Ford Crown Victoria

Cruise Control Installation & Troubleshooting

Archived from http://www.idmsvcs.com/2vmod/cruise/index.html

Background:

Cruise control comes as a standard feature on civilian 1998 ford crown victorias, it was optional on crown vics with the police and taxi package. As can be seen in the diagrams below, there are a few major components to the cruise control system. They include the wiring, cruise control switches, cruise control servo, brake position sensor, brake pressure switch, clockspring and vehicle speed sensor. On 1998 models:

- The clockspring (the sliding contacts that electrically connect the steering wheel to the steering column) is the same no matter whether the car has cruise from the factory or not
- All cars come equipped with a brake position sensor and a vehicle speed sensor, the PCM needs these inputs to determine transmission torque converter lockup and other runtime parameters
- The cruise control wiring is not used for anything other than cruise control but ford apparently put the wiring into all crown vics they made
- The brake pressure switch is a redundant safety device. On 1998's it's located inside the vehicles interior behind the brake pedal immediately above the brake position sensor. And it has two wires going to it, they are light green with red stripe and orange colored wires. All 98's were equipped with the brake pressure switch regardless of whether they had cruise or not.
- On 1997 and prior models the brake pressure switch was located on the aluminum housing of the brake master cylinder, immediately below the brake fluid level sensor (if so equipped). Some non-cruise equipped cars got the brake pressure switch, and yet others did not. If you want to add cruise and don't have the switch, there are a couple options: replace the master cylinder with one equipped with the switch, replace the brake pedal box with it's 1998 counterpart and modify the wiring harness for the new switch location, or for temporary testing purposes short the LG/R wire with the O wire.

Note: This article is relevant to 1992 through 2004 crown vics. In the 2005 model year, the crown vic recieved electronic throttle control (aka "drive by wire"). And 2005+ crown vics no longer have any of the following components:

- *mechnical cruise control servo*
- *mechanical cruise control actuator cable*
- *mechanical accelerator cable*

Installing cruise control on the 2005 and later crownvics involves fewer steps than on earlier vehicles: first install a new steering wheel with the cruise control switches on it. Then visit your local ford dealer and have them use their ids/vcm setup to update the vid block and calibration strategy in the pcm to their speed control enabled counterparts. See the Ford IDS scantool screenshot webpage for further details on installing cruise control in a 2005+ crownvic.

The cruise control servo and actuator cable are not installed on crownvics unless they came factory equipped with cruise. Below is a list of different service part numbers for the servo

Part Number	From	To	Suggested Retail
F8VZ-9C735-BA	1992	1994	$310.85
XW7Z-9C735-AA	1995	2002	$205.65
3W7Z-9C735-AA	2003	2004	$206.55

Note: 1995-1997 lincoln towncars have the same service part number as 1995-2002 crown vics do. But for the 1998 and later model years, towncars got their own unique servo that gets vehicle speed & brake pedal engagement signals via the scp databus.

All the electronic servos used in crown vics and marquis from mid-1992 to 2002 have the same electrical connector and pinout, the difference is in the calibration of the servo. Installing a servo with the wrong service part number may cause the transmission to downshift at odd times as the servo is not properly calibrated to the shift pattern of the transmission. 1992-1994 vics used the AOD-E transmission, 1995 and later vics use the 4R70W transmission.

There are a bunch of different service part numbers for the cruise control actuator cable that links the cruise servo to the throttle body but they all share the same basic # of 9A825. Each model year range in the list below has it's own unique service part number for the actuator cable:

Part Number (Gasoline Powered Vehicles)	From	To	Suggested Retail
F1VY-9A825-A	1992	1992	Obsolete
F3VY-9A825-A	1993	1993	Replaced by F4VY-9A825-A
F4VY-9A825-A	1994	1994	Obsolete
F5VY-9A825-A	1995	1995	Obsolete
F6VZ-9A825-AE	1996	1997	$52.35
F8VZ-9A825-AA	1998	1998	$32.45
XW7Z-9A825-AA	1999	2000	$28.68
1W1Z-9A825-AA	2001	2004	$25.43

As can bee seen above, there are multiple variants of the speed control actuator cable for a crown vic. Some year ranges will interchange. For instance, initially I was using the actuator cable out of a 1996 crown vic in my 1998 vic. But some year ranges will not work as evidenced by the email message that I received informing me that someone tried an actuator cable from a 1995 vic in their 1998 vic and it physically didn't fit. But this could probably be explained by the fact that in 96', the intake manifold was changed to plastic construction and the throttle body relocated. If you want to play it safe, order a new actuator cable from ford before beginning the project. For most model years, actuator cables are around $25, but for some years they are as high as $50.

If you notice any small cracks in the donor vehicle's actuator cable's jacket like I did, definetly replace it. Small cracks usually get larger given enough time. If the inner cable throttle actuator cable is exposed, it has the potential to bind against some other object in the engine bay and possible cause a vehicle collision. And if you live in a cold climate, it's possible for water to enter the cable assembly and freeze if the outer protective jacket is broken too.

