

AK11 Tracking Kit

Items Included in the Kit

Unpack the kit and review its contents. Kit includes one Tracker module (preloaded with SIM card and data plan for the truck) and wiring necessary for installation—items included vary per options purchased.

AK11 Tracker: Only one tracker module included (truck specific depending on antenna needs)

Internal Antenna Version

DF Part Number: **TRACKER-AK11-INTERNAL**

External Antenna Version

DF Part Number: **TRACKER-AK11-EXTERNAL**

(Requires an external antenna kit, see accessory kit below).



I/O Harness

(Standard power harness included with Tracker)



AK11 External Antenna Accessory (sold separately): Required for an External Antenna Tracker.

External Antenna Kit

DF Part Number: **TRACKER-ANTENNA-AK11-EXTERNAL**

(Packed with this kit, if purchased separately)



Optional AK11 Chassis Cables (sold separately): If applicable, only one of the following cables incl.

DF Part Number: **TRACKER-CABLE-AK11-GREEN**

Connection Type: J1939



(model year 2007 or newer heavy-duty trucks)

DF Part Number: **TRACKER-CABLE-AK11-GRAY**

Connection Type: J1708/J1587



(model year 2006 or older heavy-duty trucks)

DF Part Number: **TRACKER-CABLE-AK11-OBDDII**

Connection Type: OBDII,



(light duty trucks)

Optional Y Cables (sold separately): If applicable, only one of the following included—splitter must match cable option.

DF Part Number: **DF-INV-030**

Connection Type: J1939 splitter



DF Part Number: --

Connection Type: J1708 splitter



DF Part Number: --

Connection Type: OBDII splitter



Tools for the Job (not included)

- #2 Phillips screwdriver (or screw gun with #2 Philips end)
- Flat/Torq/Square screwdrivers or screw gun bits (alternate dashes)

- Wire crimpers
- Wire Strippers
- Side Cutters
- Light

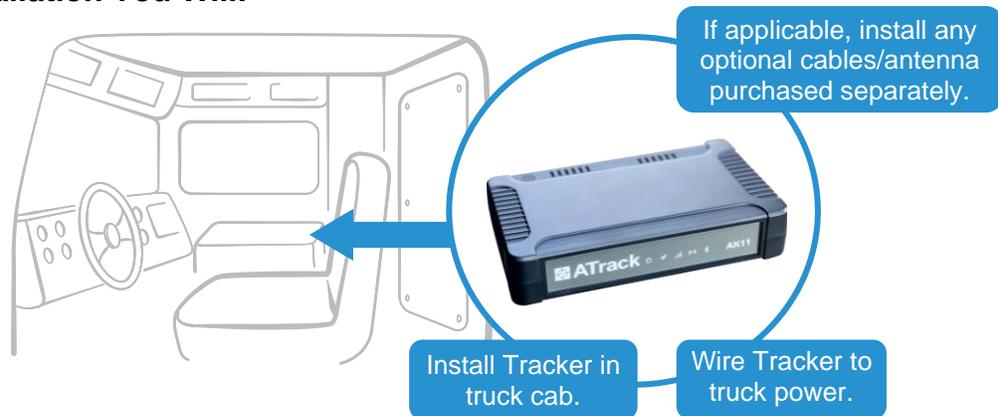
Additional Items Needed (not included)

- Grommets, bushings, hole plugs (to pass wiring through dash/firewall)
- Wire ties
- Screws/fasteners

Installation – AK11 Tracker

The Tracker Kit is tailored to your truck. The kit is installed in the cab of the vehicle where it can receive an optimal cell signal and be connected to constant truck power.

During Installation You Will:

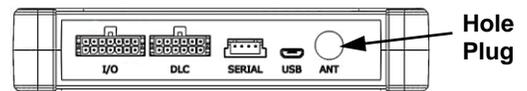


Prepare for Installation

Before starting any installation, review this section completely.

Step 1. Check the equipment—decide Tracker placement:

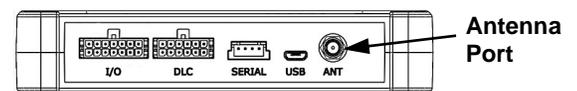
- 1.1. **Internal Antenna Tracker** requires:
Tracker Module, Power Harness, and Chassis Cable (for data, if applicable)



Sit tracker on dash (or open area) where it receives the best cell signal (it must not obstruct driver's view or function). **For poor signal areas**, do not install tracker inside the dash.

