

## WARRANTY FOR GENUINE MOPAR REMANUFACTURED PARTS, INCLUDING ENGINE ASSEMBLIES AND ABX ANTILOCK BRAKE CONTROLLER

### I. WHAT IS WARRANTED

All genuine MOPAR Remanufactured Parts are identified by an "R" or "JR" prefix.

a. MOPAR Remanufactured Parts, except powertrain parts, sold over the counter or wholesaled, are warranted for 12 months/unlimited miles for parts (exchange) only. MOPAR Remanufactured Parts, except powertrain parts, installed on a Chrysler, Plymouth, Dodge or Jeep vehicle by an authorized Chrysler, Plymouth, Dodge or Jeep dealer are warranted for 12 months/12,000 miles parts and labor, or for 12 months/unlimited miles, parts (exchange) only, whichever coverage is more favorable to the customer.

b. Mopar Remanufactured Powertrain Parts, installed on a Chrysler, Plymouth, Dodge or Jeep vehicle by a Chrysler, Plymouth, Dodge or Jeep dealer, are warranted against defects in materials and workmanship for 36 months or 36,000 miles, whichever occurs first, for parts and labor from the original date of installation. DaimlerChrysler Motors Corporation, Mopar Parts Division, ("MOPAR") will repair or replace, at its option, the failed assembly using new or remanufactured parts. This warranty covers the cost of parts and labor when repairs are completed by an authorized Chrysler, Plymouth, Dodge or Jeep dealer.

The 36-month or 36,000-Mile Limited Warranty for Mopar remanufactured powertrain assemblies covers the following parts and components.

**Gasoline Engines and Cylinder Heads:** cylinder block and all internal parts, cylinder head assemblies, timing gears and timing gear drive belts or chains, oil pumps and rear main oil seals.

**Manual or Automatic Transmissions/Transaxles:** case and all internal parts, torque converter (including ring gear), front pump seals.

c. Mopar Remanufactured Powertrain Parts, sold over the counter, are warranted against defects in materials and workmanship for 36 months or 36,000 miles, whichever occurs first, from the original date of sale by the Chrysler, Plymouth, Dodge or Jeep dealer to an independent repair facility. Repairs, including both parts and labor, can be obtained from any authorized Chrysler, Plymouth, Dodge or Jeep dealer. Alternatively, repairs, including the replacement or repair of the failed assembly and an allowance for labor, may be made by the purchasing independent repair facility. The independent repair facility must obtain authorization for any repair from MOPAR or an authorizing entity designated by MOPAR for this purpose. This repair may include the repair or replacement of the failed assembly at the option of MOPAR for this purpose. This repair may include the repair or replacement of the failed assembly at the option of MOPAR or the authorizing entity.

### II. WHAT IS NOT COVERED

MOPAR Limited Warranties do not cover parts installed on a vehicle used for racing or competition, nor do they cover the repair of any damage or conditions caused by racing or competition.

- Gaskets and seals, except as specifically identified as a covered part or component.
- Water pumps, external parts or components, and any electrical switches or sensors not specifically identified as covered by the 36-Month/36,000-Mile Limited Warranty, are warranted by Mopar's Basic Limited Parts Warranty of 12 months or 12,000 miles.
- Any non-Mopar parts, components or equipment, and the costs of any repairs or adjustments that might be caused by or needed because of the use or installation of non-Mopar parts, equipment, materials or additives.
- Damage caused by improper installation, fire or accident, by abuse, negligence, or misuse of the vehicle; by improper adjustment, alteration or failure to perform maintenance to the powertrain part accordance with the Owner's Manual; by environmental factors or Acts of God.
- Parts installed on a vehicle which has had its odometer or emissions systems tampered with or disconnected, or which has been declared to be a total loss by any insurance company, or is rebuilt after being declared to be a total loss, or is issued a certificate of title indicating that it is designed as "salvage", "junk", "rebuilt" or words of similar import.
- Any incidental or consequential damages connected with the failure of the part under warranty. Such damages include the loss of time, inconvenience, the loss of the use of the vehicle; the cost of rental cars; gasoline, telephone, travel and lodging; the loss of personal or commercial property; the loss of revenue. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the preceding limitations or exclusions may not apply to you.

### III. OTHER TERMS

- To the extent allowed by law, any implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, are limited in duration to the duration of these express warranties. If the assembly is installed on a vehicle used primarily for business or commercial purposes, no implied warranties apply. Some states do not allow limitations on how long implied warranties apply, so the preceding limitations may not apply to you.
- Mopar Remanufactured Parts used in repairs under the DaimlerChrysler New Vehicle Warranty are covered for the balance of the new vehicle warranty only.
- These warranties are the only express warranties made by Mopar Parts. No person, including a Dealer or employee of MOPAR or DaimlerChrysler Corporation, or its affiliated corporations has the authority to vary or change these warranties.
- These limited warranties give you specific legal rights and you may also have other rights which vary from state to state.

# MOPAR REMANUFACTURED 42 RE TRANSMISSION CONTROL MODULE (TCM)

## Removal and Installation Instructions



## Important

Before attempting any repairs you should refer to **42RE TRANSMISSION Powertrain Diagnostic Procedures Manual # 81-699-94019**. This manual is available through your local Chrysler Corporation Dealer.

