

If you experience any problems with installation, operations or need applications information not covered in this brochure, call our "Mopar Technical Service" hot line toll free at:

**1-800-86MOPAR** (1-800-866-6727)  
8am to 5pm M-F (ET)

*"Please have Product Part Number and Application available for reference"*

## MOPAR Remanufactured Four Cylinder Controller (FCC) 12 Month / 12,000 Mile Limited Warranty

This MOPAR Four Cylinder Controller is warranted by Chrysler Corporation against defects in workmanship or materials for 12 months or 12,000 miles, whichever comes first, from the date of its installation into a Chrysler, Plymouth, Dodge, Jeep or Eagle vehicle. If it fails, it will be repaired or replaced, at the option of Chrysler Corporation. To obtain service under this Limited Warranty, return the module to an authorized Chrysler Corporation Dealer.

This is the only warranty to this computer. If this computer is not sold for installation into a vehicle which is operated for personal, family or household purposes, Chrysler disclaims any implied warranties which may pass with the sale of this computer, to the extent allowed by law. If this computer is sold for installation into a vehicle which is operated for personal, family or household purposes, Chrysler limits the duration of any implied warranties to the duration of the express warranty made above. Under no circumstances will Chrysler be liable for any incidental or consequential damages which may result from the breach of any expressed or implied warranty, including any liability for loss of use or diminished value.

Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



# MOPAR REMANUFACTURED FOUR CYLINDER CONTROLLER (FCC)

## Removal and Installation Instructions



## Important

Before attempting any repairs you should refer to appropriate Chrysler Corporation service manuals for complete troubleshooting and repair procedures, along with required diagnostic tools. These manuals are available through your local Chrysler Corporation Dealer.

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## Safety Precautions

Before replacing any damaged component you should always first determine what caused the component to fail and repair that before continuing.

Static electricity can damage electronic components. By following a few safety procedures you can reduce the risk of damage from static electricity.

(Continued on page 2)

1. Avoid contact with the electrical connectors.
2. By frequently touching a known good ground during installation you can discharge any static electricity that you may have developed.

## Removal Procedure

### Neon

1. Locate the FCC (Or PCM - Power Control Module) on the inner fender panel next to the washer fluid bottle on the driver's side (refer to Fig. 1)
2. Disconnect the negative cable from the battery
3. Disconnect the positive cable from the battery
4. Squeeze the tabs on the PDC (Power Distribution Center) while pulling the PDC up to remove it from the bracket (refer to Fig. 2)
5. Lay PDC aside to gain access to the FCC (PCM) bracket screws
6. Remove the screws attaching the FCC (PCM) to the body
7. Lift the FCC (PCM) up and disconnect the 60-way connector
8. **REVERSE** the above procedure for **INSTALLATION**.

**CAUTION: Check inside of 60-way wiring harness connector for bent pins or corrosion. Repair as necessary. 60-way connector should be torqued to 40 in lbs., DO NOT OVER TORQUE; THIS WILL DAMAGE THE FCC CONNECTOR!**

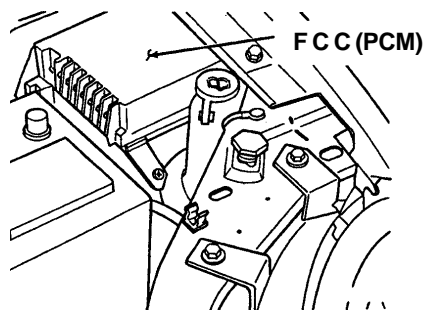


Fig. 1

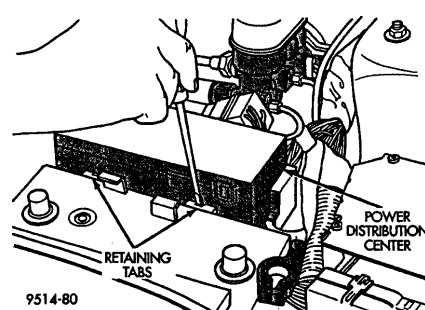


Fig. 2

## Removal Procedure

### Sebring - Avenger - Talon

1. Locate the FCC (Or PCM - Power Control Module) near the inner fender on the driver's side
2. Disconnect the negative battery terminal
3. Disconnect the positive battery terminal
4. Remove air cleaner assembly
5. Remove 60-way connector from FCC (PCM) (Fig. 3)
6. Detach FCC (PCM) from vehicle
7. **REVERSE** the above procedure for **INSTALLATION**