Also note that the cruise control actuator cable moves in relation to the engine and body of the car. On high mileage vehicles, watch actuator cables for chaffing anywhere the cable contacts other part in the engine bay. This problem is very real, and the factory cable has thick piping insulation on it in places to help prevent the onset of this type of problem. The size and length of this insulation varies according to model year. 1996-1997 vehicles have slightly longer piping insulation on the actuator cable than later ones. And the 1998+ vehicles have a crash bracket near the throttle body that holds the accelerator and speed controls cable in place.

Next part on the list is the mounting bracket that attaches to the bottom of the cruise servo. Are two variations of this bracket:

Part Number	From	To	Suggested Retail
F2VY-9C736-A	1993	1995	$8.48
F6VY-9C736-A	1996	2004	$16.48

Also need three bolts to secure the bracket to the servo: hardware number N806515-S2 (1 bolt)

Next up on the list is the mounting bracket with three studs on it that goes on the underside of the fender liner and on the other side of the fender liner attaches to the servo mounting bracket.

Part Number	From	To	Suggested Retail
F1VY-9C809-A	1992	2002	$12.20

Note: Many revisions of ford service parts literature incorrectly list the above part as only fitting 1992-1999 crown vics. But it is the proper part for 2000-2004 crownvics as well. You may have to supply false information to your parts vendor to obtain this part. (i.e. inform the dealer that you own a 1998 crown vic, when you really have a 2004 crown vic)

Will also need three nuts to secure the under fender liner bracket to the one above it: hardware number N621905-S56 (1 nut) (??invalid number??)

And there are also three self tapping screws to hold the servo to the servo bracket. (New cruise control servo service part assemblies come without any threads machined in the mounting holes.)

The ford dealership suggested retail price on the cruise servo + actuator cable + fender mounting brackets is over $200, but one ought to be able to acquire a junkyard setup for $75 or less. But salvage yard prices on infrequently sold parts such as cruise control servos vary widely among yards so you may wish to shop around a little bit. Be careful if you choose the "pre-owned" route for your cruise servo and your parts come from a "full service" salvage yard. Most recent ford cruise control servos on vehicle look nearly identical at a quick glance and you could well end up with the servo out of the wrong vehicle. For example, putting a servo from a recent ford taurus in your crownvic will likely work as the taurus still uses a conventional vss (vehicle

speed signal) and the connector pinout and actuator cable attachment system are the same, but the internal electronic calibration of the servo is somewhat different.

If you find that the cruise servo electrical connector on the fender liner is damaged, a repair pigtail and connector are avaliable for under $40. The part number for it is: F58Z-14489-HA

Steering wheels without cruise switches have to be replaced to install the switches. Ford suggested retail for the vinyl steering wheels complete with cruise switches installed is around $150. Might get lucky with a junkyard wheel but salvage yard steering wheels are often:

- worn
- weathered
- wrong color
- have defective switches due to corrosion
- damaged due to airbag deployment (1996-1997 wheels only)
- additionally, many salvage yards will only sell entire steering column assemblies, and will not sell the steering wheel seperatetly

Some people have upgraded their steering wheels to leather wrapped ones while installing cruise, as the leather wrapped ones are not too much more expensive from ford than the vinyl ones for the 1998+ cars. Some have installed steering wheels out of entirely different vehicles such as the mustang and taurus into their vics. Big thing to watch for here is whether the airbag currently installed in your vic will physically fit in the new wheel. A new driver's side airbag for a vic is over $500 from ford, some vehicles are considerably more expensive. Another point to keep in mind is whether the spline count and diameter on the steering shaft of your vic is the same as the circular mounting hole on the donor steering wheel. And yet another issue is whether the clockspring connectors are the same, but as long as you opt for a steering wheel with the same features as your old wheel and keep your original airbag this probably will not be a concern. But if you do opt for features such as redundant radio and climate control system steering wheel controls, chances are you'll need to install a new clockspring too. Note that some towncars have lighted cruise control switches, but crown vics do not. A word about salvage yard clocksprings: do not reuse a clockspring out of a vehicle with a deployed airbag as the wires inside the clockspring are physically very thin and airbags consume massive amounts of power when they deploy which usually damages the clockspring.

Some have asked about steering wheel and airbag compatibility between the years. There are four different steering wheel designs used in the 92+ crown vics:

- 92' - 95' wheel with the rectangular "brick" airbag. On these vehicles, pushing the center of the steering wheel inwards does not engage the horn, instead one has to push one of the two seperate horn switches located towards the top of the steering wheel.
- 96'-97' wheel with an airbag that is the same shape as the airbags in 96'-99' tauruses and 94'-04' mustangs. The horn is engaged by pushing the airbag inwards. The actual horn switch is seperate from the airbag assembly.
- 98'-04' newer style steering wheel. The horn is engaged by pressing the airbag assembly inwards like the 96'-97' ones are. But the actual horn switch is integrated into the airbag. If the horn switch were to fail, to get a functional horn again one would have to purchase an entire $500+ airbag assembly from ford. Fortunetly, horn switch failure is an extremely rare event on these vehicles.
- 05'-06' newest style steering wheel. These vehicles recieved a completely redesigned steering column that does not share any parts with the previous model years. And these steering wheels will not fit/work in an earlier crown vic.

