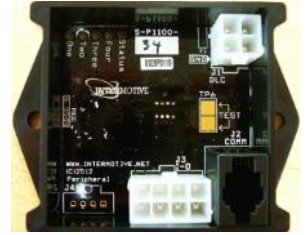


ILISC610-B Shift Interlock (Manual Lift Door) 2008-2024 Chevy/GMC Full Size Van Contact InterMotive for specific applications



Introduction

The ILISC610-B 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.

ILISC610 Add-On Option

ILISC610-BD with Door Ajar: Monitors an additional door other than lift door.

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.

CAUTION

All electronic products are susceptible to damage from Electrostatic Discharge or ESD. Ground yourself before handling or working with the module and harnessing by first touching chassis ground, such as the barrel of the cigarette lighter.



Installation Instructions

Disconnect vehicle battery before proceeding with installation.



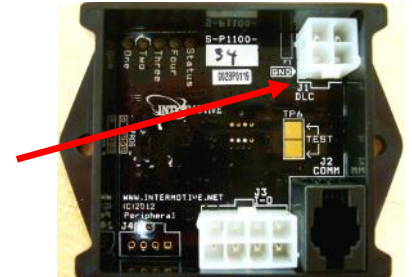
WARNING
Disconnect the battery to
prevent setting a check engine
light.

ILISC610-B 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. 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 ILISC610-B 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 ILISC610-B Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the ILISC610-B 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 4-pin connector on the ILISC610-B module.



Shift Lock Solenoid Harness - 8 pin connector

1. Locate the OEM shift lock solenoid to the right side of the steering column.
2. Remove the OEM 2-pin black connector.
3. Locate the Black T-harness Blue wire Pin 7 of the 8-pin connector.
4. Plug the Black connectors into the Shift Lock Solenoid.
5. Verify 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 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 panel 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.
5. Ensure the panel is level and secure using supplied screws.

Control Inputs/Outputs - 8-pin connector

** Blunt Cut Lift Harness **

The ILISC610-B provides three ground side inputs and two 12V, 1/2 amp outputs.

Refer to the ILISC610-B schematic when reading these instructions. A control relay will need to be installed. Lengthen the following wires using solder and heat shrink or tape. The harness provides control connections to the vehicle as follows:

Orange - Connect this output to the lift or lift relay. Refer to applicable lift model drawing when making this connection. This output provides 12V @ 1/2 amp when it is safe to operate the lift.

Gray - Connect this input to the Lift Door switch. Ensure a ground signal is provided with the lift door open. When the lift door is open, the vehicle is prevented from shifting out of Park. The lift door must be open in order to allow lift operation.

Green - ***Supplied with Optional Display Panel*** Connect this wire only if the optional Door Ajar panel is used and an additional door connection is desired. This input is an **optional** connection for an additional door (passenger). This door does not have to be open to allow lift operation. Insert the terminated end of this wire into Pin #5 of the 8-pin connector. Attach blunt side to a door switch wire that provides a ground when the chosen door is open.

Brown - Connect this wire only if **"key off"** lift operation is desired. Connect this **optional** input to the OEM Park Brake switch (as shown) such that the switch is made (GND) when the Park Brake is set. Install a standard rectifier diode (Digikey RL202-TPCT-ND or equivalent) as shown in the Blunt Cut schematic, to isolate the Parking Brake ground signal. Strip back some insulation off the Lt. Blue wire from the Park Brake Switch, solder the Brown wire on and tape or use heat shrink tubing. This connection is required if lift operation is desired when the vehicle ignition is OFF.

Pink - To generate a (-) Park output, connect a ground source to pin 2 (PURPLE). Pin 6 (PINK) then switches to ground when vehicle is in PARK. (Must be connected to ground if not used)

Purple - To generate a (+) Park output, connect a +12Vdc source to pin 6 (PINK). Pin 2 (PURPLE) then switches to +12Vdc when vehicle is in PARK.

