

# InPower Technical Bulletin

**Wiring procedure to upgrade InPower Model ETM65, ETM67A and ETM68A electronic throttle installation for cold weather operation or to prevent speed stability problems above 1450 rpm.**

**Vehicle Type: 2006 & 2007 Model Year Chevy/GMC with 6.6 L Duramax diesel engine on 2500, 3500, 4500, 5500 chassis, and G/H vans.**

## Introduction

Users have reported problems on InPower ETM65 electronic throttle installations in that the fast idle would not initiate when the outside air temperature was about 15 degrees F or below. This procedure adds a wire between the ETM65 and the GM PTO/Fast Idle circuit. This causes the GM computer to allow fast idle operation in cold weather conditions.

This wiring procedure will vary depending on the chassis type.

## Wiring Procedure

Determine the chassis type. If the chassis is a C4500 or C5500, go to *Procedure A*. If the vehicle is a 2006 or 2007 G/H van, go to *Procedure B*. If the chassis is a C2500 or C3500, go to *Procedure C*.

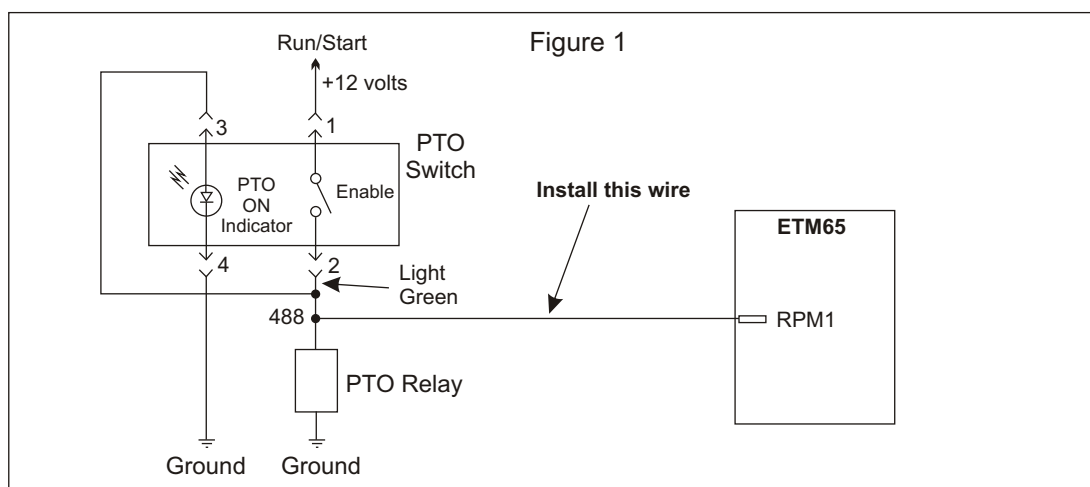
### Procedure A

First, determine if the vehicle is equipped with a PTO Switch or High Idle Switch (located on dash). If a switch exists, go to *Procedure A1*. If a switch does not exist, go to *Procedure A2*.

#### Procedure A1

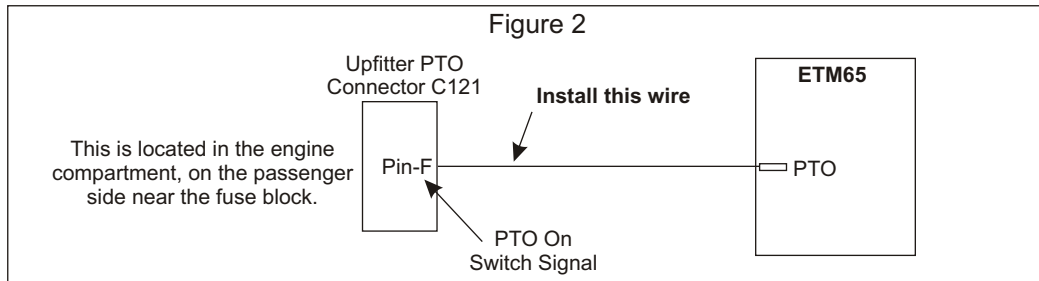
This procedure requires installing a wire from the RPM1 terminal on the ETM65 to the output wire of the PTO Switch (or High Idle Switch) located on the dash.

Remove the switch and identify the wire that goes from the switch Enable contact to the PTO relay coil. This should be a light green wire connected to pin-2 on the switch. This wire will have +12 volts on it when the ignition switch is in the Run/Start position and the PTO Switch (or High Idle Switch) is in the PTO Enable (High Idle On) position.



