

E-IDLE750

2018-2022 RAM 1500 Classic*

2018 RAM 2500-5500

Contact InterMotive for additional vehicle applications

*A RAM 1500 Classic will have a '6' or '7' in the 6th position of the VIN

Not for Vehicles with Start/Stop Ignition Switches



Introduction

Idle-Lock is an anti-theft system that allows the engine to idle with the key removed from the ignition and the shifter locked in park (**shift lock not available on vehicle's with rotary shifter**). The system is activated by pressing a momentary enable switch and removing the key within three seconds. If the Service Brake is pressed while in Idle-Lock mode the horn will sound as an alarm. The system also provides a shift lock input that can be used as an interlock for the rear door (**not available on vehicle's with rotary shifter**).

Installation Instructions

Disconnect vehicle battery before proceeding with installation



WARNING

Disconnect the battery to prevent setting a check engine light.

It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers. It is important to avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Also avoid radio frequency energy from antenna's or inverters next to the module. Finally, avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

IDLE750 Module

Remove the lower dash panel below the steering column and find a suitable location to mount the module. Locate the module in an area away from excessive heat sources (engine, heater ducts, etc.). Ensure when routing harnesses that the tilt steering column does not contact them in the full down position. When installing the harnesses, leave several inches of take-out such that the module can be removed if necessary. Do not mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module.

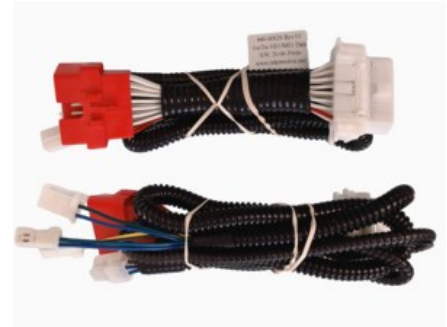
IDLE750 Add-On Options

-K: Engine kill on service brake pressed (Idle-Lock active).

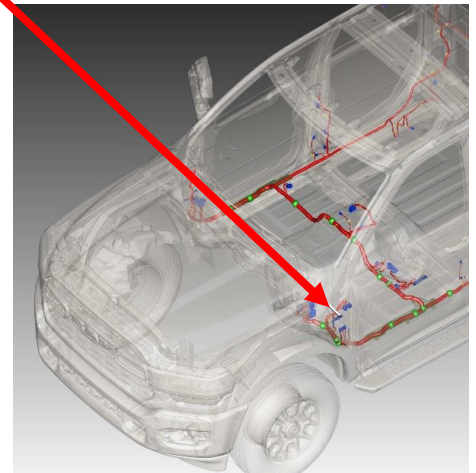
Installation Instructions (continued)

Plug and Play Harness (E-IDLE750)

1. Locate the vehicle OBDII Data Link Connector. It's a White 16-pin connector around the area above the drivers left foot.
2. Use a flat screwdriver to remove the OEM OBDII connector. There are tabs on the sides of the connector that allow it to snap into place. Press the tabs and push the connector up and out of its bracket. The kit includes a Data Link harness (see picture). Plug the red connector from the Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secured with the supplied wire tie.
3. Mount the white connector from the Data Link Harness in the former location of the vehicle's OBDII connector, by snapping it into place.
4. Plug the free end of the Data Link Harness into the extended harness which then plugs into the mating 6-pin connector on the E-IDLE750 module.
5. Locate the STAR connector bank in the location shown (next to the Park Brake).

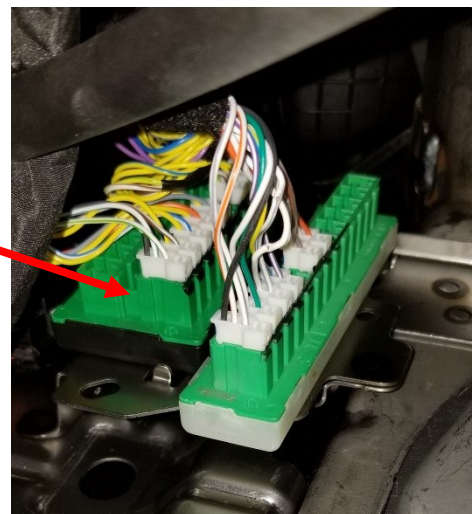


Harness 840-00009



RAM 2500– RAM 5500

1. There are multiple banks of Star connectors. One of the banks has a White base and the other has a Black base.
2. Plug the 2-pin E-IDLE750 connector with **Yellow and Brown wires** into one of the unused ports with the **Black base**.



