

## INSTALLATION GUIDE

# **AMP** Research **Power Step** MADE IN USA

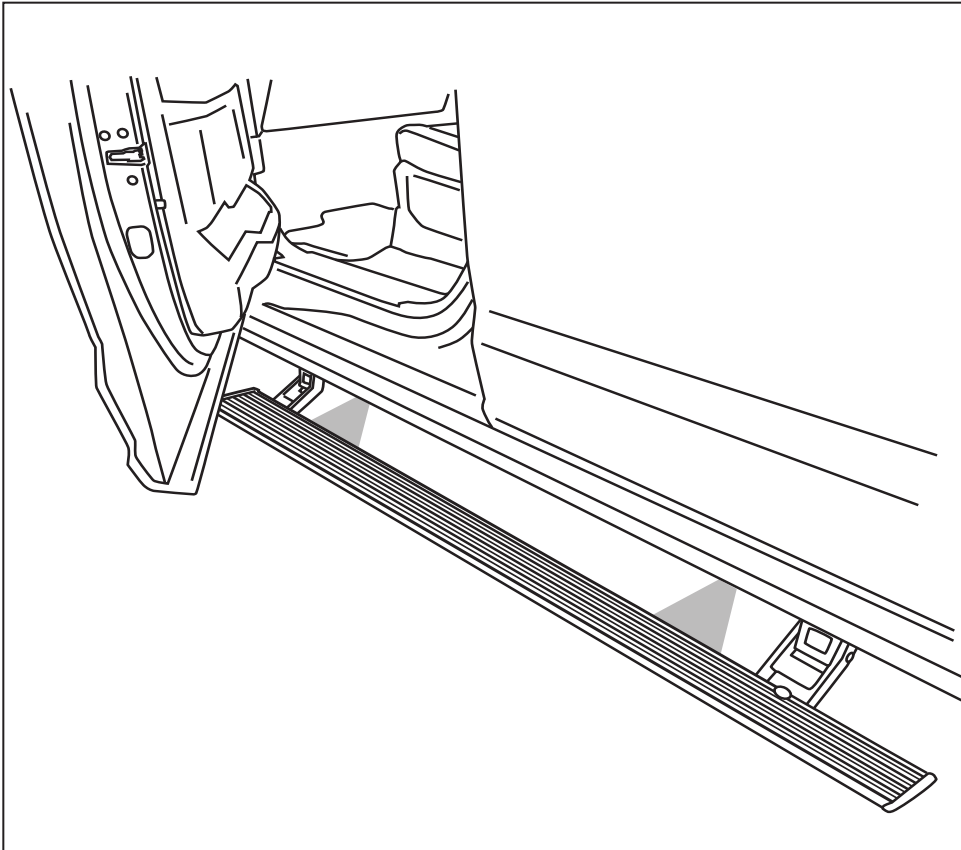
### APPLICATION

Ford F150 - SuperCrew 2004-2008

**Note: The application works only on the Super Crew model Vehicles.**

### AMP Part #

77105-01A



### INSTALLATION TIME

**3-5 Hours**

Professional installation recommended

### SKILL LEVEL



4= Experienced

### TOOLS REQUIRED

- ☐ Safety goggles
- ☐ Measuring tape
- ☐ 10 mm socket
- ☐ 13 mm socket
- ☐ 1/2" socket
- ☐ Ratchet wrench and extension
- ☐ Wire crimpers
- ☐ Wire stripper / cutter
- ☐ 3/16" hex key wrench (allen wrench)
- ☐ 4mm hex key wrench ( allen wrench )
- ☐ Electrical tape
- ☐ Weather proof caulking (silicone sealer)
- ☐ Silicone spray

### WARRANTY

**5-Year Limited Warranty**

AMP RESEARCH TECH SUPPORT 1-888-983-2204 (Press 2) Monday - Friday, 7:00 AM - 5:00 PM PST

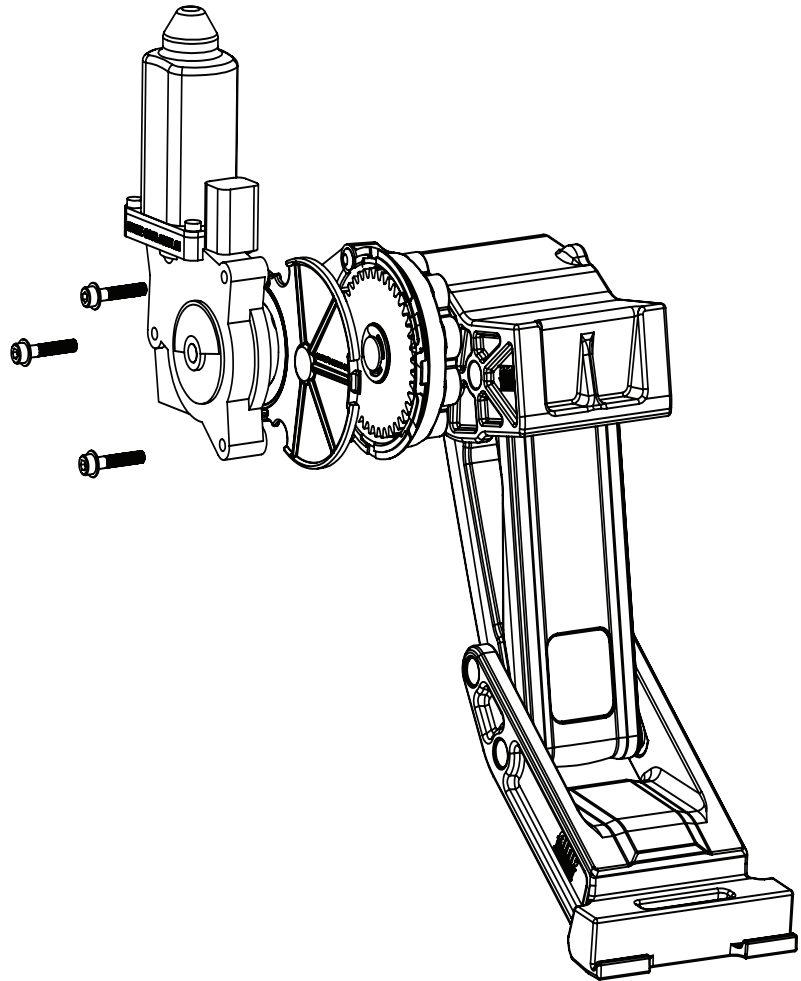
Invented, engineered and manufactured exclusively by AMP Research in the USA. May be covered by one of the following patents:  
6,641,158; 6,830,257; 6,834,875; 6,938,909; 7,055,839; 7,380,807; 7,398,985; 7,584,975 ©2012 AMP Research. All rights reserved.  
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## INSTALLATION GUIDE

Attaching motor to Linkage assembly.

