

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 Power and Logic Module 12 Month / 12,000 Mile Limited Warranty

This MOPAR Power or Logic Module 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 module. If this module 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 module, to the extent allowed by law. If this module 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.

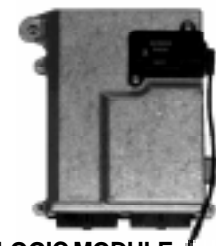
Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary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



MOPAR REMANUFACTURED POWER AND LOGIC MODULES Model Year 85 to Model Year 87 Removal and Installation Instructions



POWER MODULE



LOGIC MODULE

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.

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

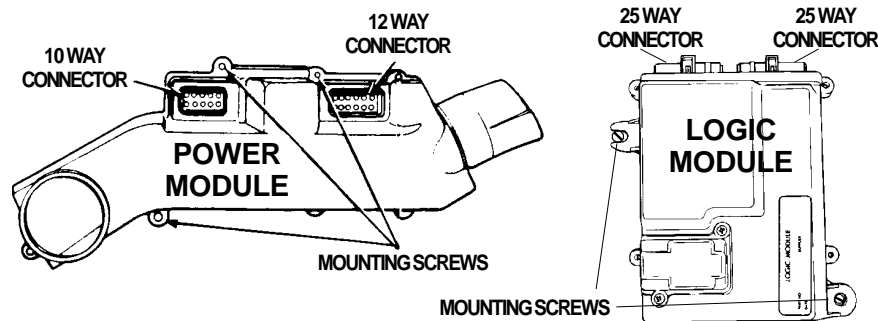
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Caution: For POWER MODULE ONLY - Do not remove grease from 10 or 12 way connectors or connector cavities in computer. The grease is used in order to prevent moisture from corroding the terminals. If there isn't at least 1/8 inch of grease in bottom of connector cavity, apply Mopar Multipurpose Grease Part # 04318063 or equivalent in connector cavity before reinstalling computer.

Removal Procedure

POWER MODULE

1. Turn ignition off.
2. Remove air cleaner duct from power module.
3. Remove battery.
4. Remove three module mounting screws.
5. Remove wiring harness connectors from module; remove module.
6. **REVERSE** the above procedure for **INSTALLATION**.



LOGIC MODULE

1. Turn ignition off.
2. Remove right side kick panel.
3. Remove two module mounting screws.
4. Remove wiring connectors and remove module.
5. **REVERSE** the above procedure for **INSTALLATION**.

Troubleshooting Tips for Power & Logic Modules

Common Failures that cause Mis-Diagnosis of Power & Logic Modules:

- Intermittent grounds; Loose or corroded grounds may cause false sensor readings. Verify sensor grounds terminate at logic module white connector TBI (red/turbo) pin 25 (blk/lb* wire).
- Manifold absolute pressure (MAP) and throttle position sensor (TPS) voltages; check voltage over the entire range, not just the extremes. Minimum TPS voltage should be approximately .5 to 1.5 vdc.

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- Sensor voltage supply; Check for approx. 5 volt output from logic module black connector TBI (blue/turbo) pin 1 (org/wht* wire) to MAP and TPS sensors, with ignition switch on.
- Logic module and distributor voltage supplies; Check for approx. 8 to 9.5 vdc at 12 way power module connector pin 12 (org wire) with ignition switch on.

Other things to consider:

- Charging system malfunction; Alternator defective or battery not fully charged. NOTE: In 1985 and later vehicles there is no external voltage regulator. The voltage regulator is controlled by BOTH the Logic and Power modules.
- Some aftermarket pick-ups have not worked properly with Mopar engine controllers.
- Verify model year of vehicle electronics; Some 1987 P-Bodies with turbo-charged engines were built with 1986 logic modules. A 1986 logic module can be identified by the MAP sensor mounted on the logic module case, unless T.S.B. #18-03-86 has been performed; then the MAP sensor is separate. The 1987 logic modules used MAP sensors mounted in the engine compartment.
- Loose or corroded pin connections; Check for water leakage through kick panel causing logic module pins to corrode.
- Auto-shutdown (ASD) relay operation; ASD relay is internal to the power module.
- Automatic idle speed (AIS) motor; Shorted windings **will** set DTC's. Open or intermittent connections **will not**.
- Vacuum system; Contaminants or leaks in vacuum lines, notably in line connected to MAP sensor.
- Excessive current on certain connector pins may damage the modules. 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 Logic Module 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 Logic Module for eventual display to the service technician. If the problem is repaired or ceases to exist, the Logic Module cancels the Fault Code after 20 to 40 vehicle starts.

