

IDLE5XX**Idle Lock™ Anti-Theft****2015 - 2020 Ford F150****2011 - 2019 Ford F250-F550****2014 - 2019 Ford Transit****2010 - 2019 Ford E-Series****Contact InterMotive for additional vehicle applications.****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. 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.

Idle-Lock Versions and the vehicles they currently support

Make sure that the version of Idle-Lock you are installing is the correct one for your Ford vehicle. There may be new vehicles or model years added. If you don't see your vehicle or model year below, please check with InterMotive.

B-IDLE503-A	2015-2020 F150 (Uses the Ford 24-pin Data Link Harness)
A-IDLE505-A	2011-2016 F250-F550
B-IDLE505-A	2017-2019 F250-F550 (Uses the Ford 24-pin Data Link Harness)
A-IDLE516-A	2014-2019 Transit
A-IDLE502-A	2010-2019 E-Series

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.

IDLE5XX 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.

Installation Instructions (continued)

Data Link Harness (6-pin connector)

1. Locate the vehicle's OBDII Data Link Connector. It will be mounted below the lower left dash panel.
2. Remove the mounting screws for the OBDII connector. Plug the Red connector from the Idle-Lock Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secure with the supplied wire tie.
3. Mount the Black or White (Ford Transit) pass through connector from the Idle-Lock Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the Idle-Lock Data Link harness so that it does not hang below the lower dash panel.
5. Plug the free end of the Data Link harness into the mating 6-pin connector on the Idle-Lock module.

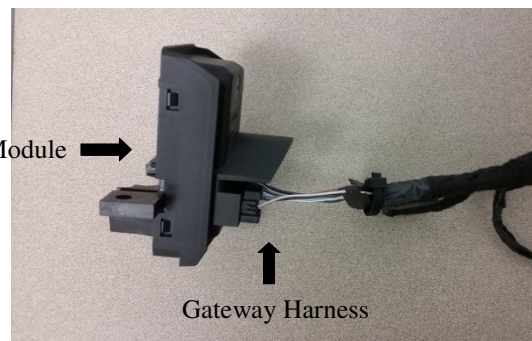


↑ Data Link Harness plugs in here

Ford 24-pin Data Link Harness (6-pin connector)

1. Locate the vehicle's Gateway Module. It will be mounted below the lower left dash panel.
2. Remove the harness behind the Gateway module by pressing the locking tab and pulling outward.
3. Plug the Female side of the Intermotive Gateway Harness into the back of the Gateway module. Ensure the connection is fully seated and secured by the locking tab.
4. Plug the Male side of the Intermotive Data Link Harness into the Gateway harness.
5. Secure the Gateway harness so that it does not hang below the lower dash panel.

Gateway Module →



↑ Gateway Harness

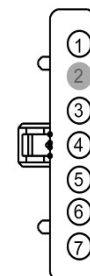
Ignition Switch Harness

The ignition switch must be accessed in order to connect the Idle-Lock ignition harness. The following sections provide separate ignition switch harness installation instructions for the Ford F250-F550, Transit, and E-Series. Several dash trim panels must be removed. See appropriate section for your installation.

2011-Present Ford F250-F550

1. Remove the lower dash trim panel.
2. Remove the lower steering column trim cover.
3. Locate the ignition switch connector (C250) and disconnect it from the ignition switch.
4. Install the Idle-Lock harness between the Ignition Switch and the OEM connector.

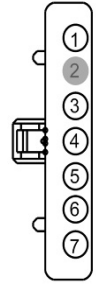
**F250-F550
C250
Front of
Connector**



2014-2019 Ford Transit

1. Remove the lower dash trim panel.
2. Remove the lower steering column trim cover.
3. Locate the ignition switch connector (C250) and disconnect it from the ignition switch.
4. Install the Idle-Lock harness between the Ignition Switch and the OEM connector.

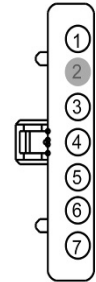
**2014-2019
Transit
C250
Front of
Connector**



2015-Present Ford F150

1. Remove the lower dash trim panel.
2. Remove the lower steering column trim cover.
3. Locate the ignition switch connector (C250) and disconnect it from the ignition switch.
4. Install the Idle-Lock harness between the Ignition Switch and the OEM connector.

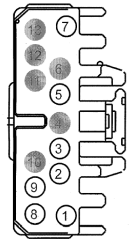
**F150
C250
Front of
Connector**



2010-Present Ford E-Series

1. Remove the lower dash trim panel.
2. Locate the ignition switch connector (C250) and disconnect it from the ignition switch.
3. Install the Idle-Lock harness between the Ignition Switch and the OEM connector.