For obvious reasons, a 98'-04' style steering wheel will not work in a 96'-97' or 92'-95' crown vic unless you also change the airbag and clockspring. Also note that just because an airbag has the same physical shape & appearance as another does not mean that it is same airbag. For instance, 98'-00' vics have single stage airbags, but 01'-04' vics have dual stage airbags with two seperate charges inside.

Additionally, keep in mind that most ford trucks have a steering column with a different steering shaft diameter and spline design than their passenger car counterparts. This means that although an explorer or f150 steering wheel may look very similar to the one in your crown vic, it will not physically fit in your vehicle.

Below is a listing of steering wheels avaliable for selected 1998 and later crown victorias:

F8AZ-3600- BAK	1998	2002	With speed control, Deep Slate Blue, Vinyl for trim code (-R)	$162.48
F8AZ-3600-BAZ	1998	2002	With speed control, Light Graphite, Vinyl for trim codes (-2) (-X)	$162.48
F8AZ-3600-BBK	2000	2003	With speed control, Deep Charcoal, Vinyl for trim codes (-W)	$149.68
F8AZ-3600-BAA	1998	1998	With speed control, Prairie Tan, Vinyl for trim code (-Y)	$162.48
XW7Z-3600-ABE	1999	2003	With speed control, Medium Parchment, Vinyl for trim codes (-G) (-H) (-J)	$109.12

F8AZ-3600-BBG	2003	2003	With speed control, Light Flint, Vinyl	$162.48
F8AZ-3600-BBB	1998	2002	With speed control, Deep Slate Blue, Leather wrap for trim code (-R)	$196.00
F8AZ-3600-BBC	1998	2002	With speed control, Light Graphite, Leather wrap for trim code (-2) (-X)	$178.50
F8AZ-3600-BBE	2000	2003	With speed control, Deep Charcoal, Leather wrap for trim code (-W)	$178.50
F8AZ-3600-BBA	1998	1998	With speed control, Prairie Tan, Leather wrap for trim code (-Y)	$178.50
XW7Z-3600-BBE	1999	2003	With speed control, Medium Parchment, Leather wrap for trim codes (-G) (-H) (-J)	$141.37
F8AZ-3600-BBH	2003	2003	With speed control, Light Flint, Leather wrap	$191.22
F8AZ-3600-BBL	2003	2003	With speed control, Midnight Black, Leather wrap for trim code (-W)	$149.68
F8AZ-3600-AAK	1998	2002	Without speed control, Deep Slate Blue, Vinyl for trim code (-R)	$162.48
F8AZ-3600-AAZ	1998	2002	Without speed control, Light Graphite, Vinyl for trim code (-2) (-X)	$162.48
F8AZ-3600-ABA	2000	2003	Without speed control, Deep Charcoal, Vinyl for trim code (-W)	$162.48
F8AZ-3600-AAA	1998	1998	Without speed control, Prairie Tan, Vinyl for trim code (-Y)	$151.15
XW7Z-3600-ABA	1999	2003	Without speed control, Medium Parchment, Vinyl for trim codes (-G) (-H) (-J)	$111.87
1W3Z-3600-BAB	2001	2002	With speed control & radio/heater controls, Medium Dark Graphite, Leather wrap	
1W3Z-3600-BAE	2003	2003	With speed control & radio/heater controls, Flint, Leather wrap	$259.38
1W3Z-3600-BAF	2001	2003	With speed control & radio/heater controls,Parchment, Leather wrap for trim codes (-G) (-H) (-J)	$259.38
1W3Z-3600-BAH	2001	2003	With speed control & radio/heater controls, Deep Charcoal, Leather wrap (-W)	$259.38

Notes:

- There are subtle changes in crown vic interior color options among different model years. For instance, in 1999 the prairie tan interior color was deleted and replaced with medium parchment. And in 2003, light graphite was deleted and replaced with light flint. Overall airbag & steering wheel dimensions are the same between all 1998-2003 crown vics.
- The group of steering wheels labelled as "without speed control", do not have the cruise control switches on them. But these wheels may be potentially be useful to a department that does not want their officers using speed control under any circumstances.
- The above list of steering wheels was compiled a few years ago. Inquire at your local ford dealer for current pricing information if desired. Also, some of the steering wheels listed above have been discontinued and are now "obsolete". A relatively fast selling steering wheel like the 98-02 police blue unit was still avaliable as a service part as of june 2009. But the relatively slow selling grey civilian leather wrap steering wheel was "obsolete" and no longer avaliable as of june 2009.

