

ILISP610-A Shift Interlock
Chevy/GMC Full Size Van
2011 6.0L
2012 4.8L, 6.6L
2013 - 2016 Select Vehicles
Contact InterMotive for specific applications



Introduction

The ILISP610-A system is a microprocessor driven system for controlling wheelchair lift operation. The system will operate with the vehicle ignition on or off. Lift operation will be enabled when specific vehicle safety conditions are met and will lock the transmission shifter in Park when the wheelchair lift is in use. Optional Plug and Play harnesses are available for most applications, making installation fast and easy.

Installation Instructions

Disconnect vehicle battery before proceeding with installation.



WARNING
Disconnect the battery to
prevent setting a check engine
light.

IMPORTANT—READ BEFORE INSTALLATION

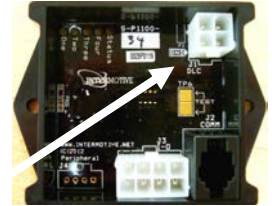
It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.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

ILISP610 Module

Remove the lower dash panel below the steering column area and find a suitable location to mount the module so that the Diagnostic LED's can be viewed with the lower dash panel removed. Locate the module in an area away from any high external heat sources (engine heat, heater ducts, etc.). Do not actually mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module.

Data Link Harness—4 pin connector

1. Locate the vehicle OBDII Data Link Connector, mounted below the lower left dash panel.
2. Remove the mounting screws for the OBDII connector. Plug the red connector from the ILISP610-A 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 pass through connector from the ILISP610-A Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the ILISP610-A 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 matching 4-pin connector on the ILISP610-A module.



Shift Lock Solenoid Harness—8 pin connector

1. Locate the OEM shift lock solenoid on the right side of the steering column.
2. Remove the OEM 2-pin black connector.
3. Install the matching InterMotive T- harness.
4. Verify the green locking tabs are in the locked position.



LED Display Panel Mounting - Black 4-pin connector

Locate a suitable position on the dashboard, within view of the driver to mount the LED Display Panel. Ensure that there is open space behind the dash where the panel is mounted. The harness is 40" in length, which is the maximum distance the display can be from the module.

1. Drill a 5/8" hole in the dash where the center of the display will be located.
2. Attach the Black 4-pin connector of the LED Display Panel Harness to the module.
3. Run the other end of the harness under the dash and out through the 5/8" hole, leaving enough takeout to prevent strain on the connector.
4. Attach the end to the LED Display Panel. Ensure the panel is level and secure using supplied screws.

Lift Connections - 8-pin connector

Optional Plug & Play Lift Harness, Braun and Ricon lifts:

Plug the 8 pin connector into the ILISP610-A module and run the lift harness out to the lift and plug it into the lift connector: Braun models use a 9-Pin connector, Ricon models use a 4-Pin connector. If the harness includes a control relay integrated into the harness, peel off the 2-sided tape and stick to the lift housing. Continue to the Park Brake Connection section.

Non Plug & Play Harnesses

The ILISP610-A provides three ground side inputs and one 12V, 1/2 amp output.

Refer to the ILISP610-A schematic when reading these instructions. If a control relay is needed to power the lift, a standard rectifier diode (digikey RL202-TPCT-ND or equivalent) **must** be installed between pins 85 & 87 of the relay, as shown on the Blunt Cut CAD drawing.

The blunt-cut 4 wires coming from the white 8 pin connector provide control connections to the vehicle as follows. Lengthen the following three wires, using solder and heat shrink or tape.

Orange –This “Vehicle Secure” output connects to the lift and provides 12V @ 1/2 amp when it is safe to operate the lift.

Ricon Lift: Connect to pin #2 of the 4-pin lift adapter connector, or if a control relay is used, terminal 86 of the relay.

Braun Lift: Connect to pin #6 of the 9-pin lift adapter connector.

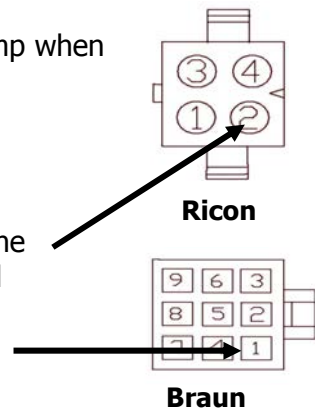
White - Ricon Lift: Connect the White wire (Lift wake up (GND) input) along with the Orange wire (Vehicle Secure) to pin #2 of the 4-pin lift adapter connector. If a control relay is used, terminal 87 of the relay.

