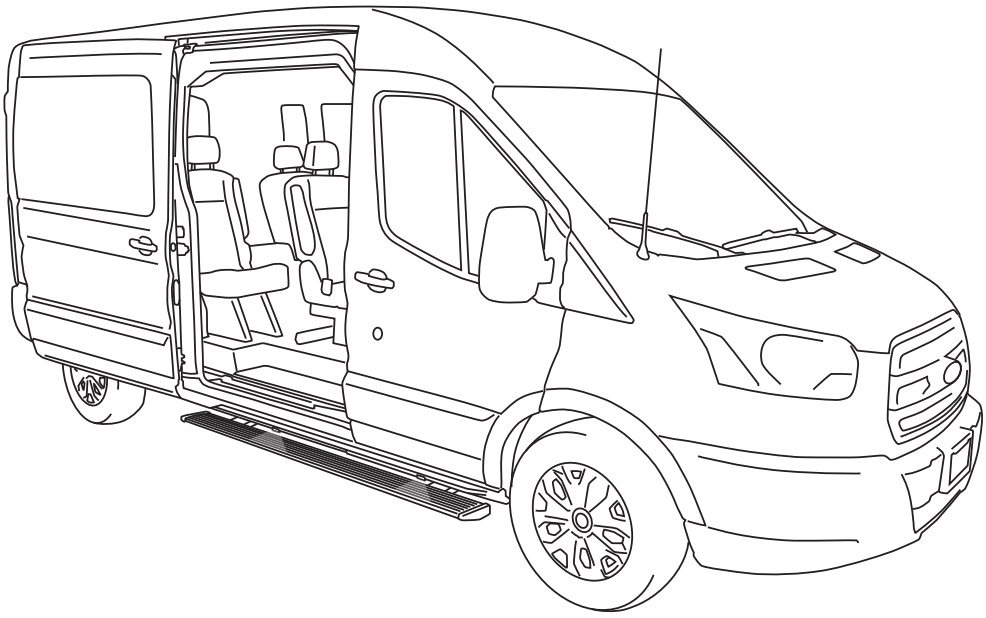
INSTALLATION GUIDE

AMP RESEARCH® Power Step™
MADE IN USA

APPLICATION	MODEL YR	PART #
Ford Transit - Single Sided (All slider and barn door models)	2020-2021	76160-01A



INSTALLATION TIME
3-5 Hours
Professional installation recommended

SKILL LEVEL
1 2 3 4
4= Experienced

TOOLS REQUIRED
- ❑ Safety goggles
- ❑ Measuring tape
- ❑ Power Drill
- ❑ 1/8” Drill Bit
- ❑ 17/32” Drill Bit
- ❑ 21/64” Drill Bit
- ❑ 10 mm socket
- ❑ 13 mm socket
- ❑ 9/16” wrench
- ❑ 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
- ❑ M8 x 1.25 Tap. (optional see Step 1.)

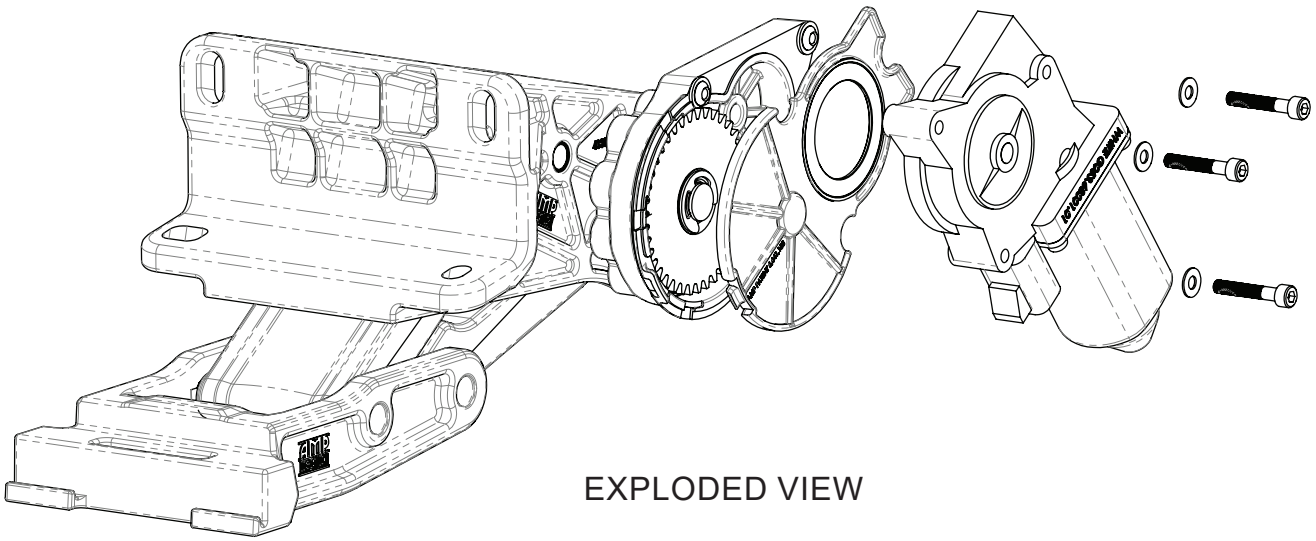
WARRANTY
5-Year Limited Warranty

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 OR MORE of the following patents: 6,641,158; 6,830,257; 6,834,875; 6,938,909; 7,055,839; 7,380,807; 7,413,204; 7,398,985; 7,584,975; 7,566,064; 7,487,986; 8,157,277; 8,408,571; 9,302,626; 9,561,751; 10,053,017; CA2463717 ©2012 AMP Research. All rights reserved. Printed in USA.

