CENTRAL TIMER MODULE

Central Timer Module (CTM) communicates with other modules over Programmable Communication Interface (PCI) bus network. PCI bus is a single wire multiplexed network capable of supporting binary encoded messages shared between multiple modules. Modules are wired in parallel. Messages are addressed to only be recognized by the module(s) in which the message was intended. This reduces the complexity of vehicle wiring and size of wiring harness. CTM fault messages are accessed through 16-pin Data Link Connector (DLC) using Chrysler's Diagnostic Readout Box (DRBIII(R)) scan tool, or generic scan tool. CTM controls and supports the following features (if equipped).

- Battery Saver Functions For Interior & Exterior Lighting
- Cargo Lighting
- Central Locking & Vehicle Theft Alarm (VTSS)
- Chime Warning
- Courtesy & Dome Lighting
- Dome Lighting Defeat
- Door Ajar Switch Status
- Door Lock Inhibit
- Driver Door Unlock
- Enhanced Accident Response
- Fog Lights
- Headlights & Headlight Time Delay
- Intermittent & Speed Sensitive Intermittent Wiper Controls
- Optical Horn
- Parking Lights
- Power Door Locks & Remote Keyless Entry (RKE)
- Remote Radio
- Rolling (Automatic) Door Locks
NOTE: After making any repairs, perform BODY VERIFICATION TEST under VERIFICATION TESTS.

1. Connect scan tool to Data Link Connector (DLC), under lower left side of instrument panel. Turn ignition on. Using scan tool, attempt to communicate with Air Bag Control Module (ACM) and Controller Anti-lock Brake (CAB) module. If scan tool is able to identify or communicate with ACM and CAB, go to next step. If scan tool is not able to identify or communicate with ACM and/or CAB, perform appropriate DTC or symptom test. See DIAGNOSTIC TROUBLE CODE IDENTIFICATION and SYMPTOM IDENTIFICATION tables under SELF-DIAGNOSTIC SYSTEM.

2. Turn ignition off. Disconnect Gray 26-pin Central Timer Module (CTM) connector C1. CTM is located behind left side kick panel. Ensure interior lights are off. Using DVOM, measure resistance between ground and Gray 26-pin CTM connector C1 terminals No. 1 and 16 (Black/Light Green wires) and No. 2 (Black wire). See Fig. 5. If resistance is 10 ohms or less on each ground circuit, go to next step. If resistance is more than 10 ohms on any ground circuit, check for an open between appropriate CTM connector terminal and ground. See GROUND DISTRIBUTION article in WIRING DIAGRAMS. Repair as necessary.

3. Disconnect Gray 12-pin CTM connector C3. Using test light connected to ground, probe Gray 12-pin CTM connector C3 terminals No. 1 (Red/Tan wire) and No. 6 (Red/Light Green wire). See Fig. 8. If test light illuminates on both circuits, go to next step. If test light does not illuminate on both circuits, check for open in appropriate circuit between power distribution center and CTM. See POWER DISTRIBUTION article in WIRING DIAGRAMS. Repair as necessary.

4. Turn ignition on. Using scan tool, ensure there is PCI BUS communication with other modules (besides the ACM and CAB). If scan tool is able to identify or communicate with all modules, go to next step. If scan tool is not able to identify or communicate with all modules, refer to appropriate communications symptom for diagnosis. See DIAGNOSTIC TROUBLE CODE IDENTIFICATION table under SELF-DIAGNOSTIC SYSTEM.

5. Connect Scope Input Cable (CH7058) to channel one connector on scan tool. Connect Cable-To-Probe Adapter (CH7062) and Black and Red test probes to scope input cable. Connect Black test probe to ground. Connect Red test probe to PCI BUS circuit at Gray 26-pin CTM connector C1 terminal No. 10 (Violet/Yellow wire).

6. Using scan tool, select PEP MODULE TOOLS, LAB SCOPE, LIVE DATA. Select 12 VOLT SQUARE WAVE. Press F2 for SCOPE. Press F2 and use DOWN arrow to set voltage scale to 20 volts. Press F2 again when complete. Turn ignition on. If reading on lab scope toggles between zero and 7.5 volts, go to next step. If reading on lab scope does not toggle between zero and 7.5 volts, repair open in PCI BUS circuit (Violet/Yellow wire).

7. Replace CTM. See CENTRAL TIMER MODULE under REMOVAL & INSTALLATION.
Central Timer Module: Testing and Inspection
Non-Trouble Code Procedures

For additional information on the Central Timer Module, refer to Powertrain Management / Computers and Control Systems / Body Control Module.