## EXPLODED VIEW

- Motor
- Socket cap screw
- Washer
- Drive Gear Housing Cover

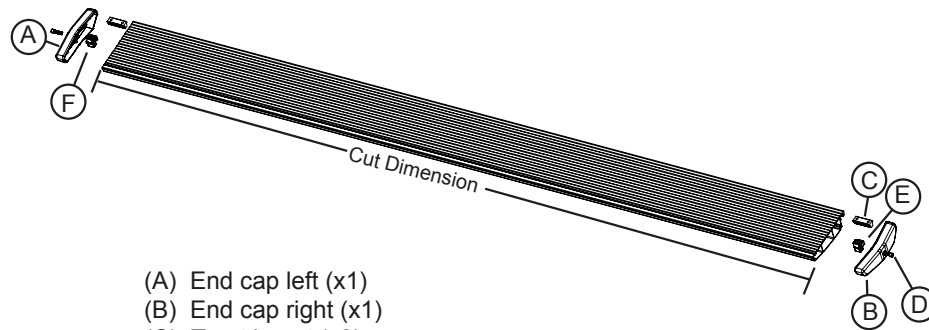
**CAUTION: HANDLE WITH CARE.**

To ensure our customers receive all components with full integrity, we pack the motors separate from their linkage assemblies. This requires that the installer position and fasten the motor before continuing with the install. Please follow the instructions below and handle the assembly carefully.

**CAUTION:** Dropping the assembly or any excessive impact MAY cause damage to the motor.

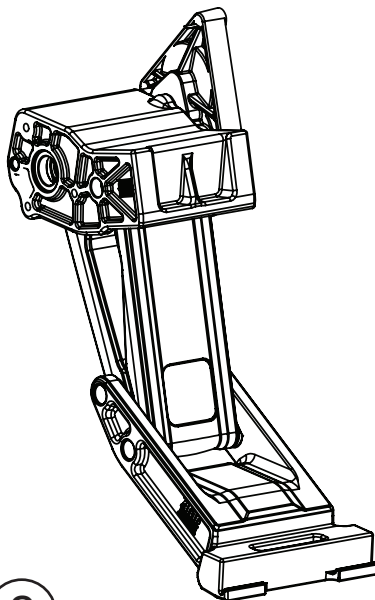
## Instructions:

1. Position the gear cover in place as shown if not already in place.
2. Seat motor into position on the three mounting bosses. This may require an adjustment of the gear by moving the swing arms.
3. After seating into place, fasten the motor with the three motor mount screws with 4mm Hex Head. Tighten screws to 36 in-lbs (4N-m). **Do not over torque.**

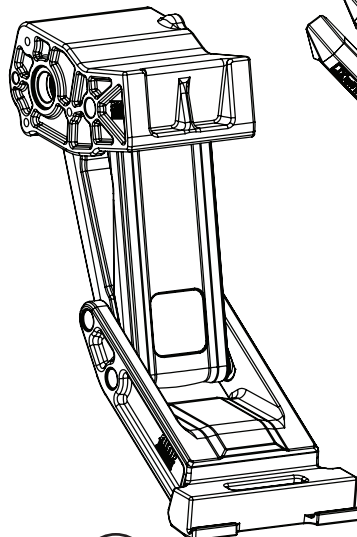


- (A) End cap left (x1)
- (B) End cap right (x1)
- (C) T-nut insert (x2)
- (D) Socket cap screw (x2)
- (E) End cap wedge right (x1)
- (F) End cap wedge left (x1)