INSTALLATION GUIDE

Attaching motor to Linkage assembly. **To be assembled in Step 5.**



EXPLODED VIEW

- Motor
- Socket cap screws
- Washers
- Drive Gear Housing Cover

CAUTION: HANDLE WITH CARE.

The motors must be put on in Step 5 after the linkages are tightened to the body of the vehicle.

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.

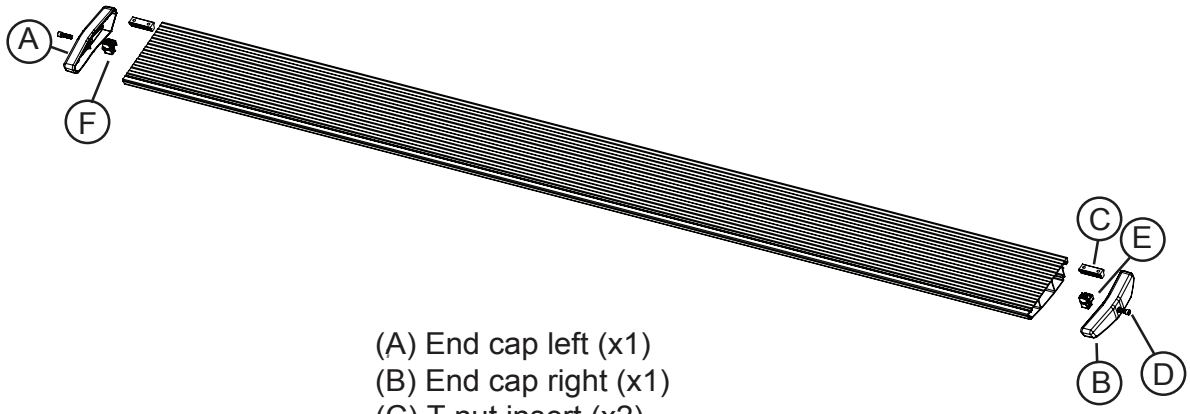
Instructions:

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.

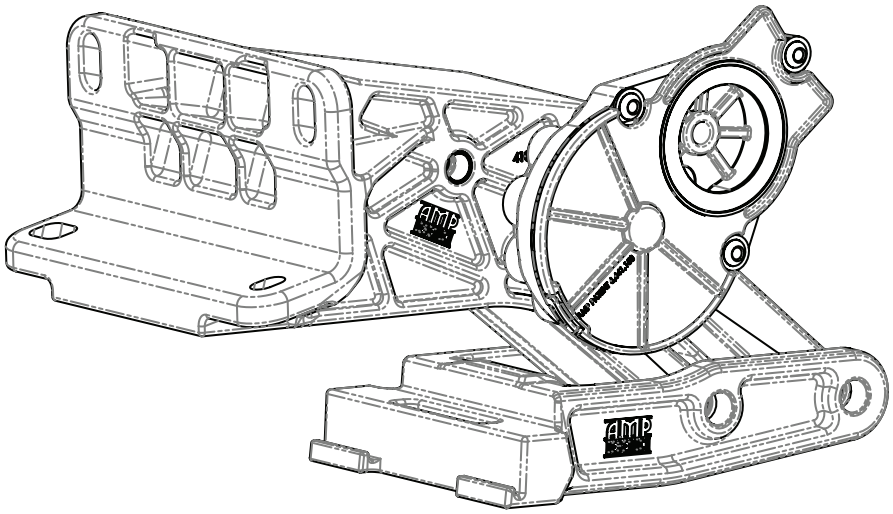
3. After seating into place, fasten the motor with the three motor mount screws with 4mm Hex Head. Tighten screws to 36 in-lbs (4N-m). **Do not over torque.**

PARTS LIST AND HARDWARE IDENTIFICATION

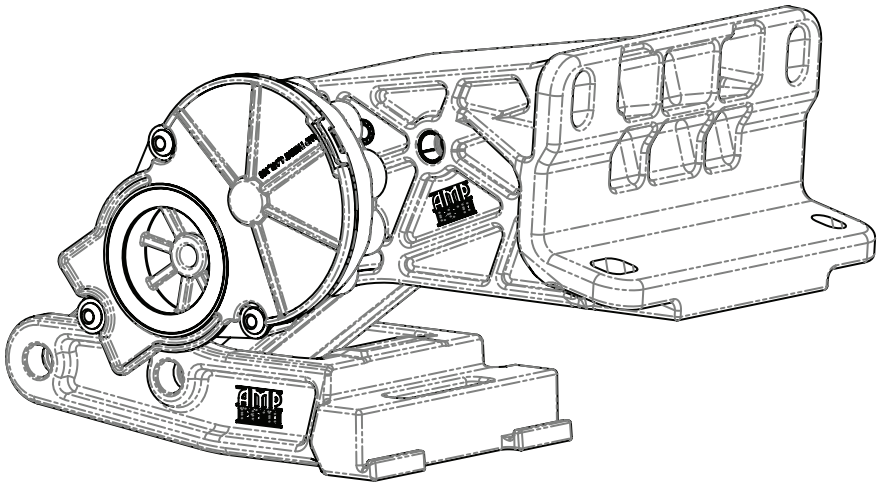


(A) End cap left (x1)
(B) End cap right (x1)
(C) T-nut insert (x2)
(D) Socket cap screw (x2)
(E) End cap wedge right (x1)
(F) End cap wedge left (x1)