Fault Code Description

When a Fault Code appears (either by flashes of the power loss/limited lamp or by watching the Diagnostic Readout Tool C-4805), it indicates that the Logic Module has recognized an abnormal signal in the system. Fault Codes indicate the result of a failure but never identify the failed component directly.

Obtaining Fault Codes

1. Connect Diagnostic Readout Tool C-4805, to the diagnostic connector located in the engine compartment near the passenger side strut tower.
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, off, on, off, on. Within 5 seconds, record all the diagnostic codes shown on the Diagnostic Readout Tool C-4805. Observe the power loss 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 C-4805 use the procedure which follows.

1. Start engine (if possible).
2. With brakes applied, cycle 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 power loss lamp on the instrument panel.
4. The Power Loss 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 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	DRB II Display	Description of Fault Code
11	Distributor Pickup Signal	No distributor pickup signal present since the battery was disconnected.
12	Battery Feed to the Logic module.	The battery feed to the logic module has been disconnected within the last 20-40 engine starts.
13+	MAP Sensor (<i>Vacuum</i>)	The MAP sensor vacuum level did not change between cranking and when the engine starts.
14+	MAP Sensor (<i>Electrical</i>)	MAP sensor signal is below .02 or above 4.9 volts.

+ Check Engine Lamp On.

++ Check Engine Lamp On. (MY 85 Turbo - Only)

Code	DRB II Display	Description of Fault Code
15	Vehicle Speed Sensor	The speed sensor signal indicates less than 2 mph when the vehicle is moving.
16+	Battery Voltage Sensing (<i>Charging System</i>)	The battery sensing voltage dropped below 4 or between 7.5 and 8.5 volts for more than 20 seconds.
17	Engine Cooling System	{MY 86 - 87 vehicles - Only} Engine coolant temp. did not reach 174 deg. F within 8 minutes of vehicle speeds greater than 28 mph or within 20 minutes after the engine was started.
17+	Detonation Sensor	{MY 85 Turbo vehicles - Only} No knock signal above 5000 engine rpm for 3 seconds.
21	Oxygen Sensor	No oxygen sensor signal for more than 22 seconds when in closed loop.
22+	Engine Coolant Sensor	The coolant sensor voltage is above 4.96 volts when the engine is cold or below .51 volts when engine is warm.
23	Throttle Body Temp. Sensor	{MY 86 - 87 Non-turbo vehicles - Only} The throttle body temp. sensor voltage is below .04 or above 4.96 volts when engine coolant temp. is above 77 deg. F.
23+	Charge Temp. Sensor	{Turbo vehicles - Only} The charge temp. sensor voltage is above 4.98 or below .06 volts.
24+	Throttle Position Sensor	The throttle position sensor signal is below .16 or above 4.7 volts.
25	Auto. Idle Speed Motor (AIS)	Proper voltage in the AIS system is not present. NOTE: Open circuit will not activate code.
26	Fuel Injector Driver	{Non-turbo vehicles - Only} The current through the fuel injector does not reach its proper peak level.
26	Injector 1 and 2	{Turbo vehicles - Only} Injectors 1 and 2 not firing properly.
27	Fuel Control	{Non-turbo vehicles - Only} The fuel control interface fails to switch properly.
27	Injector 3 and 4	{Turbo vehicles - Only} Injectors 3 and 4 not firing properly.
31	Canister Purge Solenoid	The solenoid does not turn on and off when it should.
32	Power Loss / Power Limit Lamp	{MY 85 vehicles - Only} The lamp does not turn on and off when it should.
33	A/C Cutout Relay	The relay does not turn on and off when it should.

+ Check Engine Lamp On.

