



Countries: AUSTRALIA, BRAZIL, CANADA, UNITED STATES, MEXICO, PUERTO RICO, SOUTH AFRICA
Availability: ISIS, FleetISIS
Major System: ENGINES
Current Language: English
Other Languages: [Français](#), [Español](#),
Viewed: 20098

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Coding Information

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Title: International Engine Won't Crank

Applies To: All International engines

DESCRIPTION

International engines have a Crank Inhibit circuit. The purpose of this circuit is to ensure that the engine cannot be started while the transmission is in gear.

SYMPTOMS

- No crank no start
- There will probably not be any DTC's

TROUBLESHOOTING

NOTE:

Do not replace the ESC. The ESC has nothing to do with the engine starting and running. A truck will start and run with the ESC completely removed.

NOTE:

See below for MaxxForce Engines

Here are some quick checks to determine causes of a no-crank condition.

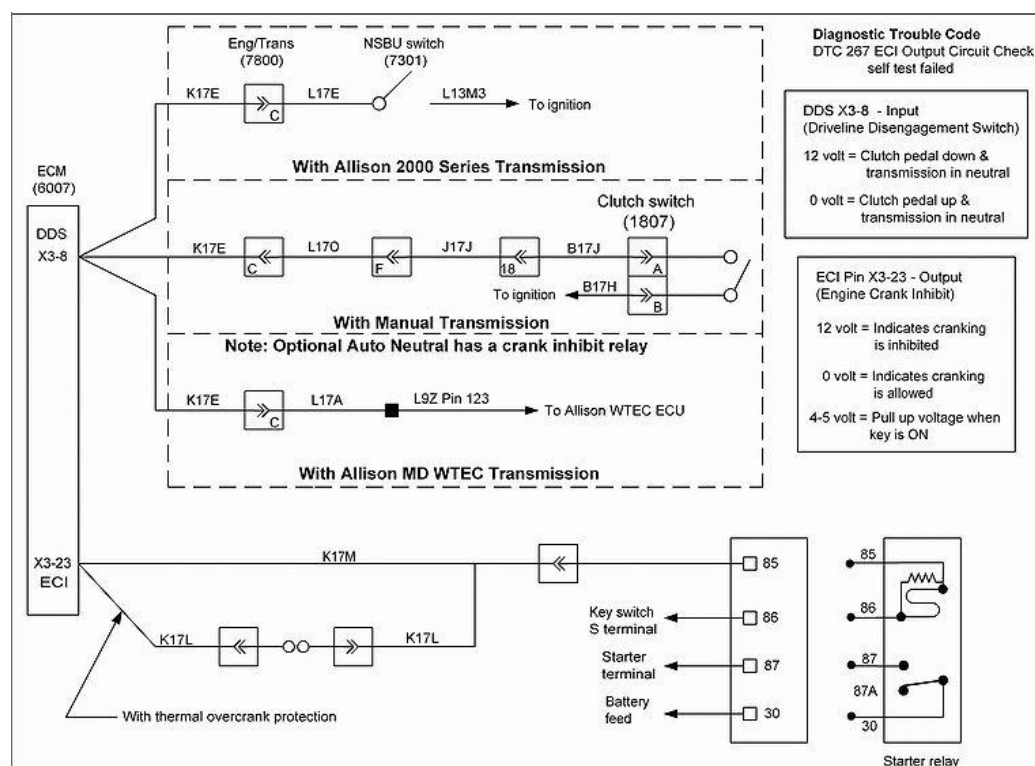
1. Place transmission in neutral and set parking brake.
2. For test purposes ground pin 85 on the start relay.
3. Turn the key switch to the start position, if engine does not crank check wiring from key switch and all wiring from starter to start relay.
4. If engine cranks, install the breakout box on the X3 connector (6007 connector for CEC).
5. With a test lead ground X3 pin 23 (pin 46 for CEC modules) and retest for engine crank. If the engine cranks, but does not start, you need to check the powers and grounds to the ECM. It's probably not powering up.
6. If the engine does not crank wiring must be repaired between X3 pin 23 (pin 46 for CEC modules) on the engine ECM to pin 85 at the crank relay. Dont forget the thermal over crank protection circuit (if equipped).
7. If engine cranks, remove test lead from X3 pin 23 (pin 46 for CEC) and apply battery voltage to X3 pin 8 (pin 26 for CEC).
8. If engine cranks, problem is due to loss of neutral signal or clutch switch to X3 pin 8 (pin 26 for CEC), refer to [S08285](#), [S082852](#), [S082852A](#), [S082853](#), and [S082854](#) for further troubleshooting.
9. If engine does not crank, engine ECM could be defective (verify for proper engine programming by contacting Tech Service Vehicle programming at 1-800-336-4500).