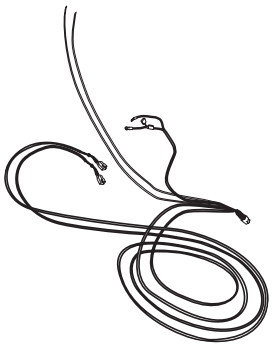
1
Running board assembly



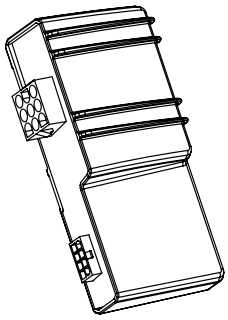
2
Front Motor Linkage assembly



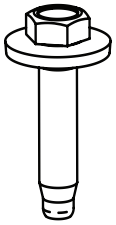
2
Rear Motor Linkage assembly



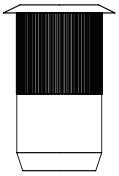
4
Wire harness



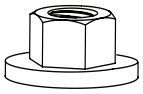
5
Controller



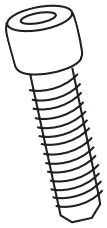
6 x8
Hex Bolt with Conical Washer



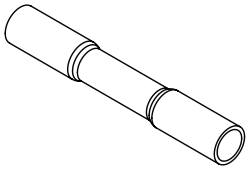
7 x7
Rivet Nut



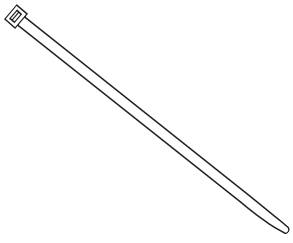
8 x3
Nut with Conical Washer



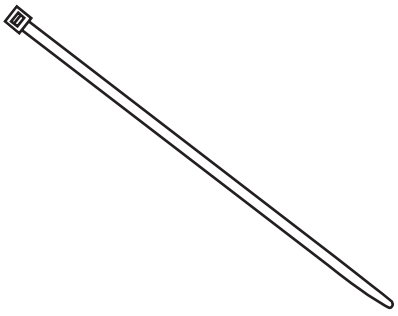
9 x4
Socket Cap Screw



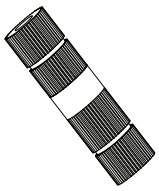
10 x4
Butt Connector



11 x20
Cable tie (7”)

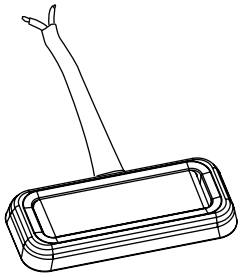


12 x2
Cable tie (11”)

