

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 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.

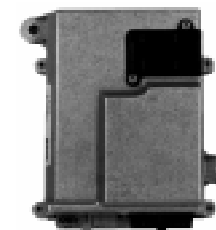
Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or executions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary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



MOPAR REMANUFACTURED POWER AND LOGIC MODULES Model Year 83 & Model Year 84 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.

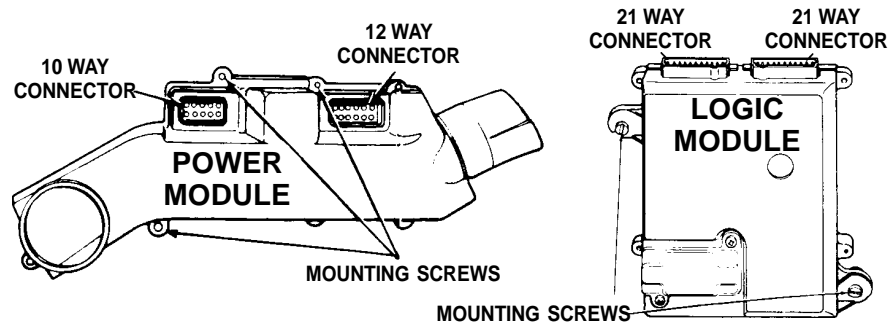
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Caution: For POWER MODULE ONLY - Do not remove grease from 10 or 12 way connectors or connector cavities in computer. The grease is used in order to prevent moisture from corroding the terminals. If there isn't at least 1/8 inch of grease in bottom 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 2 (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 white connector TBI (blue/turbo) pin 4 (vt wire) to MAP and TPS sensors, with ignition switch on.
- Logic module and distributor voltage supplies; Check for approx. 8 to 9 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 1983-84 vehicles there IS an external voltage regulator. The voltage regulator is NOT controlled by the Logic and Power modules.
- Some aftermarket pick-ups have not worked properly with Mopar engine controllers.
- Loose or corroded pin connections; Check for water leakage through kick panel causing logic module pins to corrode.
- Auto-shutdown (ASD) relay operation; NOTE: Absence of distributor signals or an open injector (or injector wiring) will cause the ASD relay to shut off.
- 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 M.A.P. 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 30 ignition key on/off cycles.

Fault Code Description

When a Fault Code appears (either by flashes of the light emitting diode-LED-on the Logic Module, 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 do not always identify the failed component.

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 (if equipped) 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 light emitting diode (LED) on the logic module or the power loss lamp on the instrument panel (if equipped).
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 Signal Circuit (Reference Pickup)	No distributor reference signal is seen by the logic module since the battery was disconnected. This code will disappear after cranking, after battery is reconnected to the logic module, and if the reference signal is present.
12	Battery Feed to the Logic Module has been recently disconnected.	The battery feed to the logic module has been disconnected within the last 30 engine starts.
13	MAP Sensor (Vacuum)	The MAP sensor vacuum level did not change between start and start to run transfer.

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Code	DRB II Display	Description of Fault Code
14	MAP Sensor (Electrical)	MAP sensor signal is below .02 or above 4.9 volts.
15	Vehicle Speed Sensor	The speed sensor signal indicates less than 2 mph when the vehicle is moving.
21	Oxygen Sensor	No oxygen sensor signal for more than 5 seconds.
22	Engine Coolant Sensor	The coolant temp. sensor is either below -60 deg F or above 270 deg F or changes too fast to be real.
23	Charge Temperature Sensor	{Turbo vehicles - Only} The charge temp. sensor is either below -60 deg F or above 270 deg F or changes too fast to be real.
24	Throttle Position Sensor	The throttle position sensor signal is below .16 or above 4.7 volts.
25	Automatic Idle Speed Control (AIS)	Proper voltage in the AIS system is not present. NOTE: Open circuit will not activate code.
31	Purge Solenoid Circuit	The proper voltage at purge solenoid "circuit" is not present.
32	Power Loss Lamp Circuit	The proper voltage at the power loss lamp "circuit" is not present.
33	A/C Wide Open Throttle Cutout Relay Circuit	The proper voltage at A/C W.O.T relay "circuit" is not present.
34	E.G.R. Solenoid Circuit	The proper voltage at E.G.R. solenoid "circuit" is not present.
35	Fan Relay Circuit	The radiator fan is off with A/C clutch on. The radiator fan is on with A/C clutch off.
41	Charging System	Battery voltage from ASD relay is below 11.75 volts longer than 22 seconds.
42	Auto Shutdown Relay (ASD)	Switched battery voltage from ASD is not present for 1/3 second after first injector "on" signal or voltage present after 3 seconds from last injector "on" signal.
43	Ignition and Fuel Control Interface Circuit	Ignition or fuel signal not present between logic module and power module or injector "off" signal is shorted to ground.
44	Logic Module	Logic module has wrong prom.
45	Overboost	{Turbo vehicles - Only} MAP sensor signal is above 10 psi boost.
51	Oxygen Feedback System	The system stays lean or rich longer than two minutes.
52	Logic Module	The logic module fails.

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<u>Code</u>	<u>DRB II Display</u>	<u>Description of Fault Code</u>
53	Logic Module	The logic module fails.
54	Logic Module	{Non-turbo vehicles - Only} The logic module fails.
54	Distributor Sync Circuit (Sync. Pickup)	{Turbo vehicles - Only} No distributor sync pick-up signal seen by the logic module.
55	End of Sequence	Indicates the end of diagnostic mode.
88	Start of Sequence	Indicates start of diagnostic mode. NOTE: This code must appear first in the diagnostic mode or fault codes will be inaccurate.

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 STATE
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
R5234097	1987	2.2L TBI M/T FED CAN HI/ALT W/O AC