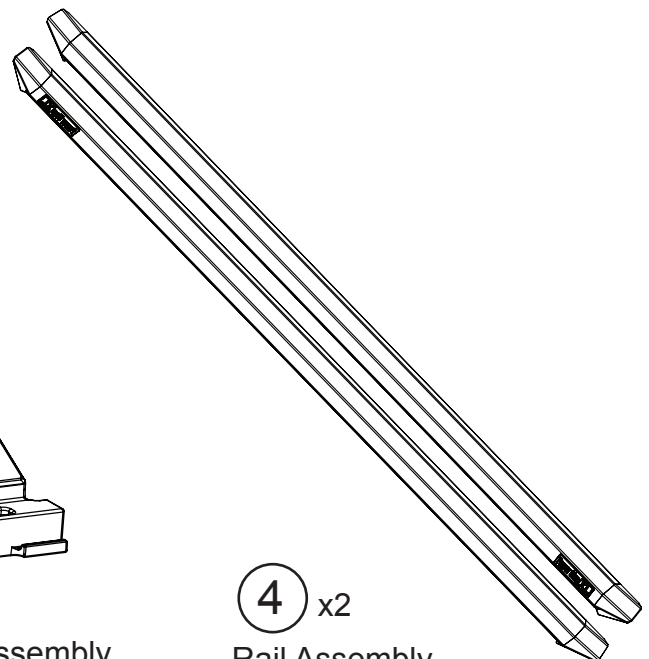
1 x2



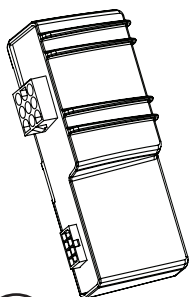
2 x2  
Motor Linkage assembly



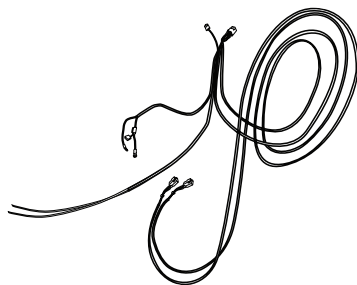
3 x2  
Idler Linkage assembly



4 x2  
Rail Assembly



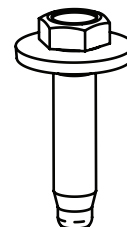
5  
Controller STA



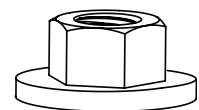
6  
Wire harness



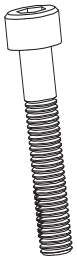
7 x4  
Posi-Tap™



8 x18  
M8 Hex Bolt w  
Conical washer



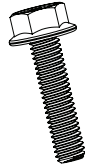
9 x10  
M8 Nut w Conical  
washer



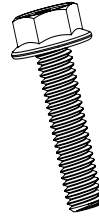
**10** x6  
M5 Hex Bolt



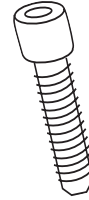
**11** x6  
M5 Washer



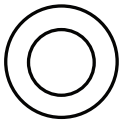
**12** x4  
M6 Flange Bolt



**13** x6  
5/16 Flange Bolt



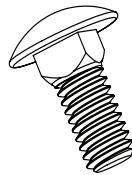
**14** x8  
Socket Cap Screw



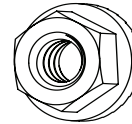
**15** x10  
M8 Washer



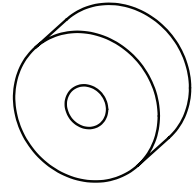
**16** x10  
M8 U-Nut



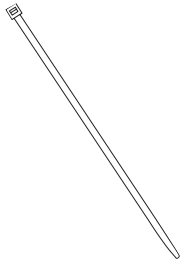
**17** x10  
5/16-18  
Carriage Bolt



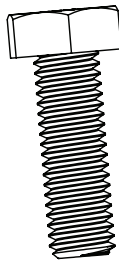
**18** x16  
5/16-18  
Flange nut



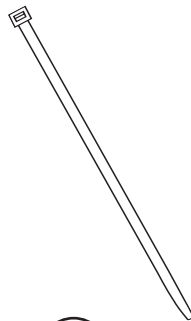
**19** x4  
Upper Mount  
Spacer



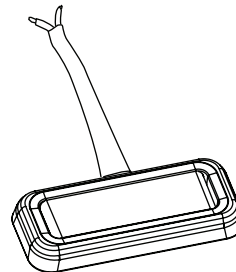
**20** x20  
Cable tie (7'')



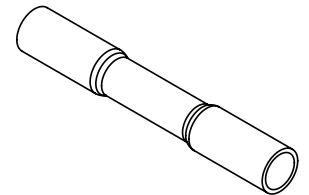
**21** x10  
M8 Hex Bolt



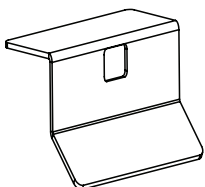
**22** x2  
Cable tie (11'')



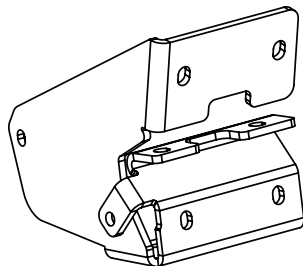
**23** x4  
LED Lamp



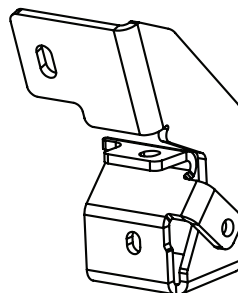
**24** x8  
Butt Connector



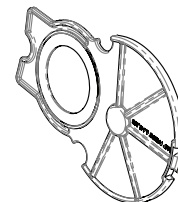
**25** x4  
LED Light  
Bracket



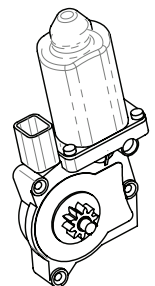
**26** x4  
Linkage Mounting  
Bracket



**27** x2  
Rail Mounting  
Bracket



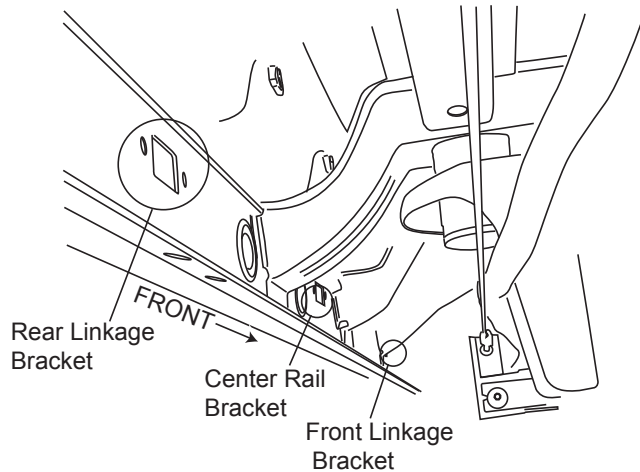
**28** x2  
Gear Cover



**29** x2  
Motor

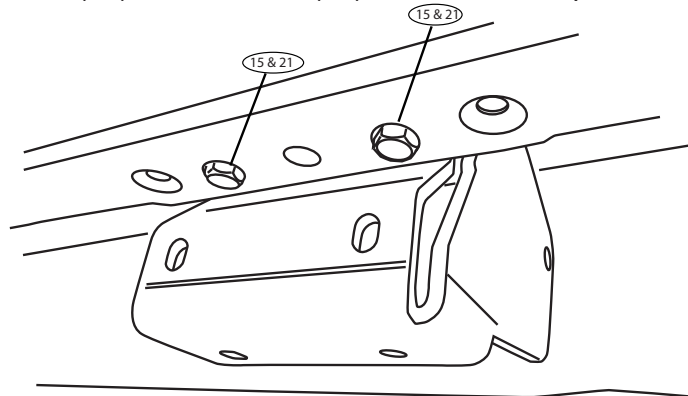
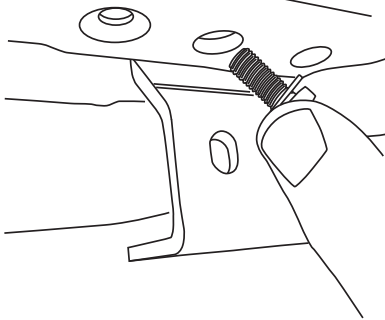
## AMP RESEARCH POWERSTEP™ – FORD F150

Locate mounting points. First middle and last set of holes on the inner sill. Install 5 u nuts (16) in upper mount holes.