The hard wired inputs to and outputs from the Central Timer Module (CTM) may be diagnosed and tested using conventional diagnostic tools and methods.

However, conventional diagnostic methods may not prove conclusive in the diagnosis of the CTM. In order to obtain conclusive testing of the CTM, the Programmable Communications Interface PCI data bus network and all of the electronic modules that provide inputs to or receive outputs from the CTM must also be checked. The most reliable, efficient, and accurate means to diagnose the CTM, the PCI data bus network, and the electronic modules that provide inputs to or receive outputs from the CTM requires the use of a DRB III scan tool. Refer to the appropriate diagnostic information. The DRB III scan tool can provide confirmation that the PCI data bus network is functional, that all of the electronic modules are sending and receiving the proper messages over the PCI data bus, and that the CTM is receiving the proper hard wired inputs and responding with the proper hard wired outputs needed to perform its many functions.

**WARNING:** ON VEHICLES EQUIPPED WITH AIRBAGS, DISABLE THE AIRBAG SYSTEM BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, SEAT BELT TENSIONER, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. DISCONNECT AND ISOLATE THE BATTERY NEGATIVE (GROUND) CABLE, THEN WAIT TWO MINUTES FOR THE AIRBAG SYSTEM CAPACITOR TO DISCHARGE BEFORE PERFORMING FURTHER DIAGNOSIS OR SERVICE. THIS IS THE ONLY SURE WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

**NOTE:** The following tests may not prove conclusive in the diagnosis of the Central Timer Module (CTM). The most reliable, efficient, and accurate means to diagnose the CTM requires the use of a DRB III scan tool. Refer to the appropriate diagnostic information.

1. Check the fused B(+) fuses (Fuse 3 - 20 ampere, and Fuse 12 - 20 ampere) in the Power Distribution Center (PDC). If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.
2. Check for battery voltage at the fused B(+) fuses (Fuse 3 - 20 ampere, and Fuse 12 - 20 ampere) in the PDC. If OK, go to Step 3. If not OK, repair the open B(+) circuit between the PDC and the battery as required.
3. Disconnect and isolate the battery negative cable. Disconnect the instrument panel wire harness connector (Connector C3) for the CTM from the CTM connector receptacle. Reconnect the battery negative cable. Check for battery voltage at each of the two fused B(+) circuit cavities of the instrument panel wire harness connector (Connector C3) for the CTM. If OK, disconnect and isolate the battery negative cable, reconnect the instrument panel wire harness connector (Connector C3) for the CTM to the CTM connector receptacle, and go to Step 4. If not OK, repair the open fused B(+) circuit(s) between the CTM and the PDC as required.
4. Check the fused ignition switch output (run-start) fuse (Fuse 11 - 10 ampere) and the fused ignition switch output (run-acc) fuse (Fuse 5 - 20 ampere) in the Junction Block (JB). If OK, go to Step 5. If not OK, repair the shorted circuit or component as required and replace the faulty fuse(s).
5. Reconnect the battery negative cable. Turn the ignition switch to the ON position. Check for battery voltage at the fused ignition switch output (run-start) fuse (Fuse 11 - 10 ampere) and the fused ignition switch output (run-acc) fuse (Fuse 5 - 20 ampere) in the JB. If OK, go to Step 6. If not OK, repair the open fused ignition switch output (run-start) circuit or fused ignition switch output (run-acc) circuit between the JB and the ignition switch as required.
6. Turn the ignition switch to the OFF position. Disconnect and isolate the battery negative cable. Disconnect the instrument panel wire harness connector (Connector C1) for the CTM from the CTM connector receptacle. Reconnect the battery negative cable. Turn the ignition switch to the ON position. Check for battery voltage at the fused ignition switch output (run-start) circuit cavity and the fused ignition switch output (run-acc) cavity of the instrument panel wire harness connector (Connector C1) for the CTM. If OK, go to Step 7. If not OK, repair the open fused ignition switch output (run-start) circuit or fused ignition switch output (run-acc) circuit between the CTM and the JB as required.
7. Turn the ignition switch to the OFF position. Check for continuity between each of the three ground circuits in the instrument panel wire harness connector (Connector C1) for the CTM and a good ground. In each case there should be continuity. If OK, use a DRB III scan tool to perform further diagnosis of the CTM. Refer to the appropriate diagnostic information. If not OK, repair the open ground circuit(s) to ground (G207 or G208) as required.