**CAUTION: Check inside of 60-way wiring harness connector for bent pins or corrosion. Repair as necessary. 60-way connector should be torqued to 40 in lbs., DO NOT OVER TORQUE; THIS WILL DAMAGE THE FCC CONNECTOR!**

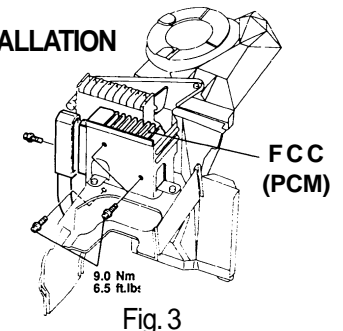


Fig. 3

## Troubleshooting Tips for FCC Controllers

### Common failures that cause mis-diagnosis of FCC Controllers:

- Intermittent grounds; Loose or corroded grounds may cause false sensor readings. Verify all sensor grounds terminate at FCC 60-way connector, pin 51 ((BK/DG) FJ and F24S Body, or (BK/LB) PL body).
- Manifold absolute pressure (MAP) sensor and Throttle position sensor (TPS) voltages; check voltage over the entire range, not just the extremes. Whenever possible use and oscilloscope to check MAP sensor and TPS sensor output voltages for noise spikes
- Verify minimum TPS voltage. Minimum TPS voltage should be approximately 0.5 to 1.5 VDC
- Automatic idle speed (AIS) motor; Shorted windings or intermittent connections. If AIS codes are present, check to ensure motor windings or related connectors are not shorted to ground.

(Continued on Page 4)

- Heater voltage for upstream and downstream oxygen sensors. Verify battery volts +/-1 volt at upstream oxygen sensor connector, pin 4 ((BK/RD) FJ and F24S body, or (DG/OR) PL body). Verify same voltage at downstream oxygen sensor connector, pin 4 ((BK/RD) FJ and F24S body, or (DG/OR) PL body).
- Charging system malfunction; Alternator defective or battery not fully charged. Check alternator output to ensure there is not excessive ripple voltage.
- Sensor voltage supply. Check for approximately 5 volt output from 60-way FCC connector pin 43 ((DG/YL) FJ and F24S body, or VT/WT) PL body) to MAP and TPS sensor, with ignition switch on.
- Distributor voltage supply. Check for approximately 8 to 9 ½ VDC output from 60-way FCC connector pin 44 ((YL) FJ and F24S body, or (OR) PL body) to distributor connector(s) with ignition switch on and while cranking.

#### Other things to consider

- Auto-shutdown (ASD) relay; Corroded wires or faulty relay.
- Minimum air flow; check for air leaks or airflow obstruction.
- Vacuum system; Contaminants or leaks in vacuum lines.
- Fuel pressure and leak down
- Vehicle speed sensor operation
- Crankshaft and Camshaft sensors; Some aftermarket sensors have not worked properly with Mopar engine controllers
- Splices and Fusible Links; check for open and/or shorted wires.
- Damaged connector terminals; Remove gasket from FCC 60-way connector, reseal connector, and check for symptom/problem. If system/problem has been corrected, check 60-way harness and/or connector for terminal damage or loose connection
- Excessive current on certain connector pins may damage the FCC. Use of a test lamp or a short in the wiring harness of the vehicle can cause this condition. Always use a DVM when checking the unit/system.
- Check Technical Service Bulletins according to model year and system malfunction

## On Board Diagnostics

The Four Cylinder Controller (FCC) has been programmed to monitor several different circuits of the fuel injection system. This monitoring is called On Board Diagnosis. If a problem is sensed with a monitored circuit, often enough to indicate an actual problem, its Fault Code is stored in the FCC for eventual display to the service technician.

## Fault Code Description

When a fault code appears, either by flashes of the check engine lamp or by watching the Diagnostic Tool, it indicates that the FCC has recognized an abnormal signal in the system. Fault Codes indicate the results of a failure but never identify the failed component directly.