**E Series
C250
Front of
Connector**



Shift Lock Harness (E-Series Only)

This section is for Ford E-Series only. Shift lock on Ford F250-550 and Transit is achieved over CAN.

2010-Present Ford E-Series

1. Remove the lower dash trim panel.
2. Locate the BTSI solenoid connector (C2127) and disconnect it from the solenoid.
3. Install the Idle-Lock harness between the BTSI solenoid and the OEM connector.

**E Series
C2127
Front of
Connector**



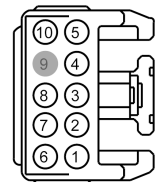
OEM Horn Wiring (E-Series Only)

This section is for Ford E-Series only. The horn on Ford F250-550 and Transit is controlled over CAN.

2010-Present Ford E-Series

1. Remove the lower dash trim panel.
2. Locate the clockspring connector (C218B).
3. Locate pin 5, Blue-White wire in C218B. This is the horn switch wire. Verify this is the proper wire. The signal will switch to ground when the horn switch is pressed.
4. Attach pin 8, Orange wire of the 12 pin connector on the IDLE502-A harness to the Blue-White horn switch wire.

**E Series
C218B
Front of
Connector**



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

Shift Lock

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 on F250-F550 and Transit. On E-Series the system uses a shift lock harness that is plug and play at the shift lock solenoid.

Shift Lock Request Input (Active Low)

Pin 3, Green-White 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) (F250-F550 and Transit Only)

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.**

Shift Lock Request Override Switch (E-Series Only)

Pin 7, Black-White wire and pin 1, Black wire of the 12 pin connector can be used to install a shift lock override switch on E-Series. Find the blunt cut ends of these wires from the Idle-Lock harness. Install a momentary switch that connects these wires together when pressed. This switch will override shift lock due to the Shift Lock Request Input. It will only allow override if the key is in the ignition and the switch is 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 the OEM horn relay or an installer supplied alarm.

Note that Idle-Lock is capable of controlling the horn via CAN on F250-550 and Transit, no wire connection needed. This feature is optional and can be disabled with a programming sequence.

CAN Horn Control Enable/Disable Programming Sequence (F250-F550 and Transit)

By default Idle-Lock will control the OEM horn via CAN on F250-F550 and Transit. If desired, this feature can be disabled with the following procedure:

1. With module installed and engine off, 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 momentarily 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.



IDLE5XX 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.

IDLE5XX Harness (4 Pin connector and 12 Pin connector)

1. Plug the IDLE5XX 4 Pin connector into the mating 4 pin connector on the IDLE5XX module.
2. Plug the IDLE5XX 12 Pin connector into the mating 12 pin connector on the IDLE5XX module.

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. Note that the horn feature can be disabled if not desired.

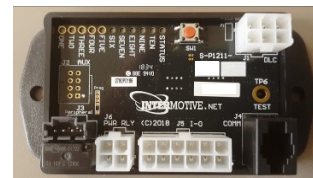
Test 4. Verify that the Lock Output disables/locks equipment at the proper times (if wired).

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. On F250-F550 the system will deactivate as soon as the shift lever is pulled back due to the park detect switch, this will occur even when the shifter is locked.

If the system fails any of the above tests, check the related wiring. If necessary, call InterMotive Technical Support at 530-823-1048. Do NOT release vehicle for service unless it has passed ALL of the above tests.