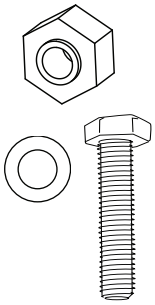


13
Posi-Lock™
Connector

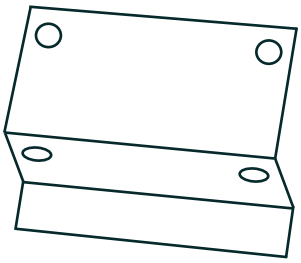
14 x2
Posi-Tap™
Connector



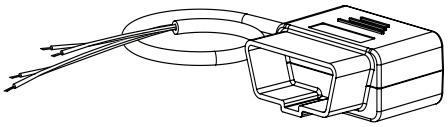
15 x2
LED Lamp



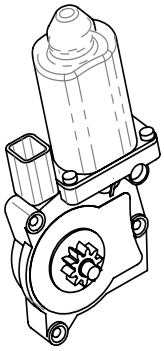
16
Rivet Nut Tool



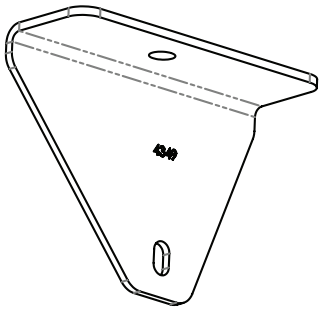
17
Drill Template



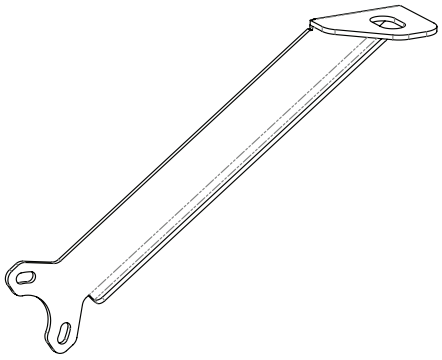
18
Module



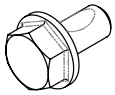
19 x2
Motor



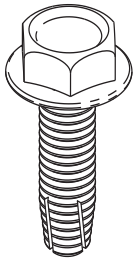
20
Front Pass. Bracket



21
Rear Pass. Bracket



22 x3
Bolt



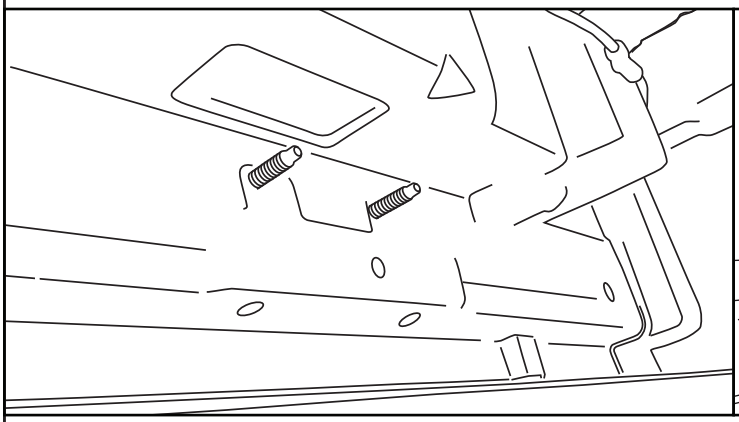
23
Thread Cutting Bolt

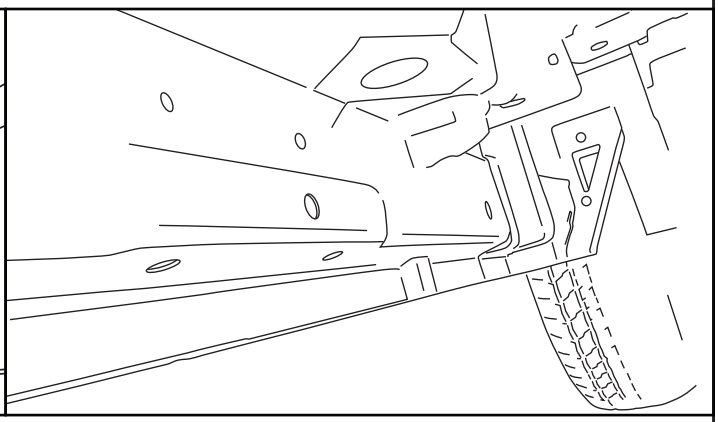
24
Washer

Installing Linkages

Rear Motor Linkage

If equipped, remove factory fixed-step on the Passenger side. If no step is present, you may have studs and tapped holes present, just plain holes alone, or inserts that need to be tapped**(use M8x1.25 tap from cover page to tap).** If threaded studs or inserts are present, or holes were tapped, attach the **Rear Motor Linkage.** If not, proceed to the next step before installing the **Rear Motor Linkage.**

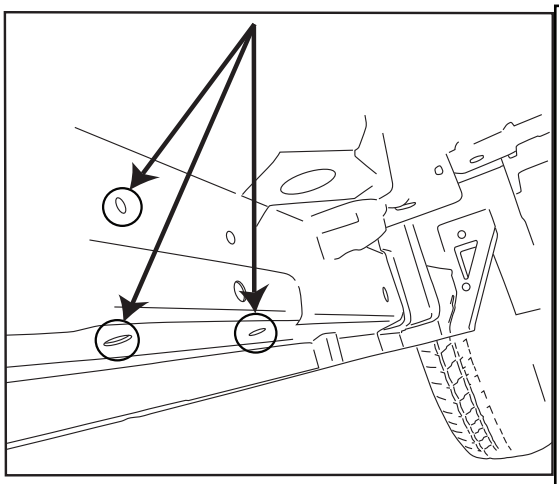




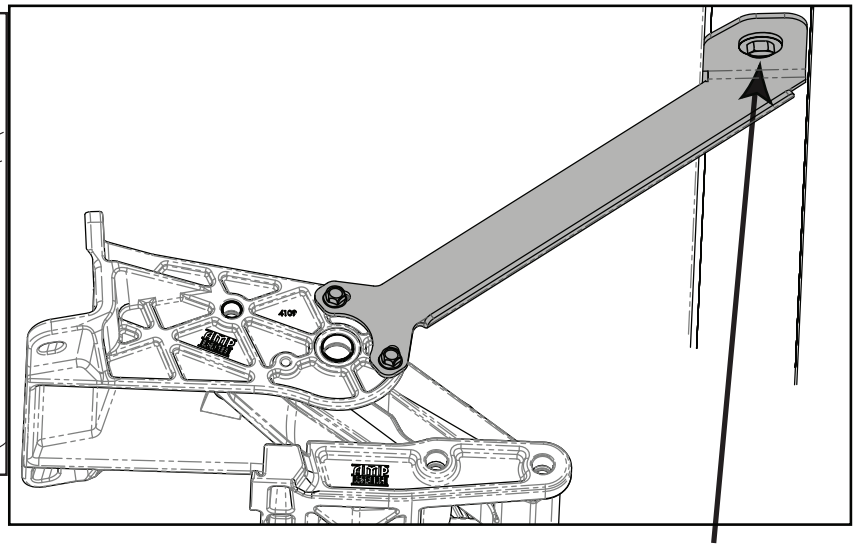
1

To attach the **Rear Motor Linkage** to the rear factory-step mount location, when no studs/threaded inserts are present, the three holes need to be drilled to the proper size **17/32”** to install three Rivet nuts (#7) using the supplied Rivet nut tool (#16). Next, install the **Rear Motor Linkage** (#3) using three Conical bolts (#6), start by installing the upper bolt loosely, then install and tighten the bottom two bolts fully. Now, tighten the

Torque fasteners to 16 ft-lbs. (22 N m).



Torque fasteners to 10 ft-lbs. (22 N m).