## Obtaining Fault Codes

1. Connect Diagnostic Tool to the connector located in the vehicle, underneath the steering wheel
2. Start the engine if possible, cycle the transmission selector and the A/C switch if applicable. Shut off the engine.
3. Turn the ignition switch on. Record all fault codes shown on the Diagnostic Tool, observe the check engine lamp on the instrument panel; the lamp should light for 2 seconds then go out (bulb check)

***If you do not have a Diagnostic Readout Tool use the procedure which follows.***

1. Start the engine (if possible)
2. With brakes applied, cycle the transmission selector and the A/C switch (if applicable). Shut off engine.
3. Turn ignition switch on, off, on, off, on within 5 seconds. This activates the display of the fault codes through flashes of the check engine lamp on the instrument panel.
4. The check engine lamp should light for two seconds to verify the bulb is good, then go out.
5. To display fault codes the lamp will flash briefly, (first digit of the fault code) pause, then flash briefly again (second digit of the fault code), followed by a longer pause before displaying the next fault code.
6. After all fault codes have been displayed, Code 55 will be displayed indicating the end of fault code messages.

# Fault Codes

Code	Generic Scan Tool Code	DRB Display (See Note 1)	Description of Fault Code
11**	P1391 or	Intermittent loss of CMP or CKP During Cranking No crank reference signal @ PCM	Intermittent loss of either camshaft or crankshaft position sensor. No crank reference signal detected during engine cranking.
12*		Battery Disconnect	Direct battery input to PCM was disconnected within the last 50 Key-on cycles.
13**	P1297	No Change in MAP from Start to Run	No difference recognized between the engine MAP reading and the barometric (atmosphere) pressure reading from start-up
14**	P0107 or P0108 or P1296	MAP Sensor Voltage Too Low MAP Sensor Voltage Too High No 5 Volts to MAP Sensor	MAP sensor input below minimum acceptable voltage. MAP sensor input above maximum acceptable voltage. MAP sensor output voltage too low for barometric pressure after key off.
15**	P0500	No Vehicle Speed Sensor Signal	No Vehicle Speed Sensor Signal detected during road load conditions.
16*		Knock Sensor Circuit	No input from Knock Sensor.
17**	P0125 or	Closed Loop Temp. not reached Engine Cold Too Long	Closed loop operation temp. not reached after 10 minutes. Engine does not reach operating temp. within 20 minutes with a vehicle speed signal.
21**	P0131 or P0132 or P0133 or P0134 P0135	Upstream O2S shorted to ground Upstream O2S shorted to voltage Upstream O2S Response Upstream O2S stays at center Upstream O2S Heater Failure	Tested after key off. Upstream oxygen sensor input voltage maintained above the normal operating range. Upstream oxygen sensor response slower than minimum required switching frequency or value does not go above .67 volts Neither rich or lean condition detected from the upstream oxygen sensor input. Upstream oxygen sensor heating element circuit malfunction tested after key off.

\* Check Engine Lamp will not illuminate at all times if this Diagnostic Trouble Code was recorded. Cycle ignition key as described in manual and observe code flashed by Check Engine Lamp.

\*\* Check Engine Lamp will illuminate during engine operation if this Diagnostic Trouble Code was recorded.

\*\*\* Generator Lamp illuminated.

\*\*\*\* Check Engine Lamp will illuminate during engine operation for 2.0L only if this DTC is recorded.

NOTE 1: DRB display message may vary depending on model year of vehicle.

MIL = Malfunction Indicator Lamp (or Check Engine Lamp)

Code	Generic Scan Tool Code	DRB Display (See Note 1)	Description of Fault Code
21** (Cont.)	P0137 or P0138 or P0139 or P0140 or P0141	Downstream O2S shorted to ground Downstream O2S shorted to voltage Downstream O2S Response Downstream O2S signal inactive Downstream O2S heater failure	Tested after key off. Downstream oxygen sensor input voltage maintained above the normal operating range. Downstream oxygen sensor does not match required response, rich at WOT or lean at fuel shutoff. Neither rich or lean condition detected from the downstream oxygen sensor. Downstream oxygen sensor heating element circuit malfunction tested after key off.
22**	P0117 or P0118	ECT Sensor Voltage Too Low ECT Sensor Voltage Too High	Engine coolant temp. sensor input below the minimum acceptable voltage. Engine coolant temp. sensor input above the maximum acceptable voltage.
23**	P0112 or P0113	Intake Air Temp. Sensor Voltage Low Intake Air Temp. Sensor Voltage High	Intake air temp. sensor input below the maximum acceptable voltage. Intake air temp. sensor input above the minimum acceptable voltage.
24*	P0121 or P0122 or P0123 or P1295	TPS Voltage does not agree with MAP Throttle Position Sensor Voltage Low Throttle Position Sensor Voltage High No 5 Volts to TPS Sensor	TPS signal does not correlate to MAP sensor. Throttle position sensor input below the minimum acceptable voltage. Throttle position sensor input above the maximum acceptable voltage. Throttle voltage too low while operating at part throttle.
25**	P0505 or P1294	Idle Air Control Motor Circuits Target Idle Not Reached ( $\pm 300$ )	A shorted or open condition detected in one or more of the idle air control motor circuits. Idle air control motor at zero for more than 20 seconds or engine speed does not equal control speed.