As a general indicator, check your cell phone service for reception quality, you need 3 bars minimum—5 bars are preferred.

- External Antenna Tracker** requires:
Tracker Module, Power Harness, Chassis Cable (for data, if applicable), and an External Antenna



Tracker can be installed in dash or inside a panel.

- 1.2. **Check Chassis Cable** color/pin type (if applicable):

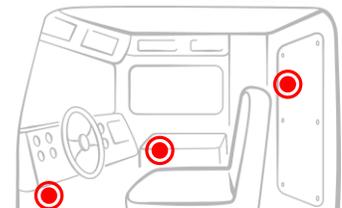
- Cable connector must match the diagnostic port; see image for typical port locations.

*Remove any port cover or splitter to check the **actual port color**.*

- Use a splitter if the port is in use (or used by service technicians) to prevent disconnecting the tracker to run diagnostics.



Rear Discharge (Typical Port Locations)



Front Discharge (Typical Port Locations)

Step 2.



Before opening any panels—read through the installation and roughly lay out the equipment. All cables must easily reach from the tracker to their connection points.

Installation

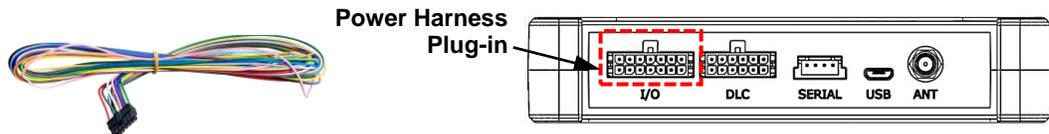
Step 1. Engine must be off, but leave battery connected.

Step 2. Remove appropriate panel(s) to access the truck's power connections.

For typical connection locations, reference DF+ Chassis CAN and Power Connections section (or contact your chassis service provider).

Step 3. Connect I/O Power Harness (powers tracker when ignition is ON or OFF).

3.1. Plug harness into tracker I/O port.



3.2. Route harness wiring to chassis connections for battery power, ignition, ground, and status switch (PTO switch, if applicable)—connections are labeled. **Always connect power or ground last.**

Important: If needed, route harness under dash trim, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

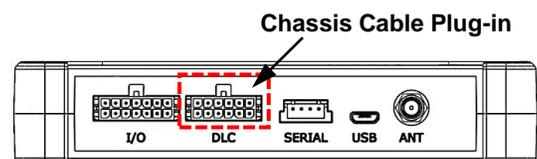
3.3. Add appropriate terminal ends to harness wires and connect to truck as follows:

- Yellow wire to ignition.
- For statusing option (on/off event tracking), dark green wire to PTO switch.
- Black wire to ground.
- Red wire to constant battery power.
- Leave remaining harness wires bundled together in a protected location.

Step 4. Connect Chassis Cable (if equipped).

4.1. Plug chassis cable into tracker DLC port.

Example Cable shown
(actual color/style may vary)



4.2. Route cable to Data Link Connector.

Important: If needed, route cable under dash trim, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

4.3. Plug chassis cable into the diagnostic port or splitter (if provided, then plug the splitter into the diagnostic port).

4.4. **STOP** **Before continuing—diagnostic port wiring must be verified.**

Occasionally, the port has ignition wired in place of constant battery (usually seen on a Front Discharge Mixer), see testing procedure below.

