# PE08-060 FORD 2/11/2009 APPENDIX J PART 1 OF 2 ENGINEER REVIEW PAGE 3

## WHEEL VALVE STEM ISO FLEX TEST MATRIX

ISO EL EY TEST - VALVE STEM DRECONDITIONING

|             |            | ISO FLEX           | IESI - VALVE | STEM PRECON | DITIONING |         |
|-------------|------------|--------------------|--------------|-------------|-----------|---------|
| Sample ID   | Valve Type | Wipe Clean<br>Only | Method A     | Method B    | Method C  | Samples |
| Baolong - A | TR414      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |
| Baolong - B | TR414      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |
| Baolong - C | TR414      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |
| Baolong - D | TR414      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |
| Baolong - E | TR414      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |
| German EHA  | TR418      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |
| Schrader    | TR414      | 6 pcs              | 6 pcs        | 6 pcs       | 6 pcs     | 24 pcs  |

## Preconditioning Methods: (All valve stems are to be wiped clean with a dry cloth prior to preconditioning)

## Method A

Ford ES-F2UA-1700-AA, Section III A., Ozone Resistance Test

- \*(Except do not strain valve stems at 10 degree angle)
- \*After aging portion of the ozone test, inspect valve stems for any deterioration and photograph findings
- \*Record test results of ozone test and provide photographs of each valve stem to Ford

## **Method B**

Method A - Less heat aging

## Method C

Method A - Less Ozone Conditioning

## **Flext Test Requirements:**

ISO 14960, Section 5.8, Flexing Test

Performance section 5.8.3 revised to; Test until loss of pressure or 200,000 cycles

- \*(Except use flex angle of +/- 10 degrees and not +/- 25 degrees)
- \* (Except test to 200,000 cycles and not 40,000 cycles)
- \*Inspect valve stems for cracks every 20,000 cycles, record finding and photograph
- \*Record final test results and provide photographs each valve stem

Flex Test Matrix.xls 9/3/2008

<sup>\*</sup>After results have been reviewed by Ford, continue to flex testing

<sup>\*</sup>Return test materials to Ford

From: Camilleri, Robert (R.H.)

Sent: Thursday, October 16, 2008 2:45 PM

To: 'Jeff Andrasik'

Subject: Wheel Valve Stem Flex Angle - Quote Request

Jeff, please provide a quote to perform the following test on a TR414 snap in rubber valve stem. We have two different TR414 valve stems (A & B) that we plan on having tested. Please call me, if you have any questions or suggestions. Thanks

Measure, record and photograph the wheel valve stem maximum flex angle for the following parameters for a given valve stem

- Wheel sizes to be simulated: 16.18 and 20 inch wheels
- Valve stem to be tested; Baolong Topseal TR414 rubber snap in wheel valve stem Provided by Ford
- Vehicle speed to be simulated; 30, 60 and 90 mph
- Wheel valve stem angles to be simulated; 20 and 30 degrees
- Record final test results and provide photograph each valve stem

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com From: Bill Thon Jr [billjr@thonassociates.com]

**Sent:** Friday, August 15, 2008 1:30 PM

To: Rohweder, David (D.S.)

Cc: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: Valves

Attachments: Valve Pictures 005.jpg; Valve Pictures 004.jpg

Dave,

Please review the pictures you requested. We could not get our hands on actual Tech valves. To demonstrate the biggest difference between the Tech valves and Ford valves I placed Tech/Aftermarket caps on Ford valves. I will have to get some additional photos from my Baolong guys.

Have a great weekend,

Bill

# Tech TR413



## Tech TR414



From:

Kircheis, Bryce (A.) Friday, September 12, 2008 1:23 PM Sent:

To: Ott, David (D.J.); Jansen, Michael (M.R.); Mayberry, Debbie (Debra L.)

Subject: Valve stems

Attachments: Valve stems DI.xls



Valve stems DI.xls (1 MB)

## Bryce Kircheis

Group Leader Ford Digital Imaging 6 Sigma Center 15080 Commerce Dr. N Dearborn MI, 48120 313-206-2017

| Rpt Nbr  |    |            | Prod<br>Date | War Strt<br>Date | Code  | Dealer Name              | Caller Name (first, | Number         | Number |      | Vin         | Veh<br>Fam | Mileage | Veh    | Engine     | Sym<br>Code | Cat    |
|----------|----|------------|--------------|------------------|-------|--------------------------|---------------------|----------------|--------|------|-------------|------------|---------|--------|------------|-------------|--------|
| 7KEAB010 | HD | 20071105 2 | 20061218     | 20070301         | 02934 | Roy O'Brien, Inc.        | Jack,Onofrey        | (586) 776-7600 | 426222 | 2007 | 1FMYU03Z17K | MR         | 16809   | ESCAP2 | 2.3L 4V    | 306201      | CHASS. |
| 8B3AD178 | HD | 20080229 2 | 20061222     | 20070530         | 04584 | Champion Ford            | Steve,McAliley      | (361) 994-6200 | 429955 | 2007 | 1ZVFT82H275 | MS         | 10761   | MUST   | MOD 4.6L   | 306200      | CHASS. |
| 8C1AC013 | HD | 20080327 2 | 20070413     | 20070601         | 04843 | Maroone Ford of Fort Lau | brian,stahl         | (954) 564-3221 | 25690  | 2007 | 1ZVFT82H875 | MS         | 10348   | MUST   | MOD 4.6L   | 306201      | CHASS. |
|          |    |            |              |                  |       |                          |                     |                |        |      | _           |            |         |        |            |             |        |
| 8C1AC137 | HD | 20080327 2 | 20070226     | 20070531         | 09555 | Gulf Breeze Ford         | Debbi,Helm          | (850) 934-8366 | 38006  | 2007 | 1FTRF12237N | FL         | 8702    | F150X2 | 4.2L EFI   | 306201      | CHASS. |
| 8DJAH140 | HD | 20080410 2 | 20070220     | 20070502         | 09555 | Gulf Breeze Ford         | Debbi,Helm          | (850) 934-8366 | 38205  | 2007 | 2FMDK39C87B | EA         | 6021    | EDGE   | DURATEC 35 | 306201      | CHASS. |
| 8DXAN074 | HD | 20080424 2 | 20070201     | 20070314         | 09555 | Gulf Breeze Ford         | Debbi,Helm          | (850) 934-8366 | 38399  | 2007 | 1FMFK17537L | EN         | 19016   | EXPDX2 | MOD 5.4 3V | 306201      | CHASS. |
|          |    |            |              |                  |       |                          |                     |                |        |      |             |            |         |        |            |             |        |
| 8EFBT306 | HD | 20080506 2 | 20061220     | 20070127         | 01203 | Fred Beans Ford-Lincoln  | ·Bruce,Paynter      | (215) 348-2900 | 494352 | 2007 | 1ZVHT82H275 | MS         | 15044   | MUST   | MOD 4.6L   | 306700      | CHASS. |
| 8EMAR096 | HD | 20080513 2 | 20070118     | 20070216         | 05439 | Fiesta Ford, Inc.        | Daniel,Henderson    | (760) 772-8000 | 62414  | 2007 | 3FAHP07Z57R | ZM         | 3110    | FUSION | 2.3L4V EFI | 306201      | CHASS. |

| 8FFAE233 HD   | 20080606 20070117 | 20070327 | 20337 | Holmes Tuttle Ford, Linco | JARAD,CHAPPUE    | (520) 292-3675 | 711258 | 2007 | 3LNHM26T27R    | ZM     | 5704  | ZEPMKZ | DURATEC 35 | 306299 CHASS. |
|---------------|-------------------|----------|-------|---------------------------|------------------|----------------|--------|------|----------------|--------|-------|--------|------------|---------------|
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
| 8FKBD563 HD   | 20080611 20070309 | 20070514 | 05439 | Fiesta Ford, Inc.         | Daniel,Henderson | (760) 772-8000 | 64744  | 2007 | 2MHHM75V97X    | RC     | 2724  | GRDMRQ | 4.6 SOHC F | 306200 CHASS. |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
| 8FQCL033 HD   | 20080617 20061219 | 20070312 | 05439 | Fiesta Ford, Inc.         | Tracy,Lowry      | (760) 772-8000 | 65114  | 2007 | 1FAFP31N17W    | FC     | 9725  | FOCUSN | 2.0L 4V    | 306609 CHASS. |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
| 8G4A5331 HD   | 20080730 20070124 | 20070327 | 04160 | Brinson Ford Lincoln-Mer  | Renee,Schedule   | (903) 676-5200 | 39163  | 2007 | 2FMDK38C37B    | EA     | 26469 | EDGE   | DURATEC 35 | 306201 CHASS. |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
| 8GCB5172 HD   | 20080703 20061206 | 20070106 | 02938 | Palm Bay Ford, Inc.       | DARRYL,SUTPHIN   | (321) 722-9000 | 184970 | 2007 | 1FTPX12V27N    | FL     | 18038 | F150X2 | 5.4L 3V FF | 306609 CHASS. |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |
| 8IDBH176 HD   | 20080904 20061207 | 20061207 | 04808 | Kelly Ford                | JIM,WILLARD      | (321) 254-4283 | 148635 | 2007 | 1FMCU02Z77K    | MR     | 20599 | ESCAP2 | 2.3L 4V    | 306609 CHASS. |
| טוז פיזו פיזו | 2000000 20001207  | 20001207 | 0-000 | riony i oru               | OHVI, VVILLALID  | (021) 204-4200 | 170000 | 2001 | II WOOOLLI IIV | ivii t | 20000 | LOUALZ | 2.UL 7V    | JUDUS OFFICE. |
| 8IIB1158 HD   | 20080909 20070215 | 20070502 | 02549 | Silsbee Ford Lincoln Mer  | Syvella,Reese    | (409) 385-3724 | 200810 | 2007 | 2MEFM75V87X    | RC     | 14152 | GRDMRQ | 4.6 SOHC F | 306602 CHASS. |
|               |                   |          |       |                           |                  |                |        |      |                |        |       |        |            |               |

| Q1           | Q2         | Q3        | Sympt Intermom ent Verifie Concord | componen |              | Addl Sym | Part Car<br>Nbr a |          | Image                    | Comments   |
|--------------|------------|-----------|------------------------------------|----------|--------------|----------|-------------------|----------|--------------------------|--|
| TIRES/WHEELS | AIR LOSS   | SLOW LEAK | •                                  |          | Processed    | -        |                   | MPOPEJO2 | ,                        | <b>CONCER:</b> left frt., right frt., and right rear tire valve cores are cracking at the base of the cores. replace def. cores <b>RECOMM:</b> DI prior approval not needed for tire valve stems. Thanks, Mark P.  |
| TIRES/WHEELS | AIR LOSS   |           |                                    |          | Processed    |          |                   | SYERK    | C:\CQIS\<br>8B3AD178.jpg | CONCER:CUST.STATES VALVE STEEMS ARE DRYROTTED. ONE BLEW OUT CAUSEING A FLAT ON THE INTERSTATE DAMAGEING THE TIRE RECOMM:valve stems and tires do not require di approval.  |
| TIRES/WHEELS | AIR LOSS   | SLOW LEAK |                                    |          | Processed    |          |                   | LLOMBAR1 | C;\CQIS\<br>8CIAC013.jpg | thanks. scott  CONCER:All four wheels, valve stems are dry rotting and cracked resultine in air loss from tire. Passenger side rear tire suddenly lost pressure while customer was on highway, resulting in destruction of tire. Remedy is replacement of all four valve stems, replacement of passenger side rear tire. RECOMM:Tires are not yet on the DI program. Thx Loretta 3-27-08   |
| TIRES/WHEELS | AIR LOSS   | SLOW LEAK |                                    |          | Approved - F | PAA3W    |                   | SYERK    | ,                        | CONCER:ALL FOUR VALVE STEAMS ARE CUT AND LEAKING AIR RECOMM:must have clear and focused close up images and the required overall images of all four valve stems. thanks, Scott warranty approved to replace all four wheel valve stems. thanks, scott  |
| TIRES/WHEELS | AIR LOSS   | SLOW LEAK |                                    |          | Processed    |          |                   | JTOLBE17 | C:\CQ!S\<br>8DJAH140.jpg | <b>CONCER:</b> All four tire stems are cracked. Left front leaking air. Request replacement of all stems. <b>RECOMM:</b> You can not use warranty to replace parts to prevent future possible failures per Warranty and Policies. So, the left front valve stem can be replaced but does not need approval because it is under the part and labor limits. Thanks, Jerry  |
| TIRES/WHEELS | AIR LOSS   | SLOW LEAK |                                    |          | Approved - F | PAA7Z    |                   | SYERK    | C:\CQIS\<br>8DXAN074.jpg | CONCER:Right rear and left fron tire stems cracked and leaking. Customer hadleft rear stem replaced 1/12/08 at Tires Plus because flat occured traveling out of town and no dealership was available. Right front tire sustained damage due to flat caused by leak in stem this past Sunday. Again customer was traveling out of town and no dealership was available for repair. Request RR and LF stem replacement and new tire. Also may need new tire sensor if damaged. RECOMM:warranty approved to replace the It frt and rt rear valve stems, tiresdo not require di approval at this time. thanks, Scott |
| TIRES/WHEELS | APPEARANCE |           |                                    |          | Approved - F | PAARZ    |                   | GBUSH5   | C:\CQ!S\<br>8EFBT306.jpg | <b>CONCER:</b> customer request to replace cracking valve stems, tech verified cracking on all 4 stems, no visible rub marks on stems or signs of damage,customer no longer waiting <b>RECOMM:</b> approved to replace 4 valve stems. thanks gary  |
| TIRES/WHEELS | AIR LOSS   | SLOW LEAK |                                    |          | Processed    |          |                   | SYERK    |                          | CONCER: cust states while driving right side rear tire went flat and was damaged while coming to a stop, dis-mounted tire to inspect for road hazard, none found, found valve stem cracked and leaking, request apprto replace (1) tire due to failed valve stem. thanks daniel RECOMM:the valve stem is under the dollar amount, di approval not required, and tires do not require di approval. thanks, Scott  |

| TIRES/WHEELS | AIR LOSS     | NOT LISTED | APPROVED TIRE              | LLOMBAR1 "                      | CONCER:C/S WHILE DRIVING, THE CAR PULLED TO THE RIGHT AND STARTED WOBBLING. HAD TO DRIVE TO A SPOT WHERE HE COULD PULL OVER. WHEN HE PULLED OVER, HE NOTICED THERE WAS NO VALVE STEM IN THE WHEEL. REQUEST NEW VALVE STEM AND NEW TIRE 225/50/17 MICHELLIN RECOMM:Warranty denied to replace tire and stem. This is caused from driving on the tire while flat. I reviewed claim with my team leader, George. thx Loretta 6-6-08 REPAIR:DENIAL OVERTURNED TO APPORVED DUE TO VALVE STEM FAILURE, REVIEWED WITHGROUP LEADER (BRYCE KIRCHIES) APPROVED P87N9 WAS ISSUED TO JAREDS PARTNER |
|--------------|--------------|------------|----------------------------|---------------------------------|---|
| TIRES/WHEELS | AIR LOSS     |            | Approved - PAA3X           | SYERK                           | JERRY AT DEALERSHIP  CONCER:while driving on freeway tire went flat due to valve stem failure tirewas damaged while coming to safe stop, tech inspected found no signs of road hazard, request approval to replace tire thank you daniel right front tire RECOMM:please specify which tire. frt, rear, rt or lt. thanks, scott warranty approved to replace the rt frt tire and valve stem. the valvestem will be called back for engineering study, please removed with great care as to keep the valve stem intact, if not able to do so please keep all pieces. thanks, Scott        |
| TIRES/WHEELS | TIRE FAILURE | VALVE STEM | Approved - PAAAV           | BKIRCHEI ,                      | CONCER:valve stem leaking, customer did not know tire low on air and drove onit damage side wall, need tire RECOMM:Approved to replace the valve stem and tire. Engineering would like the valve stem back for study, please remove it carfuly. A 700 tag will be issued for the tire and valve stem. Thanks Bryce  |
| TIRES/WHEELS | AIR LOSS     | SLOW LEAK  | Processed                  | TZELECKI  C:\CQIS\ 8G4A5331.jpg | CONCER:CUSTOMER STATES TIRE LEAKING AIR AT VALVE STEM AREA AND HAS GONE FLAT.VALVE STEM ON RT REAR TIRE AGE CRACKED AND LEAKING. SUGGESTED REPAIR,REPLACE VALVE STEM. RECOMM:Renee, Valve stems are not on the component list, and parts and loaborare under dealer cap. you may continue with repairs. Thanks Tom  |
| TIRES/WHEELS | TIRE FAILURE | VALVE STEM | Approved - PAAKR           | LLOMBAR1 ,                      | CONCER:RIGHT FRONT TIRE VALVE STEM, CRACKING. LOST ALL THE AIR FOR THAT TIRE WENT FLAT, DAMAGED SIDE WALL. TWO OTHER VALVE STEMS CRACKING, NEED TO REPLACE ONE TIRE AND REMAINING VALVE STEMS. RECOMM:approval to replace right front tire and 2 valve stems. cracking. PHOTOS ARE VERY BLURRY. FOR CLEAREST CLOSE UP, Try taking a step back, use close up function and let camera auto focus, press shutter button 1/2 way down, let camera focus then take pic. thx Loretta 7-3-08   |
| TIRES/WHEELS | TIRE FAILURE | VALVE STEM | VALVE STEM SPLIT IN RUBBER | GBUSH5                          | REPAIR: CHECKED L/R,R/F AND R/R VALVE STEM CRACKED AND LEAKING AIR RECOMMEND TO REPLACE 3 OF THE FOUR VALVE STEMS RECOMM: REPLACE ALL 4 VALVE STEMS.  |
| TIRES/WHEELS | TIRE FAILURE | BLOWOUT    | Denied                     | MSAMPLE1 ,                      | CONCER:CUSTOMER STATES POSSIBLE VALVE STEMS WERE LEAKING CAUSING THE TIRE TO LEAK THE AIR PRESSURE DOWN AND DAMAGING THE TIRES. SIDE WALLS HAD BLOWN OUT. CUSTOMER REQUEST REPLACEMENT TIRES AND OR REFUND FOR THE TIRES THEY REPLACED. ALL 4. THANKS ANN R. RECOMM:Warranty denied to replace all four tires. Based on the provided images, this is the result of damage.  |

## WHEEL VALVE STEM P-DIAGRAM

## **SYSTEM INTERACTIONS**

AIR PRESSURE

WHEEL COVER/TRIM FIT/ACCESS WHEEL RIM VALVE HOLE AIR SUB. IE NITROGEN MIX BRAKE HEAT

WHEEL DIAMETER

## MANUFACTURING **VARIATION**

VALVE CORE SEAT

CUP CRIMP VALVE CORE TOROUE VALVE CAP TOROUE RUBBER DUROMETER ADHESION PIN HEIGHT PRELUBE AIR FLOW

HEX NUT TORQUE

VALVE DIMENSIONS

## **NOISE FACTORS**

## **ENVIRONMENT**

ROAD SALT OZONE

TEMPERATURE EXTREMES

GRAVEL/ROCKS/ROUGH SURF. TIRE CAVITY CONTAMINNENTS OPERATING ENIVROMENT AND TIRE CAVITY HUMIDITY AND

CORROSION MUD/SLASH/SNOW/ICE

**FATIQUE** 

## **CHANGE OVER TIME**

COMPRESSION SET OF TEFLON & RUBBER SEALS COMPRESSION SET OF BOLT IN VALVE GROMMET BOLT IN VALVE HEX NUT TORQUE RELAXATION RUBBER DEGRADATION

OWNER/FCSD/WHEEL SUPPLIER/ASSEMBLY PLANT USAGE/DUTY CYCLE

OVER/UNDER INSERTING VALVE DURING

ASSEMBLY

VALVE MOUTH DAMAGE FROM SERVICE TOOLS USE OF AFTERMARKET CAPS/EXTENSIONS INCORRECT VALVE CAP TORQUE INCORRECT VALVE CORE TORQUE

WRONG BOLT IN VALVE STEM GROMMET

WRONG OR MISSING VALVE CAP

INCORRECT BOLT IN VALVE HEX NUT TORQUE

WRONG OR MISSING VALVE CORE

AFTERMARKET WHEEL COVERS

INSTALLATION PROCESS METHOD AND TOOLS (i.e.

PUSH IN Vs PULL IN)

TIRE & WHEEL ASSEMBLY PRESSURE

VEHICLE SPEED/ACCELERATION VALVE STEM LIFE CYCLE REPLACEMENT

CLEANIING CHEMICALS TIRE SEALANT

VEHICLE LOAD

OVER/UNDER TIRE INFLATION

CAR WASH

## INPUT SIGNAL INFLATION AIR SOURCE CHUCK

TEMPORARY MOBILITY

KIT (TMK)

## CONTROL FACTORS

RECOMMENDED TORQUE PER TRA VALVE CORE PIN HEIGHT PER TRA EPDM RUBBER SPECIFIED WITH SAE TEAR RESISTANCE TEST G11 GRADE 4 FOR VALVE VALVE DIMENSIONS

T&RA STANDARDS

ISO 19460

FORD WHEEL & VALVE STEM ES INSERT MAT-L (BRASS) & NUT, WASHER

CORE MAT-L GROMMET MAT-L

CAP MAT-L (NYLON)

SEALING GASKET MAT-L

## **OUTPUTS**

- 1. ALLOWS TIRE INFLATION & DEFLATION 2. TIRE RETAINS CONSTANT PRESSURE (NO LEAKS)
- 3. VALVE APPEARANCE IS GOOD /PERCEPTION

TIRE VALVE

- 4. VALVE INSTALLATION & REMOVAL
- 5. CAP REMOVAL
- 6. CORE REMOVAL
- 7. MEETS FEDERAL & LOCAL GOVERNMENT REQUIREMENTS
- 8. MEETS TRA AND INDUSTRY STANDARDS
- 9. SERVICEABLE AND REPLACEABLE IN

AFTERMARKET

## ERROR STATES

- 1.1 NO AIR FLOW
- 1.2 LOW AIR FLOW
- 2.1 AIR LEAKAGE 3.1 CORROSION
- (UNSATISFACTORY APPEARANCE)
- 3.2 RUBBER BODY CRACKING (SNAP-IN ONLY)
- 4.1 DIFFICULTY IN
- INSTALLATION/REMOVAL
- 5..1 DIFFICULT TO REMOVE CAP 6.1 CAN NOT REMOVE CORE
- 7.1 DOESN'T MEET FEDERAL &
- LOCAL GOVERNMENT REQ'TS 8.1 DOESN'T MEET TRA &
- INDUSTRY STANDARDS 9.1 AIR CHUCK WILL NOT LOCK
- ONTO VALVE MOUTH 9.2 UNABLE TO REMOVE VALVE
- CORE OR CAP

From: Mracna, Chris (C.J.)

**Sent:** Tuesday, June 10, 2008 1:31 PM

To: Camilleri, Robert (R.H.)

Cc: Rohweder, David (D.S.); Bliznick, Thomas (T.G.); Nasser, Kais (K.A.)

Subject: Valve Stem IR Results

We have IR results for the "German" valves that were submitted yesterday. The valve stems are produced from SBR rubber. This is different than the EPDM Schrader valves and NR Baolong valves.

We are progressing with the ozone testing of these valves.

Regards,

Chris Mracna

Chassis Materials Engineering
Brakes, Exhaust, Suspension, and Wheels
Ford Motor Company
(313) 805-4483
cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Mracna, Chris (C.J.)

**Sent:** Tuesday, August 19, 2008 11:43 AM

To: Camilleri, Robert (R.H.); Rohweder, David (D.S.)

Subject: Valve Stem Fatigue Fixture

Attachments: IMG\_2626.JPG; IMG\_2627.JPG; Valve Stem Fatigue Fixture.mpg

We're ready to go.





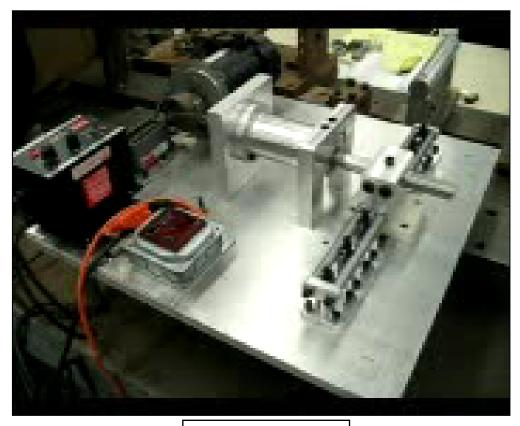


IMG\_2626.JPG IMG\_2627.JPG Valve Stem (32 KB) (202 KB) igue Fixture.mp

## Chris Mracna

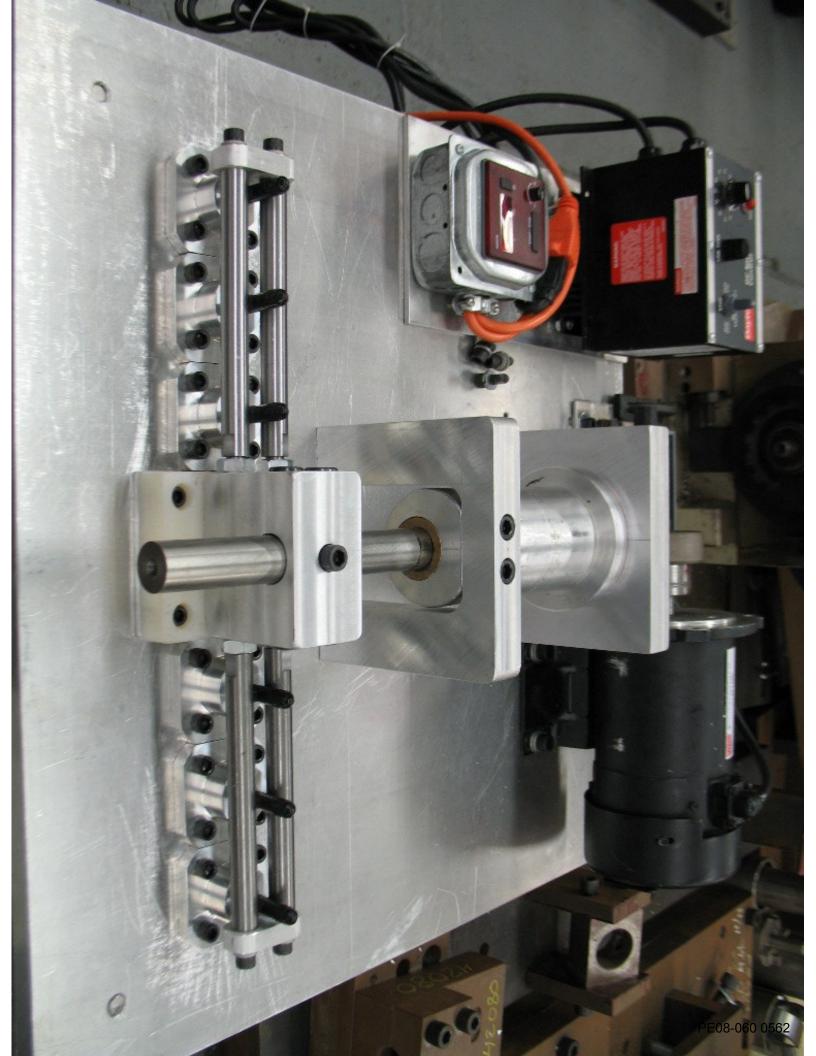
Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site



Double click to view movie file.





From: Li, Bo (Jason.)

Sent: Thursday, September 25, 2008 4:11 AM

To: Camilleri, Robert (R.H.)

Cc: Baker, Warren (W.B.); Chen, Jin (Victo.); Kong, Richard (Q.G.); Yao, Michael (G.C.)

Subject: ??: SREA

## Hello, Robert,

I'd like to sign the SREA if you have no concern with the EPDM type change. We plan to re-PPAP in the week of Oct 13th so that Baolong can meet the delivery requirement (Before Oct 20th). Pls help to push the signature of the assembly plants. If you have any other suggestion, pls contact me. Thanks.

## **Best Regards**

## Jason Li 李 波

## **STA**

Ford China Sourcing Office

Tel:86-25-51187584 Ford net: 3067584 Fax:86-25-51187281

发件人: Li, Bo (Jason.)

发送时间: Tuesday, September 23, 2008 11:14 PM

收件人: Camilleri, Robert (R.H.)

**抄送:** Baker, Warren (W.B.); Chen, Jin (Victo.); Kong, Richard (Q.G.); Yao, Michael (G.C.)

**主题:** 答复: SREA

Sorry,there's a mistake. For item 7 "IS",not "1/2 Banbuqiang", Should be "All the Banbuqiang". Thanks.

## **Best Regards**

## Jason Li 李 波

## STA

Ford China Sourcing Office

Tel:86-25-51187584 Ford net: 3067584 Fax:86-25-51187281

发件人: Li, Bo (Jason.)

发送时间: Tuesday, September 23, 2008 11:01 PM

**收件人:** Camilleri, Robert (R.H.)

抄送: Baker, Warren (W.B.); Chen, Jin (Victo.); Kong, Richard (Q.G.); Yao, Michael (G.C.)

**主题:** 答复: SREA

## Robert.

Below is the change that I confirmed with Baolong team last week. I'd like to know if you have been aware of all the changes that Baolong will make.

Was S/N Item ls 28.4Kg Mixing rubber weight every time 31.4Kg 1. Aging-Resistant chemical 4020, DTPD, RD 2. DTPD,RD Mixing time of Phase 1 3. 8min 9.5min **EPDM** type 2340A 4. DE3072 5. EPDM percentage 28% 37% 6. Automatic chemical measuring machine Added

7. Mixing process for Phase 1 EPDM&natural rubber EPDM&1/2 Natural rubber&1/2 Carbon

Black 330

+Carbon black 330&Formula B +Formula B&1/2 Carbon Black 330 +Banbuqiang(Another Carbon black)&Oil +1/2 Banbuqiang(Another Carbon

black)&Oil

+1/2Natural rubber

If you have been known all the changes listed, I will sign the SREA after approval from my suppervisor. Thanks.

## **Best Regards**

## Jason Li 李 波

## **STA**

Ford China Sourcing Office

Tel:86-25-51187584 Ford net: 3067584 Fax:86-25-51187281

发件人: Camilleri, Robert (R.H.)

发送时间: Monday, September 22, 2008 11:08 PM

**收件人:** Yao, Michael (G.C.); Li, Bo (Jason.)

主题: SREA

Jason, David Rohweder has approved the attached SREA. You will also need to sign it for it to be official. Your signature is require in the STA

Engineer section to the left of David's signature. Let me know, if you have any questions. Thanks

<< 文件: SREA Wgt Scale Mix Proc.pdf >>

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com



## SREA Form - Description of proposed change Submission Date <u>26-Aug-08</u>

|  |  | Production parts/product  Yes  No  |                         |  |                                      |   |
|--|--|--|-------------------------|--|--------------------------------------|---|
| Ι,   |  | P P  | No No                   | (IC V/PO : 1 - 1 - 1   | 1 01                                 | 1.1.  |
| d/pe   | 2  | Manufacturing process of site/location change  | 2000                    | (If YES is checked,  | please answer a & b                  | below)  |
| £ 5.   | õ  | b) Material Changed  | 17                      |  |                                      |   |
| ng a   | d/s  | Non WERS Access Supplier Change Request for Supplier Initiat   |                         | gn Change or Requ  | est to Ship part/pro                 | duct with a temporary specification   |
| Change Type<br>Production                                    | ä  | a) Supplier-initiated design change (Request for WERS Concern Rel  | lease)                  |  |                                      |   |
| 0 8 6  | 1  | b) Request to ship part/product with a temporary specification to  | Ford (F                 | Request for WERS Al  | ert or equivalent)                   | C Yes 6 No  |
| 3500   |  | Service-Unique parts/product (FCSD):   |                         |  |                                      |   |
| Change Type<br>Service-Unique                                | ដ  | Manufacturing process or site/location change:   | Yes                     | No (If YES   | is checked, please an                | swer a & b below)   |
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| Se G   | <u>a</u>   |  |                         |  | C Yes (                              | No.   |
|  |  | b) Request to ship part/product with a temporary specification to  |                         |  | ert)                                 |   |
| l  |  | SUPPLIER NAME AND ADDRESS /E-MAIL Shanghai Baolong MANUFACTURING SITE CODE EMNNA   | Automo                  | otive Corporation  | / E-mail: caojianmin                 | g@baolong.biz   |
| l  |  | MANOTACTORING SITE CODEEWINNA  |                         |  |                                      |   |
| l  |  | SUB-SUPPLIER or FORD-DIRECTED SUB SUPPLIER SREA?   | C Ye                    | s & No OLS   | TATUS OF SUPPLU                      | ER AS SHOWN IN SIM  |
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| Supplier and Part/product Information (all types of changes) |  | 7L34-1700-AA TR414 Tire Valve  |                         |  | C                                    | res res   |
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| es)  |  |  |                         | AP06A - FORD KAI<br>AP09A - FORD LOU                           |                                      |   |
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| و ع<br>م   |  |  |                         | AP20A - FORD OAI   |                                      |   |
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June 2007

| All items listed above must be fevicewed when<br>submission to ensure robust change implement<br>I affirm that the above and any attached inform | tation in support of the date proposed be   | low.                           | arked*** are to be completed, reviewed and updated prior to the SREA   |       |
|--|---|--------------------------------|--|-------|
| Name   | Title   | Signature                      | e-mail   |       |
| Jim Cao  | Manager   |                                | caojianming@baolong.biz  |       |
|  | Proposed Implemen   | tation date of                 | Tier 1 approval of sub tier change   |       |
| Telephone 86 21 57690482   | the change;   | 10 Sep.,                       | o., 08 request   |       |
| designated in the applicable engineering specif  | fication and / or inherent in the samples<br>anges result in less than satisfactory per | as originally tested and appro | he Seller's original responsibility for ensuring that all characteristics, broved, are maintained. Seller accepts full responsibility for the changes or need with the originally approved item, Seller will fully reimburse the Buyer | 12000 |

June 2007

Duppiner of Continuation (optional) optional format Good of Gate (oraniple, 111270 201 0000)

## SREA Form - Approvals

|  |                            | STA       |      | Product Development Engineering   | Product Development Plant Resident   |
|--|----------------------------|-----------|------|---|--|
| Non inverted delta parts<br>from Q1 supplier sites               | STA Engineer<br>PRINT NAME | SIGNATURE | DATE | Design and Release Manager (parts to VO plant) -OR- Component Supervisor (parts to PTO plant) PRINT NAME SIGNATURE DATE  D. ROHWEOER 195E  Product Engineer System Supervisor (PTO plant) PRINT NAME SIGNATURE DATE | Lead PVT Manager (parts to VO plant) OR-<br>Lead Resident Engineer (parts to PTO plant)<br>PRINT NAME SIGNATURE DATE |
| inverted delta (♥) parts or any parts from non-Q1 supplier sites | STA Manager<br>PRINT NAME  | SIGNATURE | DATE |   | Lead PVT Manager (parts to VO plant) OR-<br>Lead Resident Engineer (parts to PTO plant)<br>PRINT NAME SIGNATURE DATE |

|  |                            | STA       |      | Product Dev   | elopment Engine                | eering |                          | Buyer     |      |
|--|----------------------------|-----------|------|---|--------------------------------|--------|--------------------------|-----------|------|
| Non inverted delta parts<br>from Q1 supplier sites               | STA Engineer<br>PRINT NAME | SIGNATURE | DATE | FCSD Engineer PRINT NAME  FCSD Engineering PRINT NAME | SIGNATURE Supervisor SIGNATURE | DATE   | FCSD Buyer<br>PRINT NAME | SIGNATURE | DATE |
| inverted delta (♥) parts or any parts from non-Q1 supplier sites | STA Engineer<br>PRINT NAME | SIGNATURE | DATE | FCSD Engineer PRINT NAME  FCSD Engineering PRINT NAME | SIGNATURE  Manager SIGNATURE   | DATE   | FCSD Buyer<br>PRINT NAME | SIGNATURE | DATE |

| For                                  | changes affecting heat tre | at   |                                  | For material changes | HERMONISH DAY SANDERS SANDERS |
|--------------------------------------|----------------------------|------|----------------------------------|----------------------|-------------------------------|
| Heat Treat Process Spe<br>PRINT NAME | cialist<br>SIGNATURE       | DATE | Materials Engineer<br>PRINT NAME | SIGNATURE            | DATE                          |
|                                      |                            |      | -                                |                      |                               |

| Qualifying condition(s) of acceptance (For example additional testing required)                        | Reason for rejection |
|--|----------------------|
| Conduct wheel valve stem DV, Per Ford ES, with Ozone test exposure hours increased from 72 to 100 hrs. |                      |

Functional Trial Requirements and Approvals

| (This form is f      | or communi            | oduct Develop             | ional Trial Req<br>ment Plant Res<br>the Product D | uirements sident(s) to complete. Development Plant Resident and the supplier)                                      |
|----------------------|-----------------------|---------------------------|--|--|
| Plant Name / Program | Trial Run<br>Quantity | Expected In<br>Plant Date | Notes  | Trial Run of PPAP approved parts acceptable Product Development Plant Resident Printed Name and Signature and Date |
|                      |                       |                           |  |  |
|                      |                       |                           |  |  |
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|                      |                       |                           |  |  |
|                      |                       |                           |  |  |

From: Camilleri, Robert (R.H.)

Sent: Friday, September 05, 2008 9:11 AM

To: 'Jeff Andrasik'

Subject: RE: Wheel Valve Stem Test Matrix

Yes, we can live with the timing. Thanks

**From:** Jeff Andrasik [mailto:JAndrasik@SmithersMail.com]

Sent: Friday, September 05, 2008 8:08 AM

**To:** Camilleri, Robert (R.H.)

Subject: RE: Wheel Valve Stem Test Matrix

Hi Robert.

Is Ford alright with the timing?

**Thanks** 

Jeff Andrasik Test Engineer Smithers Scientific Services, Inc.

Phone: (330) 762-7441 ext. 1248

Fax: (330) 762-7447 JAndrasik@smithersmail.com

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**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Friday, September 05, 2008 7:30 AM

To: Jeff Andrasik

Subject: Wheel Valve Stem Test Matrix

Jeff, please proceed with testing the valve stem samples in the order outlined below. Please DO NOT strain the valve stems at a 10 degree angle when conducting the ozone testing. Contact me, if you have any questions. Thanks

Baolong Sample D

Baolong Sample E

Baolong Sample C

Baolong Sample B

German EHA

Schrader

Baolong Sample A

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

This email has been scanned by the MessageLabs Email Security System. For more information please visit http://www.messagelabs.com/email

PE08-060 0571

From: Camilleri, Robert (R.H.)

Sent: Thursday, September 18, 2008 2:58 PM

To: Aloysius, Bede (B.D.)
Cc: Freeman, Paul (P.W.)

Subject: RE: Wheel Valve Stem SREA

The supplier is implementing a automated material additive weight measuring system and they are revising the sequence mixing steps. No material changes, No dimensional changes, no core or brass insert changes, no cap changes, no lubricant changes, no shipping or packaging changes.

From: Aloysius, Bede (B.D.)

**Sent:** Thursday, September 18, 2008 2:54 PM **To:** Camilleri, Robert (R.H.); Freeman, Paul (P.W.)

**Subject:** RE: Wheel Valve Stem SREA

## Rob,

What is the change that is driving this SREA.

From: Camilleri, Robert (R.H.)

Sent: Thursday, September 18, 2008 2:43 PM
To: Aloysius, Bede (B.D.); Freeman, Paul (P.W.)

**Subject:** Wheel Valve Stem SREA

When: Monday, September 22, 2008 2:00 PM-2:30 PM (GMT-05:00) Eastern Time (US & Canada).

**Where:** Teleconference

Wheel valve stem SREA review.

I am assuming you will want to do some sort of trial. I would rather not wait until next week to ship out parts. Please provide me with a shipping address and I will have a box of parts ship out ASAP. Please call me, if you have questions. Thanks

Passcode: 87595684# Ford:62.13673 (1FORD)

Toll (International): +1.313.621.3673

Toll-free: 1.888.621.3673

From: Loren D. Isley P.E. [loren.isley@ntscorp.com]

Sent: Thursday, October 16, 2008 3:42 PM

To: Camilleri, Robert (R.H.)

Subject: RE: Wheel Valve Stem Flex Angle

## Robert,

Do have drawings of the wheels showing the radial location of the valve stems and the angle of installation?

Do you have drawings of the valve stems and/or dimensions of typical holes?

What is the rolling radii of the tires on each wheel size?

Is 20° and 30° relative to horizontal? Thank you for your interest in NTS,

, ,

## Loren D. Isley P.E. VP/ General Manager National Technical Systems (NTS)

12601 Southfield Rd. Detroit, MI 48223

Tel: (800) 946-2687 / (313) 835-0044

**Direct Line:** (313) 659-2847

**Cell:** (313) 492-1640 **Fax:** (313) 272-1190 Loren.isley@ntscorp.com

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Thursday, October 16, 2008 3:26 PM

To: Loren D. Isley P.E.

Subject: Wheel Valve Stem Flex Angle

Loren, please provide a quote to perform the following test on a TR414 snap in rubber valve stem. We have two different TR414 valve stems (A & B) that we plan on having tested. I would prefer a test fixture be used for this test and not an actual tire and wheel, since almost all of our wheels would restrict the movement of the valve stem. Please call me, if you have any questions or suggestions. Thanks

Measure, record and photograph the wheel valve stem maximum flex angle for the following parameters for a given valve stem

- Wheel sizes to be simulated; 16,18 and 20 inch wheels
- Valve stem to be tested; Baolong Topseal TR414 rubber snap in wheel valve stem Provided by Ford
- Vehicle speed to be simulated; 30, 60 and 90 mph
- Wheel valve stem angles to be simulated; 20 and 30 degrees

Record final test results and provide photograph each valve stem

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com From: Bill Thon Jr [billjr@thonassociates.com]

**Sent:** Friday, August 15, 2008 1:52 PM

**To:** 'Bill Thon Jr'; Rohweder, David (D.S.)

Cc: Camilleri, Robert (R.H.)

Subject: RE: Valves

Attachments: Valve Pictures 007.jpg

Here is the last one.....

**From:** Bill Thon Jr [mailto:billjr@thonassociates.com]

Sent: Friday, August 15, 2008 1:30 PM

**To:** Rohweder, David (D.S.)

Cc: 'Camilleri, Robert (R.H.)'; 'Bill Thon Jr'

Subject: Valves

Dave,

Please review the pictures you requested. We could not get our hands on actual Tech valves. To demonstrate the biggest difference between the Tech valves and Ford valves I placed Tech/Aftermarket caps on Ford valves. I will have to get some additional photos from my Baolong guys.

Have a great weekend,

Bill

# Ford TR414



From: Camilleri, Robert (R.H.)

Sent: Monday, September 22, 2008 10:15 AM

To: Gregorchik, Chris (C.)
Subject: RE: Valve Stems

## Done

**From:** Gregorchik, Chris (C.)

**Sent:** Monday, September 22, 2008 9:59 AM **To:** Stevenson, Gary (G.L.); Camilleri, Robert (R.H.) **Cc:** Mayer, Thomas (T.A.); Jessie, Jo Ann (J.A.)

Subject: RE: Valve Stems

Please concur and I will get Tom Mayer to approve.

WWRSC12A CONFIDENTIAL Alert Base Information 08/09/22 09:57:41
Alert: A12168844 Type: U USE PPM Status: A ECC: NLE2
Orig Acty: NL00 NORTH AMERICAN TRUCK Date: 08/09/22 Rte: N
Name: GREGORCHIK, CHRIS Loc: LAP Phone: 734-364-3722

E-Mail: CGREGORC Multimedia: N

Desc: SREA FOR VALVE STEMS NEW AUTOMATED MATERIAL WEIGHT MEASURING

Lang: E SYSTEM AND REVISE RUBBER MIXING PROCESS

\* (LAST)
Model>> Yr: 09 Lead: TVU5 Other: TVUK \_\_\_\_ \_\_\_\_\_

Plants Aff: \_\_\_\_ \_\_\_ \_\_\_\_ Prod Aff: UP251

Supp Docs: SREA 26-AUG-08 \_\_\_\_\_ Qty: \_\_\_\_

Closure Statement:

Select: A=Approval B=Parts C=Concern D=Description S=Summary O=Web Print P=Print R=Raise Alert W=WACTS X=Xrf Menu Press <ENTER> for Alert Base Information Continuation screen (LAST)

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

From: Camilleri, Robert (R.H.)

Sent: Monday, September 22, 2008 9:25 AM

**To:** Gregorchik, Chris (C.) **Cc:** Stevenson, Gary (G.L.) **Subject:** RE: Valve Stems

Ya I know that I only need the lead plant to sign off, but that never works it seems each plant wants to do it.

From: Gregorchik, Chris (C.)

Sent: Monday, September 22, 2008 9:09 AM

**To:** Camilleri, Robert (R.H.) **Cc:** Stevenson, Gary (G.L.) **Subject:** Valve Stems

Do we have alert for valve stems or do you need me to write one for the trial? Which PVT will sign the SREA?

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

From: Camilleri, Robert (R.H.)

Sent: Monday, September 22, 2008 9:05 AM

**To:** Gregorchik, Chris (C.) **Cc:** Stevenson, Gary (G.L.)

Subject: RE: TMD Delphos parts (U251 oil shields for LAP)

Supplier is adding automated measuring system for chemical additives and changing the mixing steps that the additives and materials are added to the mixers.

From: Gregorchik, Chris (C.)

Sent: Monday, September 22, 2008 8:55 AM

**To:** Camilleri, Robert (R.H.) **Cc:** Stevenson, Gary (G.L.)

Subject: FW: TMD Delphos parts (U251 oil shields for LAP)

What is the change before I put the parts online, Thanks.

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

From: Pope, Amy (A.L.)

Sent: Monday, September 22, 2008 8:19 AM

**To:** Gregorchik, Chris (C.) **Cc:** Rager, Larry (L.A.)

**Subject:** RE: TMD Delphos parts (U251 oil shields for LAP)

I have some 7L34-1700-AA trial parts for you in my office.

Parts Control Manager Ford Motor Company Louisville Assembly Plant apope2@ford.com 502-364-3846

From: Gregorchik, Chris (C.)

Sent: Monday, September 22, 2008 8:18 AM

**To:** Pope, Amy (A.L.) **Cc:** Rager, Larry (L.A.)

**Subject:** FW: TMD Delphos parts (U251 oil shields for LAP)

Fyi,

6L24-6N634-AD & 2C54-5D121-AA

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

**From:** mccrayc@TMDINC.COM [mailto:mccrayc@TMDINC.COM]

Sent: Monday, September 22, 2008 7:39 AM

To: Gregorchik, Chris (C.); Eddins, Chuck (C.E.); Tavakkoli, Shahriar (S.); Hausz, Jason (J.)

Cc: Barrett, Eric (E.W.); stevensk@TMDINC.COM

**Subject:** RE: TMD Delphos parts (U251 oil shields for LAP)

30 PC on their way this morning via UPS.

**From:** Gregorchik, Chris (C.) [mailto:cgregorc@ford.com]

Sent: Friday, September 19, 2008 6:54 AM

To: McCray, Chad-Tiffin; Eddins, Chuck (C.E.); Tavakkoli, Shahriar (S.); Hausz, Jason (J.)

Cc: Barrett, Eric (E.W.); Stevenson, Kurt

**Subject:** RE: TMD Delphos parts (U251 oil shields for LAP)

Send parts to LAP

Louisville Assembly Plant 2000 Fern Valley Road Louisville KY 40213

Attn: Chris Gregorchik / Amy Pope

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

From: mccrayc@TMDINC.COM [mailto:mccrayc@TMDINC.COM]

Sent: Friday, September 19, 2008 6:03 AM

**To:** Eddins, Chuck (C.E.); Tavakkoli, Shahriar (S.); Hausz, Jason (J.); Gregorchik, Chris (C.)

Cc: Barrett, Eric (E.W.); stevensk@TMDINC.COM

**Subject:** RE: TMD Delphos parts (U251 oil shields for LAP)

We were only supplied the cavity 2 from BW for an "A to B" comparison. Please see the attached full layout of both cavities produced at TMD Tiffin for the 5D121.

What address can we send the 30 PC sample to? Attn: ?

Following packaging approval and functional approval, we can PPAP in about 2 weeks.

Regards,

Chad McCray TMD Tiffin 419-443-9031

**From:** Eddins, Chuck (C.E.) [mailto:ceddins@ford.com]

Sent: Thursday, September 18, 2008 11:25 AM

**To:** Tavakkoli, Shahriar (S.); Hausz, Jason (J.); Whitney, Rob-Delphos; McCray, Chad-Tiffin; Gregorchik, Chris (C.)

Cc: Barrett, Eric (E.W.); Stevenson, Kurt

Subject: RE: TMD Delphos parts (U251 oil shields for LAP)

One Alert should suffice. We'll need trial parts. 30 each.

Chuck Eddins
PVT Supervisor
Ford Louisvillo Assemb

Ford Louisville Assembly Plant Office: (502) 364-3738

Cellphone: (313) 805-3158

*Life is a journey - Your actual mileage may vary.* 

From: Tavakkoli, Shahriar (S.)

Sent: Thursday, September 18, 2008 10:08 AM

To: Eddins, Chuck (C.E.); Hausz, Jason (J.); 'whitneyr@TMDINC.COM'; 'Chad McCray'; Gregorchik, Chris (C.)

Cc: Barrett, Eric (E.W.); 'stevensk@TMDINC.COM'

**Subject:** RE: TMD Delphos parts (U251 oil shields for LAP)

## Gentlemen;

From the information I have, we have two shields transferred from Blue Water to TMD for U251 vehicle in LAP. From the conversation that I had with some of the TMD folks, one of these shields (6L24-6N634-AD) the oil filter shield is coming from Delphos plant and Robert Whitney is my contact person there. The other shield (2C54-5D121-AA) the oil pan shield is coming from Tiffin plant. I believe my contact person would be Chad McCray there. Since I have been getting a few of these alert requests recently, I need to know how you suggest we should handle these two shields since they go on the same vehicle. I am asking Chris or Chuck for help on this. Should I raise one alert for both or do you prefer separate alerts?

From the TMD side, I have to make sure these parts are as good as the old ones. I had a conversation with Rob Whitney about 10 days ago and I noted down that PPAP date is Nov 17 for 6L24-6N634-AD. I have an A-B comparison of data, but no CMM data yet. I have no data on 2C54-5D121-AA. Maybe Chad can help

PE08-060 0579

on this one. Need to know the PPAP date for this shield also. Please provide me the proper documentation/CMM data so I can raise the alert for non-PSW parts for functional trials for both of these parts.

Thanks for your help in advance. Also, please let me know if any of my information above is not completely accurate. Thanks.

## Shahriar Tavakkoli

Frame Mounted Shields Engineer P415/U22X (313) 31-77388

From: Eddins, Chuck (C.E.)

Sent: Thursday, September 18, 2008 8:33 AM

To: Hausz, Jason (J.); 'whitneyr@TMDINC.COM'; Tavakkoli, Shahriar (S.)

Subject: RE: TMD Delphos parts

The PD engineer should write the Alert.

Chuck Eddins
PVT Supervisor
Ford Louisville Assembly Plant

Office: (502) 364-3738 Cellphone: (313) 805-3158

Life is a journey - Your actual mileage may vary.

From: Hausz, Jason (J.)

Sent: Thursday, September 18, 2008 8:31 AM

To: 'whitneyr@TMDINC.COM'; Eddins, Chuck (C.E.); Tavakkoli, Shahriar (S.)

Subject: RE: TMD Delphos parts

Chuck?

JDH

313-805-7928

**From:** whitneyr@TMDINC.COM [mailto:whitneyr@TMDINC.COM]

**Sent:** Wednesday, September 17, 2008 3:54 PM **To:** Eddins, Chuck (C.E.); Tavakkoli, Shahriar (S.)

Cc: Hausz, Jason (J.)

Subject: RE: TMD Delphos parts

Jason,

Do you have an alert number in order to ship in parts for functional trials?

Thanks.

## Robert Whitney

Manufacturing Engineer
Toledo Molding & Die, Inc.
24086 S.R. 697
Delphos, OH 45833
Phone (419) 695-5158
Fax (419) 692-8058
Email whitneyr@tmdinc.com

**From:** Eddins, Chuck (C.E.) [mailto:ceddins@ford.com]

**Sent:** Monday, September 15, 2008 11:55 AM **To:** Whitney, Rob-Delphos; Tavakkoli, Shahriar (S.)

Cc: Hausz, Jason (J.)

Subject: RE: TMD Delphos parts

I'm PD. Jason Hausz is our VO engineer.

Chuck Eddins
PVT Supervisor
Ford Louisville Assembly Plant

Office: (502) 364-3738 Cellphone: (313) 805-3158

Life is a journey - Your actual mileage may vary.

From: whitneyr@TMDINC.COM [mailto:whitneyr@TMDINC.COM]

Sent: Monday, September 15, 2008 11:43 AM

To: Tavakkoli, Shahriar (S.)
Cc: Eddins, Chuck (C.E.)

Subject: RE: TMD Delphos parts

Shahriar,

I have been dealing with Chuck, so I assumed that he was taking responsibility for this part.

Chuck,

Can you please confirm?

Thanks,

Robert Whitney

Manufacturing Engineer
Toledo Molding & Die, Inc.
24086 S.R. 697
Delphos, OH 45833
Phone (419) 695-5158
Fax (419) 692-8058
Email whitneyr@tmdinc.com

From: Tavakkoli, Shahriar (S.) [mailto:stavakko@ford.com]

Sent: Monday, September 15, 2008 11:39 AM

**To:** Whitney, Rob-Delphos **Subject:** RE: TMD Delphos parts

## Rob;

Who is the LAP Plant VO engineer that you correspond with? I know Chuck Eddins is the PVT supervisor, but who is the VO engineer? Thanks.

## Shahriar Tavakkoli

Frame Mounted Shields Engineer P415/U22X (313) 31-77388

From: Mracna, Chris (C.J.)

Sent: Friday, June 13, 2008 3:58 PM
To: Camilleri, Robert (R.H.)
Cc: Bliznick, Thomas (T.G.)
Subject: RE: Valve Stems - UPDATE

#### Rob,

I forwarded the PO info to Tom Knowles (tomk@ardl.com) at ARDL this afternoon. They had not yet received it. They'll start testing Monday with preliminary results most likely by next Friday if not sooner. They plan on running FTIR testing on the samples, which is the same testing that we performed. However, ARDL claimed that they had a more developed comparison library to use, which could (hopefully) provide a more quantitative blend ratio. I'm very interested to see what they come up with.

The ozone testing of the submitted German valves at Central Lab is scheduled to be completed Monday afternoon.

I'll be out of the office starting next Thursday (6/19) through July 7. I'll have ARDL contact you and Tom Bliznik directly with any preliminary results in my absence.

# Regards,

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Camilleri, Robert (R.H.)

**Sent:** Tuesday, June 10, 2008 2:37 PM

**To:** Mracna, Chris (C.J.)

**Subject:** FW: CPARS Request - ARDL Purchased Services

Chris, the PO number for the ARDL valve stem testing is 580955. ARDL should receive it in the next couple of days.

From: Johnson, Mary Beth (M.E.)
Sent: Tuesday, June 10, 2008 2:08 PM

**To:** Camilleri, Robert (R.H.)

Subject: RE: CPARS Request - ARDL Purchased Services

#### PO issued:

Reason: DOC NO: A AR **PO08 580955** Emer: N Type: PN Items: 001 REQ NO: RQ08 161R01 SUPPLR: H1BCB AKRON RUBBER DEVELOPMENT LAB EDI: N Blnkt No: Pay: A1 Ship: 92 Ship To: FM1BB Code-4: N Prev Ord: Waiver: \_ Sourcing: N Notes: Y Tax: 01 FOB: 02 Order Dt: Tran: 02 Rout: 01 Reqd Dlvy: 06/23/08 Inv App: N Project: N NegLS: N ustoms: N Funds: USD Promis Dt: 06/23/08 Confirm: N Prevent A/P Paymnt: N UNION D-208 4-21 Regd By: ROB CAMILLERI (313)-805-3389 lauses: FRHT /TESTING-PRODUCT DEVÉLPMNT, Qte: C: JC01 TESTING +4.800.00 Supv Rev: N Lead Buyer: Rtn Buyer: \_ Est Cost: USD Verify: Y Local Prt : Contract : N Tot Cost: USD +4,800.00 SS

# Mary Beth Johnson Ford Motor Company, Purchasing

# fngineering Services, Jesting Buyer MJohnso8@Ford.com (letter "o" before the 8)

phone: (313) 594-7665

From: Camilleri, Robert (R.H.)
Sent: Tuesday, June 10, 2008 7:18 AM
Johnson, Mary Beth (M.E.)
Cc: Grant, John (J.F.)

**Subject:** RE: CPARS Request - ARDL Purchased Services

Mary Beth, anything you can do to expedite this request for a PO would be greatly appreciated. Please contact me, if you have any questions. Thanks

From: Grant, John (J.F.)

Sent: Monday, June 09, 2008 8:58 AM
To: Johnson, Mary Beth (M.E.)
Cc: Camilleri, Robert (R.H.)

Subject: FW: CPARS Request - ARDL Purchased Services

# Hi Mary Beth,

Attached is the supplier quote for CPARS req # AAR RQ08 161R01 - T585 POLYMER IDENTIFICATION WITH COTENT RATIO. The order is going through approval and should reach your workchain in a few days. If you have any questions please contact Rob Camilleri or myself. Thanks

# John Grant

VEV Business Planning Office Engine Laboratories Department

Phone: (313) 805-2829 Pager: (313) 805-2829 Fax: (313) 845-2229 mailto:jgrant5@ford.com

<< OLE Object: Picture (Metafile) >>

From: Camilleri, Robert (R.H.)

**Sent:** Thursday, June 05, 2008 9:03 AM Parks, David (D.H.); Grant, John (J.F.)

Cc: Rohweder, David (D.S.); Campbell, Keith (K.A.)

Subject: CPARS Request - ARDL Purchased Services

John, David, attached is a request for purchased services from Akron Rubber Development Laboratory to conduct Polymer identification and a content ratio analysis of various rubber snap in wheel valve stems. Please provide me with the CPARS requisition number when available. Thanks

<< File: Ford.jun.doc >> << File: CPAR Request Akron Rubber Lab.xls >>

From: Raul [Raul@baolong.biz]

Sent: Monday, October 06, 2008 2:18 AM To: 'Chris Bruce'; miller@baolong.biz Cc: 'Bill Thon Jr'; Camilleri, Robert (R.H.)

Subject: RE: Valve Stem Trial - Louisville

Hi Chris,

The PPAP will be done by Oct and we are going to put off the series production accordingly. The shipping date for the first 300K 37% EPDM will be of Oct 27 and there is safe stock in Whelan to connect this sea shipment.

**Thanks** 

Raul **SBIC** 

From: Chris Bruce [mailto:cbruce@thonassociates.com]

Sent: Wednesday, October 01, 2008 10:47 PM

To: 'Raul'; miller@baolong.biz

Cc: 'Bill Thon Jr'; 'Camilleri, Robert (R.H.)' Subject: FW: Valve Stem Trial - Louisville

FYI,

I am beginning to think we need to prepare to ship additional 7L34-1700-AA as the launch timing discussed last week appears suspect at best. Any thoughts?