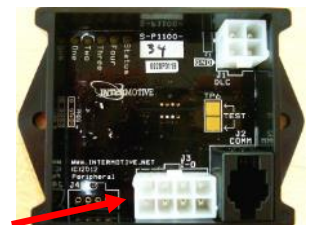
Note: The switching MOSFET for the Park output can supply up to 0.5A. Ensure the appropriate load connection so that the MOSFET is not over driven. If the load is inductive (e.g. relay coil) it should be properly clamped (diode protected) to prevent any high voltage "kickback".



Optional Display Panel



- Pin #1 — N/C
- Pin #2 — PURPLE (+) Park (Must be connected to ground if not used)
- Pin #3 — ORANGE (Vehicle Secure (12V) Output)
- Pin #4 — BROWN (Park Brake (GND) Input) *Optional
- Pin #5 — GREEN (Passenger Door Open (GND) Input) *Optional Provided only with Door Ajar Display Panel
- Pin #6 — PINK (-) Park (See instructions)
- Pin #7 — BLUE (Shift Lock Output) Plug & Play Harness
- Pin #8 — GRAY (Lift Door Open (GND) Input)



Connect the 8 pin connector to the module

Control Inputs/Outputs - 8-pin connector (continued)

** Optional Plug & Play Lift Harness **

Red - This output provides 12VDC @ 1/2 amp when it is safe to operate the lift. Cut the wire to the correct length and attach one of the pins provided using a crimping tool and insert the pin into the correct cavity.

Ricon lifts: Connect to pin #86 of the control relay. Plug 4-pin connector into lift.

Braun lifts: Connect to pin #6 of the 9-pin connector.

Black - Connect this input to the Lift Door switch, as referenced in the schematic. Cut the wire to the correct length and attach to the Lift Door switch, ensuring that a ground signal is provided with the lift door open. When the lift door is open, the vehicle is prevented from shifting out of Park. This door must be open in order to allow lift operation.

Green - ***Supplied with Optional Display Panel*** Connect this wire only if the optional Door Ajar panel is used and an additional door connection is desired. This input is an **optional** connection for an additional door (passenger). This door does not have to be open to allow lift operation. Insert the terminated end of this wire into Pin #5 of the 8-pin connector. Attach blunt side to a door switch wire that provides a ground when the chosen door is open.

Brown - Connect this wire only if **"key off"** lift operation is desired. Connect this **optional input** to the OEM Park Brake switch such that the switch is made (GND) when the Park Brake is set. Install a standard rectifier diode (Digikey RL202-TPCT-ND or equivalent) as shown in the Blunt Cut schematic, to isolate the Parking Brake ground signal. Strip back some insulation off the Lt. Blue wire from the Park Brake Switch, solder the Brown wire on and tape or use heat shrink tubing. This connection is required if lift operation is desired when the vehicle ignition is OFF.

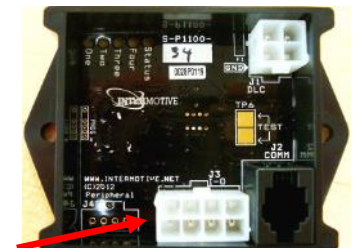
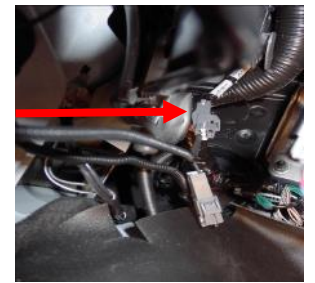
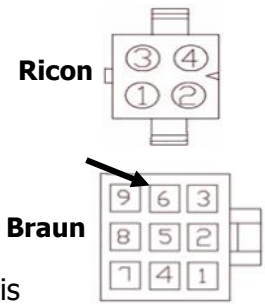
Pink - To generate a (-) Park output, connect a ground source to pin 2 (PURPLE). Pin 6 (PINK) then switches to ground when vehicle is in PARK. (Must be connected to ground if not used)

Purple - To generate a (+) Park output, connect a +12Vdc source to pin 6 (PINK). Pin 2 (PURPLE) then switches to +12Vdc when vehicle is in PARK.