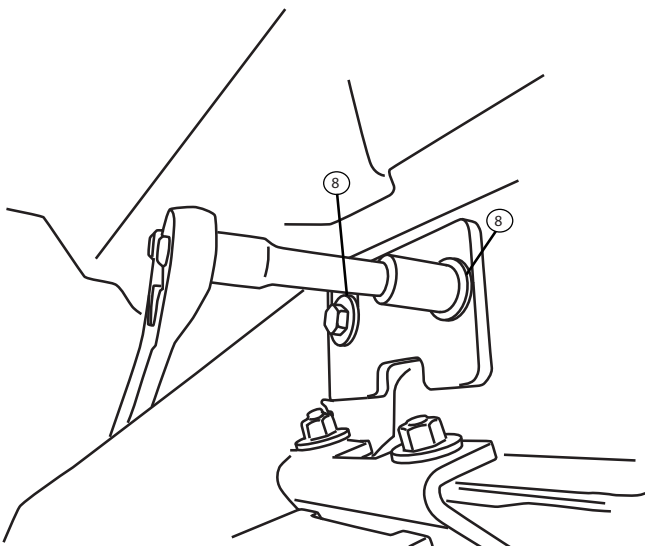
1

Set Brackets into position and use provided M8 Bolts (21) and washers (15) on outside and provided M8 nuts on the backside. Do not tighten.



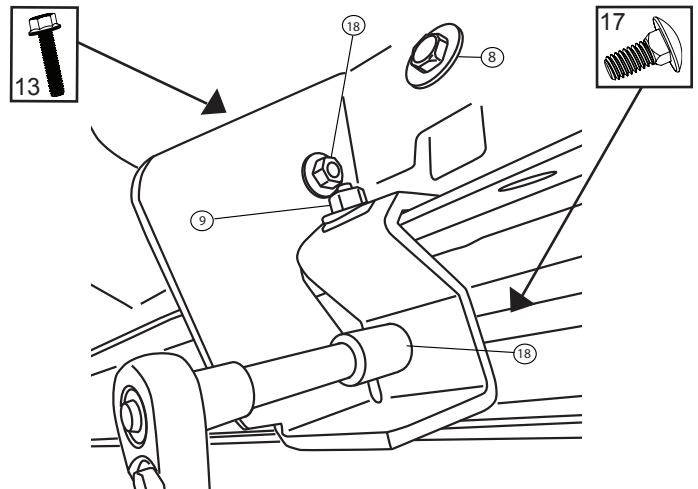
2

Using provided captive washer m8 bolts (8) install upper bracket hardware to brackets. Do not tighten.



3

Set Rail up into position. Start with rear bracket work towards the front brackets. Attach Carriage bolts 5x (17) and Flange Nut 5X (18). Center rail at front and rear door line. Torque Flange Nuts to 16 ft-lbs. Insert Flange bolt (13) and nut (18) into side of bracket. Do

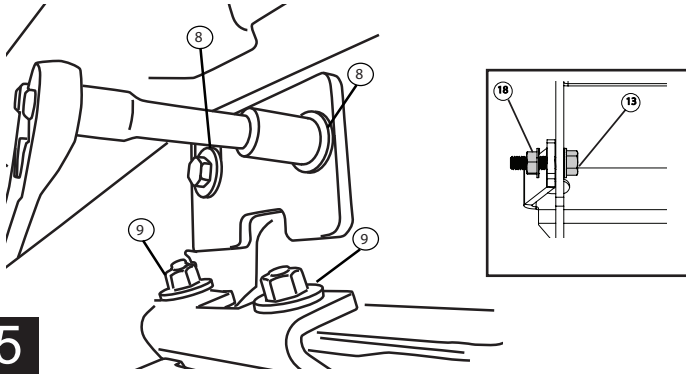


4

**Note: Badge on rail sits towards the rear of vehicle!**

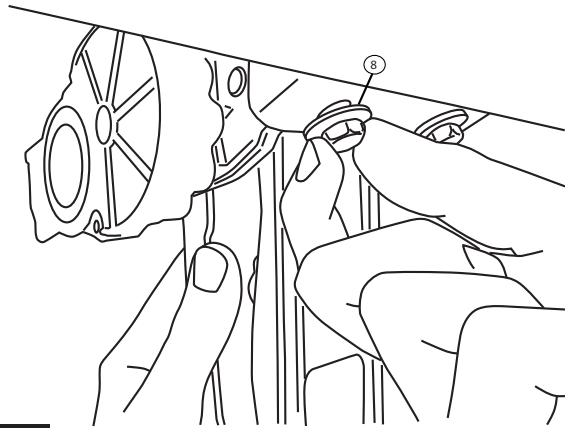
## AMP RESEARCH POWERSTEP™ – FORD F150

Starting from the rear of the vehicle work your way forward. Using a 13mm socket and wrench tighten Pinch weld bolts (21) and nut (9) first to 16ft-lbs. Next tighten upper sill bolts (8) to 16ft-lbs. Next torque flange bolt and nut on bracket tab to 16ft-lbs.



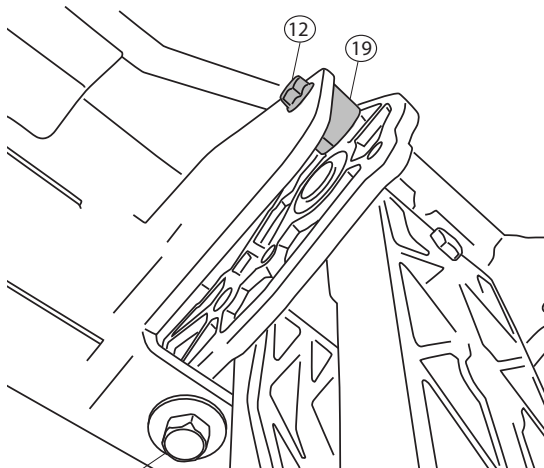
5

Thread supplied bolts 2x (8) into Front Idler Linkage. Repeat step for Rear Drive Linkage. Do not tighten.