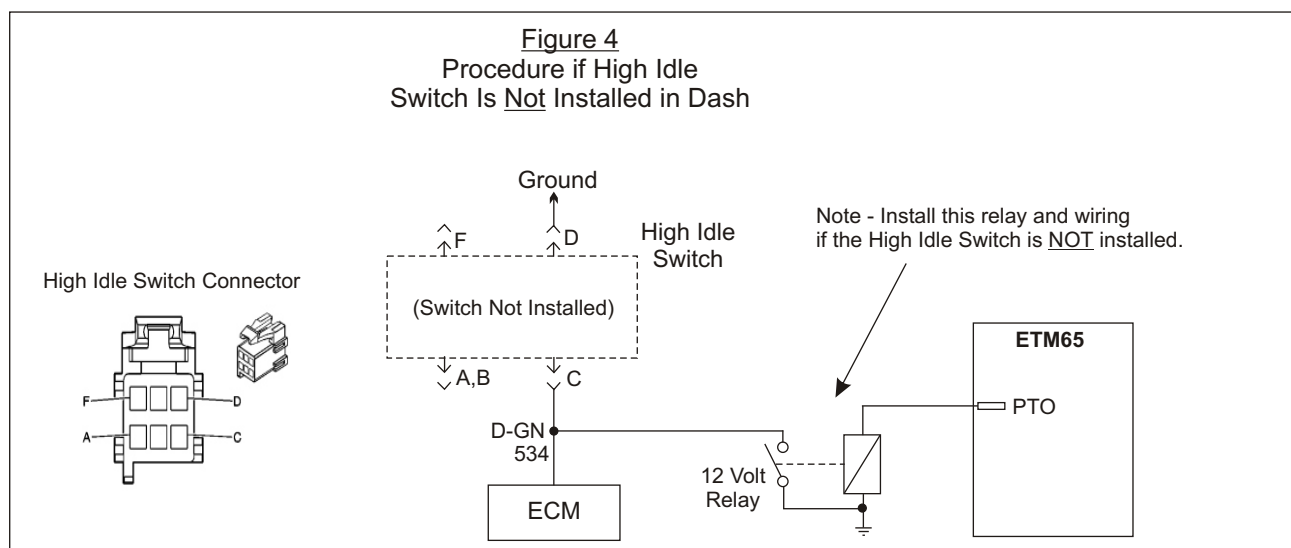
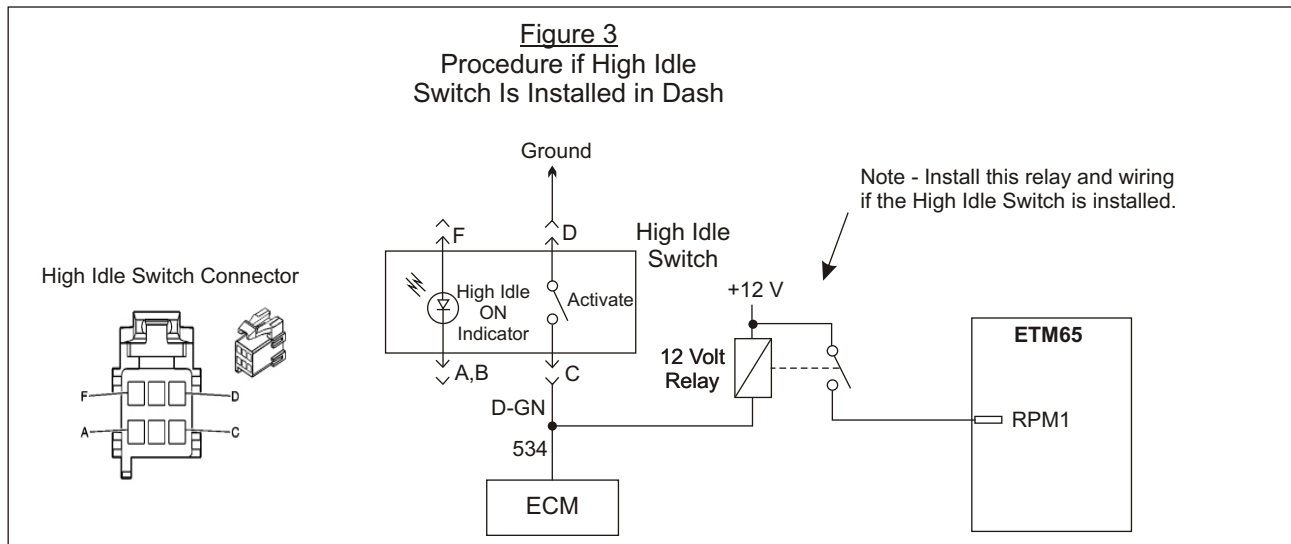
## Procedure A2

This procedure requires installing a wire from the ETM65 PTO terminal to the Upfitter PTO Connector (C121) that is located in the engine compartment. The wire will connect to pin-F ("PTO On Switch Signal").