Chris

**From:** Gregorchik, Chris (C.) [mailto:cgregorc@ford.com]

Sent: Wednesday, October 01, 2008 10:06 AM To: Chris Bruce; Camilleri, Robert (R.H.)

Cc: Bill Thon Jr

Subject: RE: Valve Stem Trial - Louisville

I will not be able to trial these parts until week of Oct 13 due pending downweek.

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

**From:** Chris Bruce [mailto:cbruce@thonassociates.com] Sent: Wednesday, September 17, 2008 10:18 AM

**To:** Camilleri, Robert (R.H.)

Cc: Gregorchik, Chris (C.); 'Bill Thon Jr' Subject: RE: Valve Stem Trial - Louisville

Rob,

The parts have been shipped via DHL, # DHL 29009683555. They should arrive to Chris's attention by Friday.

#### Best,

#### Chris

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, September 17, 2008 6:58 AM

To: Chris Bruce

Subject: Valve Stem Trial - Louisville

# Chris, please make arrangements to send a box of valve stems down to Chris Gregorchik. Thanks

From: Gregorchik, Chris (C.)

Sent: Tuesday, September 16, 2008 4:51 PM

**To:** Camilleri, Robert (R.H.) **Subject:** Valve Stem Trial

Send Parts to

Louisville Assembly Plant

Attn: Chris Gregorchik / Amy Pope

2000 Fern Valley Road Louisville KY 40213

Regards,

Chris Gregorchik

PVT Chassis Engineer - Louisville Assembly Plant

Phone: 502 364 3722

Cell Phone/Pager: 313 805 0673

From: Mracna, Chris (C.J.)

**Sent:** Tuesday, May 27, 2008 3:08 PM

To: Camilleri, Robert (R.H.); Campbell, Keith (K.A.)
Cc: Nasser, Kais (K.A.); Bliznick, Thomas (T.G.)

Subject: RE: Valve Stem Preliminary Results

Some further preliminary results were reported from the lab this afternoon. Both the Schrader & Dill valve stems were identified as EPDM rubber. The scans were distinctly different than the ones for the Baolong samples that we discussed earlier today. As you recall, the Baolong rubber samples were identified as Natural Rubber (NR). The additional current production Baolong samples were submitted to the lab this afternoon for analysis. The results of the infrared spectroscopy will be available tomorrow.

Please let me know if you have any questions.

#### Regards,

Chris Mracna

Chassis Materials Engineering
Brakes, Exhaust, Suspension, and Wheels
Ford Motor Company
(313) 805-4483
cmracna@ford.com
Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Mracna, Chris (C.J.)

**Sent:** Thursday, May 22, 2008 2:48 PM

To: Mracna, Chris (C.J.); Camilleri, Robert (R.H.); Gillman, Paul (P.D.); Nasser, Kais (K.A.); Bliznick, Thomas (T.G.)

**Subject:** Valve Stem Preliminary Results

When: Tuesday, May 27, 2008 10:15 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).

Where: Central Lab

Meet to review the preliminary durometer and infrared spectroscopy results of the submitted cracked and reference valve stems

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Ryan Casady [rcasady@schrader.co.uk]

Sent: Tuesday, August 05, 2008 9:43 AM

To: Bishel, Mike (M.)

Cc: Camilleri, Robert (R.H.)

Sorry,

That was a typo. The rubber is a mixture of SBR and EPDM as per the drawing.

**From:** Bishel, Mike (M.) [mailto:mbishel@ford.com]

Sent: Mon 8/4/2008 12:31 PM

**To:** Ryan Casady

Cc: Camilleri, Robert (R.H.)

Subject: TPMS snap-in sensor - Material

## Ryan,

Based on the Ford test data, the material composition of the snap-in valve for TPMS sensor indicates that the material is SBR and not EPDM.

Please confirm the composition. Thanks. <<Schrader France - New Ford TPMS.pdf>> <<Schrader China.pdf>>

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From: Jennings, Jonathan (A.)

**Sent:** Wednesday, June 25, 2008 11:21 AM

To: Rohweder, David (D.S.)
Cc: Song, Stuart (S.S.)

Subject: RE: Tire Valves from Baolong

#### Ok. Please make certain Kervin supports. Thanks.

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# Jonathan A. Jennings II

# Asia Pacific & Africa STA Engineering Director

From: Rohweder, David (D.S.)

**Sent:** Tuesday, June 24, 2008 4:45 PM

To: Jennings, Jonathan (A.)
Cc: Song, Stuart (S.S.)
Subject: Tire Valves from Baolong

I need to make sure we don't have an issue with the compounding of the rubber used in the Baolong valves. I need Stuart's expertise to review the process at this plant in China.

#### David Rohweder

Mgr. Tires & Wheels Engineering drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

Mracna, Chris (C.J.) From:

Monday, July 07, 2008 10:54 AM Sent:

To: Bliznick, Thomas (T.G.)

Camilleri, Robert (R.H.); Rohweder, David (D.S.) Cc:

RE: Tire valve analysis Subject:

#### Tom,

ARDL's results conflict with the results that we've obtained at Central Lab. I am interested in reviewing the ARDL's FTIR curves in addition to their final report. Do you know when their final report will be received?

## Thanks,

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Camilleri, Robert (R.H.)

Monday, July 07, 2008 10:45 AM Sent:

Mracna, Chris (C.J.) To: FW: Tire valve analysis Subject:

fyi

From: Bliznick, Thomas (T.G.) Sent: Friday, June 27, 2008 5:23 PM Camilleri, Robert (R.H.) To: Cc: Rohweder, David (D.S.)

Subject: Tire valve analysis

# Preliminary analysis data from ARDL:

|    | <u>Valve</u>             | <u>Supplier</u> | <u>Country</u> | <u>Composition</u>               |
|----|--------------------------|-----------------|----------------|----------------------------------|
|    | 7L34-1700-AA used        | Baolong         | China          | 90% EPDM / 10% Natural           |
| 1B | 7L34-1700-AA new 5/9/08  | Baolong         | China          | 80% EPDM / 20% Natural           |
| 2. | 6C34-1700-AC new 5/16/08 | Baolong         | China          | 80% EPDM / 20% Natural           |
| 3. | New release, Ford , TPMS | Schrader        | France         | 80% SBR / 20% Butadiene          |
| 4. | 2008 Ford Kuga           | EHA             | Germany        | 55% EPDM / 30% Natural / 15% SBR |
| 5. | 2008 Chevy Malibu        | Schrader        | China          | 100% EPDM                        |
| 6. | 2007 Acura MDX           | Pacific         | USA            | 85% SBR / 15% Butadiene          |
| 7. | 2008 Honda CRV           | Pacific         | Japan          | 85% SBR / 15% Butadiene          |

# **Thomas Bliznick**

**Laboratory Development Analyst** 

Ford Motor Co., Central Laboratory Polymers, Coatings, and Corrosion Section (313) 33-78487

Re: Tire valve analysis

Page 1 of 2

**From:** John Baldwin [jbaldwin@exponent.com]

**Sent:** Sunday, June 29, 2008 6:36 PM

To: Rohweder, David (D.S.)

Cc: David Bauer

Subject: Re: Tire valve analysis

I think they are wrong. The good news is they found the epdm, however, it is very hard to quantify how much epdm. Have Tom ask them for their spectra/data and their analysis. Bauer and I will take a look.

John

On 6/28/08 7:54 AM, "David Rohweder" < <a href="mailto:drohwede@ford.com">drohwede@ford.com</a>> wrote:

# What do you make of this

**David Rohweder** 

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

**From:** Bliznick, Thomas (T.G.)

**Sent:** Friday, June 27, 2008 5:23 PM

**To:** Camilleri, Robert (R.H.) **Cc:** Rohweder, David (D.S.) **Subject:** Tire valve analysis

Preliminary analysis data from ARDL:

|    | Valve                    | Supplier | Country | Composition                      |
|----|--------------------------|----------|---------|----------------------------------|
|    |                          |          |         |                                  |
| 1A | 7L34-1700-AA used        | Baolong  | China   | 90% EPDM / 10% Natural           |
| 1B | 7L34-1700-AA new 5/9/08  | Baolong  | China   | 80% EPDM / 20% Natural           |
| 2. | 6C34-1700-AC new 5/16/08 | Baolong  | China   | 80% EPDM / 20% Natural           |
| 3. | New release, Ford , TPMS | Schrader | France  | 80% SBR / 20% Butadiene          |
| 4. | 2008 Ford Kuga           | EHA      | Germany | 55% EPDM / 30% Natural / 15% SBR |
| 5. | 2008 Chevy Malibu        | Schrader | China   | 100% EPDM                        |
| 6. | 2007 Acura MDX           | Pacific  | USA     | 85% SBR / 15% Butadiene          |
| 7. | 2008 Honda CRV           | Pacific  | Japan   | 85% SBR / 15% Butadiene          |

# Thomas Bliznick Laboratory Development Analyst

Ford Motor Co., Central Laboratory Polymers, Coatings, and Corrosion Section (313) 33-78487 From: Mracna, Chris (C.J.)

**Sent:** Monday, August 04, 2008 11:53 AM

To: Bishel, Mike (M.)

Cc: Camilleri, Robert (R.H.)

Subject: RE: Pyro GC/MS Results

Attachments: Schrader France - New Ford TPMS.pdf; Schrader China.pdf

#### Mike,

Per Rob's request, I have attached the FTIR spectra for the Schrader valves.

# Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Camilleri, Robert (R.H.)

**Sent:** Monday, August 04, 2008 9:30 AM

**To:** Mracna, Chris (C.J.) **Cc:** Bishel, Mike (M.)

Subject: RE: Pyro GC/MS Results

Chris, please send the IR spectra for the Schrader China and Schrader France valve stems to Mike Bishel. Mike is the lead for the Schrader TPMS valve stem, which Schrader has stated is 100% EPDM. Thanks

When do you expect that ARDL will submit the final report? Thanks

From: Mracna, Chris (C.J.)

Sent: Friday, August 01, 2008 1:46 PM

To: Rohweder, David (D.S.)

Cc: Bliznick, Thomas (T.G.); Camilleri, Robert (R.H.)

Subject: RE: Pyro GC/MS Results

We are confident in our ability to distinguish between SBR and EPDM. The styrene (S) in SBR has a distinct peak that EPDM does not have. I've compared the IR spectra between the Schrader (France) TPMS and Schrader (China) and can confirm that there are distinct differences between the curves.

# Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Rohweder, David (D.S.)

Sent: Friday, August 01, 2008 6:01 AM

To: Mracna, Chris (C.J.); Camilleri, Robert (R.H.)

**Cc:** Bliznick, Thomas (T.G.) **Subject:** RE: Pyro GC/MS Results

How confident are we in our ability to distinguish between SBR and EPDM? For example, why would the Schrader TPMS valve test at 100% SBR when they claim to use 100% EPDM?

### David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Mracna, Chris (C.J.)

Sent: Thursday, July 31, 2008 11:04 PM

To: Rohweder, David (D.S.); Camilleri, Robert (R.H.)

**Cc:** Bliznick, Thomas (T.G.) **Subject:** RE: Pyro GC/MS Results

Update from ARDL is that the remaining retested samples, using the new Pyrolysis+GC/MS test method, are comparable to the initial results using the original pyrolysis test method. There are no blend ratio master curves for them to use with the new test method, so we're going with the results from the initial analysis as a comparison. Here are the results.

New Pyrolysis+GC/MS Test Method

Baolong (China) - New, Mfg Date 5/9/08
Baolong (China) - New, Mfg Date 5/16/08
Baolong (China) - Warranty Returned
24% EPDM, 76% NR
27% EPDM, 73% NR

#### Original Pyrolysis Test Method

• Schrader (France) - New, Ford TPMS 100% SBR

• EHA (Germany) - 2008 Ford Kuga 55% EPDM, 30% NR, 15% SBR

Schrader (China) - 2008 Chevy Malibu
 Pacific (USA) - 2007 Acura MDX
 Pacific (Japan) - 2008 Honda CRV
 100% SBR
 100% SBR

We don't have a gage R&R for the new test method, but the results look very close to what they should be (i.e. 28% EPDM, 72% NR). The results using the new test method certainly appear to provide a higher degree of resolution compared to the original test method that was used at both ARDL and Central Lab.

Please let me know if you have any additional questions.

Regards,

# Chris Mracna

Chassis Materials Engineering
Brakes, Exhaust, Suspension, and Wheels
Ford Motor Company
(313) 805-4483
cmracna@ford.com
Materials Engineering, Testing, and Standards (METS) TeamConnect Site

----Original Message----

From: Mracna, Chris (C.J.)

Sent: Thursday, July 31, 2008 9:38 AM

To: Bliznick, Thomas (T.G.)

Cc: Camilleri, Robert (R.H.); Rohweder, David (D.S.); Curtiss, Bill (W.J.); LaDuke, Jeff (M.)

Subject: RE: Pyro GC/MS Results

Tom,

Please call ARDL to find out where the report is for this testing. Please advise status ASAP.

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

----Original Message-----

From: Rohweder, David (D.S.)

Sent: Thursday, July 31, 2008 6:16 AM

To: Mracna, Chris (C.J.) Cc: Camilleri, Robert (R.H.) Subject: FW: Pyro GC/MS Results

This report only show 3 test results. When do I get the balance of the data that was quoted?

David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

----Original Message-----

From: Camilleri, Robert (R.H.) Sent: Friday, July 25, 2008 2:01 PM To: Rohweder, David (D.S.) Subject: FW: Pyro GC/MS Results

FYI

----Original Message----

From: Mracna, Chris (C.J.) Sent: Friday, July 25, 2008 1:13 PM To: Camilleri, Robert (R.H.) Subject: FW: Pyro GC/MS Results

Rob,

Attached is the preliminary report from ARDL from a few days ago. It contains compositional information from the first three Baolong samples. The sample IDs are noted in the report. We are currently waiting for the report that contains the remaining information for the rest of the sample (namely the benchmark samples).

These preliminary results are expected to remain unchanged in the final report. Based on the reported ratios, the new test method (Pyrolysis-GC/MS) appears to be able to identify the composition of the rubber samples.

We should receive the results for the remaining samples by cob today. I will forward you that report when we receive it.

Also, we should have timing for the percent ozonate testing that is also being conducted by ARDL by cob today.

Please review and let me know if you have additional questions.

Regards,

Chris Mracna

PE08-060 0595

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com Materials Engineering, Testing, and Standards (METS) TeamConnect Site

----Original Message-----From: Bliznick, Thomas (T.G.) Sent: Friday, July 25, 2008 12:44 PM To: Mracna, Chris (C.J.)

Subject: FW: Pyro GC/MS Results

Thomas Bliznick >Laboratory Development Analyst >Ford Motor Co., Central Laboratory >Polymers, Coatings, and Corrosion Section >(313) 33-78487

https://www.tc2.ford.com/ts/METS/default.aspx

----Original Message----

From: Tracy Keaton [mailto:tracyk@ardl.com]

Sent: Tuesday, July 15, 2008 2:22 PM

To: Bliznick, Thomas (T.G.)

Cc: Tom Knowles

Subject: Pyro GC/MS Results

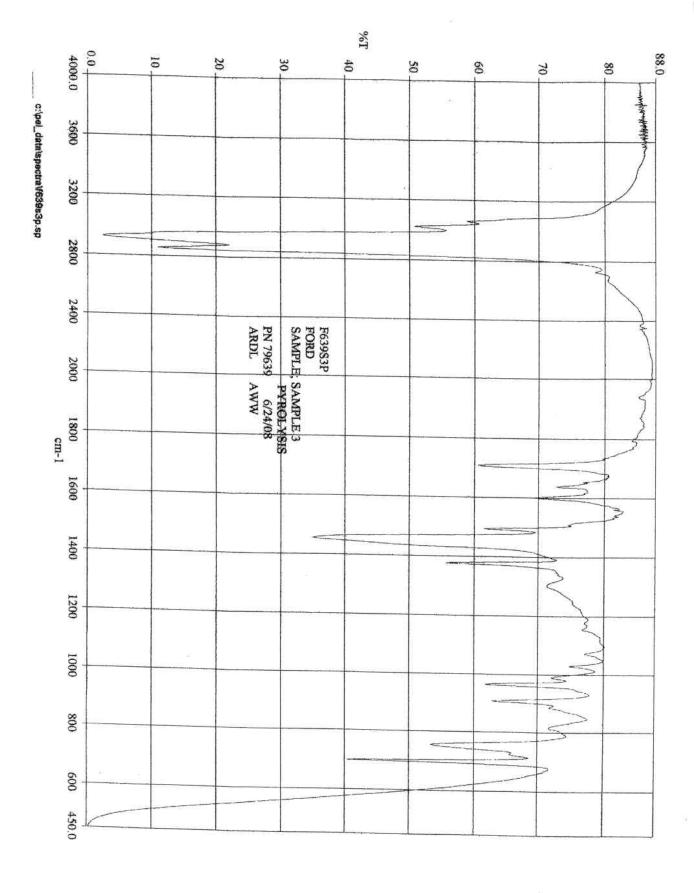
Mr. Bliznick,

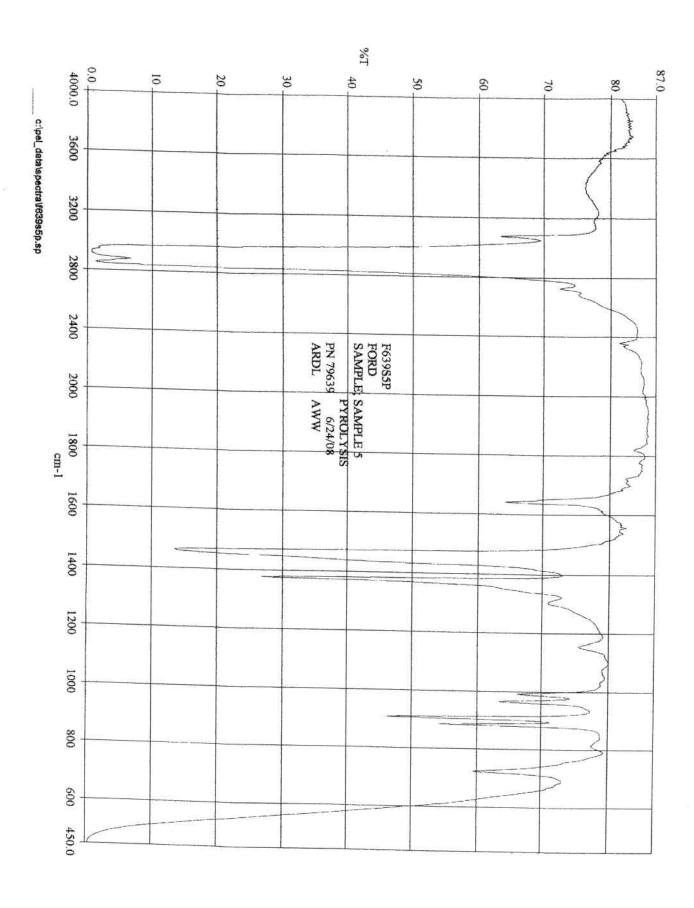
Attached are the results that Mr. Knowles discussed with you earlier today.

Thank you,

Tracy Keaton ARDL, Inc. 330-794-6600 Tel 330-794-6610 Fax <<Ford PN 79639 A.pdf>>

This email and any of its attachments may contain confidential information intended only for the use of the addressee(s). If the reader of this email is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination or copying of this email is strictly prohibited. If you have received this email in error, please notify us by return email at info@ardl.com, permanently delete the email, and destroy any printouts. If this email contains test data and/or draft reports, you are hereby notified that only a signed original test report will contain official results, a copy of which resides in the project folder located at ARDL, Inc. Thank you. Akron Rubber Development Laboratory, Inc.





From: Mracna, Chris (C.J.)

**Sent:** Monday, July 14, 2008 11:27 AM

To: Camilleri, Robert (R.H.)

Subject: RE: New Lab Request - URGENT

#### Rob,

The lab has completed the preliminary FTIR surface analysis of the valve stems that were submitted last week. All three show the presence of silicone on the surface. The silicone can be attributed to the silicone lubricant that is applied during assembly. Still gathering documentation photos.

# Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Mracna, Chris (C.J.)

Sent: Friday, July 11, 2008 11:12 AM
To: Camilleri, Robert (R.H.)
Subject: FW: New Lab Request - URGENT

Fyi, I've requested elevated status. I'll continue to follow-up.

From: Mracna, Chris (C.J.)

**Sent:** Friday, July 11, 2008 10:45 AM

**To:** LaDuke, Jeff (M.)

**Subject:** FW: New Lab Request - URGENT

#### Jeff,

This request has been upgraded to urgent status. Can we get preliminary results by cob Monday? Please advise.

#### Thanks, Chris

From: Mracna, Chris (C.J.)

**Sent:** Thursday, July 10, 2008 2:08 PM

**To:** LaDuke, Jeff (M.) **Subject:** New Lab Request

<< File: CLF07\_08 Request for Central Laboratory Service Form - rcamille 2.doc >>

# Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Elliott, Joel (J.F.)

Sent: Monday, May 19, 2008 7:01 AMTo: Ott, David (D.J.); Hartstang, Joe (.)Co: Goebel, Ken (K.M.); Burford, Chris (C.B.)

Subject: RE: Follow-up from this morning.

Nope, FCSD does not Purchase direct. Dill ACP (GSDB code ELMFA) is not an active site for Service.

# Regards, Joel Elliott

Purchasing Strategy and Technology Manager Ford Customer Service Division Ph 313 390 2174 Regent Court Building Rm 3S435

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From: Burford, Chris (C.B.)

Sent: Friday, May 16, 2008 3:23 PM

**To:** Elliott, Joel (J.F.)

Cc: Hartstang, Joe (.); Ott, David (D.J.); Goebel, Ken (K.M.)

**Subject:** FW: Follow-up from this morning.

Joel, can you handle and advise. thanks.

From: Hartstang, Joe (.)

**Sent:** Friday, May 16, 2008 1:32 PM

**To:** Burford, Chris (C.B.)

**Cc:** Ott, David (D.J.); Goebel, Ken (K.M.) **Subject:** FW: Follow-up from this morning.

Chris, I don't know who in your shop to contact specifically, so I am sending this to you.

Please advise Dave Ott if we have used Dill ACP and to what extent if applicable.

Thanks.

# Joe Hartstang

Manager, Field Service Actions Critical Parts Department PS&L Supply Chain - FCSD Phone 313-390-7604 From: Goebel, Ken (K.M.)

Sent: Friday, May 16, 2008 1:23 PM

**To:** Hartstang, Joe (.) **Cc:** Ott, David (D.J.)

**Subject:** FW: Follow-up from this morning.

Joe.

Can you get this info over the the most appropriate person in the service parts purchasing organization?

#### **Thanks**

Ken Goebel Program Manager Recall & Service Programs, FCSD 313-33-72791 kgoebel@ford.com

From: Ott, David (D.J.)

Sent: Friday, May 16, 2008 10:47 AM

**To:** Goebel, Ken (K.M.)

Subject: FW: Follow-up from this morning.

Reference my voice mail, same subject. We'd like to find out if we've used Dill valve stems in service.

Could you please either forward this note to the right FCSD contact or let me know who it is and I can contact them?

Thanks.

Dave

**From:** Gregory.Magno@dot.gov [mailto:Gregory.Magno@dot.gov]

Sent: Wednesday, May 14, 2008 12:30 PM

To: Nevi, Ray (R.A.)

Subject: Follow-up from this morning.

Ray-

Here is information from this morning. Attached are the two Taurus crash VOQs in their entirety. The owners consented to us sharing them with you.

Also attached is Dill's advisory concerning the valve stems.

Best regards,

Greg

# Gregory E. Magno

Chief, Defects Assessment Division Office of Defects Investigation US DOT / NHTSA

(202) 366-5226

From: Raul [Raul@baolong.biz]

Sent: Wednesday, August 13, 2008 3:00 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call
Attachments: MOLD# HISTORY.xls

Hi Rob.

Sorry for the delay. Attached please find the record related to the mold we've used for Ford and Tech since 2007.

**Thanks** 

Raul SBIC

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Tuesday, August 12, 2008 8:42 PM

To: Raul; Bill Thon Jr

Subject: RE: Conference Call

Raul, thank you for the prints. When can you provide the mold information for these Tech and Ford valve stems? Thanks

From: Raul [mailto:Raul@baolong.biz]
Sent: Tuesday, August 12, 2008 4:00 AM
To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call

Hi Rob.

Good day!

Attached please find the comparison print for these 3 valves.

TR413 & TR414

The difference is the indicator ring. Ford valves have it while Tech valves have not.

TR600HP

The size is different.

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Tuesday, August 12, 2008 12:51 AM

To: Raul; Bill Thon Jr

Subject: RE: Conference Call

Raul, OK we can wait until tomorrow. Thanks

From: Raul [mailto:Raul@baolong.biz]
Sent: Monday, August 11, 2008 9:08 AM
To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

**Subject:** RE: Conference Call

Hi Rob,

# Good day!

I searched my laptop and I'm sorry that I have not found the prints of the valves for aftermarket, but the drawings of Ford valves. Can we submit the comparison prints to you tomorrow as well as the mold no. history? Very sorry for the delay.

# **Best Regards**

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Monday, August 11, 2008 8:08 PM

**To:** Bill Thon Jr; Raul; Yao, Michael (G.C.); Chris Bruce; Li, Bo (Jason.)

**Subject:** Conference Call

We need to have a quick conference call today. I have several questions that I need answered and confirmed. Can we talk at 8:30 Detroit time?

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

|         | FORD MOLD# | TECH MOLD#           |
|---------|------------|----------------------|
| TR413   | 05, 06, 07 | G, K, 01, 05, 06, 07 |
|         |            |                      |
| TR414   | 06, 09, 11 | C, H, 04, 06         |
|         |            |                      |
| TR600HP | 06         | 01, 02, 03           |

From: Raul [Raul@baolong.biz]

Sent: Tuesday, August 12, 2008 4:00 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call

Attachments: TR600HP.doc; tr413.doc; tr414.doc

Hi Rob.

Good day!

Attached please find the comparison print for these 3 valves.

TR413 & TR414

The difference is the indicator ring. Ford valves have it while Tech valves have not.

TR600HP

The size is different.

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Tuesday, August 12, 2008 12:51 AM

To: Raul; Bill Thon Jr

Subject: RE: Conference Call

Raul, OK we can wait until tomorrow. Thanks

From: Raul [mailto:Raul@baolong.biz]
Sent: Monday, August 11, 2008 9:08 AM
To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call

Hi Rob.

Good day!

I searched my laptop and I'm sorry that I have not found the prints of the valves for aftermarket, but the drawings of Ford valves. Can we submit the comparison prints to you tomorrow as well as the mold no. history? Very sorry for the delay.

**Best Regards** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Monday, August 11, 2008 8:08 PM

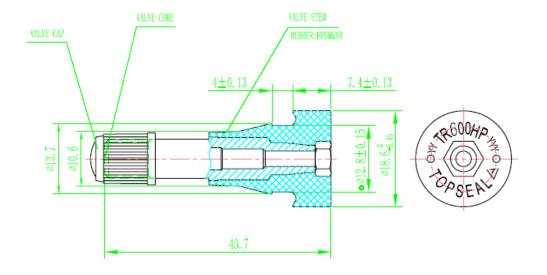
To: Bill Thon Jr; Raul; Yao, Michael (G.C.); Chris Bruce; Li, Bo (Jason.)

Subject: Conference Call

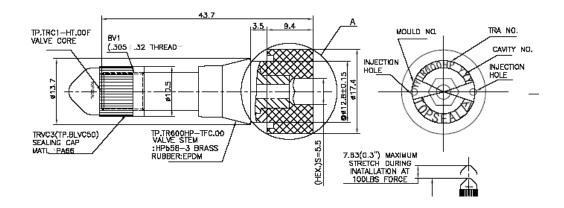
We need to have a quick conference call today. I have several questions that I need answered and confirmed. Can we talk at 8:30 Detroit time?

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

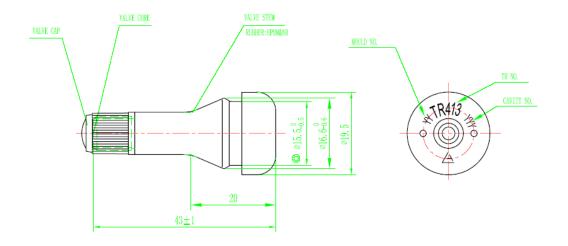
PE08-060 0606



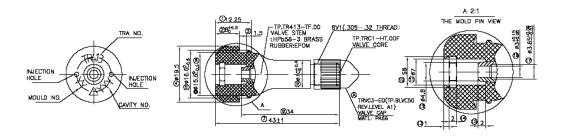
#### **TECH VALVES**



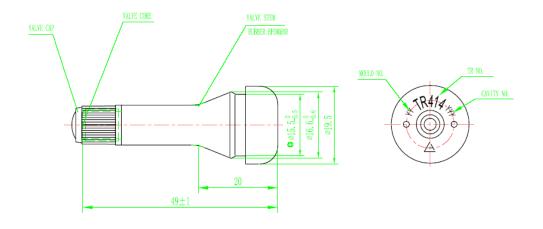
**FORD VALVES** 



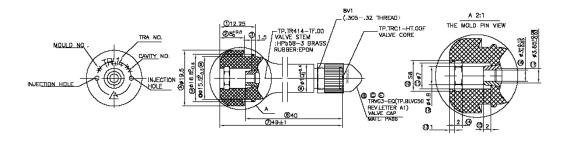
# **TECH VALVES**



FORD VALVES



# **TECH VALVES**



# FORD VALVES

From: Mracna, Chris (C.J.)

Sent: Thursday, September 11, 2008 12:01 PM
To: 'Chris Bruce'; Camilleri, Robert (R.H.)

Cc: 'Bill Thon Jr'

Subject: RE: C--Documents and Settings-lihai.tif

Agree with the rubber call-out. However, I still think the material info would be more readable in a BOM tabular format, rather than listed in various locations on the dwg.

Regards, Chris Mracna Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

-----Original Message-----

From: Chris Bruce [mailto:cbruce@thonassociates.com]

Sent: Thursday, September 11, 2008 8:43 AM To: Camilleri, Robert (R.H.); Mracna, Chris (C.J.)

Cc: 'Bill Thon Jr'

Subject: FW: C--Documents and Settings-lihai.tif

Rob and Chris,

Please see the attached drawing as promised by Baolong. If necessary, please mark up any required changes to what they have done thus far.

Thanks,

Chris Bruce

-----Original Message-----

From: Raul [mailto:Raul@baolong.biz]

Sent: Thursday, September 11, 2008 5:34 AM

To: 'Bill Thon Jr'; 'Chris Bruce'

Subject: C--Documents and Settings-lihai.tif

Hi Bill and Chris,

Attached please find the revised print of Tr414.

**Thanks** 

Raul

**SBIC** 

From: Yao, Michael (G.C.)

Sent: Wednesday, July 23, 2008 8:01 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong Wheel Valve Stem Testing

Attachments: Fixture1.JPG

Sorry. I didn't note this. After confirming with them, they will modify this fixture and redo the test. Please find the attachment and H1&H2 and L1&L2 have a little difference.

If you have any request, please let me know. Thanks



#### **Best Regards**

Yao GuoCheng (Michael)

 From:
 Camilleri, Robert (R.H.)

 Sent:
 2008年7月22日 22:06

 To:
 Yao, Michael (G.C.)

Subject: RE: Baolong Wheel Valve Stem Testing

Michael, I did not ask for Baolong to modify the fixture to run 6 of the 28 and 6 of the 37% EPDM valve stems simultaneously. I asked that they to verify that the test fixture is in working condition and meets the requirements of the ISO test procedure. Because the 37% valve stems in test 7047 showed abrasions at 20717 cycles and no abrasions on the 28% valve stem. The 37% valves where in test holes 1-3, which where the same test holes for the 28% valve stems that should abrasions at 20717 cycles in test 7044. I found this to be suspicious for the 37% EPDM valve stems. Please call me, if you have questions. Thanks

From: Yao, Michael (G.C.)

**Sent:** Tuesday, July 22, 2008 7:47 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong Wheel Valve Stem Testing

#### Robert,

Just to clarify, BaoLong needs to modify the fixture to run another 6 pcs for 28% & 37%.

The reason is that variability is too big. Is that correct? Please see the form below.

| 28% | 31,429 | 59,399  | 59,399  | 26,795 | 40,124 | 73,356 |
|-----|--------|---------|---------|--------|--------|--------|
| 37% | 35.076 | 108.167 | 163,080 | 86.395 | 40.124 | 40.124 |

# Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.)

Sent: 2008年7月22日 0:19

To: Yao, Michael (G.C.); billjr@thonassociates.com; 'Chris Bruce'; Raul

**Subject:** Baolong Wheel Valve Stem Testing

When: 2008年7月22日星期二 18:30-19:30 (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi.

Where: Teleconference

Please be prepared to discuss the Ozone test results for the 28 and 37% EPDM valve stems. Thanks

**Toll (International):** +1.313.621.3673

**Toll-free:** 1.888.621.3673 **Pass code:** 87595684



From: Bill Thon Jr [billjr@thonassociates.com]

**Sent:** Thursday, July 24, 2008 2:48 PM

To: Camilleri, Robert (R.H.); 'Chris Bruce'

Cc: miller@baolong.biz; 'Julie Troiani'; 'Raul'; 'zoe'

Subject: RE: BAOLONG VALVE SHIPMENTS TO FORD

Attachments: Revised FORD YMLU8364450 CB 7-16-08.xls

Hi Rob,

I entered the correct date...sorry about the mix-up.

Bill

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Thursday, July 24, 2008 2:25 PM

To: Chris Bruce

Cc: billjr@thonassociates.com; miller@baolong.biz; Julie Troiani; Raul; zoe

Subject: FW: BAOLONG VALVE SHIPMENTS TO FORD

Chris, the manufacturing date on lot 0627320 is identified as 7-13-08, but the shipment received date is identified as 8/15/06. Obviously a disconnect between the two date. Please update the file and return it to me. Thanks

**From:** Chris Bruce [mailto:cbruce@thonassociates.com]

Sent: Wednesday, July 16, 2008 10:03 AM

**To:** Camilleri, Robert (R.H.)

Cc:

Subject: BAOLONG VALVE SHIPMENTS TO FORD

Rob.

Attached please find three spreadsheets that trace the TR414 valve production from Baolong to the Ford Assembly plants. We were able to trace this by using the lot number and manufacture dates of material produced at Baolong during the suspect time frame. From there we traced these lots to the proper sea container and to our distribution center in Romulus, Michigan. From there we were able to tell you exactly when and to which Ford plants these parts were shipped. Hope this helps.

Regards,

Chris Bruce Baolong

248-625-5426

| CONTAINER YMLU8364450 RECEIVED ON 8/15/06   | LOT NUMBERS: 0627320                        | MFG DATE: 7-13-06                                      |              |
|---|---|--|--------------|
| PART NUMBER: FOC6-1700-AA LOAD ID SHIP DATE PLANT LOCATION  | CUSTOMER NAME                               | SHIP_FROM_NAME   | SUM(IH.Q     |
| 13372 986313 10/30/2006 SERVICIOS Y MONTAJES EAGLE  | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 12000        |
| 13503 986314 10/26/2006 T & WA OF LANSING   | T & WA LANSING                              | BAOLONG INDUSTRIES (FORD)                              | 12000        |
| 13592 990384 10/27/2006 FORD KANSAS CITY ASSY- AP06A  |   | BAOLONG INDUSTRIES (FORD)                              | 10000        |
| 13593 990385 10/27/2006 FORD MICHIGAN TRUCK- AP02A-   | AP02A - FORD MICHIGAN TRUCK                 | BAOLONG INDUSTRIES (FORD)                              | 4000         |
| 13594 990386 10/27/2006 FORD NORFOLK ASSY- AP12A-   | AP12A - FORD NORFOLK                        | BAOLONG INDUSTRIES (FORD)                              |              |
| 13650 1007202 10/30/2006 FORD MICHIGAN TRUCK- AP02A-  | AP02A - FORD MICHIGAN TRUCK                 | BAOLONG INDUSTRIES (FORD)                              | 3000         |
| 13656 1007207 10/30/2006 FORD WAYNE ASSY- AP16A-  | AP16A - FORD WAYNE                          | BAOLONG INDUSTRIES (FORD)                              | 4000         |
| 13763 1015377 11/1/2006 FORD KANSAS CITY ASSY- AP06A  |   | BAOLONG INDUSTRIES (FORD)                              | 10000        |
| 13765 1015379 11/1/2006 FORD WAYNE ASSY- AP16A-   | AP16A - FORD WAYNE                          | BAOLONG INDUSTRIES (FORD)                              | 10000        |
| 13892 1022002 11/3/2006 AUTO ALLIANCE INTERNATIONAL   | AUTOALLIANCE INTERNATIONAL INC              | BAOLONG INDUSTRIES (FORD)                              |              |
| 13950 1049979 11/6/2006 FORD KANSAS CITY ASSY- AP06A  |   | BAOLONG INDUSTRIES (FORD)                              | 10000        |
| 13996 1063921 11/7/2006 T & WA OF LANSING   | T & WA LANSING                              | BAOLONG INDUSTRIES (FORD)                              | 1000         |
| 14369 1115622 11/15/2006 FORD CHICAGO ASSY- AP03A-  | AP03A - FORD CHICAGO                        | BAOLONG INDUSTRIES (FORD)                              | 3000         |
| 14377 1115628 11/15/2006 FORD WAYNE ASSY- AP16A-  | AP16A - FORD WAYNE                          | BAOLONG INDUSTRIES (FORD)                              | 10000        |
| 14428 1119586 11/16/2006 SERVICIOS Y MONTAJES EAGLE   | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 37000        |
| 14691 1152152 11/22/2006 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES                    | BAOLONG INDUSTRIES (FORD)                              | 11000        |
| 15153 1217070 12/4/2006 FORD LOUISVILLE ASSY- AP09A-  | AP09A - FORD LOUISVILLE                     | BAOLONG INDUSTRIES (FORD)                              | 1000         |
| 15157 1217074 12/4/2006 FORD TWIN CITIES ASSY- AP15A-   | AP15A - FORD TWIN CITIES                    | BAOLONG INDUSTRIES (FORD)                              | 5000         |
| 15166 1217175 12/5/2006 NIPPON EXPRESS USA INC  | BAOLONG                                     | <b>BAOLONG INDUSTRIES (FORD)</b>                       | 1            |
| 15167 1217176 12/5/2006 NIPPON EXPRESS USA INC  | BAOLONG                                     | <b>BAOLONG INDUSTRIES (FORD)</b>                       | 64           |
| 15168 1217174 12/5/2006 NIPPON EXPRESS USA INC  | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 14           |
| 15291 1223948 12/7/2006 SERVICIOS Y MONTAJES EAGLE  | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 1000         |
| 15308 1223891 12/6/2006 FORD MICHIGAN TRUCK- AP02A-   | AP02A - FORD MICHIGAN TRUCK                 | BAOLONG INDUSTRIES (FORD)                              | 7000         |
| 15309 1223892 12/6/2006 FORD CHICAGO ASSY- AP03A-   | AP03A - FORD CHICAGO                        | BAOLONG INDUSTRIES (FORD)                              | 5000         |
| 15314 1223900 12/6/2006 FORD WAYNE ASSY- AP16A-   | AP16A - FORD WAYNE                          | BAOLONG INDUSTRIES (FORD)                              |              |
| 15316 1223902 12/6/2006 FORD OAKVILLE ASSY- AP20A-  | AP20A - FORD OAKVILLE                       | BAOLONG INDUSTRIES (FORD)                              | 8000         |
| 15317 1223903 12/6/2006 FORD ST. THOMAS ASSY- AP22A-  | AP22A - FORD ST. THOMAS                     | BAOLONG INDUSTRIES (FORD)                              | 9000         |
| 15318 1223924 12/6/2006 RENAISSANCE GLOBAL C/O PC07   |   | BAOLONG INDUSTRIES (FORD)                              | 1000         |
| 15361 1227731 12/7/2006 FORD DEARBORN STAMPING - MS   |   | ,  | 5000         |
| 15556 1262073 12/13/2006 BAOLONG  | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 500          |
| 15958 1301666 12/20/2006 FORD CHICAGO ASSY- AP03A-  | AP03A - FORD CHICAGO                        | BAOLONG INDUSTRIES (FORD)                              | 6000         |
| 15960 1301656 12/20/2006 FORD KANSAS CITY ASSY- AP06A   |   | BAOLONG INDUSTRIES (FORD)                              | 8000         |
| 15961 1301659 12/20/2006 FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE                     | BAOLONG INDUSTRIES (FORD)                              | 13000        |
| 15963 1301663 12/20/2006 FORD NORFOLK ASSY- AP12A-  | AP12A - FORD NORFOLK                        | BAOLONG INDUSTRIES (FORD)                              | 6000         |
| 15965 1301660 12/20/2006 FORD WAYNE ASSY- AP16A-  | AP16A - FORD WAYNE                          | BAOLONG INDUSTRIES (FORD)                              |              |
| 15967 1301662 12/20/2006 FORD OAKVILLE ASSY- AP20A-   | AP20A - FORD OAKVILLE                       | BAOLONG INDUSTRIES (FORD)                              | 8000         |
| 15968 1301667 12/20/2006 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS                     | BAOLONG INDUSTRIES (FORD)                              |              |
| 16072 1316519 12/22/2006 FORD MICHIGAN TRUCK- AP02A-  | AP02A - FORD MICHIGAN TRUCK                 | BAOLONG INDUSTRIES (FORD)                              | 7000         |
| 16073 1316520 12/22/2006 FORD CHICAGO ASSY- AP03A-  | APOSA FORD KANSAS CITY                      | BAOLONG INDUSTRIES (FORD)                              | 8000         |
| 16075 1316522 12/22/2006 FORD KANSAS CITY ASSY- AP06A 16077 1316524 12/22/2006 FORD WAYNE ASSY- AP16A-  |   | BAOLONG INDUSTRIES (FORD)                              | 11000        |
| 16077 1316524 12/22/2006 FORD WAYNE ASSY- AP16A-<br>16079 1316526 12/22/2006 FORD OAKVILLE ASSY- AP20A- | AP16A - FORD WAYNE<br>AP20A - FORD OAKVILLE | BAOLONG INDUSTRIES (FORD)<br>BAOLONG INDUSTRIES (FORD) | 8000<br>5000 |
| 16080 1316518 12/22/2006 AUTO ALLIANCE INTERNATIONAL  | AUTOALLIANCE INTERNATIONAL INC              | ` ,  | 18000        |
| 16081 1316495 12/22/2006 FORD DEARBORN STAMPING - MS  |   | ` ,  | 3000         |
| 16207 1370823 1/3/2007 FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE                     | BAOLONG INDUSTRIES (FORD)                              | 18000        |
| 16211 1370832 1/3/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES                    | BAOLONG INDUSTRIES (FORD)                              | 2000         |
| 16213 1370831 1/3/2007 FORD OAKVILLE ASSY- AP20A-   | AP20A - FORD OAKVILLE                       | BAOLONG INDUSTRIES (FORD)                              | 7000         |
| 16508 1406773 1/10/2007 FORD MICHIGAN TRUCK- AP02A-   | AP02A - FORD MICHIGAN TRUCK                 | BAOLONG INDUSTRIES (FORD)                              | 2000         |
| 16601 1413843 1/12/2007 FORD MICHIGAN TRUCK- AP02A-   | AP02A - FORD MICHIGAN TRUCK                 | BAOLONG INDUSTRIES (FORD)                              | 8000         |
| 16603 1413845 1/12/2007 FORD KANSAS CITY ASSY- AP06A  |   | BAOLONG INDUSTRIES (FORD)                              | 3000         |
| 16606 1413848 1/12/2007 FORD NORFOLK ASSY- AP12A-   | AP12A - FORD NORFOLK                        | BAOLONG INDUSTRIES (FORD)                              | 6000         |
| 16607 1413849 1/12/2007 FORD TWIN CITIES ASSY- AP15A-   | AP15A - FORD TWIN CITIES                    | BAOLONG INDUSTRIES (FORD)                              | 1000         |
| 16609 1413851 1/12/2007 FORD OAKVILLE ASSY- AP20A-  | AP20A - FORD OAKVILLE                       | BAOLONG INDUSTRIES (FORD)                              | 9000         |
| 16610 1413852 1/12/2007 AUTO ALLIANCE INTERNATIONAL   | AUTOALLIANCE INTERNATIONAL INC              | BAOLONG INDUSTRIES (FORD)                              | 21000        |
| 19180 1694417 3/7/2007 SCHENKERS LOGISTICS  | SCHENKERS GCC EXPORT                        | BAOLONG INDUSTRIES (FORD)                              | 164          |
| 19362 1721945 3/12/2007 FORD NEW PROGRAM WHSE   | FORD NEW MODEL PRG WHSE                     | BAOLONG INDUSTRIES (FORD)                              | 50           |
| 19363 1721946 3/12/2007 FORD NEW PROGRAM WHSE   | FORD NEW MODEL PRG WHSE                     | BAOLONG INDUSTRIES (FORD)                              | 100          |
| 19411 1730434 3/15/2007 FORD NMPDC MARKETPLACE  | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 50           |
| 19412 1726555 3/14/2007 BAOLONG   | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 250          |
| 21618 2040867 4/30/2007 FORD NMPDC MARKETPLACE  | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 10           |
| 21619 2040868 5/2/2007 NIPPON EXPRESS USA INC   | BAOLONG                                     | BAOLONG INDUSTRIES (FORD)                              | 5            |
|   |   |  |              |

From: Raul [Raul@baolong.biz]

**Sent:** Sunday, July 20, 2008 10:59 PM

To: Camilleri, Robert (R.H.); Yao, Michael (G.C.)Cc: Xu, Jackie (N.J.); 'Bill Thon Jr'; 'Chris Bruce'

Subject: RE: Baolong TR414 Wheel Valve Stem

Hi Rob and Michael,

#### Good day!

The Authorized Lab will issue the certificate report for the lube and the demoulding agent in 4 days and then we can arrange the dispatch. The shipping date will be around next Monday.

#### **Thanks**

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Tuesday, July 15, 2008 7:25 PM

**To:** Raul; Yao, Michael (G.C.)

**Cc:** Xu, Jackie (N.J.); Bill Thon Jr; Chris Bruce **Subject:** RE: Baolong TR414 Wheel Valve Stem

Hello Raul, thank you for the follow up. Please keep me informed on delivery and let me know, if you have any questions. Thanks

**From:** Raul [mailto:Raul@baolong.biz] **Sent:** Tuesday, July 15, 2008 2:31 AM

**To:** Yao, Michael (G.C.); Camilleri, Robert (R.H.) **Cc:** Xu, Jackie (N.J.); 'Bill Thon Jr'; 'Chris Bruce' **Subject:** RE: Baolong TR414 Wheel Valve Stem

Hi Rob.

Good day!

We are still checking the availability to deliver such liquid to you via express courier. We will keep you posted.

**Thanks** 

Raul SBIC

Chris as we discuss, the Ford Central lab is conducting a surface analysis of the Baolong TR414 valve stem Please provide me with a sample of the **silicone lubricant**, specified on the print, sprayed on the valve stems prior to shipping. This sample needs to be directly from the Baolong manufacturing facility, to ensure what we receive is what is being used. I also need a sample of the **mold separation agent** being used by Baolong. I am assuming that they are using a separation agent, let me know otherwise. Thanks

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com From: Yao, Michael (G.C.)

Sent: Monday, July 21, 2008 6:00 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Attachments: TR414(28%EPDM) and TR413(37%EPDM)flex test after ozone.doc

#### Robert,

Attached is report after ozone test. For 28% EPDM it takes 31,429 cycles and then 2# have a crack. For 37%, 4# have the crack when it's 35,076 cycles.

Tomorrow I will give you another 3 pcs test report.

Could you give your direction to tell us how can we do next step? Change the EPDM content or others? thanks

#### **Best Regards**

Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.) Sent: 2008年7月17日 19:18 To: Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Michael, thank you for the information.

From: Yao, Michael (G.C.)

Sent: Thursday, July 17, 2008 1:03 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong - Rubber Batch Mixing Process

#### Robert,

I asked the material engineer and for EPDM it doesn't have the grade and only have the brand--EPDM2340A.

For the natural rubber it has grade and it's SMR5.

# **Best Regards**

Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.)

**Sent:** 2008年7月16日 20:21

To: 'Raul'

Cc: 'Chris Bruce'; miller@baolong.biz; 'Bill Thon Jr'; Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Hi Raul, can you tell me what grade of natural rubber is used in the TR414 valve stem. We are planning to update our wheel valve stem engineering specification in the near future. We are thinking that we would identify materials and process requirements used by Baolong in it. Thanks for your help.

From: Raul [mailto:Raul@baolong.biz]
Sent: Wednesday, July 16, 2008 2:20 AM

**To:** Camilleri, Robert (R.H.)

Cc: 'Chris Bruce'; miller@baolong.biz; 'Bill Thon Jr'; Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Hi Rob,

Please see our answers in Blue,

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Tuesday, July 15, 2008 3:43 PM

To: Chris Bruce

Cc: Bill Thon Jr; Yao, Michael (G.C.)

Subject: Baolong - Rubber Batch Mixing Process

Chris, I have several questions regarding the materials and mixing procedures used by Baolong. An email response will do for know. If I have any follow up questions, I will schedule a meeting. Let me know, if you have any questions. Thanks

What percentage of remix is allowed during the rubber mixing process?

We don't allow any percentage of remix, such as the rubber left after the molding.

- Where does the remix come from? (i.e. left over from the injection process)
- What is the grade of the EPDM used to make the TR414 valve stem?

#### EPDM2340A

Who is the supplier of the EPDM?

#### Holland DSM

• When a batch of rubber is mixed, is all of it used at one time as one batch to make valves, or does some of it remain in the mixer?

Yes, all will be used at one time.

If any of it remains in the mixer, what steps are taken to keep it from getting to hot and over curing?

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

# Baolong central laboratory

# Test report

# FLEX TESTING (AFTER OZONE AGING) REPORT

NO:WX 200807044

| 样 品 名 称    | 卡扣气门嘴  | 实验项          | 抗疲劳              |  |  |
|------------|--|--------------|------------------|--|--|
| Article    | Snap-in tire valves  | 目            | Flex testing     |  |  |
|            |  | Test item    |                  |  |  |
| 型号/规       | 28% ( EPDM )   | 执 行 标        |                  |  |  |
| 格          | TR414(0807070202-FD)   | 准            |                  |  |  |
| Туре       | 37%(EPDM)TR413(211-14)   | Standard     |                  |  |  |
| 试 样 数 量    |  | 测试日          |                  |  |  |
| Quantity   | 6  | 期            | 2008.07.14-07.16 |  |  |
|            |  | Testing date |                  |  |  |
|            | TR414 和 TR413 各 3 只产   | 产品,抗臭氧试      | 验 72h 后,安装在疲劳测   |  |  |
|            | 试工装上,在常温环境下,气压 2bar,频率 2Hz,弯曲 25 度,经过疲劳冲击后,检测气门嘴 1 分钟无漏气,嘴体无裂纹.  Sample 28% EPDM TR414 and 37% EPDMTR413 for 3 pcs respectively, ozone test for 72h, the test valve shall be installed |              |                  |  |  |
| <br>  测试条件 |  |              |                  |  |  |
| Test       |  |              |                  |  |  |
| condition  | into a flexing test fixture, the valve assembly is pressurized to 2 bar and the flexing angle must be 25 deg from the valve axis. The  |              |                  |  |  |
|            | frequency must be 2 HZ   | S            |                  |  |  |
|            | minute, no leakage shoul crack.  |              | •                |  |  |

|            | TR414 疲劳 31429 次 28%EPDM2#嘴体发现断裂;疲劳 59399 次 28%EPDM1#3#嘴体发现断裂。 37%EPDMTR413 疲劳 35076 次 4#嘴体发现断裂;疲劳 108167 次 6#  |
|------------|---|
| 测试数据       | 嘴体发现断裂;疲劳 163080 次 5#嘴体发现断裂.  |
| Test data  | after flex testing 31,429 times 28%EPDM No.2# rubber were cracked and others were ok; after flex testing 59,399 times, 28%EPDM No.1# and No.3# tire valve was cracked; after flex testing 35,076 times, 37%EPDM No.4# tire valve was cracked; after flex testing 108,167times, 37%EPDM No.6# tire valve was cracked; after flex testing 163,080 times, 37%EPDM No.5# tire valve was cracked |
| 结 论        |   |
| conclusion |   |
| 附注 remark  | 本报告数据只对样品有效。The data only for samples   |

## 1. TR413(37%EPDM211-14)4#5#6#和 TR414(28%EPDM08070202)1#2#3#臭氧

## 72h 疲劳 20717 次嘴体磨损图片

After flex testing 20717times the status of the abraded valves



2. TR414(28%EPDM08070202)臭氧 72h 疲劳 31429 次 2#嘴体断裂图片 after flex testing 31,429 times 28%EPDM No.2# rubber were cracked





4. TR414(28%EPDM08070202)臭氧 72h 疲劳 59399 次 1#3#嘴体断裂图片 after flex testing 59,399 times, 28%EPDM No.1# and No.3# tire valve was cracked





6. . TR413(37%EPDM211-14)臭氧 72h 疲劳 163080 次 5#嘴体断裂图片 after flex testing 163,080 times, 37%EPDM No.5# tire valve was cracked



From: Raul [Raul@baolong.biz]

Sent: Wednesday, July 16, 2008 8:12 PM

To: Camilleri, Robert (R.H.)

Cc: 'Chris Bruce'; miller@baolong.biz; 'Bill Thon Jr'; Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

I will confirm it today.

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, July 16, 2008 8:21 PM

To: Raul

Cc: Chris Bruce; miller@baolong.biz; Bill Thon Jr; Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Hi Raul, can you tell me what grade of natural rubber is used in the TR414 valve stem. We are planning to update our wheel valve stem engineering specification in the near future. We are thinking that we would identify materials and process requirements used by Baolong in it. Thanks for your help.

From: Raul [mailto:Raul@baolong.biz]
Sent: Wednesday, July 16, 2008 2:20 AM

**To:** Camilleri, Robert (R.H.)

Cc: 'Chris Bruce'; miller@baolong.biz; 'Bill Thon Jr'; Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Hi Rob.

Please see our answers in Blue,

Thanks

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Tuesday, July 15, 2008 3:43 PM

To: Chris Bruce

Cc: Bill Thon Jr; Yao, Michael (G.C.)

Subject: Baolong - Rubber Batch Mixing Process

Chris, I have several questions regarding the materials and mixing procedures used by Baolong. An email response will do for know. If I have any follow up questions, I will schedule a meeting. Let me know, if you have any questions. Thanks

• What percentage of remix is allowed during the rubber mixing process?

We don't allow any percentage of remix, such as the rubber left after the molding.

- Where does the remix come from? (i.e. left over from the injection process)
- What is the grade of the EPDM used to make the TR414 valve stem?

EPDM2340A

• Who is the supplier of the EPDM?

Holland DSM

• When a batch of rubber is mixed, is all of it used at one time as one batch to make valves, or does some of it remain in the mixer?

Yes, all will be used at one time.

• If any of it remains in the mixer, what steps are taken to keep it from getting to hot and over curing?

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com From: Raul [Raul@baolong.biz]

**Sent:** Tuesday, July 29, 2008 5:58 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'; Yao, Michael (G.C.); Li, Bo (Jason.); Mracna, Chris (C.J.)

Cc: miller@baolong.biz; wangxianyong@baolong.biz; 'caojianming'; 'winston'

Subject: RE: Baolong 7/25/2008 Mtg Minutes

Attachments: 100% EPDM PRODUCTION TIMING PLAN.xls

Hi Rob.

#### Good day!

Attached please find the production timing plan for 100% EPDM. Please be kindly advised that it is based on the new internal mixer. And 37% EPDM production schedule will be same, if we use the new machine.

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Saturday, July 26, 2008 2:43 AM

**To:** Bill Thon Jr; Yao, Michael (G.C.); Raul; Li, Bo (Jason.); Mracna, Chris (C.J.)

Subject: Baolong 7/25/2008 Mtg Minutes

The following are open items that I captured during today's meeting. I will schedule a follow up meeting on Tuesday (7/29) to review these items. I do not believe that I have everyone's email address that attended the meeting. Please forward as required and contact me, if you have any questions. Thanks

- Timing to support Ford's current production needs with 100% EPDM TR414 valve stems
- Timing to support Ford's current production needs with 37% EPDM TR414 valve stems
- Timing to receive 50 pcs of 37% and 100% EPDM valve stems for testing at Ford Central Lab
- Supporting data that indicates that the 37% EPDM valve stem low cycle life was due to improper mixing
- Chemical additives identified for the 28,37 and 100% EPDM valve stems
- Baolong request warranty field sample to be returned for review

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

|                                | ITEMS   | TIMING                  | ASSIGNED BY |
|--------------------------------|---|-------------------------|-------------|
| PROJECT PLAN AND DETERMINATION | 100% EPDM COMPOUNDING PROJECT OPEN AND APPROVAL   | FROM JUNE 20 TO AUG 4   | RAUL        |
| PROJECT PLAN AND DETERMINATION | CROSS FUNCTIONAL TEAM SET UP                      | FROM JULY 26 TO AUG 4   | WINSTON     |
|                                | NEW INTERNAL MIXER INVESTMENT ANALYSIS            | FROM JULY 1 TO JULY 7   | CHENJUN LI  |
| NEW INTERNAL MIXER DEVELOPMENT | NEW INTERNAL MIXER PURCHASE APPLICATION           | FROM JULY 21 TO JULY 25 | FEI CHEN    |
|                                | NEW INTERNAL MIXER PROCUREMENT AND INSTALLATION   | FROM JULY 21 TO DEC 30  | JIM         |
|                                | 100% EPDM COMPOUNDING ADJUSTING AND DETERMINATION | FROM JULY 29 TO SEP 4   | FEI CHEN    |
| 100% EPDM COMPOUDING           | TR414 OF 100% EPDM SAMPLES PRODUCTION             | FROM SEP 5 TO SEP 10    | FEI CHEN    |
| DEVELOPMENT                    | DESIGN VERIFICATION                               | FROM SEP 11 TO SEP 24   | FEI CHEN    |
| DEVELOT MEIVI                  | CUSTOMERS APPROVAL FOR THE SAMPLES                | FROM SEP 25 TO OCT 8    | RAUL        |
|                                | FEASIBILITY COMMITMENT                            | FROM OCT 9 TO OCT 10    | FEICHEN     |
|                                | PRODUCTS AND PROCESS CHECK LIST                   | FROM OCT 15 TO OCT 16   | RUI ZONG    |
|                                | WORKSHOP LAYOUT CHECK                             | FROM OCT 15 TO OCT 16   | FEI CHEN    |
|                                | PROCESS FLOW CHART                                | FROM OCT 15 TO OCT 16   | FEI CHEN    |
|                                | SC MATRIX ANALYSIS                                | FROM OCT 20 TO OCT 21   | FEI CHEN    |
| PROCESS DESIGN AND DEVELOPMENT | PFMEA CHECK                                       | FROM OCT 20 TO OCT 21   | FEI CHEN    |
|                                | CONTROL PLAN CHECK                                | FROM OCT 20 TO OCT 21   | FEI CHEN    |
|                                | PROCESS INSTRUCTION                               | FROM OCT 27 TO OCT 28   | FEI CHEN    |
|                                | MSA PLAN  | FROM OCT 27 TO OCT 28   | RUI ZONG    |
|                                | PPK PLAN  | FROM OCT 15 TO OCT 16   | RUI ZONG    |
| PRODUCTS AND PROCESS           | TRIAL PRODUCTION                                  | FROM NOV 25 TO JAN 6    | XIUZHU XU   |
| VERIFICATION                   | PPAP  | FROM JAN 7 TO JAN 26    | RUI ZONG    |

From: Raul [Raul@baolong.biz]

**Sent:** Tuesday, July 29, 2008 6:14 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'; Yao, Michael (G.C.); Li, Bo (Jason.); Mracna, Chris (C.J.)