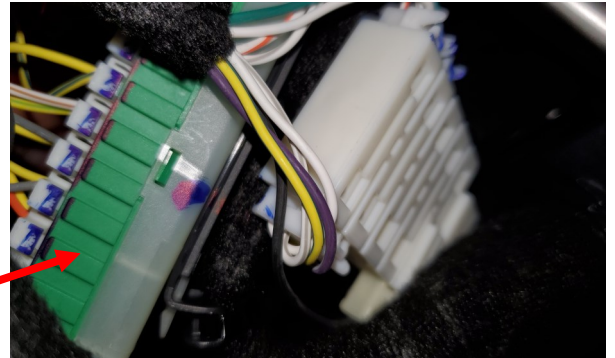
Installation Instructions (continued)

Plug and Play Harness (E-IDLE750) Continued

RAM 1500 (Classic)

On the Data link harness locate the larger white 2 pin connector with the blue and green wires. This connector will be used to plug into the vehicle.

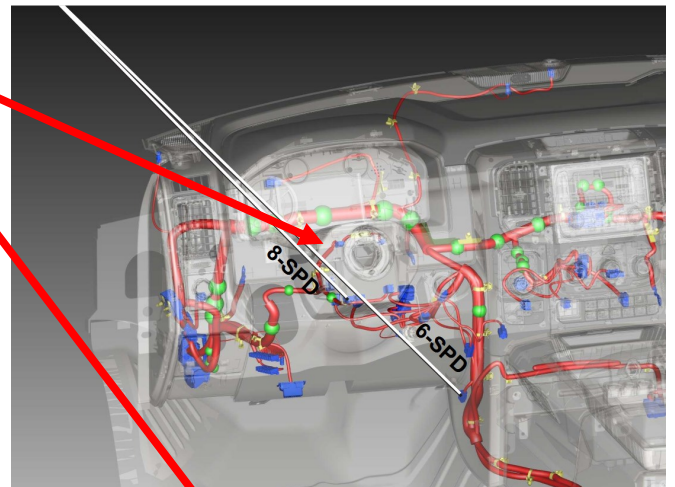
1. There are multiple banks of Star connectors. Located above the parking brake. One of the banks has a Green and White base and the other a solid white base.
2. Plug the 2-pin E-IDLE750 connector with **Yellow and Brown wires** into one of the unused ports with the **Green base**.



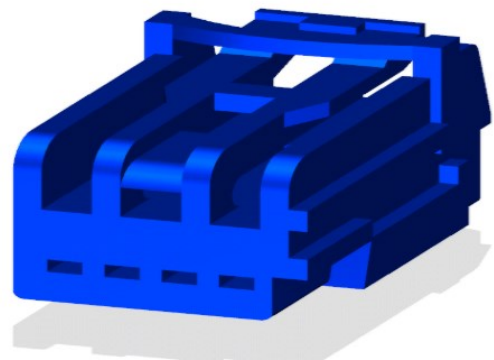
Shift Lock connector for Vehicles with Column Shifter ONLY

Shift lock on column shifters must be done discretely using the on board relay on the Intermotive Module.

1. The BTSI connector is located behind the steering wheel. To access the connector the driver knee panel must be removed.
2. The BTSI is a 4 pin connector seen in the picture below.
3. Locate the Brown/Yellow wire on pin 3.
4. Verify with a DVM there is 12V on the wire when the service brake is pressed and 0V when the service brake is released.
5. Cut the Brown/Yellow wire.
6. Attach the connector side to the Blue wire on the 4-pin connector of the InterMotive harness. (Part# S-H65LX)
7. Attach the harness side to the Purple wire on the 4-pin connector of the InterMotive harness. (Part# S-H65LX)



Isometric View:



Installation Instructions (continued)

Ignition Switch Harness

The ignition switch must be accessed in order to connect the Idle-Lock ignition harness.

1. Disconnect the OEM ignition switch connector from the ignition switch.
2. Install the E-IDLE750 harness between the ignition switch and the OEM connector.



I/O Wiring, Features, and Descriptions: (Solder and heat shrink all connections)

Shift Lock (not available on vehicle's with rotary shifter)

Idle-Lock will lock the shifter if the system is active (engine idling with key removed) or if the Shift Lock Request Input is grounded. Idle-Lock locks the shifter over CAN.

Shift Lock Request Input (Active Low)

Pin 3, Green-Black wire of the 4 pin connector is the Shift Lock Request Input. This input could be connected to the rear door switch to lock the shifter in park if the door is open.