NOTE:

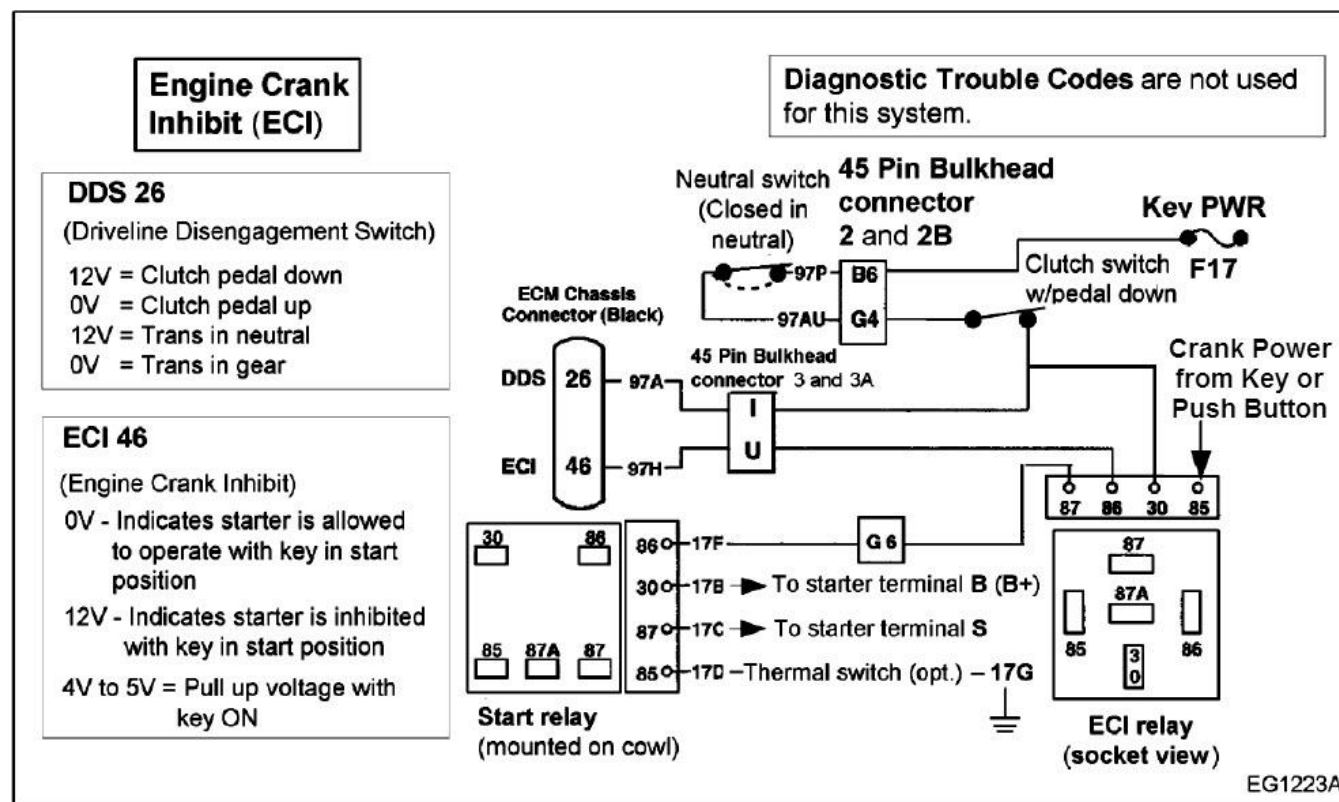
For 3 Box Engines, see bottom of article.

CIRCUIT DIAGRAMS

Engine Crank Inhibit DLCII



Engine Crank Inhibit DLC



3 Box Engines

ECM (**Connector 379**) Checks with Breakout Box installed, key On, Xmsn in Neutral, Clutch Pedal depressed

Starter Relay Connector Checks (**Connector 387**) Key On, Transmission in Neutral and Clutch Depressed

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