++ Check Engine Lamp On. (MY 85 Turbo - Only)

<u>Code</u>	<u>DRB II Display</u>	<u>Description of Fault Code</u>
34	E.G.R. Solenoid	{MY 85 - 86 Turbo vehicles - Only} The solenoid does not turn on and off when it should.
34	Speed Control Servo Circuit	{MY 87 vehicles - Only} The servo does not turn on and off when it should.
35	Radiator Fan Relay Circuit	The relay does not turn on and off when it should.
36+	Wastegate solenoid	{Turbo vehicles - Only} The solenoid does not turn on and off when it should.
37	Shift Indicator Lamp (Manual Trans. Only)	{MY 85 - 86 Non-turbo vehicles - Only} The lamp does not turn on and off when it should.
37	Transmission Lock-up Solenoid (2.5 Auto. Trans.)	{MY 87 Non-turbo vehicles - Only} The lock-up solenoid does not turn on and off when it should.
37	Baro Read Solenoid	{Turbo vehicles - Only} The solenoid does not turn on and off when it should.
41	Alternator Field Control (Charging System)	The field control fails to switch properly.
42	Auto Shutdown	The relay does not turn on and off when it should.
43	Spark Control	The spark control interface fails to switch properly.
44	Battery Temperature Sensor (Charging System)	The battery temperature sensor signal is below .04 or above 4.9 volts.
45+	Overboost Monitor	{MY 85 - 86 Turbo vehicles - Only} MAP sensor signal exceeded a predetermined amount of boost.
46+	Battery Voltage Sensing (Charging System)	The battery sense voltage is more than 1 volt above the desired control voltage for more than 20 seconds.
47	Battery Voltage Sensing (Charging System)	The battery sense voltage is more than 1 volt below the desired control voltage for more than 35 seconds.
51	Oxygen Feedback System	The oxygen sensor indicates a lean condition for more than 2 minutes (12 minutes 86 - 87 Turbo vehicles).
52	Oxygen Feedback System	The oxygen sensor indicates a rich condition for more than 2 minutes (12 minutes 86 - 87 Turbo vehicles).
53	Logic Module	The logic module failed self-test.
54++	Distributor Sync Pick-up	{Turbo vehicles - Only} No distributor sync pick-up signal.
55		Indicates the end of diagnostic mode.
88		Indicates start of diagnostic mode. NOTE: This code must appear first in the diagnostic mode or fault codes will be inaccurate.

+ Check Engine Lamp On.

++ Check Engine Lamp On. (MY 85 Turbo - Only)

Part Number Applications

POWER MODULE

<u>Reman. Part No.</u>	<u>Year</u>	<u>Vehicle Application - Engine Specifications</u>
R5213581	1983.5-84	2.2L TBI FED
R5226197	1984	2.2L TURBO FED
R5227694	1985-87	2.2L & 2.5L TBI FED
R5227808	1985-87	2.2L & 2.5L TURBO FED

LOGIC MODULE

<u>Reman. Part No.</u>	<u>Year</u>	<u>Vehicle Application - Engine Specifications</u>
R4798477	1984	2.2L TURBO A/T & M/T
R5226870	1984	2.2L TBI A/T
R5226978	1985	2.2L TBI A/T CAL
R5227241	1985	2.2L TBI A/T FED CAN HI/ALT
R5227243	1985	2.2L TURBO M/T 50 STATE CAN HI/ALT
R5227892	1985	2.2L TBI A/T FED CAN HI/ALT
R5227893	1986	2.2L TBI A/T FED CAN HI/ALT
R5227894	1986	2.5L TBI A/T FED CAN HI/ALT
R5227932	1986	2.2L TURBO M/T FED CAL CAN
R5227933	1986	2.2L TURBO A/T FED CAL CAN
R5227935	1985	2.2L TURBO A/T 50 ST
R5233540	1987	2.2L TURBO I A/T FED CAL CAN HI/ALT
R5233542	1987	2.2L TURBO I M/T FED CAL CAN HI/ALT
R5234085	1987	2.2L TBI A/T FED CAN HI/ALT
R5234087	1987	2.5L TBI A/T FED CAL CAN HI/ALT
R5234089	1987	2.2L TBI A/T CAL