

Installation of your new device should be performed by a 12V certified technician or mechanic familiar with automotive 12V systems.

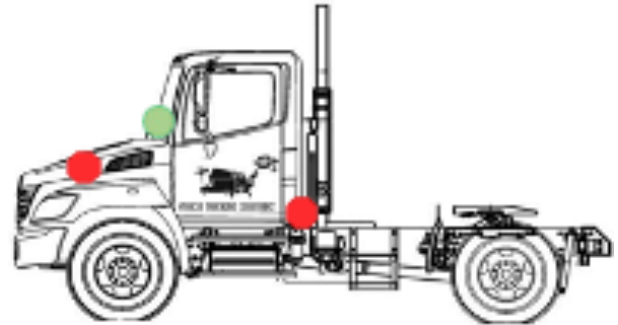
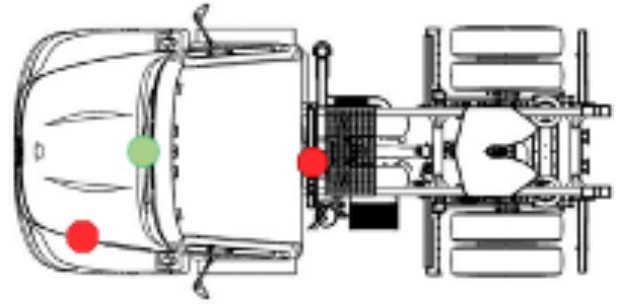


Mounting Guidelines

- The device should be installed under the dashboard with a clear line of sight to the sky, and as close to the windshield as possible. Place device with barcode decal "THIS SIDE TOWARDS SKY" facing up. (Reference diagram A)
- DO NOT install the unit underneath metal as the signal will not penetrate and reach the satellite.
- During initial installation, the vehicle should ideally be outside to ensure the best GPS signal. The devices may not report a location to the satellite if it is inside a garage or other structure.
- Secure the device with Velcro, and/or zip ties to ensure it is solidly mounted to the vehicle.

Installation Guidelines:

- After securing the harness within the vehicle it is now time to power up the device.
- With the Ignition Off, Plug in the device to the Molex Connector.
- During the boot up process the device will show a Solid Green light for 30 Seconds
 - This represents the device powering up
- After the device has powered up the Green LED will start to Flash at the following Rates
 - 25 times on-off every 10 seconds when the ignition is on
 - Eight times on-off every 10 seconds when the ignition is off
- During the installation if you see a Red LED flashing please be sure to review the section on Troubleshooting
- Before finalizing installation, contact our Support Department at **(631) 670-1623** to verify the device is properly reporting to **IntelliShift**.
- 3-Wire installs are used for Customers who do not have the Diagnostic option for their vehicles. We will need to find and utilize a Constant Positive source for Power, an Ignition based Positive for Ignition and unpainted Metal for Ground.
- For Vehicles who use a standard Key to start, we usually go to the Ignition Tumbler and tap into the wire harness there for Power and Ignition.
- For Vehicles who use an Engine Push to Start, we usually source those wires from the vehicles BCM/ECU/Fuse Box and use a computer safe test light or multimeter to find the correct wires for Power and Ignition.
- We tap into those wires via our preferred Poke and Wrap method, creating a small hole in the wire after its stripped to wrap our wire around the vehicle's wire, then using tape to wrap around our connection. Afterward, we use a zip tie to secure all our connections on each individual wire.



- For Ground, usually, any unpainted metal surface that is bolted directly to the body and isn't a moving part is sufficed. Attach a small Ring Terminal and use a self-tapping screw to secure in place.
- Please place the VG-5 high up inside the dash to obtain a maximum GPS signal.
- Once everything is wired up and your VG-5 is placed, bundle up the harness neatly and zip tie to a factory harness to retain a factory looking install

Troubleshooting:

The Green and Red LEDs are intended to aid in troubleshooting installations. Below is a summary of their behavior.

Green LED

- See Installation.

Red LED

- The red LED flashes two-digit codes. The first digit indicates which general area is having a problem (hardware, modem, GPS, end-end service). The second digit gives specific error information. Since there can be more than one error condition, the device rotates through the error codes (e.g. if the GPS is tracking no satellites and the modem is not registered).

1-X Error Codes: IntelliShift-Specific Errors

- **1-1:** The device has an expired license key due to a failure to resync with the IntelliShift configuration server. Contact IntelliShift with the serial number of the device.
- **1-2:** Low supply voltage. This could be caused by a true low voltage condition (<8V) or a high impedance supply that dips in voltage when the current draw spikes due to modem transmit.
- **1-3:** Allocated data usage exhausted. Contact IntelliShift Technical Support for further instructions.

2-X Error Codes: Modem Related Error Codes

- **2-1:** Modem module fault. Contact IntelliShift for failure analysis and repair.
- **2-2:** No SIM Make sure the SIM drawer contains a SIM and that it is correctly seated in the socket. If it is, then contact IntelliShift for failure analysis and repair.
- **2-3:** No Check that the cellular antenna is correctly attached. Try to substitute a known-good cellular antenna to see if the antenna may be broken. If this fixes the problem, then reinstall a new antenna. If not, then RMA the unit to IntelliShift for failure analysis and repair.

- **2-4:** Network not found. Contact IntelliShift Technical Support
- **2-5:** Last data session failed. This means that an attempt to establish a data session failed. This failure will occasionally happen in a working unit, but if the problem is persistent Contact IntelliShift.
- **2-6:** Network is not available.

3-X Error Codes: GPS Related Error Codes

- **3-1:** GPS module fault: Contact IntelliShift for failure.
- **3-2:** GPS antenna fault: try replacing the GPS antenna with a known good antenna. If the condition is not corrected after 2 minutes, contact IntelliShift for failure.
- **3-3:** GPS not tracking any satellites. Check that the GPS antenna has a clear, unobstructed view of the sky and has been operating for at least five minutes. Check that the GPS antenna is facing the correct way up. If the condition persists contact IntelliShift for failure analysis.
- **3-4:** GPS no fix (less than three satellites). If the antenna only has a partial view of the sky due to the position of the vehicle (e.g. under a cover, close proximity to a building, etc.) then try to move the vehicle to ensure that it will be able to make fixes when standing in the open. If the vehicle has a full view of the sky and the error condition persists then try to reposition the GPS antenna to reduce any obstructions from its view of the sky.
- **3-5:** GPS has no GPS receiver that sets its internal clock from the satellite signals. If the GPS receiver has no time, then it has never seen a single satellite since the device was last power cycled.

4-X Error Codes: End-to-End Application Error Codes

- **4-2:** Data transfer failed. If the condition persists then contact IntelliShift Technical Support.

Before finalizing installation, please contact our technical support department at 631-670-1623 to have them verify the vehicle is visible in IntelliShift and is registering properly.