Note: The switching MOSFET for the Park output can supply up to 0.5A, Ensure the appropriate load connection so that the MOSFET is not over driven. If the load is inductive (e.g. relay coil) it should be properly clamped (diode protected) to prevent any high voltage "kickback".

- Pin #1 — N/C
- Pin #2 — PURPLE (+) Park (Must be connected to ground if not used)
- Pin #3 — RED (Vehicle Secure (12V) Output)
- Pin #4 — BROWN (Park Brake (GND) Input) *Optional
- Pin #5 — GREEN (Passenger Door Open (GND) Input) *Optional
Provided only with Door Ajar Display Panel
- Pin #6 — PINK (-) PARK (See instructions)
- Pin #7 — BLUE (Shift Lock Output) Plug & Play Harness
- Pin #8 — BLACK (Lift Door Open (GND) Input)

Connect the 8 pin connector to the module



** Optional Braun Plug & Play Relay Kit #900-00004 **

Current models of Braun lifts draw more than 1 amp and will require the Braun plug and play relay kit.



Red (From ILISC610 Module) – This output provides 12V when it is safe to operate the lift. Cut the wire to the correct length and attach one of the pins provided using a crimping tool and insert at pin #86 of the included relay.

Red - Connect to pin #6 of the 9-pin Braun lift connector.

Yellow (eyelet) - Connect to External +12V at the lift.

Black (eyelet) - Connect to External ground at the lift.

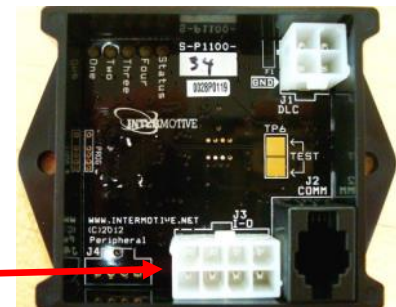


Optional Shift Lock Input: Connect the Yellow wire to any source which provides a High True output to enable shift lock and insert pin into pin #1 at the 8-pin connector.

Black – This input must “tap in” to the existing Lift Door switch wire as the instructions show (See installation description on Page 3).

- Pin #1 — N/C
- Pin #2 — PURPLE (+) Park (Must be connected to ground if not used)
- Pin #3 — RED (Vehicle Secure (12V) Output)
- Pin #4 — BROWN (Park Brake (GND) Input) *Optional
- Pin #5 — GREEN (Passenger Door Open (GND) Input) *Optional
Provided only with Door Ajar Display Panel
- Pin #6 — PINK (-) PARK (See instructions)
- Pin #7 — BLUE (Shift Lock Output) Plug & Play Harness
- Pin #8 — BLACK (Lift Door Open (GND) Input)

Connect the 8 pin connector to the module



Reconnect vehicle battery

ILISC610-B Module Mounting

Ensure all the harnesses are properly connected and routed, and are not hanging below the dash area. Mount the ILISC610-B module as described on page one. Secure using screws or doubled sided tape.

Reconnect the vehicle battery

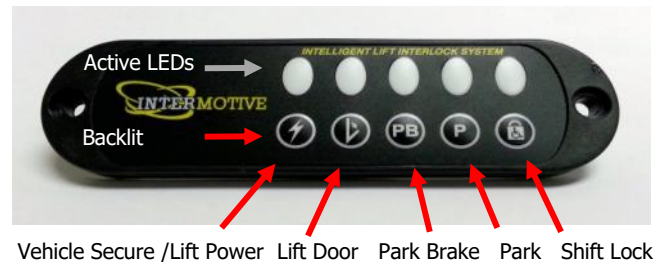
Post Installation / Check List

ILISC610-B (Manual 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 as 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.