Cc: miller@baolong.biz; wangxianyong@baolong.biz; 'caojianming'; 'winston'

Subject: RE: Baolong 7/25/2008 Mtg Minutes

Additionally, here is the performance comparison chart among these 3 compounding,

|                            | 28% EPDM                                    | 37% EPDM                            | 100%EPC                         |
|----------------------------|---|-------------------------------------|---------------------------------|
| RUBBER BLENDING EVALUATION | PERFECT                                     | EXCELLENT                           | GOOD                            |
| RUBBER FLUIDITY            | PERFECT                                     | EXCELLENT                           | GOOD                            |
| TENSILE STRENGTH           | EXCELLENT                                   | EXCELLENT                           | GOOD                            |
|                            | ≥14MPa                                      | ≥14MPa                              | ≥12MPa                          |
| ELONGATION                 | GOOD  | GOOD                                | GOOD                            |
|                            | ≥400%                                       | ≥400%                               | ≥400%                           |
| TEARING STRENGTH           | GOOD  | GOOD                                | BAD                             |
|                            | ≥30KN/M                                     | ≥30KN/M                             | ≥25KN/N                         |
| FLEXING PERFORMANCE        | GOOD  | GOOD                                | BAD                             |
| ANTI AGING PERFORMANCE     | GOOD  | EXCELLENT                           | PERFEC                          |
| ANTI OZONE PERFORMANCE     | GOOD, W/ THE NECESSARY<br>ANTI OZONE AGENTS | EXCELLENT W/O ANTI<br>OZONE AGENTS  | PERFEC                          |
| CURING EVALUATION          | LOW MOLDING TEMP AND EASY OPERATION         | LOW MOLDING TEMP AND EASY OPERATION | HIGH MOLDING T<br>DIFFICULT OPE |
|                            | 150°C-160°C                                 | 150°C-160°C                         | 170°C-180                       |

#### Thanks

Raul SBIC

From: Raul [mailto:Raul@baolong.biz] Sent: Tuesday, July 29, 2008 5:58 PM

To: 'Camilleri, Robert (R.H.)'; 'Bill Thon Jr'; 'Yao, Michael (G.C.)'; 'Li, Bo (Jason.)'; 'Mracna, Chris (C.J.)'

Cc: 'miller@baolong.biz'; 'wangxianyong@baolong.biz'; 'caojianming'; 'winston'

**Subject:** RE: Baolong 7/25/2008 Mtg Minutes

Hi Rob,

Good day!

Attached please find the production timing plan for 100% EPDM. Please be kindly advised that it is based on the new internal mixer. And 37% EPDM production schedule will be same, if we use the new machine.

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Saturday, July 26, 2008 2:43 AM

To: Bill Thon Jr; Yao, Michael (G.C.); Raul; Li, Bo (Jason.); Mracna, Chris (C.J.)

**Subject:** Baolong 7/25/2008 Mtg Minutes

The following are open items that I captured during today's meeting. I will schedule a follow up meeting on Tuesday (7/29) to 0629

review these items. I do not believe that I have everyone's email address that attended the meeting. Please forward as required and contact me, if you have any questions. Thanks

- Timing to support Ford's current production needs with 100% EPDM TR414 valve stems
- Timing to support Ford's current production needs with 37% EPDM TR414 valve stems
- Timing to receive 50 pcs of 37% and 100% EPDM valve stems for testing at Ford Central Lab
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- Chemical additives identified for the 28,37 and 100% EPDM valve stems
- Baolong request warranty field sample to be returned for review

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com From: Raul [Raul@baolong.biz]

Sent: Wednesday, July 30, 2008 2:53 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'; Yao, Michael (G.C.); Li, Bo (Jason.); Mracna, Chris (C.J.)

Cc: miller@baolong.biz; wangxianyong@baolong.biz; 'caojianming'; 'winston'

Subject: RE: Baolong 7/25/2008 Mtg Minutes

Attachments: 37% EPDM PRODUCTION TIMING PLAN.xls

Hi Rob,

#### Good day!

Attached please find the production timing plan for 37% EPDM, upon our current mixers. Please kindly note that our current machines will be able to mix 37% EPDM rubber after the necessary adjustment.

#### **Thanks**

Raul SBIC

From: Raul [mailto:Raul@baolong.biz] Sent: Tuesday, July 29, 2008 5:58 PM

To: 'Camilleri, Robert (R.H.)'; 'Bill Thon Jr'; 'Yao, Michael (G.C.)'; 'Li, Bo (Jason.)'; 'Mracna, Chris (C.J.)'

Cc: 'miller@baolong.biz'; 'wangxianyong@baolong.biz'; 'caojianming'; 'winston'

Subject: RE: Baolong 7/25/2008 Mtg Minutes

Hi Rob.

#### Good day!

Attached please find the production timing plan for 100% EPDM. Please be kindly advised that it is based on the new internal mixer. And 37% EPDM production schedule will be same, if we use the new machine.

Thanks

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Saturday, July 26, 2008 2:43 AM

To: Bill Thon Jr; Yao, Michael (G.C.); Raul; Li, Bo (Jason.); Mracna, Chris (C.J.)

**Subject:** Baolong 7/25/2008 Mtg Minutes

The following are open items that I captured during today's meeting. I will schedule a follow up meeting on Tuesday (7/29) to review these items. I do not believe that I have everyone's email address that attended the meeting. Please forward as required and contact me, if you have any questions. Thanks

- Timing to support Ford's current production needs with 100% EPDM TR414 valve stems
- Timing to support Ford's current production needs with 37% EPDM TR414 valve stems
- Timing to receive 50 pcs of 37% and 100% EPDM valve stems for testing at Ford Central Lab
- Supporting data that indicates that the 37% EPDM valve stem low cycle life was due to improper mixing
- Chemical additives identified for the 28.37 and 100% EPDM valve stems
- Baolong request warranty field sample to be returned for review

North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

| ITEMS   | TIMING                  | ASSIGNED BY |
|---|-------------------------|-------------|
| TO MIX THE RUBBER OF 37% EPDM BY AN OUTSOURCED INTERNAL MIXER |                         | FEI CHEN    |
| TO PRODUCE TR414 SAMPLES WITH THE ABOVE BLENDED RUBBER        | ON JULY 29              | FEI CHEN    |
| TO PRODUCE TR414 SAMPLES OF 28% EPDM                          | ON JULY 25              | FEI CHEN    |
| DUROMETER TESTING BEFORE AGING                                | ON JULY 30              | RUI ZONG    |
| FORCE TO SEAT AND FORCE TO PULL OUT                           | ON JULY 30              | RUI ZONG    |
| BURSTING  | ON JULY 30              | RUI ZONG    |
| AIR LEAKAGE TESTING AT LOW TEMP AND ROOM TEMP.                | FROM JULY 30 TO JULY 31 | RUI ZONG    |
| AIR LEAKAGE TESTING AT HIGH TEMP.                             | FROM AUG 1 TO AUG 2     | RUI ZONG    |
| FLEXING TESTING AS PER ETRTO                                  | FROM JULY 30 TO JULY 31 | RUI ZONG    |
| AGING TESTING   | FROM JULY 30 TO AUG 1   | RUI ZONG    |
| ADHESION TESTING  | ON JULY 30              | RUI ZONG    |
| DUROMETER TESTING AFTER AGING                                 | ON AUG 2                | RUI ZONG    |
| REST FOR 24 HOURS AFTER AGING                                 | ON AUG 3                | RUI ZONG    |
| OZONE TESTING FOR 72 HOURS                                    | FROM AUG 5 TO AUG 7     | RUI ZONG    |
| 1ST FLEXING TESTING AFTER OZONE TESTING                       | FROM AUG 8 TO AUG 10    | RUI ZONG    |
| 2ND FLEXING TESTING AFTER OZONE TESTING                       | FROM AUG 11 TO AUG 12   | RUI ZONG    |
| OZONE TESTING FOR MORE THAN 72 HOURS                          | FROM AUG 5 TO AUG 12    | RUI ZONG    |
| TESTING SUMMARY   | FROM AUG 13 TO AUG 14   | FEI CHEN    |
| TO ADJUST THE CURRENT MACHINES TO FIT 37% EPDM COMPOUNDING    | FROM AUG 15 TO AUG 19   | FEI CHEN    |
| TRIAL PRODUCTION  | FROM AUG 20 TO AUG 26   | FEI CHEN    |
| PV TESTING  | FROM AUG 27 TO SEP 16   | RUI ZONG    |
| UPDATE APQP   | FROM SEP 17 TO SEP 18   | SIMON LI    |
| SREA AND PPAP   | FROM SEP 19 TO SEP 25   | SIMON LI    |

From: Yao, Michael (G.C.)

**Sent:** Monday, July 07, 2008 10:25 PM

To: 'zongrui'; 'raul'; 'liguangfu'; 'chenfei'; 'wangxianyong@baolong.biz'

Cc: Camilleri, Robert (R.H.)

Subject: RE: Additional Wheel Valve Stem Testing

Attachments: Comparison testing timing 0708.xls

Updated timeline is attached. thanks

**Best Regards** 

Yao GuoCheng (Michael)

From: Yao, Michael (G.C.) Sent: 2008年7月7日 21:22

To: 'zongrui'; 'raul'; 'liguangfu'; 'chenfei'; wangxianyong@baolong.biz

Subject: RE: Additional Wheel Valve Stem Testing

Baolong team,

Please note this issue is very hot. Our managements concern it including China and NA and it's very serious. Please make this test as priority.

For attachment of 28% and 37% comparision which you sent to me, please give us quantity for every test item.

Attached is updated timing. Please make sure you can complete them. thanks

**Best Regards** 

Yao GuoCheng (Michael)

From: zongrui [mailto:zongrui@topseal.com.cn]

Sent: 2008年7月7日 16:56

**To:** Yao, Michael (G.C.); 'raul'; 'liguangfu' **Cc:** 'chenfei'; wangxianyong@baolong.biz

Subject: 答复: Additional Wheel Valve Stem Testing

#### 姚工您好!

附件是28%和37%EPDM卡扣嘴的全套实验报告和高温老化后疲劳第一次实验的对比,请查收! 另外28%和37%EPDM臭氧老化后疲劳对比实验由于实验室老化箱的缘故要比原计划推迟3天,大约7月16-17日第一次对比才能够完成 PE08-060 0634 发件人: Yao, Michael (G.C.) [mailto:gyao1@ford.com]

发送时间: Friday, July 04, 2008 8:59 AM

收件人: raul; liguangfu; zongrui

抄送: wangxianyong@baolong.biz; Li, Bo (Jason.) 主题: FW: Additional Wheel Valve Stem Testing

#### Raul&Rui,

Please help to prepare the completed test report and send them to us . thanks

#### TESTING ITEMS 28% EPDM 37% EPDM

FORCE TO SEAT (5PCS) Finished Test report Finished ADHESION TESTING (5PCS) Finished Test report Finished BURSTING TESTING (3PCS) Finished Finished Test report OZONE TESTING TOOLING DESIGN To be finished on June 29 To be finished on June 29 N/A OZONE TESTING TOOLING MANUFACTURE To be finished on July 3 To be finished on July 3 Photo AGING TESTING FOR 72 HOURS AS PER ES SPEC (6PCS) To be finished on July 2 To be finished on July 2

STABILIZING VALVES AT ROOM TEMPERATURE IN A DARK (6PCS) On July 3 On July 3 N/A OZONE TESTING AT 100PPHM AS PER ES SPEC (6PCS) From July 4 to July 6 From July 4 to July 6 N/A FLEXING TESTING TO FAILURE AFTER AGING TEST (6PCS) To be finished on July 8 (Estimated due date) To be finished on July 8 Photo&Test report

FLEXING TESTING TO FAILURE WITH OZONE TEST PARTS(6PCS) From July 7 to 8(Estimated due date) From July 7 to 8 (Estimated due date) Photo&Test report

#### **Best Regards**

#### Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.)

**Sent:** 2008年6月27日 23:20

To: 'Chris Bruce'

Cc: Yao, Michael (G.C.)

Subject: Additional Wheel Valve Stem Testing

Chris, I have had a last minute request for additional A to B testing of the 28% and 37% valve stems. In addition to the Flex testing of Aged and Ozone test valves. I need Flex test done on valve stems that have only been aged valves and valve stems that have had no preconditioning done to them. The following is the testing that Baolong should be conducting. Please have Baolong provide any updates to timing that maybe needed. Thanks

- Flex test to failure, valve stems that have been both aged and ozone tested (Per Ford ES)
- Flex test to failure, valve stems that have only been aged (Per Ford ES)
- Flex test to failure valve stems that have had no preconditioning (No aging or ozone testing)

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

| TESTING ITEMS   | 28% EPDM                               | 37% EPDM                               |
|---|--|--|
| FORCE TO SEAT (5PCS)                                    | Finished                               | Finished                               |
| ADHESION TESTING (5PCS)                                 | Finished                               | Finished                               |
| BURSTING TESTING (3PCS)                                 | Finished                               | Finished                               |
| OZONE TESTING TOOLING DESIGN                            | To be finished on June 29              | To be finished on June 29              |
| OZONE TESTING TOOLING MANUFACTURE                       | To be finished on July 3               | To be finished on July 3               |
| AGING TESTING FOR 72 HOURS AS PER ES SPEC (20PCS)       | To be finished on July 9               | To be finished on July 9               |
| STABILIZING VALVES AT ROOM TEMPERATURE IN A DARK (6PCS) | On July 10                             | On July 10                             |
| OZONE TESTING AT 100PPHM AS PER ES SPEC (6PCS)          | From July 11 to 13                     | From July 11 to 13                     |
| FLEXING TESTING TO FAILURE WITH OZONE TEST PARTS(6PCS)  | From July 14 to 18(Estimated due date) | From July 14 to 18(Estimated due date) |
| FLEXING TESTING TO FAILURE AFTER AGING TEST (3PCS)      | From July 11 to 13                     | From July 11 to 13                     |
| REPORT SUBMISSION                                       | On July 18(Depend on flexing test)     | On July 18(Depend on flexing test)     |

From: Mracna, Chris (C.J.)

Sent: Wednesday, August 06, 2008 4:04 PM

**To:** Rohweder, David (D.S.); Camilleri, Robert (R.H.)

**Subject:** RE: Additional requests

#### Update

Our Differential Scanning Calorimetry (DSC) thermal analysis (as described below) did not detect any notable differences between the 2007 & 2008 28% EPDM Baolong samples in terms of undercure. No exothermic peaks were observed on the heat flow curves. It did detect a small difference between the 28% & 37% Baolong samples. The 37% EPDM Baolong sample had a slightly different glass transition temperature compared to the 28% EPDM Baolong sample. This was expected because the rubber composition was different. The glass transition temperatures for all sample fell with the expected range of -55 to -65 C.

Another thermal analysis method called Thermal Gravimetric Analysis (TGA) was performed on the samples as well. Using this test, we were able to duplicate ARDL's ratio results. I believe we now have an in-house method that can accurately determine the percent EPDM in the blend without having to send future samples to ARDL for verification.

I hope to have a formal report to forward to you in a few days.

Bldg 4 is proceeding with the fabrication of the fatigue fixture. The motor drive unit will be delivered to them on Friday morning, and we're hoping to have timing for completion by then.

Please let me know if you have any further questions.

#### Regards,

Chris Mracna

Chassis Materials Engineering
Brakes, Exhaust, Suspension, and Wheels
Ford Motor Company
(313) 805-4483
cmracna@ford.com
Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Rohweder, David (D.S.)

Sent: Wednesday, August 06, 2008 5:35 AM

**To:** Mracna, Chris (C.J.) **Subject:** RE: Additional requests

thanks

David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Mracna, Chris (C.J.)

**Sent:** Tuesday, August 05, 2008 4:20 PM

**To:** Rohweder, David (D.S.) **Subject:** RE: Additional requests

The cross-link status is being measured using thermal analysis testing. There are different ways of evaluating cross-link status. One way is to put a sample of the rubber in a non-compatible solvent to see how much it swells. The amount of swell is proportional to the density of the cross-linking. Unfortunately, the method is only available for neat elastomers.

Elastomer blends need master samples of known composition to provide comparisons. We don't have known master blends of EPDM/NR, so this method was deemed unfeasible at this time.

Another method is to heat a sample of the unknown elastomer and measure the change in heat flow of the sample as the temperature increases. If the sample is undercured during molding, there will be remaining cross-link bonding sites available in the elastomer matrix. As the thermal energy in the sample continually increases, it will eventually reach a point where the bonds will form. This will result in a exothermic change in heat flow which can be measured by the test machine.

The thermal analysis testing was completed this afternoon. We're still evaluating and interpreting the results and should have something to report by tomorrow afternoon.

#### Regards,

Chris Mracna

Chassis Materials Engineering
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cmracna@ford.com
Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Rohweder, David (D.S.)

**Sent:** Tuesday, August 05, 2008 6:47 AM

**To:** Mracna, Chris (C.J.) **Subject:** RE: Additional requests

What about the crosslink status?

#### **David Rohweder**

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Mracna, Chris (C.J.)

**Sent:** Friday, August 01, 2008 3:02 PM

**To:** Rohweder, David (D.S.); Camilleri, Robert (R.H.)

**Subject:** RE: Additional requests

Here an update on the subsequent tests that we are currently pursuing:

#### Thermal Analysis

Preliminary results will be available Tuesday (8/5).

#### Tear Strength

The tension/tear test is on hold currently because I wanted Tom to work to get a dynamic ozone fixture going.

#### Dynamic Ozone

The ozone chamber has been retrofitted to run a dynamic test inside of it. A specimen fixture is currently being manufactured for this testing.

#### Fatigue Testing Fixture

Bldg 4 will build the fatigue test fixture. Central Lab will own and operate the fixture. I will work with the machinists at bldg 4 on timing and get them all the dwgs and pictures that they need.

#### Percent Ozonate Comparison

We have received preliminary results from ARDL.

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

From: Rohweder, David (D.S.)

Sent:

Thursday, July 31, 2008 6:17 AM Mracna, Chris (C.J.) Camilleri, Robert (R.H.) To: Cc: Addition requests Subject:

What is the status of the discussion we had around determining the cross linking status i.e. swell data and the tension/tear test?

#### **David Rohweder**

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Mracna, Chris (C.J.)

**Sent:** Friday, May 30, 2008 12:48 PM

To: Camilleri, Robert (R.H.)
Subject: RE: Valve Stems

Rob,

We're running two separate ozone tests, one per ASTM D1171 (SAE J1205) and the other per the Ford ES-F2UA-1700-AA (SAE J1206). The test procedures are different.

We started the ASTM D1171 method yesterday. It requires a 10 degree articulated conditioning period of 72-hours at 40C followed by 72-hours of ozone exposure at 50 ppm. We used some washers and coat hanger wire to articulate the valves to 10 degrees (or as close as possible). However, to maintain current timing, our conditioning period was only 24-hours at ambient followed by 72-hours of ozone exposure at 50 ppm. Parts will be out around noon Monday.

The Ford ES-F2UA-1700-AA is very similar to the SAE J1206, which requires non-articulated heat aging of the valve stems for 72-hours at 100C. The samples are then articulated to 10 degrees and conditioned in a dark area for 24-hours at ambient followed by a 72-hour ozone exposure at 100 ppm. The heat aging will be done Monday with the remaining portion of the procedure to be completed by next Friday.

100C for natural rubber will likely have a detrimental effect, since natural rubber is only good to 80-90C. This might have been a screening test to weed out natural rubber valve stems.

We're not sure why these two test procedures have different levels of ozone concentration.

Please let me know if you have any questions.

#### Regards,

Chris Mracna

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cmracna@ford.com
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From: Camilleri, Robert (R.H.)
Sent: Friday, May 16, 2008 7:55 AM

**To:** Mracna, Chris (C.J.) **Subject:** Valve Stem

Chris, please provide timing to complete the wheel valve stem analysis. I need to schedule a review with my management. Thanks

From: Mracna, Chris (C.J.)

Sent: Monday, July 21, 2008 5:48 PM

To: Camilleri, Robert (R.H.)
Subject: RE: Valve Stem Test Matrix

Attachments: Vavle Stem Test Matrix.xls

It helps when I attach the darn thing.

Vavle Stem
est Matrix.xls (4

From: Mracna, Chris (C.J.)

Sent: Monday, July 21, 2008 5:46 PM
To: Camilleri, Robert (R.H.)
Subject: Valve Stem Test Matrix

Rob.

Attached is a test matrix of the completed & in-process valve stem lab tests. Please review and let me know if you have any questions. Please forward accordingly. I'll keep it updated as the testing progresses.

#### Regards,

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

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| Complete /              | Type of Test | Lab           | Test                                       | Procedure                    | Sample IDs               | Results                                  | Report                    |
|-------------------------|--------------|---------------|--|------------------------------|--------------------------|--|---------------------------|
| In-Progress In-Progress | Chemistry    | Central Lab   | Surface Chemistry                          | FTIR                         | [Click Here]             | No Discernable Differences               | Pending                   |
| In-Progress             | Chemistry    | Central Lab   | Thermal Analysis                           | TGA & DSC                    | [Click Here]             | Pending                                  | <u>i criding</u>          |
| In-Progress             | Physical     | Central Lab   | Comparative Tear Strength                  | Instron                      | [Click Here]             | Pending                                  |                           |
| In-Progress             | Physical     | Central Lab   | Fatigue Testing Under Ozone Atmosphere     | Pending                      | <u>[Olloit Floro]</u>    | r onding                                 |                           |
|                         | ye.ea.       | 001111011 200 | r uniged realing ender element innerpries  | ES-F2UA-1700-AA, sec. III A, |                          |  |                           |
| In-Progress             | Physical     | Central Lab   | Ozone Exposure                             | except 25 deg articulation   | [Click Here]             | Pending                                  |                           |
| In-Progress             | Chemistry    | ARDL          | Elastomer Identification                   | FTIR - Cast Plate            | [Click Here]             | Inconclusive                             | Pending                   |
| ,                       |              |               |  |                              |                          | Inconclusive                             | Ţ.                        |
| In-Progress             | Chemistry    | ARDL          | Elastomer Identification                   | FTIR - Pyrolysis             | [Click Here]             | However, matched Central Lab results     | Pending                   |
| In-Progress             | Chemistry    | ARDL          | Identify Ratio of EPDM/NR                  | Pyrolysis - GC/MS            | [Click Here]             | Pending                                  |                           |
| In-Progress             | Chemistry    | ARDL          | Pecent Ozonate Comparison                  | TBD                          | [Click Here]             | Pending                                  |                           |
| In-Progress             | Physical     | ARDL          | Fatigue Testing Under Ozone Atmosphere     | Pending                      |                          |  |                           |
| Complete                | Chemistry    | Central Lab   | Elastomer Identification                   | FTIR - Pyrolysis             | [Click Here] [Click Here | Inconclusive                             | [Click Here] [Click Here] |
| Complete                | Physical     | Central Lab   | Comparative Durometer                      | ASTM D1415                   | [Click Here]             | See Report                               | [Click Here]              |
|                         |              |               |  | ASTM D1171                   |                          |  |                           |
|                         |              |               |  | (FLTM BP 101-01)             |                          |  |                           |
| Complete                | Physical     | Central Lab   | Ozone Exposure                             | (SAE J1205, sec. 4.7)        | [Click Here]             | No Cracks in Area of Interest            | [Click Here]              |
|                         |              |               |  | ES-F2UA-1700-AA, sec. III A  |                          | No Cracks in Area of Interest.           |                           |
|                         |              |               |  | (ISO 14960, sec. 5.7)        |                          | (Note cracks in wire fixturing region of |                           |
| Complete                | Physical     | Central Lab   | Ozone Exposure                             | (SAE J1206, sec. 4.7)        | [Click Here] [Click Here | German sample)                           | [Click Here] [Click Here] |
|                         |              |               |  |                              |                          | 37% EPDM samples perform better than     |                           |
| Complete                | Physical     | Baolong       | Ozone Exposure Followed by Fatigue Testing | ISO 14960                    | [Click Here]             | 28% EPDM                                 | [Click Here]              |
|                         |              |               |  |                              |                          | 37% EPDM samples perform much            |                           |
| Complete                | Physical     | Baolong       | Heat Aging Followed by Fatigue Testing     | ISO 14960                    | [Click Here]             | better than 28% EPDM                     | [Click Here]              |

From: Rohweder, David (D.S.)

Sent: Friday, August 01, 2008 6:01 AM

To: Mracna, Chris (C.J.); Camilleri, Robert (R.H.)

Cc: Bliznick, Thomas (T.G.)

Subject: RE: Pyro GC/MS Results

How confident are we in our ability to distinguish between SBR and EPDM? For example, why would the Schrader TPMS valve test at 100% SBR when they claim to use 100% EPDM?

#### **David Rohweder**

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Mracna, Chris (C.J.)

**Sent:** Thursday, July 31, 2008 11:04 PM

To: Rohweder, David (D.S.); Camilleri, Robert (R.H.)

**Cc:** Bliznick, Thomas (T.G.) **Subject:** RE: Pyro GC/MS Results

Update from ARDL is that the remaining retested samples, using the new Pyrolysis+GC/MS test method, are comparable to the initial results using the original pyrolysis test method. There are no blend ratio master curves for them to use with the new test method, so we're going with the results from the initial analysis as a comparison. Here are the results.

New Pyrolysis+GC/MS Test Method

Baolong (China) - New, Mfg Date 5/9/08
Baolong (China) - New, Mfg Date 5/16/08
Baolong (China) - Warranty Returned
24% EPDM, 76% NR
27% EPDM, 73% NR

#### Original Pyrolysis Test Method

• Schrader (France) - New, Ford TPMS 100% SBR

• EHA (Germany) - 2008 Ford Kuga 55% EPDM, 30% NR, 15% SBR

Schrader (China) - 2008 Chevy Malibu
 Pacific (USA) - 2007 Acura MDX
 Pacific (Japan) - 2008 Honda CRV
 100% SBR
 100% SBR

We don't have a gage R&R for the new test method, but the results look very close to what they should be (i.e. 28% EPDM, 72% NR). The results using the new test method certainly appear to provide a higher degree of resolution compared to the original test method that was used at both ARDL and Central Lab.

Please let me know if you have any additional questions.

Regards,

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

----Original Message-----From: Mracna, Chris (C.J.)

Sent: Thursday, July 31, 2008 9:38 AM

To: Bliznick, Thomas (T.G.)

Cc: Camilleri, Robert (R.H.); Rohweder, David (D.S.); Curtiss, Bill (W.J.); LaDuke, Jeff (M.)

Subject: RE: Pyro GC/MS Results

Tom

Please call ARDL to find out where the report is for this testing. Please advise status ASAP.

Chris Mracna

Chassis Materials Engineering Brakes, Exhaust, Suspension, and Wheels Ford Motor Company (313) 805-4483 cmracna@ford.com

Materials Engineering, Testing, and Standards (METS) TeamConnect Site

----Original Message----

From: Rohweder, David (D.S.)

Sent: Thursday, July 31, 2008 6:16 AM

To: Mracna, Chris (C.J.) Cc: Camilleri, Robert (R.H.) Subject: FW: Pyro GC/MS Results

This report only show 3 test results. When do I get the balance of the data that was quoted?

David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

----Original Message----

From: Camilleri, Robert (R.H.) Sent: Friday, July 25, 2008 2:01 PM To: Rohweder, David (D.S.) Subject: FW: Pyro GC/MS Results

FYI

-----Original Message-----From: Mracna, Chris (C.J.)

Sent: Friday, July 25, 2008 1:13 PM To: Camilleri, Robert (R.H.)

Subject: FW: Pyro GC/MS Results

#### Roh

Attached is the preliminary report from ARDL from a few days ago. It contains compositional information from the first three Baolong samples. The sample IDs are noted in the report. We are currently waiting for the report that contains the remaining information for the rest of the sample (namely the benchmark samples).

These preliminary results are expected to remain unchanged in the final report. Based on the reported ratios, the new test method (Pyrolysis-GC/MS) appears to be able to identify the composition of the rubber samples.

We should receive the results for the remaining samples by cob today. I will forward you that report when we receive it.

Also, we should have timing for the percent ozonate testing that is also being conducted by ARDL by cob today.

Please review and let me know if you have additional questions.

Regards,
Chris Mracna
Chassis Materials Engineering
Brakes, Exhaust, Suspension, and Wheels
Ford Motor Company
(313) 805-4483
cmracna@ford.com
Materials Engineering, Testing, and Standards (METS) TeamConnect Site

----Original Message-----From: Bliznick, Thomas (T.G.) Sent: Friday, July 25, 2008 12:44 PM

To: Mracna, Chris (C.J.)

Subject: FW: Pyro GC/MS Results

Thomas Bliznick >Laboratory Development Analyst >Ford Motor Co., Central Laboratory >Polymers, Coatings, and Corrosion Section >(313) 33-78487 >

https://www.tc2.ford.com/ts/METS/default.aspx

----Original Message-----

From: Tracy Keaton [mailto:tracyk@ardl.com]

Sent: Tuesday, July 15, 2008 2:22 PM

To: Bliznick, Thomas (T.G.)

Cc: Tom Knowles

Subject: Pyro GC/MS Results

Mr. Bliznick,

Attached are the results that Mr. Knowles discussed with you earlier today.

Thank you,

Tracy Keaton ARDL, Inc. 330-794-6600 Tel 330-794-6610 Fax <<Ford PN 79639 A.pdf>>

This email and any of its attachments may contain confidential information intended only for the use of the addressee(s). If the reader of this email is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination or copying of this email is strictly prohibited. If you have received this email in error, please notify us by return email at info@ardl.com, permanently delete the email, and destroy any printouts. If this email contains test data and/or draft reports, you are hereby notified that only a signed original test report will contain official results, a copy of which resides in the project folder located at ARDL, Inc. Thank you. Akron Rubber Development Laboratory, Inc.

From: Yao, Michael (G.C.)

Sent: Wednesday, September 10, 2008 10:55 PM

To: 'Raul'; 'raul@chinabaolong.net'

Cc: caojianming@baolong.biz; 'Mander Wang'; 'winston'; Li, Bo (Jason.)

Subject: RE:

Please update all these changes into control plan.

**Best Regards** 

Yao GuoCheng (Michael)

From: Raul [mailto:Raul@baolong.biz]

Sent: 2008年9月11日 10:13

**To:** Yao, Michael (G.C.); ygc1106@126.com

Cc: caojianming@baolong.biz; 'Mander Wang'; 'winston'

Subject: FW:

Here is more information,

Specifically list all changes to the physical equipment that will allow us to produce a valve with more EPDM. The machines are same without any changes. We've just adjusted the process parameter.

- 1. The natural rubber is added to the mixer by 2 times, 1/2+1/2. Originally, NR was mixed one time.
- 2. The anti-ozone agent is added to the mixer by 2 times too, 1/2+1/2. Originally, the chemicals were mixed one time.
- 3. We've prolonged the mixing time for the chemicals.

All the above work is done with the purpose to mix the rubber evenly and make the chemicals absorbed completely.

#### Previous.

- 1. Mixing NR and EPDM for 3 minutes
- 2. Then mixing the blended rubber for another 2 minutes after adding the chemicals
- 3. Adding the wax oil and carbon black and mixing the material for 2 minutes

#### Now,

- 1. Mixing 1/2 NR, EPDM and 1/2 chemicals for 3 minutes
- 2. Then mixing the blended rubber for another 2 minutes after adding 1/2 chemicals
- 3. Adding the wax oil and carbon black and mixing the material for 3 minutes.
- 4. Mixing the blended rubber for another 1.5 minutes after adding 1/2 NR.

**Thanks** 

Raul SBIC From: zoe [zoe@baolong.biz]

Sent: Wednesday, July 16, 2008 11:38 PM

To: Camilleri, Robert (R.H.)

Cc: 'Raul'; 'Chris Bruce'; miller@baolong.biz; 'Bill Thon Jr'

Subject: RE: : Baolong - Rubber Batch Mixing Process

Hi Rob.

Good day!

This is Zoe writing to you from Shanghai Baolong Automotive Corporation. I'm the colleague of Raul.

The grade of natural rubber is SMR5(from Malaysia).

If you have any question, please let us know.

Thanks & Best regards! Zoe Huo BAOLONG

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, July 16, 2008 8:21 PM

To: Raul

Cc: Chris Bruce; miller@baolong.biz; Bill Thon Jr; Yao, Michael (G.C.)

Subject: RE: Baolong - Rubber Batch Mixing Process

Hi Raul, can you tell me what grade of natural rubber is used in the TR414 valve stem. We are planning to update our wheel valve stem engineering specification in the near future. We are thinking that we would identify materials and process requirements used by Baolong in it. Thanks for your help.

From: Raul [mailto:Raul@baolong.biz]
Sent: Wednesday, July 16, 2008 2:20 AM

To: Camilleri, Robert (R.H.)

Cc: 'Chris Bruce'; miller@baolong.biz; 'Bill Thon Jr'; Yao, Michael (G.C.)

**Subject:** RE: Baolong - Rubber Batch Mixing Process

Hi Rob,

Please see our answers in Blue,

**Thanks** 

Raul SBIC

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Tuesday, July 15, 2008 3:43 PM

To: Chris Bruce

Cc: Bill Thon Jr; Yao, Michael (G.C.)

Subject: Baolong - Rubber Batch Mixing Process

Chris, I have several questions regarding the materials and mixing procedures used by Baolong. An email response will do for know. If I have any follow up questions, I will schedule a meeting. Let me know, if you have any questions. Thanks

What percentage of remix is allowed during the rubber mixing process?

We don't allow any percentage of remix, such as the rubber left after the molding.

- Where does the remix come from? (i.e. left over from the injection process)
- What is the grade of the EPDM used to make the TR414 valve stem?

#### EPDM2340A

• Who is the supplier of the EPDM?

#### Holland DSM

• When a batch of rubber is mixed, is all of it used at one time as one batch to make valves, or does some of it remain in the mixer?

Yes, all will be used at one time.

• If any of it remains in the mixer, what steps are taken to keep it from getting to hot and over curing?

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com From: Raul [Raul@baolong.biz]

Sent: Thursday, September 25, 2008 3:14 AM
To: Yao, Michael (G.C.); Camilleri, Robert (R.H.)
Cc: 'Bill Thon Jr'; 'Chris Bruce'; Li, Bo (Jason.)

Subject: RE: 4020 Attachments: RUBBER.zip

In USA, it's called 6PPD. Attached please find the rubber comparison sheet, including the report.

**Thanks** 

Raul SBIC

**From:** Yao, Michael (G.C.) [mailto:gyao1@ford.com] **Sent:** Thursday, September 25, 2008 2:41 PM

To: Raul; Camilleri, Robert (R.H.)

Cc: Bill Thon Jr; Chris Bruce; Li, Bo (Jason.)

Subject: RE: 4020

What's its name? Also send the rubber spec for EPDM type.

**Best Regards** 

Yao GuoCheng (Michael)

From: Raul [mailto:Raul@baolong.biz]

Sent: Thursday, September 25, 2008 2:12 PM

To: Camilleri, Robert (R.H.)

Cc: Yao, Michael (G.C.); 'Bill Thon Jr'; 'Chris Bruce'

Subject: RE: 4020

4020 has 2 functions.

Mainly it is against Ozone and meanwhile it is anti-aging too.

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, September 24, 2008 7:32 PM

To: Raul

Cc: Yao, Michael (G.C.); Bill Thon Jr; Chris Bruce

Subject: 4020

Raul, please remind me, what was the 4020 additive? Anti-aging, ozanant, or something else? Thanks

Robert H. Camilleri

North American Wheels, Tires, and Jacks

11/20/2008

Ford Motor Company 313-805-3389 rcamille@ford.com

PE08-060 0651 11/20/2008

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Date: 2007-Sep-14 Page: 1 of 2 DSM

Customer code: 41000924

33,069 15 MT 15 2007-Sep-14 Shipping Date: No. of Pkgs: Metric Tons: Pounds:

ASTIMDB047 5,40 6.60

**ASTIMD3900** 

**ISD248 ₹**₩

55,10

0.50

50.90

0.00

21.00

150289

29.00

Production Date

Batch Number

3207160057

3207160058

3207160059

3207160060 3207160082

Range Mex: Range Min: Method: Units:

2007-Jun-09 2007-Jun-09 2007-Jun-09 2007-Jun-09

%WT 

**上**%

Ethylene

Volatiles

Property: Mooney Viscosity, ML1+4, 125°C

6.33 6.33 6.24 6.24 6.24 6.24 6.24 6.24 6.24 6.24 6.24 6.24

53.80 53.80

24.20 24.20 24.20

53.80

0.29

53.52 53,52 53.52

0.24 0.24

25.10 25.10 24.70 24.70 24.70 24.70

2007-Jun-10

2007-Jun-10 2007-Jun-10

3207160083

2007-Jun-10 2007-Jun-10 2007-Jun-10 2007-Jun-10

3207160086

3207160088 3207160089 3207160090

3207160087

3207160085

3207160084

53.52 53.52 53.52 53.52 53,52 53.52

0.33 0.33 0.33 0.33 53.52

0.33

25,10

25.10 25.10 25.10

2007-Jun-10 2007-Jun-10 2007~Jun-10 24.70

2007-Jun-10

3207160092

3207160091

0.33 0.33

Inspection Certificate

| According to EN 10204 / 3.1 |

Material: Keltan® 2340A

THE GATEWAY EAST SINGAPORE 10-02/04 189721

DSM Elastomers Asia

DSM Elastomers

Customer P.O.: Car Number: Sales Order:

Shipping Order: 129421/80137022

07S0905 103813

SEAL:29945

Under normal conditions the shelf life of the material is guaranteed for 3 years, after production-date

88 CENTURY BOULEVARD, 19F JINMAO TOWER Phone: 65 6295 7188 / Fax: 65 6299 5848 Phone: 21 50498899 / Fax: 21 50498238 SINOCHEM INTERNATIONAL CORPORATION PUDONG NEW AREA 200121 SHANGHAL **MR JAMES** CHINA

| Certificate  |
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| I            |
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| Elastomers   |
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DSM Elastomers Asia

1 According to EN 10204 / 3.1 )

Customer code: 41000924

Date: 2008-Jul-24

Page: 1 of 2

DSM (6)

Material: Keltan ® DE3072/335-31 27 2008-Jul-24 24.300 MT 53,572 Shipping Date: Metric Tons: No. of Pkgs: Pounds: THE GATEWAY EAST SINGAPORE 10-02/04 189721 88 CENTURY BOULEVARD, 19F JINMAO TOWER Phone: 65 6295 7188 / Fax: 65 6299 5848 SINOCHEM INTERNATIONAL CORPORATION c/o MR Guo Chun Xiang PUDONG NEW AREA 200121 SHANGHAI

CHINA

Shipping Order: 157349/80167118 Customer P.O.: Car Number: Sales Order:

0880610

122594

SEAL:0057891

| Phane: 21 610 | Phone: 21 61048625 / Fax: 21 50498238 | 498238                                   |           |       |           |           |
|---------------|---------------------------------------|--|-----------|-------|-----------|-----------|
| !             | Property: Moaney 1                    | Property: Mooney Viscosity, ML1+4, 125°C | Volatiles | ã     | Ethylene  | ENB       |
|               | Units:                                | MU                                       | ™%        | ₩WT   | %WT       | %W⊤       |
|               | Method:                               | 150289                                   | 150248    | DSM   | ASTMD3900 | ASTMD6047 |
|               | Range Min:                            | 44.00                                    | 0.00      | 47.60 | 61.90     | 7.90      |
|               | Range Max:                            | 52.00                                    | 0.50      | 52.40 | 66.10     | 9.50      |
| Batch Number  | Production Date                       |  |           |       |           |           |
| 3408115113    | 2008-Apr-25                           | 47.00                                    | 0.23      | 50.07 | 64.31     | 8.89      |
| 3408115114    | 2008-Apr-25                           | 47.00                                    | 0.23      | 50.07 | 64.31     | 8.89      |
| 3408115115    | 2008-Apr-25                           | 47.00                                    | 0.23      | 50.03 | 64.31     | 8.89      |
| 3408115116    | 2008-Apr-25                           | 47.00                                    | 0.23      | 50.07 | 64.31     | 8.89      |
| 3408115117    | 2008-Apr-25                           | 45.40                                    | 0.38      | 50,07 | 64.31     | 8.89      |
| 3408115118    | 2008-Apr-25                           | 45,40                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115119    | 2008-Apr-25                           | 45.40                                    | 0.38      | 50,07 | 64.31     | 8.89      |
| 3408115120    | 2008-Apr-25                           | 45.40                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115121    | 2008-Apr-25                           | 45.40                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115122    | 2008-Apr-25                           | 45.40                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115123    | 2008-Apr-25                           | 45,40                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115124    | 2008-Apr-25                           | 45.40                                    | 0.3B      | 50.07 | 64.31     | B.89      |
| 3408115125    | 2008-Apr-25                           | 46.00                                    | 0.38      | 50.07 | 64.31     | B.89      |
| 3408115126    | 2008-Apr-25                           | 45.00                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115127    | 2008-Apr-25                           | 46.00                                    | 0.38      | 50.07 | 64.31     | B.89      |
| 3408115128    | 2008-Apr-25                           | 46.00                                    | 0.38      | 50.07 | 64.31     | B.89      |
| 3408115129    | 2008-Apr-25                           | 46.00                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115130    | 2008-Apr-25                           | 46.00                                    | 0.38      | 50.07 | 64.31     | 8.83      |
| 3408115131    | 2008-Apr-25                           | 46.00                                    | 0.38      | 50.07 | 64.31     | 8.89      |
| 3408115132    | 2008-Apr-25                           | 45.50                                    | 0.48      | 50.07 | 64.31     | 8.89      |
| 3408115133    | 2008-Apr-25                           | 45.50                                    | 0.48      | 50.07 | 64.31     | 8.83      |
| 3408115134    | 2008-Apr-25                           | 45.50                                    | 0.48      | 50.07 | 64.31     | 8.89      |
| (4            |                                       |  |           |       |           |           |

|                    |                 | 2340A     | DE3072      | NOTE  |
|--------------------|-----------------|-----------|-------------|---|
| Mooney Viscosity M | IL(1+4)125°C MU | 21—29     | 44—52       | DE3072 has better strength and heat tolerance                           |
| Volatile           | wt%             | 0—0.5     | 0—0.5       |   |
| Ethylene Content   | wt%             | 50.9—55.1 | 61.90—66.10 | DE3072 has better strength and heat tolerance                           |
| ENB Content        | wt%             | 5.4—6.6   | 7.9—9.5     | DE3072 has better chemical reaction speed and benefit the rubber mixing |
| Oil                | wt%             |           | 0 47.6—52.4 |   |

From: Raul [Raul@baolong.biz]

Sent: Wednesday, October 15, 2008 5:29 AM

To: Camilleri, Robert (R.H.)

Cc: Yao, Michael (G.C.); 'Bill Thon Jr'; 'Chris Bruce'; 'winston'; 'Jim Cao'

Subject: RE: 37% EPDM

Hi Rob,

We feel very sorry for this unexpected change. Please find our answers below,

# Why are we finding this out now, with less then 5 days prior to the shipping date?

Actually we have been discussing it internally since the beginning, but draw the conclusion at this time. 37% is the new compounding that we've never introduced in the market. So we'd better have more time for the ramp up upon the serial production.

• What is it about the production of the 37% EPDM valve that Baolong needs more time to familiarize themselves with?

To verify the serial production parameters during the following days.

From Oct 15 to Oct 22, we are going to produce 15K pcs everyday.

From Oct 23 to Nov 5, we are going to produce 37.5K pcs every day.

From Nov 6 to Nov 15, we are going to produce 75k pcs every day.

Totally, there will be 1M for the purpose of verification.

# What specifically about the 37% valve does Baolong plan to verify in the aftermarket?

We want to check the tire valves performance, such as the air leakage, anti-ozone, anti-aging...all the items specified in DVP. We will approve the above trial parts firstly and then ship them to our local customers. And we will follow up the feedback from these customrs.

What is the minimum number of valves that Baolong needs to ship to meet Ford's production needs?

300K 28% EPDM valves.

# What is the revised timing plan?

300K 28% EPDM to be shipped on Oct 27 300K 37% EPDM to be shipped on Nov 24.

We can discuss more in the coming conference call.

Thanks

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, October 15, 2008 2:27 AM

To: Raul

Cc: Yao, Michael (G.C.); Bill Thon Jr; Chris Bruce; winston; Jim Cao

**Subject:** RE: 37% EPDM

Raul, this is not going to be accepted very well with my management. These are just some of the questions that they will ask. We can discuss more at tomorrow's meeting.

- Why are we finding this out now, with less then 5 days prior to the shipping date?
- What is it about the production of the 37% EPDM valve that Baolong needs more time to familiarize themselves with?
- What specifically about the 37% valve does Baolong plan to verify in the aftermarket?
- What is the minimum number of valves that Baolong needs to ship to meet Ford's production needs?

PE08-060 0655

# What is the revised timing plan?

From: Raul [mailto:Raul@baolong.biz]
Sent: Tuesday, October 14, 2008 4:28 AM

**To:** Camilleri, Robert (R.H.)

Cc: Yao, Michael (G.C.); 'Bill Thon Jr'; 'Chris Bruce'; 'winston'; 'Jim Cao'

Subject: RE: 37% EPDM

Hi Rob,

Good day!

Hereby please be kindly advised that the delivery of 37%EPDM valves will be put off until next month, around Nov 24, 2008. Because our plant hope to have more time to be familiar with the serial production of this new compounding. And during the following 30 days, we will verify the new valves upon the aftermarket firstly.

So I'm afraid that before the shipment of 37% EPDM, we will ship another 300K to 400K 28% EPDM valves to NA warehouse, to support Ford plant run.

Any comments, please feel free to let us know.

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Tuesday, October 14, 2008 2:44 AM

To: Raul

Cc: Yao, Michael (G.C.); Bill Thon Jr; Chris Bruce

**Subject:** RE: 37% EPDM

Raul,

I have reviewed the DVP/PV testing and request the following updates. If you question any of these additions we can discuss during the Wednesday meeting. I realize that some of these test may not be impacted by the SREA, but a DVP must have all the required testing on it. The last two items can use carryover data, as long as it is less then six months old. Thanks

- 1. Item #1 Appearance Check should reference Section III G and not F.
- 2. Item #3 Rim Seal Leak Test should have a Room Temperature test
- 3. Item #4 Tear Resistance Test should have a Bursting/Unseating test
- 4. Add: Section III F; Valve Assembly Operations Check
- 5. Add: Section III H Valve Core

From: Raul [mailto:Raul@baolong.biz]
Sent: Monday, October 06, 2008 11:06 PM

**To:** Camilleri, Robert (R.H.)

Cc: Yao, Michael (G.C.); 'Bill Thon Jr'; 'Chris Bruce'

Subject: RE: 37% EPDM

Attached please find the full DVP and PVP, including the reports.

**Thanks** 

Raul SBIC

From: Raul [mailto:Raul@baolong.biz]
Sent: Tuesday, October 07, 2008 10:54 AM

To: 'Camilleri, Robert (R.H.)'

**Cc:** 'Yao, Michael (G.C.)'; 'Bill Thon Jr'; 'Chris Bruce' **Subject:** 37% EPDM

Hi Rob,

Good day!

This is Raul writing to you from Shanghai Baolong Automotive Corp.

Attached please find the DVP and PVP report for 37% EPDM valve.

Thanks

Raul **SBIC**  From: Camilleri, Robert (R.H.)

Monday, October 13, 2008 2:44 PM Sent:

To: 'Raul'

Cc: Yao, Michael (G.C.); 'Bill Thon Jr'; 'Chris Bruce'

Subject: RE: 37% EPDM

# Raul,

I have reviewed the DVP/PV testing and request the following updates. If you question any of these additions we can discuss during the Wednesday meeting. I realize that some of these test may not be impacted by the SREA, but a DVP must have all the required testing on it. The last two items can use carryover data, as long as it is less then six months old. Thanks

- 1. Item #1 Appearance Check should reference Section III G and not F.
- 2. Item #3 Rim Seal Leak Test should have a Room Temperature test
- 3. Item #4 Tear Resistance Test should have a Bursting/Unseating test
- 4. Add: Section III F; Valve Assembly Operations Check5. Add: Section III H Valve Core

From: Raul [mailto:Raul@baolong.biz] Sent: Monday, October 06, 2008 11:06 PM

To: Camilleri, Robert (R.H.)

Cc: Yao, Michael (G.C.); 'Bill Thon Jr'; 'Chris Bruce'

Subject: RE: 37% EPDM

Attached please find the full DVP and PVP, including the reports.

**Thanks** 

Raul SBIC

From: Raul [mailto:Raul@baolong.biz] **Sent:** Tuesday, October 07, 2008 10:54 AM

To: 'Camilleri, Robert (R.H.)'

Cc: 'Yao, Michael (G.C.)'; 'Bill Thon Jr'; 'Chris Bruce'

Subject: 37% EPDM

Hi Rob,

Good day!

This is Raul writing to you from Shanghai Baolong Automotive Corp.

Attached please find the DVP and PVP report for 37% EPDM valve.

**Thanks** 

Raul **SBIC**  PPM

Summa

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Site: EMNNA SHANGHAI BAOLON(

(Dongjing, Songjiang, \$

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Location Dongjing, §ator (CSA) SIM

Refresh

FORD Launch
CONFIDENTIAL Schedule

# sed only on shipments to Production plants.

ist | View Ford Plant PPM List | View Brand/Region PPM List

### Immature

|                    | Oct<br>2005 | Nov<br>2005 | Dec<br>2005 | Jan<br>2006 | Feb<br>2006 | Mar<br>2006 | Apr<br>2006 | May<br>2006  | Jun<br>2006 | Jul<br>2006 | Aug<br>2006   | Sep<br>2006 | Oct<br>2006 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|---------------|-------------|-------------|
| Total PPM          | 493         | 0           | 0           | 0           | 0           | 12          | 0           | 0            | 0           | 0           | 1             | 16          | 0           |
| Parts Received (00 | 304         | 325         | 249         | 286         | 413         | 462         | 413         | 587          | 880         | 427         | 970           | 977         | 805         |
| Total Scrap/Return | 0           | 0           | 0           | 0           | 0           | 6           | 0           | 0            | 0           | 0           | 1             | 16          | 0           |
| Total Rework       | 150         | 0           | 0           | 0           | 0           | 0           | 0           | 0            | 0           | 0           | 0             | 0           | 0           |
|                    | 12 Month F  | PPM: 27     |             |             |             |             | 6 Month P   | <b>PM:</b> 3 |             | 3 Month P   | <b>PM</b> : 7 |             |             |
|                    |             |             |             |             |             |             |             |              |             |             |               |             |             |
| # of QRs           | 1           | 0           | 0           | 0           | 0           | 1           | 0           | 0            | 0           | 0           | 1             | 1           | 0           |
| Charge Back        | \$8,901     | NA          | NA          | NA          | NA          | \$203       | NA          | NA           | NA          | NA          | \$364         | \$1,845     | NA          |

12 Month: 6 Month:

QR Incidents - 4 2 'ge Back Dollars: \$11,313

) Receipts \*\*\* = PPM is greater than 1,000,000

Data refreshed as of November 1, 2006

Report Date: Mon Nov 27 1:32:24 2006

Version 1.17 Published Sep 06 2006 09:58:30 From: Camilleri, Robert (R.H.)

Sent: Monday, September 08, 2008 10:49 AM

To: 'Chris Bruce'; 'Bill Thon Jr'
Cc: Mracna, Chris (C.J.)
Subject: Part Print Update

Attachments: Vavle Stem Drawing Call-out Proposals.xls

Chris, Bill, attached is our proposal for the valve stem a print call out. I will schedule a quick call in at 2 pm today? Let me know, if you can attend. thanks



Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

Baolong Call-out:

EPDM/NR Blend per SAE J200 M3 BA 6xx A14 B13 Z1 Z2 Z3 Z4
Z1 = EPDM X/min or Z1 = EPDM X-Y%
Z2 = Ozone Test per ES-F2UA-1700-AA, except X hours exposure
Z3 = Antioxonant to be X ppm min
Z4 Antioxidant to be X ppm min

Z4 = Antioxidant to be X ppm min

TABLE 1 - BASIC REQUIREMENTS FOR ESTABLISHING TYPE BY TEMPERATURE

|      | THE BY TEMPERATOR    |  |  |  |  |  |
|------|----------------------|--|--|--|--|--|
| Туре | Test Temperature, °C |  |  |  |  |  |
| Α    | 70                   |  |  |  |  |  |
| В    | 100                  |  |  |  |  |  |
| С    | 125                  |  |  |  |  |  |
| D    | 150                  |  |  |  |  |  |
| E    | 175                  |  |  |  |  |  |
| F    | 200                  |  |  |  |  |  |
| G    | 225                  |  |  |  |  |  |
| Н    | 250                  |  |  |  |  |  |
| J    | 275                  |  |  |  |  |  |
| K    | 300                  |  |  |  |  |  |
|      |                      |  |  |  |  |  |

TABLE 2 - BASIC REQUIREMENTS FOR ESTABLISHING CLASS BY VOLUME SWELL

| Class | Volume Swell, max, % |  |  |
|-------|----------------------|--|--|
| Α     | no requirement       |  |  |
| В     | 140                  |  |  |
| С     | 120                  |  |  |
| D     | 100                  |  |  |
| E     | 80                   |  |  |
| F     | 60                   |  |  |
| G     | 40                   |  |  |
| Н     | 30                   |  |  |
| J     | 20                   |  |  |
| K     | 10                   |  |  |

Strength

| TABLE 6.BA - BASIC REQUIREMENTS FOR THE CLASSIFICATION |
|--|
| OF DURRED MATERIALS. BA MATERIALS                      |

|                                     |                                      |                                      | OF R                              | JBBER MATERIALS - BA                        | MATERIALS   |  |                                   |
|-------------------------------------|--------------------------------------|--------------------------------------|-----------------------------------|---|---|--|-----------------------------------|
| Durometer<br>Hardness,<br>±5 points | Tensile<br>Strength,<br>min<br>(MPa) | Tensile<br>Strength,<br>min<br>(psi) | Ultimate<br>Elongation,<br>min, % | Heat Aged,<br>ASTM D 573,<br>70 h at 100 °C | Oil Immersion,<br>ASTM D 471,<br>IRM 903 Oil <sup>(1)</sup><br>70 h at 100 °C | Compression Set,<br>ASTM D 395,<br>Method B,<br>Solid,<br>max, %,<br>22 h at 70 °C | Available Suffix<br>Grade Numbers |
| 60                                  | 10                                   | 1450                                 | 350                               | Change in tensile strength,<br>±30%         | No requirement  | Compression set,<br>50% max  | 2,3,4,5,6                         |
| 60<br>60                            | 14<br>17                             | 2031<br>2466                         | 400<br>400                        | Change in ultimate elongation,<br>-50% max  |   |  | 2,3,4,5,6<br>2,3,4,5,6            |

xx = Supplier defined tensile strenth min

# Suffix Letters

| TABLE 3 -     | TABLE 3 - MEANING OF SUFFIX LETTERS    |  |  |  |  |  |
|---------------|--|--|--|--|--|--|
| Suffix Letter | Test Required                          |  |  |  |  |  |
| Α             | Heat Aging Resistance                  |  |  |  |  |  |
| В             | Compression Set                        |  |  |  |  |  |
| С             | Ozone or Weather Resistance            |  |  |  |  |  |
| D             | Compression-Deflection Resistance      |  |  |  |  |  |
| EA            | Fluid Resistance (Aqueous)             |  |  |  |  |  |
| EF            | Fluid Resistance (Fuels)               |  |  |  |  |  |
| EO            | Fluid Resistance (Oils and Lubricants) |  |  |  |  |  |
| F             | Low-Temperature Resistance             |  |  |  |  |  |
| G             | Tear Resistance                        |  |  |  |  |  |
| Н             | Flex Resistance                        |  |  |  |  |  |
| J             | Abrasion Resistance                    |  |  |  |  |  |
| K             | Adhesion                               |  |  |  |  |  |
| M             | Flammability Resistance                |  |  |  |  |  |
| N             | Impact Resistance                      |  |  |  |  |  |
| Р             | Staining Resistance                    |  |  |  |  |  |
| R             | Resilience                             |  |  |  |  |  |
| Z             | Any special requirement which shall    |  |  |  |  |  |
|               | be specified in detail                 |  |  |  |  |  |

| TABLE 6.BA - SUPPLEMENTARY (SUFFIX) REQUIREMENTS FOR THE CLASSIFICATION OF RUBBER MATERIALS - BA MATERIALS (CONTINUED) |  |                         |            |            |            |            |            |            |            |
|--|--|-------------------------|------------|------------|------------|------------|------------|------------|------------|
|  | Suffix Requirements  | Grade<br>1              | Grade<br>2 | Grade<br>3 | Grade<br>4 | Grade<br>5 | Grade<br>6 | Grade<br>7 | Grade<br>8 |
| A14  | Heat aging resistance ASTM D 573,<br>70 h at 100 °C:               |                         |            |            |            |            |            |            |            |
|  | Change in hardness, max, points                                    | Basic Requirements Only |            | +10        | +10        |            |            |            |            |
|  | Change in tensile strength, max, %                                 | Basic Requirements Only |            | -25        | -25        |            |            |            |            |
|  | Change in ultimate elongation, max, %                              | Basic Requirements Only |            | -25        | -25        |            |            |            |            |
| B13  | Compression set, ASTM D 395,<br>Method B, 22 h at 70 °C, max, %    | Basic Requirements Only |            | 25         |            |            | 25         |            | 25         |
| C12  | Resistance to ozone, ASTM D 1171, quality retention rating, min. % | Basic Requirements Only | 100        | 100        | 100        | 100        | 100        | 100        | 100        |

From: Bill Thon Jr [billjr@thonassociates.com]

**Sent:** Friday, June 13, 2008 11:36 AM

To: Camilleri, Robert (R.H.)
Cc: cbruce@thonassociates.com
Subject: FW: TIMING PLAN.xls

Attachments: TIMING PLAN.xls



Please review the attached timing plan.

Also Raul listed below some additional timing.

One more thing, I talked to Larry. He indicated that when Dill tested the 37% EPDM with no anti-aging chemicals the parts went 480 hours in the ozone test.

Bill

-----Original Message-----

From: raul [mailto:raul@baolong.biz] Sent: Friday, June 13, 2008 2:35 AM

To: 'Bill Thon Jr'

Cc: 'caojianming'; wangxianyong@baolong.biz; winston@chinabaolong.net; miller@baolong.biz; 'Chris Bruce'

Subject: RE: TIMING PLAN.xls

Hi Bill,

Good day!