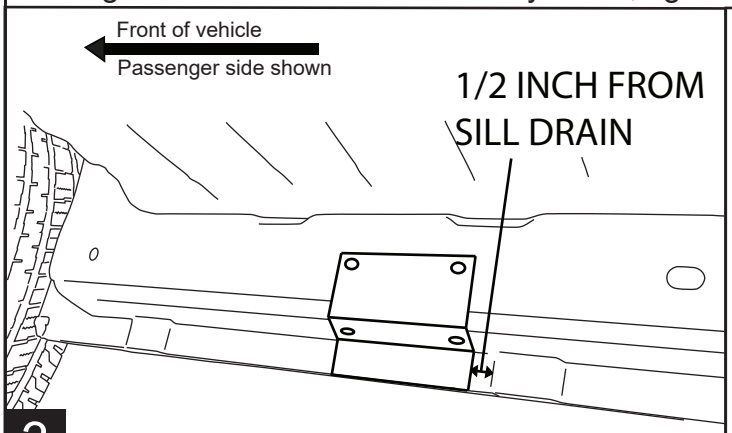


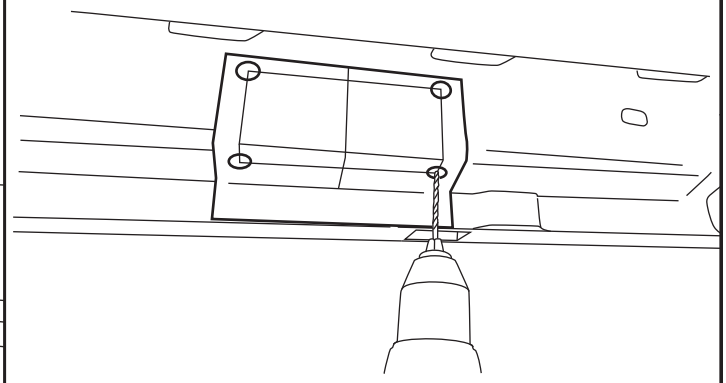
2

To attach the **Rear Bracket (#21)** to the rear linkage, start by using the Thread Cutting bolt (#23), to cut threads in the blank insert in the frame rail. Use a 9/16” socket and rachet, go slow and stay straight. Then install the bracket on the non-motor side of linkage loosely with two bolts(#22), install the upper Bolt (#23) and Washer (#24), loosely and tighten the bottom two bolts fully. Now, tighten the top.

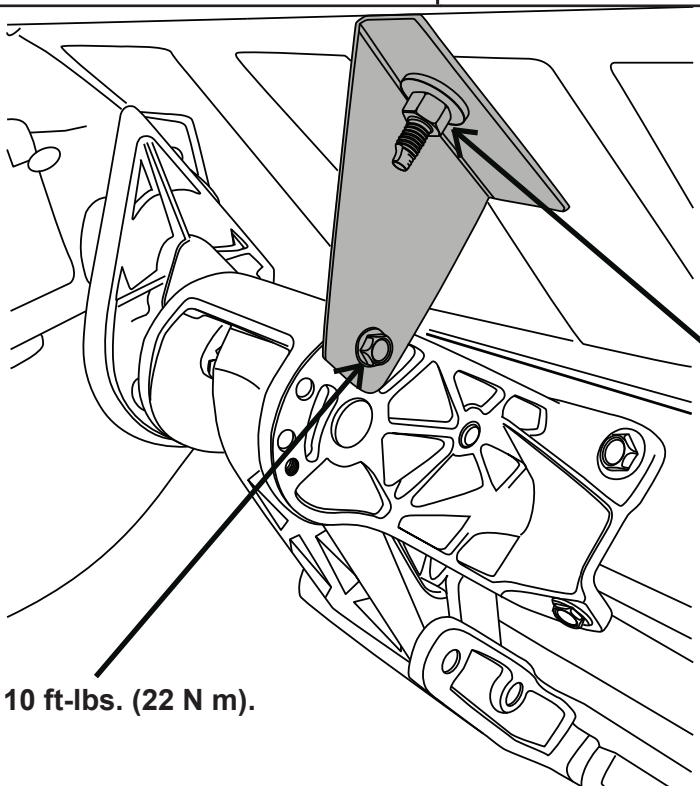
Front Motor Linkage

Next, for the **Motor Linkage** (#2), you may have studs and tapped holes present, just plain holes alone, or inserts that need to be tapped**(use M8x1.25 tap from cover page to tap).** If threaded studs or inserts are present, or holes were tapped, attach the **Front Motor Linkage**. If not, attach the **drill template (#17)** 1/2 inch in front of the second sill drain from the front with tape, mark 4 holes to drill. **Drill a 1/8" pilot hole, then a 17/32" hole at each location and install four Rivnuts (#7) using the supplied rivnut tool (#16).** Install Motor Linkage (#2) with Conical bolts (#6), install the upper bolt loosely, then tighten the bottom two bolts fully. Now, tighten the top. **Torque fasteners to 16 ft-lbs. (22 N m).**





3



NOTE: **Make sure to remove contents from other side of floor before drilling. Prop up foam liner.**

Torque to 16 ft.lbs.