Braun Lift: Connect the White wire (Lift wake up (GND) input) to pin #1 of the 9-pin lift adapter connector.

Gray – Connect this input to the Lift Stowed Switch. It must have a ground signal with the lift is stowed. When lift is not stowed, the vehicle is prevented from shifting out of Park.

Ricon Lift: Connect to pin #4 of the 4-pin lift adapter connector.

Braun Lift: Connect to pin #9 of the 9-pin lift adapter connector.

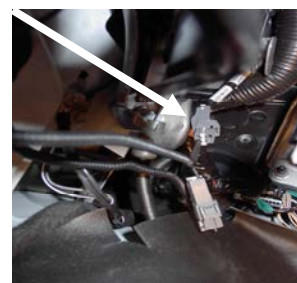


Park Brake Connection

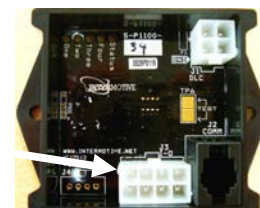
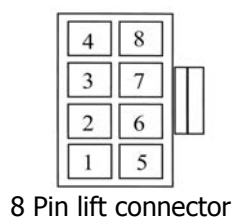
Plug & Play Park Brake Harness - On Plug & Play models, disconnect the OEM connector from the Park Brake Switch and plug in the Park Brake T-Harness.

Non Plug & Play Brown wire – This input connects to the OEM Park Brake switch.

1. Install a standard rectifier diode (Digikey RL202-TPCT-ND or equivalent), as shown in the Blunt Cut CAD Drawing, to isolate the Park Brake ground signal.
2. Strip back some insulation off the WT/VT wire, solder the Brown wire on and tape or use heat shrink tubing.



- Pin #1 — N/C
- Pin #2 — N/C
- Pin #3 — ORANGE (Vehicle Secure (12V) Output)
- Pin #4 — BROWN (Park Brake (GND) Input)
- Pin #5 — WHITE (Wake-up Signal (GND) input)
- Pin #6 — N/C
- Pin #7 — BLUE (Shift Lock Output)
- Pin #8 — GRAY (Lift Stowed (GND) Input)



Connect the 8 pin connector to the module

ILISP610 Module

Ensure all the harnesses are properly connected and routed, and are not hanging below the dash area. Mount the ILISP610 module as described on page one. Secure using screws or doubled sided tape.

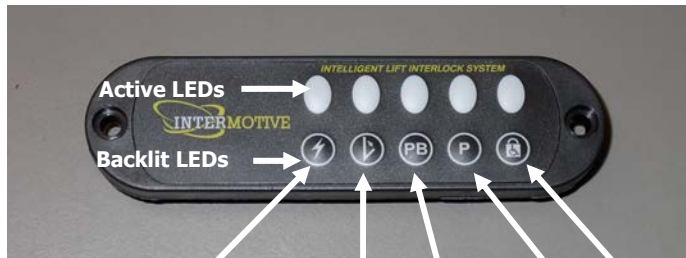
Post Installation / Check List Reconnect vehicle battery

ILISP610-A (Electric Lift Door)

The following checks must be made after installation of the system, to ensure correct and safe operation of the lift. If any of the checks do not pass, do not deliver the vehicle. Recheck all connections per the installation instructions.

Begin the checklist with the vehicle in the following state:

- Lift Stowed
- Lift Door closed
- Park Brake set (PB)
- Transmission in Park (P)
- Ignition off (Key off). Wait until the module goes into "Sleep" mode (all panel LEDs OFF) which takes approximately 5 minutes.