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\*\* Check Engine Lamp will illuminate during engine operation if this Diagnostic Trouble Code was recorded.

\*\*\* Generator Lamp illuminated.

\*\*\*\* Check Engine Lamp will illuminate during engine operation for 2.0L only if this DTC is recorded.

NOTE 1: DRB display message may vary depending on model year of vehicle.

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Code	Generic	DRB Display (See Note 1)	Description of Fault Code
	Scan Tool		
27**	P0201	Injector # 1 Control Circuit	Injector # 1 does not respond electrically to control signal.
	or		
	P0202	Injector # 2 Control Circuit	Injector # 2 does not respond electrically to control signal.
	or		
31**	P0203	Injector # 3 Control Circuit	Injector # 3 does not respond electrically to control signal.
	or		
	P0204	Injector # 4 Control Circuit	Injector # 4 does not respond electrically to control signal.
	or		
31**	P0441	Evap Purge Flow Monitor Failure	Insufficient vapor flow detected during evaporative emission system operation at idle.
	or		
33*	P0443	EVAP Solenoid Circuit	An open or shorted condition detected in the duty cycle purge solenoid circuit.
	or		
33*		A/C Clutch Relay Circuit	An open or shorted condition detected in the A/C clutch relay circuit.
	or		
		A/C Pressure Sensor Volts Too High	A/C pressure transducer input above the maximum acceptable voltage.
34*	or	A/C Pressure Sensor Volts Too Low	A/C pressure transducer input below the minimum acceptable voltage.
	or		
		Speed Control Solenoid Circuits	An open or shorted condition detected in the Speed Control vacuum or vent solenoid circuits.
34*	or		
	or	Speed Control Switch Always Low	Speed Control switch input below min. acceptable voltage.
	or	Speed Control Switch Always High	Speed Control switch input above max. acceptable voltage.
35****	P1489	High Speed Fan CTRL Relay Circuit	An open or shorted condition detected in the high speed radiator fan relay control circuit.
	or		
41***	P1490	Low Speed Fan CTRL Relay Circuit	An open or shorted condition detected in the low speed radiator fan relay control circuit.
	or		
41***		Generator Field Not Switching Properly	An open or shorted condition detected in the generator field control circuit.
42*		Fuel Pump Relay Control Circuit	An open or shorted condition detected in the fuel pump relay control circuit.
	or		
		Auto Shutdown Relay Control Circuit	An open or shorted condition detected in the auto shutdown relay control circuit.

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\*\* Check Engine Lamp will illuminate during engine operation if this Diagnostic Trouble Code was recorded.

\*\*\* Generator Lamp illuminated.

\*\*\*\* Check Engine Lamp will illuminate during engine operation for 2.0L only if this DTC is recorded.

NOTE 1: DRB display message may vary depending on model year of vehicle.

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Code	Generic	DRB Display (See Note 1)	Description of Fault Code
	Scan Tool		
42**		No ASD Relay Output Voltage at PCM	No ASD output voltage sensed when the ASD relay is energized
	or		
42**		Fuel Level Sending Unit Volts Too Low	Open circuit between Body Controller and fuel gauge sending unit.
	or		
42**		Fuel Level Sending Unit Volts Too High	Circuit shorted to voltage between Body Controller and fuel gauge sending unit.
	or		
42**		Fuel Level Unit No Change Over Miles	No movement of fuel level sender detected.
	or		
43****	P0300	Multiple Cylinder Misfire	Misfire detected in multiple cylinders.
	or		
43****	P0301	Cylinder # 1 Misfire	Misfire detected in cylinder # 1.
	or		
43****	P0302	Cylinder # 2 Misfire	Misfire detected in cylinder # 2.
	or		
43****	P0302	Cylinder # 3 Misfire	Misfire detected in cylinder # 3.
	or		
43****	P0304	Cylinder # 4 Misfire	Misfire detected in cylinder # 4.
	or		
43****	P0351	Ignition Coil # 1 Primary Circuit	Peak primary circuit current not achieved w/ max. dwell time.
	or		
43****	P0352	Ignition Coil # 2 Primary Circuit	Peak primary circuit current not achieved w/ max. dwell time.
	or		
44***		Ambient Temp. Sensor	No ambient temp. sensor input. Also used as an input to TCM.
46***		Charging System Voltage Too High	Battery voltage sense input above target charging voltage during engine operation.
47***		Charging System Voltage Too Low	Battery voltage sense input below target charging voltage during engine operation. Also, no significant change detected in battery voltage during active test of generator output circuit.
51**	P0171	Fuel System Lean	A lean air-fuel mixture has been indicated by an abnormally rich correction factor.
52**	P0172	Fuel System Rich	A rich air-fuel mixture has been indicated by an abnormally lean correction factor.