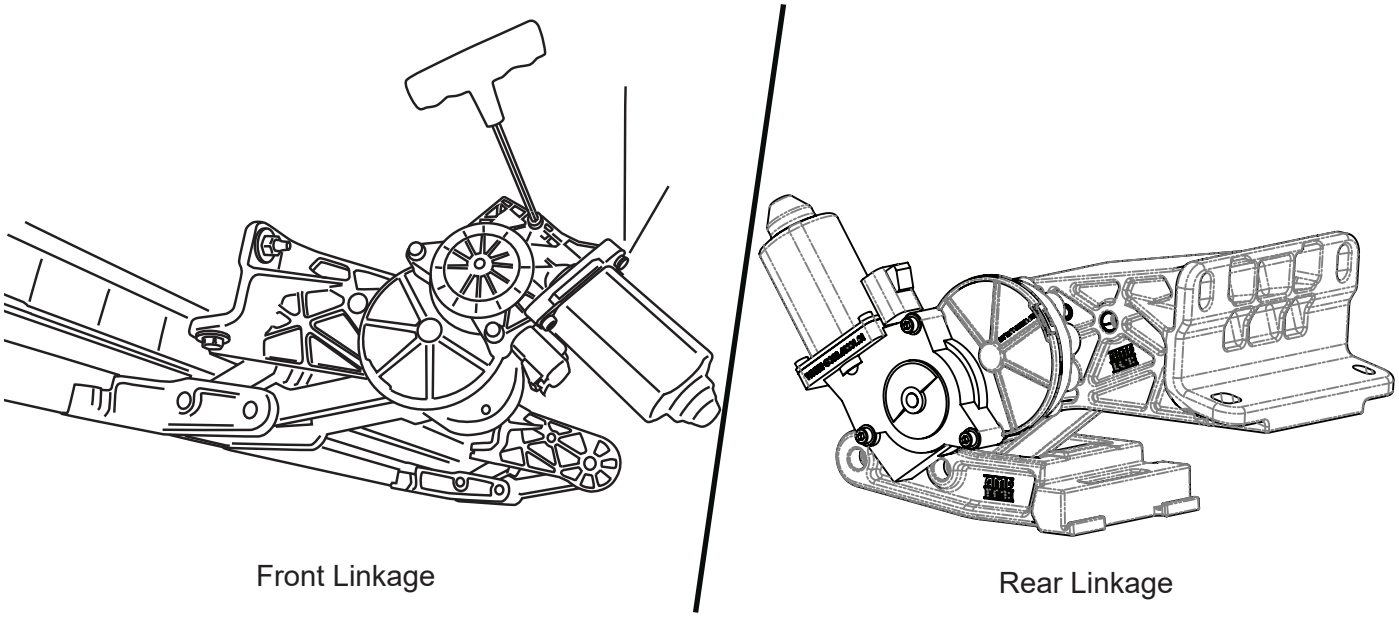
Torque fastener to 10 ft-lbs. (22 N m).

To install front bracket (passenger side), first install the bracket as shown to the front linkage non-motor side using bolt (#22). Push bracket up to floor and mark the center of the hole to be drilled. Remove the bracket, and open spare tire tool-compartment under the front passenger seat. Remove contents and drill hole from the bottom with a 21/64" drill bit, prop up the foam liner to limit it's damage and to install bolt. Re-install bolt (#22). Install the bolt(#6) from up top and the Nut (#8) on the bottom.

4 **Torque to 16 ft.lbs.**

Install the motors onto the Linkage Assemblies. See page 2 for motor installation instructions.

Note: The front motor mounts in a downward direction and the rear motor mounts on the opposite side of the linkage in an upward direction as swhown below.

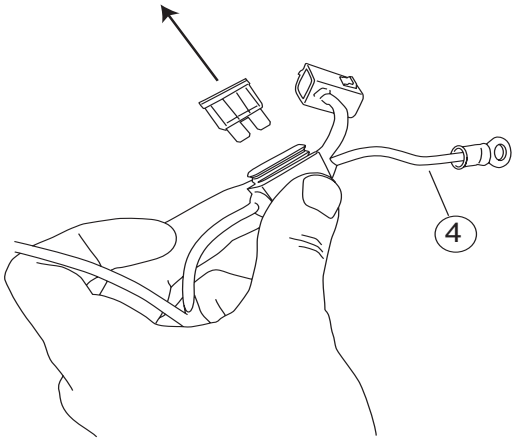


Front Linkage

Rear Linkage

5

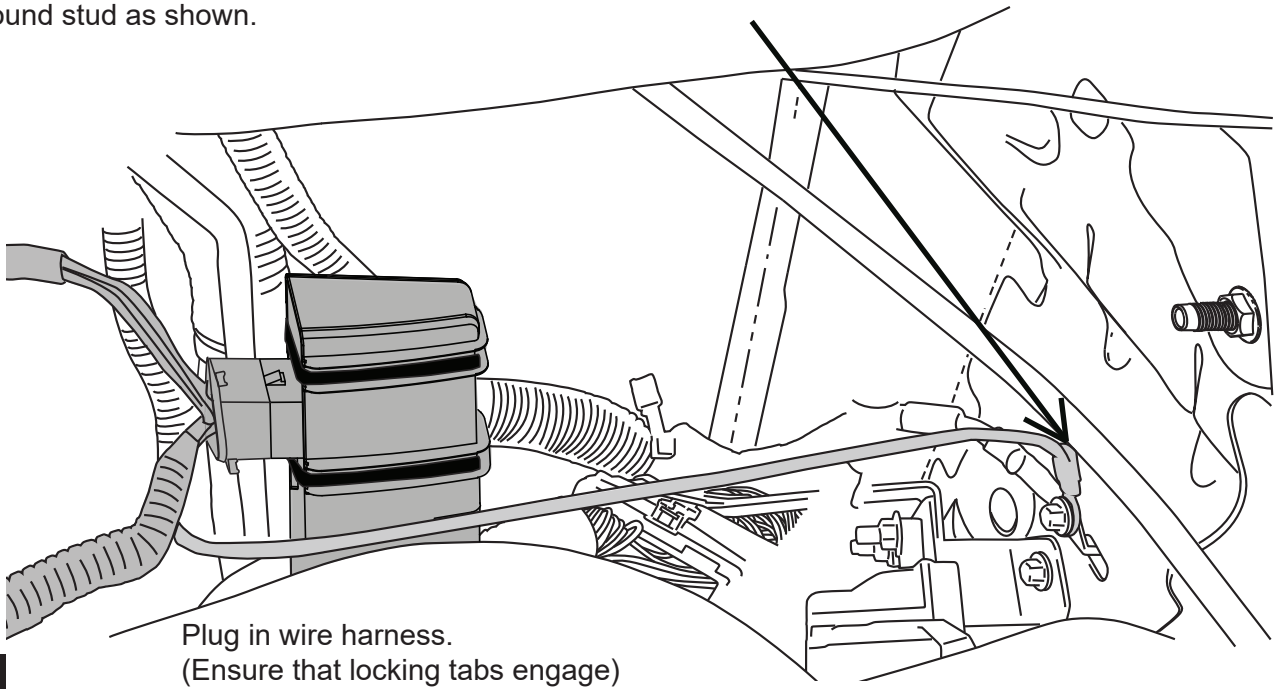
Remove fuse from harness.



