

NB: Check Engine Light← [NB: Introduction](#)**NB1 CHECK ENGINE LIGHT FAULT**

- For E-Series and F-650/750, GO to [NB3](#) .
- If any KOEO On-Demand or Continuous memory faults are present, service them before proceeding.

Is the **CHECK ENGINE** light always on?

Yes	No
REFER to the Instrument Cluster section of the Workshop Manual to diagnose cluster. RESTORE vehicle.	GO to NB2 .

NB2 CHECK ENGINE LIGHT NEVER ON

- Disconnect MAP sensor to force CHECK ENGINE light to illuminate.
- Cycle key on and off twice waiting at least 10 seconds between cycles.

Is the **CHECK ENGINE** light on?

Yes	No
System functioning correctly. RESTORE vehicle.	REFER to the Instrument Cluster section of the Workshop Manual to diagnose instrument cluster. RESTORE vehicle and RETEST.

NB3 CHECK ENGINE LIGHT FAULT

- If any KOEO On-Demand or Continuous Memory Diagnostic Trouble Codes are present, service before proceeding.

Is **CHECK ENGINE** light always on?

Yes	No
GO to NB4 .	GO to NB5 .

NB4 CHECK ENGINE LIGHT ALWAYS ON: CHECK CIRCUIT 658 (PK/LG) FOR SHORTS TO GROUND

- Disconnect PCM harness connector.
- Key on, engine off.

Is the **CHECK ENGINE** light on?

Yes	No

REPAIR short to ground in circuit 658 (PK/LG).
RESTORE system. CLEAR DTCs and RETEST.

INSTALL a new PCM. RESTORE system. CLEAR
DTCs and RETEST.

NB5 CHECK ENGINE LIGHT NEVER ON

- Disconnect manifold absolute pressure (MAP) sensor.
- Key on, engine running.

Is the **CHECK ENGINE** light on?

Yes	No
System working OK. RESTORE system. CLEAR DTCs and RETEST.	RECONNECT MAP sensor. GO to NB6 .

NB6 CHECK IGNITION FEED CIRCUIT

- Key on, engine off.
- Measure voltage between powering side of fuse in the IP fuse panel and known good ground.

Is **B+** present?

Yes	No
GO to NB7 .	REPAIR open in ignition feed circuit 640 (RD/YE) or ignition switch. RESTORE system. CLEAR DTCs and RETEST.

NB7 CHECK FUSE

- Remove fuse, inspect.

Is the fuse OK?

Yes	No
REINSTALL fuse. GO to NB8 .	REPAIR short to ground to circuit 640 (RD/YE). INSTALL a new fuse. RESTORE system. CLEAR DTCs and RETEST.

NB8 CHECK CIRCUIT 640 (RD/YE) FOR OPEN

- Remove fuse.
- Remove check engine light bulb.
- Measure resistance between nonpowering side of fuse circuit 640 (RD/YE) and powering side of check engine light bulb socket.

Is the resistance less than 5 ohms?

Yes	No
Circuit 640 (RD/YE) OK. GO to NB9 .	REPAIR open in circuit 640 (RD/YE). REINSTALL bulb.

RESTORE system. CLEAR DTCs and RETEST.
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NB9 TEST CHECK ENGINE LIGHT BULB

- Bench test bulb by applying B+ to one side and B- to the other.

Does the bulb illuminate?

Yes	No
GO to NB10 .	INSTALL a new bulb. RESTORE system. CLEAR DTCs and RETEST.

NB10 CHECK CIRCUIT 658 (PK/LG)

- Install breakout box; leave PCM disconnected.
- Measure resistance between bulb socket circuit 658 (PK/LG) and PCM test pin 2.

Is the resistance less than 5 ohms?

Yes	No
Circuit 658 (PK/LG) is OK. INSTALL a new PCM. RESTORE system. CLEAR DTCs and RETEST.	REPAIR open in circuit 658 (PK/LG). RESTORE system. CLEAR DTCs and RETEST.