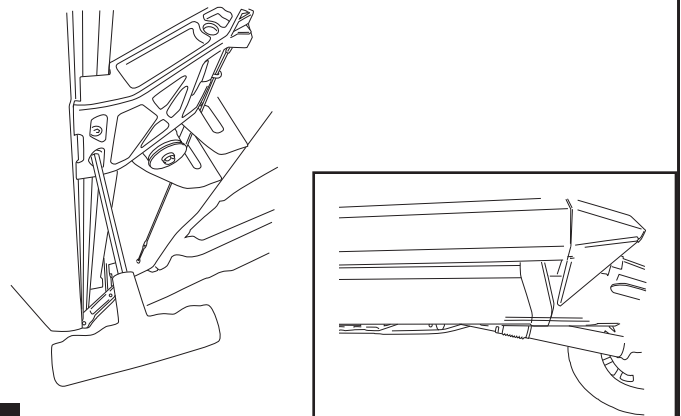
6

Install provided spacer (19) and M6 bolt (12) into upper mount as shown on both the Drive and Idler linkages. Do not tighten.



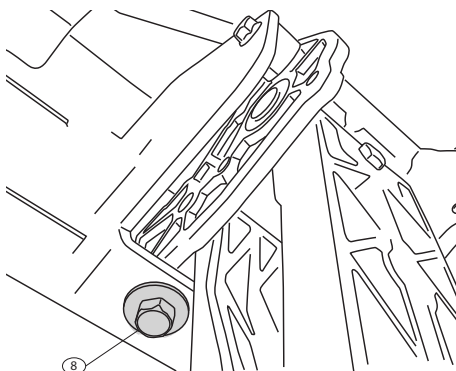
7

Slide mounting T-nut into position, Center board in rail pocket. Tighten fasteners to 10 ft-lbs.



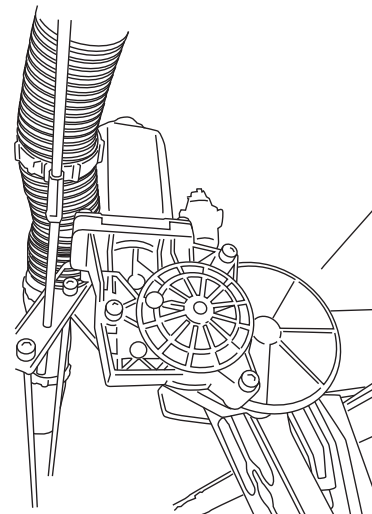
8

Using a 13mm socket Torque linkage bolts 4x (8) from step 5 to 16 ft-lbs Next use a 10mm socket, torque linkage spacer bolt 2x (12) from step 6 to 8 ft-lbs. Once linkages are tight cycle board to verify steps deploy under own weight.



9

Attach motor to harness. Using a 4mm hex Torque to 36 in-Lbs.



10

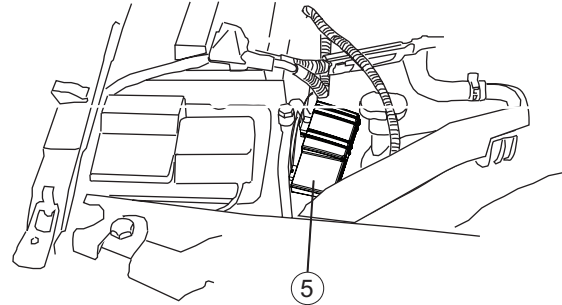


Remove fan shroud to allow for wire routing. Shroud will be reinstalled in a later step.



11

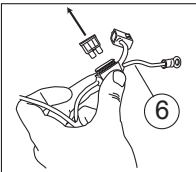
Mount controller with the two 11" tie wraps to factory conduit. Route wire harness under core support and down toward controller. Attach harness to controller (make sure connector locking tabs fully engage).



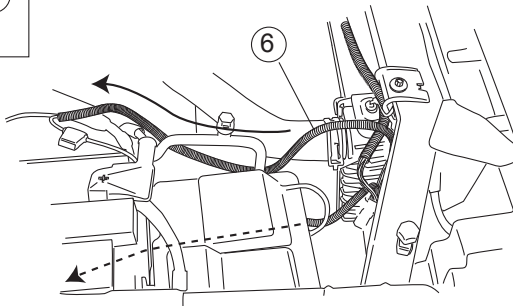
12

Secure harness with tie wraps.

Remove fuse.

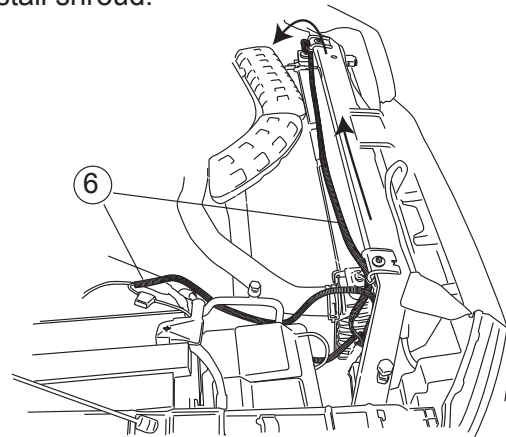


Connect red and black power leads to battery. Red lead goes to positive. Route shorter leg of harness down passenger-side wheel well.



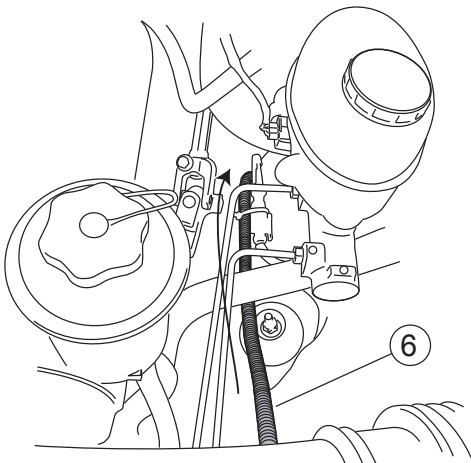
13

Route longer leg of harness across front and down under driver side. Secure harness with tie wraps and reinstall shroud.