6

Installing Electrical Components

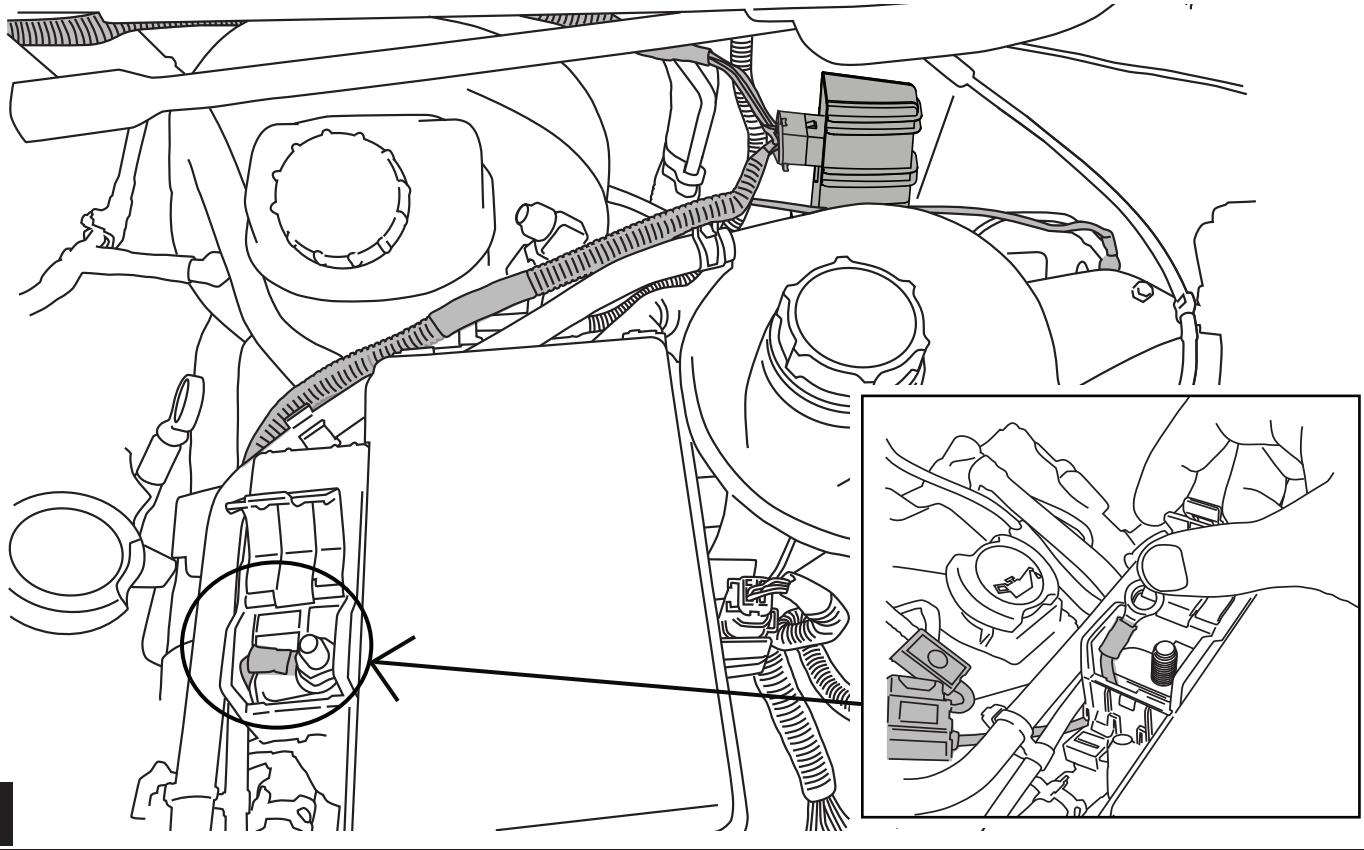
Using the two 11” cable ties (#12), mount controller (#5) to the main harness (#4) and plug in the connector, (Ensure that locking tabs engage). Attach Negative lead (BLACK wire) and the eyelet from step 6, to the ground stud as shown.