Vehicle Secure/Lift Enable, Lift Deployed, Park Brake, Park, Shift Lock

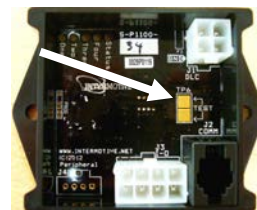
1. Press the Lift Deploy Request button on the remote fob (electric door), or for manual door system, open door, press button on pendant. Verify the module wakes up and all 5 LED's on the dash panel illuminate for approximately 2 seconds. The lower icon LEDs are backlit and will remain illuminated whenever the module is awake. The fob button may have to be held for 2 seconds or more to wake up the system.
2. Turn the ignition key on.
3. With Lift Door open, Park Brake set and transmission in Park, all LED's except Lift Deployed will be illuminated. Attempt to deploy the lift. Verify the lift deploys and all 5 LED's are illuminated.
4. With the Lift deployed and Service Brake applied, verify the vehicle cannot be shifted out of Park.
5. Stow the lift but leave door open.
6. With Lift Door open, Lift Stowed, transmission in Park, release Park Brake. Verify that the Park Brake LED goes out. Attempt to deploy the lift. Verify the lift does not deploy with Park Brake released.
7. With lift door open, Park Brake set, lift stowed, Transmission in Neutral, verify the lift does not deploy.
8. With key on, Lift Door closed, Park Brake released and the Service Brake applied, verify the transmission shift lever will shift out of Park.

Note: The factory default is for the module to enable the lift on wake up (firmware 2.02 & later). This may cause the lift to beep, etc., whenever the key is turned on. To change this behavior, see ILISP510/610-A Application note (www.intermotive.net) or contact InterMotive.

If any of the previous Post Installation tests fail, enter diagnostic mode below:

Lift Interlock Diagnostic Mode Testing allows a visual indication of system status and is a good troubleshooting tool when used in conjunction with the above tests. The module is fully functional in this mode. Enter Diagnostic Mode by the following steps:

1. Place transmission in Park and turn ignition switch to run position.
2. Touch a grounded wire to the Silver Test Pad on the module. LED's on the module will prove out, then become status indicators:
 - LED 1 will be on when Shift Lock enabled.
 - LED 2 will be on when transmission is in Park.
 - LED 3 will be on when Park Brake is set.
 - LED 4 will be on when Lift is deployed.
 - LED marked "status" indicates "Vehicle Secure" or "Lift enabled" meaning there is 12V on Pin 3 (Vehicle Secure wire), which connects to the lift.
 - Cycling the key will exit Diagnostic Mode and all LED's will be off.



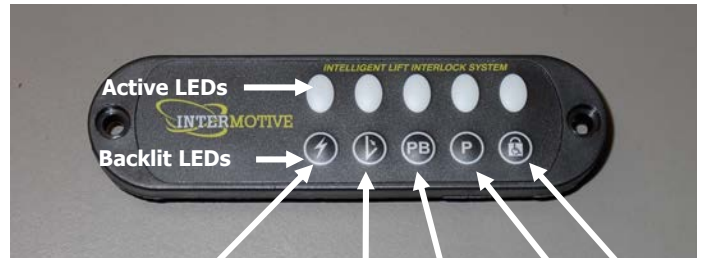
Leave in vehicle
ILISP610-A Shift Interlock Operating Instructions
Chevy/GMC Full Size Van 2011 6.0L, 2012 4.8L, 6.6L , 2013 - 2016 Select Vehicles

ILISP610-A Lift Interlock Operation

The ILISP610-A system is a wheel chair lift safety interlock which will work with the key on or key off. It will enable the lift when certain vehicle safety conditions are met, and will lock the transmission shifter in Park when the wheelchair lift is in use (not stowed). The ILISP610-A prevents the vehicle from being shifted out of park if the lift is not stowed.

Key on operation

1. The system will wake up when the fob or pendant deploy buttons are pushed.
2. With the module awake and the vehicle in Park, the (P) LED will be illuminated.
3. When the Park Brake is applied, the (PB) LED will be illuminated.
4. When the Lift is deployed, the Lift Deployed LED will be illuminated.
5. With the Park Brake applied, the PB, P, Shift Lock, and Vehicle Secure LED's will be illuminated, and the lift will be operational (enabled).