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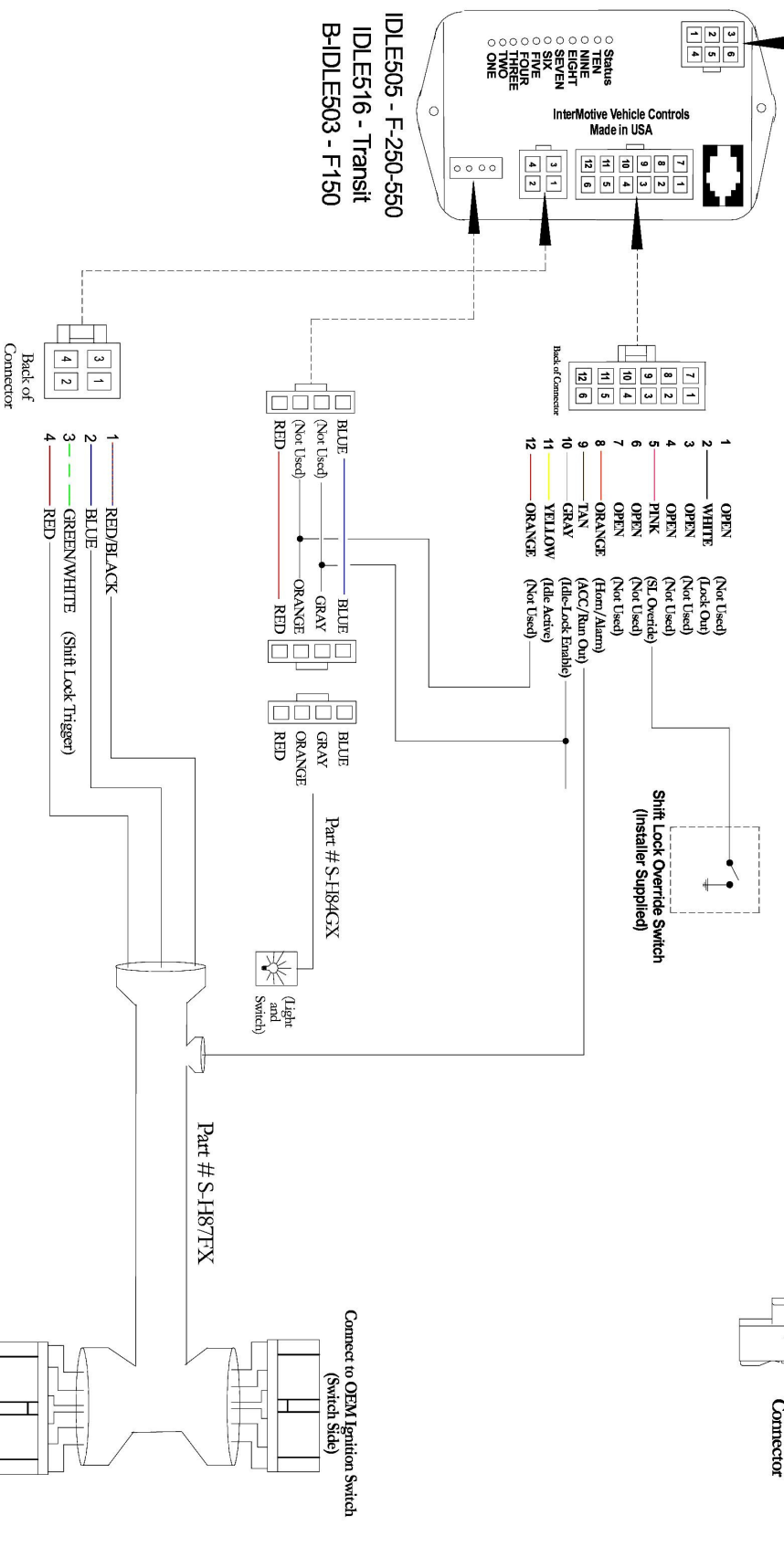
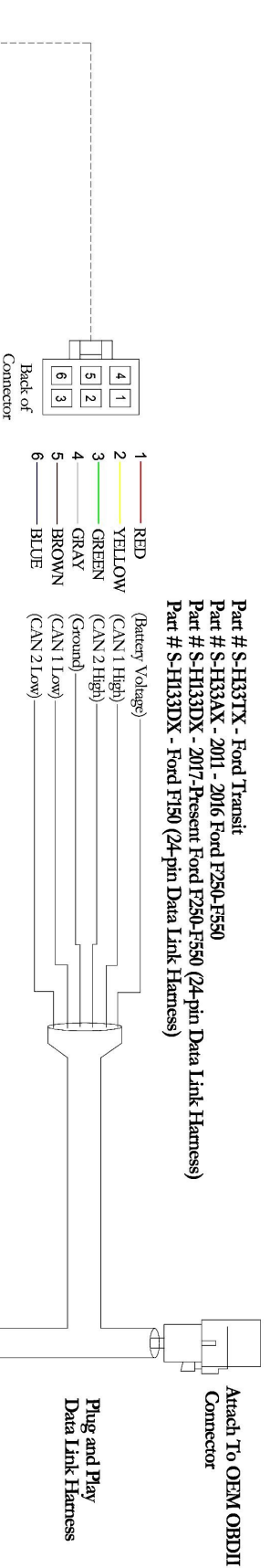