Shift Lock Request Override Input (Active Low)

Pin 5, Pink-Black wire of the 12 pin connector is the Shift Lock Request Override Input. This input should be connected to a momentary switch that will override shift lock due to the Shift Lock Request Input. This input will allow the operator to temporarily override shift lock to shift the transmission out of park in the event of a bad door switch. It will only allow override if the key is in the ignition and the switch turned to the run position. **InterMotive strongly recommends installing this switch.**

Lock Output (Active High)

Pin 2, White wire of the 12 pin connector is the Idle-Lock output. This output (500mA max current) can control installer supplied normally closed relays to lock/disable equipment when Idle-Lock is active. This minimizes possible theft when Idle-Lock is active and the vehicle is unattended.

When Idle-Lock is enabled, this output becomes active after 10 seconds. This output remains active until the key is back in the run position.

Idle-Lock Active Output (Active High)

Pin 11, Yellow wire of the 12 pin connector is the Idle-Lock Active output. This output (500mA max current) can control installer supplied normally closed relays or auxiliary indicator LEDs. When Idle-Lock is enabled, this output becomes active. This output remains active until the key is back in the run position. Mounted in an appropriate location these indicators will allow the operator to easily determine if Idle-Lock mode is active.

Horn/Alarm Output (Active Low)

Pin 8, Orange wire of the 12 pin connector is the Horn/Alarm Output. This output (500mA max current) can control an installer supplied alarm/indicator.

Idle-Lock System Disable

To install a disable switch for the Idle-Lock system, find the Gray wire of the S-H84Gx enable switch harness. Cut this wire leaving at least 4" from the in-line connector. Install a toggle switch (installer supplied) that will re-connect the Gray wire when closed (extend wires if necessary). Install the switch in desired location in vehicle.

CAN Horn Control Enable/Disable Programming Sequence

By default Idle-Lock will control the OEM horn via CAN. If desired, this feature can be disabled with the following procedure:

1. With module installed and engine on (Ram 1500) or off (Ram 2500-5500), turn the key to Run.
2. Transmission must be in park at this point.
3. **Set the Park Brake.**
4. Put the module in test mode by pressing the Red test button on the module. While in test mode, several of the LEDs on the module will start to flash.
5. Shift transmission to drive.
6. Press the service brake five times within 10 seconds.

Once the above sequence is executed, LED 5 on the module will flash six times. If LED 5 does not flash, then the sequence was not recognized and should be re-attempted after waiting 10 seconds.

Note: To re-enable CAN horn control, repeat the steps above. When the sequence is correctly executed, LED 5 will flash three times. If LED 5 does not flash, then the sequence was not recognized and should be re-attempted after waiting 10 seconds.

Idle-Lock Enable Switch and Active LED

An LED is provided in the kit which illuminates when Idle-Lock is active.

1. Drill a 16mm (0.630") hole in the desired mounting location. One possibility is the dash panel to the left of the Steering Wheel.
2. Route the LED harness through the hole and mount the LED in the hole.
3. Slide the LED's lock nut onto the harness and snug it down onto the back of the LED.
4. Plug in the 4 pin (Black) connector of the LED harness into the mating connector on the Idle-Lock main harness.
5. Apply optional "Idle-Lock Enable/Active" label included in the kit.



E-IDLE750 Module Mounting

Ensure all harnesses are properly connected and routed, and are not hanging below the dash area. Mount the module as described on page one and secure with supplied screws or double sided tape.

E-IDLE750 Harness (4 Pin connector and 12 Pin connector)

1. Plug the E-IDLE750 4 Pin connector into the mating 4 pin connector on the E-IDLE750 module.
2. Plug the E-IDLE750 12 Pin connector into the mating 12 pin connector on the E-IDLE750 module.
3. Plug in the 4 Pin LIN connector

Reconnect the vehicle battery

Post Installation Operational Test

Test 1. Start the Engine.

Test 2. While the engine is running, enable Idle-Lock by asserting the enable request input.

- The Red LED will flash five times and then blink every two seconds.
- Remove the key from the ignition within 3 seconds, the engine will continue to idle.
- Idle-Lock is now active.

Test 3. Attempt to shift the vehicle out of Park. The system will keep the shifter locked. At this time the OEM horn should sound for 20 seconds after the service brake is pressed or until the key is turned to the run position. Idle-Lock systems ordered with the -K option will stop the engine when service brake is pressed while Idle-Lock is active. Note that the horn feature can be disabled if not desired.

Test 4. Verify that the Lock Output disables/locks equipment at the proper times (if wired).

Test 5. Insert key and turn to RUN. The vehicle should be able to shift out of Park.

- The system will deactivate (shut down engine) if anyone defeats the OEM shift lock mechanism and shifts the vehicle out of Park.