1. Turn ignition key on (to "Run"), verify the module wakes up and all 5 LEDs illuminate for approximately 2 seconds. The lower icon LEDs are backlit and will remain illuminated whenever the module is awake.
2. Verify that the Park LED, the Park Brake LED, and the Shift Lock LED remain illuminated.
3. Attempt to deploy the lift. The lift must not deploy with the Lift Door closed.
4. With key on, Lift Door open, Park Brake set and transmission in Park, all 5 LEDs will be illuminated. Attempt to deploy the lift. Verify the lift deploys, then stow the lift.
5. With key on, Lift Door open, transmission in Park, release Park Brake. Verify that the Park Brake (PB) and Vehicle Secure LEDs go out. Attempt to deploy the lift. Verify the lift does not deploy.
6. With key on, Lift Door closed, Park Brake set, attempt to shift vehicle out of Park. Verify transmission will not shift out of Park.
7. With key on, Lift Door open, Park Brake released, attempt to shift vehicle out of Park. Verify transmission will not shift out of Park.
8. With key on, Lift Door closed, Park Brake released and the Service Brake applied, attempt to shift vehicle out of Park. Verify transmission shift lever is able to shift out of Park and all LED's are OFF.

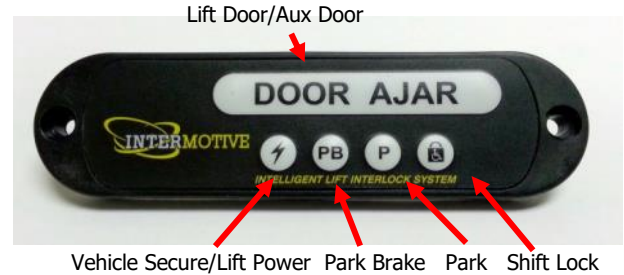
Post Installation / Checklist (continued)

Optional Door Ajar LED Display Panel

Perform the same checks as the standard LED Panel.

Optional input: If equipped with a connection for an additional door (Aux Door) the Door Ajar LED will blink on the display panel until the door is closed. If the **Lift Door** is open, the Door Ajar LED will stay on steady, taking priority over the additional door input.

Optional input: If equipped with key off lift function, the Park Brake has to be set for the system to be operational.

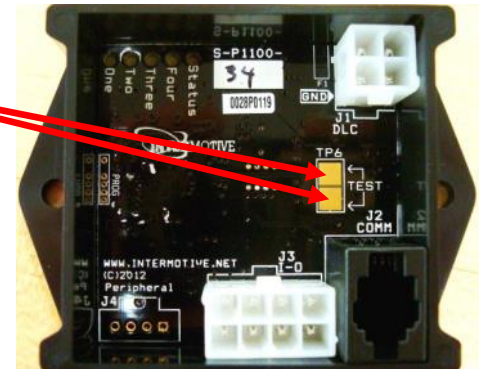


If any of the previous Post Installation tests fail, enter diagnostic mode below:

Lift Interlock Diagnostic Mode Testing

Enabling Diagnostic Mode allows a visual indication of system status and is a good troubleshooting tool 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. Momentarily short the two "Test" pads together.
- 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 Door is open.
 - LED marked "status" indicates "Vehicle Secure" or "Lift enabled" meaning there is 12V on Pin 3 (orange wire) which connects to the lift.

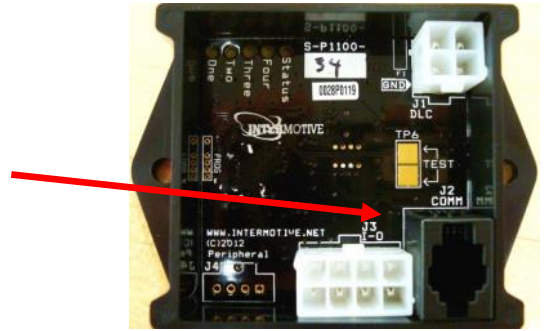


Cycling the key will exit Diagnostic Mode and all LED's will be off.