Attached please find the revised timing plan, indicating 37% EPDM + anti-ozone.

Regarding the testing, we have arranged the comparison testing for 28% and 37%.

1.28%

Ozone, by June 25 Flexing, by June 20

2.37%

Ozone, by July 5 Flexing, by June 27

Thanks

Raul

**SBIC** 

|                        | To improve and determine the compounding | To produce the samples | •       | To improve and determine the technics               | To produce trial samples       | Total   |           |                          |          |
|------------------------|--|------------------------|---------|---|--------------------------------|---------|-----------|--------------------------|----------|
| 37% EPDM W/ ANTI-OZONE | 20 days                                  | 2 days                 | 15 days | 10 days   | 10 days                        | 57 days |           |                          |          |
|                        | To improve and determine the compounding | To produce the samples | ,       | To determine the new equipments and their suppliers | To purchase the new equipments | new     | determine | To produce trial samples | Total    |
| 100% EPDM              | 45 days                                  | 2 days                 | 15 days |   |                                |         |           |                          |          |
|                        |  | 10 days                |         |   | 65 days                        | 15 days | 10 days   | 10 days                  | 155 days |

From: Rohweder, David (D.S.)

**Sent:** Monday, June 09, 2008 8:11 AM

To: Camilleri, Robert (R.H.)

Subject: FW: Question

### David Rohweder

Mgr. Tires & Wheels Engineering drohwede@ford.com phone; 313-337-3122 Cell/Text 313-805-5622

From: Fritschen, Steve (S.E.)
Sent: Friday, June 06, 2008 3:04 PM
To: Rohweder, David (D.S.)
Cc: Fritschen, Steve (S.E.)

Subject: RE: Question

Mr. Rohweder,

### Good Afternoon!

The valve stems are released and we (FCSD) do sell quite a number of them. A example is shown below. However, I do believe that quite a number of dealers probably do purchase and use valve stems and wheel weights and other bulk parts from local vendors. Although, as you know, they are only suppose to use Ford parts for warranty repairs.

SERVICE PART: F42Z- 1700-A VALVE ASY

ENGINEERING PART: 7L34 1700 AA ORIGIN: WERS SUPPLIER LOC: FINIS: 4868407

FCSD Sales - per Calendar Year

YEAR Quantity

2008 1364 2007 2941 2006 1103 2005 1113 2004 694 2003 479

I hope this information helps!

### Thanks!

# Steve Fritschen

Program Manager

Warranty Improvement Team

FCSD - Service Engineering Operations

Phone: 313-845-3805 E-mail: sfritsch@ford.com

From: Rohweder, David (D.S.)

**Sent:** Thursday, June 05, 2008 6:06 AM

**To:** Fritschen, Steve (S.E.)

**Subject:** Question

Steve, do you where our dealers get the tire valve stems they use?

David Rohweder Mgr. Tires & Wheels Engineering drohwede@ford.com phone; 313-337-3122 Cell/Text 313-805-5622

Rohweder, David (D.S.) From:

Thursday, July 31, 2008 6:16 AM Sent:

Mracna, Chris (C.J.) To: Camilleri, Robert (R.H.) Cc: FW: Pyro GC/MS Results Subject:

Attachments: Ford PN 79639 A.pdf



Ford PN 79639 A.pdf (3 MB)

This report only show 3 test results. When do I get the balance of the data that was quoted?

David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

-----Original Message-----

From: Camilleri, Robert (R.H.) Sent: Friday, July 25, 2008 2:01 PM

To: Rohweder, David (D.S.)

Subject: FW: Pyro GC/MS Results

FYI

----Original Message----From: Mracna, Chris (C.J.)

Sent: Friday, July 25, 2008 1:13 PM

To: Camilleri, Robert (R.H.)

Subject: FW: Pyro GC/MS Results

# Rob.

Attached is the preliminary report from ARDL from a few days ago. It contains compositional information from the first three Baolong samples. The sample IDs are noted in the report. We are currently waiting for the report that contains the remaining information for the rest of the sample (namely the benchmark samples).

These preliminary results are expected to remain unchanged in the final report. Based on the reported ratios, the new test method (Pyrolysis-GC/MS) appears to be able to identify the composition of the rubber samples.

We should receive the results for the remaining samples by cob today. I will forward you that report when we receive it.

Also, we should have timing for the percent ozonate testing that is also being conducted by ARDL by cob today.

Please review and let me know if you have additional questions.

Regards, Chris Mracna **Chassis Materials Engineering** Brakes, Exhaust, Suspension, and Wheels Ford Motor Company

(313) 805-4483 cmracna@ford.com Materials Engineering, Testing, and Standards (METS) TeamConnect Site

-----Original Message-----From: Bliznick, Thomas (T.G.) Sent: Friday, July 25, 2008 12:44 PM

To: Mracna, Chris (C.J.)

Subject: FW: Pyro GC/MS Results

Thomas Bliznick >Laboratory Development Analyst >Ford Motor Co., Central Laboratory >Polymers, Coatings, and Corrosion Section >(313) 33-78487 https://www.tc2.ford.com/ts/METS/default.aspx

----Original Message----From: Tracy Keaton [mailto:tracyk@ardl.com] Sent: Tuesday, July 15, 2008 2:22 PM To: Bliznick, Thomas (T.G.) Cc: Tom Knowles

Subject: Pyro GC/MS Results

Mr. Bliznick,

Attached are the results that Mr. Knowles discussed with you earlier today.

Thank you,

Tracy Keaton ARDL, Inc. 330-794-6600 Tel 330-794-6610 Fax <<Ford PN 79639 A.pdf>>

This email and any of its attachments may contain confidential information intended only for the use of the addressee(s). If the reader of this email is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination or copying of this email is strictly prohibited. If you have received this email in error, please notify us by return email at info@ardl.com, permanently delete the email, and destroy any printouts. If this email contains test data and/or draft reports, you are hereby notified that only a signed original test report will contain official results, a copy of which resides in the project folder located at ARDL, Inc. Thank you. Akron Rubber Development Laboratory, Inc.



July 15, 2008

# TEST REPORT

PN 79639A

PO #AAR P008 580955

# **Chemical Analysis Department**

Prepared For:

Mr. Tom Bliznick Ford Motor Company – SC #154 15000 Century Drive Dearborn, MI 48120-1267

Prepared By:

Melinda Wagner Chemist Approved By:

Thomas M. Knowles

Vice President, Chemical Services

An A2LA Accredited Testing Laboratory — Certificate Numbers 255.01 & 255.02 ISO 9001:2000 Registered Member of ACIL: The American Council of Independent Laboratories

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Registered



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# Testing. Development. Problem Solving.



July 15, 2008

Mr. Tom Bliznick Ford Motor Company

Page 2 of 2 PN 79639A

**SUBJECT:** 

Chemical analysis on samples submitted and requested by the above company.

Purchase Order Number: AAR P008 580955

RECEIVED:

Nine Valve Stems identified as GC34-1700-AC New 5/16/08, 7L34-1700-AA New 5/9/08, 7L34-

1700-AA Used (Sample 1), and Samples 3 through 7.

PYRO-GC/MS

Method:

New Pryo

Instrument:

Perkin Elmer Clarus 500 Gas Chromatograph with a Clarus 560D mass Spectrometer

Accessory:

CDS Analytical Pryoprobe 5000 Series

Column:

Forte BPX5 GC Capillary Column

A small portion of each sample was placed in an appropriately sized quartz tube that had been loaded with a small amount of quartz wool to retain the sample. The quartz tube was loaded into the Pyro-GC/MS and analyzed.

Sample weights are as follows:

| Sample Identification    | Mass/mg |
|--------------------------|---------|
| 7L34-1700-AA New 5/9/08  | 0.166   |
| GC34-1700-AC New 5/16/08 | 0.192   |
| Sample 1                 | 0.158   |

| RESULTS                  |        |
|--------------------------|--------|
| Sample Identification    | EPR/NR |
| 7L34-1700-AA New 5/9/08  | 31/69  |
| GC34-1700-AC New 5/16/08 | 24/76  |
| Sample 1                 | 27/73  |

Prepared By:

Melinda Wagner Chemist Approved By:

Thomas M. Knowles
Vice President, Chemical Services

Any samples submitted for this project will be retained at Akron Rubber Development Laboratory, Inc. for a period of three months following completion of work.

\*ARDL is accredited by A2LA for the test methods listed on the attached scope\*

# **Qualitative Report**

File:

C:\TurboMass\NHTSA.PRO\Data\PN79639(5-9-08).raw

Acquired: Description:

Sample ID:

10-Jul-08 11:48:38 AM

GC/MS Method:

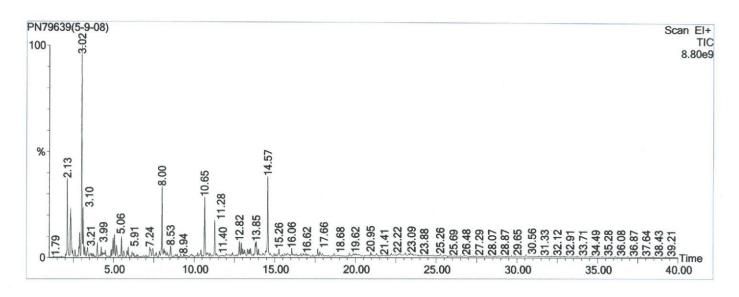
GC: New Pyro.mth MS: New Pyro.EXP

PN79639(5-9-08)

Printed: 10-Jul-08 12:29 PM

Page 1 of 1

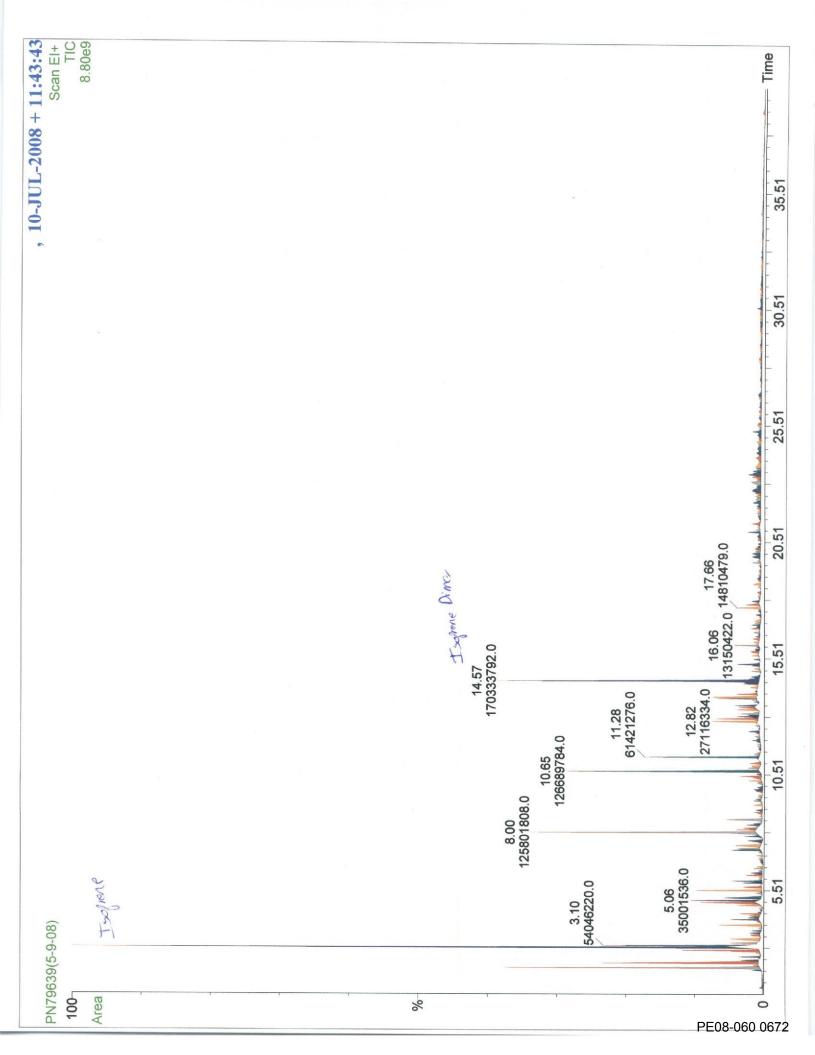
Vial Number: 221

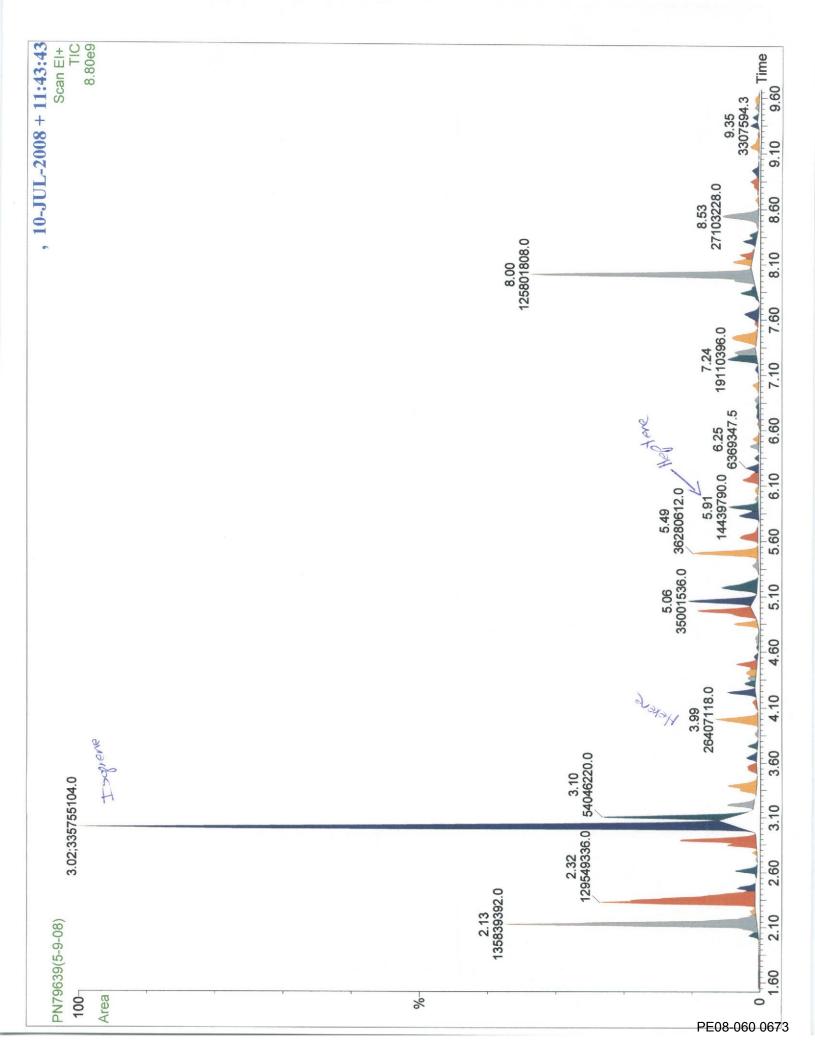


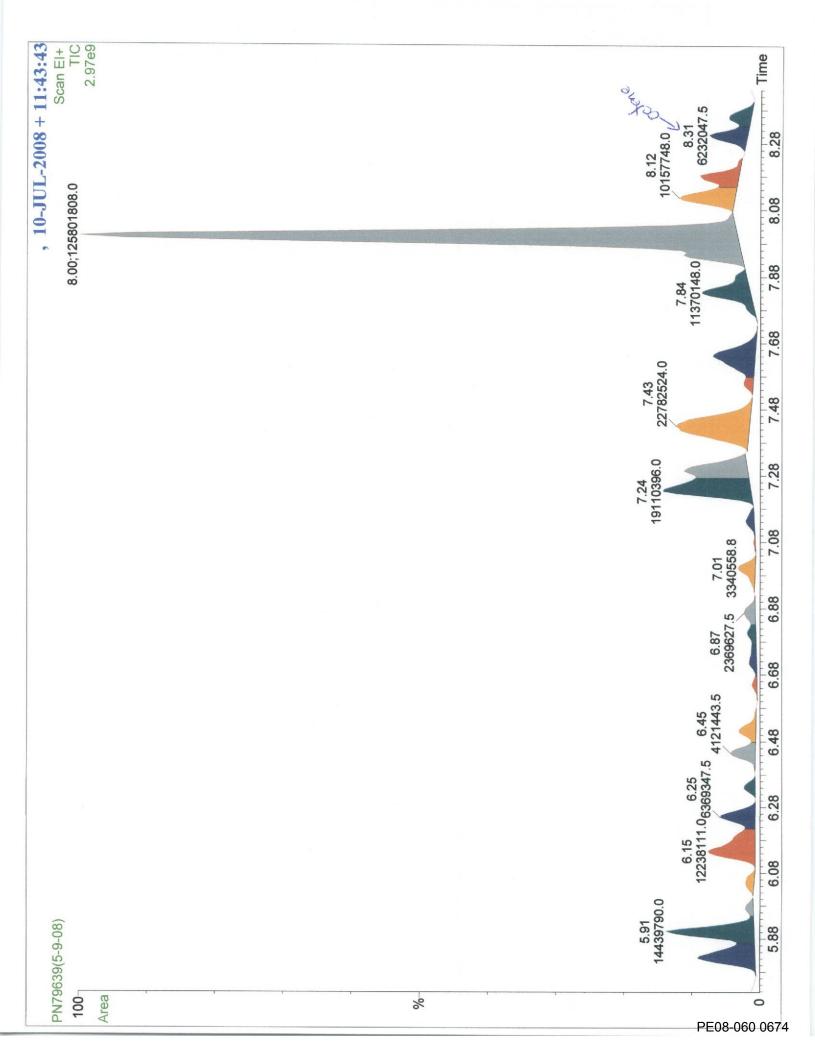


**ACQUISITION PARAMETERS** 

Oven: Initial temp 40°C for 2 min, ramp 8°C/min to 300°C, hold 5.50 min, Inj=300°C, Volume=0 µL, Split=:1, Carrier Gas=PSIG, Solvent Delay=0.00 min, Transfer Temp=200°C, Source Temp=180°C, Scan: 30 to 550Da, Column







# **Qualitative Report**

File:

C:\TurboMass\NHTSA.PRO\Data\PN79639(5-16-08).raw

Acquired: Description:

10-Jul-08 12:53:42 PM

Printed: 10-Jul-08 01:34 PM

GC/MS Method:

GC: New Pyro.mth

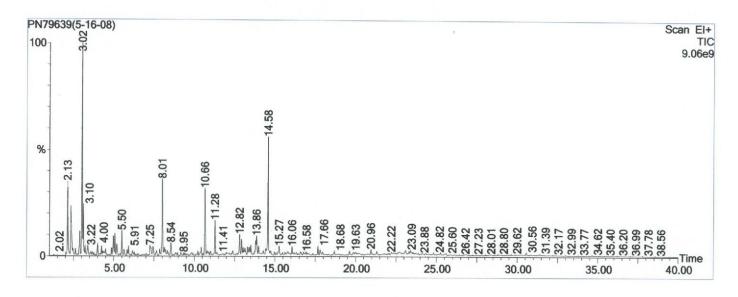
MS: New Pyro.EXP

Page 1 of 1

Sample ID:

PN79639(5-16-08)

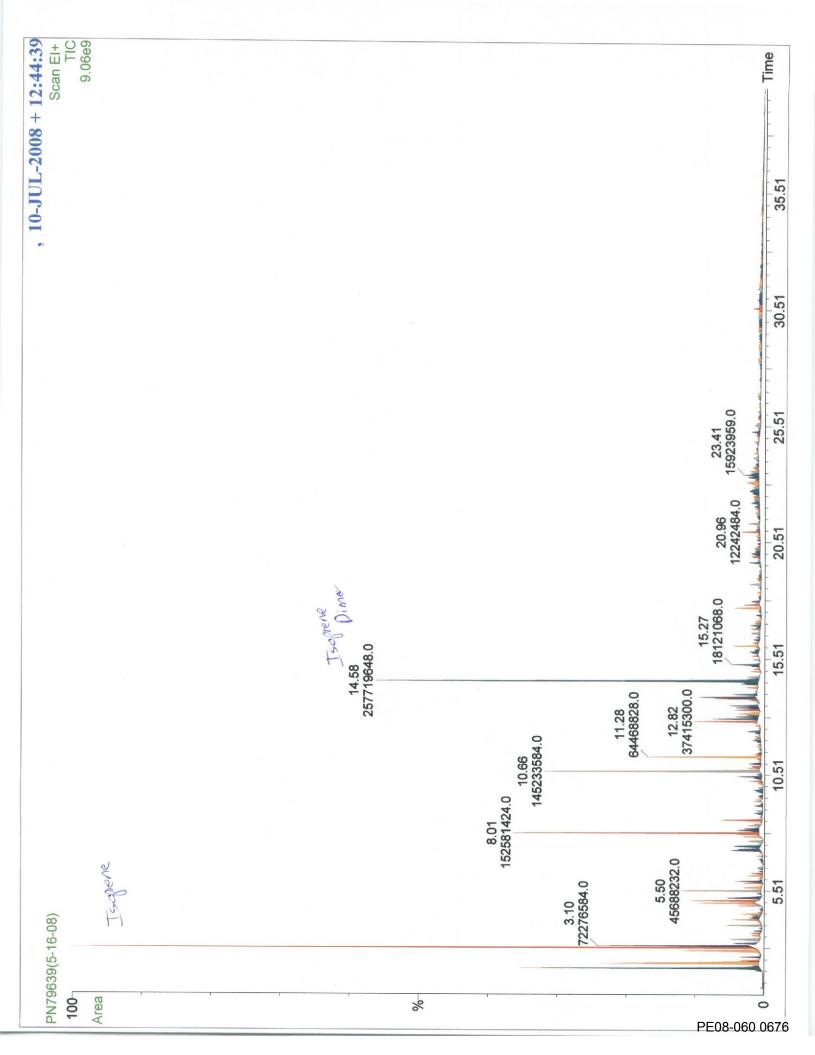
Vial Number: 222

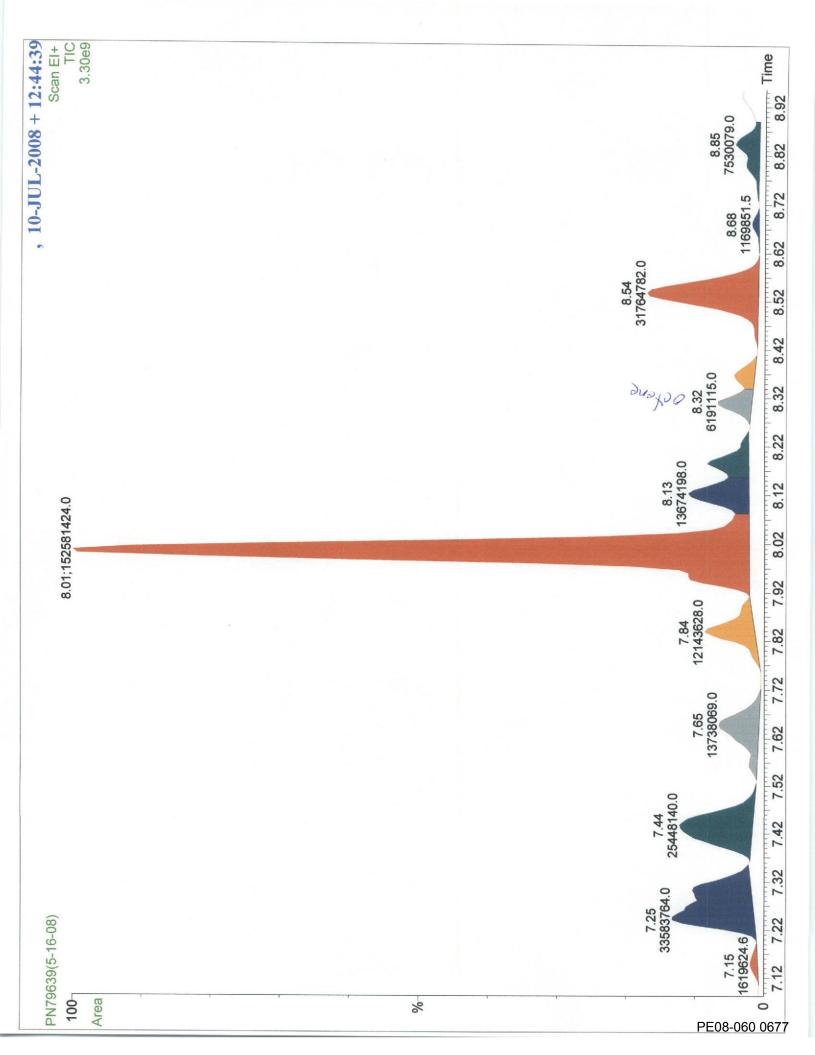




Inst() ACQUISITION PARAMETERS

Oven: Initial temp 40°C for 2 min, ramp 8°C/min to 300°C, hold 5.50 min, Inj=300°C, Volume=0 µL, Split=:1, Carrier Gas=PSIG, Solvent Delay=0.00 min, Transfer Temp=200°C, Source Temp=180°C, Scan: 30 to 550Da, Column





# **Qualitative Report**

File:

C:\TurboMass\NHTSA.PRO\Data\PN79639Sample1.raw

Acquired:

10-Jul-08 02:00:56 PM

Printed: 10-Jul-08 02:41 PM

Description:

GC/MS Method: Sample ID:

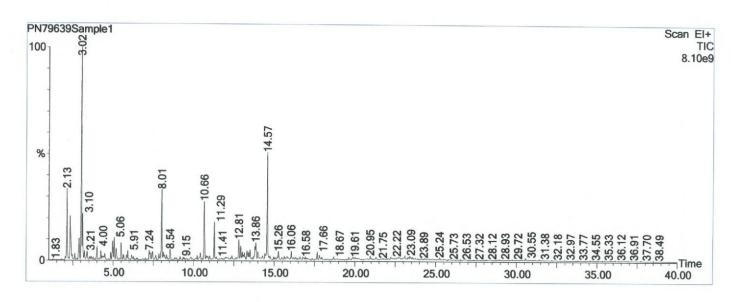
GC: New Pyro.mth PN79639Sample1

MS: New Pyro.EXP

O.EXP

Page 1 of 1

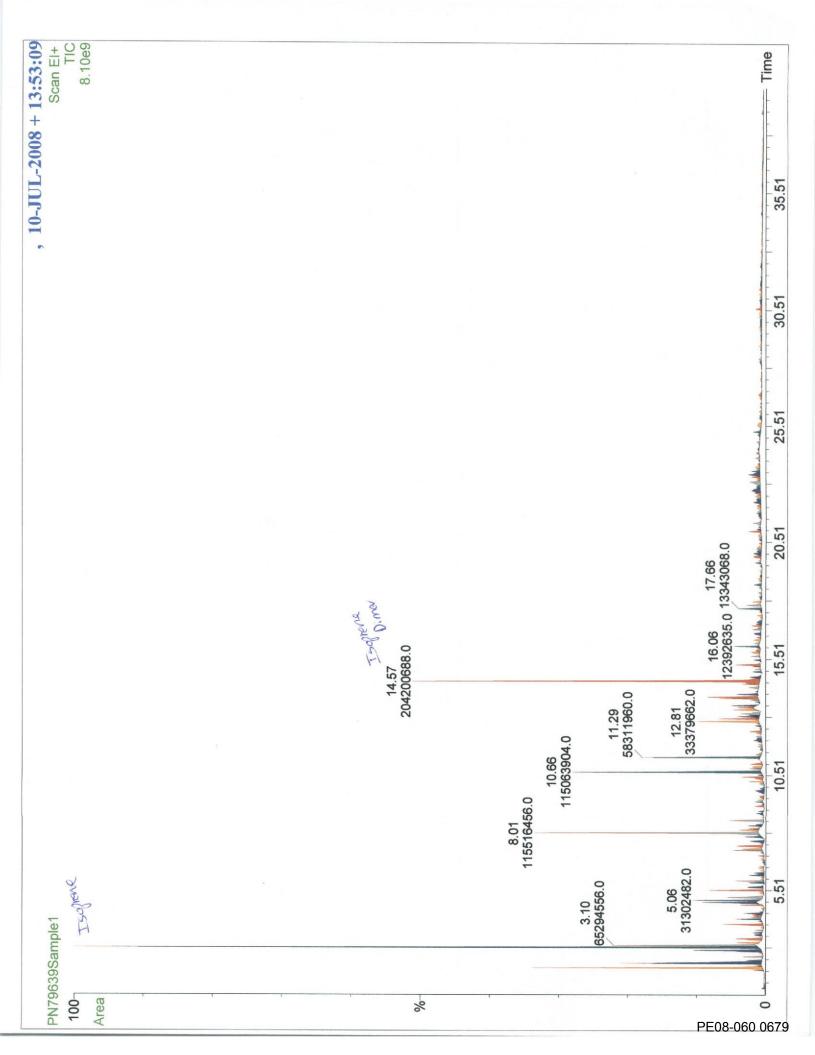
Vial Number: 223

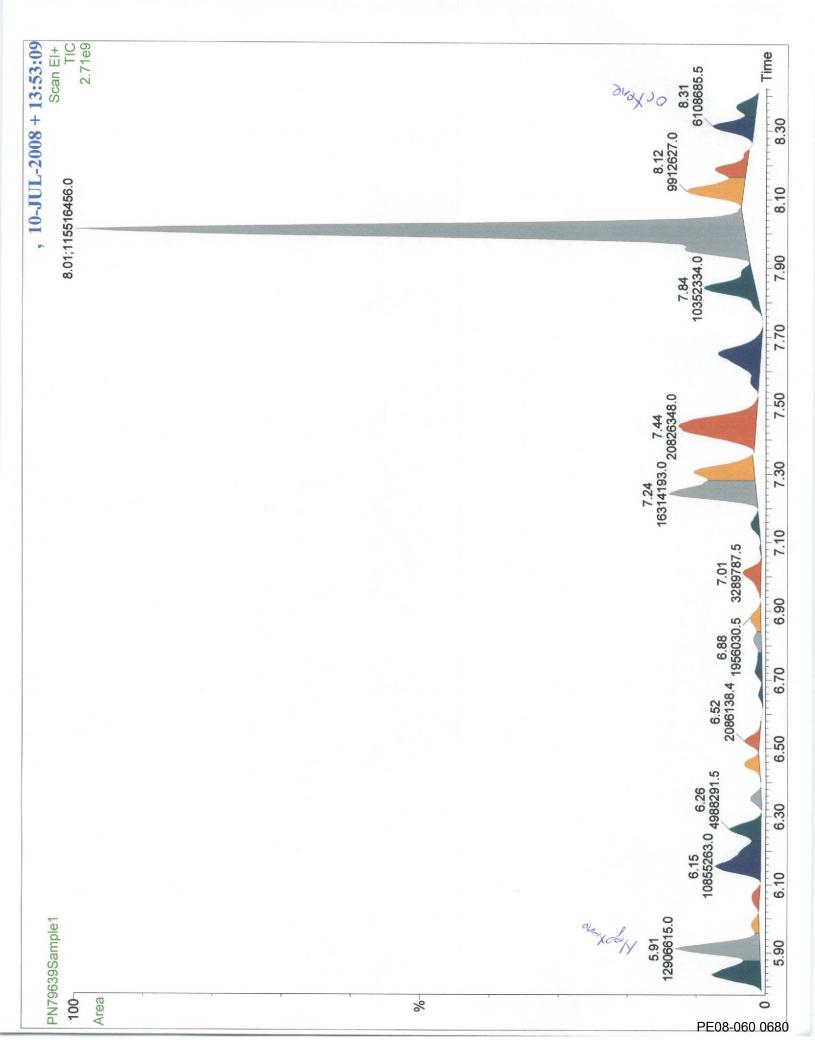




Inst() ACQUISITION PARAMETERS

Oven: Initial temp 40°C for 2 min, ramp 8°C/min to 300°C, hold 5.50 min, Inj=300°C, Volume=0 µL, Split=:1, Carrier Gas=PSIG, Solvent Delay=0.00 min, Transfer Temp=200°C, Source Temp=180°C, Scan: 30 to 550Da, Column





From: Christensen, Kris (K.S.)

Sent: Wednesday, May 21, 2008 9:56 AM

To: Campbell, Keith (K.A.)
Subject: FW: Please review

Attachments: FW: Crown Vic Police Car Valve Stems

Keith -

Please call and we can discuss.

Thanks!

# Kris S. Christensen

SUV/Commercial Vehicle Critical Concern Manager MD 327 GCD26 PDC

Bus.: (313) 323-8497 Fax: (313) 317-9257 CDSID: kchrist1 E-mail: kchrist1@ford.com

From: Stewart, Greg (J.)

**Sent:** Tuesday, May 20, 2008 8:46 AM

**To:** Christensen, Kris (K.S.)

**Subject:** Please review

Can you please check CQIS folder # 080033560000. I am tracking it and have just received another email that could be the same thing.

2FAFP71W77X146527

2FAFP71W07X140813

2FAFP71W87X130269

2FAFP71W97X130281

2FAFP71W87X130286

2FAFP71W27X130297



FW: Crown Vic olice Car Valve.

# Greg Stewart

FCSD Program Manager Crown Victoria/Grand Marquis/Town Car/Ranger St. Thomas Assembly Plant Phone: (519) 637-5317 From: Hanson, Chris (C.)

Sent: Monday, May 19, 2008 6:05 PM

To: Kahn, Jason (J.); Stewart, Greg (J.)

**Cc:** Morrison, Bill (B.E.); Hange, Douglas (D.S.)

Subject: FW: Crown Vic Police Car Valve Stems

Greg & Jason,

This is mainly an FYI. Is there anything I need to have the dealership look for? My only recommendation will be to replace the valve stems.

Regards,

Chris Hanson

**From:** Charlie Waters [mailto:cwaters@bozardford.com]

Sent: Monday, May 19, 2008 2:54 PM

To: Hange, Douglas (D.S.); Hanson, Chris (C.)

**Cc:** rwright@bozardford.com

Subject: FW: Crown Vic Police Car Valve Stems

P.S. The vehicle that we have looked at is VIN 2FAFP71W77X139349; 8458 MILES

**From:** Charlie Waters [mailto:cwaters@bozardford.com]

**Sent:** Monday, May 19, 2008 2:53 PM

To: 'Hanson, Chris (C.)'; 'Hange, Douglas (D.S.)'

Cc: 'rwright@bozardford.com'

Subject: Crown Vic Police Car Valve Stems

Chris / Doug

We have been notified by the St. Johns County Sheriffs Office of a problem with valve stems failing on 2007 Crown Vic Police Cars

I had them bring a car by to inspect and this car had three split around the stem, just above the wheel.

They indicated that six valve stems have failed on other units. I have asked them to bring the other cars by for inspection, but this obviously could turn into a dangerous situation if a valve stem blows while in pursuit.

Could you please investigate this matter?

Thanks

# Charlie Waters

BOZARD FORD/LINCOLN/MERCURY

Direct Line: (904) 436-6339 E-mail: <u>cwaters@bozardford.com</u> From: Wickenheiser, Francis (F.J.)

Sent: Wednesday, July 16, 2008 10:47 AM

To: Christensen, Kris (K.S.); Logel, Jay (J.D.)

Subject: FW: Important, please read.

**From:** Wickenheiser, Francis (F.J.) **Sent:** Tuesday, July 15, 2008 4:09 PM

To: Veneziano, Frank (j.)

Cc: Sleva, Vincenza (Enza.); Arning, Ralph (R.); Palczynski, Kimberly (K.A.); Ricks, Kevin (K.J.); Sherwood, Wesley (W.)

Subject: FW: Important, please read.

Hi Frank,

I don't know exactly what the questions are, but the Ford position is provided as a link in the story (text below)... I don't think that any additional commentary is needed

"Ford uses tire valve stems from different suppliers, including Shanghai Baolong Automotive Corporation. We have received no communication from NHTSA or our valve stem suppliers that any valves stems used on Ford vehicles are part of any investigation. We cannot comment on your specific vehicle because we do not know its usage, maintenance or repair history. We continually monitor the performance of our vehicles on the road, and respond to customer questions quickly. Customers should contact their local dealers if they questions about their vehicles."

In case the dealers are asking, they should repair tires, valve-stems - and any other parts - according to standard repair procedures and cover under warranty if that is applicable.

By the way, Enza Sleva is the FCSD Boston regional manager, and has been working with public affairs on responding to this media inquiry... dealers should contact her if they would like further discussion.

If I can be of further help, please give me a call. Joe Wickenheiser 313-84-54221

From: Jones, Rick (W.P.)

Sent: Tuesday, July 15, 2008 3:33 PM

**To:** Wickenheiser, Francis (F.J.); Christensen, Kris (K.S.)

**Subject:** FW: Important, please read.

Hi guys, FYI.

**From:** Arning, Ralph (R.)

**Sent:** Tuesday, July 15, 2008 3:25 PM

To: Jones, Rick (W.P.)

**Subject:** FW: Important, please read.

Here's the link.

Regards.

# Ralph Arning

Ford Customer Service Div. Mustang PVT/Launch Team

PE08-060 0683

Phone: 734-782-7914 Cell Phone: 734-752-9639 e-mail: RARNING@Ford.com

From: Ricks, Kevin (K.J.)

Sent: Thursday, July 10, 2008 4:58 PM

To: Arning, Ralph (R.)

**Subject:** FW: Important, please read.

I hear you know something? Can you call me sometime.

# Kevin Ricks

Manager - Ford Technical Service Hotline FCSD Concern Reporting and FQEs KRICKS@Ford.com 313-317-6333

From: Veneziano, Frank (j.)

**Sent:** Thursday, July 10, 2008 1:23 PM

**To:** Palczynski, Kimberly (K.A.); Ricks, Kevin (K.J.)

**Subject:** Important, please read.

# Kevin and Kim,

We are starting to get questions on the report below. What should be our direction? I will stop by shortly. Thank you

http://www.thebostonchannel.com/investigative/16731003/detail.html

# TheBostonChannel.com

Ford Comments On Cracked Valve Stem Investigation

# Team 5 Investigates: Up To 30 Million Potentially Defective Valves In Use

Team 5 Investigates has found cracked valve stems on three separate 2007 model year vehicles, each of which was manufactured by Ford.

"It was cracked all the way around," said David Kidd, who checked his 2007 Ford F-150 after seeing our Team 5 investigation into cracked valve stems.

# What To Look For | Photos: Spotting Defective Valves

"One of them, I moved it, and I thought it was going to fall off," said Kidd. "I was concerned about a blow out, having a rollover, or worse."

Valve stems allow you to put air into a tire. Even a small crack can allow air to leak out, causing a flat or a crash.

# **™** <u>Watch report</u>

Two local Ford dealers confirmed that all four of Kidd's F-150's valve stems were cracked and rotten.

A cracked valve stem is suspected of causing an accident in Florida last November in which a 31-year-old man was killed. His family has filed a lawsuit.

"I wouldn't have looked at those valve seals if you hadn't run that story," he said.

Kidd isn't alone. Team 5 Investigates first reported Monday that there could be more than 30 million potentially defective valve stems on replacement tires as well as on cars and trucks bought new.

Additionally, NewsCenter 5 found three cracked valve stems on one of our 2007 Ford Explorers, and one cracked valve stem on another station vehicle.

The National Highway Transportation Safety Administration is investigating valve stems made in 2006 at a Chinese plant. Already, one distributor of those valve stems has issued a recall. Another distributor is under investigation.

In a statement to Team 5 Investigates, Ford acknowledged using valve stems from the factory in question but denied that "any valve stems used on Ford vehicles are part of any investigation." So far, Ford has not explained the cracked valve stems found on our two SUVs and Kidd's F-150.

Related To Story



### **DEFECTIVE TIRE VALVES**

- 🛂 2007 Fords Under Investigation
  - Expert Shows What To Look For
- Photos: How To Spot Defective Valves
- Statement: Ford On Preliminary Investigation
- pdf: NHTSA Tire Stem Evaluation
- pdf: Safety Letter Sent to NHTSA
- Statement: Ford Company Position
- mp3:Direct Tire PSA
- pdf: Wrongful Death Action
- pdf: Procedure To Inspect Valves
- pdf: Snap In Valve Recall
- pdf: NHTSA Notification Letter
- pdf: NHTSA Investigation Summary
- Web: NHTSA Complaint Form
- Contact Team 5
- Statement From Ford

WCVB-TV has filed a formal complaint with NHTSA about the cracks found on our valve stems.

# **Previous Stories:**

- June 26, 2008: <u>Tire Dealer Sounds Alarm About Potential Driver Danger</u>
- June 24, 2008: Potential Defect Threatens More Than 30 Million Tires

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From: Chris Bruce [cbruce@thonassociates.com]

Sent: Wednesday, June 25, 2008 11:31 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

**Subject:** FW: Ford Valve Testing **Attachments:** Comparison testing.xls

FYI

**From:** Raul [mailto:Raul@baolong.biz] **Sent:** Tuesday, June 24, 2008 11:40 PM

To: 'Bill Thon Jr'; wangxianyong@baolong.biz; caojianming@baolong.biz; 'winston'

**Cc:** cbruce@thonassociates.com **Subject:** RE: Ford Valve Testing

Hi Bill,

Good day!

This morning, CSO PD told us to stop the testing at 300PPHM, but as per ES. Attached please find the timing plan.

Thanks

Raul SBIC

From: Bill Thon Jr [mailto:billjr@thonassociates.com]

**Sent:** Tuesday, June 24, 2008 9:54 PM

**To:** 'Raul'; wangxianyong@baolong.biz; caojianming@baolong.biz; 'winston'

Cc: cbruce@thonassociates.com Subject: Ford Valve Testing

Hi Guys,

We spoke to Ford several times to today with regard to testing the 28% and 37% EPDM parts. I was unaware of CSO telling Baolong to test to 300 pcs per Million. Per Ford's direction today, we should test to the current ES requirement which is 100 pcs per Million. We should of course test all parts to failure.

When you have time send us the test plan that we intend on following.

Thanks,

Bill

| TESTING ITEMS  | 28% EPDM                        | 37% EPDM                        |
|--|---------------------------------|---------------------------------|
| FORCE TO SEAT (5PCS)   | FINISHED                        | FINISHED                        |
| ADHESION TESTING (5PCS)  | 26-Jun-08                       | 26-Jun-08                       |
| BURSTING TESTING (3PCS)  | 26-Jun-08                       | 26-Jun-08                       |
| AGING TESTING (20PCS)  | June 26 to June 28              | June 26 to June 28              |
| OZONE TESTING AT 100PPHM (6PCS)  | Begin on June 30, until failure | Begin on June 30, until failure |
| FLEXING TESTING AFTER AGING FOR 72 HOURS (6PCS)                                    | Begin on June 30, until failure | Begin on June 30, until failure |
| HARDNESS, FORCE TO SEAT, FORCE TO UNSEAT AND ELONGATION TESTING AFTER AGING (5PCS) | 30-Jun-08                       | 30-Jun-08                       |

From: Chris Bruce [cbruce@thonassociates.com]
Sent: Wednesday, October 15, 2008 7:05 AM

To: Camilleri, Robert (R.H.)

Subject: FW: FORD REVIEWED CP's and PFMEA's

Additionally what I sent Raul yesterday.

Chris

**From:** Chris Bruce [mailto:cbruce@thonassociates.com]

**Sent:** Tuesday, October 14, 2008 12:17 PM

To: 'Raul'; 'billjr@thonassociates.com'

Subject: FORD REVIEWED CP's and PFMEA's

Raul,

Regarding the CP's and PFMEA's attached to this original e-mail; we went over them in detail at Ford on Monday morning with Rob Camilleri and an STA from NA. From this 3 hour meeting many items were reviewed and changes will be required. Overall, with respect to the CP and PFMEA Ford is requiring we be much more specific. Specific to the point that by reading the CP and following the PFMEA the reader can visualize and understand totally what is being done in the facility by our personnel. The CP's and PFMEA's you have already supplied are much to vague. As a summary, for the both documents we need to understand how the raw materials, list them all, are actually received, where and by whom. Then how they are certified, for example, the supplier cert is reviewed etc. or whatever the certification process is and then what happens next, are they placed in inventory, is so, by whom. Where are the received components, carbon black, oils etc. stored in the facility, how and by whom. What happens if the incoming raw material is rejected? Is it red tagged and placed in a quarantine area for disposition and the supplier notified. This needs to be illustrated in the documents. Next we need to illustrate and show in our CP and PFMEA how the raw materials are pulled from the storage. How does the operator know what and how much materials to pull from the warehouse? How does he do it and when the operator brings it to the mixing room who and how is it received in that area such that we can be absolutely certain the correct materials and amounts are being delivered. If they are not the correct deliverables what happens. This is the kind of detail we need to see in these reports. Additionally, whenever we reference an internal specification, such as TP.CF-101, we must include it with the CP so it can be reviewed. Also, when we reference Gauge and Equipment we must also include for reference in the CP and PFMEA our internal PM (Preventive Maintenance) schedule and that the operator checks to verify calibration prior to utilization of said tools and equipment. That said lets look at the Control Plan (CP) for the Formulation of Material A and specifically look at each category that requires more detail, I will only provide Line Item #5 as an example but all items through #25 need to be thought of the same way. Similarly the PFMEA Items

# Part Process No.

5

# **Process Name/Operation Description**

Carbon Black, Oil and other materials, receiving.

This is too vague, list all items specifically.

# Machine for Mfg.

Forklift truck, go cart

This again is to simple, we must identify more clearly who is doing what.

### **Product:**

Appearance, Chemical Component

What exactly are we checking for, who is checking it, how and what happens after it is reviewed.

# Product/Process Specification/Tolerance:

Refers TP .JY-101

We must supply a copy of this specification or provide more specific information as to what is being done to verify acceptance.

# **Gauge & Equipment:**

Tools and equipment inspection

What tools and equipment are used for inspection? How do we no they are calibrated? Should probably cross reference the PM (Preventive Maintenance) schedule for whatever tools and equipment are being utilized.

# **Control Method:**

# Sampling:

Needs to be more specific, how many pieces per batch? How large is a batch? Is it different for each different raw material? If it passes what happens? How does it get moved to storage and logged as good raw material? If it is bad how does it get tagged for return to the supplier? Do all these actions occur on the dock as the material is received or is it taken to a separate holding area for certification prior to moving to inventory?

These are some of the questions being asked us by Ford and so hopefully you can see the amount of detail required in the CP and PFMEA docs. We realize it is going to take some time to revise all that must be done and there will be many revisions, that is ok. According to Ford NA this process must be done and we will review with CSO after for their acceptance. I will send a separate email on the PFMEA. Sorry this is so long but I was unsure how to present to you what happened in our meeting.

### Chris

From: Raul [mailto:Raul@baolong.biz]
Sent: Tuesday, October 07, 2008 10:29 PM

To: billjr@thonassociates.com; 'Chris Bruce'

Subject: FW: TR414 Print

FYI

**From:** Jim Cao [mailto:caojianming@baolong.biz]

**Sent:** Tuesday, October 07, 2008 8:05 PM **To:** rcamille@ford.com; 'Yao, Michael (G.C.)'

Cc: 'raul'

Subject: TR414 Print

Hi Robert,

Here attached are the latest print of TR414, FMEA, PF& CPs for your information.

Any questions please feel free to let me know.

Thanks and regards,

Jim Cao

Shanghai Baolong

From: Chris Bruce [cbruce@thonassociates.com]

Sent: Wednesday, May 21, 2008 8:03 PM

To: Camilleri, Robert (R.H.)
Cc: billjr@thonassociates.com

Subject: FW: Ford

Attachments: FORD Ozone Test Summary 5-21-08.xls

#### Rob,

Attached are some test reports as requested in the meeting two days ago as well as some comments from Miller regarding EPDM. We will discuss in the morning.

#### Chris

**From:** Miller Feng [mailto:miller@baolong.biz] **Sent:** Wednesday, May 21, 2008 1:00 PM

To: 'Bill Thon Jr'; 'Chris Bruce'

Cc: winston@chinabaolong.net; 'charles'; 'raul'

Subject: Ford

Hi Bill and Chris,

As we talk to Ford during conference call yesterday, EPDM is a key factor differentiating Ford products from Dill and the aftermarket.

1. EPDM is a key fact related to Ozone resistant performance. Ford rubber compound contains 28% EPMD, but others has only 25%. Yesterday Ford asked what is the tolerance of controlling the rubber composition. I asked our chemist and checked our control plan, the rubber weight tolerance is 0.2kg for each cart, each cart weights 52kgs.

# Year 2006 **TR414**

| Shipping Date from Shanghai | Shipping Lot No. | Ozone Test Report No. | Conclusion | Note              |  |
|-----------------------------|------------------|-----------------------|------------|-------------------|--|
| 20060110                    | 0527225          |                       |            |                   |  |
| 20060110                    |                  | -                     |            |                   |  |
| 20060110                    |                  | _                     |            |                   |  |
|                             |                  | 2006024               | Pass       | Test at same time |  |
| 20060117                    |                  | _                     |            |                   |  |
| 20060126<br>20060126        |                  | 4                     |            |                   |  |
|                             |                  |                       |            |                   |  |
| 20060308                    |                  | 2006042               | Pass       | Test at same time |  |
| 20060322                    |                  |                       |            |                   |  |
| 20060405                    | 0627309          | _                     |            |                   |  |
| 20060411                    | 0627310          | 2006082               | Pass       | Test at same time |  |
| 20060421                    | 0627210          | _                     |            |                   |  |
| 20060421                    |                  |                       |            |                   |  |
| 20060511                    |                  | W(X)2007-707-2        | Pass       | Test at same time |  |
| 20060519                    |                  | , ,                   |            |                   |  |
| 20060613                    |                  |                       |            |                   |  |
| 20060613                    |                  |                       |            |                   |  |
| 20060623                    |                  | 2006116               | Pass       | Test at same time |  |
|                             | 0627322          |                       |            |                   |  |
|                             | 0627323          |                       |            |                   |  |
|                             | 0627325          |                       |            |                   |  |
| 20060713                    |                  | 2006178               | Pass       | Test at same time |  |
| 20060713                    |                  | 2002/0                |            |                   |  |
| 20060803                    |                  | 2006183               | Pass       | Test at same time |  |
| 20060803                    |                  | 2000103               | 1 433      | rese de same time |  |
| 20060906                    |                  | 2006194               | Pass       | Test at same time |  |
| 20060906                    |                  | 2000131               | . 355      | . coc ac same and |  |
|                             | 0627344/45       |                       |            |                   |  |
| 20061127                    |                  | 2006204-1             | Pass       | Test at same time |  |
|                             | 0627351          |                       |            |                   |  |
|                             | 0627345/48/52    |                       |            |                   |  |
| 20061215                    |                  | 0612-001              | Pass       | Test at same time |  |
| 20061221                    | 0627353          | 0012-001              | 1 033      | rescat same time  |  |
| 20061228                    | 0627350/57       |                       |            |                   |  |

From: Camilleri, Robert (R.H.)

Sent: Tuesday, August 19, 2008 7:54 AM

To: 'Raul'

Cc: 'Bill Thon Jr'

Subject: FW: Conference Call
Attachments: MOLD# HISTORY.xls

Raul, according to the DV plans we approved, the first molds used for the TR414 valve stems were 5,6,7 and 8. After the initial DV approvals, Baolong was allowed add molds as required. You reported the mold history of the TR414 valve stems as being 06, 09, 11, which does not align with the information that I have. Do you have an explanation for this? Thanks

From: Raul [mailto:Raul@baolong.biz]
Sent: Wednesday, August 13, 2008 3:00 AM
To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call

Hi Rob,

Sorry for the delay. Attached please find the record related to the mold we've used for Ford and Tech since 2007.

**Thanks** 

Raul SBIC

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Tuesday, August 12, 2008 8:42 PM

To: Raul; Bill Thon Jr

Subject: RE: Conference Call

Raul, thank you for the prints. When can you provide the mold information for these Tech and Ford valve stems? Thanks

From: Raul [mailto:Raul@baolong.biz]
Sent: Tuesday, August 12, 2008 4:00 AM
To: Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call

Hi Rob,

Good day!

Attached please find the comparison print for these 3 valves.

TR413 & TR414

The difference is the indicator ring. Ford valves have it while Tech valves have not.

TR600HP

The size is different.

**Thanks** 

Raul SBIC

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

**Sent:** Tuesday, August 12, 2008 12:51 AM

12/1/2008

To: Raul; Bill Thon Jr

Subject: RE: Conference Call

Raul, OK we can wait until tomorrow. Thanks

**From:** Raul [mailto:Raul@baolong.biz] **Sent:** Monday, August 11, 2008 9:08 AM **To:** Camilleri, Robert (R.H.); 'Bill Thon Jr'

Subject: RE: Conference Call

Hi Rob.

Good day!

I searched my laptop and I'm sorry that I have not found the prints of the valves for aftermarket, but the drawings of Ford valves. Can we submit the comparison prints to you tomorrow as well as the mold no. history? Very sorry for the delay.

**Best Regards** 

Raul SBIC

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Monday, August 11, 2008 8:08 PM

To: Bill Thon Jr; Raul; Yao, Michael (G.C.); Chris Bruce; Li, Bo (Jason.)

**Subject:** Conference Call

We need to have a quick conference call today. I have several questions that I need answered and confirmed. Can we talk at 8:30 Detroit time?

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

|         | FORD MOLD# | TECH MOLD#           |
|---------|------------|----------------------|
| TR413   | 05, 06, 07 | G, K, 01, 05, 06, 07 |
|         |            |                      |
| TR414   | 06, 09, 11 | C, H, 04, 06         |
|         |            |                      |
| TR600HP | 06         | 01, 02, 03           |

From: Chris Bruce [cbruce@thonassociates.com]

Tuesday, April 29, 2008 8:59 AM Sent:

To: Camilleri, Robert (R.H.)

Cc: 'Bill Thon Jr'

Subject: FW: Baolong Chronology

Rob,

To the right in "RED" I have provided the additional data Bill had promised.

Thanks,

Chris

From: Bill Thon Jr [mailto:billjr@thonassociates.com]

Sent: Tuesday, April 29, 2008 8:20 AM

To: 'Camilleri, Robert (R.H.)' Cc: cbruce@thonassociates.com Subject: Baolong Chronology

Hi Rob,

Here is the chronology for Baolong/Topseal TR414:

6C34-1700-

AB/BB

**July '05** Dill supplied approx 250,000 on behalf of Baolong/Topseal

January 24,

2006

These parts were produced in North Carolina

**Plants** Dearborn May 24, 2006

Goodyear (Arizona)

**Kansas City** June 5, 2006

Kentucky

Michigan Truck July 11, 2006

Goodyear (Texas)

Norfolk

August '05 5F93-1700-Baolong/ Topseal began supplying parts manufactured in China.

AB

Dill no longer producing parts for the OE

**Plants** Dearborn August 25,

Wixom 2006

> Kansas City Michigan Truck

Norfolk

Additional Plant Chicago

January '06

**Additional Plants** Twin Cities

Louisville

PE08-060 0696

11/21/2008

#### May '06

Additional Plants Oakville

St. Thomas Hermosillo

**June '06** 

Additional Plants

Atlanta

Wayne

Auto Alliance

December '06

**Additional Plant** 

Venezuela

I am working on the dates for the 600HP at Ohio, KTP and Cuatitlan. Also the TR413 at Wixom

Let me know if need any additional information.

Thanks,

Bill Thon, Jr. BAOLONG 248-625-5426

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http://www.iolo.com

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http://www.iolo.com

From: Camilleri, Robert (R.H.)

**Sent:** Friday, July 25, 2008 10:32 AM

**To:** Mracna, Chris (C.J.) **Subject:** FW: anti ozone agents

Chris, here are the anti-ozone agents used that we requested. Is this enough information to determine what it is that they are using? If not we can request more information from Raul. Thanks

From: Raul [mailto:Raul@baolong.biz] Sent: Friday, July 25, 2008 10:27 AM

**To:** Camilleri, Robert (R.H.)

Cc: 'Bill Thon Jr'; 'Chris Bruce'; Yao, Michael (G.C.); 'MILLER FENG'

**Subject:** RE: anti ozone agents

Hi Rob,

Here are our anti-ozone agents details in the different compounding,

28% EPDM, RD x 0.5, 4020 x 1 and DTPD x 1

37% EPDM, RD X 0.5 and DTPD x 1

100% EPDM, RD x 1 and MB x 2

**Thanks** 

Raul SBIC From: Mracna, Chris (C.J.)

Sent:Friday, July 25, 2008 1:13 PMTo:Camilleri, Robert (R.H.)Subject:FW: Pyro GC/MS Results

Attachments: Ford PN 79639 A.pdf



Rob.

Attached is the preliminary report from ARDL from a few days ago. It contains compositional information from the first three Baolong samples. The sample IDs are noted in the report. We are currently waiting for the report that contains the remaining information for the rest of the sample (namely the benchmark samples).

These preliminary results are expected to remain unchanged in the final report. Based on the reported ratios, the new test method (Pyrolysis-GC/MS) appears to be able to identify the composition of the rubber samples.

We should receive the results for the remaining samples by cob today. I will forward you that report when we receive it.

Also, we should have timing for the percent ozonate testing that is also being conducted by ARDL by cob today.

Please review and let me know if you have additional questions.

Regards,
Chris Mracna
Chassis Materials Engineering
Brakes, Exhaust, Suspension, and Wheels
Ford Motor Company
(313) 805-4483
cmracna@ford.com
Materials Engineering, Testing, and Standards (METS) TeamConnect Site

-----Original Message-----From: Bliznick, Thomas (T.G.) Sent: Friday, July 25, 2008 12:44 PM To: Mracna, Chris (C.J.)

Subject: FW: Pyro GC/MS Results

Thomas Bliznick
>Laboratory Development Analyst
>Ford Motor Co., Central Laboratory
>Polymers, Coatings, and Corrosion Section
>(313) 33-78487
>

https://www.tc2.ford.com/ts/METS/default.aspx

-----Original Message-----

From: Tracy Keaton [mailto:tracyk@ardl.com] Sent: Tuesday, July 15, 2008 2:22 PM

To: Bliznick, Thomas (T.G.)

Cc: Tom Knowles

Subject: Pyro GC/MS Results

Mr. Bliznick,

Attached are the results that Mr. Knowles discussed with you earlier today.

Thank you,

Tracy Keaton ARDL, Inc. 330-794-6600 Tel 330-794-6610 Fax <Ford PN 79639 A.pdf>>

This email and any of its attachments may contain confidential information intended only for the use of the addressee(s). If the reader of this email is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination or copying of this email is strictly prohibited. If you have received this email in error, please notify us by return email at info@ardl.com, permanently delete the email, and destroy any printouts. If this email contains test data and/or draft reports, you are hereby notified that only a signed original test report will contain official results, a copy of which resides in the project folder located at ARDL, Inc. Thank you. Akron Rubber Development Laboratory, Inc.



July 15, 2008

## TEST REPORT

PN 79639A

PO #AAR P008 580955

## **Chemical Analysis Department**

Prepared For:

Mr. Tom Bliznick Ford Motor Company – SC #154 15000 Century Drive Dearborn, MI 48120-1267

Prepared By:

Melinda Wagner Chemist Approved By:

Thomas M. Knowles

Vice President, Chemical Services

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# Testing. Development. Problem Solving.



July 15, 2008

Mr. Tom Bliznick Ford Motor Company

Page 2 of 2 PN 79639A

SUBJECT:

Chemical analysis on samples submitted and requested by the above company.