Installation:

Cruise servo install:

- Bolt holes for cruise control servo were pre-drilled in driver's side fender liner
- Push the metal mounting bracket up from underneath the driver's side fender liner
- Place the servo on top of the studs on the top of the fender liner
- Place nuts onto studs, tighten to secure the servo in place

Cruise control actuator cable install:

- Line ball on cable up with cruise servo grooves
- Twist servo cable plug to secure in place
- Remove plastic engine cover
- Route cruise cable from servo to throttle body area
- Secure cruise linkage cable to throttle linkage by clipping in pace
- Bolt cruise linkage jacket to bracket

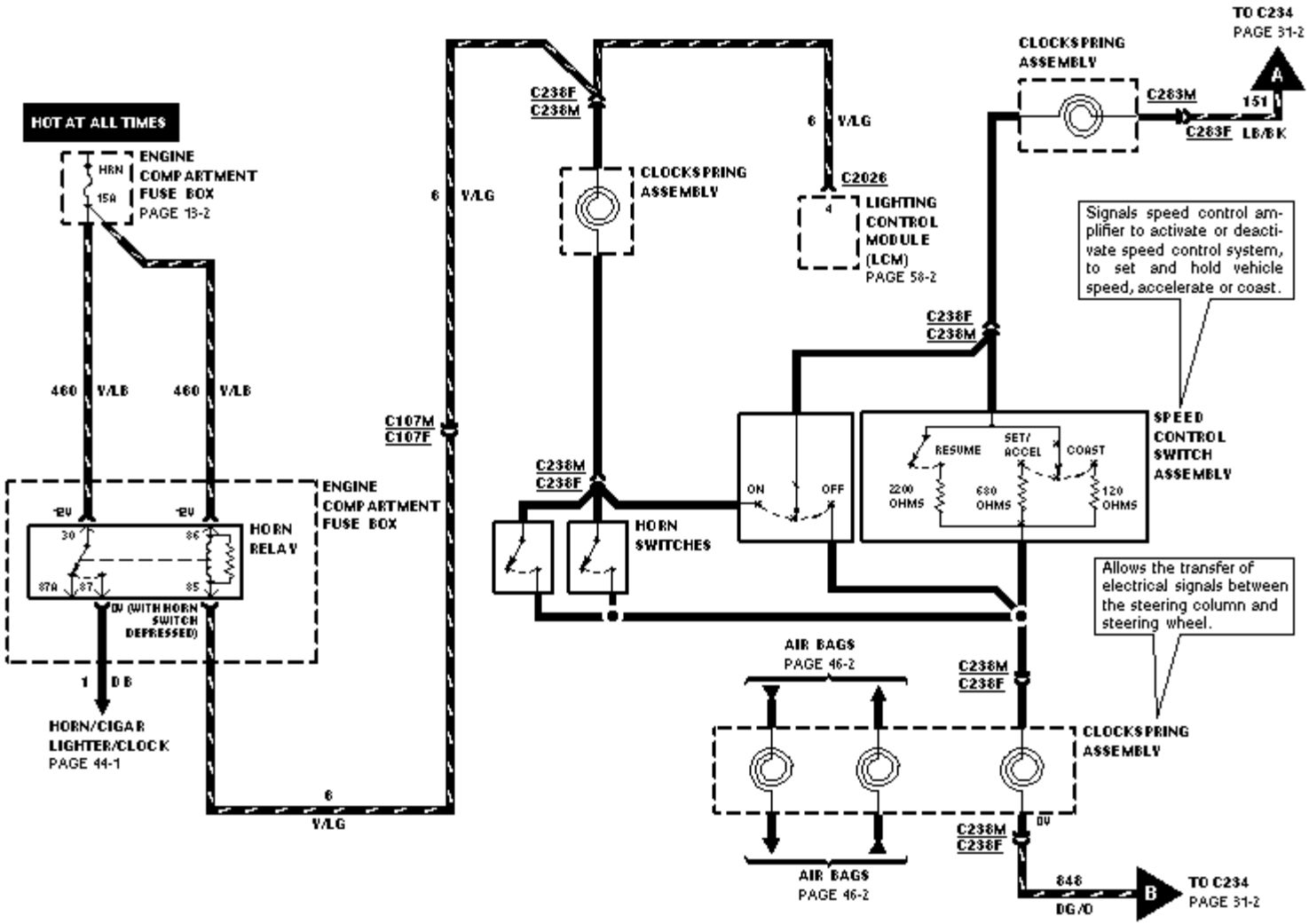
Steering wheel installation

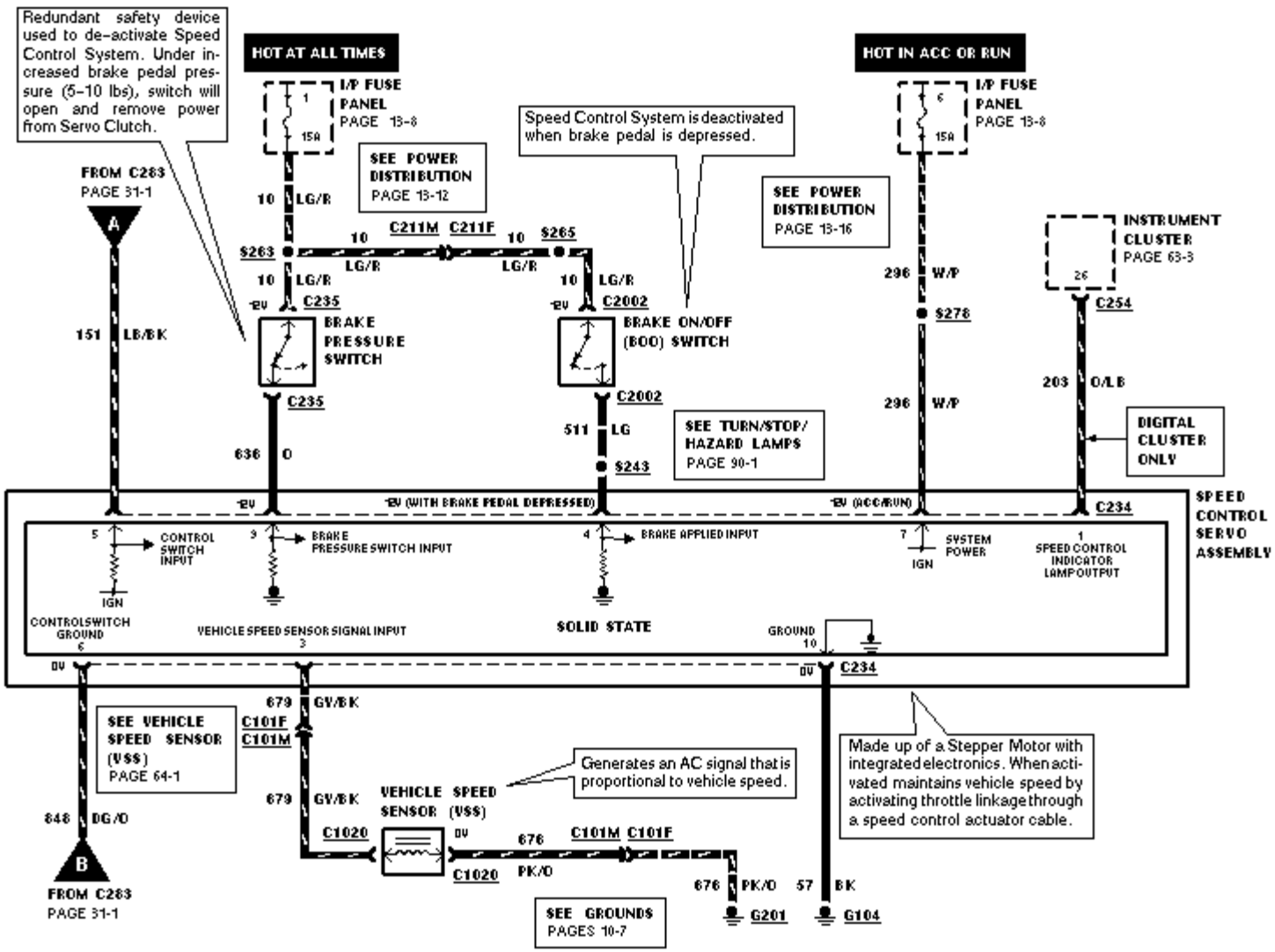
- Disconnect positive and negative terminals from battery
- Wait ten minutes for airbag backup power supply to discharge
- Remove 2 airbag bolt plastic covers from steering wheel
- Remove 2 bolts that secure airbag to steering wheel
- Slide airbag out of steering wheel
- Disconnect airbag electrical connectors
- Remove torx50 bolt from center of steering wheel
- On 1997's and prior, use a standard steering wheel/harmonic balancer puller to pull the wheel