"Key OFF only" procedure

The ILISC610 module comes from the factory with the ability to power the lift with the key on or off. If operating the lift with key off **only** is desired, perform the following steps:

1. Sit at the wheel with the vehicle in park and the Park Brake ON.
2. Vehicle Key in the ON position.
3. Put the ILIS module into its Diagnostic mode by shorting the two "Test" pads together. LED's on the module will light depending on what vehicle conditions are met.
4. Apply and hold the Service Brake.
5. Touch a grounded wire to the Test Pad again. Module LED's 3 and 4 will turn ON for 3 seconds and then turn OFF for 3 seconds, and repeat.
6. If Service Brake is released when LED's are ON, the "Key OFF only" mode is selected. If the Service Brake is released when the LED's are OFF, the default "Key ON or OFF" mode is selected.
7. LED 5 will flash to indicate the mode has been selected and the module will exit the Diag mode.
8. Verify requested mode is in operation by testing for "Vehicle Secure" with Key ON and Key OFF.



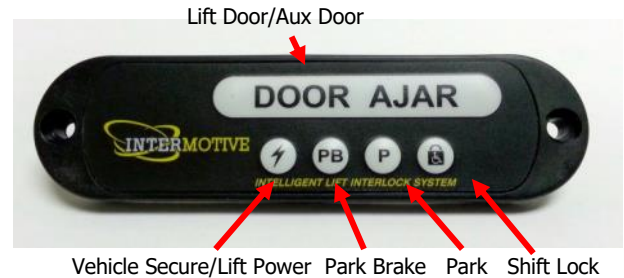
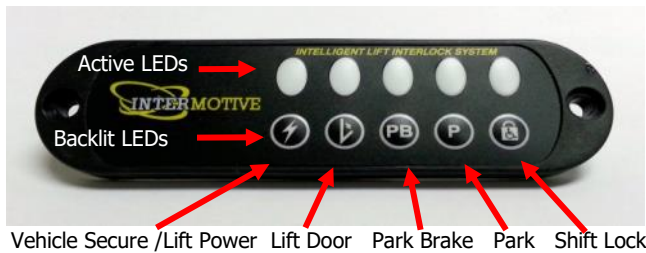
*The discrete Park Brake input must be installed for the lift to operate with the Key OFF.

**If the ILISC610-B fails any step in the System Operating Instructions review the instructions.
If necessary, call InterMotive Technical Support at (530) 823-1048.**

Leave in vehicle ILISC610-B Shift Interlock (Manual Lift Door) Operating Instructions 2008-2024 Chevy/GMC Full Size Van

ILISC610-B (Manual Lift Door)

The ILISC610-B 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. The ILISC610-B prevents the vehicle from being shifted out of park if the lift door is open. As an added feature, the vehicle cannot be shifted out of park anytime the parking brake is applied. This eliminates excessive parking brake wear due to driving with the parking brake applied.



Key On function

- When the vehicle is in "Park" the (P) LED will be illuminated.
- When the Park Brake is applied, the (PB) LED will be illuminated.
- When the Lift Door is open, the Lift Door LED will be illuminated. (Door Ajar LED on optional display panel).
- When the Park Brake is applied or the Lift Door is open, the Shift Lock LED will be illuminated, and the vehicle cannot be shifted out of Park.
- With the vehicle in Park, Park Brake applied and Lift Door open, the Vehicle Secure LED will be illuminated and the lift will be operational. At this point **all** LEDs will be illuminated on either display panel.

Key off function (if optional Park Brake input supplied)