Purchase Order Number: AAR P008 580955

RECEIVED:

Nine Valve Stems identified as GC34-1700-AC New 5/16/08, 7L34-1700-AA New 5/9/08, 7L34-

1700-AA Used (Sample 1), and Samples 3 through 7.

PYRO-GC/MS

Method:

New Pryo

Instrument:

Perkin Elmer Clarus 500 Gas Chromatograph with a Clarus 560D mass Spectrometer

Accessory:

CDS Analytical Pryoprobe 5000 Series

Column:

Forte BPX5 GC Capillary Column

A small portion of each sample was placed in an appropriately sized quartz tube that had been loaded with a small amount of quartz wool to retain the sample. The quartz tube was loaded into the Pyro-GC/MS and analyzed.

Sample weights are as follows:

| Sample Identification    | Mass/mg |
|--------------------------|---------|
| 7L34-1700-AA New 5/9/08  | 0.166   |
| GC34-1700-AC New 5/16/08 | 0.192   |
| Sample 1                 | 0.158   |

| RESULT                   | <u>S</u> |
|--------------------------|----------|
| Sample Identification    | EPR/NR   |
| 7L34-1700-AA New 5/9/08  | 31/69    |
| GC34-1700-AC New 5/16/08 | 24/76    |
| Sample 1                 | 27/73    |

Prepared By:

Melinda Wagner Chemist Approved By:

Thomas M. Knowles
Vice President, Chemical Services

Any samples submitted for this project will be retained at Akron Rubber Development Laboratory, Inc. for a period of three months following completion of work.

\*ARDL is accredited by A2LA for the test methods listed on the attached scope\*

## **Qualitative Report**

File:

C:\TurboMass\NHTSA.PRO\Data\PN79639(5-9-08).raw

Acquired: Description:

Sample ID:

10-Jul-08 11:48:38 AM

GC/MS Method:

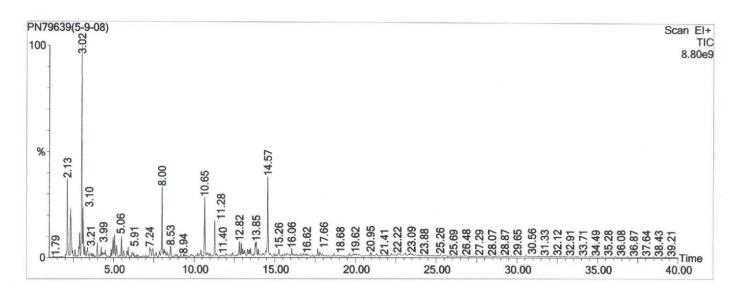
GC: New Pyro.mth MS: New Pyro.EXP

PN79639(5-9-08)

Printed: 10-Jul-08 12:29 PM

Page 1 of 1

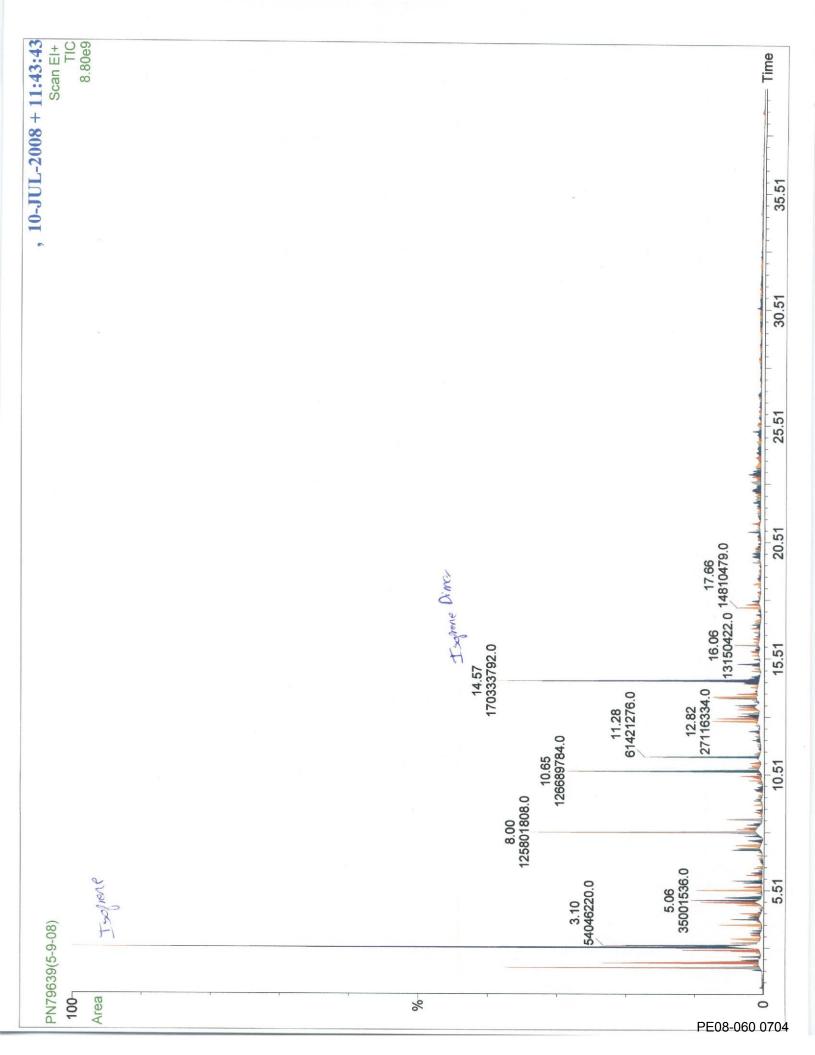
Vial Number: 221

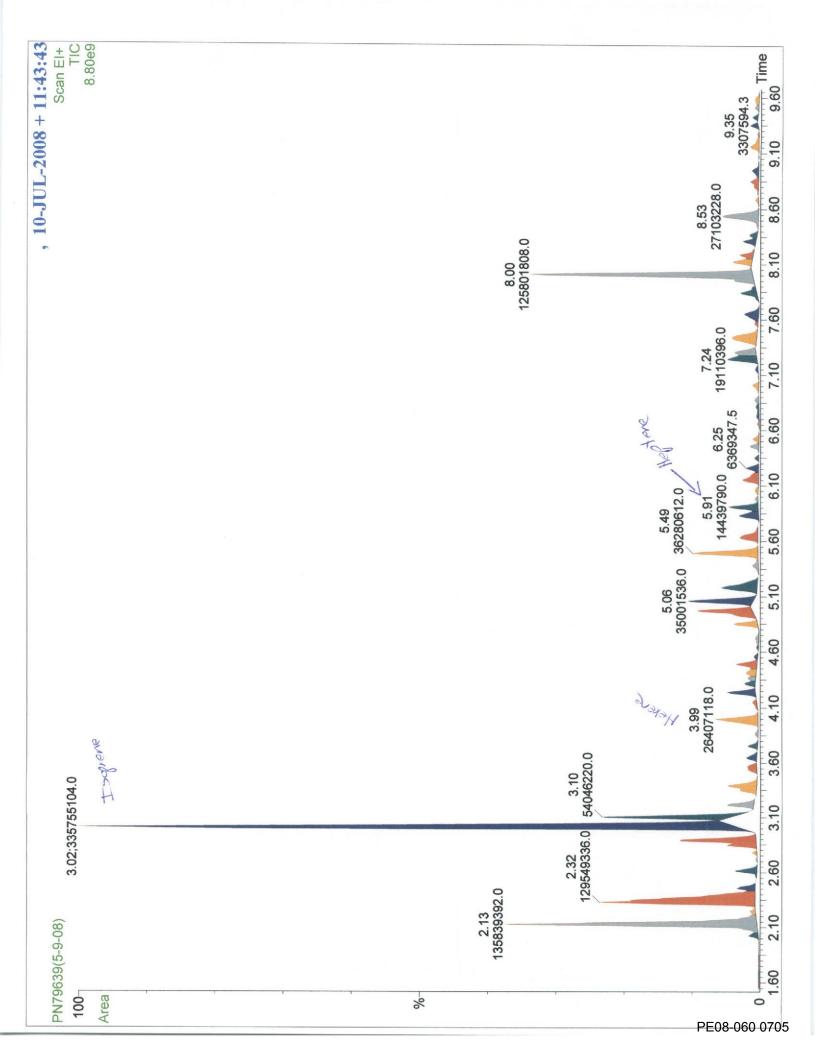


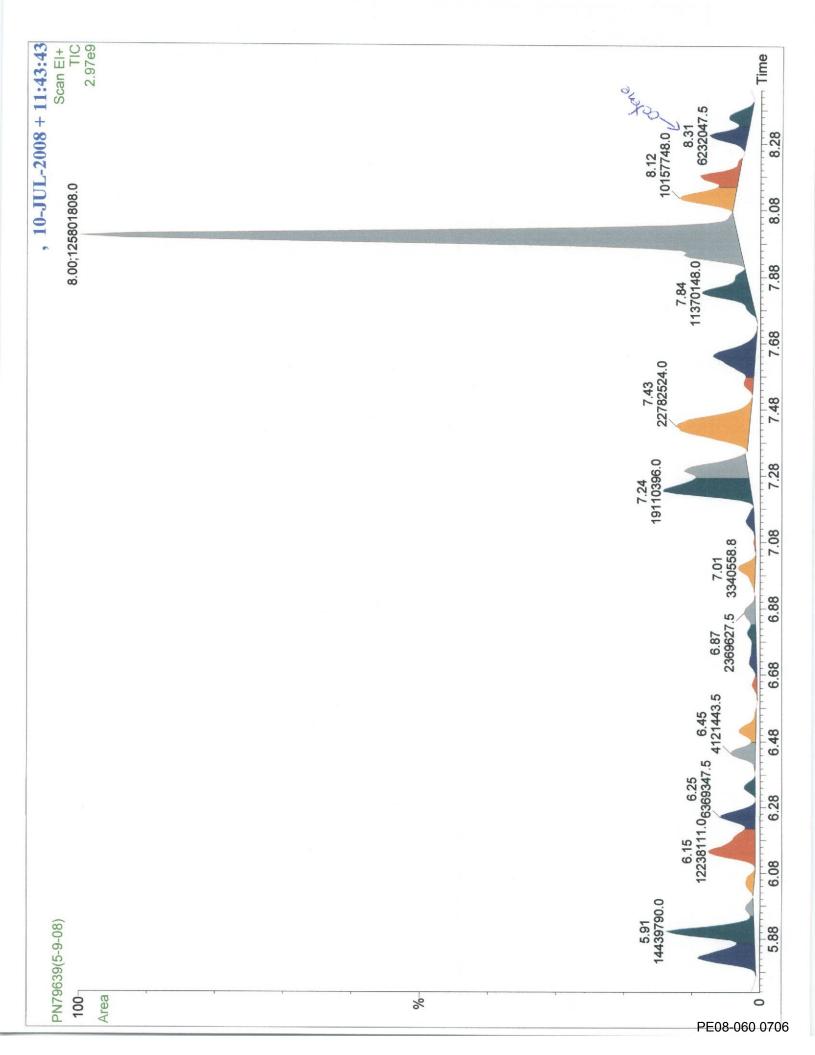


**ACQUISITION PARAMETERS** 

Oven: Initial temp 40°C for 2 min, ramp 8°C/min to 300°C, hold 5.50 min, Inj=300°C, Volume=0 µL, Split=:1, Carrier Gas=PSIG, Solvent Delay=0.00 min, Transfer Temp=200°C, Source Temp=180°C, Scan: 30 to 550Da, Column







## **Qualitative Report**

File:

C:\TurboMass\NHTSA.PRO\Data\PN79639(5-16-08).raw

Acquired:

10-Jul-08 12:53:42 PM

Printed: 10-Jul-08 01:34 PM

Description: GC/MS Method:

GC: New Pyro.mth

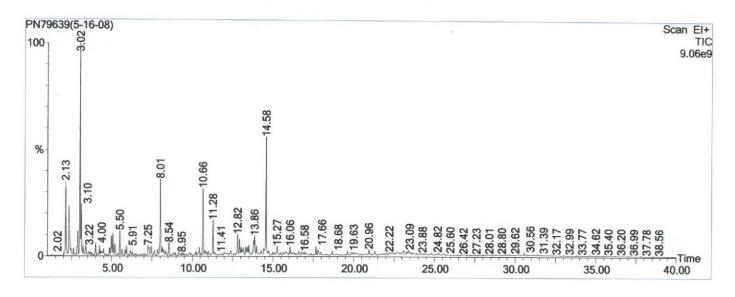
MS: New Pyro.EXP

Page 1 of 1

Sample ID:

PN79639(5-16-08)

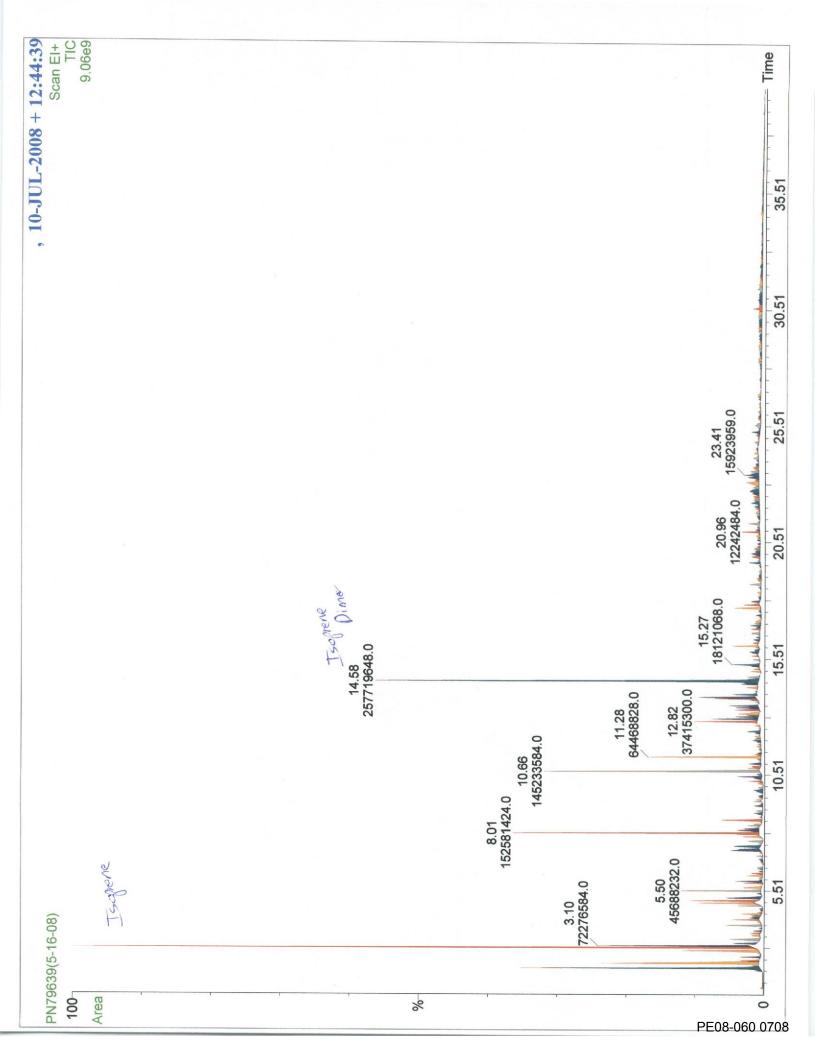
Vial Number: 222

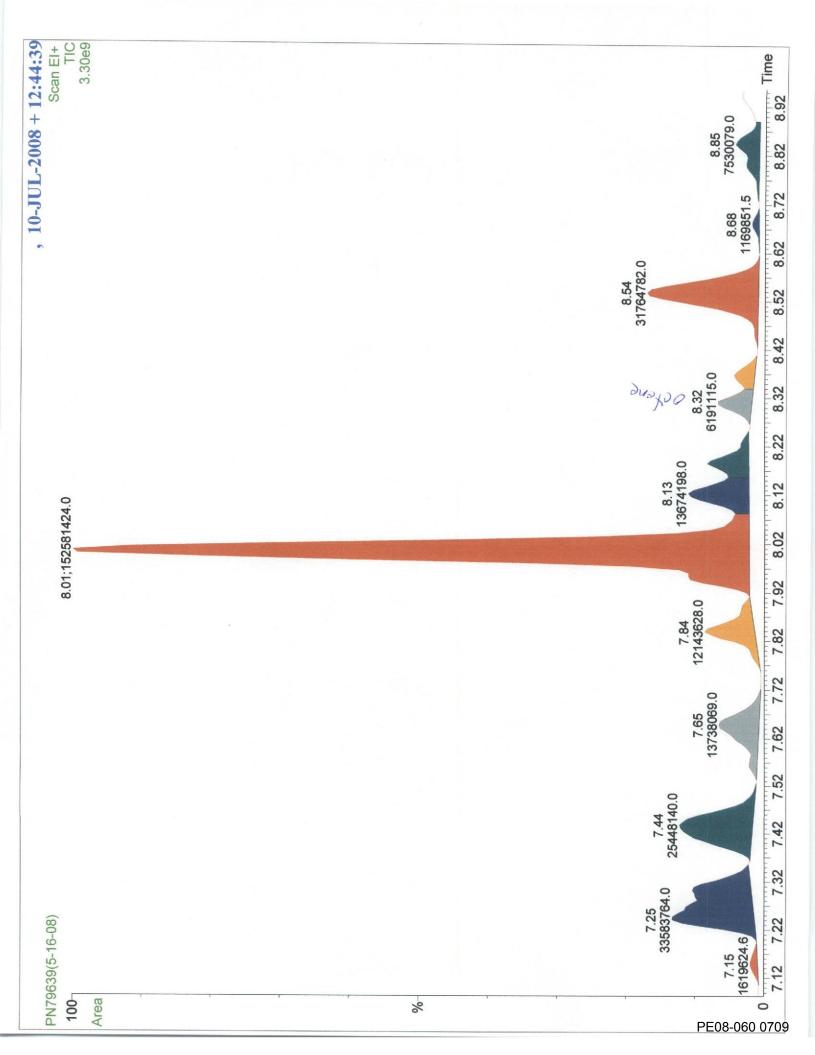




Inst() ACQUISITION PARAMETERS

Oven: Initial temp 40°C for 2 min, ramp 8°C/min to 300°C, hold 5.50 min, Inj=300°C, Volume=0 µL, Split=:1, Carrier Gas=PSIG, Solvent Delay=0.00 min, Transfer Temp=200°C, Source Temp=180°C, Scan: 30 to 550Da, Column





## **Qualitative Report**

File:

C:\TurboMass\NHTSA.PRO\Data\PN79639Sample1.raw

Acquired: Description: 10-Jul-08 02:00:56 PM

on:

GC/MS Method: Sample ID: GC: New Pyro.mth

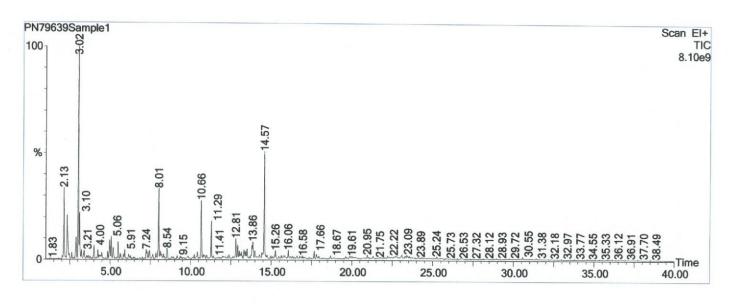
MS: New Pyro.EXP

PN79639Sample1

Printed: 10-Jul-08 02:41 PM

Page 1 of 1

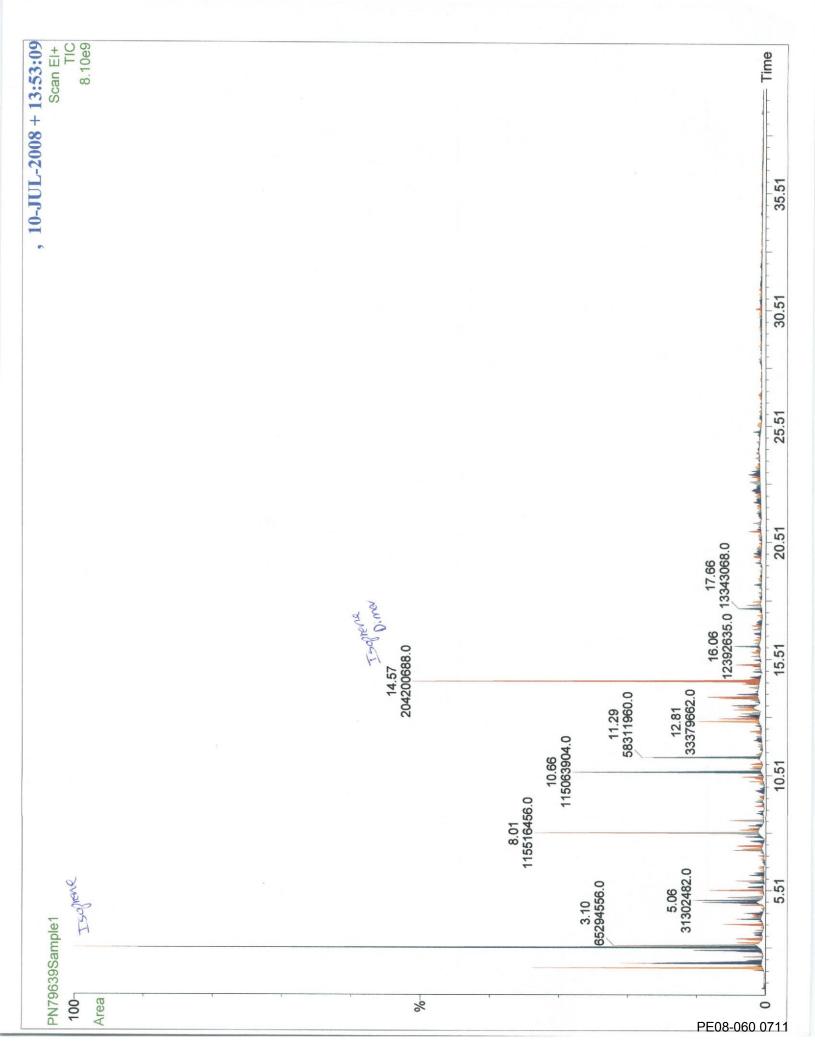
Vial Number: 223

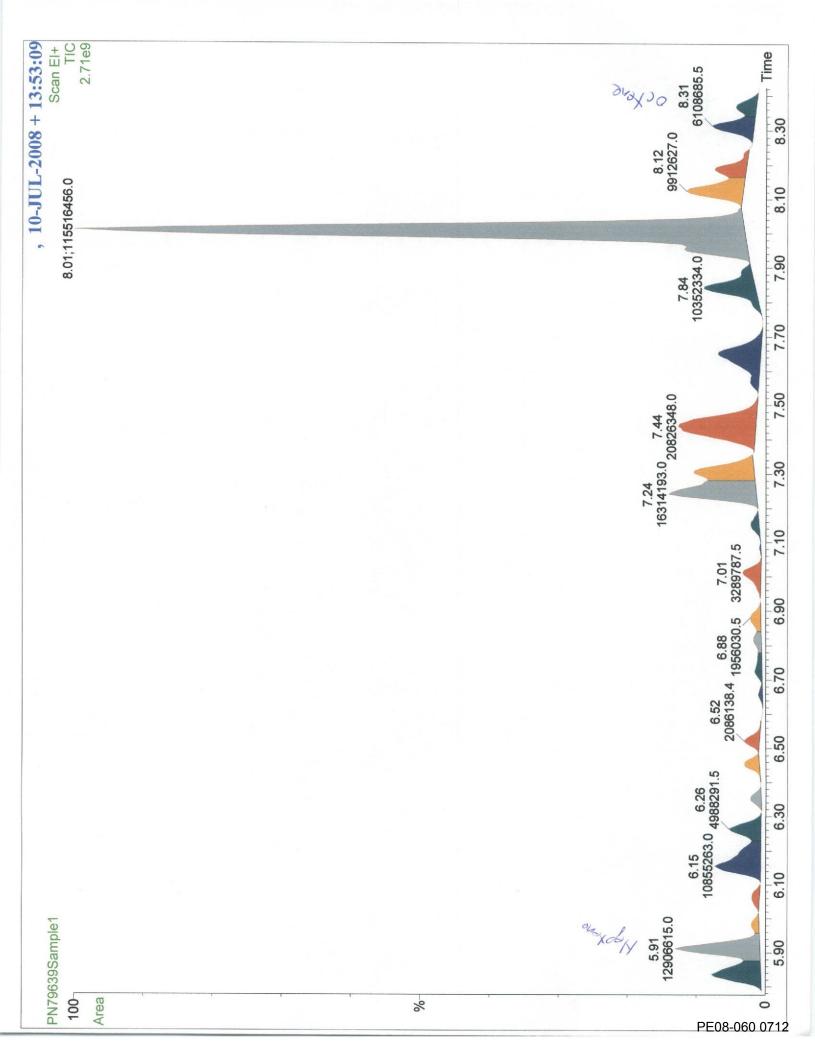




Inst() ACQUISITION PARAMETERS

Oven: Initial temp 40°C for 2 min, ramp 8°C/min to 300°C, hold 5.50 min, Inj=300°C, Volume=0 µL, Split=:1, Carrier Gas=PSIG, Solvent Delay=0.00 min, Transfer Temp=200°C, Source Temp=180°C, Scan: 30 to 550Da, Column

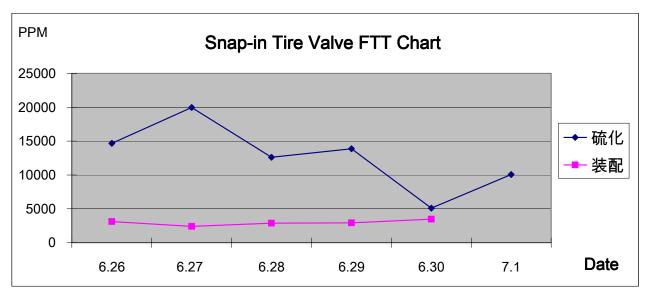




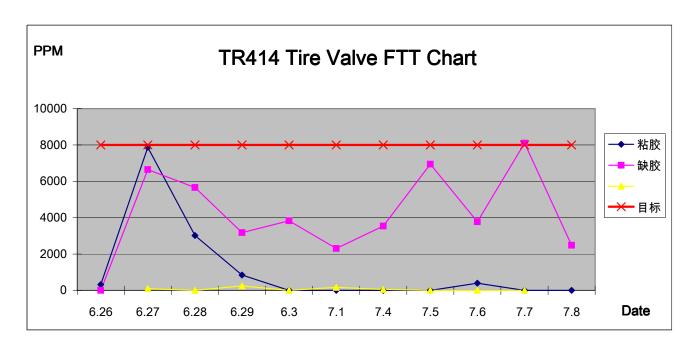
# 硫化FTT

# 装配FTT

| 日期   | 不合格品数量 | 产品总数  | PPM   | 日期   | 产品数量  | 废品合计 | PPM   |
|------|--------|-------|-------|------|-------|------|-------|
| 6.26 | 870    | 59308 | 14669 | 6.27 | 28587 | 89   | 3113  |
| 6.27 | 1208   | 60497 | 19968 | 6.28 | 34722 | 84   | 2419  |
| 6.28 | 205    | 16251 | 12615 | 6.29 | 32662 | 94   | 2878  |
| 6.29 | 507    | 36547 | 13873 | 6.30 | 36490 | 107  | 2932  |
| 6.30 | 20     | 3915  | 5109  | 7.1  | 27071 | 94   | 3472  |
| 7.1  | 297    | 29498 | 10068 | 7.2  | 28983 |      |       |
|      |        |       | 89627 |      |       |      | 14815 |



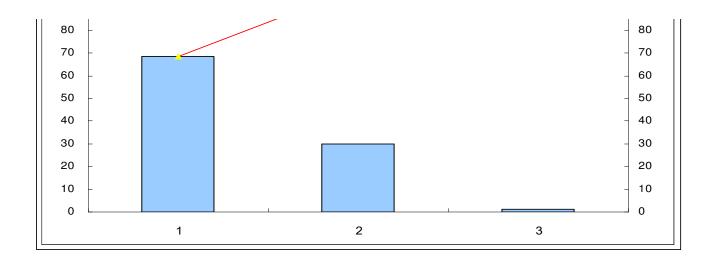
| 不良项目 | 不良内容         | 占比例    | 不良原因           | 改善对策        | 负责部门 | 完成日期      |
|------|--------------|--------|----------------|-------------|------|-----------|
| 缺胶   | TR414产品缺胶严重  | 22.30% | 模具不水平          | 将模具和机台调节水平  | 机装车间 | 7/5/2006  |
| 粘模   | TR414产品粘模严重  | 18.50% | 工人没有按照规<br>定洗模 | 加强工人培训和管理   | 卡扣车间 | 7/10/2006 |
| 堵孔   | 台检发现硫化堵孔比例偏高 | 26.80% | 模具顶针松动         | 定期检查模具顶针,对顶 | 卡扣车间 | 7/10/2006 |



**TR 414 Tire Valve Statistics** 

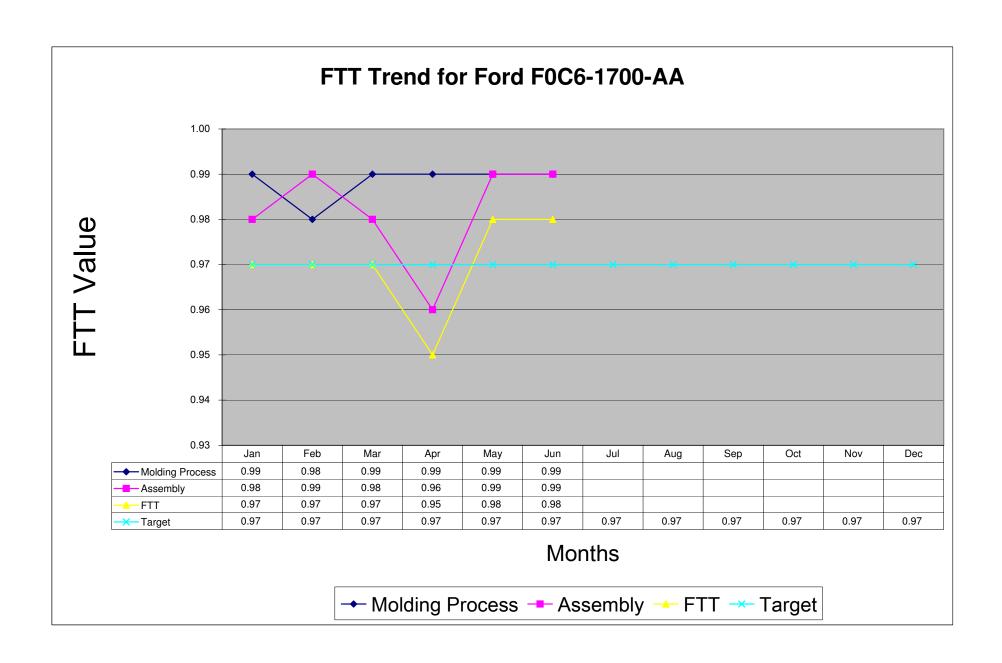
| Failure | 粘胶   |       | 缺朋   | <b>È</b> |      | 堵孔  | Targ PPM  | Rema |  |
|---------|------|-------|------|----------|------|-----|-----------|------|--|
| Date    | Quan | PPM   | Quan | PPM      | Quan | PPM | raigiriwi |      |  |
| 6.26    | 19   | 320   |      | 0        |      |     | 8000      |      |  |
| 6.27    | 476  | 7868  | 402  | 6645     | 6    | 99  | 8000      |      |  |
| 6.28    | 49   | 3015  | 92   | 5661     |      | 0   | 8000      |      |  |
| 6.29    | 31   | 848   | 116  | 3174     | 9    | 246 | 8000      |      |  |
| 6.30    |      | 0     | 15   | 3831     |      | 0   | 8000      |      |  |
| 7.1     |      | 0     | 68   | 2305     | 5    | 170 | 8000      |      |  |
| 7.4     |      | 0     | 209  | 3543     | 3    | 51  | 8000      |      |  |
| 7.5     |      | 0     | 217  | 6942     |      | 0   | 8000      |      |  |
| 7.6     | 6    | 398   | 57   | 3777     |      | 0   | 8000      |      |  |
| 7.7     |      | 0     | 95   | 8095     |      | 0   | 8000      |      |  |
| 7.8     |      | 0     | 62   | 2482     | 2    | 80  | 8000      |      |  |
| Totall  | 581  | 12450 | 1333 | 46456    | 25   | 646 |           |      |  |

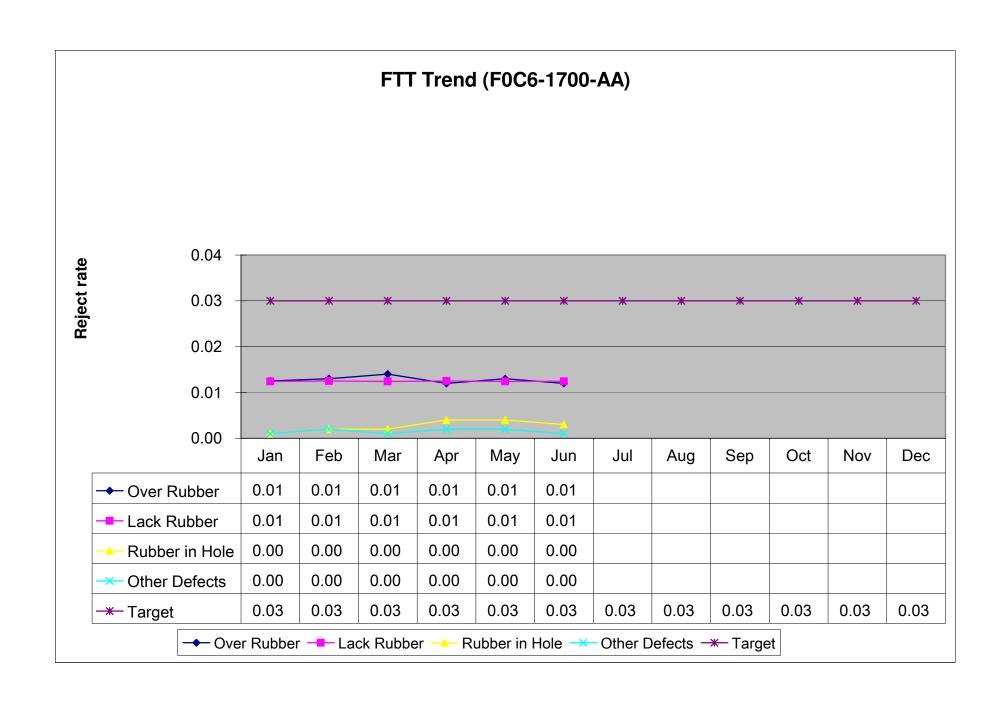




| 序号     | 1    | 2    | 3     |
|--------|------|------|-------|
| 项目     | 缺胶   | 粘胶   | 堵孔    |
| 数量     | 1333 | 581  | 25    |
| 累加数    | 1333 | 1914 | 1939  |
| 缺陷占比率% | 68.7 | 30.0 | 1.3   |
| 累加百分率% | 68.7 | 98.7 | 100.0 |

| 不良项目 | 不良内容             | 占比例    | 不良原因         | 改善对策                 | 负责部门 | 完成日期      |
|------|------------------|--------|--------------|----------------------|------|-----------|
| 堵孔   | 台检发现硫化堵<br>孔比例偏高 | 68.70% | 模具顶针松动       | 定期检查模具顶针<br>,对顶针定期更换 | 卡扣车间 | 7/10/2006 |
| 缺胶   | TR414产品缺胶<br>严重  | 30.00% | 模具不水平        | 将模具和机台调节<br>水平       | 机装车间 | 7/5/2006  |
| 粘模   | TR414产品粘模<br>严重  | 1.30%  | 工人没有按照规定要求洗模 | 加强工人培训和管<br>理        | 卡扣车间 | 7/10/2006 |





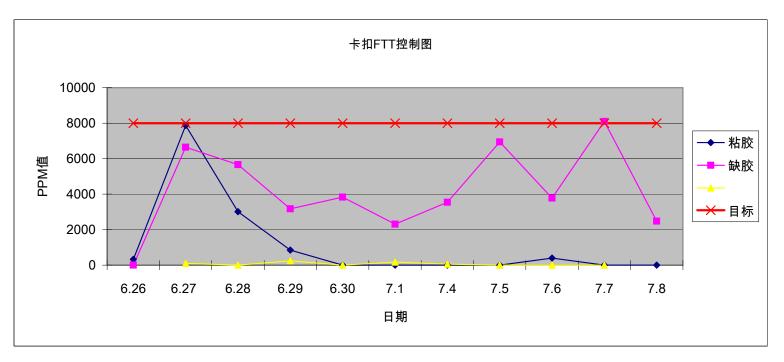
#### QOS Metrics

| Madria                 | Torrest 107     | Town et 100 | Deen       | Performance |     |     |     |     |     |     |     |     |     |     |     |
|------------------------|-----------------|-------------|------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Metric                 | Target '07      | Target '08  | Resp.      | Jan         | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Customer Plant PPM     | 50              | 45          | Qual       |             |     | 56  |     |     |     |     |     |     |     |     |     |
| Delivery Rate          | 100%            | 100%        | MP&L       |             |     |     |     |     |     |     |     |     |     |     |     |
| Warrenty PPM           | 120             | 110         | Qual       |             |     |     |     |     |     |     |     |     |     |     |     |
| FTT                    | 98%             | 99%         | Manu       |             |     | 97  |     |     |     |     |     |     |     |     |     |
| Internal PPM           | 300             | 280         | Manu       |             |     |     |     |     |     |     |     |     |     |     |     |
| OEE                    | 75              | 78          | Manu       |             |     |     |     |     |     |     |     |     |     |     |     |
| Cpk                    | >=1.33          | >=1.33      | Manu       |             |     |     |     |     |     |     |     |     |     |     |     |
| PM Completion          | 100%            | 100%        | Manu       |             |     |     | 98  |     |     |     |     |     |     |     |     |
| DTD                    | 23              | 20          | Fina       |             |     |     |     |     |     |     |     |     |     |     |     |
| 5S                     | 90              | 95          | All        |             |     |     |     |     |     |     |     |     |     |     |     |
| Safety Data            | <3              | <3          | Manu       |             |     |     |     |     |     |     |     |     |     |     |     |
| Turnover Rate          | <5 <del>%</del> | <5%         | HR         |             |     |     |     |     |     |     |     |     |     |     |     |
| Supplier PPM           | 30              | 28          | Purch/Qual |             | 40  |     |     |     |     |     |     |     |     |     |     |
| Supplier Delivery Rate | 100%            | 100%        | Purch/Qual |             |     |     |     |     |     |     |     |     |     |     |     |

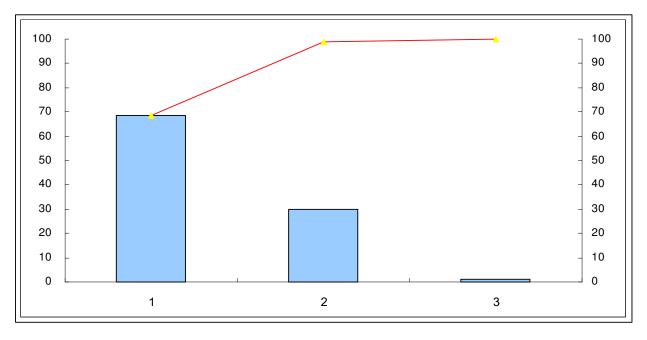
| Open Issue             | Resp. | Root Cause | Corrective Action | Due Date | Status |
|------------------------|-------|------------|-------------------|----------|--------|
| PPM Higher/FTT lower   | Manu  |            |                   |          |        |
| PM Completion 98% only | Manu  |            |                   |          |        |
| Higher supplier PPM    | Qual  |            |                   |          |        |
|                        |       |            |                   |          |        |
|                        |       |            |                   |          |        |

# FD产品不合格项分析

| 日期   | 粘胶  |       | 缺形   | ξ     |    | 堵孔  | 目标   | 合计    |  |
|------|-----|-------|------|-------|----|-----|------|-------|--|
| 口和   | 数量  | PPM   | 数量   | PPM   | 数量 | PPM | 日柳   |       |  |
| 6.26 | 19  | 320   |      | 0     |    |     | 8000 | 14797 |  |
| 6.27 | 476 | 7868  | 402  | 6645  | 6  | 99  | 8000 | 21027 |  |
| 6.28 | 49  | 3015  | 92   | 5661  |    | 0   | 8000 | 12266 |  |
| 6.29 | 31  | 848   | 116  | 3174  | 9  | 246 | 8000 | 14297 |  |
| 6.30 |     | 0     | 15   | 3831  |    | 0   | 8000 | 3851  |  |
| 7.1  |     | 0     | 68   | 2305  | 5  | 170 | 8000 | 10365 |  |
| 7.4  |     | 0     | 209  | 3543  | 3  | 51  | 8000 | 9873  |  |
| 7.5  |     | 0     | 217  | 6942  |    | 0   | 8000 | 7423  |  |
| 7.6  | 6   | 398   | 57   | 3777  |    | 0   | 8000 | 17958 |  |
| 7.7  |     | 0     | 95   | 8095  |    | 0   | 8000 | 8190  |  |
| 7.8  |     | 0     | 62   | 2482  | 2  | 80  | 8000 | 12925 |  |
| 合计   | 581 | 12450 | 1333 | 46456 | 25 | 646 |      | 4559  |  |



| 序号     | 1    | 2    | 3     |
|--------|------|------|-------|
| 项目     | 缺胶   | 粘胶   | 堵孔    |
| 数量     | 1333 | 581  | 25    |
| 累加数    | 1333 | 1914 | 1939  |
| 缺陷占比率% | 68.7 | 30.0 | 1.3   |
| 累加百分率% | 68.7 | 98.7 | 100.0 |



| 不良项目 | 不良内容             | 占比例    | 不良原因         | 改善对策                 | 负责部门 | 完成日期      | 可否关闭 |
|------|------------------|--------|--------------|----------------------|------|-----------|------|
| 堵孔   | 台检发现硫化堵<br>孔比例偏高 | 68.70% | 模具顶针松动       | 定期检查模具顶针<br>,对顶针定期更换 | 卡扣车间 | 7/10/2006 | 已关闭  |
| 缺胶   | TR414产品缺胶<br>严重  | 30.00% | 模具不水平        | 将模具和机台调节<br>水平       | 机装车间 | 7/5/2006  | 已关闭  |
| 粘模   | TR414产品粘模<br>严重  | 1.30%  | 工人没有按照规定要求洗模 | 加强工人培训和管理            | 卡扣车间 | 7/10/2006 | 已关闭  |

From: Bill Thon Jr [billjr@thonassociates.com]

**Sent:** Thursday, June 05, 2008 10:45 AM

To: Camilleri, Robert (R.H.)

Cc: 'Chris Bruce'
Subject: Ford TR414
Attachments: record.pdf

Hi Rob,

Please review the attached test report for one batch of rubber. My guys pulled a random report from past production. Also I cut and pasted an email Miller sent to me which further describes the report.

Hi Bill,

Since I am still online, I answer your question then you could get it today.

06111401-FD is exactly the rubber batch number, meaning Nov. 14<sup>th</sup>, 2006 No. 1 batch, FD means this rubber is especially for Ford. It indicates that on Nov. 14<sup>th</sup>, we mixed ten batches of rubber for Ford. If I understand correctly this is the small batch actually we called one cart. One cart is 46kgs, can produce about 8000 pcs of TR414.

As for T10 and T90, it indicates on the vulcanizing curve. A vulcanizing curve shows the time line of the rubber specimen begins curing to the end(time line as X axis, rubber curing as Y axis) under specific temperature and pressure. From the lowest point to the highest point of the curve, if we define this distance as 1, then we can find a time point of curing 10% and 90%, we define the 10% of the curve as the beginning of curing, while 90% as the finish point of the curing. So T10 like 2'31" in the report means that rubber begins curing at 2'31" and finish curing at 4'36" after timer begins.

With this vulcanizing curve, we can monitor if the rubber performance is good or not, if its performance is ok for our parameters set for molding process.

This is the production reports we kept then, each cart of mixed rubber, this is the necessary test we do.

I wish my explanation is clear for you. If you have any other questions, please feel free to ask.

Have a nice day!

Miller

From: raul [mailto:raul@baolong.biz]
Sent: Monday, June 02, 2008 4:49 AM

To: 'Bill Thon Jr'; winston@chinabaolong.net; 'Mander Wang'

**Cc:** miller@baolong.biz; 'Chris Bruce' **Subject:** RE: Ford Rubber Issue

Hi Bill,

Good day!

Attached please find the testing record copies for your reference.

**Thanks** 

PE08-060 0721

#### Raul SBIC

No viruses found in this incoming message Scanned by **iolo AntiVirus 1.5.3.5** http://www.iolo.com

No viruses found in this incoming message Scanned by **iolo AntiVirus 1.5.3.5** <a href="http://www.iolo.com">http://www.iolo.com</a>

Mooney Durometer 拓扑思(上海)汽车配件有限公司 Density D-橡胶成品快检记录表 OR0807-E-20 A/1 混炼均匀度 殿可 硬度 密度 项目 判定 T10 T50 T90 ML MH T10 T90 塑度 胶料批号标准 ≥1'20" 2'-3'30" ≤5'00" ≤0.3N.m ≥1.0N.m R<15S R<25S 57-63 1.07-1.09 39-49 0.22-0.42 436 1.07) 232" 317 142 0.21 1.2] 121 0.39 61 40 0/11/401 - FD 61 1.079 2 20' 306 133 0.23 1.25 10 0611140) - FD 0.39 61 1.08 127 34 437 0.22 1.31 10 0.39 06111403 - FD 1 1.018 134 0.25 1.20 61 270 408 10 0.40 0611/44 - FD 441 0.21 1.28 40 61 1.078 228 31t 0611140 1 - FD 0.37 224 211 431 1.22 0.25 40 61 1.071 034 06111406 - FD 1.28 1 439 49 ĽA 021 61 1.080 315 06111407 - FD 011 / 1.25 219 306 1.0)8 023 0.40 432 06111408 - FD 10 61 139 1 1.078 228 0.39 61 315 0.21 10 06111409 - FD 1.24 311 112 0.23 1.078 228 29 0611 1/10 - FD 0.39 22t 437 / 307 433 1.23 1.079 0.23 61 221 06111501 - FD 39 1 436 1.30 227 3'13' 0.22 61 1.081 11 0611100) - FD 1 1.22 61 2'23" 3/10 139 0.23 1.080 41 06111to3 - FD / 1.26 1.078 227 312 140 0.21 06111504 - FD 61 16 / 1.23 29 132 61 1.078 221 307 0.25 0611/COE - FD 0 227 1.2] 313 431 61 0.22 1.079 10 06 111006 - FD 1.23 4'36 0.23 61 1.0 / 125 312 10 06111507 - FD 1 1.081 1.28 3'16 4'38 2'30" 0.22 61 06111508 - FD 10 1 222" 433 0.23 1.24 1.078 2'07 61 11 0611159 - FD 0 61 317 441 1.28 1.080 232 0.21 OKNICIO - FD 10 433 222 121 1 121 301 61 1.079 217 0.23 10 0611160/ - FD V 221 208 134 61 1.23 4 1.079 0.23 06111602 - FD 1.26 1.079 39 433 0.72 61 0611/603 - FD 41 V 12 1.22 301 61 1.078 0.2 41 2.20 06111604 - FD 1 208 136 1.26 0.22 42 61 1.076 0611160 C- FD V 220 433 0.24 1.28 41 62 1.081 301 06111606 - FD 0 2'44 321 *33*2 0.22 1.2 1.019 06111607 -FD 10 61 435 1.24 41 2'08 0.23 61 1.079 221 06/11608 - FD 0 61 437 0.21 1.2 22) 40 1.0) 06111609 - FD  $\overline{V}$ 433 309 0.23 41 61 1.079 22 1.24 06111610 - FD 06111611 - FD 61 1.078 3'12" 438 0.22 1.2 4 308 436 7.23 61 0.23 40 [.0] 220 06111612 - FD / 2'26 431 13 0.22 1.24 1.076 30t 39 61 211 06111701 - FD 60 2'03" 430 0.23 1.21 29 [0] 216 06111702 - FD 1.08 433 1.31 61 2'10" 223 0.22 06111703 - FD 41 1.079 215 426 61 201" 0.24 1.25 06111) 04 - FD 41 1 3'10" 131 1.21 60 1.080 124 0.21 06111705 - FD 40 V 218 431 1.079 304 023 1.25 61 06111706 - FD 10 V 1.079 429 1.28 3'09" 61 0.21 10 0611170) - FD 1 219 430 1.15 1.081 305 0.23 0611108 - FD 40 61 V 39 320" 06111709 - FD 443 1.28 61 1.080 232 0.21

3'13

1.078

226

10

测试员: 礼名

06111)10 - FD

Plasticity |

日期: 11/16 2006

FE08-06 0 0723

1.75

0.23

# 拓扑思(上海)汽车配件有限公司

| 接料形等 評准   |                     |           |       | 711       |           | 海)汽车)-橡胶 |   |        | 录表                |            | QR08  | 07-E-2 | 0 A/1                                   |
|---|---------------------|-----------|-------|-----------|-----------|----------|---|--------|-------------------|------------|-------|--------|---|
| 現日   別度   丁屋   砂度   密度   T10   T50   T50   ML   MH   T10   T50   判定   120     |                     | en        |       |           |           | 130,42   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |        |                   |            | 湿炼均   | 均匀度    |   |
| 022.02   3949   37.3   107.00   177   73.00   107.00   127   121   128   141   128  |                     | 塑度        | 门尼    | 硬度        | 密度        | T10      | T50                                     | T90    | ML                | MH         |       |        | 判定                                      |
| 661089 - ii) 0.41   | 校料批号 标准             | 0.22.0.42 | 30.49 | 57-63     | 1 07-1.09 | ≥1'20"   | 2'-3'30"                                | ≤5'00" | ≤0.3N.m           | ≥1.0N.m    | R<15S |        | San |
|   | 11001 ID            |           |       |           |           |          |   |        | 0,20              | 12t        | 221   | 136"   |   |
|   | VV-                 |           |       |           | 1078      | 2'22"    | 3'10"                                   |        | 0.21              | 1.28       |       |        |   |
|   |                     |           |       |           |           | _        |   |        |                   |            |       |        | V                                       |
| ## 10   0.41   34   60   1.31   2.12   2.18   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   2.25   2.25 |                     |           |       |           |           |          |   |        |                   |            |       | -      |   |
| ## 10   0.41   34   60   1.31   2.12   2.18   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.24   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   1.25   2.20   2.25   2.25 | 06110804 - FU       |           |       |           |           |          | 2'02"                                   | 121    | 0:22              |            |       |        |   |
|   | 06 1 (0X) ( - FD    |           | 133   |           |           |          |   |        |                   |            |       |        | V                                       |
| 0011078 - FD  | 10 10 00 - FD       |           |       |           |           |          |   |        |                   |            |       |        | V                                       |
| 101108 10 0 41 47 60 10 10 18 218 20 1 43 1 0.20 126 06110810 - FD 0.41 47 60 1.013 22 12 12 12 13 44 0.20 12 12 12 13 44 0.20 12 12 12 12 12 12 12 12 12 12 12 12 12   | 06110801-FD         |           |       | - 0       |           |          |   |        |                   |            |       |        | V                                       |
| 04110F0   FD  | 06110808 - FD       |           |       |           | -         |          |   |        |                   |            |       |        |   |
| 0(110701 - FD) 0.40   |                     | 1.1       |       |           |           |          |   |        | -                 |            |       |        | V                                       |
| 041090 - FD 0.41  | 06/10810 - FD       | 0.41      | 37.   | 100       | 1.0/2     | 1226     | 35                                      | 451    | 0.20              | 121        |       |        |   |
| 041090 - FD 0.41  | 1101 ~              | ,         | 40    | . />      | 100       | 2,50     | 1'09"                                   | 12/    | 0 12              | 1.21       | 124"  | KAF*   | V                                       |
| 6110903 - FD 0.40   |                     | - 11      |       |           |           |          |   |        |                   |            | 235   | 74     |   |
| 6010901 - FD 0.38   | VIII V              |           |       |           |           |          |   |        |                   |            | 112   |        |   |
| 06110706 - FD 0.25  | 06110903 - FD       |           |       |           |           |          | 307                                     | 43     |                   |            |       |        | 10                                      |
| 06110706 - FD 0.25  |                     |           |       | _ v       |           |          | 3.10                                    | 431    |                   |            |       |        |   |
| Ship(r0 - FD   0.36   24   61   1018   222   310   438   0.23   1.31  | V 1/1               | 0.38      |       |           |           |          |   |        |                   |            |       |        |   |
|   | 06110906 - FD       |           |       |           |           |          | 7.68                                    |        |                   |            |       |        | -                                       |
| 0h10f0f - FD  | 0611090) - FD       |           |       |           | _         |          |   | _      |                   |            |       |        |   |
|   | 06110908 - FD       |           |       | _         |           |          |   | 43     |                   |            |       |        | -                                       |
|   | 06110909 - FD       |           |       |           |           | _        |   |        |                   |            |       | 7      | - 4                                     |
|   | 06110910 - FD       | 0.39      | 1     | 61        | 1.01      | 221      | 3.09                                    | 43     | 0.25              | 1.25       | 17.   |        | +                                       |
|   | F86181 41 - 20      | 1 75      | 1.18  | 3         | 1         |          | 1224                                    |        |                   |            |       |        |   |
|   | 1. (1)81010         | 185       | 114   |           | 123       |          | 1 144                                   | -      | 3 3 4 4 4         |            |       |        |   |
|   |                     |           |       |           |           |          |   |        |                   |            |       |        | -                                       |
|   | I supplement        | 1.63      | *     |           |           | 11 23    | 5 1 23                                  |        |                   | 3 4-24     | -     |        | 1                                       |
|   | Lature 12 - 60      |           |       | 210       | 118       |          | 2                                       | 1 1 12 | 84.00             | 4 1 100    |       |        |   |
|   | F 8/114/14 3 B      | 1785      |       |           | T.E       | 1        | 100                                     | 1      | 16 4 . 164        | 6 Tile     |       |        |   |
|   | 1 30 3 AL - AD      | 34178.5   | 1 3 4 |           | 14.6      | 4 122    |   |        | 4                 |            |       |        |   |
|   | 1 35110501 - 13     | 2         |       | 335       | 11.00     |          | 9 1 2 1                                 | A LA   | B L. Bu           |            | 2     |        | -                                       |
|   | 1 2/19/01 44        | 1 80      | 1 10  | 2 33      | 100       |          |   | 14     | 4 3 3 4           | 8 12       |       | -      |   |
|   | To all track to the | 4.16.8    | 11.3  | 5:        |           |          |   | 3 1 2  | 419               |            |       |        |   |
|   |                     | 1 23      |       | 4.75      |           |          | 2 22                                    |        | 24.4.3.           |            | 4     |        | 4                                       |
|   |                     | 1 1 1 2   | 3 1 2 | 2 1:-1    |           | 2 113    | 6 12                                    | 444    | 4 4.2.            |            |       |        | 17                                      |
|   |                     | 1 0 4     |       | negative. | 114       | 1111     | 14 11 1                                 |        |                   | o paracopa | 14    |        |   |
|   |                     | * 1.      |       |           |           |          |   |        | 4                 |            |       | 1      | 4                                       |
| PE08 060 (  | 7.00                | 1         |       |           |           |          |   |        |                   | 24 1 1     | 44 14 |        |   |
| PE08 060 (  |                     |           | 10    |           | 1 5 7     | 13       |   |        | 14 16             | 411        |       | ž.     |   |
| PE08 060 0  |                     |           |       | 100       | 1         | ,        | 8 1 8                                   | 0 1    |                   |            | 1     |        | 1                                       |
| PE08.060.0  | 1 484 787           |           |       | 7         | 2 10      | 1        |   | 1      | 44 1.7            | 8 I I      | 2 1   |        |   |
| PE08.060.0  |                     | 5 1 0     |       | 1         |           | 1        | 10 7 6                                  |        | 14 1 . 16         |            |       |        |   |
| PE08.060.0  |                     | 100       |       |           |           |          | 2012                                    |        | 14 1 21           | 5 7        | 2 3   |        |   |
| PE08.060.0  |                     | 4         | 1     |           |           |          |   |        |                   | 2          |       | 1      | - L                                     |
| DEUX-P. H   | PRODUCT CONTRACTOR  | 4 1 9     |       |           |           |          |   |        | 1                 |            |       |        | 1 20                                    |
| D #H. / PE08-060 C  |                     | 1         |       |           | -         |          |   |        |                   |            |       |        |   |
| 日期. / PE08-060 (  |                     |           |       |           | -         |          | ,                                       | -      |                   |            | 7     |        | - 10                                    |
|   |                     |           |       |           |           |          |   |        | □ <del>11</del> 0 | 1          |       |        | PE08-060                                |

