

WHELEN[®]

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Installation Guide: FLEET-RACK™ Traffic Advisor™ (Arrow Style):

Warnings to Installers

Whelen's emergency vehicle warning devices must be properly mounted and wired in order to be effective and safe. Read and follow all of Whelen's written instructions when installing or using this device. Emergency vehicles are often operated under high speed stressful conditions which must be accounted for when installing all emergency warning devices. Controls should be placed within convenient reach of the operator so that they can operate the system without taking their eyes off the roadway. Emergency warning devices can require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or vehicle damage, including fire. Many electronic devices used in emergency vehicles can create or be affected by electromagnetic interference. Therefore, after installation of any electronic device it is necessary to test all electronic equipment simultaneously to insure that they operate free of interference from other components within the vehicle. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving; sudden braking or collision. Failure to follow instructions can result in personal injury. Whelen assumes no liability for any loss resulting from the use of this warning device. PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.

Warnings to Users

Whelen's emergency vehicle warning devices are intended to alert other operators and pedestrians to the presence and operation of emergency vehicles and personnel. However, the use of this or any other Whelen emergency warning device does not guarantee that you will have the right-of-way or that other drivers and pedestrians will properly heed an emergency warning signal. Never assume you have the right-of-way. It is your responsibility to proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. Emergency vehicle warning devices should be tested on a daily basis to ensure that they operate properly. When in actual use, the operator must ensure that both visual and audible warnings are not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should be familiar with all applicable laws and regulations prior to the use of any emergency vehicle warning device. Whelen's audible warning devices are designed to project sound in a forward direction away from the vehicle occupants. However, because sustained periodic exposure to loud sounds can cause hearing loss, all audible warning devices should be installed and operated in accordance with the standards established by the National Fire Protection Association.

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.**
- **Failure to use specified installation parts and/or hardware will void the product warranty.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr the holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro®, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post (this does not include products that use cigar power cords).**
- **If this product uses a remote device for activation or control, make sure that this device is located in an area that allows both the vehicle and the device to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

Installation:

Caution: Permanent mounting of this product will require drilling. It is absolutely necessary to make sure that no other vehicle components could be damaged by this process. Check both sides of the mounting surface before starting. If damage is likely, contact Whelen tech support.

IMPORTANT: It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment!

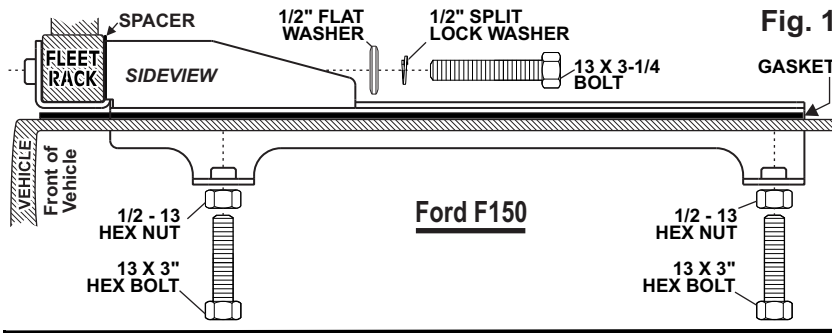


Fig. 1

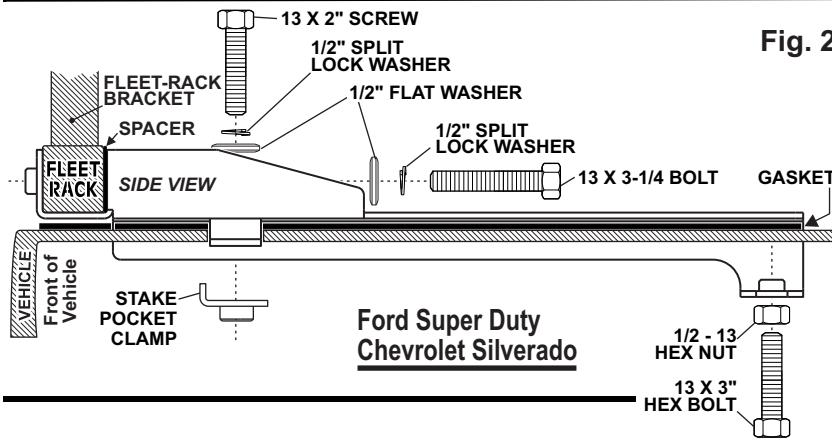


Fig. 2

Bed Rail Mounting:

1. **Model FR02:** Slip the passenger side mounting bracket onto the bed rail of the pickup bed and insert the rubber gasket between the side rail and bracket (Fig. 1).
2. The 2 mounting bolts screw into the two mounting tabs on the bracket and up against the bottom of the bed rail. Secure the mounting bracket to the side rail using the supplied hardware (Fig. 1).

NOTE: For models FR01 and FR03 you will use the supplied **STAKE BRACKET CLAMP** which hooks around the bed rail taking the place of one of the mounting tabs (Figs. 2 & 3).

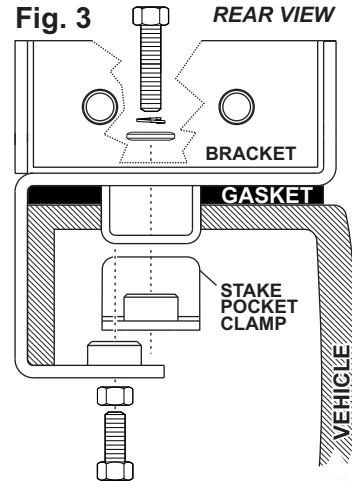


Fig. 3

3. Repeat this procedure for the driver side bracket.
4. Insert the rack into the two mounting brackets while also inserting the two supplied spacers and secure the rack to the mounting brackets using the supplied hardware (Figs. 1 & 2).

Utility Body Mounting:

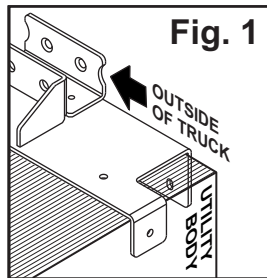


Fig. 1

1. Position the mounting bracket on the front edge of the utility body where it will be mounted. The two tabs on the bracket will hang over the front and inside of the utility body (Fig. 1).
2. With the bracket in place, mark off the three top mounting hole locations onto the mounting surface, remove the bracket and drill the mounting holes (17/64 drill bit).

3. Position the bracket (with mounting gasket) back onto the vehicle. Secure the bracket to the vehicle including the support bracket, using the three mounting holes you drilled in step 2 (Fig. 2).
4. Using a 17/64 drill bit drill the four remaining mounting holes using the bracket as a template.
5. Finish securing the bracket using the supplied hardware and repeat steps 1 - 5 for the other bracket.
6. Insert the FLEET-RACK™ into the mounting brackets while inserting the supplied spacers and secure the FLEET-RACK into the mounting brackets using the supplied hardware (Fig. 2).