Vehicle Secure/Lift Enable, Lift Deployed, Park Brake, Park, Shift Lock

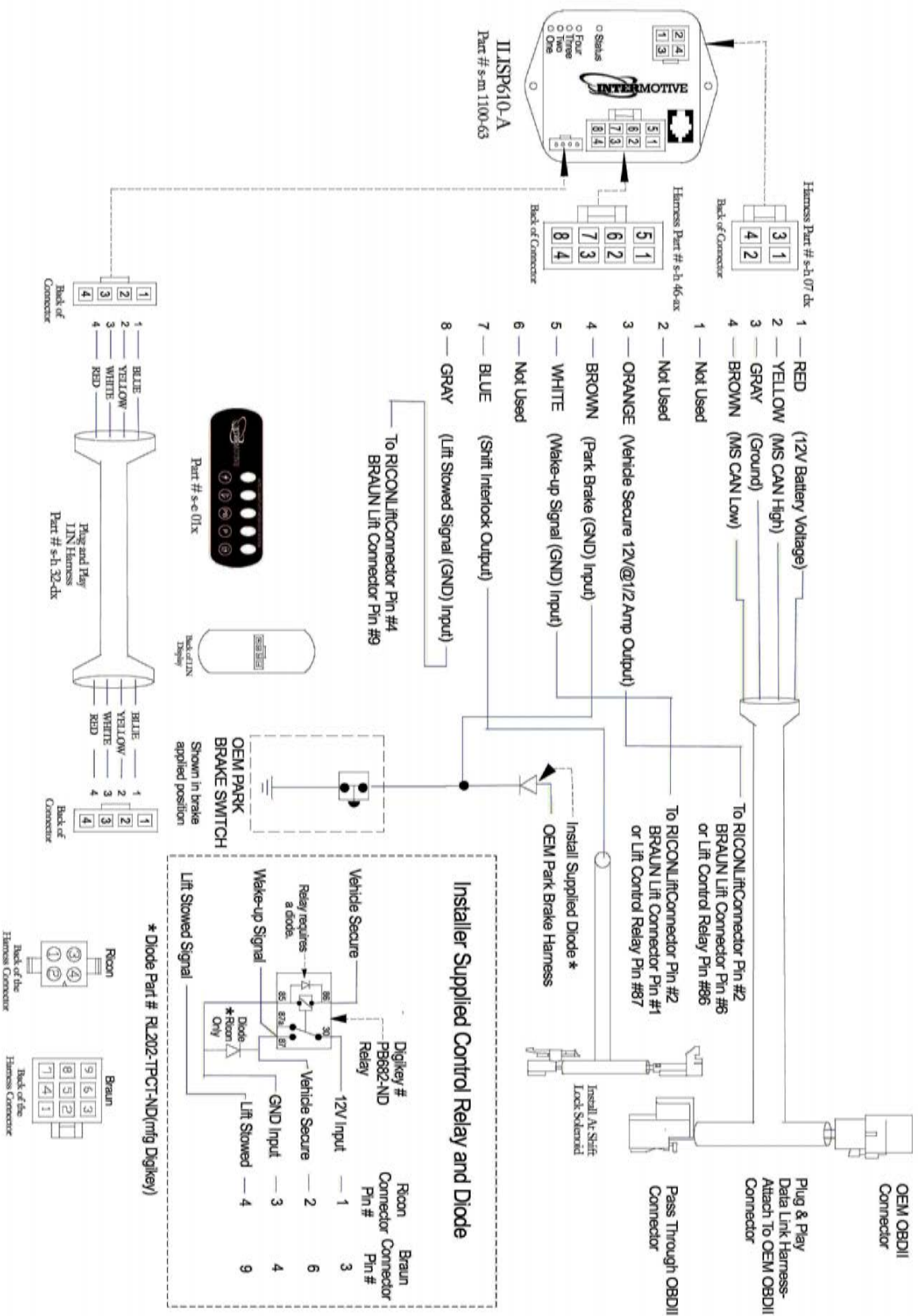
Key off function (if optional Park Brake input supplied)

- Vehicle must be in Park before turning key off.
- With the vehicle in Park and the Park Brake applied, the (P), (PB), and Vehicle Secure LED's will be on.
- When the lift starts to deploy, the Shift Lock and Lift Deployed LEDs will illuminate.

When the lift is stowed and ignition power is not present for 5 minutes, the system will enter a low current "sleep" mode of operation. To wake from "sleep" mode, turn the ignition on (key on) or press the lift deploy button on the pendant or fob (may have to be depressed for a second or two to wake the system). All display LEDs will illuminate for approximately 2 seconds as a "prove out". The backlit LEDs will remain on as long as the module is awake.