# 拓扑思(上海)汽车配件有限公司

| 06110101 - FD 0-39 41 60 1016 272 306 432 0.22 1-24 06110101 - FD 0-38 41 60 1016 272 313 488 0.21 1-34 06110101 - FD 0-38 41 60 1016 278 313 488 0.21 1-34  |                  |        |           |       | 拓          | 扑思(上       | 海)汽车     | 配件有             | 限公司   | 基基      |        | OR   | 080   | 7-E-20 | A/1    |
|--|------------------|--------|-----------|-------|------------|------------|----------|-----------------|-------|---------|--------|------|-------|--------|--------|
| 現日   現日   現日   現日   田田   田田   田田   田田  |                  |        |           |       |            | FI         | )-橡胶     | <br>以<br>前<br>1 | 大包记   | XX.     | T      | _    | _     |        |        |
| Repair   R   |                  | -76 H  |           |       |            | when print | T10      | T50             | TOO   | MI      | MH     | _    |       |        | 判定     |
|  | married Alle Die |        | 塑度        | 门尼    | <b></b> 使度 | 密度         | 110      | 130             | 190   | IVIL    |        |      |       |        | -      |
|  | 胶料机写             | WIE    | 0.22-0.42 | 39-49 | 57-63      | 1.07-1.09  |          |                 | _     | -       | _      |      |       |        | 7      |
| 10   10   10   10   10   10   10   10  | 06110201.        | - FD   | 0.38      | 41    | 61         | _          |          |                 |       | 0.25    |        | 12.1 | 3     | 425    |        |
| Chileses   |                  | -      | -         | 14    | 61         | 1.07       |          | _               | 64.60 |         | 1.25   | -    | -     |        | 1      |
| Object   FD   O.3   A.5   Object   FD    |                  |        | ,         | 42    | 61         | 1.076      |          | _               |       |         |        | -    | -     |        |        |
| Shipe  C   D   D   Sh  |                  |        |           |       | 61         | 1.076      |          | 1 / 1           | 420   |         | 1.25   | -    | +     |        |        |
| Office   - D   0.2   |                  |        | 0.28      | 41    | 61         | -          | 211      | 258             | 424   |         | _      | +    | -     | -      |        |
| 041028 - FD 0.31 42 61 101 207 216 42 021 121 041028 - FD 0.38 41 61 101 208 207 418 0.23 124 061028 - FD 0.38 41 61 101 208 207 428 41 02 061028 - FD 0.38 41 61 101 208 207 428 41 02 061028 - FD 0.38 41 61 101 208 207 428 41 02 128 061028 - FD 0.38 41 61 101 208 207 418 0.24 1.22 207 411 061028 - FD 0.41 42 60 101 128 268 411 0.14 128 061028 - FD 0.40 42 60 101 128 268 270 418 0.24 1.22 07 411 0.14 128 0611028 - FD 0.40 42 60 101 0208 270 418 0.24 1.22 07 411 0.14 128 0611028 - FD 0.40 42 60 101 0208 270 411 0.14 128 0.24 128 0611028 - FD 0.36 414 60 1018 211 211 211 418 0.12 123 0611028 - FD 0.36 414 60 1018 211 211 211 418 0.14 125 0611028 - FD 0.36 414 60 1018 211 211 211 418 0.14 125 0611028 - FD 0.31 42 60 1018 268 207 418 0.14 121 0611028 - FD 0.31 42 60 1018 268 207 418 0.14 121 0611028 - FD 0.31 42 60 1018 210 128 248 0.14 121 0611028 - FD 0.31 43 60 1018 128 210 128 018 123 0611028 - FD 0.31 43 60 1018 128 210 128 018 123 0611028 - FD 0.31 43 60 1018 128 210 128 018 123 0611028 - FD 0.31 43 60 1018 210 128 218 018 123 0611028 - FD 0.31 43 60 1018 128 210 128 018 123 0611028 - FD 0.31 43 60 1018 128 210 128 018 123 0611028 - FD 0.31 43 60 1018 128 210 128 018 123 0611028 - FD 0.31 43 60 1018 120 120 120 120 120 120 120 120 120 120  |                  | -      |           | 13    | 61         | -          | 209      | 20              |       |         |        | -    | -     |        | -      |
| 06110267 - FD 0.38 A1 61 101 208 20 422 0.24 124 0.25 125 0.6110367 - FD 0.38 A1 61 101 208 207 428 0.23 124 0.6110367 - FD 0.28 A1 61 101 208 207 428 0.23 124 0.6110367 - FD 0.28 A1 61 101 208 207 428 0.23 124 0.6110367 - FD 0.49 A5 60 101 208 207 413 0.24 122 200 411 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 123 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 413 0.24 124 0.61103 - FD 0.49 A5 60 1016 208 207 414 0.61 0.08 |                  |        | 0.37      | 42    | 61         | [.0]       |          |                 |       |         | _      | -    | -     |        |        |
| 06 1027 - FD 0.38 A1 61   108   214   257   278   224   244   06 10270 - FD 0.28 A1 61   101   258   212   425   122   220   413   124   220   411   250   125   124   250   413   124   250   413   224   124   250   413   224   124   250   413   224   124   250   413   224   235   241   235   244   245   224   235   244   245   235   244   245   235   244   245   2 |                  |        |           |       | 61         | [.0]       | 208      |                 |       |         | _      | -    |       |        |        |
| 0611026 FD 0.28 41 61 101 208 20 43 0.24 1.2 20 411 V 0611002 FD 0.41 43 60 101 118 26 411 0.24 1.28 V 0611003 FD 0.42 43 60 1.016 204 20 43 1.02 1.24 1.2 20 0611003 FD 0.42 43 60 1.016 204 20 43 1.02 1.24 1.2 20 0611004 FD 0.40 43 60 1.016 204 20 411 0.22 1.22 0611004 FD 0.40 43 61 1.016 204 20 411 0.22 1.22 0611004 FD 0.33 42 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 43 61 1.016 204 20 61 1008 FD 0.33 42 60 1.016 204 43 61 1.016 204 20 43 61 1.016 204 20 61 1008 FD 0.33 42 60 1.016 204 43 61 1.016 20 43 60 1.016  | 0/110201         |        |           |       | 61         | 1078       | 24       |                 |       |         | _      |      | -     |        |        |
| Shipto  - FD   |                  |        |           | 41    | 61         | 1.07)      | 2'08     | 2'0             | 42    | 1.23    | 1.25   |      |       |        |        |
| 06110(0) - FD  | Voltosio         | - 10   | 0. 20     |       |            |            |          |                 | 1     |         |        | -    | 1 , 4 | 4 -1   |        |
| 06110(0) - FD 0.41   | dilatal          | - ED   | 0/10      | 133   | 61         | 1.07       | 203      | 24              |       |         |        | _    | 02    | 411    | -      |
| 06 10CC - FD   |                  |        |           | 133   | 60         | 1.07       | 1'58     | 24              | _     |         |        |      |       | 400    |        |
| 06 10(04 - FD 0.40   |                  |        |           | 13    | 60         | 1.076      |          |                 |       | 3 0.2   |        |      |       |        |        |
| 06 10 10 10 - 10 - 10 - 10 - 10 - 10 - 1   |                  |        |           |       | 60         | 1.07       | 201      |                 |       | 0.2     |        |      |       |        |        |
| 06 10t0   - FD   |                  |        |           |       | _          | 1.07[      | 211      | 2'              |       |         | 2 1.32 | -    |       |        | 0      |
| 06110[0] - FD 0.36 444 60 10]8 311 257 424 0.23 1.25 06110[0]8 - FD 0.46 444 60 10]6 324 20 424 0.22 1.25 06110[0]8 - FD 0.43 43 60 10]7 326 320 42 60 10]7 326 320 42 60 10]7 326 320 42 60 10]7 326 320 42 60 10]8 310 32 12 12 12 12 12 12 12 12 12 12 12 12 12   |                  |        |           | _     | 61         | 1.07       | 208      | _               |       |         |        |      |       |        | Y      |
| 06110 (0 P P) 0.3  |                  |        |           |       | - 60       | 1.07       |          | 12'5            | 1 4   | 11 0.2  |        |      |       |        | ,      |
| 06110 (10 - FD   | ofriotos         |        |           |       |            | 1.076      | 204      |                 | 41    | 7" 0.2  |        |      |       |        |        |
| 6  0t   0 - FD   0.5    1/3   6    10 5   20 1   1/3   4 8   0.24   1.2    06  0t   1 - FD   0.5    43   60   10 t   3/4   1/4   4/4   0.28   1.35   06  0t   2 - FD   0.3    43   60   1.0 t   1/4   1/4   4/4   0.21   1/28   06  06   - FD   0.3    43   60   1.0 t   1/4   1/4   4/4   0.21   1/28   06  06   - FD   0.3    43   60   10    1/6   1/4   1/4   0.24   1.24   06  06   - FD   0.3    43   60   10    1/6   1/4   1/4   0.24   1.24   06  06   - FD   0.3    43   61   10 8   2/1   2/1   4/4   0.23   1.21   06  06   - FD   0.3    43   61   10 8   2/1   2/1   4/4   0.23   1.28   06  06   - FD   0.3    43   61   10 8   2/1   2/1   4/4   0.21   1/3   06  06   - FD   0.3    43   61   10 8   2/1   2/1   4/4   0.21   1/3   06  06   - FD   0.3    43   61   10 8   2/1   2/1   4/4   0.21   1/3   06  06   - FD   0.3    43   61   10 8   2/1   2/1   4/4   0.21   1/3   06  06   - FD   0.3    43   61   10 8   2/2   2/1   4/4   0.21   1/3   06  06   - FD   0.3    43   61   10 8   2/2   2/1   4/4   0.21   1/3   06  06   - FD   0.3    42   60   10 8   1/2   2/1   4/4   0.21   1/3   06  06   - FD   0.3    43   60   10 8   1/2   2/1   4/4   0.21   1/3   06  06   - FD   0.3    41   61   10 8   2/2   3/1   4/2   0.21   1/3   06  06   - FD   0.3    41   61   10 8   2/2   3/1   3/2   0/2   1/2   06  06   - FD   0.3    41   61   10 8   2/2   3/1   3/2   0/2   1/2   06  06   - FD   0.3    41   61   10 8   2/2   3/1   3/2   0/2   1/2   06  06   - FD   0.3    41   61   10 1   2/2   3/1   3/2   0/2   1/2   06  06   - FD   0.3    41   60   10 1   2/2   3/1   3/2   0/2   1/2   06  06   - FD   0.3    41   60   10 1   2/2   3/1   3/2   0/2   1/2   06  06   - FD   0.3    41   60   10 1   2/2   3/1   3/2   0/2   1/2   0/2   06  06   - FD   0.3    41   60   10 1   2/2   3/1   3/2   0/2   1/2   0/2   1/2   06  06   - FD   0.3    41   60   10 1   2/2   3/1   3/2   0/2   1/2   0/2   1/2   06  06   - FD   0.3    41   60   10 1   2/2   3/1   3/2   0/2   1/2   0/2   1/2   06  06  06  06  06  06  06  06  06  06   |                  |        | 037       |       | 60         | 1.070      | 208      | " 2'5           | 2 41  | 9 0.2   |        |      | 3     | ETC.   |        |
| 06  06   - FD  |                  |        |           | _     | _          | 1.07       |          | -1              | 1 4   | 8 02    | 1.2    | 1    |       |        |        |
| 06110612 - FD  |                  |        |           | -     |            |            |          |                 | f' 4  | 4 0.2   |        |      |       |        | /      |
| 0611060 - FD 0.28  |                  |        |           |       |            |            |          |                 | 4     | 4' 02   | 1.2    | 3    |       |        |        |
| 0611060 - FD 0.3   | 00110[12         | -19    | 10.01     | -     |            |            |          |                 |       |         |        |      |       |        |        |
| 06110602 - FD 0.53 41 61 1098 2'11" 2'5" 426" 0.24 1.24  | -/1/0/01         | - CD   | 0.25      | 1     | 1 61       | 107        | ) 2'01   | 23              | 0' 4  | 21 00   | 3 1.2  | 1    | 211   | 414    | 10     |
| 06110603 - FD 0.38 41 61 1078 2'11" 2'51" 424" 0.23 1.24 06110604 - FD 0.31 42 60 1071 2'12" 2'54" 426 0.22 1.2)  06110604 - FD 0.31 42 61 1078 7'0" 7'6" 426 0.22 1.2)  06110606 - FD 0.31 42 61 1088 7'11 7'6" 424 0.22 1.35  0611060 - FD 0.31 42 61 1088 7'11 7'6" 424 0.22 1.35  0611060 - FD 0.38 42 60 1078 2'12" 2'56" 4'16" 0.23 1.26  0611060 - FD 0.38 42 60 1078 1'56" 2'26" 4'16" 0.23 1.26  0611060 - FD 0.38 41 60 1078 2'12" 2'56" 4'21" 0.21 1.32  0611060 - FD 0.38 41 60 1078 2'12" 2'56" 4'21" 0.21 1.32  0611000 - FD 0.40 40 61 1080 2'17" 3'07 4'36 0.23 1.24 2'30" 4'40"  0611000 - FD 0.38 41 60 1078 2'27" 3'64 4'36" 0.21 1.32  0611000 - FD 0.38 41 60 1079 2'20" 3'06 4'31" 0.23 1.26  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.33  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.33  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.33  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.38  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.38  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.38  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.21 1.38  0611000 - FD 0.38 41 60 1079 2'30" 3'10" 4'36" 0.23 1.24  0611000 - FD 0.38 41 60 1079 2'20" 3'06" 4'38" 0.24 1.26  0611000 - FD 0.39 41 60 1076 2'17" 3'06" 4'38" 0.24 1.26   |                  |        |           | 1     |            |            |          | 2' 2'0          | 7 4   | 26 0.2  | 4 1.   | 4    |       |        | 0      |
| 06110604 - FD  |                  |        |           |       |            |            |          | 17 3            | 7 4   | 25' 0   |        |      |       |        |        |
| 0611060  |                  |        |           |       |            | _          |          | " 2"            |       |         |        |      |       |        |        |
| 06110606 - FD  | 06/10/04         | - 20   |           |       |            |            |          |                 |       |         |        | 8    |       |        | 0      |
| 0611060 - FD  0.5  |                  |        |           |       | -          |            |          |                 |       |         |        | 35   |       |        | 1      |
| 06110608 - FD  |                  |        |           |       | 7          |            |          |                 |       |         | 2000   |      |       |        | _      |
| 06110609 - FD 0.3  | 06110601         |        |           |       |            |            |          |                 |       |         | -      |      |       |        |        |
| 06110610 - FD 0.38 41 60 1016 2'19" 3'05" 4'36" 0.21 1.24 230" 440" \( \begin{array}{c c c c c c c c c c c c c c c c c c c   | 06110608         | - 10   |           | 1     | 2 /0       |            |          |                 |       |         | 10000  | /    |       |        |        |
| 06110701 - FD 0-39 41 61 1078 2'22' 3'07' 4'36' 0.23 1.24 2'30' 440' \( \begin{array}{c c c c c c c c c c c c c c c c c c c  | 06110607         | - FD   | 0.5       | b 1 4 | 1 /        |            |          |                 |       |         |        |      |       |        | V      |
| 06110101 - FD 0-39 41 61 1080 227 3'44 436 0.21 132 06110102 - FD 0-38 41 60 1079 2'30' 3'13' 4'36' 0.21 132 06110102 - FD 0-38 41 60 1079 2'30' 3'17' 4'36' 0.21 132 06110102 - FD 0-37 41 61 1079 2'30' 3'17' 4'36' 0.21 13 0.25 126 06110102 - FD 0-38 41 60 1016 2'28' 3'13' 4'36' 0.21 13 0.25 126 06110102 - FD 0-38 41 60 1016 2'28' 3'13' 4'36' 0.21 138 06110102 - FD 0-38 41 60 1016 2'28' 3'13' 4'36' 0.21 138 021 06110104 - FD 0-39 41 60 1016 2'28' 3'13' 4'36' 0.23 123 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 123 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 123 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 123 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 124 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 124 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 124 06110104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 126 025 126' 0610104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 126 025 126' 0610104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 126 025 126' 0610104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 126' 0.23 126' 0610104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 126' 0.23 126' 0610104 - FD 0-39 41 60 1016 2'26' 3'11' 4'36' 0.23 126' 025 126' 06' 06' 06' 06' 06' 06' 06' 06' 06' 0   | 0611067          | 1 - FD | 0.2       | 0 4   | 0          | 1,0        | 11/2     | 2 2             | **    | -       |        |      |       |        |        |
| 0611010 - FD 0.40 40 61 1.080 227 3'4" 436" 0.21 1.32 0.6110102 - FD 0.49 41 61 1.01) 2'19" 2'06" 4'32 0.22 1.26 06110104 - FD 0.38 41 60 1.079 2'20" 3'06" 4'32" 0.22 1.26 06110106 - FD 0.40 41 61 1.07) 2'22" 3'10" 4'36" 0.21 1.3 0.2 06110106 - FD 0.40 41 61 1.07) 2'22" 3'10" 4'36" 0.21 1.3 0.2 0611010 - FD 0.38 41 60 1.016 2'28" 3'13 4'88" 0.21 1.28 06110108 - FD 0.39 41 60 1.016 2'19" 3'05" 4'36" 0.23 1.23 0.23 1.23 06110109 - FD 0.39 41 60 1.016 2'19" 3'05" 4'36" 0.23 1.23 0.23 1.23 0.24 06110109 - FD 0.39 41 60 1.016 2'19" 3'05" 4'36" 0.23 1.23 0.24 06110109 - FD 0.39 41 60 1.016 2'26" 3'11 4'35" 0.24 1.26 0  | 1.3              |        |           | 0     | 1 1        | 1 10       | 20 1     | 2               | 19'   | 2/ 0    | 23 1.  | 2/1  | 230   | 440    | V      |
| 06110103 - FD 6-39 41 61 107 2'19" 2'06" 4'32" 0.22 1-26 06110104 - FD 6-38 41 60 1079 2'20" 3'06 4'31" 0.23 126 06110106 - FD 6-37 41 61 1079 2'20" 3'10" 4'36" 0.21 1-3 06110106 - FD 6-38 41 60 1016 2'28" 3'13" 4'36" 0.21 1-38 06110108 - FD 6-38 41 60 1016 2'28" 3'13" 4'36" 0.23 1-23 06110109 - FD 6-39 41 60 1016 2'26" 3'11" 4'36" 0.23 1-23 06110109 - FD 6-39 41 60 1016 2'26" 3'11" 4'36" 0.23 1-24 06110109 - FD 6-39 41 60 1016 2'26" 3'11" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10" 4'36" 0.24 1-26 06110109 - FD 6-39 41 60 1016 2'26" 3'10 |                  |        |           | 7 4   |            |            |          |                 |       |         |        |      |       |        | V      |
| 06110704 - FD 0.38 41 60 1.079 2'20" 3'06" 4'37" 0.25 1.26  06110706 - FD 0.40 41 61 1.079 2'20" 3'17" 4'36" 0.21 1.35  06110707 - FD 0.40 41 60 1.076 2'28" 3'18 4'88" 0.21 1.28  06110708 - FD 0.39 41 60 1.076 2'19" 3'06" 4'36" 0.23 1.23  06110709 - FD 0.39 41 60 1.076 2'19" 3'06" 4'36" 0.23 1.23  06110709 - FD 0.39 41 60 1.076 2'26" 3'11 4'36" 0.21 1.26   |                  |        |           | 0 4   |            | _          |          | 21 3            |       | (2) 0   |        | 2t   |       |        | V      |
| 06110106 - FD 0-38 41 60 1.079 2'30" 3'11" 4'36" 0.21 1.3  06110106 - FD 0-40 41 61 1.07) 2'22" 3'10" 4'36" 0.22 1.24  0611010 - FD 0-38 41 60 1.016 2'8" 3'13 4.88" 0.21 1.88  06110108 - FD 0-39 41 60 1.016 2'19" 3'05 4'30" 0.23 1.23  06110109 - FD 0-39 41 60 1.016 2'26" 3'11 4'36" 0.21 1.86  06110109 - FD 0-39 41 60 1.016 2'26" 3'11 4'36" 0.21 1.86  | 0611010          |        | 63        | 9 4   |            |            |          | 1 5             | 0/.   | (2) 0   |        |      |       |        | V      |
| 0611010 - FD 0.40 1 61 1.0) 2'25' 3'10' 4'36' 0.22 1.24  0611010 - FD 0.38 1 60 1.016 2'28' 3'13' 1.88' 0.21 1.88  06110108 - FD 0.38 1 60 1.016 2'19" 2'06' 1.30' 0.23 1.23  06110109 - FD 0.39 1 60 1.016 2'26' 3'11' 4'36' 0.21 1.86  06110109 - FD 0.39 1 60 1.016 2'26' 3'11' 4'36' 0.21 1.86   | -                | -      |           |       | 1 60       |            |          |                 | 17"   | 17/11 0 |        |      |       |        | V      |
| 06110 00 - FD 0.28 A1 60 1.076 2'28" 3'13 4.38 0.21 1.28 06110 00 - FD 0.39 41 60 1.076 2'19" 3'05 4'30 0.23 1.23 06110 00 - FD 0.39 41 60 1.076 2'26" 3'11 4'31" 0.21 1.24 06110 10 - FD 0.39 41 60 1.076 2'26" 3'11 4'31" 0.21 1.24 0  |                  | 7      |           |       |            |            | <u> </u> |                 |       |         |        | -    |       |        | 1      |
| 06110 00 - FD 0-39 41 60 10 0 226 3 13 430 0.23 1.23 06110 00 - FD 0-39 41 60 10 0 226 3 11 435 0.21 1.26  |                  |        |           |       | -          | _          | 11       |                 |       |         |        |      | 1     | 1      | V      |
| 06110108 - FD 6-38 41 60 FO 6 211 308 235 123 124 126 06110109 - FD 6-39 41 60 1.016 226 311 431 0.21 1.26 0.26 0.26 1.26 0.26 0.26 0.26 0.26 0.26 0.26 0.26 0   |                  | 71     | 0-        |       |            |            | 16 2     | 1013            | 15    | 120     |        |      | 1     |        | V      |
| 0611010 - HD 0-39 41 60 1.016 226 311 432 0.21 1.12 0.11 0611010 - FD 040 12 60 1.07) 2'20' 3'06' 4'8 0.21 1.26  |                  |        | 8         | 38 4  | 7          |            | 3/1      | 11 3            | 111   |         | -      |      |       |        | V      |
|  | 0611070          | 4-H)   | 0         | 39 4  |            |            |          | 26 3            |       |         |        |      |       |        | 1      |
| 测试员: 4, 6% PE08-06   | 0611071          | v - FD | a         |       |            | 1/-0       | 11/2     | 20 13           | 00 6  |         | 11-1   |      |       | 1 5    | E00.00 |
| ' CY NIK   |                  |        | 测记        | 式员:   | AJ 20      | )          |          |                 |       |         | 797: 1 | 1/7. | 200   | ( P    | EU8-06 |

日期: 11/7 2016 PE08-060 0725

### 拓扑思(上海)汽车配件有限公司

| FD-橡     | 胶成      | 思杜 | 1 thi  | 1是表   |
|----------|---------|----|--------|-------|
| F 17-48K | LIX VIX |    | CADA N | 13640 |

QR0807-E-20 A/1

|  |             |        |       | FI        | )- 橡胶  | 风前为      | で位に    | 水水      |         | QRO   | 507-E-2 | 0 A/1 |
|--|-------------|--------|-------|-----------|--------|----------|--------|---------|---------|-------|---------|-------|
|  | 一段可         |        |       |           |        |          |        |         |         | 湿炼力   | 均匀度     |       |
| 一块I  | 塑度          | 门尼     | 硬度    | 密度        | T10    | T50      | T90    | ML      | MH      | T10   | T90     | 判定    |
| 胶料批号标准   | 至汉          | 11/6   | 7000  | 山山人又      | 110    | 150      | 150    | 11112   | 11111   | 110   | 170     | TIME  |
|  | 0.22-0.42   | 39-49  | 57-63 | 1.07-1.09 | ≥1'20" | 2'-3'30" | ≤5'00" | ≤0.3N.m | ≥1.0N.m |       | R<25S   |       |
| 0612150 - FD   | 0.40        | 39     | 61    | 1.074     | 1'[]"  | 24t      | 409'   | 0.21    | 1.14    | >'UC' | 417"    | V     |
|  |             | 39     | 61    | 1.017     | 1'59"  | 245      | 4'12"  | 0.22    | 1.16    | -     |         | V     |
| 0612102-FD   | 0.40        |        |       |           |        | 10       |        |         |         |       |         | 1/    |
| 06D1103 - FD   | 0.42        | 39     | 60    | 1.076     | 202"   | 248      | 416    | 0.20    | 1.20    |       |         | V     |
| 0612404-FD   | 0.42        | 39     | 60    | 1.014     | 1'58"  | 248      | 416    | 0.20    | 1.14    |       |         | V     |
| 0612160 - FD   | 0.42        | 39     | 61    | 1.076     | 201"   | 248      | 216    | 020     | 1.23    |       |         | V     |
| 0612106 - FD   | 0.42        | 39     | 60    | 1.076     | 1.28   | 246      | 42"    | 0.21    | 1.14    |       |         | V     |
|  |             | 39     | 60    | 1.074     | 201"   | 24       | 416    | 0.20    | 1.18    |       |         | V     |
| 061210 ] - FD  | 0.42        |        | -     |           | 201    |          | 410    |         |         |       |         | -     |
| 0612108-FD   | 0.42        | 39     | 60    | 1.033     | 1:19"  | 246      | 41t    | 021     | 1.4     |       |         | V     |
| 06121509 - FD  | 12.42       | 39     | 60    | 1.074     | 159"   | 244      | 412"   | 0.20    | 1.20    |       |         | ~     |
| 86121t10 - FD  | 0.42        | 19     | 60    | 1.07C     | 1:57"  | 2'st"    | 416    | 0.2     | 1.15    |       |         | V     |
| 00121.01   | 1.42        | 71     |       | 11.15     | 131    | 2645     | 411    | V.2     | 1       |       |         |       |
|  | -           |        |       |           |        |          |        |         |         |       |         |       |
| , , , , -  | -           |        |       | - 1       | 1-5-1  | 1. 61    | 4.2    | 1000    |         | 1     |         | -     |
| 06121601-FD  | 0.39        | 12     | 61    | 1.076     | 157    | 244      | 415    | 0.22    | 1.11    | 20)"  | 410"    | V.    |
| 0612160) - FD  | 0.42        | 39     | 60    | (6)       | 1'[7]  | 245      | 44     | 0.24    | 1.19    |       | 1 43    |       |
| 06121603 - FD  | 0.39        | 12     | 60    | 1.07      | 11/6   | 241      | 408    | 0.22    | 1-22    |       |         | V     |
| 06121604 - FD  | 1,1         | 40     | CA    | 1.075     | 157"   | 234      | 415    |         | 1.18    |       |         | 0     |
| the same of the sa | 240         |        | 0     | 1.15      | 151    | 244      | 415    | 0.23    |         | -     |         | V     |
| 0612160t - FD  | 0.41        | 41     | _     | 1.014     | 202    | 249      | 419    | 0.20    | 1.18    |       |         | 0     |
| 06121606 - FD  | 12.42       | 39     | 60    | 1.0%      | 150    | 238      | 40)    | 0.23    | 1.18    |       |         | ~     |
|  | 1036        | 1.04   | 1-6-  | 1         |        | 1        | 170    | 1       | 15 11   |       |         |       |
| 06121801 - FD  | 0.42        | 39     | 61    | 1.079     | 201    | 24)      | 417    | 0.22    | 1.18    | 2'06" | 4IL     | 0     |
| 0612182 - FD   | 0.42        | 39     | 61    | 1.080     | 20)    | 2'tt"    |        |         | 1-15    | 200   | 415     | 10    |
|  |             |        | 01    |           |        |          | 426    | 0.22    |         |       | -       |       |
| 06,12,1803 - FD  | 0.42        | 39     | 61    | 1.079     | 207    | 2'14"    | 425    | 0.22    | 1.13    |       |         | V     |
| 06121804 - FD  | 9.42        | 29     | 62    | 1.080     | 209"   | 2'tt     | 424    | 0.20    | 1.21    |       |         | V     |
| 06121805 - FD  | 0.42        | 38     | 61    | 1.080     | ) ot'  | 2'3'     | 42t    | 122     | 1.16    |       |         |       |
| 06121806 - FD  | 0.41        | 41     | 62    | 1.080     | 207"   | 2'22"    | 417    | 0.21    | 1.23    |       |         | V     |
| 06121807 - FD  | 0.41        | 41     | 62    | 1.083     | 201    | 2'51"    |        |         |         |       |         | 0     |
| 10121001 10  |             |        |       |           | 201    |          | 422    | 0.23    | 1.19    | -     |         | 1     |
| 06121808-FD  | 0.41        | 41     | 62    | 1.084     | 209"   | 256      | 425    | 0.20    | 1.21    |       | 1 24    |       |
| 1 (8) 2144 2 22  | 1           |        | -     | -         | 71     |          | 7      |         |         |       |         |       |
| 06121901-FD  | 0.40        | 41     | 61    | 1.079     | 1'19"  | 246"     | 423    | 0.22    | 1.19    | 205   | 419     | 1     |
| 06121902 - FD  | 0.40        | 10     | 61    | 1.079     | 2'00"  | 2'47"    | 116    | 0.22    | 1.17    |       | 1       | 1/    |
| 1612 ROS - FD  | 0,40        | 40     | /1    | 1.078     | 205    | 255      | 107    |         |         |       |         | V     |
|  |             |        | 01    |           |        |          | A-13   | 0.22    | 1.16    |       |         | -     |
| 06121904 - FD  | 0.40        | 40     | 61    | 1.079     | 208    | 2'11     | 422    | 0.20    | 1-19    |       |         | 0     |
| 0612190[ - FD  | 0.40        | 10     | 61    | 1.078     | 206    | 214      | 126    | 0.22    | 1.15    |       |         | 5     |
| 06121906 - FD  | 0.40        | 10     | 61    | 1.079     | 107    | 13       | sit"   | 0.20    | 1-22    |       |         | V     |
| 06121907 - FD  | 011         | 39     | 61    | 1.079     | 2'05"  | 25       |        |         | 1       |       |         |       |
|  |             | 30     | -     | -         |        | 250      | 44     | 0.22    | 1.1     |       |         | V     |
| 06121908 - FD  | 0.42        | 39     | 61    | 1.080     | 208    | 256      | 422    | 0.20    | 1.21    |       |         | V     |
| 一个所以从4000万   | 183         |        |       |           |        |          |        | 60 0    |         |       |         |       |
| MOLES I EL   | 1 1/2       | 2.1:00 |       |           |        |          |        | 51-4    | We will | 7.1   |         | 10    |
| 1 - 1/21/21/21/21  | 100         |        |       |           |        | 444      |        |         |         |       |         |       |
|  |             |        |       |           |        |          |        |         |         |       |         |       |
|  | -           |        |       |           |        |          |        |         |         |       |         |       |
|  |             |        |       |           |        |          |        |         |         |       |         |       |
|  |             |        | -     |           |        |          |        |         |         | 1     | 1       |       |
|  |             |        |       |           |        |          |        |         |         |       |         | 3 1 1 |
|  | All         |        |       |           |        |          |        | -       |         |       |         |       |
|  |             | -      |       | -         |        |          |        |         |         |       |         |       |
|  | 2614 5-45 1 |        |       |           |        |          |        |         |         |       |         |       |

测试员: 赵独

日期:11/8 2010

拓扑思(上海)汽车配件有限公司

|           |        |           |       | 拓     | 扑思(上      | 海)汽车   | 配件有      | 限公司    |      |      |         | OBO    | 07 E 2  | 00 A/1    |
|-----------|--------|-----------|-------|-------|-----------|--------|----------|--------|------|------|---------|--------|---------|-----------|
|           |        |           |       |       | FI        | )-橡胶   | 成品包      | 央检记    | 录表   | :    |         |        | 307-E-2 | JUA/I     |
| 1         |        | , en er   |       |       |           |        |          |        |      |      |         |        | 均匀度     | بلایا چکې |
| -         | 项目     | 一段可       | 门尼    | 硬度    | 密度        | T10    | T50      | T90    | M    | IL   | MH      | T10    | T90     | 判定        |
| 效料批号      | 标准     | 塑度        | 11/6  | 10人/文 |           |        | 21 21201 | ≤5'00" | <0   | 3N.m | ≥1.0N.m | R<15S  | R<25S   |           |
| X441m J   | 13.12  | 0.22-0.42 | 39-49 | 57-63 | 1.07-1.09 | ≥1'20" | 2'-3'30' |        | -    | 23   | 1.14    | 2'10"  | 131     |           |
| 6121201 - | FD     | 0.38      | 10    | 60    | 1.076     | 207    | 2'04     | 120    | -11  | 23   | 1.16    | -      | 1       |           |
| 1         | - FD   | 0.38      | 10    | 60    | 1.0)]     | 2'00   | 216      | 419    |      | _    |         |        |         | V         |
| 7         | FD     | 0.37      | 12    | 60    | 1.078     | 2'03"  | 2'18     |        | _    | 12   | 1.21    |        |         | V         |
| 121204    | - FD   | 0.3]      | 41    | 60    | 1.075     | 201    | 20       |        |      | 25   | 1.15    | -      |         | 1         |
| 7         | - FD   | 0.3)      | 42    | 60    | 1.075     | 205    | 20       | _      |      | 22   | 1.17    |        | -       | 1         |
| 7 . /     |        | 0.37      | 41    | 19    | 101       | 101    | 1212     |        |      | 23   | HIL     | -      | -       | 10        |
| DIZIZVV   | -FD    | 0.36      | 42    | 19    | 1.07      | 208    | 2'ct     | 42     |      | 21   | 1.18    |        |         | V         |
| 1612120   |        |           | 10    | 60    | 1.03      | 206    | 2'5      | 1 42   | r v  | .23  | 1.14    |        |         | _         |
| 06121208  | - FD   | 0.40      | -     | 61    | 1.07      | 100    | 1 1/4    | -      | 9 0  | 21   | 1.18    |        | -       | 1         |
| 06121209  | -FD    | 039       | 41    | _     | 1.0/      | 10%    | _        |        |      | 1.23 | 1.16    |        |         | 1         |
| 06121210  | -FD    | 0.38      | 41    | 60    | -         | 1 1/2/ |          |        |      | 0.22 | LIT     | 4-     |         | V         |
| 06121211  | -FD    | 0.36      | 12    | 60    | -         | 11'48  | _        |        |      | 124  | 1.16    | -      |         | V         |
| 06121212  | -FD    | 0.3]      | 42    | 61    | 1.01      | 11 150 | 24       | 14     | 9    | 1667 |         | L. Lin |         |           |
| 36-128-17 | 1-10   | 1         | 1     | -0    | 1.5       | 4 1    | 3 37     | 7 4    | 17   | 0.24 | 1-22    | 15     | 8 42    | 21        |
| 06121301  | - FD   | 0.35      | 46    | 59    | 1.07      | 7 200  |          |        | 47   |      | -       | _      |         | V         |
| 06121302  | - FD   | 0.36      | 15    | 60    | 1.0)      |        |          | -      |      | 1.23 |         |        |         | V         |
| 06121303  |        | 0.36      | 45    | 15    |           |        | 8" 24    |        |      | 0.25 |         |        |         | 1/        |
| 06121304  | - FD   | 0.35      | 16    | 60    | 1.07      | 3 20   | 2 24     |        | -1   | 0.24 |         | -      | 8 /     | 10        |
| 06121305  | - FD   | 0.36      | 14    | 60    | 107       | 3 10   | 8 22     |        | 21   | 0.21 |         | -      |         | V         |
| 06121306  | _      | 03)       | 44    | . 19  | 1.07      |        | [ 2      |        |      | 0.22 |         |        |         | V         |
|           | 7 - FD | 0.39      | 41    | 14    | 1.07      | 3 20   | 1' 22    | 19 4   | 17'  | 0.23 | 1.1     |        |         | 1         |
| 0612130   | 2 -2   | 0.39      | 1     | 1     | 1.0       |        |          |        | 20"  | 022  |         |        |         |           |
| 0612130   | Y-FD   |           | 1     | -     | 1.07      | 7 20   | -        | 0 4    | 20"  | 0,24 | 1.1     | 1      |         | V         |
| 06,12130  |        | 0.67      | 1.    | -     | 1.0       | 6 20   | -        |        | 237  | 12   | 3 1.2   |        |         | V         |
| 06121310  |        | 0.38      |       |       | 1.07      |        |          |        | 123" | 0.22 |         |        |         | V         |
| 06121311  | - FD   | 0.39      |       |       | 1.0       |        |          |        | 125  | 0.2  | 1       |        |         | 1         |
| 06121312  | 2 - FD | 0.00      | 14    | 1 60  | 1.0       | 16 2   | 7/2      | 50 2   | 1    | 4.2  |         |        |         |           |
| 38128 X10 |        | 100       | 1     | 2 /   | - 10      | 1/1    |          | 0      | (1)  | 0    | 2 1-1   | 9 1    | th' 4   | 12" 4     |
| 0612140   | 1 - FI | 04        | 1 3   |       |           | 1      |          | 17 0   | EII  |      |         | -      | -       | V         |
| OLIVIAD   | 2 - FI | 0.4       | 1 3   | 9 6   |           | - 71   |          | 46     | FII' | 0,2  |         |        |         | V         |
| 0/17/10   | 2 - FÌ | 04        |       | 9 6   | 1.0       | 78 1   | 8 2      |        | 1-16 | 0.2  |         | ,      | -       | V         |
| 061718    | 04 - F |           | 11 -  |       | 1 1.0     | 14 1   |          | 42     | 411  | 0.   |         |        |         | V         |
| 0/12/4    | C-Fi   |           |       | 9 6   |           | 1      |          | 38     | 107  | 0,2  |         |        | _       | -         |
| 0/12/40   | 6 - FT |           |       | 7 6   |           | 1 16   |          | 14     | 216  | 0.   |         |        |         | -1        |
| 101214    | -      |           |       |       | 9 1.0     |        | 13' 2    | 10     | 4B   | 0.2  | 2 1.    | 19     |         | V         |
| 061214    | 7-H    |           | 11 3  |       | 6 1.      |        | 00" 2    |        | 416  | 0.   | 12 17   | 6      |         | V         |
| 061214    |        |           |       |       | 7         | 019 7  | 01       | 'ro"   | 424  | 0.   |         |        |         | V         |
|           | 9-ED   |           |       |       | -         | 08 1   | 18' 2    | 44     | 411  | _    | 24 1.   |        |         | V         |
| 061214    |        | 0.3       | X 4   |       | 1 1       | 200    | 18.      | 242"   | 405  | 0.   |         | x      |         | V         |
| 061214    | 11-A   | 0.        | 28 4  |       | 1 1.      |        |          |        | 116  |      | 23 1.   | 18     |         | . 0       |
| 061214    | 12-E   | 0.        | 59 6  | h     | 60 1.     | 1) ([  | tt"      | 243    | 415  | 100  | 1.      | 10     |         |           |
|           |        |           | 1     |       |           | 191    | 1        |        |      | -    |         | 3 1    |         |           |
|           |        |           |       |       |           |        |          |        |      | -    |         |        |         |           |
|           |        |           |       |       |           |        |          |        |      | -    |         |        |         |           |
| -         |        |           |       |       |           |        |          | 7      |      |      |         |        |         |           |
|           |        |           |       |       |           | 7.     |          |        |      |      |         |        | k .     |           |
|           |        |           |       |       |           |        |          |        |      |      |         |        | -       |           |
| -         |        |           |       | -     |           |        |          | -10-3- |      |      |         |        |         |           |
|           |        | Strict    | H 4-4 | 1,    | 1         |        |          | 100    |      | E    | 期: 11/8 | 200    | 6       |           |
|           |        | ·测        | 试员:   | 赵每    | 2         |        |          |        |      | -    |         | ,,,,   |         | PE08-     |
|           |        |           |       |       |           |        |          |        |      | *16* |         |        |         |           |

|             |             |           |       |        | FI        | <b>)-</b> 徐风X | 成品供      | CUN NO | KK      |         | QIOO     | 07-E-Z | OINI |
|-------------|-------------|-----------|-------|--------|-----------|---------------|----------|--------|---------|---------|----------|--------|------|
| 6           |             | 一段可       |       | 7      | 7000      |               |          |        |         | 1       | 混炼均      | 匀匀度    |      |
| 1           | 项目          | 塑度        | 门尼    | 硬度     | 密度        | T10           | T50      | T90    | ML      | MH      | T10      | T90    | 判定   |
| <b>狡料批号</b> | 标准          | 生汉        | 1 1/6 |        | ш/х       |               | 4.00     |        |         | >1 0N   | D <150   | D-255  |      |
|             |             | 0.22-0.42 | 39-49 | 57-63  | 1.07-1.09 | ≥1'20"        | 2'-3'30" | ≤5'00" | ≤0.3N.m | ≥1.0N.m |          | R<25S  | . /  |
| 6120601     | - FD        | 039       | 42    | 18     | 1.079     | 210           | 256      | 415    | 0.23    | 1.26    | 207      | 422    | -    |
| 6120602     | - FD        | 0.39      | 10    | 19     | 1.0]      | 2'11"         | 217      | 42     | 0.21    | 1.2t    |          |        |      |
| 1. 1.       | - FD        | 040       | 41    | 19     | 1.078     | 210"          | 2'58"    | 124    | 0.22    | 1.25    |          |        | 2    |
|             | - FD        |           | 12    | .08    | 1.079     | 2'11'         | 2'18"    | UNE    | 0.73    | 1.27    |          |        |      |
| 6120604     | FV          | 6.48      | 202   | 30     | 1.11      | -11           | - 10     |        |         |         | la serie |        |      |
| 7.51        |             |           | 12    | 60     | 1.078     | 2'13"         | 2'00"    | 420    | 0.22    | 1.R     | 207"     | 424    | V    |
| 16120/01    | - FD        | 0.40      | 13    |        |           | 213           |          |        |         |         | 2.1      | 444    | V    |
| 6120702     | -FD         | 039       | 13    | 59     | 1-079     | 212           | 2'19'    | 121    | 0.72    | 1-22    |          | -      | 1    |
| 6120703     | - FD        | 0.38      | SK    | 60     | 1.0)      | 203           | 20       | 424    |         | 1.18    |          |        | V    |
| 16120704    | - FD        | 0.38      | 14    | 19     | 1278      | 210           | 211      | 425    | 0.23    | 1.22    |          |        |      |
| 6120705     | - FD        | 037       | 42    | 60     | 1.019     | )'00'         | 246      | 412"   | 0.25    | 1.21    |          |        | 1    |
| 6120706     | - FD        | 0.27      | 12    | 61     | 1.019     | 1.28.         | 21/16    | 4'K    | 0.24    | 1.21    |          |        | V    |
|             |             |           | 45    | 60     | 1.079     | 10            | 231      | 3'19   | 0.23    | 1-26    |          |        | 1    |
| 7           | - FD        | 037       |       | 60     | 1.078     | 1'0"          | 237      | 402    | 0.25    | 1.22    | 100      | 1.000  | V    |
| 16120/08    |             | 038       | 13    |        | 1.018     | 102           | 1 231    | 40     |         | ,       |          | 1      | V    |
| 16120709    |             | 0.39      |       | 60     | 1.079     | 1.29          |          | _      |         | 1.24    | -        | 1      | ~    |
| 16120710    | - FD        | 039       | 13    | 60     | 1.078     | iti'          | 224      | 400    | 0.25    | 1.25    |          |        | 10   |
| 27/11/2017  |             | 1         | 1     | N. All |           |               |          |        |         |         | 1        | 1 1    |      |
| 16120801    | - FD        | 0.40      | 41    | 19     | 1.076     | 202           | 245      | 410    | 0.22    | 1.21    | 1'88"    | 410.   | V    |
|             | - FD        | 0.37      | 12    | 60     | 1.077     | 1'55'         | 238      | 337    | 0.22    | 1.23    |          |        | 1    |
| 06120803    | - FD        | 0.3       | 12    | 60     | 1.078     | iti           | 235      |        |         | 1.20    |          |        | V    |
|             |             | 0.38      | 13    | 60     | 1.0)      | 1'55"         | 237      | 35     | 0.23    | 1.25    |          |        | V    |
| 06120804    | - FD        |           |       | 60     |           | 102           |          |        |         | 1.23    |          |        | V    |
| 06120805    | <u>- FD</u> | 0.38      | 13    |        | 108       |               |          | 1/0/   |         |         |          |        | 1,   |
| 06120806    | - FD        | 0.31      | 145   | 60     | 1.018     |               |          |        |         | 1.25    |          | -      | V    |
| 0612080]    | - FD        | 0.29      |       | 60     | 1.078     |               |          | 100    |         | 1.22    | -        | -      | V    |
| 06120808    | -FD         | 0.39      | 13    | 60     | 1.078     |               |          | 3'00   | 0.22    | 1.26    |          |        | -    |
| 06120809    | - A)        | 0.40      | 11    | 60     | 1.077     | 1'0'          |          |        | 0.24    | 1-21    |          |        | V    |
|             | - FD        | 0.37      | 42    | 60     | 1.079     | 14            | 237      | 35     | 0.22    | 1.27    |          |        | V    |
| 11120010    | 10          | 1         | 1     |        | 1         |               |          |        |         |         |          |        |      |
| 2/12/10/    | 10          | 1011      | 1     | 60     | 1.07      | 107           | 2'56     | 1 (157 | 0.74    | 1.16    | 209      | 1 124  | 1 6  |
| 06121101    |             | 0,31      | 42    | 61     | 1         |               |          |        |         | 1.15    | 12.1     |        | L    |
| 06121102    |             | 250       | 41    |        | 1.0/6     | 211           | 124      | 1 410  | 1-1     |         | -        |        | 1    |
| 06121103    | -FD         | 0.38      | 13    | 60     | 1.0)(     | 211           | 2'58     | 44     | 11/20   | 1.15    | -        | -      | -    |
| 06121101    | - PD        | 0.38      | 43    | 60     | 1.07      | 206           | 1/16     | 121    | 0.24    | 1.14    |          |        | 10   |
| 06121105    | - FD        | 0.57      | 142   | 60     | 1.07      | 309           | 2'       | 42     | 0.22    |         |          |        | _    |
| 06121106    |             | 0.38      | 13    | 61     | 1.0]]     | 200           |          |        | 6 024   | 1.16    |          |        | V    |
| 0612110     | - FD        | 0.29      | 1/2   | -60    | 1.076     | 207           |          | 415    | 0 )     |         |          |        | V    |
| 06121108    |             | 0.5       | 1/2   | 60     | 1.0)6     | _             |          |        |         | 1.10    | -        |        | V    |
| 06/21/08    |             |           | 14    | 61     | 1.014     |               |          | 1 42   | 0,22    |         | 7        | -      | Tu   |
|             | - FD        | 0.3)      | 4)    |        | _         | _             |          |        |         | 1-18    |          |        | -    |
| 06121110    | - FD        | 0.3]      | 45    | 60     | 1.010     |               |          |        |         |         |          |        | + !  |
| 06121111    | - FD        | 0.39      | 144   | 60     | 1.07      | irt           | 100      |        |         | 1.19    |          |        | 1    |
| 06121112    |             | 0.38      | 13    | 60     | 1.0)8     | 201           | 24       | 1 418  | 0.22    | 1.23    |          |        | IV   |
| 1           |             |           |       |        |           |               |          |        |         |         |          |        |      |
|             |             |           |       |        | -         | -             |          |        |         | -       |          |        |      |
|             |             |           |       |        |           |               |          |        | -       |         |          | -      |      |
|             |             |           |       |        |           |               |          |        |         |         |          |        |      |
|             |             |           |       |        |           | -             |          |        |         |         |          | -      |      |
|             |             |           |       | -      |           |               | -        |        | -       |         |          |        | -    |
|             |             |           |       |        |           |               |          |        | □ #B    |         |          |        |      |

测试员: 包架

日期: 12/1 2006

From: Yao, Michael (G.C.)

Sent: Wednesday, July 23, 2008 9:02 PM

To: Camilleri, Robert (R.H.)

Subject: ??: Flex Test Fixture Valve Holes

Attachments: Ozone fixture.pdf

After confirming with him, it has the chamfer. Maybe you can see it in the attachment. thanks

From: Camilleri, Robert (R.H.) Sent: 2008-7-23 (星期三) 20:40

To: Raul

Cc: Yao, Michael (G.C.); billir@thonassociates.com; 'Chris Bruce'

Subject: Flex Test Fixture Valve Holes

Raul, in looking at some of the test photos, it appears that the test fixture valve holes appear to have sharp edges. It is hard to see in the photo exactly if the edges are rounded/chamfer, but don't look like it to me. When you are working on the fixture, please have someone ensure that they are chamfered. Thanks

Robert H. Camilleri

North American Wheels, Tires, and Jacks

Ford Motor Company

313-805-3389

rcamille@ford.com





From: 曹建明 [caojianming@baolong.com]
Sent: Monday, July 24, 2006 1:06 AM

To: Kong, Qingguo (Q.)

Subject: 转发: (瑞星提示-此邮件可能是垃圾邮件)RE: EMNND Quality Concern F020861 From Mich

Truck (Shanghai Baolong Industries Corp)

FYI

\_\_\_\_邮件原件\_\_\_\_

发件人: Bill Thon Jr [mailto:billjr@thonassociates.com]

发送时间: 2006年6月10日 2:40

收件人: mtpiq@ford.com; jmink4@ford.com; zwang11@ford.com; zhoufang@chinabaolong.net; caojianming@baolong.biz; dalbrig1@ford.com; zwang11@ford.com; wangxianyong@topseal.com; caolianming@topseal.com; dlee48@ford.com; miller@baolong.biz; 'raul'; caojianming@baolong.biz

主题: (瑞星提示-此邮件可能是垃圾邮件)RE: EMNND Quality Concern F020861 From Mich Truck (Shanghai Baolong Industries Corp)

Please review attached form.

Regards,

Bill Thon, Jr. BAOLONG 248-625-5426

----Original Message----

From: mtpiq@ford.com [mailto:mtpiq@ford.com]

Sent: Sunday, January 08, 2006 8:54 PM

To: jmink4@ford.com; mtpiq@ford.com; billjr@thonassociates.com; zwang11@ford.com; zhoufang@chinabaolong.net; caojianming@baolong.biz; dalbrig1@ford.com; zwang11@ford.com; wangxianyong@topseal.com; caolianming@topseal.com; dlee48@ford.com

Subject: EMNND Quality Concern F020861 From Mich Truck (Shanghai Baolong Industries Corp)

To: Shanghai Baolong Industries Corp Supplier Code: EMNND 6850 Middlebelt Rd

Romulus, MI 48174

1st Supplier Email:billjr@thonassociates.com
QC Mgr() Plant Mgr() QR2(P)

1st Supplier Contact: BILL THON, MFG REP EMNNA Contact Phone:

248-625-5426

QC Mgr() Plant Mgr() QR2(P) Contact Fax:

248-625-5614

From: Ford Motor Company, Mich Truck Jun 8, 2006 09:54 PM EDT

Subject: Quality Concern Notification Ford Concern Number: F020861

Part Number: F0C6 1700 AA Part Name: VALVE AIR

Vehicle: EXPEDITION (TB7 )

\_

Shanghai Baolong Industries Co - We Recieved Some Valve Stems That Are Old Parts Diffrent Part Numbers On The Box. Not Enough Grease Or Lubricate On Them Causing Then To Split And Break Apart Parts Are In Iq Awaiting Supplier Review.

|     | Please Take The Following Actions:  |     |
|-----|---|-----|
|     |   |     |
| to: | * Return this form and requested information (all blank/underlined spaces):   |     |
|     | Email:mtpiq@ford.com Fax: (734) 467-0567 Tel: (734) 467-0568  |     |
|     | Response Prepared By: Phone: Date:  |     |
|     | Supplier Concern Number/Remarks:  |     |
| 7   | * Respond within 24 hours of receipt, with completed information: Is this concern supplier responsible? If no, please provide appropriate documentation. If undetermined, contact IQ for further clarification.  (Y/N/Undetermined)  Describe planned interim actions:                  | su  |
|     |   |     |
| rep | Production date(s) of suspect part:  Is FCSD service stock affected? (Yes/No)  The last shipment of FCSD service stock was made on: (date).  If service stock is affected, please notify your FCSD STA  presentative:  Brincat, K. R. (Kristi) @ 1-734-5233964 Email: kbrincat@ford.com |     |
| *   | * Sort suspect material at the Ford facility, within 24 hours.  Person Performing Sort: Arrival Time At Plant:  # Pieces Sorted at Ford: # Defective Pieces Found At Ford:  Describe how the sorted and certified material will be identified/marked                                    |     |
| y   | * Purge your facility and supply chain of suspect material.  Ship certified material, suitably identified, as soon as possible within 24 hours.  Do this for the next 30 days for non-delta parts, and 90 days for delta parts.   |     |
|     | # Pieces In-transit (from supplier ship location to Ford Plant):<br># Pieces In-transit Sorted: # Defective Pieces In-transit:  |     |
|     | (not to be recorded in QR2)   |     |
|     | Date/Time materials 'certified' at supplier:  |     |
| 7   | * Initiate and return 8D corrective action reports, within the times specified with a copy sent to your Ford Site STA Engineer, zwang11@ford.c  | com |
|     | Within 3 calendar days Within 15 calendar days  |     |

2

1. Identify your Team

4. Determine Root Cause or

| 2. Describe the problem 3. Contain the problem Note: Item #3 'Containment' MUST address production stock and service stock (if affected.) | Potential Root Cause(s) 5. Interim Corrective Actions 6. Permanent Corrective Actions 7. Prevention 8. Congratulate your team |
|---|---|
| Supplier 8D Champion:   | Phone:  |
| * Include the concern number, F020861   | , on all related correspondence   |
| Before coming to Mich Truck , supplier the Incoming Quality Department and pr   |   |
| IQ Admin. Asst: Joy Reynolds (734) 467 IQ Manager: Donna Albright   | -0568<br>(734) 467-0600   |
|   | ctions  |
| Respond In 24 Hours<br>Initiate 8D Analysis   | Ship Certified Stock<br>Sort Suspect Stock At Plant   |
| Plant Use O Concern Open Date: 0  |   |
| Supplier Response Received: Req. Supplier Sort/Rework Performed: Certified Stock Received:  | Bin Code: Symptom Code:   |
| 8D Received:  | Root Cause Code:  |
|   |   |
| Note: These counts are for production   | stock only  |
| Total Parts Sorted: 0 Total Parts Reworked: 0 Total Parts Returned: 0 Total Parts Scrapped: 0   |   |
| This Concern Has Not Been Elevated To   | a QR  |

The attached file word document,F020861.doc contains the same information as in the email note. You may disregard the other attached file 'ATT123...ATT'

### Baolong DVPR Index

| Ford Part Number | TRA Number         | Manufacturing Site      | DV Approval Date | DV Purpose                      |
|------------------|--------------------|-------------------------|------------------|---------------------------------|
| F81D-1700-AB     | TR416MA            | Roxboro, North Carolina | 6/1/2005         | Baolong acquisition of DILL     |
| F81D-1700-AB     | TR416MA            | Shanghai, China         | 12/12/2005       | Manufacturing site transfer     |
| F81D-1700-BB     | TR416MB            | Roxboro, North Carolina | 6/1/2005         | Baolong acquisition of DILL     |
| F81D-1700-BB     | TR416MB            | Shanghai, China         | 12/12/2005       | Manufacturing site transfer     |
| D70A-1705-AA     | 3/4" Extension     | Roxboro, North Carolina | 5/1/2005         | Baolong acquisition of DILL     |
| D70A-1705-AA     | 3/4" Extension     | Shanghai, China         | 12/13/2005       | Manufacturing site transfer     |
| F0C6-1700-AA     | TR414              | Roxboro, North Carolina | 4/28/2005        | Baolong acquisition of DILL     |
| F0C6-1700-AA     | TR414              | Shanghai, China         | 6/15/2005        | Manufacturing site transfer     |
| F0C6-1700-AA     | TR414              | Shanghai, China         | 11/16/2005       | Manufacturing site transfer     |
| F0C6-1700-AA     | TR414              | Shanghai, China         | 12/1/2005        | Manufacturing site transfer     |
| F0C6-1700-AA     | TR414              | Shanghai, China         | 2/13/2006        | Manufacturing site transfer     |
| F0C6-1700-AA     | TR414              | Shanghai, China         | 2/13/2006        | Manufacturing site transfer     |
| 7L34-1700-AA     | TR414              | Shanghai, China         | 2/27/2007        | Valve cap retention tulip added |
| E2TA-1700-AA     | TR413 + 1/2" Ext   | Shanghai, China         | 8/11/2005        | Schrader resourcing to Baolong  |
| 5F93-1700-AB     | TR413HP            | Shanghai, China         | 4/30/2006        | Schrader resourcing to Baolong  |
| 6L34-1A163-AA    | Valve Cap BLVC50   | Shanghai, China         | 11/17/2006       | Manufacturing site transfer     |
| 6C34-1700-AB     | TR600HP            | Shanghai, China         | 4/3/2006         | Schrader resourcing to Baolong  |
| 6C34-1700-AC     | TR600HP            | Shanghai, China         | 9/11/2006        | NOM revisions                   |
| 6C34-1700-BB     | TR600HP + 3/4" Ext | Shanghai, China         | 5/16/2006        | Schrader resourcing to Baolong  |
| 6C34-1700-BC     | TR600HP + 3/4" Ext | Shanghai, China         | 9/11/2006        | NOM revisions                   |
| BLE13P           | 3/4" Extension     | Shanghai, China         | 6/22/2006        | Sourcing to Baolong             |

#### ARDL TEST SAMPLES

| Vehicle             | TRA No | Valve<br>MFG     | Country of<br>Origin | Visual<br>Inspection | Vehicle<br>Position |
|---------------------|--------|------------------|----------------------|----------------------|---------------------|
| 2007 Toyota CMAX    | 413    | TBD              | TBD                  | Cracked              | TBD                 |
| 2007 Acura MDS      | 413    | Pacific          | USA                  | No Cracks            | Spare Tire          |
| 2008 Honda Accord   | 413    | Pacific          | Japan                | No Cracks            | Spare Tire          |
| 2008 Honda CRV      | 413    | Pacific          | Japan                | No Cracks            | Spare Tire          |
| 2007 Camry XLE      | 413    | Pacific          | USA                  | No Cracks            | Spare Tire          |
| 2008 Chevy Malibu   | 414    | Schrader         | China                | No Cracks            | Spare Tire          |
| 2007 GMC Acadia SLT | 414    | Schrader<br>EHA  | China                | No Cracks            | Spare Tire          |
| 2007 Ford Mondeo    | 414    | Alligator        | Germany              | No Cracks            | Spare Tire          |
| 2008 Ford Kuga      | 414    | EHA<br>Alligator | Germany              | No Cracks            | RH Rear             |

From: Yao, Michael (G.C.)

Sent: Wednesday, July 23, 2008 10:27 AM

To: Camilleri, Robert (R.H.)

Subject: ??: Baolong Wheel Valve Stem Testing

H1&H2 should be the same and it should be a key point for the result. But after they measured, they found that H1-H2≈2 mm.

As for L1&L2, they found that L1-L2≈1mm.I don't think it's also a cause.

Actually after having this result, it should have given us a general idea. We can't make sure 37% is more robust than 28%. Because there is a big variability for the result.

28% 26,795 --73,356; 37% 35,076--163,080 .

I'm still talking with them if we can verify it more robust by other means for increasing EPDM's parts.

From: Camilleri, Robert (R.H.) Sent: 2008-7-23 (星期三) 20:33

To: Yao, Michael (G.C.)

Subject: RE: Baolong Wheel Valve Stem Testing

Michael, I am not quite sure that I understand what you are trying to tell me by pointing out that H1&H2 and L1&L2 have a little difference. I didn't think there would be any difference. Please explain, thanks.

From: Yao, Michael (G.C.)

Sent: Wednesday, July 23, 2008 8:01 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong Wheel Valve Stem Testing

Sorry. I didn't note this. After confirming with them, they will modify this fixture and redo the test. Please find the attachment and H1&H2 and L1&L2 have a little difference.

If you have any request, please let me know. Thanks

<< File: Fixture1.JPG >>

**Best Regards** 

Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.)

**Sent**: 2008年7月22日 22:06

To: Yao, Michael (G.C.)

Subject: RE: Baolong Wheel Valve Stem Testing

Michael, I did not ask for Baolong to modify the fixture to run 6 of the 28 and 6 of the 37% EPDM valve stems simultaneously. I asked that they to verify that the test fixture is in working condition and meets the requirements of the ISO test procedure. Because the 37% valve stems in test 7047 showed abrasions at 20717 cycles and no abrasions on the 28% valve stem. The 37% valves where in test holes 1-3, which where the same test holes for the 28% valve stems that should abrasions at 20717 cycles in test 7044. I found this to be suspicious for the 37% EPDM valve stems. Please call me, if you have questions. Thanks

From: Yao, Michael (G.C.)

Sent: Tuesday, July 22, 2008 7:47 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong Wheel Valve Stem Testing

Robert.

Just to clarify, BaoLong needs to modify the fixture to run another 6 pcs for 28% & 37%.

The reason is that variability is too big. Is that correct? Please see the form below.

28% 31,429 59,399 59,399 26,795 40,124 73,356 37% 35,076 108,167 163,080 86,395 40,124 40,124

**Best Regards** 

Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.)