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\*\* Check Engine Lamp will illuminate during engine operation if this Diagnostic Trouble Code was recorded.

\*\*\* Generator Lamp illuminated.

\*\*\*\* Check Engine Lamp will illuminate during engine operation for 2.0L only if this DTC is recorded.

NOTE 1: DRB display message may vary depending on model year of vehicle.

MIL = Malfunction Indicator Lamp (or Check Engine Lamp)

<b>Code</b>	<b>Generic Scan Tool Code</b>	<b>DRB Display (See Note 1)</b>	<b>Description of Fault Code</b>
53****	P0605 or P0605	Internal Controller Failure PCM Failure SPI Communications	PCM Internal fault condition detected. PCM Internal fault condition detected.
54*	P0340	No Cam Signal at PCM	No camshaft signal detected during engine cranking.
55*			Completion of fault code display on Check Engine Lamp.
62*		PCM Failure SRI Mile Not Stored	Unsuccessful attempt to update EMR mileage in the PCMEEPROM.
63*		PCM Failure EEPROM Write Denied	Unsuccessful attempt to write to an EEPROM location by the PCM.
64****	P0420	Catalytic Converter Efficiency Failure	Catalyst efficiency below required level.
65****	P0551	Power Steering Switch Failure	Power steering high pressure seen at high speed.
66*		No CCD Message from Body Controller	No communication from body control module.
71**	P1496	5 Volt Output Low	Internal PCM check for 5 volts.
77*			Speed Control Power Circuit Malfunction detected with power feed to speed control servo solenoids.

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\*\* Check Engine Lamp will illuminate during engine operation if this Diagnostic Trouble Code was recorded.

\*\*\* Generator Lamp illuminated.

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## Part Number Applications

<b>Reman. Part No.</b>	<b>Vehicle Application - Year, Body Type</b>	<b>Engine Specifications</b>
R4874154	1994-95 PL BODY	2.0L MPI M/T FED LOW ALT
R4874155	1994-95 PL BODY	2.0L MPI M/T FED HIGH ALT CAL
R4874156	1994-95 PL BODY	2.0L MPI A/T (3ATX) FED LOW ALT TAIWAN
R4874158	1994-95 PL BODY	2.0L MPI A/T (3ATX) FED HIGH ALT
R4874159	1994-95 PL BODY	2.0L MPI A/T (3ATX) CAL (TLEV)
R4874162	1994-95 PL BODY	2.0L MPI DOHC M/T FED LOW ALT
R4874163	1994-95 PL BODY	2.0L MPI DOHC M/T FED HIGH ALT CAL
R4874164	1994-95 PL BODY	2.0L MPI DOHC M/T FED CAL (ACR)
R4874165	1994-95 PL BODY	2.0L MPI DOHC A/T (3ATX) FED LOW ALT
R4874166	1994-95 PL BODY	2.0L MPI DOHC A/T (3ATX) FED HIGH ALT CAL
R4874190	1995 FJ, F24S BODY	2.0L MPI DOHC M/T CAL (Built after 6/19/94)
R4874191	1995 FJ, F24S BODY	2.0L MPI DOHC M/T FED (Built after 6/19/94)
R4874192	1995 FJ, F24S BODY	2.0L MPI DOHC A/T (4EATX) FED CAL (Built after 6/19/94)
R4882238	1994 FJ, F24S BODY	2.0L MPI DOHC M/T FED (Built after 6/19/94)
R4882239	1994 FJ, F24S BODY	2.0L MPI DOHC A/T (4EATX) FED CAL (Built after 6/19/94)
R5269657	1995 FJ, F24S BODY	2.0L MPI DOHC M/T BUX (Built after 6/19/94)