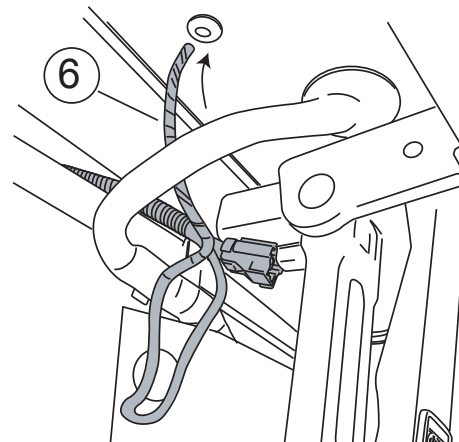
14

Route longer leg of harness down along driver-side wheel well and along frame of vehicle. Secure with tie wraps.



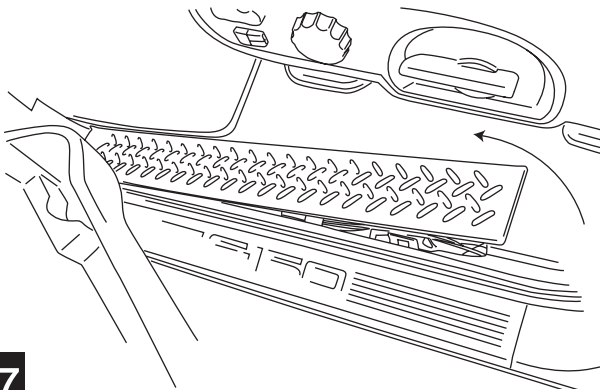
15

Puncture grommet and thread all four trigger wires up into the cabin of vehicle. The grommet is located on driver-side behind forward linkage assembly.



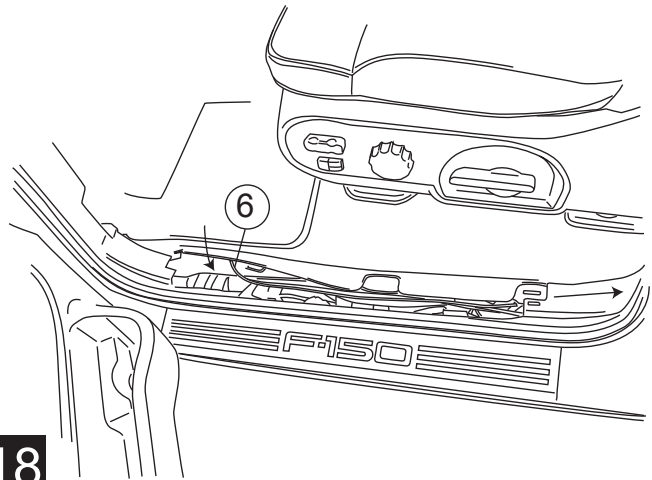
16

Remove drivers-door sill plate and pull back carpet to reveal trigger wires threaded through grommet.



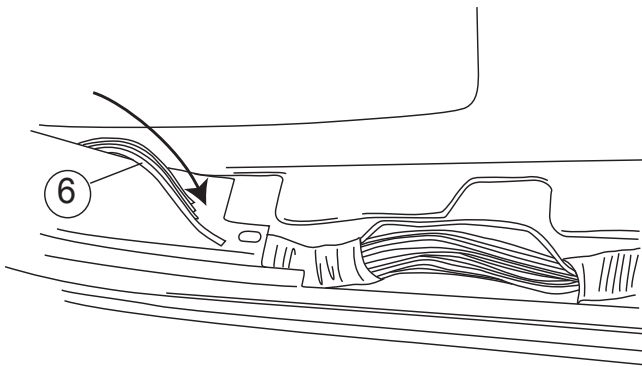
17

Pull wires from grommet and route back along factory wire harness to back door sill plate.



18

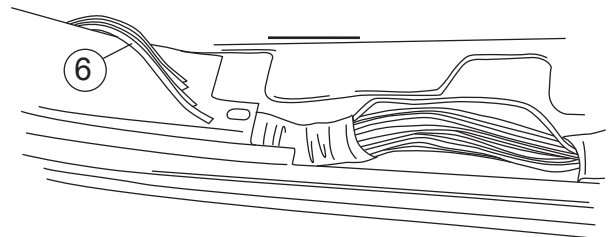
Remove rear door step plate and open wire bundle. Route trigger wires to rear door sill plate.



19

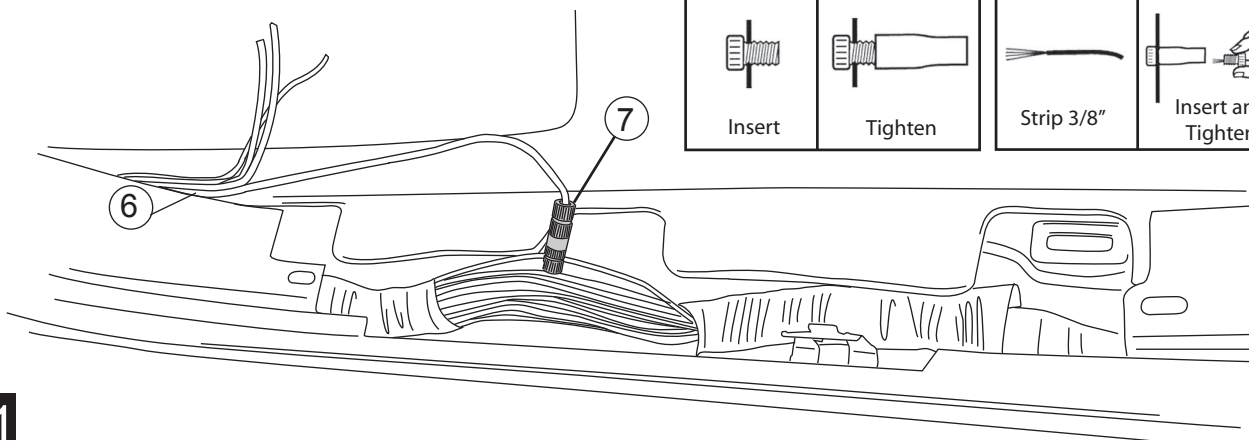
Locate the appropriate signal wires as noted below. Note: There may be up to five Black with Blue Stripe wires; use the one that looks unique (ie. different blue stripe... weight and shade).