- On 1998 and up models, loosely screw in torx50 bolt and use two jaw puller to remove wheel
- Place new wheel onto steering column, tighten center bolt, plug together electrical connectors and reassemble

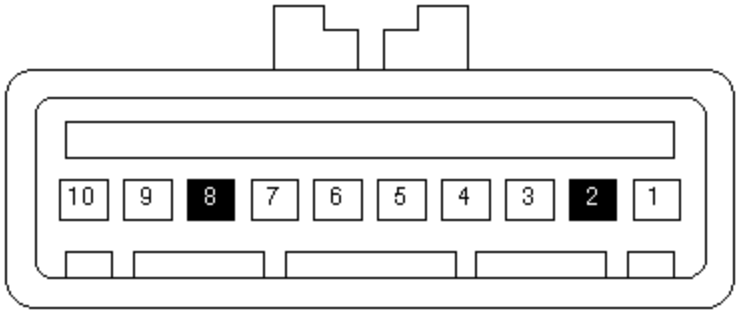
Cruise should now engage when car reaches 30MPH, cruise ON switch is pressed, and speed is set using set accel switch.

The car may need a front end alignment after new steering wheel install to get steering wheel centered when the front tires are pointed straight ahead. Cost varies for this procedure, some independent shops charge as little as $40 for a front end alignment, while others have been known to charge in excess of $80. While in the alignment shop, you may wish to have the tires balanced if you feel vibration at highway speeds. Also, don't be suprised if you get a call from the shop telling you that you've got worn front end components that should be replaced. Front suspension and steering components seem to have a rather short lifespan during police use.

Ford does not offer a "9A818 speed control retrofit kit" for 98' crown victorias, you have to order each part individually.