Test Diagnostic Port Wiring

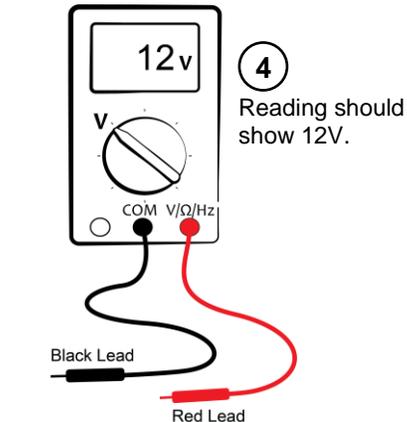
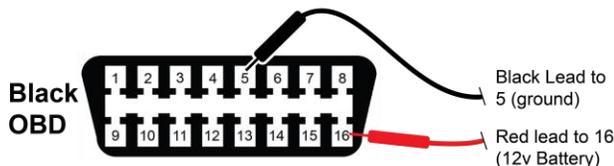
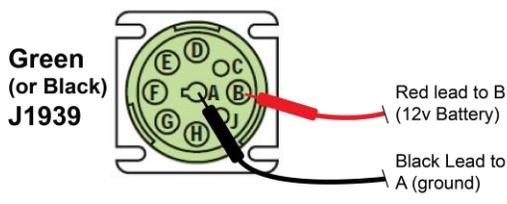
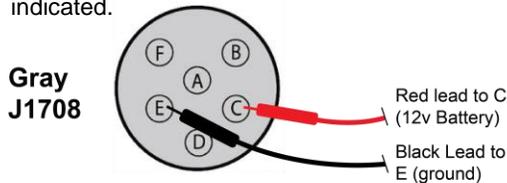
A. Turn ignition key ON; then turn the key OFF.

B. **If ignition turns OFF**, wiring connections are verified, go to Step 4.5.

If ignition stays ON, test the diagnostic port wiring with a multimeter as follows:

- 1 Unplug the chassis cable from the diagnostic port.
- 2 Set multimeter to volts, then plug the red and black leads into the multimeter as shown.

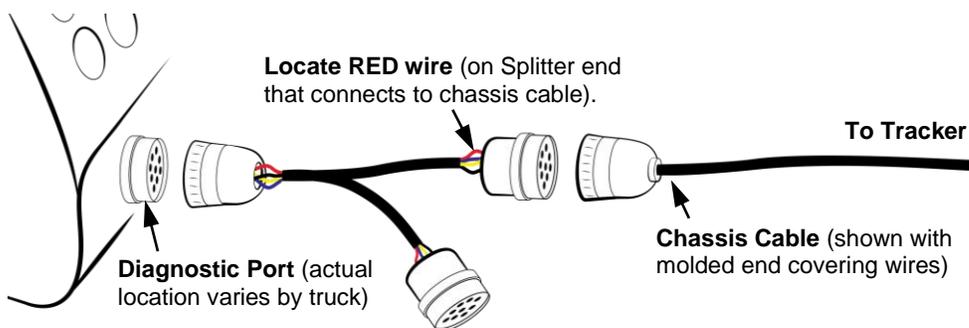
- 3 Test the constant battery pin on the chassis diagnostic port. See the port type for your truck below—place red and black leads as indicated.



- 5 **Double check:** Test voltage to constant battery pin again with ignition key ON and OFF.
 - If 12v is shown with key ON and OFF, wiring is verified, skip to Step 4.5
 - If no voltage is shown when key is OFF, the port has ignition wired in place of constant battery, see next step to correct the wiring.

C. **To remove ignition power from the chassis cable**, you must cut the red wire in the chassis cable or splitter, see steps below.

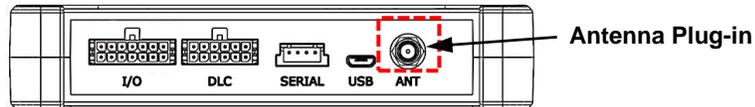
- 1 Turn ignition key OFF, then unplug the chassis cable (or splitter).
- 2 Locate the **RED** wire on the chassis cable or splitter. If both ends of the chassis cable are molded, use a splitter, then find the **RED** wire visible on the splitter, see image.
- 3 Cut the **RED** wire (on end that sends ignition power to the tracker), see image below. **Shrink wrap or seal both cut wire ends** (wire is live when key is ON).



4.5. Make sure chassis cable is securely fastened out of the way.

Step 5. Connect External Antenna (if applicable).

- 5.1. Peel the protective cover from adhesive side of antenna.
- 5.2. Mount antenna on inside windshield or headframe, near a pillar, as high as possible so it does not obstruct the driver's view.
- 5.3. Route antenna cable inside the headliner to the tracker and connect cable end to ANT plug-in port.



Step 6. Place tracker in the predetermined mounting location—position it to see the indicator LEDs.