	SuperCrew
Driver Front	Black / Yellow
Pass. Front	Black / Pink
Driver Rear	Black / Blue
Pass. Rear	Black / White



20

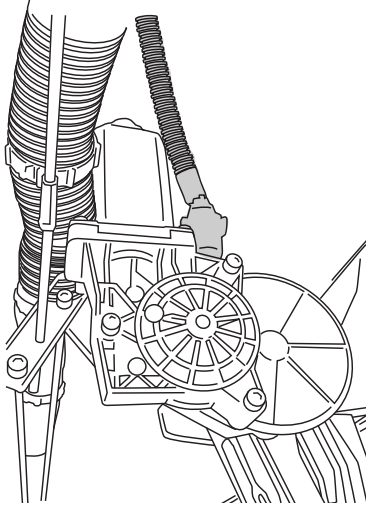
Using supplied Posi-Taps™, splice Power Step trigger wires into the corresponding door ajar wires. The SuperCrew (having 4 independent doors) is the only application that will use all four wires; tape off the two unused trigger wires on the SuperCab and Regular Cab.



21

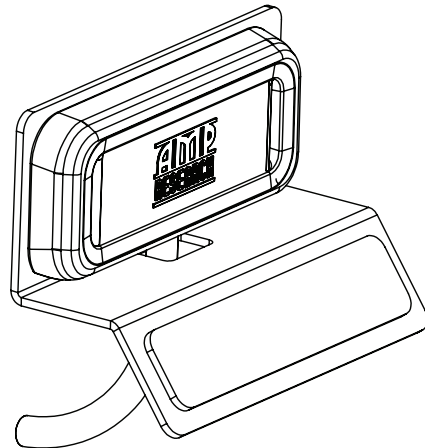


Connect harness to motor. Secure harness with tie wraps.



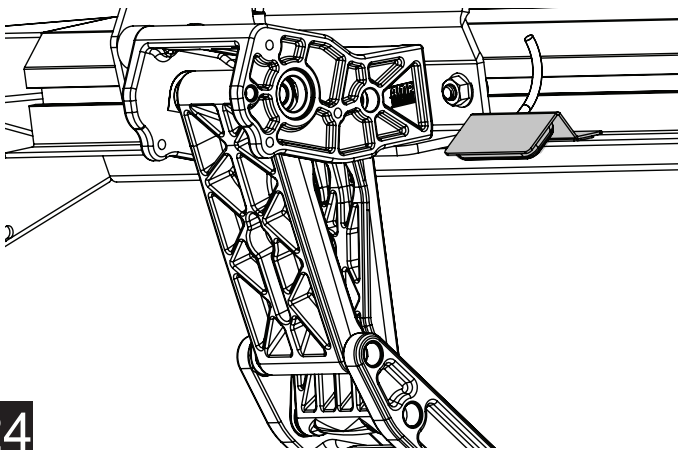
22

Affix LED lamp (23) to LED Bracket (25) as shown..



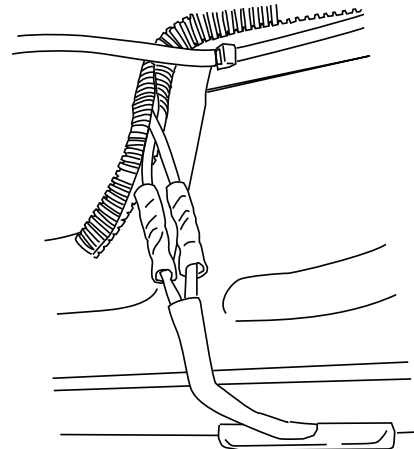
23

Affix LED light bracket assembly to rail. Mount front light rearward of front linkage and mount rear light just forward of rear linkage.



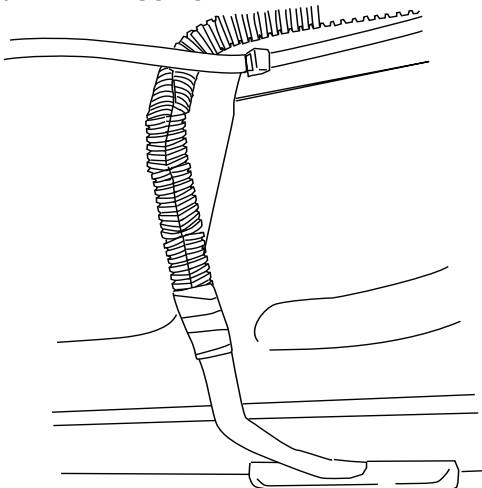
24

Using supplied butt connectors, connect the lamp wires. Red to Red, Black to Black. Once Crimped use heat gun to shrink tube.



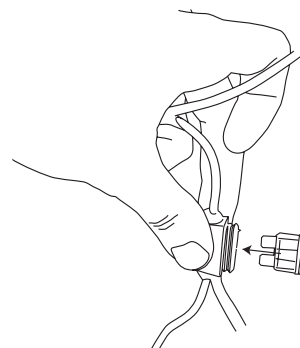
25

Close and wrap conduit with electrical tape. Secure all loose wires with cable ties. Pull lamp wires upward to avoid any wire snagging.