HOT AT ALL TIMES
ENGINE COMPARTMENT FUSE BOX
PAGE 13-2
HRN
15A
460 V/LB
460 V/LB
12V
12V
30
86
87A
87
85
HORN RELAY
ENGINE COMPARTMENT FUSE BOX
0V (WITH HORN SWITCH DEPRESSED)
1 DB
HORN/CIGAR LIGHTER/CLOCK
PAGE 44-1
6 V/LG
C107M
C107F
6 V/LG
C238F
C238M
CLOCKSPRING ASSEMBLY
C238M
C238F
HORN SWITCHES
6 V/LG
C2026
4
LIGHTING CONTROL MODULE (LCM)
PAGE 58-2
ON
OFF
RESUME
SET/ ACCEL
COAST
2200 OHMS
680 OHMS
120 OHMS
SPEED CONTROL SWITCH ASSEMBLY
C238F
C238M
Signals speed control amplifier to activate or deactivate speed control system, to set and hold vehicle speed, accelerate or coast.
CLOCKSPRING ASSEMBLY
C263M
151
C263F LB/BK
TO C234
PAGE 31-2
A
Allows the transfer of electrical signals between the steering column and steering wheel.
AIR BAGS
PAGE 46-2
C238M
C238F
CLOCKSPRING ASSEMBLY
C238M
C238F
0V
AIR BAGS
PAGE 46-2
848
DG/O
B
TO C234
PAGE 31-2


Redundant safety device used to de-activate Speed Control System. Under increased brake pedal pressure (5–10 lbs), switch will open and remove power from Servo Clutch.
HOT AT ALL TIMES
I/P FUSE PANEL PAGE 13-8
1
15A
SEE POWER DISTRIBUTION PAGE 13-12
Speed Control System is deactivated when brake pedal is depressed.
HOT IN ACC OR RUN
I/P FUSE PANEL PAGE 13-8
6
15A
SEE POWER DISTRIBUTION PAGE 13-16
INSTRUMENT CLUSTER PAGE 63-3
26
C254
FROM C283 PAGE 31-1
A
10 LG/R
C211M C211F
10 S265
S263
LG/R
LG/R
10 LG/R
10 LG/R
12V
C235
C2002
151 LB/BK
BRAKE PRESSURE SWITCH
BRAKE ON/OFF (BOO) SWITCH
C235
C2002
636 O
511 LG
S243
SEE TURN/STOP/ HAZARD LAMPS PAGE 90-1
296 W/P
S276
296 W/P
203 O/LB
DIGITAL CLUSTER ONLY
12V
12V (WITH BRAKE PEDAL DEPRESSED)
12V (ACC/RUN)
C234
SPEED CONTROL SERVO ASSEMBLY
5 CONTROL SWITCH INPUT
IGN
3 BRAKE PRESSURE SWITCH INPUT
4 BRAKE APPLIED INPUT
7 IGN SYSTEM POWER
1 SPEED CONTROL INDICATOR LAMP OUTPUT
CONTROLSWITCH GROUND 6
VEHICLE SPEED SENSOR SIGNAL INPUT 3
SOLID STATE
GROUND 10
0V
0V
C234
679 GY/BK
C101F C101M
SEE VEHICLE SPEED SENSOR (VSS) PAGE 64-1
Generates an AC signal that is proportional to vehicle speed.
679 GY/BK
VEHICLE SPEED SENSOR (VSS)
C1020
0V
676
C101M C101F
848 DG/O
B
FROM C283 PAGE 31-1
C1020
PK/O
676 PK/O
57 BK
G201
G104
SEE GROUNDS PAGES 10-7
Made up of a Stepper Motor with integrated electronics. When activated maintains vehicle speed by activating throttle linkage through a speed control actuator cable.



* WITH DIGITAL CLUSTER

C234 (BLACK)

