



An ISO 9001:2000 Registered Company

Intelligent Lift Interlock System (ILIS404-A) - Installation

2008 – Dodge Sprinter With Diesel Engine

Note: The ILIS 404-A is designed for commercial lift applications and is not compatible with power door openers.

ILIS Module – Remove the driver’s seat and step-well trim for access (See Figure 1). The ILIS module mounting location is inside the seat pedestal. The module can be secured using self-tapping screws (See Figure 2).

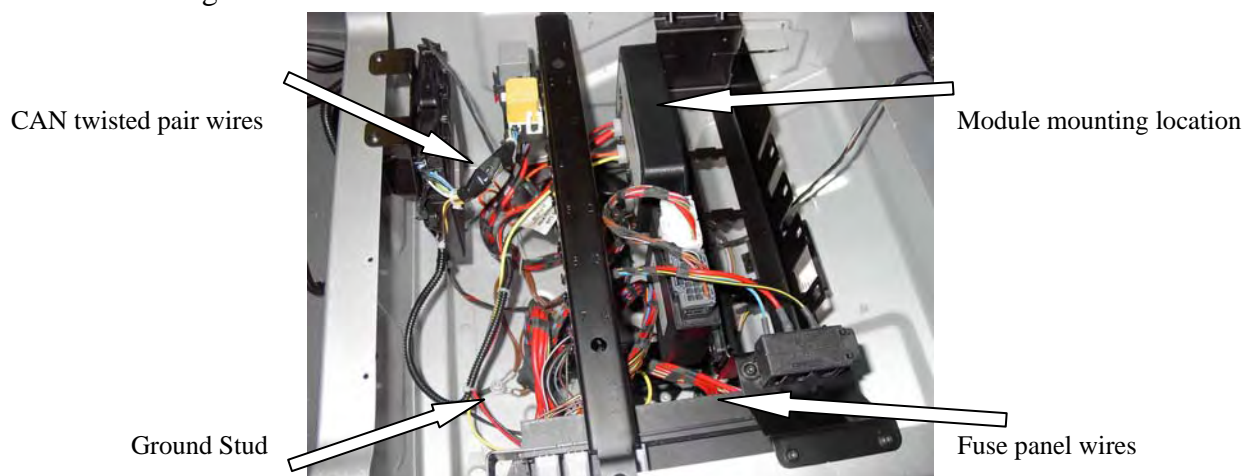


(Fig. 1)

LED Display Panel (8-pin black) – The LED display harness will be routed under the step-well trim. Drill a 1” hole in the dashboard where you wish the center of the display to be.

- Connect the 8-pin end of the LED display harness into the ILIS module in the connector Labeled “ILIS LED” (black).
- Run the other end of the harness under the step-well and dash area and through the 1” hole. Connect the 10-pin end of the LED display harness into the LED Display Panel. Ensure panel is level, and secure using the supplied screws.

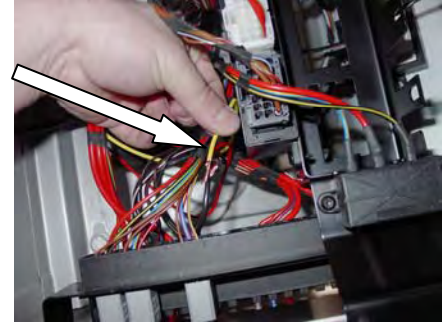
Locate the vehicle power and ground circuits in **ILIS Harness** and **Data Link Harness** sections of these instructions. Once these circuits are identified, turn the ignition switch to the off position and disconnect the vehicle battery before continuing the installation. Component locations from the inside of the seat pedestal are shown in figure 2.



(Fig. 2)

ILIS Harness (6-pin yellow) – Locate ILIS harness with Yellow, Orange and Gray wires.

- **Yellow wire** – Find an ignition switched circuit (**hot in start and run only**) from the fuse panel located on the left side of the seat pedestal (Figure 3). Parallel tap, solder and heat shrink this circuit.
- **Orange wire** – Connect the orange wire (lift power output) to the lift power relay. This circuit must only activate the lift power relay/solenoid and must not draw more than 8.0 Amps. Make all open-ended wire connections by stripping the insulation, soldering, and taping. **Do not power any other loads off this circuit.**
- **Gray wire** – Attach to the door switch circuit (the door switch must provide a ground with the door open) or remove the gray wire from harness if using the O.E.M door switch.



(Fig. 3)

Connect ILIS Harness to the module, in the cavity labeled “ILIS” (yellow).

Data Link Harness (6-pin red) – Locate the Data Link harness and attach wires to the vehicle.

- **Red wire** – Find an ignition switched circuit (**hot in start and run only**) from the fuse panel located on the left side of the seat pedestal. Parallel tap, solder and heat shrink this circuit.
- **Black wire** – Attach to the ground stud located inside the pedestal box.

Locate the CAN twisted pair wires (Figure 2 and Figure 4)

- **Yellow wire** – Attach to CAN-High (green with white tracer).
- **Brown wire** – Attach to CAN-Low (green).