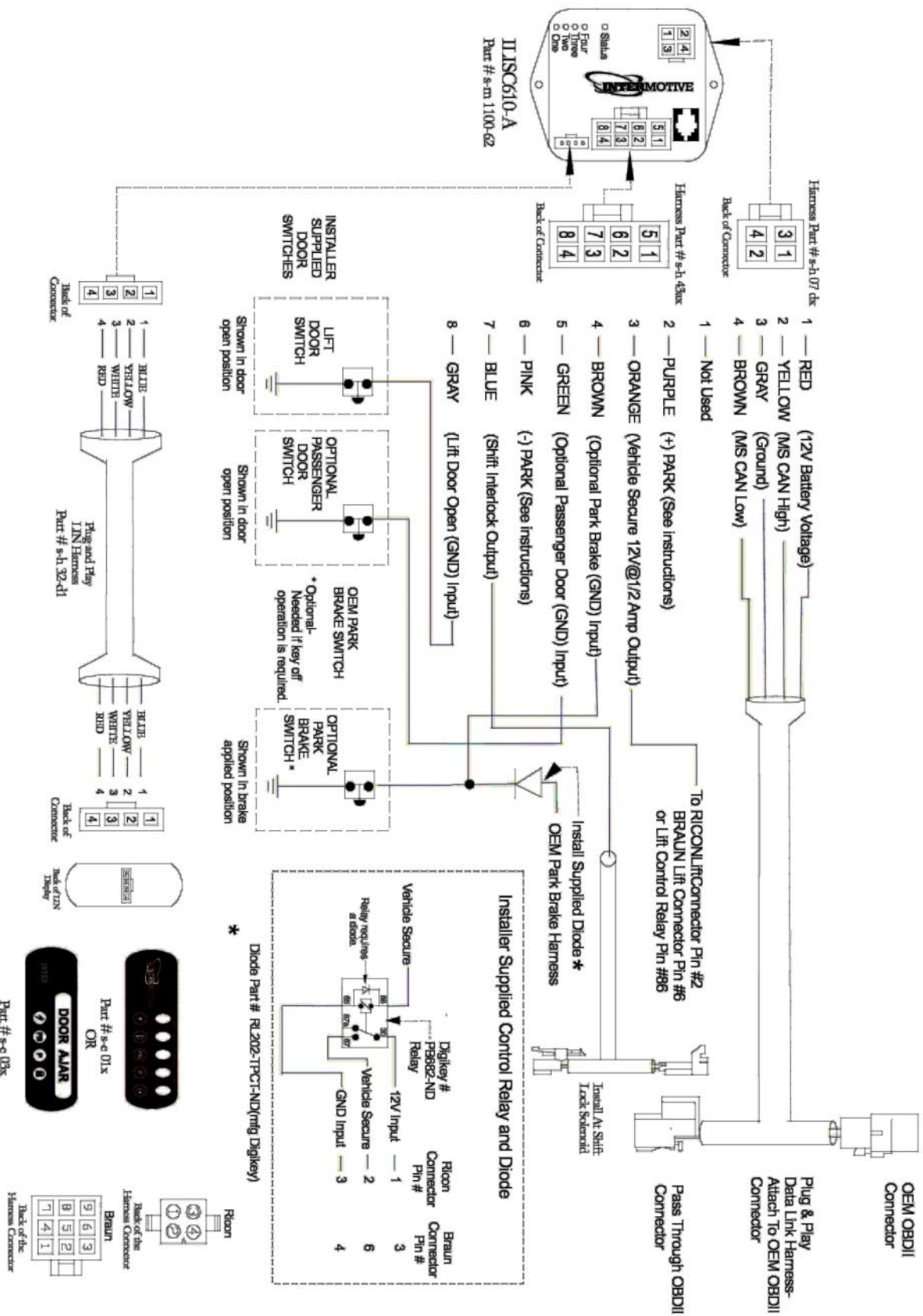
- Vehicle must be in Park before turning key off.
- With the vehicle in Park, the (P) LED and Shift Lock LED will be illuminated.
- With the Park Brake applied and the Lift Door open, all LEDs will be illuminated and the lift will be operational.

Optional Door Ajar: If equipped, when an additional door (Aux Door) is open, the Door Ajar LED will blink on the display panel until this door is closed. If the Lift Door is open, the Door Ajar LED will stay on solid, taking priority over the additional door input.

When the lift door is closed 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 ignition on (key on) or open the lift door. The LEDs will illuminate for approximately 2 seconds as a "prove out". The backlit LEDs remain on as long as the module is awake.