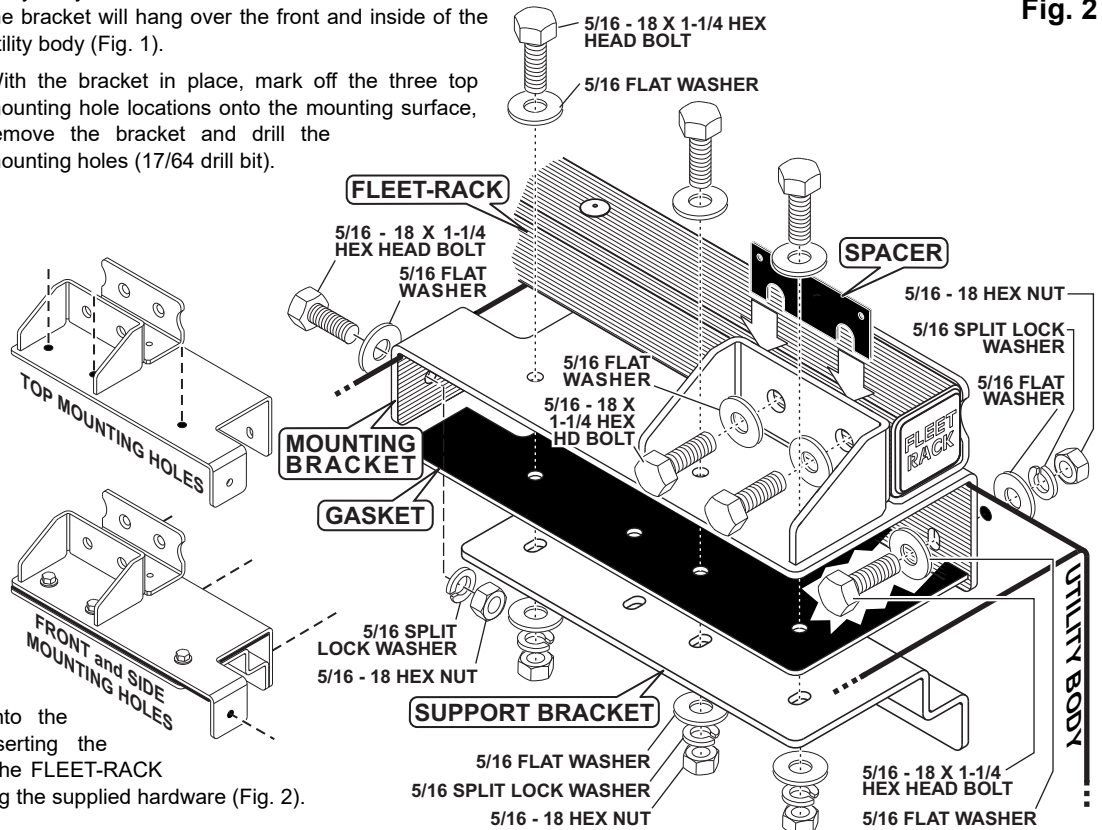


Fig. 2

Wiring:

Wire Connections / Power Cable:

- Splice the RED and RED/WHT wires together, then extend this single wire to the battery and install a 15 amp fuse block (customer supplied) to the end of the wire. Remove the fuse before connecting any wires to the battery. Connect the wire to the POSITIVE (+) battery terminal.

IMPORTANT: There must not be more than 2 feet of wire between fuse block and battery. The wire between fuse and battery is unprotected, do not allow this wire to come in contact with any other wires.

- Splice the BLACK and BLK/WHT wires together, then extend this single wire to the battery and connect it to the battery ground. If your vehicle has a cable extending from the negative terminal of the battery to the chassis, it is best to attach the black wire at the chassis connection.

WARNING: All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

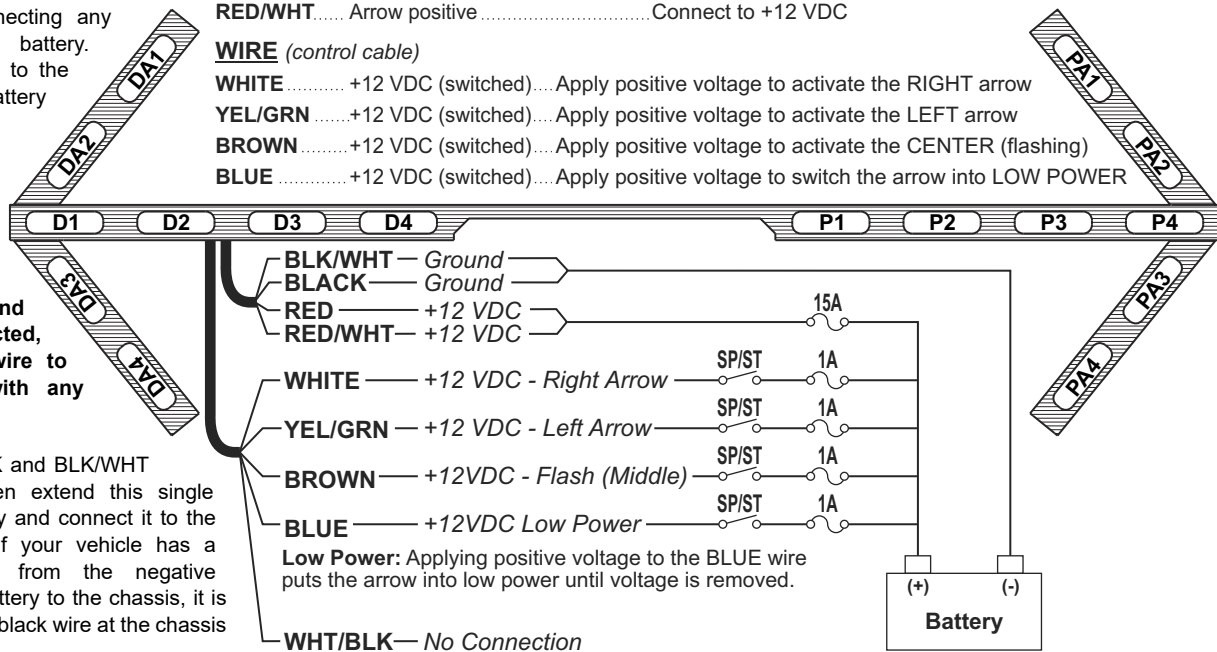
WIRE (power cable)