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"*

## 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.

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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

### NOTICE: BEFORE REPLACING TCM -

Use the DRB Scan Tool to diagnose TCM Function whenever a fault is suspected. **Replace the module ONLY when Scan Tool diagnosis indicates a fault has actually occurred.**

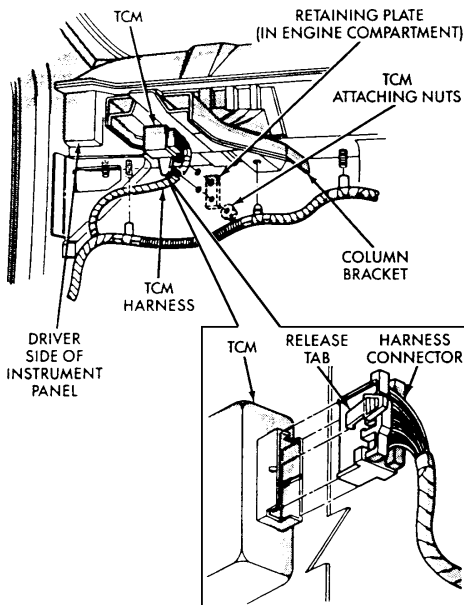


Fig. 1 - TCM Location & Mounting

### TCM REPLACEMENT

The TCM is located on the driver's side of the dash, adjacent to the steering column. The module and harness connector are accessible from under the instrument panel. (Fig. 1)

The module has integral mounting studs for attachment to the dash panel. A retaining plate and two locknuts secure the module to the dash (Fig. 1). Although the module is inside the vehicle, the retaining plate and locknuts are on the engine compartment side of the dash panel.

### TCM REMOVAL

1. In engine compartment, remove module locknuts and remove module retaining plate. **Locknuts and retaining plate are on driver side of engine compartment near brake booster.**
2. In vehicle interior, reach up under instrument panel and slide module out of dash.
3. Work module downward until module harness connector is accessible.
4. Lift release tab on harness connector (Fig. 1). Pull connector out of the module and remove module from vehicle.

## Installation Procedure

1. Carefully align and plug harness connector into module. Verify that connector is fully seated before proceeding.
2. Work module upward into position on dash. Then slide module studs into mounting holes in dash.
3. In engine compartment, install retaining plate on module studs. Then install and tighten locknuts to 14-16 N•m (129-144 in. lbs.) torque.

## 42RE Transmission Diagnosis

Always begin transmission diagnosis by checking the easily accessible items such as fluid level, fluid condition and throttle cable/shift linkage adjustments. A road test will determine if further diagnosis is necessary.

Procedures outlined in this section should be performed in the following sequence to realize the most accurate results:

1. Preliminary Diagnosis
2. Fluid level and condition
3. Leak test (if fluid level is low)
4. Linkage adjustment
5. Overdrive control switch test
6. Road test
7. Stall test
8. Hydraulic pressure test
9. Air pressure test
10. Analyze test results and consult diagnosis charts

### PRELIMINARY DIAGNOSIS

Two basic procedures are required. One procedure for vehicles that are **Driveable** and an alternate procedure for **Disabled** vehicles (will not back up or move forward).

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### **DRIVABLE Vehicle -**

1. Check for TCM fault codes with DRB scan tool, or with fault flash codes at lamp in overdrive OFF switch.
2. Check fluid level and condition.
3. Adjust throttle and gearshift linkage if complaint was based on delayed, erratic or harsh shifts.
4. Road test - note how transmission upshifts, downshifts and engages.
5. Perform stall test if complaint based on sluggish acceleration; or, if an abnormal throttle opening is needed to maintain normal speeds with a properly tuned engine
6. Perform hydraulic pressure test if shift problems were noted during road test.
7. Perform air pressure test to check clutch-based operation.

### **DISABLED Vehicle -**

1. Check fluid level and condition.
2. Check for broken, disconnected, binding throttle valve cable or lever.
3. Check for cracked, leaking cooler lines, or loose, missing pressure point plugs.
4. Raise vehicle, start engine, shift transmission into gear and note the following:
  - A. If propeller shafts turn but wheels do not, problem is with differential or axle shafts.
  - B. If propeller shafts do not turn and transmission is noisy, stop engine. Remove oil pan and check for debris. If pan is clear, remove transmission and check for damaged drive plate, converter, oil pump or input shaft.
  - C. If propeller shafts do not turn and transmission is not noisy, perform hydraulic pressure test to determine if problem is of a hydraulic or mechanical origin.

**See Page 5 for FAULT CODE Information**

**See Pages 6-7 for UNIT WIRING DIAGRAM**

## **Obtaining Fault Codes**

Diagnostic trouble flash codes are provided for diagnosis purposes. The lamp in the overdrive OFF switch is used to signal the various flash codes.

The flash codes and type of fault indicated are outlined in the flash code chart which appears below. To view flash codes, proceed as follows:

- A. Turn ignition key on and off three times. Then, leave overdrive OFF switch in normal overdrive (ON) position.
- B. Immediately begin counting number of flashes displayed by overdrive OFF switch indicator lamp.
- C. Flash codes will correspond to powertrain control module in duration and spacing.
- D. A code **55** identifies *end of flash code transmission*.

## **Fault Codes**

<u>CODE</u>	<u>FAULT DESCRIPTION</u>
11	Engine RPM input
12	Output shaft sensor input
13	Vehicle speed input
14	Governor pressure sensor input
15	Throttle position sensor input
16	Transmission fluid temperature input
17	Overdrive override (control) switch input
18	System voltage
19	Internal fault in module
21	Governor pressure solenoid output
22	Overdrive solenoid output
23	Converter clutch solenoid output
24	Overdrive override (control switch) lamp output
25	Internal fault in module
26	Governor pressure sensor offset drift
55	End of code transmission

## **Part Number Application**

R6027218	1993-94 Jeep ZJ 4.0L	(with 42RE Trans.)
R6027564	1993-95 Jeep ZJ 4.0L	(with 42RE Trans.)

# 42 RE TCM Unit Wiring Diagram