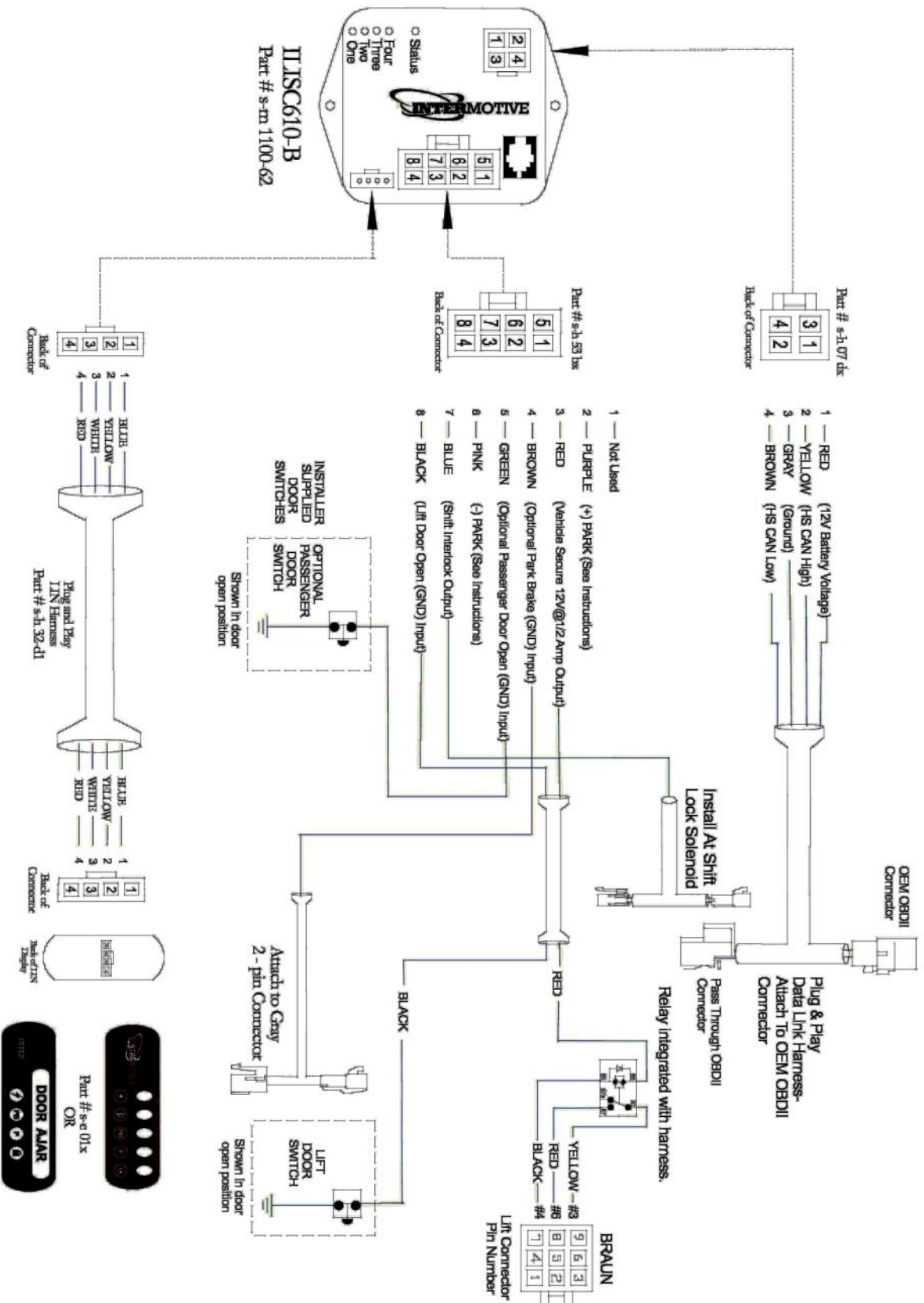
Do not leave the lift door open when the vehicle is not in use. This will cause a draw on the vehicle's electrical system and may result in a dead battery.