- BLACK** Arrow ground Connect to vehicle ground
- BLK/WHT** Arrow ground Connect to vehicle ground
- RED** Arrow positive Connect to +12 VDC
- RED/WHT** Arrow positive Connect to +12 VDC

WIRE (control cable)

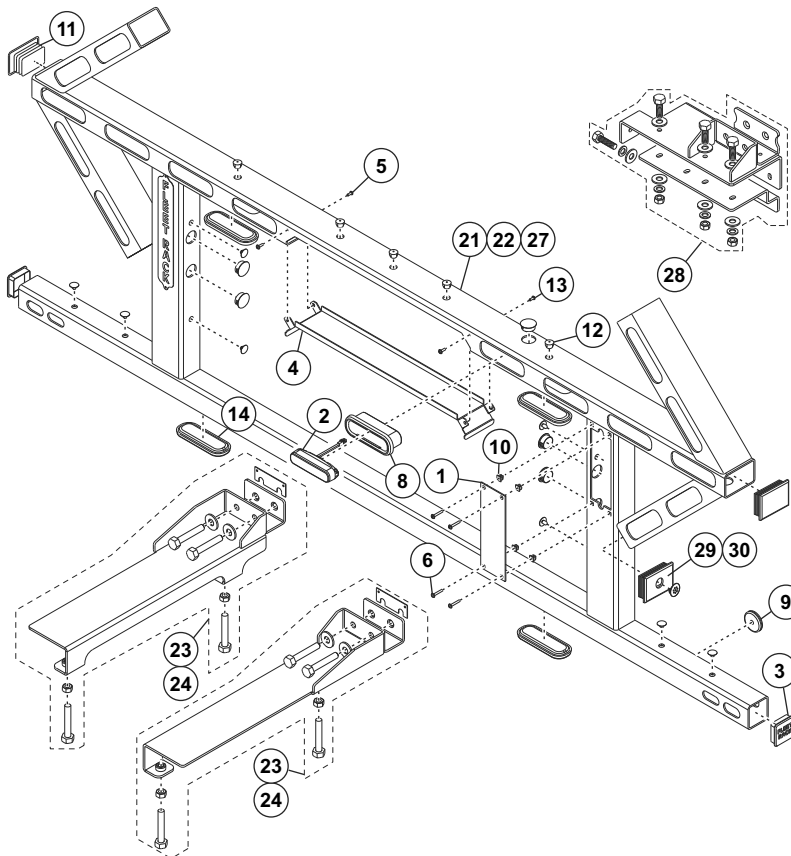
- WHITE** +12 VDC (switched) Apply positive voltage to activate the RIGHT arrow
- YEL/GRN** +12 VDC (switched) Apply positive voltage to activate the LEFT arrow
- BROWN** +12 VDC (switched) Apply positive voltage to activate the CENTER (flashing)
- BLUE** +12 VDC (switched) Apply positive voltage to switch the arrow into LOW POWER

SPLIT ARROW:
Applying positive voltage to the WHT & YEL/GRN wires simultaneously will activate Split Arrow.



Wire Connections / Control Cable:

Extend the WHITE, YELLOW/GREEN, BROWN and BLUE wires to the battery. Fuse each wire a 1 amp and install an SPST switch on each wire. All fuses and switches are customer supplied.