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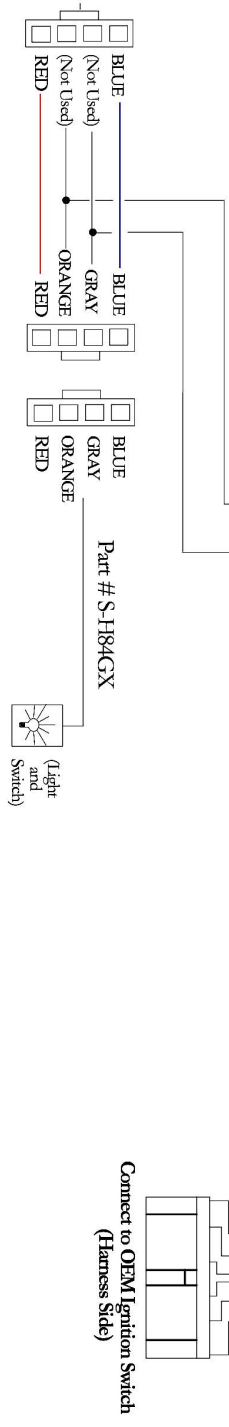
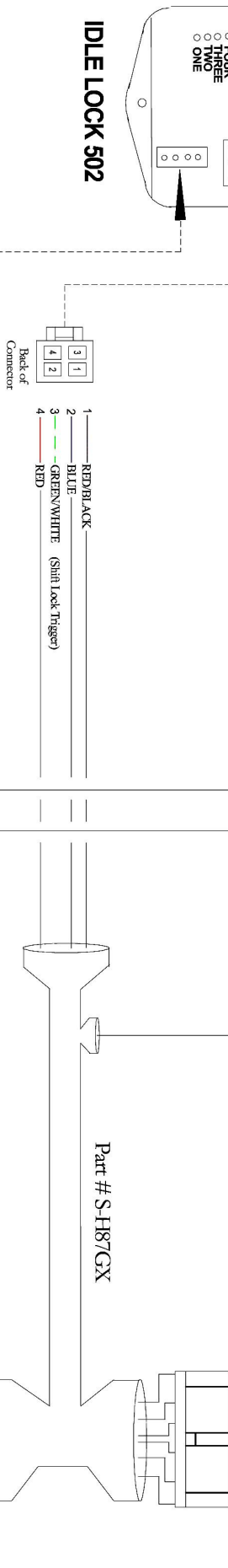
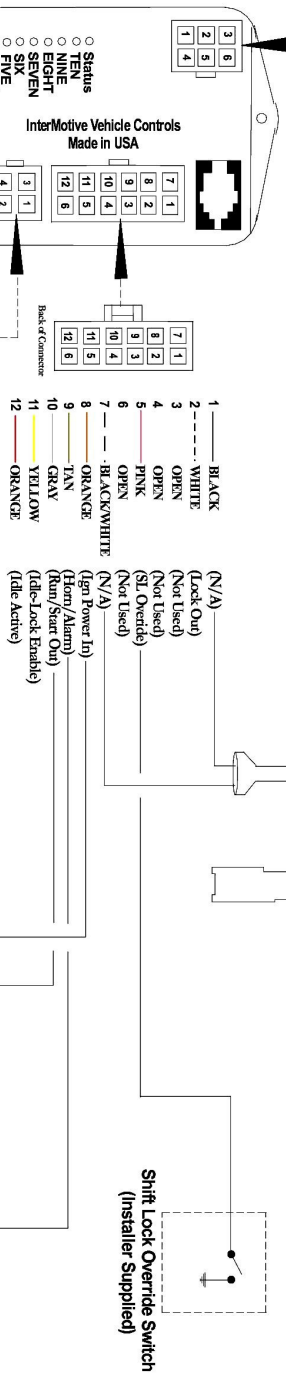
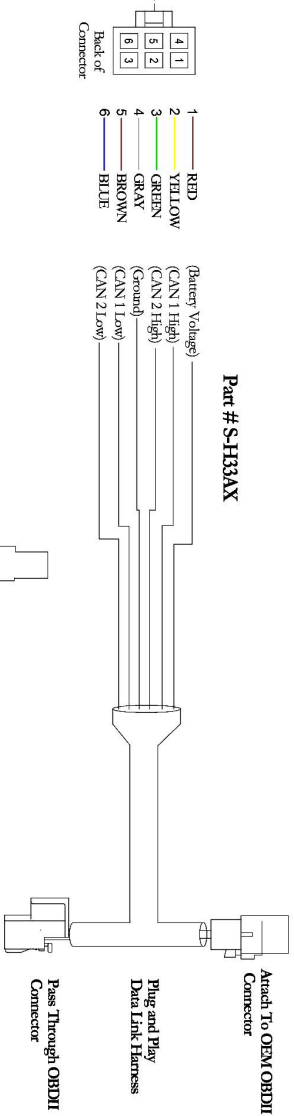
Idle-Lock is an anti-theft system that allows the engine to idle with the key removed from the ignition and the shifter locked in park. The system is activated by pressing a momentary enable switch and removing the key within three seconds. If the service brake is pressed while in Idle-Lock mode the horn will sound as an alarm. The system also provides a shift lock request input that can be used as an interlock for the rear door.

- 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 5XX 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.



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