SPEED CONTROL SERVO

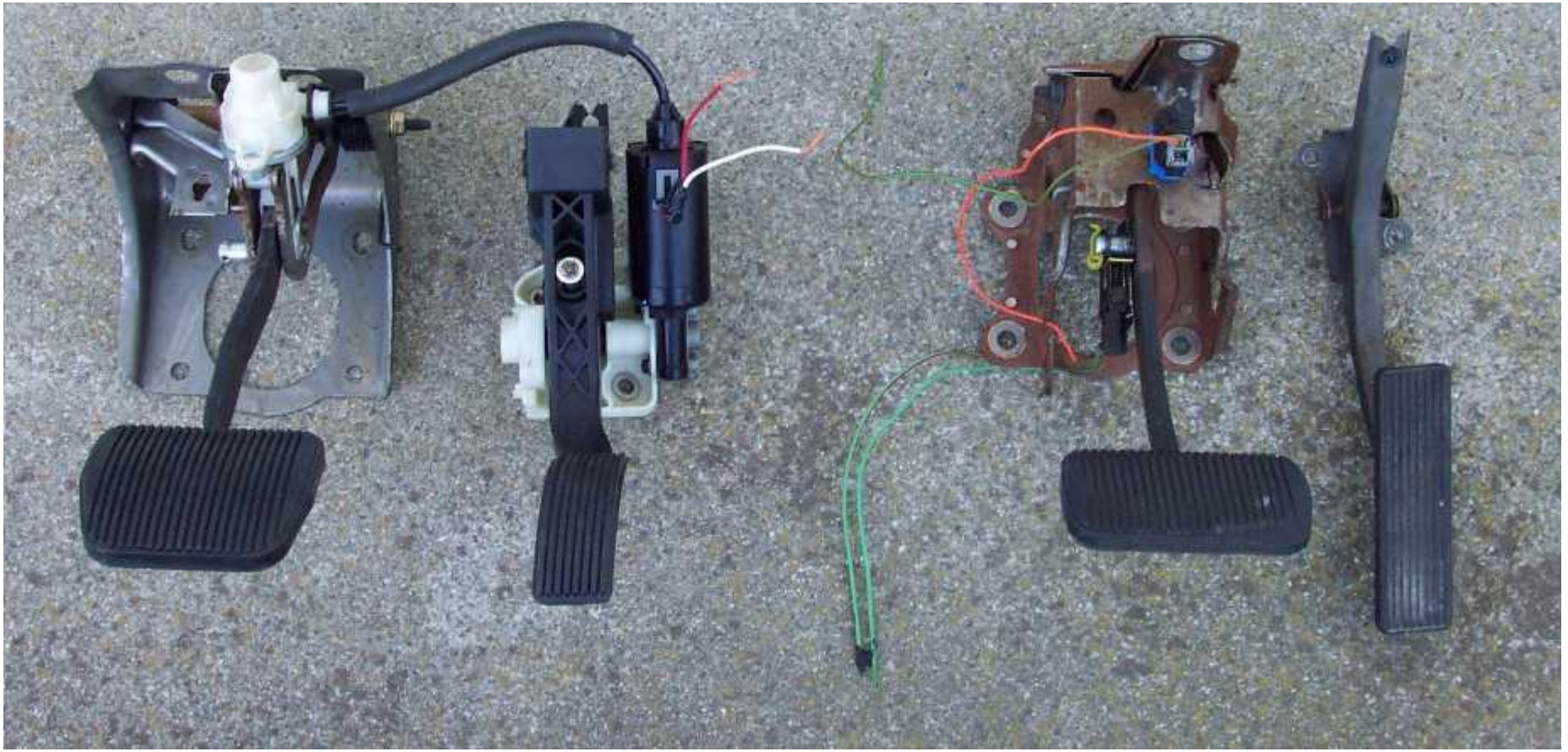
PIN	CIRCUIT	CIRCUIT FUNCTION
1	*203 (O/LB)	Speed Control Indicator Lamp Output
2	–	NOT USED
3	679 (GY/BK)	Vehicle Speed Sensor (VSS) Signal Input
4	511 (LG)	Brake Pedal Position (BPP) Switch Input
5	151 (LB/BK)	Speed Control Switch Input
6	848 (DG/O)	Speed Control Switch Ground
7	296 (W/P)	Power (Hot in Run and Acc)
8	–	NOT USED
9	636 (O)	Speed Control Deact Switch Input
10	676 (PK/O)	Ground

Note: For vehicles without speed control, a cap containing a shorting bar is placed over the 10-pin servo connector. The shorting bar connects pins 6 and 10, providing a ground path for the steering wheel mounted horn switches. If this shorting bar is not present, the horn will not function. The part number for this item is F3TZ-14A666-A

Picture of the original non-cruise steering wheel installed in my 98' PI, the tool to the left is the two jaw puller used to remove the steering wheel from the column.

Below is a power adjustable pedal box and it's fixed counterpart. The blueish switch on the right is the speed deac switch used in 98+ vehicles. The switch held on using the yellowish retainer is the brake on/off (boo) switch. If your brake lights don't work and you "cant shift out of park", highly suspect boo switch or it's wiring has failed. The deac switch is only used by the cruise control system and failure typically will not cause any symptoms other than a cruise control system that doesn't work.

(To view more pictures of the below components, click here)



And here's a closeup of the speed control deac switches from a 98' crown victoria and a 01' grand marquis

Note the electrical connector on the sensor mounted to the metal housing of the master cylinder, that's the brake pressure (DEAC) switch used in 1996-1997 crown victorias. Some 1992-1997 crownvics will instead have the deac switch located on the proportioning valve below the master cylinder.