QTY	QTY	QTY	QTY	ITEM	PART NUMBER	DESCRIPTION
			*		01-0687510-01	FLEET RACK, TRAFFIC ARROW, SILVERADO
			*		01-0687510-02	FLEET RACK, TRAFFIC ARROW, SUPER DUTY
			*		01-0687510-03	FLEET RACK, TRAFFIC ARROW, F150
			*		01-0687510-04	FLEET RACK, TRAFFIC ARROW, UTILITY BODY
1	1	1	1	1	01-026E835-00	SUB ASSY, 10 OUTLET T/A MODULE FLT-RACK ARROW
16	16	16	16	2	01-026D816-10	SUB ASSY, ION LT AMBER 2-WIRE BLACK HSG
2	2	2	2	3	11-26D921-000	ENDCAP, 2" SQUARE FLEET-RACK
1	1	1	1	4	11-26E367-007	CVR, 3RD BRAKE LT CUT-OUT TRAFCA ADV, FLT-RACK BLK
4	4	4	4	5	14-06221C-08V	SCREW, 6-32 X 1/2 PPHMS SS BLACK OXIDE VIBRA-TITE VC-3
4	4	4	4	6	15-08121B-082	SCREW, 8 X 1/2 PPHMS TYPE A SS BLK ZINC OXIDE
1	1	1	1	7	39-1V04017-00	HOUSING, 4 POS PLUG UNIVERSAL MATE-N-LOK
16	16	16	16	8	21-006D378-00	GROMMET, BODY MOUNT ION LIGHT
5	5	5	5	9	21-11263204-0	GROMMET, 1" SLIM LINE
4	4	4	4	10	21-12080905-1	GROMMET, #8
6	6	6	6	11	21-3218535-00	PLUG, RECTANGULAR TUBING
5	5	5	5	12	21-3718425-05	PLUG, DOME, 1/2" HOLE DIA DP500, BLK NYLON, 94V-2
6	6	6	6	13	21-3718425-10	PLUG, DOME, 1.0" HOLE DIA DP1000, BLK NYLON, 94V-2
4	4	4	4	14	22-206D920-00	PLUG, WIRE ACCESS FLEET-RACK
1	1	1	1	15	26-0121053-01	CLAMP, 7/16"
8	8	8	8	16	26-1518443-00	CLIP, CHRISTMAS TREE
1	1	1	1	17	46-0746931-00	CABLE POWER TRAFFIC ARROW FLEET-RACK
1	1	1	1	18	46-0746932-00	CABLE CONTROL TRAFFIC ARROW FLEET-RACK
1	1	1	1	19	46-0787519-00	HARNESS INTERNAL DRIVER FLEET-RACK ARROW
1	1	1	1	20	46-0787519-01	HARNESS INTERNAL PASSNGR FLEET-RACK ARROW
-	-	-	-	21	06-26E847-001	FRAME, MAIN SILVERADO/F-150 W-LOGO FLT-RCK ARW
-	-	-	-	22	06-26E847-002	FRAME, MAIN SUPR DUTY W-LOGO FLT-RCK ARROW
-	-	-	-	23	01-046D992-01	KIT, MTG BRACKET SILVERADO/SUPER DUTY FLEET-RACK
-	-	-	-	24	01-046D992-02	KIT, MTG BRACKET F-150 FLEET-RACK
1	1	1	1	25	39-1V17269-00	SEAL, INTERFACE 4 POS UNIVERSAL MATE-N-LOK
1	1	1	1	26	39-1V17269-01	SEAL, WIRE 4 POS UNIVERSAL MATE-N-LOK
1	-	-	-	27	06-26E847-003	FRAME, MAIN UTIL BODY W-LOGO FLEET-RACK ARROW
1	-	-	-	28	01-0487593-01	KIT, MTG BRACKET, UTILITY BODY FLEET-RACK
2	2	2	2	29	21-3247769-00	PLUG, RECTANGULAR 2X3 w/HOLE FLEET RACK
2	2	2	2	29	21-7263998-00	PLUG, VENT, 7/50 DIA HOLE