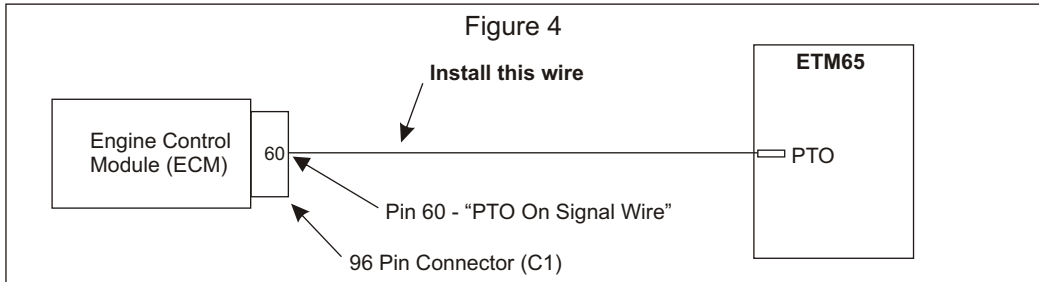
## Procedure B

This procedure is for the 2006 & 2007 G/H vans and requires installing a wire from the ETM65 to the harness connector behind the dash that is used for the High Idle Switch. The wire from the dash connector will be installed on different terminals on the ETM65 depending on if the High Idle Switch is installed or not. See Figures 3 and Figure 4 for the appropriate wiring.



### Procedure C

This procedure is for the 2500 and 3500 chassis. It requires installing a wire from the ETM65 PTO terminal to pin-60 on the GM Engine Control Module (ECM). Pin-60 is "PTO On Switch Signal" and is wire #488 (LT-GRN). Due to the fact that GM did not install wire #488 in the ECM wire harness on the 2500 and 3500 chassis, it is necessary to install a wire with a crimped terminal that inserts into pin-60 of the ECM connector. The GM procedure for installing this wire is as follows.



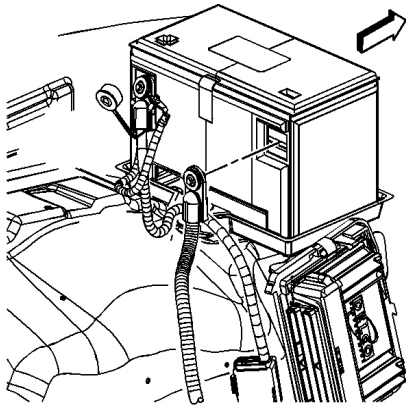
### Tools and Parts Required

Crimper: Bosch p/n 1 928 498 213  
Terminal: Bosch p/n 1 928 498 135  
GM p/n 12595687  
Delphi p/n 15438364

1/4 inch Female Blade Terminal  
Wire rated for under-hood temperatures  
Convuluted tubing or braided mesh wire covering  
Small flat bladed tool

Note - The terminal is available at any GM dealer in their *Terminal Repair Kit*, J-38125, Tray 19.

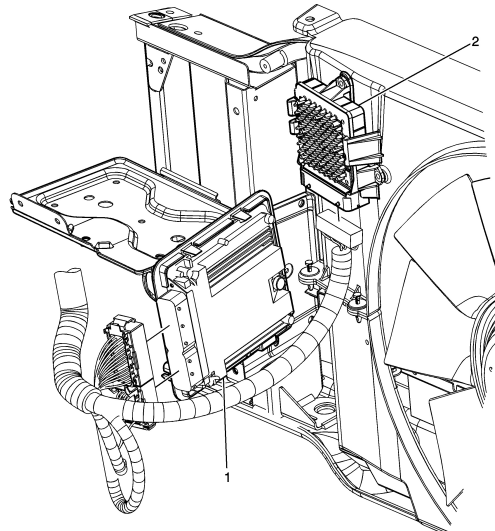
### Battery Disconnect Procedure



1. Turn off all the lamps and accessories.
2. Turn the ignition OFF.
3. Loosen the negative battery cable bolt.
4. Remove the negative battery cable.