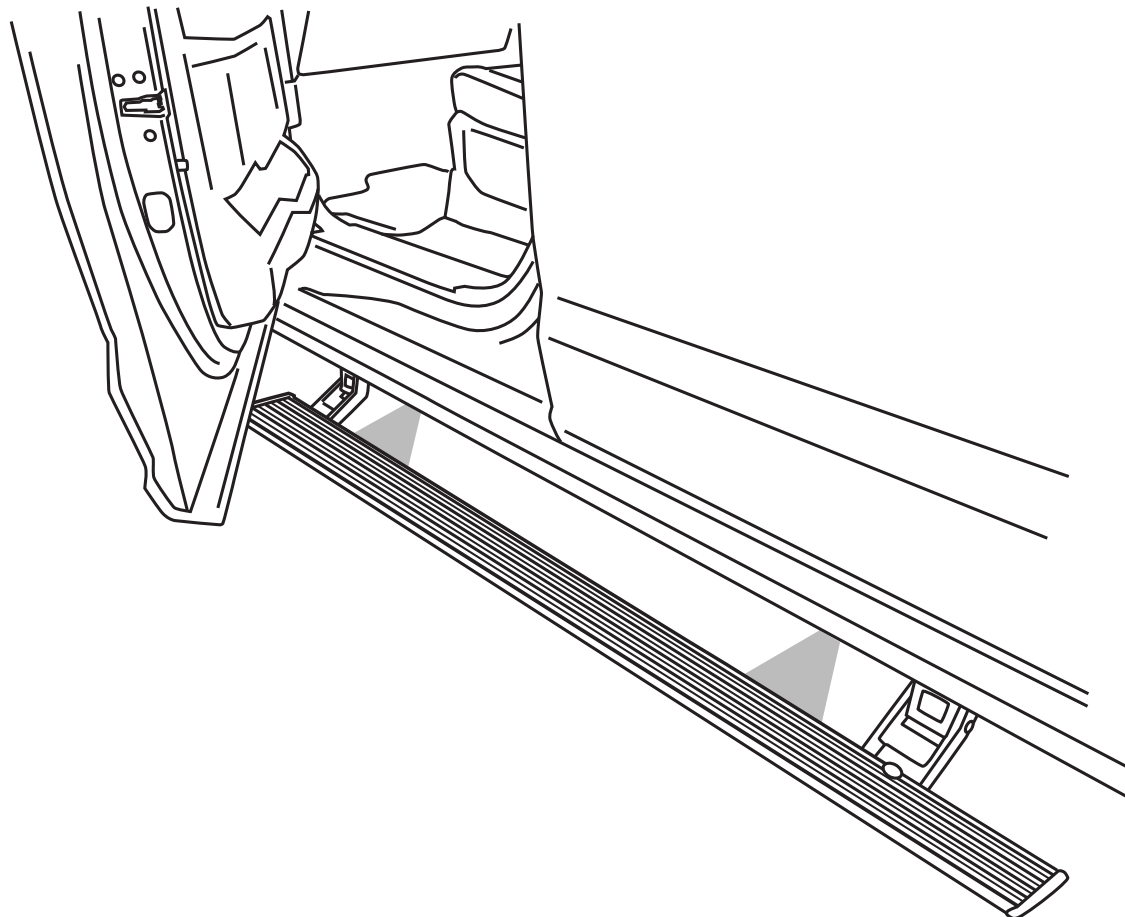
26

Reinstall Fuse.



27

Check that all doors activate the Power Step and the LED Lights work when doors open and close. Reinstall any remaining trim panels.



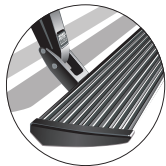
### FINAL SYSTEM CHECK

Check that all doors activate the PowerStep and the LED lights work when doors open and close.

**NORMAL OPERATION:** When the doors open, PowerStep automatically deploys from under the vehicle. When the doors are closed, PowerStep will automatically return to the stowed/retracted position. ***Note that there is a 2-second delay before the PowerStep returns to the stowed/retracted position.***

**CORRECT OPERATION OF LIGHTS:** All four lamps will illuminate upon opening any door of vehicle. Lamps will stay on until restowing of both Power Steps or until 5 minutes has expired with the doors open. When the lights timeout after 5 minutes, they can be reilluminated by closing and opening any door of vehicle.

**POWER-DEPLOYABLE RUNNING BOARDS OPERATION:** AMP Research PowerStep running boards automatically move when the doors are opened to assist entering and exiting the vehicle.



**Automatic power deploy:**

The running boards will extend down and out when the doors are opened.

**Automatic power stow:**

The running boards will return to the stowed position when the doors are closed. There will be a 2-second delay before the running boards move to the stowed position.

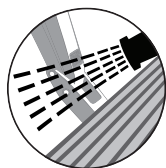
**Automatic stop:**

If an object is in the way of the moving running board, the running board will automatically stop. To reset, clear any obstruction, then simply open and close the door to resume normal operation.



**Manually set in the deployed (OUT) position for access to the roof:**

The running boards can be manually set in the deployed position by firmly holding the step down with your foot while at the same time closing the door. To resume normal operation, open and close the door.



**Maintenance:** In adverse conditions, debris such as mud, dirt, and salt may become trapped in the running board mechanism, possibly leading to unwanted noise. If this occurs, manually set the running boards to the deployed position and flush the front and rear hinge arms with a high-pressure car wash wand. Avoid spraying the motors directly. After washing, apply silicone spray lubricant to the hinge pivot pins. Do not apply silicone, wax or protectants like Armor All® to the running board stepping surface.

**Caution!** Keep hands away when the running board is in motion.

## 5-YEAR LIMITED WARRANTY

AMP RESEARCH warrants this product to be free from defects in material and workmanship for FIVE (5) YEARS FROM DATE OF PURCHASE, provided there has been normal use and proper maintenance. This warranty applies to the original purchaser only. All remedies under this warranty are limited to the repair replacement of the product itself, or the repair or replacement of any component part thereof, found by the factory to be defective within the time period specified. The decision to repair or replace is wholly within the discretion of the manufacturer.

This warranty specifically excludes labor. If you have a warranty claim, first you must call our factory at the number below for instructions. You must retain proof of purchase and submit a copy with any items returned for warranty work. Upon completion of warranty work, if any, we will return the repaired or replaced item or items to you freight prepaid. Damage to our products caused by accidents, fire, vandalism, negligence, misinstallation, misuse, Acts of God, or by defective parts not manufactured by us, is not covered under this warranty.

ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE CREATED HEREBY ARE LIMITED IN DURATION TO THE SAME DURATION AND SCOPE AS THE EXPRESS WRITTEN WARRANTY. OUR COMPANY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

**FOR WARRANTY ISSUES WITH THIS PRODUCT PLEASE CALL AMP RESEARCH CUSTOMER SERVICE 1-888-983-2204**

## WARNING

Be sure to read and precisely follow the provided instructions when installing this product. Failure to do so could place the vehicle occupants in a potentially dangerous situation. After installing or reinstalling, re-check to insure that the product is properly installed.



The material that your product is made from can be recycled. Please also consider recycling the packaging that your product came in.