CAN communication wires must have a soldered and heat shrink parallel tap. A poor connection will result in network communication errors.

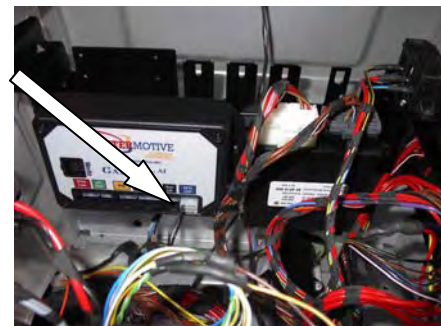
Connect 6-pin Data Link harness to the module, in the cavity labeled “Data Link” (red).



(Fig. 4)

Door Switch – The ILIS 404-A has the option of using the vehicle’s OEM door switch or an installer supplied door switch.

- If the rear door is used for the mounting location of the lift, the ILIS 404-A is pre-programmed to monitor the rear door and requires no further action.
- If the passenger sliding door is used for the mounting location of the lift, the ILIS 404-A requires the supplied 6-pin (jumper) connector to be connected in the module cavity labeled “AFIS LED” (blue) (Figure 5).
- If the installation requires an installer supplied door switch, follow the steps below.
 1. Connect the supplied 4-pin (jumper) connector into the module cavity labeled “AUX I/O” (black).
 2. Install a door switch. The door switch must switch to ground when the door is in the open position.
 3. Run the wire from the door switch to the ILIS 404-A module.



(Fig. 5)

4. Connect door switch circuit to the gray wire in pin-6 of the ILIS connector, solder and heat shrink the connection. (*Never use both jumpers when selecting lift door location*).

Lift enable switch (optional) may be installed on ILIS404-A.

1. Attach one side of a latching switch to a wire and crimp the other end of the wire to one of the provided terminals. Only one terminal is needed, one extra is provided. This is a logic level circuit that will draw only milliamps, so a 20 Gauge wire is more than adequate.
2. Insert the crimped terminal into cavity 1 of the supplied 4-pin connector. Cavity 1 will be marked (black) for easy reference. Attach the other side of the switch to a known good ground point.
3. Insert the 4-pin connector into the cavity on the ILIS 404-A module marked “Aux I/O” (green). Do not insert it into the header marked “I/O Port” (green) or damage to the module can occur.

Note: If using the supplied 4-pin jumper for the use of an installer supplied door switch, insert the lift enable terminal into cavity 1 (marked black). If using an OEM door switch, remove and isolate (cut) the jumper out of the connector and insert the lift enable terminal into cavity 1 (marked black).

The Lift Enable switch operation will then be as follows:

With the lift switch open (no ground); the lift will be enabled if all other interlock safety conditions are met.

With the lift switch closed (grounded), the lift will be disabled even if all other interlock safety conditions are met.

Reconnect vehicle battery and perform post installation test.



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ILIS (ILIS404-A) - Operating Instructions

Sprinter – 2008

The Intelligent Lift Interlock System (ILIS) is a microprocessor driven system for controlling wheelchair lift operation. Lift operation will only be allowed when all of the following conditions are met:

1. The vehicle is in “Park”
 2. The parking brake is applied.
 3. The vehicle ignition is on.
 4. The lift door is open.
 5. Lift disable switch is not activated (with the optional switch installed).
- ❑ The Intelligent Lift Interlock System (ILIS) will not allow the vehicle to be shifted out of park if the lift door is open. As an added feature, it also will not allow the vehicle to be shifted out of park anytime the parking brake is applied. This feature eliminates excessive parking brake wear due to unintentional driving with the parking brake applied.
 - ❑ When the vehicle is first started, or if the key is turned to the “Run” position (ignition ON), the five upper LED’s on the display panel will illuminate for 2 seconds as a prove out of the LED’s.
 - ❑ The upper row of LED’s are used to indicate when conditions for lift operation are met, or not met.
 - ❑ The lower row of LED’s are icons (symbols) used to indicate the purpose of the corresponding indicator LED above them. The lower row of LED’s are backlit and should remain illuminated whenever the ILIS module is powered (ignition ON).

All five upper LED’s must be illuminated for the lift to operate



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ILIS 404-A -Post Installation Testing

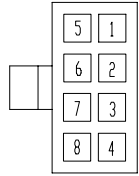
THE FOLLOWING PROCEDURE MUST BE PERFORMED TO VERIFY PROPER INSTALLATION:

1. Set Park Brake, place transmission to Park position, and close lift door. Turn ignition to the "Run" position. Do not start vehicle.
2. Verify LED prove-out on LED Status Panel
3. All five (5) upper LEDs should illuminate for approximately two seconds upon initial power on. The lower Icon LED's are backlit and should remain illuminated whenever the ILIS404-A module is awake.
4. Verify that the Park LED, the Park Brake LED, and the Shift Lock LED remain illuminated.
5. Place foot on service brake and attempt to shift out of Park. Shift lever should not be allowed to shift out of the Park position. If shift lever is allowed to move, check for loose connections at all connection points.
6. Place wheel chocks under the vehicle tires. Release Park Brake. Verify Park Brake LED and the Shift Lock LED on the LED Status panel are no longer illuminated. Remove foot from service brake and attempt to shift out of Park. Shift lever should not be allowed to shift out of the Park position. If shift lever is allowed to move, check for loose connections at all connection points.
7. With Park Brake still released, place foot on service brake and attempt to shift out of park. Shift lever should now be allowed to shift out of Park position. Verify that all upper LEDs are not illuminated with transmission in any other gear. If shift lever is not allowed to move, check for loose connections at all connection points.
8. Place shift lever back to the Park position and verify that the Park LED on the LED Status Panel is illuminated.
9. With Park Brake still released, have an assistant open the lift door(s). Verify that the Lift Door LED and the Shift Lock LED on the LED Status Panel are now illuminated. Place foot on service brake and attempt to shift out of Park. Shift lever should not be allowed to shift out of "Park" position. If shift lever is allowed to move, check for loose connections at all connection points.
10. Set Park Brake. Verify that the Park Brake LED on LED Status Panel is again illuminated. Verify that the Lift Power LED on the LED Status Panel is also now illuminated. All five (5) upper LEDs on the LED Status Panel should now be illuminated. The lift should now be operational. Have assistant verify lift operation.
11. Release Park Brake. Verify that the Park Brake LED and Lift Power LED on the LED Status Panel are not illuminated. Have assistant attempt to operate lift. Lift should not be operational. If lift operates, check for loose connections at all connection points.
12. Set Park Brake. Stow lift and close lift door(s). Turn ignition off. The LEDs will turn off with the key cycle.
13. If any irregular operational issues persist, contact InterMotive at 530-346-1801 for technical assistance.

REVISIONS

DATE: CHANGE:

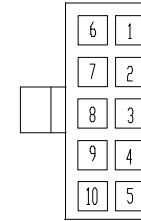
ILIS LED



- 1 — YELLOW (5V power)
- 2 — GREEN (Lift LED)
- 3 — WHITE (Park Brake LED)
- 4 — BLACK (Backlight Ground)
- 5 — BROWN (Shift Lock LED)
- 6 — BLUE (Door LED)
- 7 — GRAY (Park LED)
- 8 — RED (12V power)

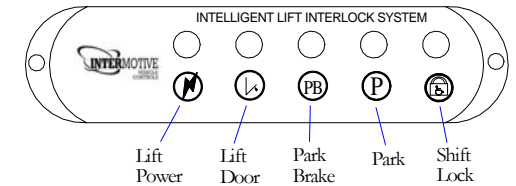
Back of Connector

- YELLOW — 1
- OPEN — 2
- WHITE — 3
- BLACK — 4
- GREEN — 5
- BROWN — 6
- BLUE — 7
- GRAY — 8
- RED — 9
- OPEN — 10



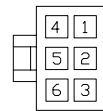
Back of Connector

ILIS LED



Lift Power Lift Door Park Brake Park Shift Lock

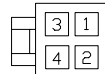
AFIS LED



Back of Connector

- 1 — (Application For Side Door Switch Circuit)
- 2 — (Not Used)
- 3 — (Not Used)
- 4 — (Not Used)
- 5 — (Not Used)
- 6 — (Not Used)

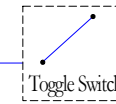
AUX I/O



Back of Connector

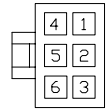
- 1 — (Application For Back Door Switch Circuit)
- 2 — (Not Used)
- 3 — (Not Used)
- 4 — (Not Used)

Installer Supplied



Toggle Switch
Switch To Ground - Lift Disabled
Switch Open - Lift Enabled

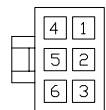
DATA LINK



Back of Connector

- 1 — RED — Fused Ignition Power
- 2 — BLACK (Ground) — Attach to Ground
- 4 — BLACK (Ground) — Attach to Ground
- 3 — YELLOW (CAN High) — Attach to Green/White Wire
- 5 — OPEN (Not Used)
- 6 — BROWN (CAN Low) — Attach to Green Wire

ILIS



Back of Connector

- 1 — OPEN (Not Used)
- 2 — YELLOW (Lift In) — (Fused Ignition Power)
- 3 — ORANGE (Lift Power Out-12V) — (Attach to Lift Relay)
- 4 — OPEN (Not Used)
- 5 — OPEN (Not Used)
- 6 — GRAY (Lift Door In - Ground) — (GRAY) Attach to Lift Door Switch (Optional Descret Door Circuit)



PRODUCT :

INTELLIGENT LIFT INTERLOCK SYSTEM

DRAWN BY:

Bruce Hodge

PART NO:

ILIS 404-A

DATE DRAWN:
3/20/08

CHECK BY:

Ed Prokopik

DATE CHECKED:
3/23/08