CAUTION FAN

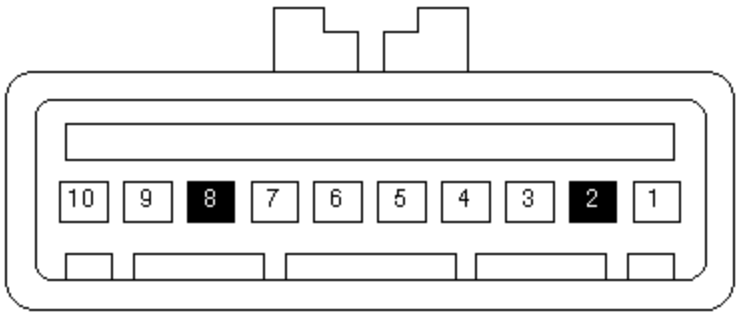
Troubleshooting:

If cruise control still doesn't opearte properly, below are some troubleshooting hints:

- Keep in mind that the basic operating principle of the cruise control system is to monitor the vehicle speed and mechanically move the throttle linkage like the vehicle operator would by pressing the accelerator pedal. And this is why you should not use the cruise control on roads with a low coefficent of friction (i.e. rain or snow) because the cruise system will sense the deceleration when you go through a puddle and attempt to accelerate the car causing it to "spinout".
- Physically make sure that the servo and actuator cable are present. It's common for police departments to swap wear components such as steering wheels among different vehicles. So just because you have a steering wheel with cruise switches, doesn't necessarily mean that you've got the rest of the needed components present.
- Make that the actuator cable is physically attached to the throttle body. On vehicles with a large amount of accelerator pedal depress/release cycles (i.e. inner city taxi cab), it's not uncommon to find the plastic where the cable meets with the ball stud of the throttle body wears in such a way that the cable will pop off at random intervals in time. If you find the linkage cable just laying

loose inside the engine bay, chances are that it's worn and in need of replacement.

- A multimeter with volt and ohm measurment capability is a must have device for accuratetly diagnosing a malfunctioning cruise control setup. The meter can be of the $20 walmart or radioshack variety and doesn't need to be anything fancy. But a "testlight" is not an acceptable substitute.
- On the old 92-97 vehicles, carefully inspect the speed deac switch mounted to the brake master cylinder. If it fails, it can cause the speed control system to become inoperative. It could also vent the hydraulic system to the ouside air which could turn into an expensive repair should significant amounts of water or other debris accumulate inside the abs hydraulic control unit. As mentioned previosuly, 98+ vehicles use a switch mounted to the brake pedal box inside the car instead of the master cylinder under the hood.
- With the large number of hours that police officers sit in their cars, it's not uncommon to find human dander, and food & skin oils have accumulated significantly enough inside the switches that they don't work properly. If you've found that the cruise switch resistance is out of range at the connector plug, spraying some contact cleaner or wd40 inside the cruise switches may temporarily bring the switch resistances back within to allow for further diagnostics. But cruise switches are sealed and not designed to be "cleaned", so if you spray something inside the switches, you should replace the switches with new service assemblies.
- Clocksprings are wear items because they flex everytime the steering wheel is turned. If your cruise control became inoperative around the same time that your airbag light started flashing or horn failed to function, and you find that the cruise switch resistances are out of range, suspect that the clockspring has failed.
- The cruise control "ON" switch gets a low current +12v signal through the horn relay engagement coil. So if the horn relay is not present or if there is a wiring fault between the horn switches and the relay, the cruise control probably won't work either.



* WITH DIGITAL CLUSTER

C234 (BLACK)

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For cruise control to engage,

- Pin 3 must have a valid vss signal on it. If your speedometer is accurate, then there's a high probability that this signal is also accurate at the cruise servo

because both devices get data from the same sender. But do keep in mind that there could be a wiring fault in between the two.

- Pin 4 should be at 0V because it has a ground path through the brake light filaments
- Pins 5 & 6 should have valid steering wheel cruise switch data. To check the on button, connect a voltmeter between the two pins. Pressing the ON button should register +12V. To check the rest of the switches, connect an ohmmeter between the two pins. Pressing OFF = 0 Ohms. Coast=120 Ohms. Set Accel=680 Ohms. Resume=2200 Ohms. The cruise servo accepts a 10% deviance from the stated values. For example, it's acceptable for the coast switch to fall anywhere within the 108-132 range. And also if you see the resistance values vary significantly when you have an assistant turn the steering wheel while holding the cruise switches, suspect the clockspring has failed.
- Pin 7 should read +12V when the ignition key is in the run or accessory positions
- Pin 9 should read +12V with the brake pedal released
- Pin 10 is ground. Disconnect the battery and measure the resistance between a ground source and this pin if you suspect a problem.

Additionally, Ford has released a Technical Service Bulletin (TSB) about Cruise Control Diagnostics with some additional service tips. TSB 06-08-05 is avaliable by clicking here. But do note that crown victoria police interceptors do not have a cruise control engaged light on the instrument panel, so you will need to manually probe the appropriate circuit on the cruise control servo electrical harness to monitor the voltage pulses that would represent lightbulb flashes in the tsb.

Note: Some fleet "mechanics" with unlimited access to multiple crown vics just swap cruise control components between vehicles until the cruise control system starts to work again. While not recommended, the "brute force" method is often effective because of the limited number of parts in the speed control system. But then again, the same "mechanics" would probably never get the cruise control system to function again if the true cause of the problem was with the dashboard electrical harness.

Miscellaneous:

- Motor Age magazine had an article in the October 2002 issue with some information on ford cruise control components. Click here to view the article in question.

- Information about the vacuum based cruise control system used in the legacy pre-1992 crownvics is avaliable by clicking here.

Questions or comments?

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