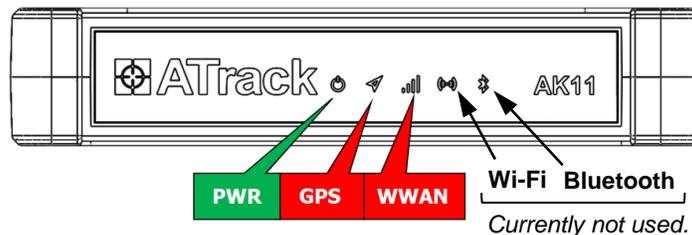
Internal Antenna Tracker (place on dash or where it receives the best cell signal).

External Antenna Tracker (place in dash or inside a panel).

See next section to verify tracker installation is complete.

VERIFY TRACKER INSTALLATION

After unit installation, **allow up to five minutes** for signal reception to the tracker to stabilize, then check the tracker lighting indicators to verify module placement and wire connections are correct.



Step 1. Turn ignition key ON and check the LED indicators for a **Normal State**:

Tracking only—normal LED state when reporting:

- PWR **solid** green
- GPS **solid** red
- WWAN (cellular) **solid** red

Tracking and chassis data—normal LED state when reporting:

- PWR **flashing** green
- GPS **solid** red
- WWAN (cellular) **solid** red

Step 2. If lights show a normal state, tracker installation is verified.

- If all lights are off, check power (12v and ignition) and ground wire connections, reference the Installation section, Step 3, Connecting the I/O Power Harness.
- If lights are not showing a normal state, see Troubleshooting section.

Step 3. When installation is complete, make sure all wiring connections are securely fastened, then close any dash or panels opened.

TRACKER TROUBLESHOOTING

Issue	Possible Cause	Potential Solution
Indicator Light (LED) Issues (reference Verify Tracker section on previous page for normal light state)		
No lights ON	Power or ground wiring issue.	Make sure I/O Harness is plugged into I/O port on Tracker. Check I/O Harness connections to chassis power (12v and ignition) and ground, reference Installation section, Step 3, Connecting the I/O Power Harness.
Units with chassis data, PWR not flashing	Ignition key not ON	Turn ignition key ON to verify PWR light. Key must be ON for PWR LED to flash (indicates data is transmitting).
	Chassis connection	Make sure chassis cable is plugged into DLC Port on Tracker. Make sure chassis cable is properly connected to the diagnostic port in the truck. If the issue persists, contact DF+ Support to verify device configuration.
GPS not solid red or WWAN (Cellular) not solid red	Hardware or truck location issue	AK11 Tracker with External Antenna: <ul style="list-style-type: none"> Make sure antenna is mounted in an open location (for best cell signal)—make sure antenna is plugged into tracker. Reference Installation section, Step 5 for mounting the antenna. As a general indicator, check your cell phone service for reception quality, you need 3 bars minimum—5 bars are preferred. Move truck to an open location to receive a better signal (if needed, pull truck out of building). Once truck is in the open, allow up to five minutes for signal reception to stabilize, then recheck LED(s). If WWAN (cellular) is still not solid red, check the troubleshooting section below for a SIM card or data plan issue. If GPS is still not solid red, contact DF+ Support.
		AK11 Tracker with Internal Antenna: <ul style="list-style-type: none"> Move truck to an open location to receive a better signal (if needed, pull truck out of building). Once truck is in the open, allow up to five minutes for signal reception to stabilize, then recheck LED(s). As a general indicator, check your cell phone service for reception quality, you need 3 bars minimum—5 bars are preferred. If tracker is inside the dash, remove it, and mount it on top of the dash to receive a better cell signal. If WWAN (cellular) is still not solid red, check the troubleshooting section below for a SIM card or data plan issue. If GPS is still not solid red, contact DF+ Support.

Issue	Possible Cause	Potential Solution
<p>Hardware and location issues above check ok, but WWAN (Cellular) still not solid red</p>	<p>SIM card or data plan issue</p>	<p>Check for SIM card issue: For qualified service technician only (who is familiar with electronic devices).</p> <ul style="list-style-type: none"> a) On bottom of tracker, remove the small Philips screw and open the SIM card door. b) Make sure the card is correctly in place. c) Remove the SIM card, inspect it for visible damage, then reinstall it to see if that fixes the issue. d) Allow up to five minutes for signal reception to stabilize, then recheck LED(s). <p>If the issue persists, check for data plan issue: Contact DF+ Support to check if the data plan is active (statusing and reporting chassis data).</p>

For installation or troubleshooting questions, please call DF+ Support at 630.518.4606.