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Coding Information

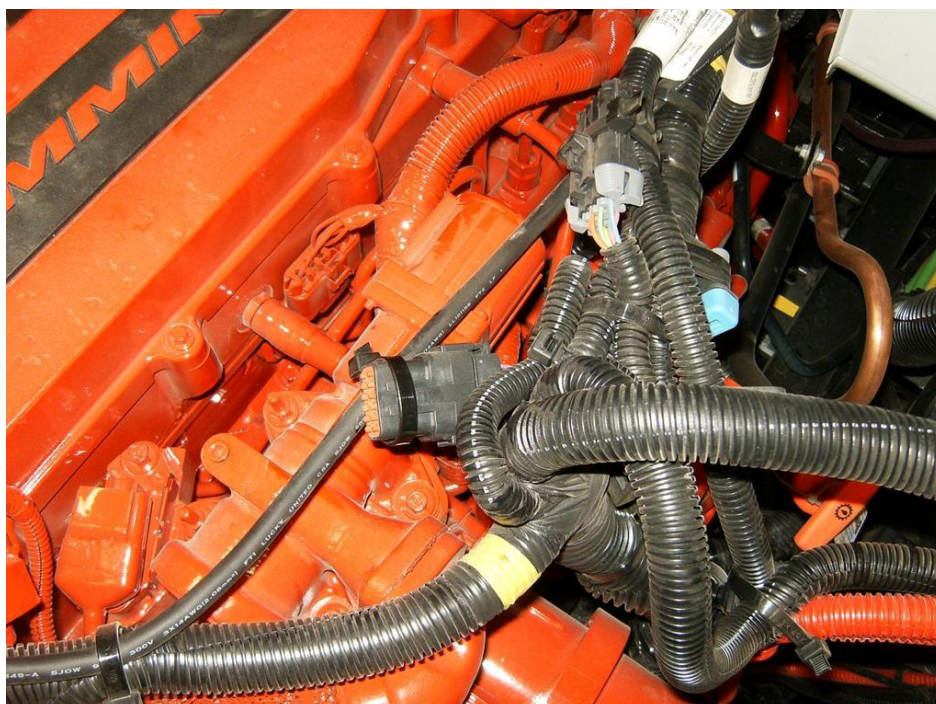
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Title: Cummins ISB Engine Remote Engine Speed Control with Feature 12XAT

Applies To: Cummins ISB engines with feature code 12XAT

DESCRIPTION

Feature code 12XAT provides an engine interface connector (7207) to facilitate remote engine speed control with Cummins ISB engines.



Connector 7207 Location (Center of picture)

PIN TO CIRCUIT CROSS REFERENCE

7207 cavity	Circuit Number	ECM 6000 Pin	Signal Function
2	KR46A	19	Cruise Control/PTO Resume Switch
4	KR46B	12	Cruise Control/PTO Set Switch
5	KR97AR	30	Tachometer Signal
6	KC9C/KC9A	62	Signal Return
7	KP6C/KP6A	8	5 Volt Supply
8	KR99A	63	Remote Pedal Signal
10	KR99B	90	Control PTO On/Off Switch
11	KR99C	94	Remote PTO On/Off Switch
12	KR99F	67	Remote Accelerator On/Off Switch

SERVICE PART INFORMATION

1. Connector 7207 Terminal - 2503295C1

TACHOMETER SIGNAL

Pin 5 provides the tachometer signal from the ECM.

BASIC REMOTE ENGINE SPEED CONTROL

There are 3 basic engine speed control configurations that use these circuits, Remote PTO, Remote Station PTO, and Remote Accelerator.

1. Remote PTO uses a ground input on 1 circuit to control up to 5 preset speeds.
 - a. If the "Remote PTO" parameter is enabled, with INSITE, using a switch to apply a ground, from pin 6, to pin 11, of the 7207 connector, will make the engine ramp to the first preset.
 - b. As determined by the value of the "Remote PTO Number of Speed Settings" parameter, set with INSITE, each successive toggle of the switch will increase the ramp to the next programmed preset speed.
 - c. Flipping the switch off, therefore removing the ground, will return the engine speed to idle.
2. Remote Station PTO uses ground inputs on several circuits to control up to 3 preset speeds or provide variable ramping. This mimics the cruise switch functionality in the cab.

- a. If the "Remote Station PTO" parameter is enabled, with INSITE, using a switch to apply a ground, from pin 6, to pin 11, of the 7207 connector, will enable the remote engine speed control.
- b. Using a 3 position center stable switch to apply a momentary ground to pins 2 or 4, of the 7207 connector, will make the engine ramp up or down.
- c. The engine ramping will either step through the three presets or ramp variably, depending on the parameters settings, configured with INSITE.

3. Remote Accelerator

- a. If the "Remote Accelerator" parameter is enabled, with INSITE, using a switch to apply a ground, from pin 6, to pin 12, of the 7207connector, will enable the remote accelerator.
- b. The remote pedal or potentiometer has to be connected to pins 6, 7 and 8, in the appropriate configuration, to provide a varying voltage, to pin 8, that increases as the pedal is pressed or the potentiometer is turned.
- c. If the remote accelerator is enabled, by the signal at pin 12, the engine speed should respond to the increase in voltage at pin 8.

OTHER RESOURCES

Refer to Cummins manual, CM2350 Electronic Subsystem Technical Package - Body Builders Guide AEB 15.142, for additional circuit connection and ECM programming requirements.

For the typical ranges and Cummins default settings, of these programmable parameters, please contact your Cummins Application Engineer or refer to the OEM Programmable Parameters Table for this engine.


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