Sent: 2008年7月22日 0:19

To: Yao, Michael (G.C.); billir@thonassociates.com; 'Chris Bruce'; Raul

**Subject:** Baolong Wheel Valve Stem Testing

When: 2008年7月22日星期二 18:30-19:30 (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi.

where: Teleconference

Please be prepared to discuss the Ozone test results for the 28 and 37% EPDM valve stems. Thanks

**Toll (International):** +1.313.621.3673

**Toll-free:** 1.888.621.3673

11/25/2008

**Pass code:** 87595684

PE08-060 0739 11/25/2008 From: Chris Bruce [cbruce@thonassociates.com]

**Sent:** Wednesday, July 16, 2008 10:03 AM

To: Camilleri, Robert (R.H.)

Cc: billjr@thonassociates.com; 'Julie Troiani'; 'Raul'; 'zoe'; miller@baolong.biz

Subject: BAOLONG VALVE SHIPMENTS TO FORD

Attachments: FORD MEDU1344913 CB 7-16-08.xls; FORD MSCU1048962 CB 7-16-08.xls; FORD YMLU8364450 CB 7-16-

08.xls

#### Rob,

Attached please find three spreadsheets that trace the TR414 valve production from Baolong to the Ford Assembly plants. We were able to trace this by using the lot number and manufacture dates of material produced at Baolong during the suspect time frame. From there we traced these lots to the proper sea container and to our distribution center in Romulus, Michigan. From there we were able to tell you exactly when and to which Ford plants these parts were shipped. Hope this helps.

Regards,

Chris Bruce Baolong

248-625-5426

CONTAINER MEDU1344913 RECEIVED 10/16/06 LOT NUMBERS: 0627344 MFG DATE; 9-7-06

| CONTAINER MEDI<br>PART NUMBER: F |         |            | 0/16/06                        | LOT NUMBERS: 0627344                  | MFG DATE; 9-7-06          |          |
|----------------------------------|---------|------------|--------------------------------|---------------------------------------|---------------------------|----------|
| LOAD_NUMBER                      |         |            | PLANT_LOCATION                 | CUSTOMER NAME                         | SHIP_FROM_NAME            | SUM(IH.( |
|                                  |         |            | FORD MICHIGAN TRUCK- AP02A-    | <del>_</del>                          | BAOLONG INDUSTRIES (FORD) | 8000     |
|                                  |         |            |                                |                                       | BAOLONG INDUSTRIES (FORD) | 7000     |
|                                  |         |            | FORD NORFOLK ASSY- AP12A-      |                                       | BAOLONG INDUSTRIES (FORD) | 6000     |
|                                  | 1190214 |            | FORD OAKVILLE ASSY- AP20A-     |                                       | BAOLONG INDUSTRIES (FORD) | 4000     |
|                                  | 1194826 |            | FORD MICHIGAN TRUCK- AP02A-    |                                       | BAOLONG INDUSTRIES (FORD) | 4000     |
|                                  | 1194827 |            | FORD CHICAGO ASSY- AP03A-      |                                       | BAOLONG INDUSTRIES (FORD) | 4000     |
|                                  | 1194829 |            | FORD KANSAS CITY ASSY- AP06A-  |                                       | BAOLONG INDUSTRIES (FORD) | 9000     |
|                                  | 1194831 |            | FORD WAYNE ASSY- AP16A-        |                                       | BAOLONG INDUSTRIES (FORD) | 5000     |
|                                  | 1194861 |            |                                | AUTOALLIANCE INTERNATIONAL INC        |                           | 24000    |
|                                  | 1198076 |            | FORD ST. THOMAS ASSY- AP22A-   |                                       | BAOLONG INDUSTRIES (FORD) | 1000     |
|                                  | 1217066 |            | FORD MICHIGAN TRUCK- AP02A-    |                                       | BAOLONG INDUSTRIES (FORD) | 8000     |
|                                  | 1217067 |            | FORD CHICAGO ASSY- AP03A-      |                                       | BAOLONG INDUSTRIES (FORD) | 8000     |
|                                  | 1217069 |            | FORD KANSAS CITY ASSY- AP06A-  |                                       | BAOLONG INDUSTRIES (FORD) | 18000    |
|                                  | 1217070 |            | FORD LOUISVILLE ASSY- AP09A-   |                                       | BAOLONG INDUSTRIES (FORD) | 17000    |
|                                  | 1217072 |            | FORD NORFOLK ASSY- AP12A-      |                                       | BAOLONG INDUSTRIES (FORD) | 6000     |
|                                  | 1217074 |            | FORD TWIN CITIES ASSY- AP15A-  |                                       | BAOLONG INDUSTRIES (FORD) | 3000     |
|                                  | 1217075 |            | FORD WAYNE ASSY- AP16A-        |                                       | BAOLONG INDUSTRIES (FORD) | 10000    |
|                                  | 1217077 |            |                                |                                       | BAOLONG INDUSTRIES (FORD) | 2000     |
|                                  | 1217078 |            | FORD ST. THOMAS ASSY- AP22A-   |                                       | BAOLONG INDUSTRIES (FORD) | 8000     |
|                                  | 1223948 |            | SERVICIOS Y MONTAJES EAGLE     |                                       | BAOLONG INDUSTRIES (FORD) | 19000    |
|                                  | 1223892 |            | FORD CHICAGO ASSY- AP03A-      |                                       | BAOLONG INDUSTRIES (FORD) | 3000     |
|                                  | 1223894 |            | FORD KANSAS CITY ASSY- AP06A-  |                                       | BAOLONG INDUSTRIES (FORD) | 19000    |
|                                  | 1223896 |            | FORD TWIN CITIES ASSY- AP15A-  |                                       | BAOLONG INDUSTRIES (FORD) | 9000     |
|                                  | 1227731 |            | FORD DEARBORN STAMPING - MS05A |                                       | ,                         | 5000     |
|                                  | 1232671 |            | FORD MICHIGAN TRUCK- AP02A-    |                                       | BAOLONG INDUSTRIES (FORD) | 3000     |
|                                  | 1232672 |            | FORD CHICAGO ASSY- AP03A-      |                                       | BAOLONG INDUSTRIES (FORD) | 4000     |
|                                  | 1232674 |            | FORD KANSAS CITY ASSY- AP06A-  |                                       | BAOLONG INDUSTRIES (FORD) | 9000     |
|                                  | 1232675 |            | FORD NORFOLK ASSY- AP12A-      |                                       | BAOLONG INDUSTRIES (FORD) | 6000     |
|                                  | 1232676 |            | FORD WAYNE ASSY- AP16A-        |                                       | BAOLONG INDUSTRIES (FORD) | 5000     |
|                                  | 1232678 |            | FORD OAKVILLE ASSY- AP20A-     |                                       | BAOLONG INDUSTRIES (FORD) | 2000     |
|                                  | 1258651 |            | FORD NORFOLK ASSY- AP12A-      |                                       | BAOLONG INDUSTRIES (FORD) | 4000     |
| 15498                            | 1258653 | 12/11/2006 | FORD TWIN CITIES ASSY- AP15A-  |                                       | BAOLONG INDUSTRIES (FORD) | 3000     |
| 15499                            | 1258654 | 12/11/2006 | FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE                    | BAOLONG INDUSTRIES (FORD) | 9000     |
| 15640                            | 1265630 | 12/13/2006 | FORD MICHIGAN TRUCK- AP02A-    |                                       | BAOLONG INDUSTRIES (FORD) | 7000     |
|                                  | 1265631 |            | FORD CHICAGO ASSY- AP03A-      |                                       | BAOLONG INDUSTRIES (FORD) | 9000     |
|                                  | 1265633 |            |                                |                                       | BAOLONG INDUSTRIES (FORD) | 4000     |
|                                  | 1265634 | 12/13/2006 | FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES              | BAOLONG INDUSTRIES (FORD) | 6000     |
| 15646                            | 1265636 | 12/13/2006 | FORD OAKVILLE ASSY- AP20A-     |                                       | BAOLONG INDUSTRIES (FORD) | 7000     |
| 15647                            | 1265637 | 12/13/2006 | FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS               | BAOLONG INDUSTRIES (FORD) | 10000    |
| 15648                            | 1265638 |            | RENAISSANCE GLOBAL C/O PC07A   | VENEZUELA IEOCA                       | BAOLONG INDUSTRIES (FORD) | 1000     |
| 15649                            | 1265639 |            | FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE                    | BAOLONG INDUSTRIES (FORD) | 9000     |
| 15761                            | 1273128 | 12/15/2006 | FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK           | BAOLONG INDUSTRIES (FORD) | 4000     |
|                                  | 1273129 | 12/15/2006 | FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO                  | BAOLONG INDUSTRIES (FORD) | 4000     |
| 15763                            | 1273130 | 12/15/2006 | FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY              | BAOLONG INDUSTRIES (FORD) | 10000    |
| 15765                            | 1273131 | 12/15/2006 | FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE                    | BAOLONG INDUSTRIES (FORD) | 5000     |
| 15768                            | 1273127 | 12/15/2006 | FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE                 | BAOLONG INDUSTRIES (FORD) | 5000     |
| 15769                            | 1273513 | 12/15/2006 | AUTO ALLIANCE INTERNATIONAL    | <b>AUTOALLIANCE INTERNATIONAL INC</b> | BAOLONG INDUSTRIES (FORD) | 29000    |
| 15804                            | 1287734 |            | FORD MICHIGAN TRUCK- AP02A-    |                                       | BAOLONG INDUSTRIES (FORD) | 8000     |
|                                  | 1287735 | 12/18/2006 | FORD CHICAGO ASSY- AP03A-      |                                       | BAOLONG INDUSTRIES (FORD) | 7000     |
| 15807                            | 1287737 |            | FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY              | BAOLONG INDUSTRIES (FORD) | 12000    |
| 15808                            | 1287738 | 12/18/2006 | FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE               | BAOLONG INDUSTRIES (FORD) | 18000    |
| 15811                            | 1287740 | 12/18/2006 | FORD WAYNE ASSY- AP16A-        |                                       | BAOLONG INDUSTRIES (FORD) | 9000     |
|                                  |         |            |                                |                                       |                           |          |

| 15010 1007710 | 40/40/2000 FORD CALCUIL F 400V 4 DOOA - FORD CALCUIL               | LE BAOLONO INDUSTRIES (FORR)            | 0000  |
|---------------|--|---|-------|
| 15813 1287742 |  | ,                                       | 8000  |
| 15814 1287743 |  |   | 9000  |
| 15815 1287754 |  | ,                                       | 18000 |
| 15958 1301666 |  | ,                                       | 1000  |
| 16215 1370826 |  | ,                                       | 8000  |
| 16325 1378391 |  | ,                                       | 7000  |
| 16327 1378393 | 1/5/2007 FORD OAKVILLE ASSY- AP20A- AP20A - FORD OAKVIL            | LE BAOLONG INDUSTRIES (FORD)            | 4000  |
| 16328 1378394 |  | ` ,                                     | 4000  |
| 16329 1378395 | 1/5/2007 AUTO ALLIANCE INTERNATIONAL AUTOALLIANCE INTER            | RNATIONAL INCBAOLONG INDUSTRIES (FORD)  | 26000 |
| 16356 1396535 | 1/8/2007 FORD KANSAS CITY ASSY- AP06A- AP06A - FORD KANSA          | S CITY BAOLONG INDUSTRIES (FORD)        | 33000 |
| 16361 1396564 | 1/8/2007 FORD OAKVILLE ASSY- AP20A- AP20A - FORD OAKVIL            | LE BAOLONG INDUSTRIES (FORD)            | 1000  |
| 16508 1406773 | 1/10/2007 FORD MICHIGAN TRUCK- AP02A- AP02A - FORD MICHIG          | AN TRUCK BAOLONG INDUSTRIES (FORD)      | 5000  |
| 16511 1406776 | 1/10/2007 FORD TWIN CITIES ASSY- AP15A- AP15A - FORD TWIN C        | ITIES BAOLONG INDUSTRIES (FORD)         | 6000  |
| 16514 1406779 | 1/10/2007 FORD ST. THOMAS ASSY- AP22A- AP22A - FORD ST. THO        | DMAS BAOLONG INDUSTRIES (FORD)          | 4000  |
| 16515 1406780 | 1/10/2007 FORD DEARBORN STAMPING - MS05A MS05A - FORD DEARB        | ORN STAMPIN BAOLONG INDUSTRIES (FORD)   | 2000  |
| 16747 1433234 | 1/16/2007 SERVICIOS Y MONTAJES EAGLE BAOLONG                       | BAOLONG INDUSTRIES (FORD)               | 32000 |
| 16778 1436998 | 1/17/2007 FORD MICHIGAN TRUCK- AP02A- AP02A - FORD MICHIG          | AN TRUCK BAOLONG INDUSTRIES (FORD)      | 9000  |
| 16781 1437000 | 1/17/2007 FORD KANSAS CITY ASSY- AP06A- AP06A - FORD KANSAS        | S CITY BAOLONG INDUSTRIES (FORD)        | 18000 |
| 16783 1437002 | 1/17/2007 FORD NORFOLK ASSY- AP12A- AP12A - FORD NORFO             | LK BAOLONG INDUSTRIES (FORD)            | 6000  |
| 16784 1437003 | 1/17/2007 FORD TWIN CITIES ASSY- AP15A- AP15A - FORD TWIN C        | ,                                       | 6000  |
| 16785 1437004 | 1/17/2007 FORD WAYNE ASSY- AP16A- AP16A - FORD WAYNE               | ,                                       | 5000  |
| 16927 1444046 | 1/19/2007 FORD WAYNE ASSY- AP16A- AP16A - FORD WAYNE               | ,                                       | 6000  |
| 16933 1444077 | 1/19/2007 FORD MICHIGAN TRUCK- AP02A- AP02A - FORD MICHIG          | AN TRUCK BAOLONG INDUSTRIES (FORD)      | 3000  |
| 16936 1444102 |  | ,                                       | 5000  |
| 16937 1444080 | 1/19/2007 FORD WAYNE ASSY- AP16A- AP16A - FORD WAYNE               | BAOLONG INDUSTRIES (FORD)               | 4000  |
| 16939 1444082 | 1/19/2007 FORD OAKVILLE ASSY- AP20A- AP20A - FORD OAKVIL           | LE BAOLONG INDUSTRIES (FORD)            | 4000  |
| 16941 1444085 | 1/19/2007 FORD DEARBORN STAMPING - MS05A MS05A - FORD DEARB        | · · ·                                   | 2000  |
| 17136 1463614 | 1/24/2007 FORD LOUISVILLE ASSY- AP09A- AP09A - FORD LOUISV         | 'ILLE BAOLONG INDUSTRIES (FORD)         | 14000 |
| 17139 1463617 | 1/24/2007 FORD KANSAS CITY ASSY- AP06A- AP06A - FORD KANSA         | ,                                       | 20000 |
| 17151 1463688 | 1/24/2007 FORD DEARBORN STAMPING - MS05A MS05A - FORD DEARB        | ORN STAMPIN BAOLONG INDUSTRIES (FORD)   | 16000 |
| 17263 1472156 | 1/26/2007 AUTO ALLIANCE INTERNATIONAL AUTOALLIANCE INTER           | RNATIONAL IN(BAOLONG INDUSTRIES (FORD)  | 15000 |
| 17264 1472157 |  |   | 12000 |
| 17330 1487948 |  | ,                                       | 20000 |
| 17331 1487949 |  |   | 3000  |
| 18849 1654776 |  | · · · · · · · · · · · · · · · · · · ·   | 3000  |
| 18851 1654778 |  | ,                                       | 21000 |
| 18856 1654783 |  | ,                                       | 6000  |
| 18967 1663904 |  | RNATIONAL INC BAOLONG INDUSTRIES (FORD) | 20000 |
| 19029 1684656 |  | ,                                       | 8000  |
| 19031 1684658 |  | · · ·                                   | 24000 |
| 19034 1684661 |  | · · · · · · · · · · · · · · · · · · ·   | 4000  |
| 19039 1684666 |  | /                                       | 1000  |
| 19175 1694381 |  | , ,                                     | 7000  |
| 19176 1694382 |  | ,                                       | 6000  |
| 10170 1004002 | . GITEOUT FOILD OIL THOMING NOOT ALEEN ALEEN TO LEAT TO NO OIL THE | Discolating (I OND)                     | 0000  |

| CONTAINER MSCU1048962 RECEIVED 12/20/06                | LOT NUMBER: 0627344 & 0627345  | MFG DATES: 11-9-06        |                  |
|--|--------------------------------|---------------------------|------------------|
| PART NUMBER: FOC6-1700-AA                              |                                |                           |                  |
| LOAD NUMBER ID SHIP DATE PLANT LOCATION                | CUSTOMER NAME                  | SHIP FROM NAME            | SUM(IH.QUANTITY) |
| 19900 1772952 3/21/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 2000             |
| 16787 1437006 1/17/2007 FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 7000             |
| 16788 1437007 1/17/2007 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 9000             |
| 16790 1437008 1/17/2007 RENAISSANCE GLOBAL C/O PC07A   | VENEZUELA IE0CA                | BAOLONG INDUSTRIES (FORD) | 1000             |
| 16791 1437077 1/17/2007 FORD DEARBORN STAMPING - MS05A | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 16000            |
| 16934 1444078 1/19/2007 FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 4000             |
| 16935 1444079 1/19/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 10000            |
| 16936 1444102 1/19/2007 FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE        | BAOLONG INDUSTRIES (FORD) | 13000            |
| 16940 1444104 1/19/2007 AUTO ALLIANCE INTERNATIONAL    | AUTOALLIANCE INTERNATIONAL INC | BAOLONG INDUSTRIES (FORD) | 23000            |
| 16941 1444085 1/19/2007 FORD DEARBORN STAMPING - MS05A | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 3000             |
| 17011 1456679 1/22/2007 FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 7000             |
| 17014 1456703 1/22/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 18000            |
| 17015 1456681 1/22/2007 FORD NORFOLK ASSY- AP12A-      | AP12A - FORD NORFOLK           | BAOLONG INDUSTRIES (FORD) | 6000             |
| 17016 1456682 1/22/2007 FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17019 1456683 1/22/2007 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 9000             |
| 17020 1456684 1/22/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 2000             |
| 17021 1456685 1/22/2007 FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 9000             |
| 17022 1456691 1/22/2007 FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 7000             |
| 17108 1460386 1/23/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 6000             |
| 17136 1463614 1/24/2007 FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE        | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17137 1463615 1/24/2007 FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17138 1463616 1/24/2007 FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17140 1463618 1/24/2007 FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17141 1463619 1/24/2007 FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 9000             |
| 17142 1463620 1/24/2007 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17152 1463624 1/24/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 1000             |
| 17514 1495932 1/31/2007 FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17515 1495933 1/31/2007 FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17517 1495934 1/31/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 2000             |
| 17521 1495938 1/31/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 1000             |
| 17602 1503051 2/2/2007 FORD MICHIGAN TRUCK- AP02A-     | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 3000             |
| 17603 1503052 2/2/2007 FORD CHICAGO ASSY- AP03A-       | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17604 1503053 2/2/2007 FORD KANSAS CITY ASSY- AP06A-   | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17607 1503056 2/2/2007 FORD TWIN CITIES ASSY- AP15A-   | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17608 1503057 2/2/2007 FORD WAYNE ASSY- AP16A-         | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17610 1503059 2/2/2007 FORD OAKVILLE ASSY- AP20A-      | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 5000             |
| 17611 1503060 2/2/2007 AUTO ALLIANCE INTERNATIONAL     | AUTOALLIANCE INTERNATIONAL INC | BAOLONG INDUSTRIES (FORD) | 3000             |
| 17664 1520620 2/5/2007 FORD MICHIGAN TRUCK- AP02A-     | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 3000             |
| 17665 1520621 2/5/2007 FORD CHICAGO ASSY- AP03A-       | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17667 1520623 2/5/2007 FORD KANSAS CITY ASSY- AP06A-   | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 20000            |
| 17672 1520627 2/5/2007 FORD OAKVILLE ASSY- AP20A-      | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17673 1520628 2/5/2007 FORD DEARBORN STAMPING - MS05A  | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 9000             |
| 17845 1528437 2/7/2007 FORD MICHIGAN TRUCK- AP02A-     | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17846 1528438 2/7/2007 FORD CHICAGO ASSY- AP03A-       | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17848 1528440 2/7/2007 FORD KANSAS CITY ASSY- AP06A-   | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 21000            |
| 17849 1528441 2/7/2007 FORD LOUISVILLE ASSY- AP09A-    | AP09A - FORD LOUISVILLE        | BAOLONG INDUSTRIES (FORD) | 18000            |
| 17852 1528444 2/7/2007 FORD TWIN CITIES ASSY- AP15A-   | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17854 1528446 2/7/2007 FORD OAKVILLE ASSY- AP20A-      | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 8000             |
| 17855 1528447 2/7/2007 FORD ST. THOMAS ASSY- AP22A-    | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 3000             |
| 17856 1528448 2/7/2007 FORD DEARBORN STAMPING - MS05A  | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 7000             |
| 17947 1535527 2/9/2007 FORD MICHIGAN TRUCK- AP02A-     | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 4000             |
| 17049 1525529 2/0/2007 EODD KANSAS CITY ASSY ADOSA     | ADOGA FORD KANGAS CITY         | DAOLONG INDUSTRIES (FORD) | 6000             |

MS05A - FORD DEARBORN STAMPING

AUTOALLIANCE INTERNATIONAL INC

AP06A - FORD KANSAS CITY

AP20A - FORD OAKVILLE

17948 1535528

17952 1535532

17954 1535533

17955 1535534

2/9/2007 FORD OAKVILLE ASSY- AP20A-

2/9/2007 FORD KANSAS CITY ASSY- AP06A-

2/9/2007 AUTO ALLIANCE INTERNATIONAL

2/9/2007 FORD DEARBORN STAMPING - MS05A

6000

5000

4000

6000

BAOLONG INDUSTRIES (FORD)

BAOLONG INDUSTRIES (FORD)

**BAOLONG INDUSTRIES (FORD)** 

BAOLONG INDUSTRIES (FORD)

| 18852 1654779 | 2/28/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 4000  |
|---------------|--|--------------------------------|---------------------------|-------|
| 18853 1654780 | 2/28/2007 FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 8000  |
| 18855 1654782 | 2/28/2007 FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 8000  |
| 18856 1654783 | 2/28/2007 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 3000  |
| 18857 1654784 | 2/28/2007 FORD DEARBORN STAMPING - MS05A | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 7000  |
| 18895 1654829 | 3/1/2007 BAOLONG                         | BAOLONG                        | BAOLONG INDUSTRIES (FORD) | 1000  |
| 18956 1663895 | 3/2/2007 FORD MICHIGAN TRUCK- AP02A-     | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 3000  |
| 18959 1663897 | 3/2/2007 FORD KANSAS CITY ASSY- AP06A-   | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 10000 |
| 18960 1663898 | 3/2/2007 FORD TWIN CITIES ASSY- AP15A-   | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 3000  |
| 18961 1663899 | 3/2/2007 FORD WAYNE ASSY- AP16A-         | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 5000  |
| 18963 1663901 | 3/2/2007 FORD OAKVILLE ASSY- AP20A-      | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 3000  |
| 18964 1663902 | 3/2/2007 FORD ST. THOMAS ASSY- AP22A-    | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 5000  |
| 18966 1663903 | 3/2/2007 FORD DEARBORN STAMPING - MS05A  | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 5000  |
| 18967 1663904 | 3/2/2007 AUTO ALLIANCE INTERNATIONAL     | AUTOALLIANCE INTERNATIONAL INC | BAOLONG INDUSTRIES (FORD) | 5000  |
| 19035 1684662 | 3/5/2007 FORD WAYNE ASSY- AP16A-         | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 7000  |
| 19037 1684664 | 3/5/2007 FORD OAKVILLE ASSY- AP20A-      | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 7000  |
| 19038 1684665 | 3/5/2007 FORD ST. THOMAS ASSY- AP22A-    | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 8000  |
| 19039 1684666 | 3/5/2007 FORD DEARBORN STAMPING - MS05A  | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 8000  |
| 19431 1726721 | 3/14/2007 SERVICIOS Y MONTAJES EAGLE TX  | BAOLONG                        | BAOLONG INDUSTRIES (FORD) | 7000  |
| 19504 1730615 | 3/14/2007 FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 8000  |
| 19507 1730624 | 3/14/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 21000 |
| 19509 1730616 | 3/14/2007 FORD NORFOLK ASSY- AP12A-      | AP12A - FORD NORFOLK           | BAOLONG INDUSTRIES (FORD) | 6000  |
| 19511 1730617 | 3/14/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 5000  |
| 19512 1730618 | 3/14/2007 FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 8000  |
| 19514 1730619 | 3/14/2007 FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 9000  |
| 19515 1730620 | 3/14/2007 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 8000  |
| 19516 1730621 | 3/14/2007 FORD DEARBORN STAMPING - MS05A | MS05A - FORD DEARBORN STAMPING | BAOLONG INDUSTRIES (FORD) | 8000  |
| 19638 1739027 | 3/16/2007 AUTO ALLIANCE INTERNATIONAL    | AUTOALLIANCE INTERNATIONAL INC | BAOLONG INDUSTRIES (FORD) | 20000 |
| 19641 1739030 | 3/16/2007 FORD ST. THOMAS ASSY- AP22A-   | AP22A - FORD ST. THOMAS        | BAOLONG INDUSTRIES (FORD) | 4000  |
| 19643 1739032 | 3/16/2007 FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 5000  |
| 19644 1739033 | 3/16/2007 FORD TWIN CITIES ASSY- AP15A-  | AP15A - FORD TWIN CITIES       | BAOLONG INDUSTRIES (FORD) | 2000  |
| 19645 1739034 | 3/16/2007 FORD NORFOLK ASSY- AP12A-      | AP12A - FORD NORFOLK           | BAOLONG INDUSTRIES (FORD) | 6000  |
| 19646 1739035 | 3/16/2007 FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE        | BAOLONG INDUSTRIES (FORD) | 15000 |
| 19647 1739036 | 3/16/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 10000 |
| 19648 1739037 | 3/16/2007 FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 4000  |
| 19649 1739038 | 3/16/2007 FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 3000  |
| 19677 1763341 | 3/19/2007 FORD MICHIGAN TRUCK- AP02A-    | AP02A - FORD MICHIGAN TRUCK    | BAOLONG INDUSTRIES (FORD) | 2000  |
| 19678 1763342 | 3/19/2007 FORD CHICAGO ASSY- AP03A-      | AP03A - FORD CHICAGO           | BAOLONG INDUSTRIES (FORD) | 1000  |
| 19680 1763344 | 3/19/2007 FORD KANSAS CITY ASSY- AP06A-  | AP06A - FORD KANSAS CITY       | BAOLONG INDUSTRIES (FORD) | 22000 |
| 19684 1763348 | 3/19/2007 FORD WAYNE ASSY- AP16A-        | AP16A - FORD WAYNE             | BAOLONG INDUSTRIES (FORD) | 9000  |
| 19825 1772956 | 3/21/2007 FORD LOUISVILLE ASSY- AP09A-   | AP09A - FORD LOUISVILLE        | BAOLONG INDUSTRIES (FORD) | 14000 |
| 19832 1772960 | 3/21/2007 FORD OAKVILLE ASSY- AP20A-     | AP20A - FORD OAKVILLE          | BAOLONG INDUSTRIES (FORD) | 1000  |
|               |  |                                | , ,                       |       |

**BAOLONG** 

**BAOLONG** 

21618 2040867

21619 2040868

5/2/2007 NIPPON EXPRESS USA INC

**BAOLONG INDUSTRIES (FORD)** 

10

From: Raul [Raul@baolong.biz]

**Sent:** Tuesday, July 29, 2008 5:58 AM

To: Camilleri, Robert (R.H.); 'Bill Thon Jr'; Yao, Michael (G.C.); Li, Bo (Jason.); Mracna, Chris

(C.J.)

Cc: miller@baolong.biz; wangxianyong@baolong.biz; 'caojianming'; 'winston'

Subject: RE: Baolong 7/25/2008 Mtg Minutes

Attachments: 100% EPDM PRODUCTION TIMING PLAN.xls

Hi Rob.

#### Good day!

Attached please find the production timing plan for 100% EPDM. Please be kindly advised that it is based on the new internal mixer. And 37% EPDM production schedule will be same, if we use the new machine.

#### **Thanks**

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Saturday, July 26, 2008 2:43 AM

To: Bill Thon Jr; Yao, Michael (G.C.); Raul; Li, Bo (Jason.); Mracna, Chris (C.J.)

Subject: Baolong 7/25/2008 Mtg Minutes

The following are open items that I captured during today's meeting. I will schedule a follow up meeting on Tuesday (7/29) to review these items. I do not believe that I have everyone's email address that attended the meeting. Please forward as required and contact me, if you have any questions. Thanks

- Timing to support Ford's current production needs with 100% EPDM TR414 valve stems
- Timing to support Ford's current production needs with 37% EPDM TR414 valve stems
- Timing to receive 50 pcs of 37% and 100% EPDM valve stems for testing at Ford Central Lab
- Supporting data that indicates that the 37% EPDM valve stem low cycle life was due to improper mixing
- Chemical additives identified for the 28,37 and 100% EPDM valve stems
- Baolong request warranty field sample to be returned for review

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

|                                | ITEMS   |
|--------------------------------|---|
| PROJECT PLAN AND DETERMINATION | 100% EPDM COMPOUNDING PROJECT OPEN AND APPROVAL   |
| THOSECTTEAN AND BETEINMATION   | CROSS FUNCTIONAL TEAM SET UP                      |
|                                | NEW INTERNAL MIXER INVESTMENT ANALYSIS            |
| NEW INTERNAL MIXER DEVELOPMENT | NEW INTERNAL MIXER PURCHASE APPLICATION           |
|                                | NEW INTERNAL MIXER PROCUREMENT AND INSTALLATION   |
|                                | 100% EPDM COMPOUNDING ADJUSTING AND DETERMINATION |
| 100% EPDM COMPOUDING           | TR414 OF 100% EPDM SAMPLES PRODUCTION             |
| DEVELOPMENT                    | DESIGN VERIFICATION                               |
| DEVELOT MENT                   | CUSTOMERS APPROVAL FOR THE SAMPLES                |
|                                | FEASIBILITY COMMITMENT                            |
|                                | PRODUCTS AND PROCESS CHECK LIST                   |
|                                | WORKSHOP LAYOUT CHECK                             |
|                                | PROCESS FLOW CHART                                |
|                                | SC MATRIX ANALYSIS                                |
| PROCESS DESIGN AND DEVELOPMENT | PFMEA CHECK                                       |
|                                | CONTROL PLAN CHECK                                |
|                                | PROCESS INSTRUCTION                               |
|                                | MSA PLAN  |
|                                | PPK PLAN  |
| PRODUCTS AND PROCESS           | TRIAL PRODUCTION                                  |
| VERIFICATION                   | PPAP  |

| TIMING                  | ASSIGNED BY |
|-------------------------|-------------|
| FROM JUNE 20 TO AUG 4   | RAUL        |
| FROM JULY 26 TO AUG 4   | WINSTON     |
| FROM JULY 1 TO JULY 7   | CHENJUN LI  |
| FROM JULY 21 TO JULY 25 | FEI CHEN    |
| FROM JULY 21 TO DEC 30  | JIM         |
| FROM JULY 29 TO SEP 4   | FEI CHEN    |
| FROM SEP 5 TO SEP 10    | FEI CHEN    |
| FROM SEP 11 TO SEP 24   | FEI CHEN    |
| FROM SEP 25 TO OCT 8    | RAUL        |
| FROM OCT 9 TO OCT 10    | FEICHEN     |
| FROM OCT 15 TO OCT 16   | RUI ZONG    |
| FROM OCT 15 TO OCT 16   | FEI CHEN    |
| FROM OCT 15 TO OCT 16   | FEI CHEN    |
| FROM OCT 20 TO OCT 21   | FEI CHEN    |
| FROM OCT 20 TO OCT 21   | FEI CHEN    |
| FROM OCT 20 TO OCT 21   | FEI CHEN    |
| FROM OCT 27 TO OCT 28   | FEI CHEN    |
| FROM OCT 27 TO OCT 28   | RUI ZONG    |
| FROM OCT 15 TO OCT 16   | RUI ZONG    |
| FROM NOV 25 TO JAN 6    | XIUZHU XU   |
| FROM JAN 7 TO JAN 26    | RUI ZONG    |

. 2008/06/12

#### Christensen, Kris (K.S.)

Subject:

2007 MY Multiple Vehicle Lines - Valve Stems

Location:

PDC GC-D26 (Kris & Dave's Office)

Start: End: Thu 6/12/2008 10:00 AM Thu 6/12/2008 11:00 AM

Recurrence:

(none)

Meeting Status:

Accepted

Required Attendees:

McClenaghan, Dave (D.); Christensen, Kris (K.S.); Rohweder, David (D.S.); Wickenheiser,

Francis (F.J.); Johnston, Dennis (D.T.); Oswalt, Greg (G.G.); Patel, Bharat (B.J.)

#### Dave McClenaghan

SUV/Commercial Vehicle Critical Concern Analyst

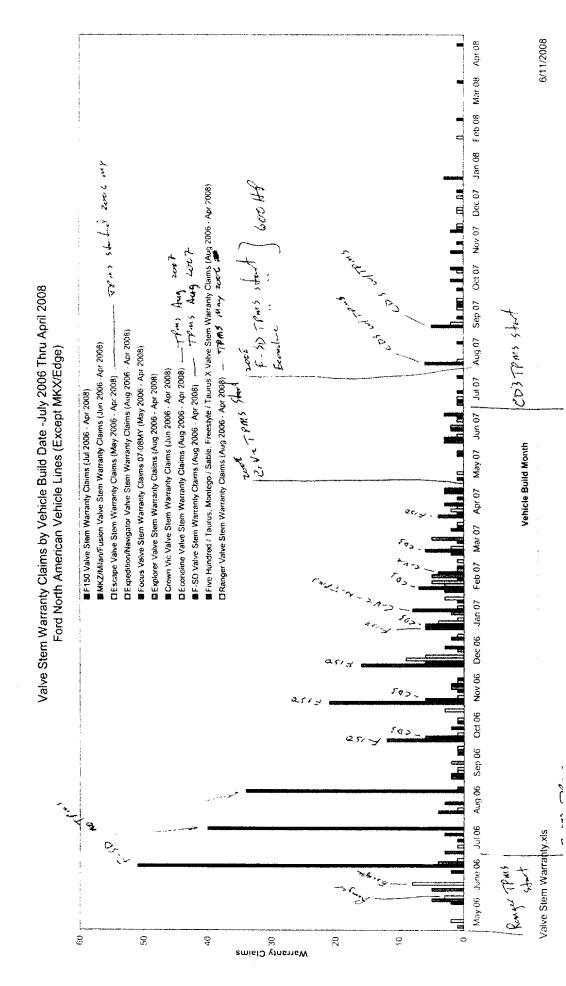
MD 327 GC-D26C PDC

Bus.: (313) 805-7724 Fax: (313) 317-9257 CDSID: dmcclen1 E-mail: dmcclen1@ford.com

\* AMISOM/ RECOLL \* Both by Baolong (marketed as Dill) ERDM \* EPDM used to Natural rubber for Ozone resistance \* Baolong indicites - Aid not meet irone aging to and Ford part sales very low ( N 2500 pc) \* TR 414 or 600 HP \* Dealers purchasing who stems from other Sources Aftermarked herrory - they see Ford varioles with but refres \* First Dill reall - overlayed claims - high ozone dryns \* Error state - some occurring in only / year \* Error state - 10 my plant bed seat. 4 Modernal analysis - Ford NA, Ford Europe, compositors,

## Meeting Attendees June 12, 2008 2007 MY Multiple Vehicle Lines - Valve Stems

| Name  | Title | Plant/Building | Phone        | CDS      |
|---|-------|----------------|--------------|----------|
| Kris Christensen                                | ССМ   | PDC            | 313-323-8497 | KCHRIST1 |
| Dave McClenaghan                                | CCA   | PDC            | 313-805-7724 | DMCCLEN1 |
| Dennis Johnston                                 |       |                |              |          |
| Wickenheiser                                    |       |                |              |          |
| Greg Oswalt                                     |       |                |              |          |
| Bharat Patel                                    |       |                |              |          |
| Will  |       |                |              |          |
| MikeRay   |       |                |              |          |
| Rick Somes                                      |       |                |              |          |
| Dennis Johnston                                 |       |                |              |          |
| Ken Griewek                                     |       |                |              |          |
| Dennis Johnston<br>Ken Garewek<br>Dave Rohunder |       |                |              |          |
|   |       |                |              |          |
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|   |       |                |              |          |



From: Camilleri, Robert (R.H.)

**Sent:** Thursday, June 26, 2008 10:36 AM

To: 'Chris Bruce' Cc: 'Bill Thon Jr'

Subject: 37% EPDM Samples

Chris, I would like to get a head start on evaluating the 37% EPDM valve stems. Assuming we decide to use these, we will do confirmation testing at our lab here in Dearborn. Could you get a dozen samples of both the 25% and 27% from Baolong to support this confirmation testing for us? I also need the 25%, since the manufacturing date will be recent. Perhaps Baolong can send them to you while we are on shutdown and I'll get them from you when I return. Thanks

From: zhoufang [zhoufang@chinabaolong.net]

Tuesday, October 31, 2006 3:44 AM Sent:

To: Kong, Qingguo (Q.); 'Jim Cao'

Subject: 8d报告

Attachments: 标识 - 8D.doc; 供方质量-8D.doc; 硫化仪试验数据.pdf

附件内是所需的8D报告和扫描的硫化仪试验数据。关于技术开发方面的几个问题,我和Mander讨论后认为不需要 专门做8D。具体请孔工和Mander再交流一下。

谢谢!

zhoufang

2006-10-31

#### 8 D 报告

编号: QR 0811-E-01 版本: A/0

项目: 返工零件未作标识,流转卡上未写返工 开始日期:2006.9.22 数量。 零件名称: 气门嘴 零件号:TR414 报告日期:2006.10.13 1 参加讨论小组人员: 2 问题描述(主要) 组员 部门 电话 1.返工零件未作何标识. 钱维军 卡扣车间 57677822 2. 流转卡上数量不准确. 张永凯 卡扣车间 57677822 梁洁 品保部 57677817 王贤勇 技术部 57690038 周方 品保部 57690051 3 临时性措施: 效果: 1.对返工零件填写返工返修单.车间技术员现场指导返工. 2.返工零件临时划定区域作好标识. 3.培训操作人员按照规定要求操作. 负责人:梁洁、张永凯、钱维军 完成时间:11月10日 4 根本原因分析: 1.目前还没有正式的返工作业指导书,返工中存在随意性. 2.返工产品未作明显标识,有在误用风险. 负责人:王贤勇、周方、钱维军、梁洁、张永凯

| 5 选择永久性的纠正措施:                        | 验证及效果:  |
|--------------------------------------|---------|
| 1.制定返工作业指导书.                         |         |
| 2.所有返工产品均要按程序文件要求贴上"返工"标记。("返工"标签重   |         |
| 新设计 )。                               |         |
|                                      |         |
|                                      |         |
| 负责人:王贤勇、周方、钱维军、梁洁、张永凯                |         |
| 6 实施永久性的纠正措施:                        | 实际完成日期: |
| 1.制定返工作业指导书. 11 月 15 日前              |         |
| 2.所有返工产品均按程序文件要求贴上"返工"标识. 10 月 30 日前 |         |
| 3.返工标签重新设计制作。11 月 30 日前。             |         |
|                                      |         |
| 负责人:王贤勇、周方、钱维军、梁洁、张永凯                |         |
| 7 实施预防措施:                            |         |
|                                      |         |
|                                      |         |
|                                      |         |
|                                      |         |
| 负责人:                                 | 实施日期:   |
| 8 有效性验证结果:                           |         |
|                                      |         |
|                                      |         |
|                                      |         |
|                                      |         |

#### 8 D 报告

编号: QR 0811-E-01 版本: A/0

项目: 返工零件未作标识,流转卡上未写返工 开始日期:2006.9.22 数量。 零件名称: 气门嘴 零件号:TR414 报告日期:2006.10.13 1 参加讨论小组人员: 2 问题描述(主要) 组员 部门 电话 1.返工零件未作何标识. 钱维军 卡扣车间 57677822 2. 流转卡上数量不准确. 张永凯 卡扣车间 57677822 梁洁 品保部 57677817 王贤勇 技术部 57690038 周方 品保部 57690051 3 临时性措施: 效果: 1.对返工零件填写返工返修单.车间技术员现场指导返工. 2.返工零件临时划定区域作好标识. 3.培训操作人员按照规定要求操作. 负责人:梁洁、张永凯、钱维军 完成时间:11月10日 4 根本原因分析: 1.目前还没有正式的返工作业指导书,返工中存在随意性. 2.返工产品未作明显标识,有在误用风险. 负责人:王贤勇、周方、钱维军、梁洁、张永凯

| 5 选择永久性的纠正措施:   | │ 验证及效果:<br>│ |
|---|---------------|
| 1.制定返工作业指导书.  |               |
| 2.所有返工产品均要按程序文件要求贴上"返工"标记。("返工"标签重                            |               |
| 新设计)。   |               |
|   |               |
|   |               |
| 负责人:王贤勇、周方、钱维军、梁洁、张永凯   |               |
| 6 实施永久性的纠正措施:   | 实际完成日期:       |
| 1.制定返工作业指导书. 11 月 15 日前                                       |               |
| 2.所有返工产品均按程序文件要求贴上"返工"标识. 10 月 30 日前                          |               |
| 3.返工标签重新设计制作。11 月 30 日前。                                      |               |
|   |               |
|   |               |
| 负责人:王贤勇、周方、钱维军、梁洁、张永凯<br>———————————————————————————————————— |               |
| 负责人:王贤勇、周方、钱维军、梁洁、张永凯<br>—————————————————————<br>7 实施预防措施:   |               |
|   |               |
|   |               |
|   |               |
|   |               |
| 7 实施预防措施:   | 实施日期:         |

# 新老硫化仪数据对比

| T10     T50       2' 12     3' 01       2' 14     3' 00       2' 13     3' 02       2' 14     2' 59       2' 11     3' 00       2' 09     2' 55       2' 13     3' 04       2' 15     3' 09       2' 15     3' 09       2' 03     2' 50 | T90<br>4, 25<br>4, 30<br>4, 23<br>4, 26<br>4, 21<br>4, 28<br>4, 36<br>4, 36<br>4, 12<br>4, 12<br>4, 17<br>3, 51 | ML<br>0. 780<br>0. 870<br>0. 770<br>0. 790<br>0. 860 | MH<br>2.160 |       | التآ  | T90    | TW   | HW    |
|---|---|--|-------------|-------|-------|--------|------|-------|
|   | 4   | 0. 780<br>0. 870<br>0. 770<br>0. 790<br>0. 860       | 2. 160      |       |       |        |      |       |
| 7   | 7 7 7 7 7 7 7 7 0 0 0 0 0 0 0 0 0 0 0 0   | 0. 870<br>0. 770<br>0. 790<br>0. 860                 |             | 2′33  | 3 23  | 4, 48  | 0.24 | 1.22  |
| 2 2 2 2 2 2 3   | 4 4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6   | 0. 770 0. 790 0. 860 0. 800                          | 2. 290      | 2, 36 | 3, 28 | 4, 54  | 0.22 | 1.25  |
| 2 2 2 2 2 2 2   | 4 4 4 4 4 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8   | 0. 790   | 2.100       | 2, 28 | 3, 17 | 4, 42  | 0.24 | 1. 22 |
| 2 3 3 2 3   | 4 4 4 A A A A A W   | 0.860  | 2.080       | 2, 23 | 3, 25 | 4, 50  | 0.22 | 1. 24 |
| 7 3 3, 7,   | 4 4 4 6   | 0 800  | 2. 230      | 2, 20 | 3, 09 | 4, 42  | 0.21 | 1. 28 |
| 2 3 3   | 3,4,4,4,3,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4   | 000  | 2.070       | 2, 24 | 3, 14 | 4, 46  | 0.21 | 1. 27 |
| 2,3   | 4 4 4 3   | 0.750  | 2.369       | 2, 27 | 3, 19 | 4, 44  | 0.23 | 1.27  |
| 2,  | 4, 4, 3,  | 0.860  | 2, 250      | 2, 26 | 3, 17 | 4, 49  | 0.23 | 1.27  |
|   | 3,  | 0.850  | 2.340       | 2, 21 | 3, 11 | 4, 40  | 0.21 | 1. 28 |
| 2,  | 3,  | 0.830  | 2.320       | 2, 26 | 3, 14 | 4, 40  | 0.23 | 1.25  |
| 2,  |   | 0.880  | 2.180       | 2, 27 | 3, 18 | 4, 45  | 0.23 | 1.27  |
| 3,  | 4,  | 0.870  | 2. 100      | 2, 25 | 3, 11 | 4'37   | 0.24 | 1. 26 |
|   | 4,  | 0.850  | 2. 160      | 2, 24 | 3, 13 | 4' 14  | 0.25 | 1.41  |
| 18 3, 08  | 4, 33   | 0.800  | 2.090       | 2, 26 | 3, 17 | 4, 42  | 0.25 | 1. 23 |
| 2,  | 4,  | 0.840  | 2.130       | 2, 36 | 3, 28 | 4, 54  | 0.22 | 1.25  |
| 1   | 4, 38   | 0.800  | [2,210]     | 2, 28 | 3, 17 | 4' 42, | 0.24 | 1.22  |
| 08 2,   | 4, 17   | 0. 790   | 2. 130      | 2, 23 | 3, 25 | 4, 50  | 0.22 | 1.24  |
| 16 3, 05  | 4, 29   | 092.0  | 2.369       | 2, 20 | 3, 09 | 4, 42  | 0.21 | 1. 28 |
| 15 3' 01  | 4, 22   | 0.810  | 2.250       | 2, 24 | 3, 14 | 4, 46  | 0.21 | 1. 27 |
| 20 3, 10  | 4, 33   | 0.750  | 2.340       | 2, 45 | 3, 34 | 4, 59  | 0.24 | 1.22  |
| 注:对比硫化仪改型前后的测试数据,以200808080808080808080808080808080808080   | ,以便于数据追溯  | 据追溯  | 审核          | TR    | 2.8   | · ·    |      |       |

邮件并有 8.70

PE08-060 **FORD** 2/11/2009 APPENDIX J PART 1 OF 2 **FIELD** COMMUNICATION **PAGE 215** 

From:

Camilleri, Robert (R.H.) Thursday, September 04, 2008 7:15 AM Janiunas, Vince (V.J.) Sent:

To: Subject: FCSD - Valve Stems

Attachments: Some vehicles may encounter issues with wheel valve stems.doc; FORDvsTECH PARTS.pdf

Vince, please call me with any questions that you might have. Thanks





Some vehicles FORDvsTECH ay encounter is RTS.pdf (186 K

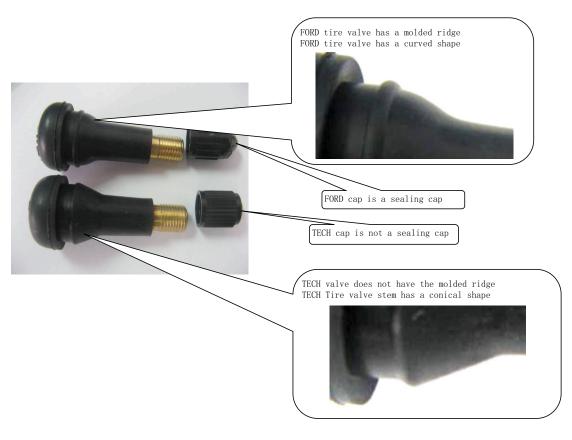
Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

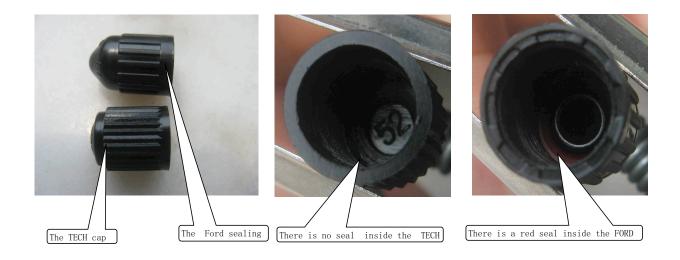
There is no change in our warranty policy or service procedures. If a crack in a valve stem is identified, the valve stem should be replaced and the valve stems on the other wheels also should be inspected for cracks.

The graphic identifies the visible differences between a TECH TR414 and a FORD TR414 tire valve stem

The materials used are different between the TECH TR414 and the Ford TR414 tire valve stem.

The TECH TR414 tire valve stem was made in a different facility on different equipment than the FORD TR414 tire valve stem.





Goebel, Ken (K.M.) From:

Thursday, June 12, 2008 7:53 AM Sent:

To: Green, Jeffrey (J.T.)

Christensen, Kris (K.S.); Frommann, Mike (M.W.) Cc:

FW: Population Extraction Request Subject:

Attachments: Multiple Veh Lines - valve stem population extract request.xls

### Jeff.

Please process the attached request. Please see me for background.

Ken Goebel **Program Manager** Recall & Service Programs, FCSD 313-33-72791 kgoebel@ford.com

From: Christensen, Kris (K.S.)

Sent: Wednesday, June 11, 2008 3:51 PM Frommann, Mike (M.W.); Goebel, Ken (K.M.) To:

Subject: Population Extraction Request

Mike & Ken -

This is the population extraction request that I discussed with you, Ken. Tire & Wheel Engineering would like the population counts broken down by model year, vehicle line, and month of production.



Multiple Veh ines - valve ste.

If you have questions or need more information, please call.

Thanks!

### Kris S. Christensen

SUV/Commercial Vehicle Critical Concern Manager

MD 327 GCD26 PDC

Bus.: (313) 323-8497 Fax: (313) 317-9257 CDSID: kchrist1 E-mail: kchrist1@ford.com

### 1) Standardization of data request 2) Data accuracy **FSA Coordinator Area** Requestor Name: Kris Christensen 3) Quicker Turnaround Requestor CDSID: kchrist1 Form Creation Date: 9/28/2005 Requestor Organization: CCM - SUV/Commercial Vehicle 4) Consumption Management - Reduction of IT Cost Form Revised Date: blank 5) Less email transactions requesting clarification Request Date: 11-Jun-08 Request # Concern Description: Revision request(a,b,etc.): 2006-2007 Multiple Vehicle Lines - valve stem EPRC #, if applicable: GCamp Global #: X-number: **FSA Coordinator Name:** Requesting volumes categorized by model year, vehicle line, and Special Request: month of production Application Used to gather data (X): Business Objects:\_ GCampVAQ: GCamp Targeting: GCamp1: **Variants** e.g., F-250/350/450/550 e.g., XL, XLT "Job 1" returns 'Current MY Prod Counts | All or specific All or Specific All, Auto, Man, e.g., Emission Codes, Sold Dates, USA and Safety Act Taurus/Sable Police Pre-Prod units are delayed one week" or Specific Speed Control, Escape Livery, Limousine Tire Size, GVW, North America, etc. 3Dr. 4Dr. 5Dr Wheelbase. SunerCah CrewCah Hydraulic or Air Brake etc **Assigned Responsible** dd-mmm-yyyy dd-mmm-yyyy Prod Date Begin | Prod Date End Country(s) (if necessary) Vehicle(s) Model Year(s) **BodyStyle** Transmission(s) Other Plant(s) Engine(s) All vehicle lines manufactured in 2006-2007 31-May-08 All 1-Jul-05

THIS NEW VEHICLE EXTRACT/DATA REQUEST FORM PROVIDES:

Insert Additional Rows if needed.

Required sections=

From: Janiunas, Vince (V.J.)

Sent: Tuesday, September 09, 2008 9:31 AM

To: Kaltz, Gordie (G.); Hayduk, Mark (M.S.); Echhot, T (T.); Humphries, Glenn (G.L.); Ricks, Kevin (K.J.); Montini,

Matthew (M.J.); Camilleri, Robert (R.H.)

Subject: ISM Courtesy Copy: 094-2008-1945: valve stems

### **ISM Courtesy Copy**

\*\*\* NOTE: The system generated the email. Do not reply to this email \*\*\*

\*\*\* To be removed from this distribution list, please email Robert Klump at rklump@ford.com \*\*\*

This message is being sent on behalf of VJANIUNA.

This is a courtesy copy of the following article to advise you this article is currently being processed for publication.

### **General Information**

Last action taken (as of 9/9/2008 1:31:16 PM GMT): Submit for approval

Comment:

Author:VJANIUNATracking Number:094-2008-1945Title:valve stems

**Vehicle Applications:** 

| Vehicle Lines               | Model Year<br>Start | Model Year<br>End | Assembly Plants | Body<br>Styles | Engine | Trans<br>Axles | Build<br>From | Build<br>To |
|-----------------------------|---------------------|-------------------|-----------------|----------------|--------|----------------|---------------|-------------|
| F-150                       | 2007                | 2007              |                 |                |        |                |               |             |
| Expedition                  | 2007                | 2007              |                 |                |        |                |               |             |
| Navigator                   | 2007                | 2007              |                 |                |        |                |               |             |
| E-Series (E-150 to 550)     | 2007                | 2007              |                 |                |        |                |               |             |
| F-Super Duty (F-250 to 550) | 2007                | 2007              |                 |                |        |                |               |             |
| Explorer 4dr                | 2007                | 2007              |                 |                |        |                |               |             |
| Explorer Sport Trac         | 2007                | 2007              |                 |                |        |                |               |             |
| Escape                      | 2007                | 2007              |                 |                |        |                |               |             |
| Mariner                     | 2007                | 2007              |                 |                |        |                |               |             |
| Taurus                      | 2007                | 2007              |                 |                |        |                |               |             |
| Taurus X                    | 2007                | 2007              |                 |                |        |                |               |             |
| MKS                         | 2007                | 2007              |                 |                |        |                |               |             |
| Sable                       | 2007                | 2007              |                 |                |        |                |               |             |
| Mustang                     | 2007                | 2007              |                 |                |        |                |               |             |
| Ranger                      | 2007                | 2007              |                 |                |        |                |               |             |
| Focus                       | 2007                | 2007              |                 |                |        |                |               |             |
| Edge                        | 2007                | 2007              |                 |                |        |                |               |             |
| MKX                         | 2007                | 2007              |                 |                |        |                |               |             |
| Flex                        | 2007                | 2007              |                 |                |        |                |               |             |
| Crown Victoria              | 2007                | 2007              |                 |                |        |                |               |             |
| Grand Marquis               | 2007                | 2007              |                 |                |        |                |               |             |
| Town Car                    | 2007                | 2007              |                 |                |        |                | ĺ             |             |
| Fusion                      | 2007                | 2007              |                 |                |        |                |               |             |
| Milan                       | 2007                | 2007              |                 |                |        |                |               |             |
| MKZ                         | 2007                | 2007              |                 |                |        | Î              | <u> </u>      |             |

Internal Text:

on the other wheels also should be inspected for cracks.

**External Text:** 

ISMs to Supersede:

If SPECS Case, Select all Other Affected Publications:

**Changes Needed in Other Pubs:** 

Message Category:

Body/Chassis/Electrical

**CQIS Codes:** 

Supervisor CDSID: mmontini
Consultant CDSID: RCAMILLE

ISM Number:

Author Work Group: PVT Member

(End automated email)

From: Drewicz, Sue (S.T.)

Sent: Wednesday, April 30, 2008 12:27 PM

To: Kircheis, Bryce (A.)
Cc: Drewicz, Sue (S.T.)
Subject: FW: Tire Edits DI4

Attachments: Effective May 15, 2008, Tires will be included in the Digital Imaging (DI) Prior Approval Pilot

Program.html

Bryce,

I actually did this some time ago (my memory . . .). The panel name is TDI.

### Sue Drewicz

### sdrewicz@ford.com

Global Warranty Analysis & Administration sdrewicz@ford.com
(313) 84-54363
(313) 84-54408 fax

\_\_\_\_\_

From: Kircheis, Bryce (A.)
Sent: Thursday, April 10, 2008 4:18 PM

**To:** Drewicz, Sue (S.T.) **Subject:** Tire Edits DI4

Here is our proposed edits for tires. We will call it DI4 as it seems to follow our theme.

We intend to go live with these on May 15 with 50 dealers. Notification was sent today.



Effective May 5, 2008, Tires ...

|         | Include   |         |                 |              |              |              |
|---------|-----------|---------|-----------------|--------------|--------------|--------------|
| Include | Reported  | Include | Include         | Include      | Exclude      | Exclude      |
| prefx   | Base Part | Suff    | Parts Total Amt | Country Code | Dealer Panel | Program code |
| 9001    | *         | *       | <0              | USA          | ESC          | PAWACVO      |
| 9002    | *         | *       |                 |              | ESP          | PAWADLR      |
| 9003    | *         | *       |                 |              | LSG          | PAWAFLD      |
| 9004    | *         | *       |                 |              | L26          | PAWAFLT      |
| 9005    | *         | *       |                 |              | OTC          | PAWAGO       |
| 9006    | *         | *       |                 |              | QCL          | PCSP         |
| 9007    | *         | *       |                 |              | QCM          | PCSPB        |
| 9008    | *         | *       |                 |              | QFC          | PCSPM        |
| 9009    | *         | *       |                 |              | RAV          | PEFSA        |
|         | TIRE      |         |                 |              | R9L          | RERECALL     |
|         | TWC01     |         |                 |              | SPW          | PINTRAN      |
|         | TYRE      |         |                 |              |              | PMVC         |
|         |           |         |                 |              |              | PONP         |
|         |           |         |                 |              |              | PONPB        |
|         |           |         |                 |              |              | PRAV         |
|         |           |         |                 |              |              | PSFSA        |
|         |           |         |                 |              |              |              |

**PSFSAM PSRECALL** WSPARTAC **WSPARTF** WSPARTLF **WSPARTOC** 

Bryce Kircheis
Group Leader
Ford Digital Imaging
6 Sigma Center
15080 Commerce Dr. N
Dearborn MI, 48120
313-206-2017

## **Ford Motor Company**

**Electronic Field Communications** 

EFC Number: EFC0200504 Date: 04/09/2008

Subject: Effective May 15, 2008, Tires will be included in the Digital Imaging (DI) Prior

Approval Pilot Program

**Summary:** The following communication notifies 50 selected Digital Imaging Prior Approval

Dealerships that effective May 15, 2008, tire repairs will be added to the covered components for a pilot program which require prior approval before beginning the

repair.

Target Division(s) and Addressees:

**FCSD:** Field Ops

Originator Name: Debbie Mayberry Phone: 313-248-5057 E-Mail:

dmayberr@ford.com

Information

Division: FCSD Department: Quality

**Dealer Communication:** Yes

Dealer eStore Materials: Tire Condition Guide (FTCG1) and Tire Warranty Job Aid

(TIREWARRANTY-1105)

Related Communication(s):

**Additional Contacts:** 

Concurring Manager: Todd Zucker; Operations & Communications Mgr,

**FCSD** 

### Communication:

A file showing the status of dealers participating in the Digital Imaging Pilot Tire Project program is posted to Get It / Warranty / Level 1 – DI & RTDA / 2008 / <u>Digital Imaging Tire Pilot Selected Dealerships</u>. The pilot will run May 15 – December 31, 2008.

The following Dealer communication will be published to FMCDealer.com on Monday, April 14, 2008.