Blunt Cut Lift Harness



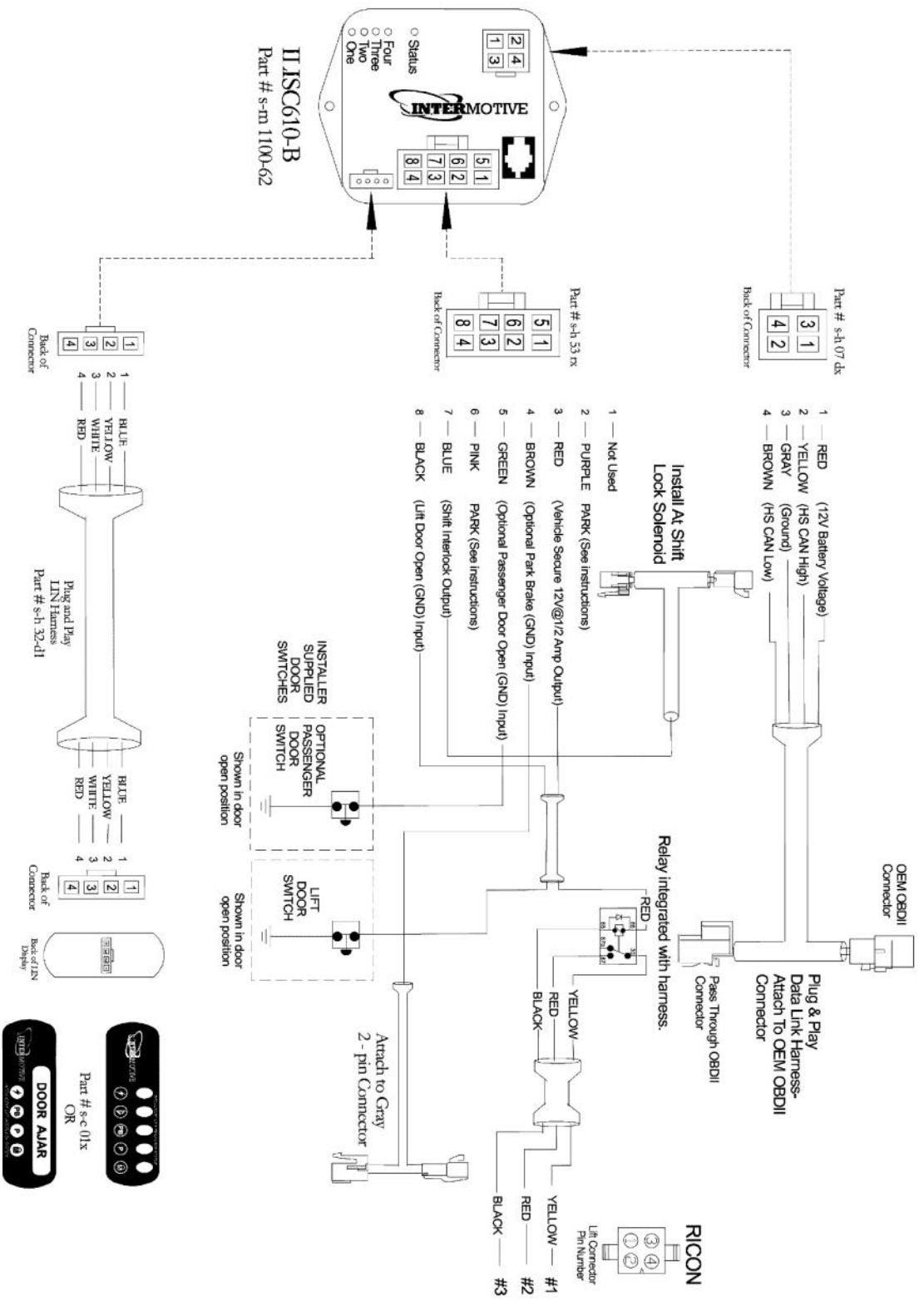
If the ILISC610-B fails any step in the Post Installation Test, review the installation instructions and check all connections. If necessary, call InterMotive Technical Support at (530) 823-1048.

Braun Plug & Play Lift Harness



If the ILISC610-B 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 & Play Lift Harness



If the ILISC610-B 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.