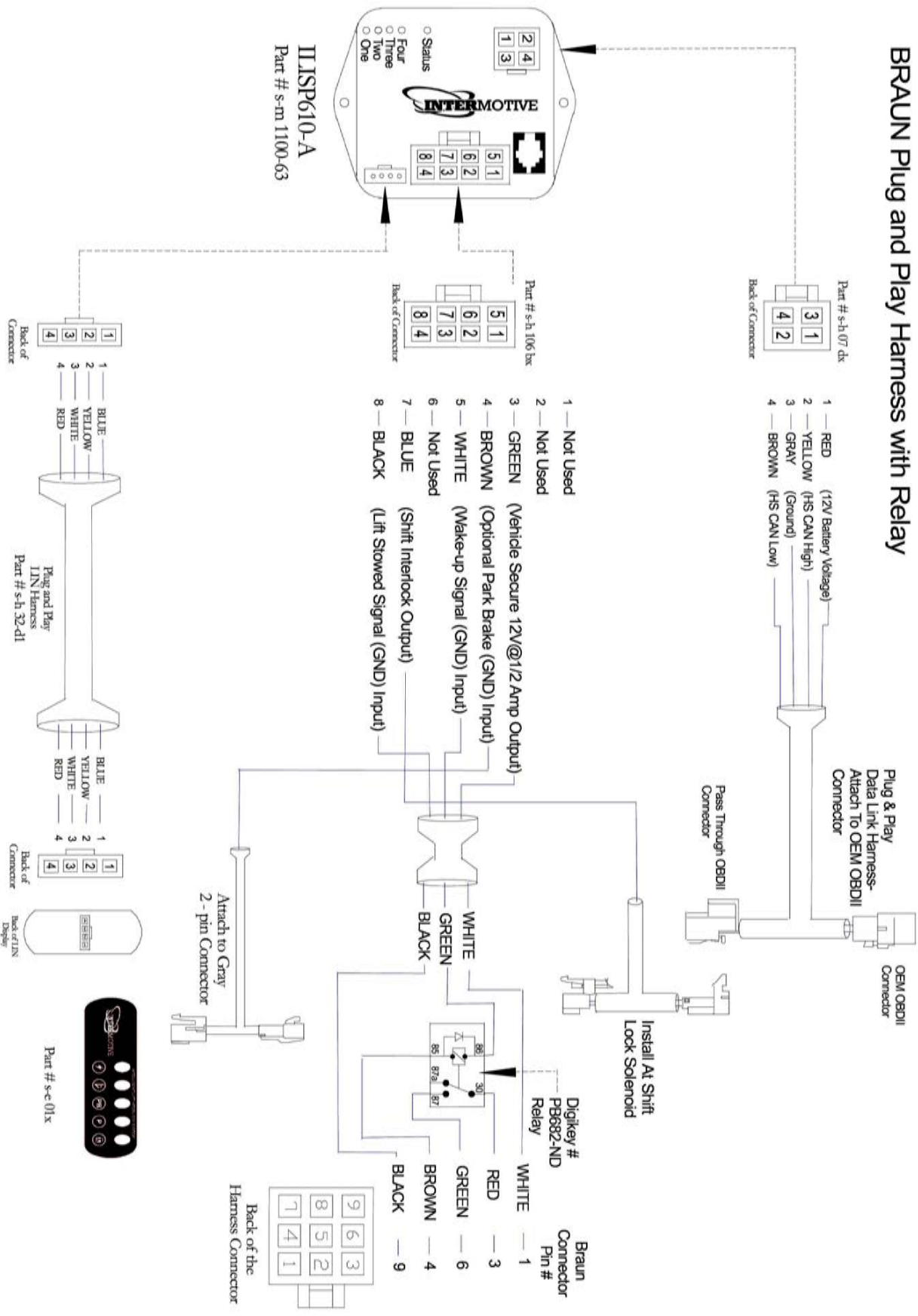
Note: Do not leave the lift door open when the vehicle is not in use. This will cause a draw on the vehicle's electrical system and may result in a dead battery.