# This Field Communication also contains the following Dealer Communication:

**Dealer Summary:** Effective May 15, 2008, tire repairs will be added to the covered components

which require prior approval before beginning the repair as a pilot project.

To: Selected DI Dealers
Addressees: Dealer Principal

Service Manager Service Department

### Communication:

April 14, 2008

To: Selected Digital Imaging Dealer Principals and Service Managers

Subject: Effective May 15, 2008, Tires will be included in the Digital Imaging (DI) Prior Approval

Pilot Program

### **BACKGROUND**

After a review of tire warranty claims and returned tires, it was determined that Tires will be added to the Digital Imaging Prior Approval program as a pilot project effective May 15, 2008 that will run through the PE08-060 0770

### TIRES NOW INCLUDED IN DIGITAL IMAGING AS A PILOT PROJECT

- *Effective May 15, 2008*: Your dealership is required to obtain approval for any tire replacements for vehicles within their base warranty period for repairs dated May 15, 2008 and later.
- **Notify the Service Department**: Inform your service and warranty personnel of this new DI requirement well in advance of the May 15th effective date.
  - Employee turnover, personnel problems, and poor administrative procedures from the Dealership are within the control of the Dealer.
  - Dealership controlled factors do not justify an exception.
- Awareness of Tire Issues: Dealership personnel should familiarize themselves with the Tire Condition Guide and Tire Job Aid that is available on FMCDealer.com / "Parts & Service" tab / "Warranty" tab / Job Aids. Hard copies of the Job Aids can be ordered through the Dealer eStore:
  - Tire Condition Guide (FTCG1)
  - Tire Warranty Job Aid (TIREWARRANTY-1105)
- Pilot Length: Your dealership must conform to Digital Imaging Requirements on Tires until:
  - Successful graduation from the Digital Imaging Program; or
  - o The pilot program ends on December 31, 2008

### **DIGITAL IMAGING PROCESS**

Photographing and submitting tire claims will follow the same process (detail below) as submitting current Digital Imaging concerns.

- Document the customers concern on a Repair Order
- Examine the tire for signs of damage.
- Clean the tire, if necessary, to see concern
- Take the odometer and ¾ view images of the vehicle.
- Each tire concern will require 2 images, a close up and an overall.
  - The overall image should provide a full view of the entire circumference of the tire.
  - The close up will be a detailed image of the concern.
- If you are submitting a claim for multiple tires each tire must:
  - Have a close-up and overall image for review.
  - Identified with a grease pencil or a sticky note to facilitate the review of your claim.
- For tires with vibration concerns, overall images of the wheels will be used to determine the tire's condition. *Teardown of the tire is not required for Digital Imaging review.*
- Digital Imaging will not be able to determine a warrantable condition in every circumstance, therefore, an approval code signifies:
  - Agreement to proceed to the technician area for further evaluation of warrantable conditions (vibration, bulges, etc.)
  - Service Management is responsible to make a determination if the tire is warrantable based on factors not visible to the camera
  - The presence of damage that has caused the need for the repair, whether visible in the image sent to Digital Imaging or not, will make the tire unwarrantable
- Digital Imaging denial means the tire is not warrantable.
  - o It does not mean the tire is suitable for safe service
  - The customer should be cautioned, especially in circumstances when the unwarrantable condition appears to have made the tire unsafe
  - Ultimately, the customer is responsible for the continued safe operation of their vehicle, and the condition of the tires is a very important factor.

### QUESTIONS

For questions, please contact Debbie Mayberry at (313) 248-5057 or via e-mail: <a href="mayberr@ford.com">dmayberr@ford.com</a>.

From: Ott, David (D.J.)

Wednesday, September 24, 2008 8:34 AM Sent:

To: Tuneff, Mark (M.S.)

Subject: FW: ISM Courtesy Copy: 094-2008-1945: valve stems

**From:** Rohweder, David (D.S.)

Sent: Monday, September 22, 2008 10:42 AM

To: Ott, David (D.J.)

**Subject:** FW: ISM Courtesy Copy: 094-2008-1945: valve stems

### David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Camilleri, Robert (R.H.)

Sent: Tuesday, September 09, 2008 8:09 PM

**To:** Rohweder, David (D.S.)

**Subject:** FW: ISM Courtesy Copy: 094-2008-1945: valve stems

FYI, copy of FCSD direction to techs.

From: Janiunas, Vince (V.J.) Sent: Tue 9/9/2008 9:31 AM

To: Kaltz, Gordie (G.); Hayduk, Mark (M.S.); Echhot, T (T.); Humphries, Glenn (G.L.); Ricks, Kevin (K.J.); Montini, Matthew (M.J.);

Camilleri, Robert (R.H.)

Subject: ISM Courtesy Copy: 094-2008-1945: valve stems

ISM Courtesy Copy

\*\*\* NOTE: The system generated the email. Do not reply to this email \*\*\* To be removed from this distribution list, please email Robert Klump at rklump@ford.com \*\*\*

This message is being sent on behalf of VJANIUNA.

This is a courtesy copy of the following article to advise you this article is currently being processed for publication.

### **General Information**

Last action taken (as of 9/9/2008 1:31:16 PM

GMT):

Submit for approval

**Comment:** 

**Author: Tracking Number:**  **VJANIUNA** 094-2008-1945

PE08-060 0772

Title: valve stems

**Vehicle Applications:** 

| Vehicle Lines                   | Model<br>Year Start | Model<br>Year End | Assembly Plants | Body<br>Styles | Engine | Trans<br>Axles | Build<br>From | Build<br>To |
|---------------------------------|---------------------|-------------------|-----------------|----------------|--------|----------------|---------------|-------------|
| F-150                           | 2007                | 2007              |                 |                |        |                |               |             |
| Expedition                      | 2007                | 2007              |                 |                |        |                |               |             |
| Navigator                       | 2007                | 2007              |                 |                |        |                |               |             |
| E-Series (E-150 to 550)         | 2007                | 2007              |                 |                |        |                |               |             |
| F-Super Duty (F-<br>250 to 550) | 2007                | 2007              |                 |                |        |                |               |             |
| Explorer 4dr                    | 2007                | 2007              |                 |                |        |                |               |             |
| Explorer Sport<br>Trac          | 2007                | 2007              |                 |                |        |                |               |             |
| Escape                          | 2007                | 2007              |                 |                |        |                |               |             |
| Mariner                         | 2007                | 2007              |                 |                |        |                |               |             |
| Taurus                          | 2007                | 2007              |                 |                |        |                |               |             |
| Taurus X                        | 2007                | 2007              |                 |                |        |                |               |             |
| MKS                             | 2007                | 2007              |                 |                |        |                |               |             |
| Sable                           | 2007                | 2007              |                 |                |        |                |               |             |
| Mustang                         | 2007                | 2007              |                 |                |        |                |               |             |
| Ranger                          | 2007                | 2007              |                 |                |        |                |               |             |
| Focus                           | 2007                | 2007              |                 |                |        |                |               |             |
| Edge                            | 2007                | 2007              |                 |                |        |                |               |             |
| MKX                             | 2007                | 2007              |                 |                |        |                |               |             |
| Flex                            | 2007                | 2007              |                 |                |        |                |               |             |
| Crown Victoria                  | 2007                | 2007              |                 |                |        |                |               |             |
| Grand Marquis                   | 2007                | 2007              |                 |                |        |                |               |             |
| Town Car                        | 2007                | 2007              |                 |                |        |                |               |             |
| Fusion                          | 2007                | 2007              |                 |                |        |                |               |             |
| Milan                           | 2007                | 2007              |                 |                |        |                |               |             |
| MKZ                             | 2007                | 2007              |                 |                |        |                |               |             |

**Internal Text:** 

There is no change in our warranty policy or service procedures. If a crack in a valve stem is identified, the valve stem should be replaced and the valve stems on the other wheels also should be inspected for cracks.

**External Text:** 

ISMs to Supersede:

If SPECS Case, Select all Other Affected

**Publications:** 

**Changes Needed in Other Pubs:** 

**Message Category:** 

**CQIS Codes:** 

**Supervisor CDSID:** 

Body/Chassis/Electrical

mmontini

Consultant CDSID: ISM Number: Author Work Group:

**RCAMILLE** 

**PVT Member** 

(End automated email)

From: Kong, Qingguo (Q.)

Sent: Saturday, July 29, 2006 3:41 AM To: 'miller@baolong.biz'; 'jim'

Subject: 转发: Baolong QR

Importance: High

### Miller/Jim

Pls read below email and claim the defective parts from your representative in NA and analyze .

### **Best Regards**

Richard Kong (Kong Qingguo) Supplier Technical Assistance China Sourcing Office Tel +86 025-86557000-7161 Fax +86 025-86795810 E-mail QKONG1@FORD.COM

发件人: Haight, Denton (D.R.)

发送时间: 2006年7月28日 21:11 收件人: Tong, Steve (K.J.) 抄送: Kong, Qingguo (Q.) 主题: RE: Baolong QR

I spoke with the IQ manager, Donna Albright. She said the issue is there is not enough lubrication on the valve stem so they crack and break apart.

The supplier should have the parts by now as their plant representative (Tom) pick them up to send back.

The other line in the QR about old level does not apply to them and should be removed from the description.

Nice to hear from you,

Take care and let me know if the supplier needs more clarification.

Thank you,

Denton R. Haight STA Resident Manager Michigan Truck Plant dhaight@ford.com 734-467-0717

cell: 734-732-1335

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From: Tong, Steve (K.J.)

**Sent:** Thursday, July 20, 2006 7:53 AM

To: Haight, Denton (D.R.)
Cc: Kong, Qingguo (Q.)
Subject: Baolong QR

Hi, Denton,

Greeting from Nanjing.

I need your help for resolving the QR (F020861) for Baolong ( site code EMNNA). Site STA engineer is Richard ( Qingguo).

We try to understand plant feedback. We did not get clear feedback from supplier's NA contact yet. If you can help would be great.

Now Peter Gijsen is CSO STA Chassis manager. He is having vacation now starting from this week, I am taking care chassis for this period. Thanks.

Steve Tong CSO STA From: Eggleston, Chauncy (C.R.)

Sent: Wednesday, September 24, 2008 4:32 PM

To: Camilleri, Robert (R.H.)

Cc: Wroblewski, Mike (M.J.); Bogenhagen, Michael (M.A.); Capers, Douglas (D.)

Subject: RE: WERS Alert - Valve Stem Trial

### A12169905

CHAUNCY R. EGGLESTON

NAE Tire & Wheel Engineering - Mustang Program Phone: (313) 39-04456 Fax: (313) 32-20744

E-mail: cegglest@ford.com

"For God so loved the world, that He gave His only begotten Son" (To learn more)

From: Camilleri, Robert (R.H.)

Sent: Wednesday, September 24, 2008 4:25 PM

To: Eggleston, Chauncy (C.R.)
Cc: Wroblewski, Mike (M.J.)
Subject: WERS Alert - Valve Stem Trial

Chauncy, could please issue a WERS Alert to support the SREA wheel valve stem trial at AAI? Trial must be completed in time to kick off the supplier no later then September 30th for them to make their October 20th shipping date. We anticipate have valves manufactured with the revised process delivered to AAI the week of December 15th. Thanks

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

# PE08-060 FORD 2/11/2009 APPENDIX J PART 1 OF 2 ILLUSTRATIONS PAGE 233

From:

Sent:

Camilleri, Robert (R.H.) Wednesday, July 23, 2008 8:31 AM Mracna, Chris (C.J.) Flex Test Fixture Picture To: Subject:

Attachments: Fixture1.JPG

Chris, this is a very good picture of the flex testing assembly used by Baolong. My come in handy when trying to build a test fixture.



Fixture1.JPG (406 KB)

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com



Bill Thon Jr [billjr@thonassociates.com] From:

Sent: Friday, August 15, 2008 2:01 PM

To: Rohweder, David (D.S.)

Camilleri, Robert (R.H.); Bill Thon Cc:

Subject: Valve Pictures

P1030855\_2.jpg; P1030857\_2.jpg; P1030858\_2.jpg; P1030859\_2.jpg Attachments:









P1030855\_2.jp P1030857\_2.jp P1030858\_2.jp P1030859\_2.jp g (18 KB)

g (19 KB)

g (19 KB)

g (19 KB)

Dave,

I seem to be having trouble emailing the photos through my PC so I am trying on my laptop. Incase you did not receive the earlier email here again is a brief description of the photos. Since I could not get my hands on actual Tech Valves I simply put the Tech/Aftermarket caps on the Ford valves to show the biggest visual difference between the valves. I have asked my guys to also send photos of actual Tech valves.

Regards,

Bill

# Ford TR414



# Tech TR413



# Ford TR413



# Ford TR414



From: Bill Thon Jr [billjr@thonassociates.com]

**Sent:** Friday, August 15, 2008 1:41 PM

**To:** 'Bill Thon Jr'; Rohweder, David (D.S.)

Cc: Camilleri, Robert (R.H.)

Subject: RE: Valves

Attachments: Valve Pictures 006.jpg

### More pix...sorry the files are big

**From:** Bill Thon Jr [mailto:billjr@thonassociates.com]

**Sent:** Friday, August 15, 2008 1:30 PM

**To:** Rohweder, David (D.S.)

Cc: 'Camilleri, Robert (R.H.)'; 'Bill Thon Jr'

Subject: Valves

Dave,

Please review the pictures you requested. We could not get our hands on actual Tech valves. To demonstrate the biggest difference between the Tech valves and Ford valves I placed Tech/Aftermarket caps on Ford valves. I will have to get some additional photos from my Baolong guys.

Have a great weekend,

Bill

# Ford TR413



From: Raul [Raul@baolong.biz]

Sent: Wednesday, July 23, 2008 5:16 AM

To: Camilleri, Robert (R.H.); billjr@thonassociates.com; 'Chris Bruce'

Cc: Yao, Michael (G.C.); Mracna, Chris (C.J.)

Subject: RE: Valve Stem Flex Test Fixture

Attachments: FLEXING FIXTURE.zip

Hi Rob,

Attached please find the prints of the flexing tooling. Sorry for all the words in Chinese...

**Thanks** 

Raul SBIC

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Tuesday, July 22, 2008 9:13 PM

**To:** Raul; billjr@thonassociates.com; Chris Bruce **Cc:** Yao, Michael (G.C.); Mracna, Chris (C.J.) **Subject:** Valve Stem Flex Test Fixture

I asked the Ford Lab to acquire the capability of conducting the flex test. They will need to build or acquire a fixture to do this. Since I can see a need for future testing by both Ford and Baolong, ideally we should have the same test fixtures. Does Baolong have a tool print of their fixture, that we can use to build a copy of the Baolong fixture? Or, if the fixture was purchased, who did they buy it from? Thanks

Robert H. Camilleri North American Wheels, Tires, and Jacks Ford Motor Company 313-805-3389 rcamille@ford.com

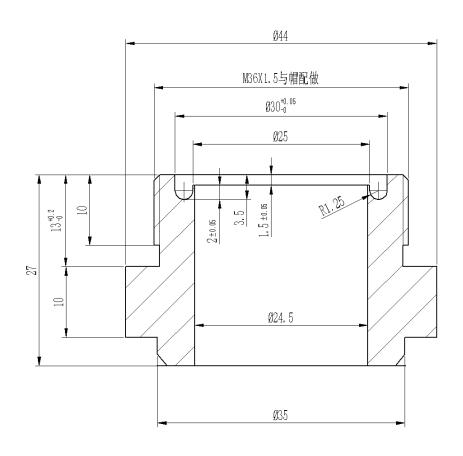
18~30 10~18 6~10 3~6 0~3 尺寸范围 ±0.165 ±0.135 ±0.11 ±0.09 ±0.07 未往公差 TP. BLPLSY2. 01 250 Ø5 6-M12X1.5 390 技术要求 1. 未标注的所有锐角到R2. 2. 未注尺寸公差IT13级,未注形位公差按B级。 拓扑思汽车配件 材料

|    |      |        |             |                                       |       |      |     |     |     |    | 45 |     | <u> </u> | 有限公司          |  |
|----|------|--------|-------------|---------------------------------------|-------|------|-----|-----|-----|----|----|-----|----------|---------------|--|
| 标记 | 处数   | 主      | 要更改内容       |                                       | 更改文件号 | 版本更改 | 笠 名 | H   | 期   | -  |    |     | 图名       | <br>底板        |  |
| 设计 |      | 陈志东    | 2006. 5. 11 | 标准化                                   |       |      |     | 版本  | 물 기 | 件数 | 重量 | 比例  | 图 是      |               |  |
| 校为 | '    |        |             |                                       |       |      |     | A   |     | 1  |    | 1.4 |          | . BLPLSY2. 01 |  |
| ΙŻ | ا د  |        |             | , , , , , , , , , , , , , , , , , , , |       |      |     | A   |     | 1  |    | 1:4 |          |               |  |
| 审核 |      |        |             | 批准                                    |       |      |     | 保隆货 | 号   |    |    |     | 保隆件号     | i.<br>Ī       |  |
| 标证 | (; 美 | 健特性:⊙, | 重要特性:€      | )                                     |       |      |     |     |     |    |    |     |          |               |  |

TP. BLPLSY2. 07

| 18~30  | 10~18  | 6~10  | 3~6   | 0~3   | 尺寸范围 |
|--------|--------|-------|-------|-------|------|
| ±0.165 | +0.135 | +0.11 | ±0.09 | ±0.07 | 未注公差 |

全部 🖖



# 技术要求

- 1. 未标注的所有锐角到R2.
- 2. 未注尺寸公差IT13级,未注形位公差按B级。

|        |         |             |     |       |      |    |     |     | 材料    |    |     | T / 拓扑思汽车    | 配件 |
|--------|---------|-------------|-----|-------|------|----|-----|-----|-------|----|-----|--------------|----|
|        |         |             |     |       |      |    |     |     | 77 11 | 45 |     | 有限公司         |    |
| 标记处数   | 主要      | 更改内容        |     | 更改文件号 | 版本更改 | 签名 | H   | 期   |       | 10 |     | 图名嘴座         |    |
| 设计     | 陈志东     | 2006. 5. 16 | 标准化 |       |      | 1  | 版 2 | 1 号 | 件数    | 重量 | 比例  |              |    |
| 校对工艺   |         |             |     |       |      |    | A   |     | 6     |    | 2:1 | TP.BLPLSY2.0 | )7 |
| 审核     |         |             | 批准  |       |      |    | 保隆貨 | 步号  |       | l  |     | 保隆件号         |    |
| 标识: 关节 | 建特性:◉,重 | 重要特性:◎      | )   |       | '    |    |     |     |       |    |     |              |    |

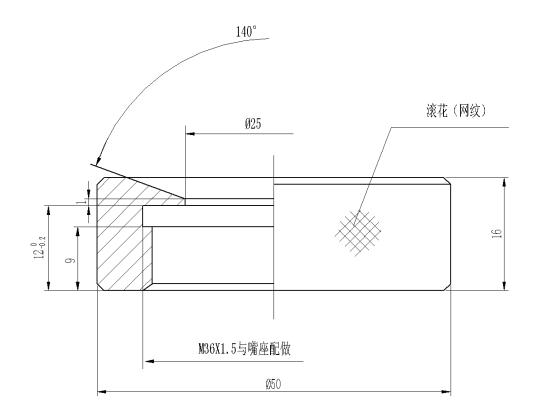
PE08-060 0790

 
 18~30
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 尺寸花間

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 TP. BLPLSY2. 08 全部 3.2 M8 9 2 12 80. Ø12 10X10方 技术要求 1. 未标注的所有锐角到R2. 2. 未注尺寸公差IT13级,未注形位公差按B级。 拓扑思汽车配件 材料 有限公司 45 图名 更改文件号 版本更改 靠杆 标记处数 主要更改内容 签名 日期 标准化 设计 件数重量比例 陈志东 2006.5.16 版本号 图号TP.BLPLSY2.08 校对 12 工 艺 批准 保隆货号 保隆件号 识: 关键特性:⊙,重要特性:◎ PE08-060 0791 
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 尺寸范围

 90 \*\*CASTIdTH\*\* dL

全部 🖑



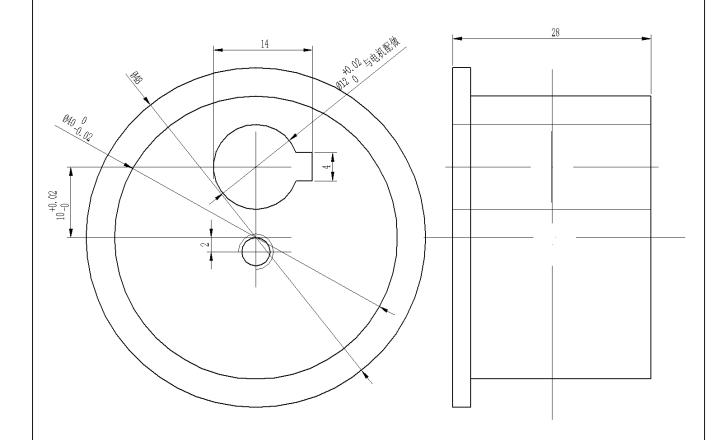
# 技术要求

- 1. 未标注的所有锐角到R2.
- 2. 未注尺寸公差IT13级,未注形位公差按B级。

|      |     |           |             |     |       |      |    |     |     | 材料 | 4.5 |     | 拓扑思汽车配件<br>/ 有限公司 |
|------|-----|-----------|-------------|-----|-------|------|----|-----|-----|----|-----|-----|-------------------|
| 标记   | 处数  | 主要        | 要更改内容       |     | 更改文件号 | 版本更改 | 签名 | H   |     | -  | 45  |     | 图名 帽              |
| 设计   |     | 陈志东       | 2006. 5. 16 | 标准化 |       |      |    | 版2  | 上 号 | 件数 | 重量  | 比例  | 图号 REPLACED OF    |
| 校对工艺 |     |           |             |     |       |      |    | A   |     | 6  |     | 2:1 | TP. BLPLSY2. 05   |
| 审核   |     |           | r:          | 批准  |       |      |    | 保隆的 | 步号  |    |     |     | 保隆件号              |
| 标识   | : 关 | 建特性:◉ , ] | 重要特性:◎      | )   |       |      |    |     |     |    |     |     | 5500.00           |

| 18~30 | 10~18 | 6~10 | 3~6 | 0~3 | 尺寸範围 | ±0.165 | ±0.135 | ±0.11 | ±0.09 | ±0.07 | 未注公差

全部 🖑



# 技术要求

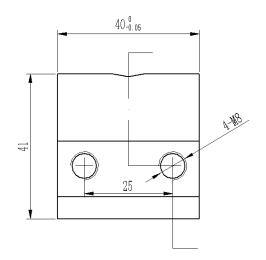
- 1. 未标注的所有锐角到R2.
- 2. 未注尺寸公差IT13级,未注形位公差按B级。

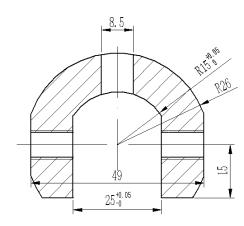
|      |       |         |             |     |       |      |    |     |     | 材料 |    |     | <b>「」</b> 拓扑思汽车配件 |
|------|-------|---------|-------------|-----|-------|------|----|-----|-----|----|----|-----|-------------------|
|      |       |         |             |     |       |      |    |     |     |    | 45 |     | △── 有限公司          |
| 标记   | 处数    | 主要      | 要更改内容       |     | 更改文件号 | 版本更改 | 签名 | 日   | 期   |    |    |     | 图名偏心轴             |
| 设计   |       | 陈志东     | 2006. 6. 16 | 标准化 |       |      |    | 版本  | 도 号 | 件数 | 重量 | 比例  | 图号 RD RI RI RI 10 |
| 校对工艺 |       |         |             |     |       |      |    | A   |     | 1  |    | 2:1 | TP. BLPLSY2. 10   |
| 审核   |       |         |             | 批 准 |       |      |    | 保隆货 | 号   |    |    |     | 保隆件号              |
| 标 识  | : 关 🕏 | 建特性:◉,፤ | 重要特性:◎      | )   |       | •    |    |     |     |    |    |     |                   |

TP. BLPLSY2. 0₫

| 18~30  | 10~18  | 6~10  | 3~6   | 0~3   | 尺寸范围 |
|--------|--------|-------|-------|-------|------|
| ±0.165 | ±0.135 | ±0.11 | ±0.09 | ±0.07 | 未注公差 |

全部 🖑





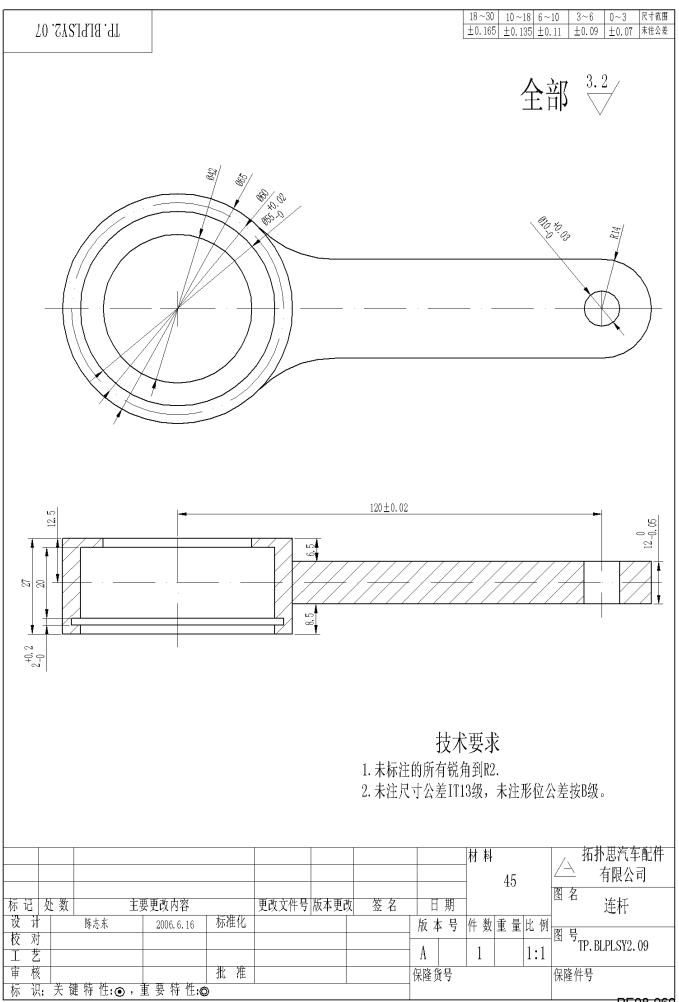
# 技术要求

- 1. 未标注的所有锐角到R2.
- 2. 未注尺寸公差IT13级,未注形位公差按B级。

|       |       |             |         |       |      |    |              |   | 材料 |    |       | <b>五木思汽车配件</b>      |
|-------|-------|-------------|---------|-------|------|----|--------------|---|----|----|-------|---------------------|
|       |       |             |         |       |      |    |              |   |    | 45 |       | △→ 有限公司             |
| 标记 刻  | 数  主要 | 要更改内容       |         | 更改文件号 | 版本更改 | 签名 | 日            | 期 |    | 10 |       | 图 名 U型套             |
| 设计    | 陈志东   | 2006. 5. 16 | 标准化     |       |      |    | 版本           | 号 | 件数 | 重量 | 比例    |                     |
| 校对工艺  |       |             |         |       |      |    | Λ            |   | 3  |    | 1 • 1 | 图号<br>TP.BLPLSY2.04 |
| 1 1 4 |       |             | ALL, VA |       |      |    | In the sky t | 1 | J  |    | 1.1   | Imple M. III        |
| 审核 识: |       | 重要特性:€      | 批准      |       |      |    | 保隆货品         | Ī |    |    |       | 保隆件号                |
| 标 识:  |       | E & TO LENG | 7       |       |      |    |              |   |    |    |       |                     |

 
 18~30
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 尺寸范围

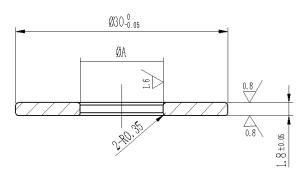
 ±0.165
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 未往公差
 TP. BLPLSY2, 02 全部 3.2 18X45° 65 Ø45.03 22 12 2-08.5 40,8-0.05 80 95 技术要求 1. 未标注的所有锐角到R2. 2. 未注尺寸公差IT13级,未注形位公差按B级。 拓扑思汽车配件 材料 有限公司 45 图名 轴承座 标记处数 更改文件号 版本更改 主要更改内容 签名 日期 设计 标准化 件数重量比例 陈志东 版本号 2006.5.16 图号TP.BLPLSY2.02 校对 1:1 A 工 艺 批准 保隆货号 保隆件号 识: 关键特性:⊙,重要特性:◎ PE08-060 0795



| $\Delta \Delta$ | • 77 T | $\alpha \pi$ | 7/1/ | т•т | r |
|-----------------|--------|--------------|------|-----|---|
| un              | / A    | V 1.         | ату  | Ι'Л |   |
|                 |        |              |      |     |   |

| 18~30  | 10~18  | 6~10  | 3~6   | 0~3   | 尺寸范围 |
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| ±0.165 | ±0.135 | ±0.11 | ±0.09 | ±0.07 | 未注公差 |

# 全部 🖑



| 序号 | ØA                                  | 件数  |
|----|-------------------------------------|-----|
| 1  | 9. 1-0.05                           |     |
| 2  | 11.7-0.05                           | 各6件 |
| 3  | 16. 1 <sup>0</sup> <sub>-0.05</sub> |     |

# 技术要求

- 1. 未标注的所有锐角到R2. 2. 未注尺寸公差IT13级,未注形位公差按B级。

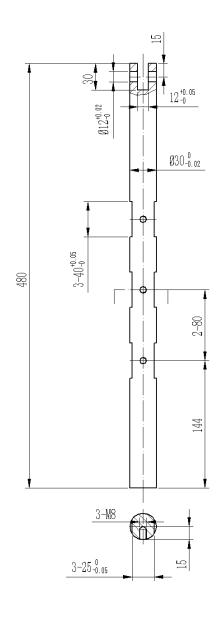
|       |         |             |          |       |      |    |      | 材料       |      | T / 拓扑思汽车配件 T                           |
|-------|---------|-------------|----------|-------|------|----|------|----------|------|---|
|       |         |             |          |       |      |    |      |          | 45   | △ 有限公司                                  |
| 标记处   | 数 主要    | 要更改内容       |          | 更改文件号 | 版本更改 | 签名 | 日月   | <b>月</b> | 10   | 图名系列卡板                                  |
| 设计    | 陈志东     | 2006. 5. 16 | 标准化      |       |      | 1  | 版本   | 号 件数     | 重量比例 | - · · · · · · · · · · · · · · · · · · · |
| 校对工艺  |         |             |          |       |      |    | A    | 各6件      | 2:1  | TP. BLPLSY2. 06                         |
| 审核    |         |             | 批 准      |       |      |    | 保隆货气 | <u>1</u> | l    | 保隆件号                                    |
| 标识: 关 | 键 特性:●, | 重要特性:◎      | <b>)</b> |       | '    |    |      |          |      |   |

TP. BLPLSY2, 03

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 尺寸范围

 ±0.165
 ±0.135
 ±0.11
 ±0.09
 ±0.07
 未社公差





# 技术要求

- 1. 未标注的所有锐角到R2.
- 2. 未注尺寸公差IT13级,未注形位公差按B级。

|        | ı       |             |     | T     |      |    |   |       |    |     | i <del>ar l</del> . | l 1111 <del>V= d= a</del> c 1 <i>h</i> l. |
|--------|---------|-------------|-----|-------|------|----|---|-------|----|-----|---------------------|---|
|        |         |             |     |       |      |    |   | 材 料   | ŀ  |     |                     | 下思汽车配件                                    |
|        |         |             |     |       |      |    |   |       | 45 |     |                     | 有限公司                                      |
|        |         |             |     |       | V-1- |    |   |       | TU |     | 图名                  | 1.1                                       |
| 标记 处数  | 主要      | 更改内容        |     | 更改文件号 | 版本更改 | 签名 | 日其                                      | Ħ     |    |     |                     | 轴   |
| 设计     | 陈志东     | 2006. 5. 11 | 标准化 |       |      |    | 版本                                      | 号 件 数 | 重量 | 比例  | H H                 |   |
| 校对     |         |             |     |       |      |    | <b>-</b>                                |       |    | ļ., | 图号 <sub>TPR</sub>   | LPLSY2.03                                 |
| 工艺     |         |             |     |       |      |    | A                                       | 1     |    | 1:4 | 11.1                | LI LU12. VO                               |
| 审核     |         |             | 批准  |       |      |    | 保隆货号                                    |       | -  | 1   | 保隆件号                |   |
| 标识: 关键 | 建特性:⊙,重 | 重要特性:€      | )   | I     |      |    | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |       |    |     |                     |   |

From: Camilleri, Robert (R.H.)

Sent: Friday, September 12, 2008 1:00 PM

To: Ott, David (D.J.)
Subject: RE: Decoder

Attachments: FORDvsTECH PARTS.pdf

Sorry, thanks for reminding me. I believe this one pager was sent out to Consumer Reports. Call me if you have questions. Thanks



FORDvsTECH ARTS.pdf (187 K

From: Ott, David (D.J.)

Sent: Friday, September 12, 2008 12:53 PM

**To:** Camilleri, Robert (R.H.)

Subject: Decoder

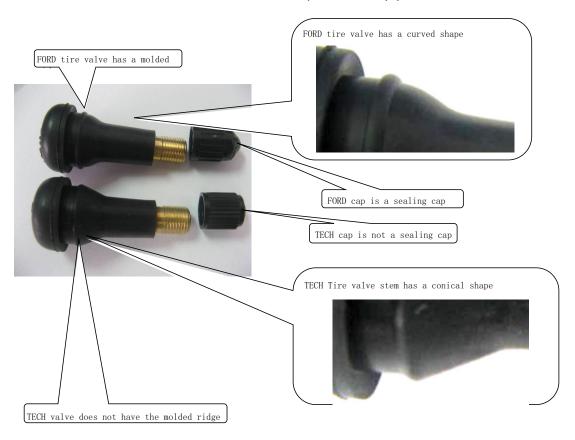
Howdy Bob, might you be able to send to me the valve stem supplier/distrtibuter "decoder" cheat sheet that we spoke about earlier this week? You're right, it gets confusing real quick.

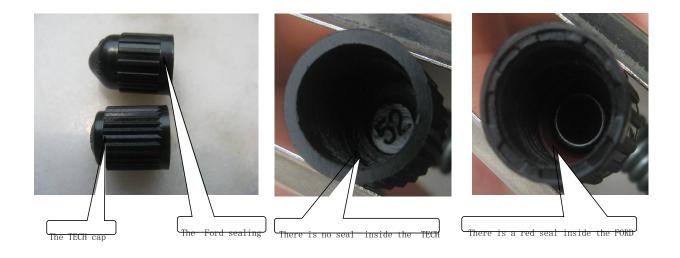
Thanks,

David J. Ott Government Investigations Manager - Automotive Safety Office Ford Motor Company Fairlane Plaza South, Suite 500 330 Town Center Drive Dearborn, MI 48126

Phone: 313-33-76645 Fax: 313-59-42268 The graphic identifies the visible differences between a TECH TR414 and a FORD TR414 tire valve stem

The material used are different between the TECH TR414 and the Ford TR414 tire valve stem. The TECH TR414 tire valve stem was made in a different facility on different equipment than the FORD TR414 tire valve stem.





From: Rohweder, David (D.S.)

**Sent:** Monday, August 18, 2008 9:01 AM

To: Camilleri, Robert (R.H.)
Subject: FW: Valve Pictures

Attachments: FORD & TECH PARTS.XLS



FORD & TECH ₹TS.XLS (180 KE

David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

-----Original Message-----

From: Bill Thon Jr [mailto:billjr@thonassociates.com]

Sent: Monday, August 18, 2008 8:18 AM

To: Rohweder, David (D.S.) Subject: RE: Valve Pictures

Try these.....

-----Original Message-----

From: Rohweder, David (D.S.) [mailto:drohwede@ford.com]

Sent: Friday, August 15, 2008 3:32 PM

To: Bill Thon Jr

Subject: RE: Valve Pictures

Can you get it in focus, or can I get a tech part Monday

David Rohweder

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

-----Original Message-----

From: Bill Thon Jr [mailto:billjr@thonassociates.com]

Sent: Friday, August 15, 2008 3:27 PM

To: Rohweder, David (D.S.) Subject: RE: Valve Pictures

Here is a pic of the caps....Ford cap on the right.

Trying to get a better photo for you.

----Original Message-----

From: Rohweder, David (D.S.) [mailto:drohwede@ford.com]

Sent: Friday, August 15, 2008 3:03 PM

To: Bill Thon Jr

Subject: RE: Valve Pictures

Bill can you try to show the valve cap better?

David Rohweder Mgr. Tires & Wheels Engineering drohwede@ford.com phone; 313-337-3122 Cell/Text 313-805-5622

----Original Message-----

From: Bill Thon Jr [mailto:billjr@thonassociates.com]

Sent: Friday, August 15, 2008 2:01 PM

To: Rohweder, David (D.S.)

Cc: Camilleri, Robert (R.H.); Bill Thon

Subject: Valve Pictures

Dave,

I seem to be having trouble emailing the photos through my PC so I am trying on my laptop. Incase you did not receive the earlier email here again is a brief description of the photos. Since I could not get my hands on actual Tech Valves I simply put the Tech/Aftermarket caps on the Ford valves to show the biggest visual difference between the valves. I have asked my guys to also send photos of actual Tech valves.

Regards,

Bill

TECH & FORD products comparison

The difference of TR413 between FORD & TECH



From: Rohweder, David (D.S.)

Tuesday, September 02, 2008 4:38 PM Sent:

To: Camilleri, Robert (R.H.)

FW: Final art? Subject:

Attachments: FORDvsTECH PARTS.pdf

# **David Rohweder**

Mgr. Tires & Wheels Engineering

drohwede@ford.com phone; 313-337-3122 Cell/Text 313-805-5622

Sherwood, Wesley (W.) From:

Wednesday, August 27, 2008 11:13 AM Rohweder, David (D.S.) Sent:

To:

Subject: RE: Final art?



**FORDvsTECH** \RTS.pdf (190 K

From: Rohweder, David (D.S.)

Sent: Wednesday, August 27, 2008 11:10 AM

Sherwood, Wesley (W.) To:

Subject: Final art?

Did the final art get sent to CU? If so please send me a copy...

# David Rohweder

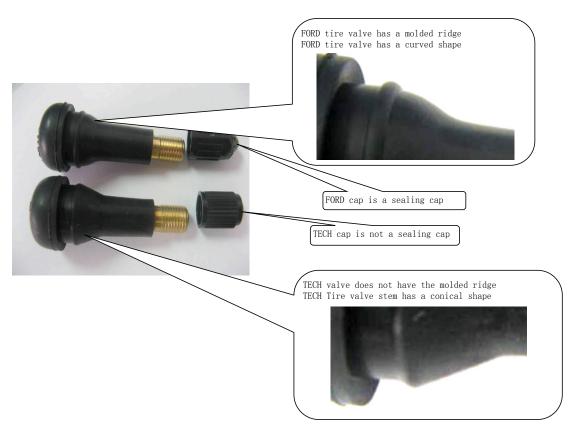
Mgr. Tires & Wheels Engineering

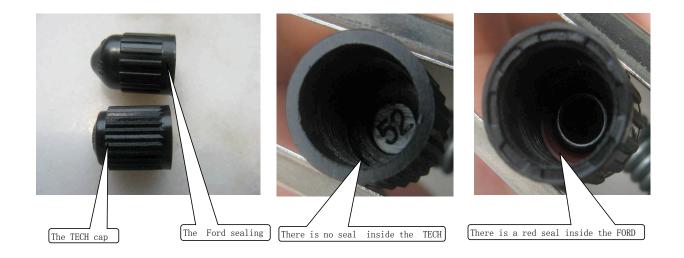
drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

The graphic identifies the visible differences between a TECH TR414 and a FORD TR414 tire valve stem

The materials used are different between the TECH TR414 and the Ford TR414 tire valve stem. The TECH TR414 tire valve stem was made in a different facility on different equipment than the FORD TR414 tire valve stem.





Julie Troiani [Jtroiani@WFWhelan.com] From: Thursday, July 17, 2008 1:00 PM Sent:

To: Camilleri, Robert (R.H.)

Chris Bruce; billjr@thonassociates.com Cc:

Subject: FW: Emailing: DSC00240, DSC00241, DSC00246

Attachments: DSC00240.jpg; DSC00241.jpg; DSC00246.jpg







DSC00240.jpg DSC00241.jpg DSC00246.jpg (136 KB)

(119 KB)

(129 KB)

<<DSC00240.jpg>> He <<DSC00241.jpg>> re <<DSC00246.jpg>> are the photos of the

mfg date and the lot number.

Julie Troiani

W.F. Whelan Co Distribution Supervisior Phone: (734) 721-6410 x251

Cell: (734) 732-6361 Fax: (734) 721-2880

Email: jtroiani@wfwhelan.com Website: wfwhelan.com

-----Original Message-----From: Micheal Swan

Sent: Thursday, July 17, 2008 12:57 PM

To: Julie Troiani

Subject: Emailing: DSC00240, DSC00241, DSC00246

Your message is ready to be sent with the following file or link attachments:

DSC00240 DSC00241 DSC00246

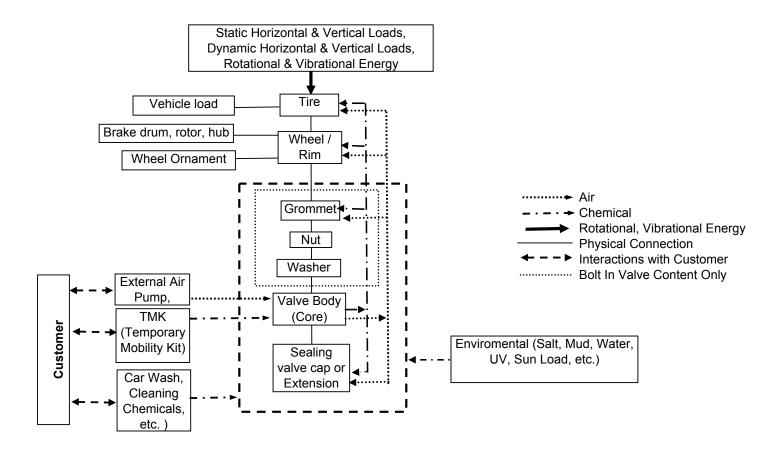
Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.





# THE PROPERTY AND 18 OF ENO 110101010254 TUUU SECTION OF THE PERSON OF THE P 7L34-1700-AA DESCRIPTION TUBELESS TIRE VALVE HELLER. STEEDER BASE SO TO COM FORD REVISION DATE SEG MADE NO CHAL BELLET FOWER IP IR 414 IF

# **Generic Wheel Valve Stem Functional Boundary Diagram**



PE08-060
FORD
2/11/2009
APPENDIX J PART 1
OF 2
OTHER
PAGE 268

From: Hohage, Caspar Dirk (C.D.)

Sent: Thursday, August 14, 2008 12:25 PM

To: Bilen, Tuygun (T.)
Cc: Rohweder, David (D.S.)

Subject: AW: Consumer Reports on Tire Valve Stems

Would you please schedule a 15min audio between David and me to discuss the tire valve situation? Thx.

#### Regards,

# Caspar Dirk Hohage

# chohage@ford.com

Tel: 8-70-34567 (int), +49-(0)221-90-34567 (ext)

Ford-Werke GmbH
Henry-Ford-Straße 1, 50735 Köln
Sitz der Gesellschaft: Köln
Registergericht Köln, HRB 54183
Vorsitzender des Aufsichtsrats: Albert Caspers
Geschäftsführung: Bernhard Mattes (Vorsitzender), Doris Adam, Werner Harbers, Dr. Hermann H. Hollmann, Dr. Franz-Josef Laermann, Rainer
Ludwig, Dr. Wolfgang Schneider, Jürgen Stackmann

Von: Rohweder, David (D.S.)

Gesendet: Donnerstag, 14. August 2008 18:24

An: Hohage, Caspar Dirk (C.D.)

**Betreff:** RE: Consumer Reports on Tire Valve Stems

# I need to update you on a call when we get a chance

#### David Rohweder

Mgr. Tires & Wheels Engineering drohwede@ford.com phone; 313-337-3122 Cell/Text 313-805-5622

From: Hohage, Caspar Dirk (C.D.)

**Sent:** Thursday, August 14, 2008 11:59 AM

**To:** Rohweder, David (D.S.)

**Subject:** AW: Consumer Reports on Tire Valve Stems

#### How did it go?

## Regards,

## Caspar Dirk Hohage

#### chohage@ford.com

Tel: 8-70-34567 (int), +49-(0)221-90-34567 (ext)

Ford-Werke GmbH Henry-Ford-Straße 1, 50735 Köln Sitz der Gesellschaft: Köln Registergericht Köln, HRB 54183 Vorsitzender des Aufsichtsrats: Albert Caspers

Geschäftsführung: Bernhard Mattes (Vorsitzender), Doris Adam, Werner Harbers, Dr. Hermann H. Hollmann, Dr. Franz-Josef Laermann, Rainer

Von: Rohweder, David (D.S.)

**Gesendet:** Mittwoch, 13. August 2008 11:42

An: Hohage, Caspar Dirk (C.D.)

**Betreff:** FW: Consumer Reports on Tire Valve Stems

#### FYI

#### **David Rohweder**

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Sherwood, Wesley (W.)

Sent: Tuesday, August 12, 2008 2:06 PM

**To:** Rohweder, David (D.S.)

Cc: Jammoul, Ali (A.); Collins, Bill (W.E.)

**Subject:** FW: Consumer Reports on Tire Valve Stems

#### Dave,

I just spoke to Paul and he agreed to have you talk with Consumer Reports this afternoon with the understanding that Bill Collins will moderate the call. He was very clear that only you were approved to talk on this subject. He also asked for an update so I would appreciate if the two of you can put together a few notes from the call.

I recommend Bill and you call the reporter at 4:15pm after we have a chance to discuss open questions and issues. Thank you.

From: Sherwood, Wesley (W.)

**Sent:** Tuesday, August 12, 2008 9:38 AM

To: Mascarenas, Paul (P.A.)
Cc: Collins, Bill (W.E.)

**Subject:** Consumer Reports on Tire Valve Stems

Hi Paul,

We are in the process of responding to questions from on tire valve stems from David Champion at Consumer Reports and would like to request your approval for Dave Rohweder to talk to the reporter to provide background information (not for attribution in a story.) The magazine is confused why alleged cracked stems on an employee's 2007 Focus are not involved in an importer's recall of six million aftermarket stems.

Bill Collins is managing the issue and will be on the phone with David and Dave.

Time is of the essence as we've been going back-and-forth with CR for more than a week now so we want to bring this issue to closure. Please let me know if you have questions. Thank you.

Regards,

Wes Sherwood

Safety Communications Mgr.

o: (313) 390-5660 c: (313) 467-5957 \*\* New \*\*

From: Camilleri, Robert (R.H.)

**Sent:** Tuesday, July 22, 2008 10:06 AM

To: Yao, Michael (G.C.)

Subject: RE: Baolong Wheel Valve Stem Testing

Michael, I did not ask for Baolong to modify the fixture to run 6 of the 28 and 6 of the 37% EPDM valve stems simultaneously. I asked that they to verify that the test fixture is in working condition and meets the requirements of the ISO test procedure. Because the 37% valve stems in test 7047 showed abrasions at 20717 cycles and no abrasions on the 28% valve stem. The 37% valves where in test holes 1-3, which where the same test holes for the 28% valve stems that should abrasions at 20717 cycles in test 7044. I found this to be suspicious for the 37% EPDM valve stems. Please call me, if you have questions. Thanks

From: Yao, Michael (G.C.)

**Sent:** Tuesday, July 22, 2008 7:47 AM

To: Camilleri, Robert (R.H.)

Subject: RE: Baolong Wheel Valve Stem Testing

#### Robert,

Just to clarify, BaoLong needs to modify the fixture to run another 6 pcs for 28% & 37%.

The reason is that variability is too big. Is that correct? Please see the form below.

| 28% | 31,429 | 59,399  | 59,399  | 26,795 | 40,124 | 73,356 |
|-----|--------|---------|---------|--------|--------|--------|
| 37% | 35,076 | 108,167 | 163,080 | 86,395 | 40,124 | 40,124 |

## **Best Regards**

#### Yao GuoCheng (Michael)

From: Camilleri, Robert (R.H.)
Sent: 2008年7月22日 0:19

To: Yao, Michael (G.C.); billir@thonassociates.com; 'Chris Bruce'; Raul

**Subject:** Baolong Wheel Valve Stem Testing

When: 2008年7月22日星期二 18:30-19:30 (GMT+08:00) Beijing, Chongging, Hong Kong, Urumgi.

Where: Teleconference

Please be prepared to discuss the Ozone test results for the 28 and 37% EPDM valve stems. Thanks

**Toll (International):** +1.313.621.3673

**Toll-free:** 1.888.621.3673 **Pass code:** 87595684

From: Julie Troiani [Jtroiani@WFWhelan.com]
Sent: Wednesday, July 16, 2008 3:26 PM
To: Camilleri, Robert (R.H.); Chris Bruce

Cc: billjr@thonassociates.com; Raul; zoe; miller@baolong.biz

Subject: RE: BAOLONG VALVE SHIPMENTS TO FORD

Rob,

That is the bar code that our warehouse puts on each box that enables Ford to scan that parts into their system.

# Julie Troiani

W.F. Whelan Co

Distribution Supervisior Phone: (734) 721-6410 x251

Cell: (734) 732-6361 Fax: (734) 721-2880

Email: jtroiani@wfwhelan.com

Website: wfwhelan.com

From: Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, July 16, 2008 3:22 PM

To: Chris Bruce

Cc: billjr@thonassociates.com; Julie Troiani; Raul; zoe; miller@baolong.biz

Subject: RE: BAOLONG VALVE SHIPMENTS TO FORD

The attached label is from a box of valve stems that I have at my desk.

**From:** Chris Bruce [mailto:cbruce@thonassociates.com]

Sent: Wednesday, July 16, 2008 3:16 PM

**To:** Camilleri, Robert (R.H.)

Cc: billjr@thonassociates.com; 'Julie Troiani'; 'Raul'; 'zoe'; miller@baolong.biz

Subject: RE: BAOLONG VALVE SHIPMENTS TO FORD

Rob,

On the small label, the Baolong label, found on every box, the lot number and manufacturing date can be found. Regarding what you are seeing, I am not sure, please send a picture and we will be able to determine what you are looking at.

Thanks.

Chris

**From:** Camilleri, Robert (R.H.) [mailto:rcamille@ford.com]

Sent: Wednesday, July 16, 2008 10:21 AM

To: Chris Bruce

Cc: billjr@thonassociates.com; Julie Troiani; Raul; zoe; miller@baolong.biz

Subject: RE: BAOLONG VALVE SHIPMENTS TO FORD

Chris, what is number was used to mark the boxes delivered to our facilities? The Load, ID or Lot number? The boxes that I have at my desk are marked with a Serial number. Thanks

**From:** Chris Bruce [mailto:cbruce@thonassociates.com]

Sent: Wednesday, July 16, 2008 10:03 AM

11/21/2008

**To:** Camilleri, Robert (R.H.)

Cc: billjr@thonassociates.com; 'Julie Troiani'; 'Raul'; 'zoe'; miller@baolong.biz

Subject: BAOLONG VALVE SHIPMENTS TO FORD

Rob,

Attached please find three spreadsheets that trace the TR414 valve production from Baolong to the Ford Assembly plants. We were able to trace this by using the lot number and manufacture dates of material produced at Baolong during the suspect time frame. From there we traced these lots to the proper sea container and to our distribution center in Romulus, Michigan. From there we were able to tell you exactly when and to which Ford plants these parts were shipped. Hope this helps.

Regards,

Chris Bruce Baolong

248-625-5426

From: Rohweder, David (D.S.)

Sent: Thursday, August 14, 2008 5:59 AM

To: Mascarenas, Paul (P.A.)

Cc: Jammoul, Ali (A.); Hohage, Caspar Dirk (C.D.)

Subject: FW: Consumer Reports on Tire Valve Stems

FYI, we are briefing Sue C. this afternoon on the status. Let me know if you want to discuss before the meeting Wes set up for next week.

#### **David Rohweder**

Mgr. Tires & Wheels Engineering

drohwede@ford.com

phone; 313-337-3122 Cell/Text 313-805-5622

From: Sherwood, Wesley (W.)

Sent: Wednesday, August 13, 2008 3:33 PM

**To:** Mascarenas, Paul (P.A.)

Cc: Rohweder, David (D.S.); Collins, Bill (W.E.)

Subject: RE: Consumer Reports on Tire Valve Stems

We would like to update you over the phone or in person. I'll set up time.

From: Mascarenas, Paul (P.A.)

Sent: Wednesday, August 13, 2008 3:23 PM

To: Sherwood, Wesley (W.)
Cc: Collins, Bill (W.E.)

Subject: RE: Consumer Reports on Tire Valve Stems

Wes:

As discussed - please let me have a summary of what is covered w/ CR.

Thx.

Paul Mascarenas

From: Sherwood, Wesley (W.)

Sent: Tuesday, August 12, 2008 9:38 AM

To: Mascarenas, Paul (P.A.)
Cc: Collins, Bill (W.E.)

**Subject:** Consumer Reports on Tire Valve Stems

Hi Paul,

We are in the process of responding to questions from on tire valve stems from David Champion at Consumer Reports and would like to request your approval for Dave Rohweder to talk to the reporter to provide background information (not for attribution in a story.) The magazine is confused why alleged cracked stems on an employee's 2007 Focus are not involved in an importer's recall of six million aftermarket stems.

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Regards,

Wes Sherwood Safety Communications Mgr. From: Sherwood, Wesley (W.)

Sent: Tuesday, August 12, 2008 2:06 PM

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Subject: FW: Consumer Reports on Tire Valve Stems

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Regards,

Wes Sherwood Safety Communications Mgr.

o: (313) 390-5660 c: (313) 467-5957 \*\* New \*\*

|                      | ITEM                    | TOPSEAL<br>CAPACITY<br>PER WEEK | STOCK IN<br>TOPSEAL CHINA<br>ON JAN 9, 2006 |                             | STOCK IN<br>WHELAN USA<br>ON JAN 9, 2006 | REMARK  | QUANTITY<br>ON THE WAY<br>FROM<br>TOPSEAL | Cover Ford demand to                                    | Dates       | Output<br>Baolong | Shipped<br>out<br>from<br>Baolong | Date Arrival<br>US | Receival<br>US<br>warehouse | Ford Usage | Inventory<br>level<br>US<br>warehouse |          |
|----------------------|-------------------------|---------------------------------|---|-----------------------------|--|---|---|---|-------------|-------------------|-----------------------------------|--------------------|-----------------------------|------------|---------------------------------------|----------|
| SBIC NO.<br>FORD NO. | TR416MA<br>F81D-1700-AB | 2,000PCS                        |   | THEY ARE ALL<br>UNASSEMBLED | 1,000PCS                                 | ALL ARE FROM DILL                               | 0PC                                       | Wk 13/03/06   | Wk 30/01/06 | 2000              |                                   |                    |                             | 100        | 700                                   | Wk 30/01 |
| SBIC NO.             | TR416MB<br>F81D-1700-BB | 3,000PCS                        |   | THEY ARE ALL<br>UNASSEMBLED | 7,000PCS                                 | 1,000PCS FROM DILL;<br>6,000PCS FROM<br>TOPSEAL | 0PC                                       | DILL part to Wk 16/01/06<br>Baolong part to Wk 27/02/06 | Wk 16/01/06 | 3000              | 6,000<br>(SEA)                    | Wk 20/02/06        | 6000                        | 1000       | 7000                                  | Wk 16/01 |
| SBIC NO.<br>FORD NO. | BLE19P<br>D7OA-1705-AA  | 10,000PCS                       | 0PC   |                             | 17,000PCS                                | ALL ARE FROM DILL                               | 0PC                                       | Wk 30/01/06   |             |                   |                                   |                    |                             | 5000       |                                       |          |

NOTE: THERE SHOULD BE SOME STOCK IN FORD PLANT FOR THE ABOVE 3 TYPES

From: Parrish, Will (W.F.)

**Sent:** Thursday, June 05, 2008 10:22 AM

To: Christensen, Kris (K.S.)
Cc: Patel, Bharat (B.J.)

Subject: Cross Vehicle Line Valve Stem Issue

#### Kris,

I understand that you may be scheduling a meeting to review a valve stem issues that may impact a number of vehicle lines. Bharat is out today, so if you would include me on any meeting notice so that I could attend, it would be appreciated. Thanks.

# Will Parrish

Critical Concerns Engineer - Unibody Cluster

Mobile: 313-805-4343 1ATO3, PDC, MD#327 E-Mail: wparris1@ford.com

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Fritschen, Steve (S.E.) From:

Thursday, July 24, 2008 2:25 PM Sent:

To: Camilleri, Robert (R.H.) Fritschen, Steve (S.E.) Cc: Valve Stem Sales Subject:

#### Mr. Camilleri,

Per your request, the following information provides the Service Part Number / Engineering Part Number crossreference (first set of data) and the sales per year (second set of data). Actually I thought our sales on this part would be higher, only 2900 in 2007 and 1647 in 2008, but I suspect our dealer friends probably purchase these along with wheel weights and other 'supplies' from a local vendor.

I hope this information helps!

==>

SERVICE PART: F42Z-1700-A **VALVE ASY** 

1700 AA ENGINEERING PART: 7L34 ORIGIN: **WERS** 

FINIS: 4868407 SUPPLIER LOC:

Vendor Part: Fam Buy:

Motorcraft Part: Prime Suplr: Q29AA

Comparable Part: FOVY- 1700-A Packager Cd: F747A

Replaced Part: 5L3Z- 1700-A Mat Content: Replacing Part: Ship Mlt:

NBA Phone: 313-390-1935 Buyer: 01S JESSE SINGH

Dmnd Anlyst: 1DA DONNA GRIFFIN NDA Phone: 313-531-5867 Q29AA NPA Phone: 313-390-5607 Prod Anlyst: 202 MIKE PAULSEN

Profs ID: WSTAPLE9 Price Anlyst: I88 WANDA STAPLES

SERVICE PART: F42Z- 1700-A VALVE ASY BACKCAST: Y DEMAND GROUP: \_\_\_

| A<br>C | YEAR | Quantity | / Repla | aced Part N | lumber | Message |
|--------|------|----------|---------|-------------|--------|---------|
|        | 2008 | 1647     |         |             |        |         |
|        | 2007 | 2941     |         |             |        |         |
|        | 2006 | 1103     | 5L3Z-   | 1700-A      | REPL   | ACED    |
|        | 2005 | 1113     |         |             |        |         |
|        | 2004 | 694      |         |             |        |         |
|        | 2003 | 479      |         |             |        |         |
|        | 2002 | 204      |         |             |        |         |
|        | 2001 | 220      |         |             |        |         |
|        | 2000 | 155      |         |             |        |         |

# Thanks!

# Steve Fritschen

Program Manager
Warranty Improvement Team
FCSD - Service Engineering Operations
Phone: 313-845-3805

E-mail: sfritsch@ford.com