E-IDLE750

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2018 RAM 2500-5500

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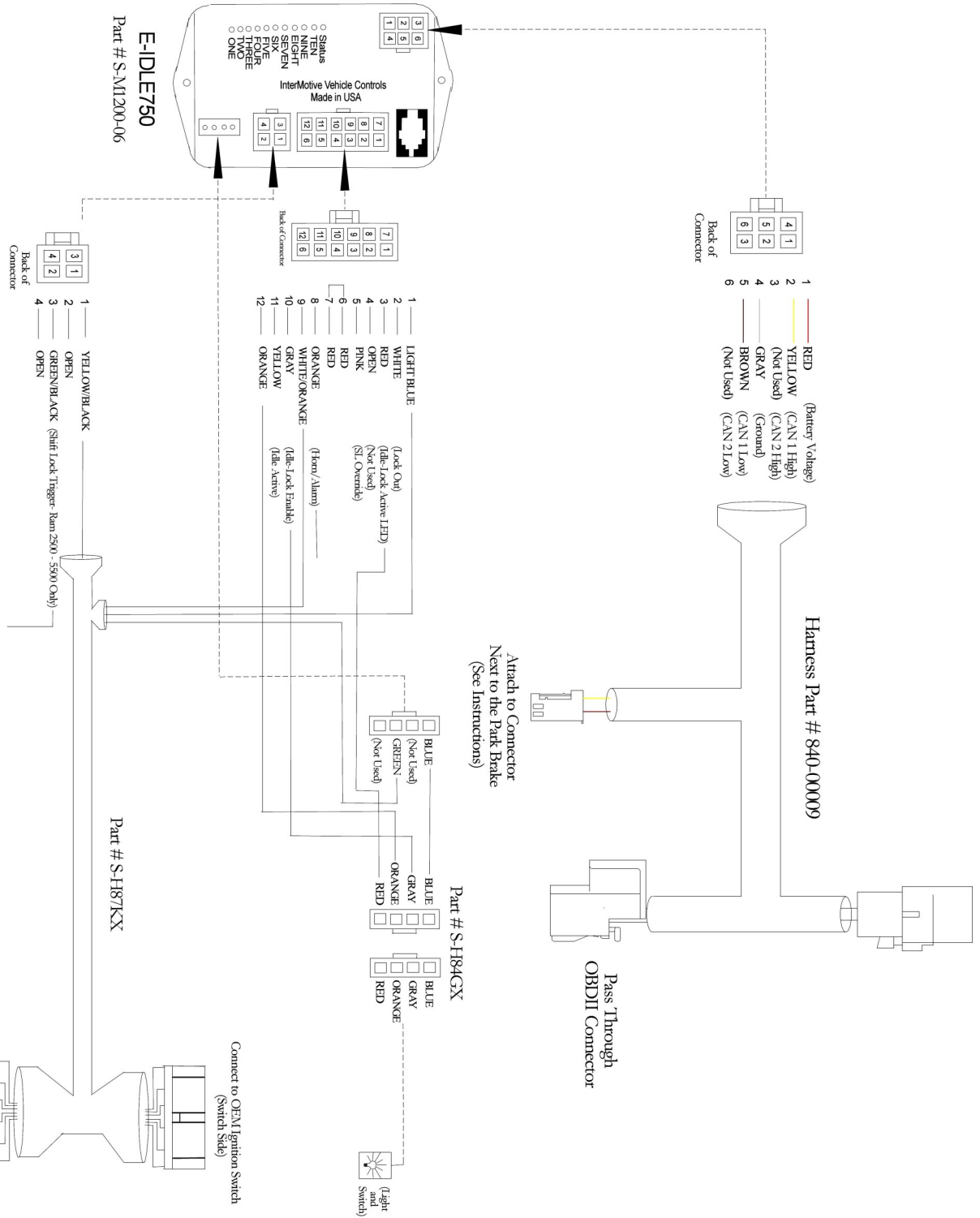
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- Idle-Lock is enabled by removing the key from the ignition within 3 seconds of asserting the Idle-Lock enable input. Transmission must be in Park and engine must be running.
- To prevent unattended vehicle theft (Idle-Lock active), the horn will sound if someone attempts to shift the vehicle out of Park. The shifter will remain locked, and the Lock Output will remain active.
- Inserting the key and turning it to Run restores normal operation. The Lock Output will turn off.
- The system may have an input to lock the shifter if the rear door is open. A momentary override switch will be installed to bypass shift lock due to the rear door in the case of a faulty door switch.



Submit product registration at www.intermotive.net

If the Idle-Lock 750 fails any step in the Post Installation Test, review the installation instructions and check all connections. If necessary, call Intermotive Technical Support at (530) 823-1048.