Blunt Cut Harness



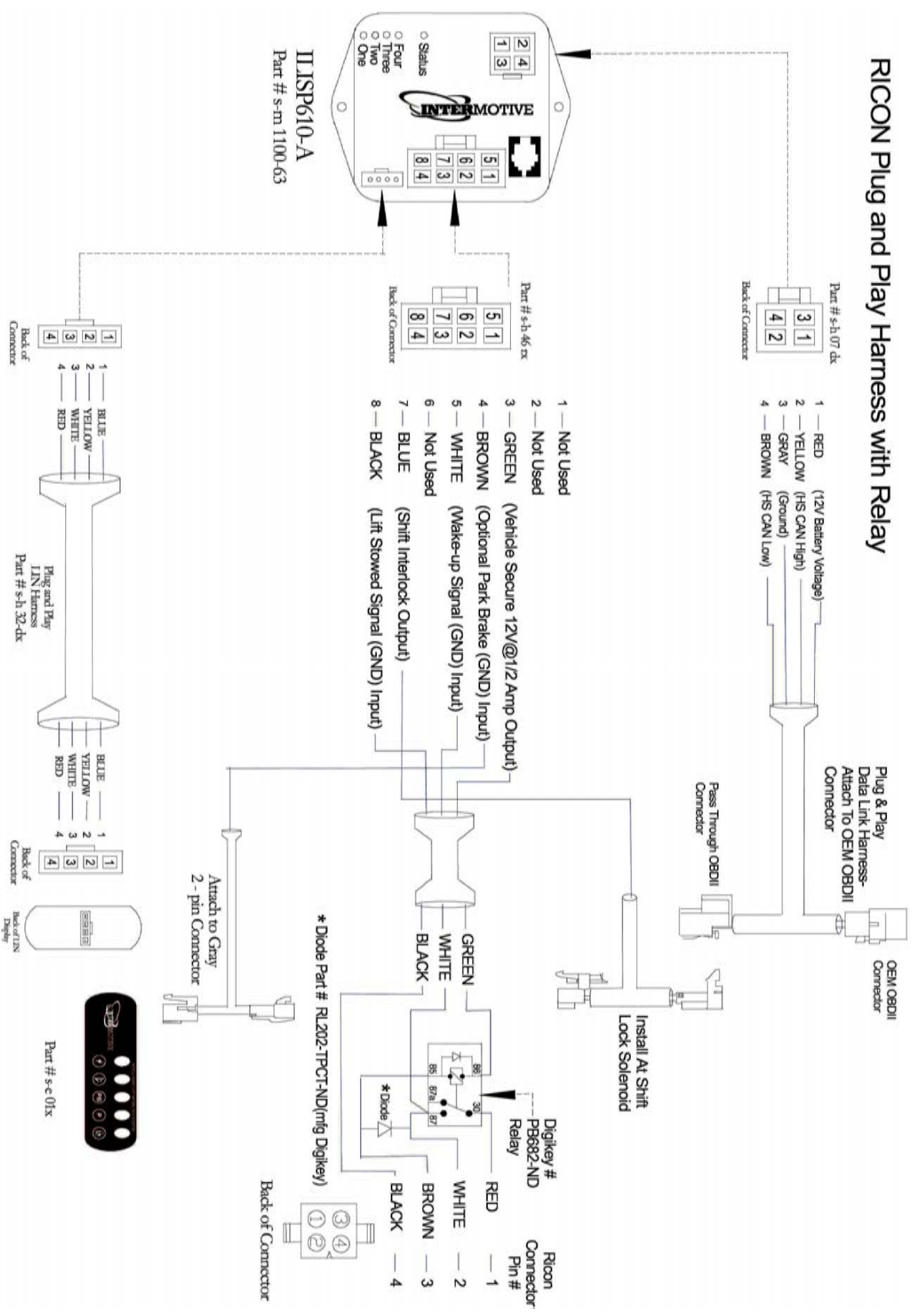
If the ILISP610-A fails any step in the Post Installation Test, review the installation instructions and check all connections. If necessary, call InterMotive Technical Support at (530) 823-1048.

BRAUN Plug and Play Harness with Relay



If the ILISP610-A 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.

RICON Plug and Play Harness with Relay



If the ILISP610-A 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.