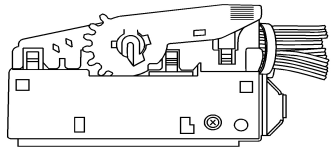
### Connector Removal Procedure

#### Left Front of the Engine Compartment

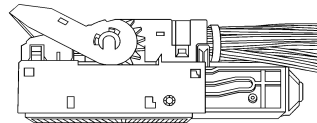


- (1) Engine Control Module (ECM)  
(2) Transmission Control Module (TCM)

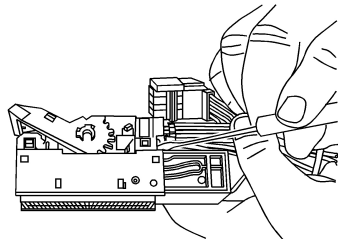
5. Locate Engine Control Module (ECM).



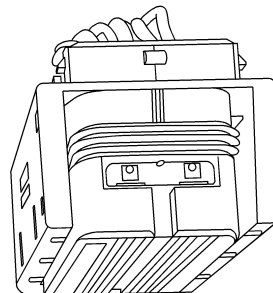
6. Locate the assist lever on the top of the 96 pin connector C1. Move the assist lever to the forward position.



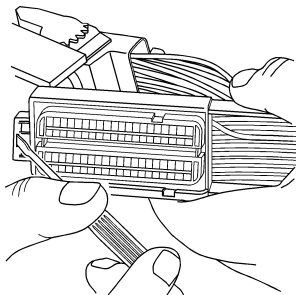
7. Disconnect the connector from the component.



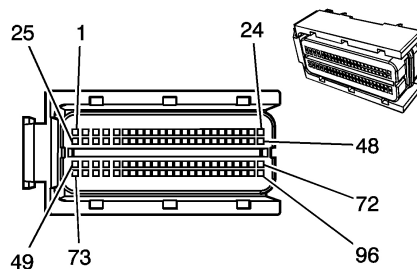
8. Locate the dress cover locking tabs at the corners of the connector. Use a small flat-blade tool to release the locking tabs and remove the dress cover.



9. The terminal positive assurance (TPA) is located in the front of the connector



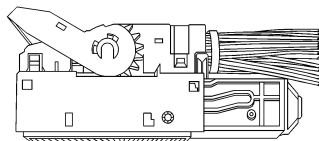
10. Use a small flat-blade tool to remove TPA from the connector.



11. Crimp terminal 1 928 498 135 to wire rated for under-hood temperatures using crimper 1 928 498 213 and insert terminal into connector C1 cavity #60.

#### Reassemble Connector

#### Wire Routing



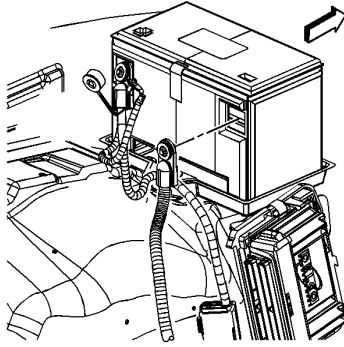
13. Cover wire with convoluted tubing or braided mesh.
14. Route wire through firewall using an insulation grommet or other sealing method.
15. Connect wire to ETM65 PTO terminal using ¼ inch blade terminal.

12. Reassemble connector and attach to ECM following the steps listed above in reverse order.

**Important:** Ensure that the dress cover and connector body are both in the released position before reassembling. Failure to do so may cause damage to the connector and component.

## Battery Connection Procedure

**Important:** Clean any existing corrosion from the battery terminal bolt flange and battery cable end.



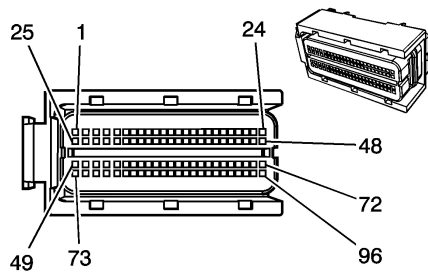
1. Install the negative battery cable.
2. Tighten the negative battery cable bolt.

### Tighten

Tighten the bolt to 17 N-m (13 lb ft).

## Engine Control Module Connector End Views

### Engine Control Module (ECM) Connector C1



### Connector Part Information

- OEM: 15438366
- Service: 89046933
- Description: 96-Way F Sealed (BK)

### Terminal Part Information

- Terminal/Tray: 1928498135/19 (Terminal Repair Kit J-38125, Tray 19)
- Crimper: 1 928 498 213
- Disassembly Tool: 1 928 498 218
- Core/Insulation Crimp: Pins 1-3, 8, 9, 25-27, 31, 49-51, 60, 73-75, 77, 84 - See Terminal Repair Kit
- Core/Insulation Crimp: Pins 6, 7, 10-13, 15, 18- 21, 23, 24, 30, 32, 34, 37-42, 44, 47, 48, 53, 55-58, 61-63, 65-68, 71, 72, 76, 78, 79, 82, 85, 86, 88, 92, 96 - P/P
- Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)