MAINTENANCE MATTERS — Fast lessons on speedometers

Remember when a speedometer was just a speedometer? Well, times have changed. If you're in the market for new MCI coach, you'll notice today's speedometers are fast becoming sophisticated message centers where critical information is displayed. This article will show you how to operate the instrument and retrieve important data.

These are the features you can access with your speedometer if you have an MCI coach manufactured since the introduction of the EPA-compliant clean diesel engines:

- Standard Display Message
- Odometer
- Trip Meters
- Hour Meter
- Vehicle Data
- Manual and Auto Test Modes
- Diagnostic Codes
- Warnings
- Unit Set Up

**Speedometer Head Operation**

Important coach information can be viewed in the window located at the bottom of the speedometer head. The two buttons, "Mode" (left button) and "Set" (right button), will scroll through the screens. The starting screen can be accessed any time by pressing and holding the mode button for 3 seconds.

Operators can choose to display either odometer, speed or engine RPM in the information window while coach is in operation by pressing the "Set" button. The selected display will remain in memory after the coach has been shut down and restarted. Vehicle mileage is stored in the speedometer head. If the speedometer head is to be changed, the new one must be ordered and programmed with the current vehicle mileage by request at the time of order.

**Trip Meters**

There are two separate trip meters. From the starting screen, press the Mode button once for Trip 1 and twice for Trip 2. Press and hold "Set" to clear.

**Hour Meter**

The hour meter reads the engine hours from the engine ECM. From the starting screen, press the Mode button 3 times to display.

**Vehicle Data**

The vehicle data screen displays information gathered from various sensors on the vehicle. They include:

- SPEEDOMETER (MPH or KPH)
- TACHOMETER (RPM)
- ENGINE OIL PRESSURE
- WATER TEMPERATURE
- OIL TEMPERATURE
- TRANSMISSION TEMPERATURE
- FUEL GUAGE
- VOLTMETER

To access the vehicle data screen from the starting screen, press the Mode button 4 times; then press "Set." The display will show SPEED on the first screen. Press the Mode button until the desired input is shown, then press the set button to display its value.

**Diagnostics – Automatic Test**

To perform the test automatically, press the Mode button 5 times from the start screen to get to the diagnostics screen. Press the Set button once to access the auto screen. Press "Set" again to start the automatic test of the gauges and tachometers.

The entire instrument panel will go through a complete diagnostic routine in which it will
test the minimum, mid range and maximum function of all the gauges, as well as test all of the LEDs and telltale in the instrument panel. It will continue this test until another mode is selected.

**Code Retrieval**
The speedometer is also capable of showing diagnostic messages. To access them:

1. Press the Mode button 5 times from the starting screen to display the diagnostic screen.
2. Press the Set button once to display the auto screen.
3. Press the Mode button 2 times to display the faults screen.
4. Press the Set button once to display the code, source and FMI. The screen will keep cycling through the code, source and FMI until the Mode button is pressed, taking you to the next set of fault codes or out of the main faults screen.
5. Press the Mode button once to display the next set of faults. Note: If there are no more faults, it will return to the beginning fault screen.

Some of the information that will be displayed in the window for engine and transmission are:

- **J 1939 messages**
  - Parameter Group Number (example P4006)
  - SRC – Source 0 for engine 3 for transmission
  - FMI – Failure Mode Indicator
- **J 1708 messages** (repeat of J 1939)
  - SID (example 526)
  - MID (example 128)
  - FMI (example 3)
- **The SRC (Source) screen indicates which vehicle system the codes belong to:**
  - 0 – Engine Controller
  - 3 – Transmission Controller
  - 5 – Shift Selector
  - 11 – ABS Controller
  - 15 – Engine Brakes
  - 17 – Cruise Control
  - 23 – Instrument Cluster
  - 33 – Muxplex Modules
  - 40 – Cab Display
  - 42 – Adaptive Cruise Control
  - 43 – On Board Diagnostic Unit
  - 49 – Cab Controller
  - 51 – Smart Tire
  - 59 – Transmission Display

**Warning Indicators**
To access these, press the Mode button 6 times from the starting screen then press "Set" to cycle through the warnings if present. Warning indicators will also be shown at the initial startup of the coach if present. Push the Set button to toggle through them.

The warning screen will not show engine and transmission trouble codes. Some of the warnings that will be displayed are:

- BAG LTS (Baggage lights on)
- AIR LOW (System air pressure low)
- TAG AXL (Tag axle unloaded)
- REAR (Rear raise active)

A fire alarm warning, not to be confused with the optional Amerex system alarm, can also be displayed. This warning is triggered by the standard alarm system. This warning will not have any other effect on coach operation.

**Set Up**
Use this function to switch between metric and English units.

1. Press the Mode button 7 times from the starting screen to access the SETUP screen.
2. Press the Set button once to display the SETUNIT screen.
3. Press the Set button one more time to display the current setting.
4. Press the Mode button to switch from one setting to the other.

Still not up to speed on your instrumentation? Refer to your operation manual or contact your MCI Support Team or MCI’s Technical Call Center for more information.

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