Plug in wire harness.
(Ensure that locking tabs engage)

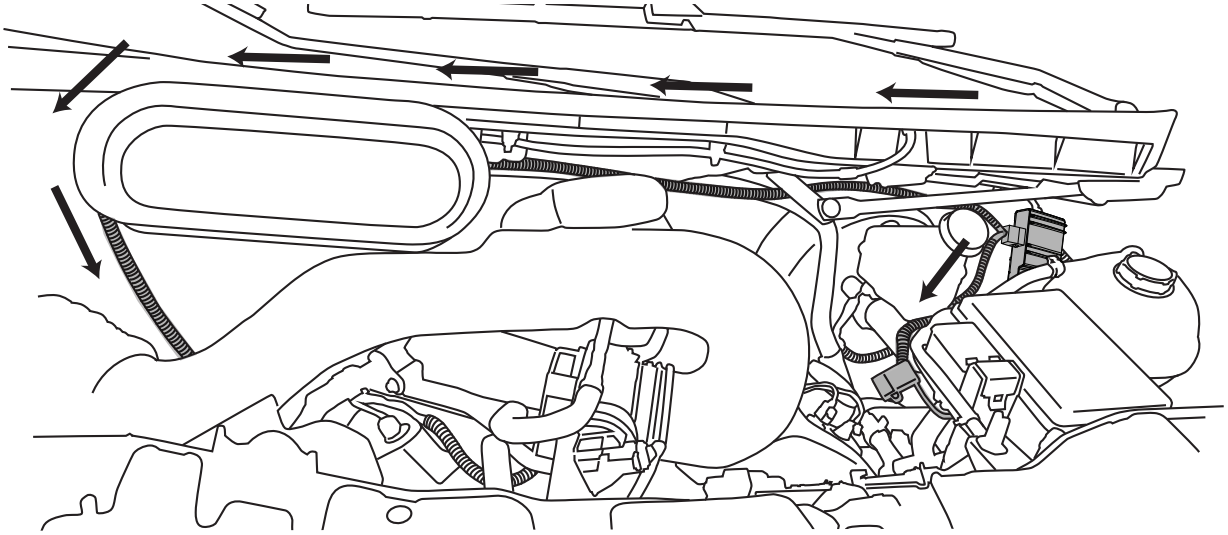
7

Attach power lead (RED wire) to positive pole on the Fuse block. **CAUTION**: Do not ground wrench when engaged with nut.



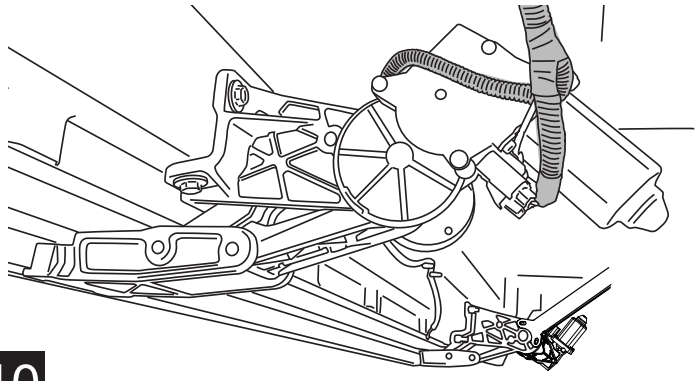
8

Route long end of wire harness above engine and down through passenger side wheel well. Zip tie the harness to cowling clips on fire wall. Keep away from exhaust components. Secure with zip ties (#11).



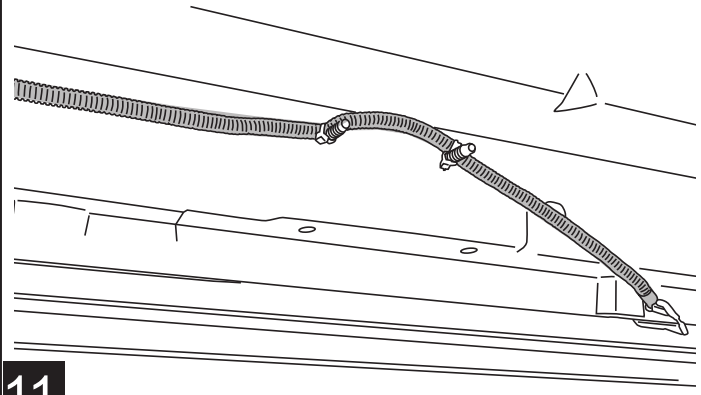
9

Route wire harness along the upper side of the floor/ rocker structure directly towards the front linkage. Secure with zip ties (#11). Keep away from exhaust components.



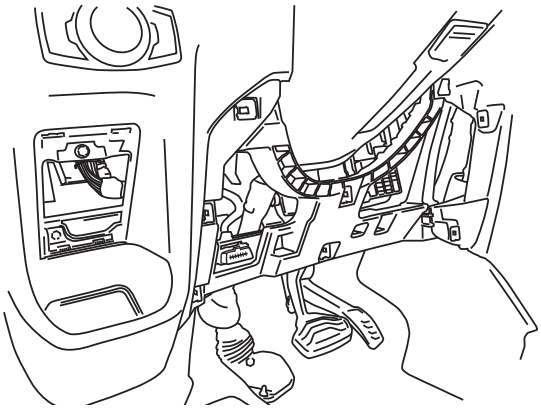
10

Route wire harness along the upper side of the floor/ rocker structure towards to the rear light and rear linkage location. Secure with zip ties (#11). Keep away from exhaust components.



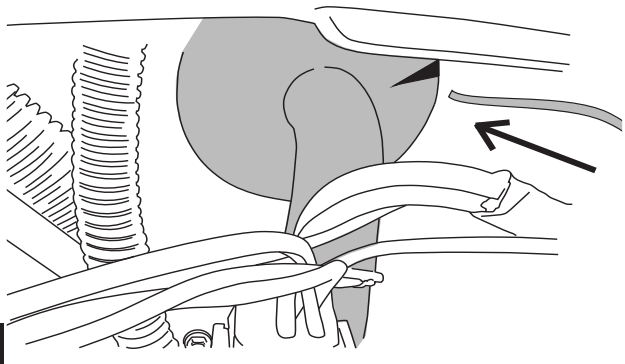
11

Remove the panel under the steering wheel by just pulling straight out.



12

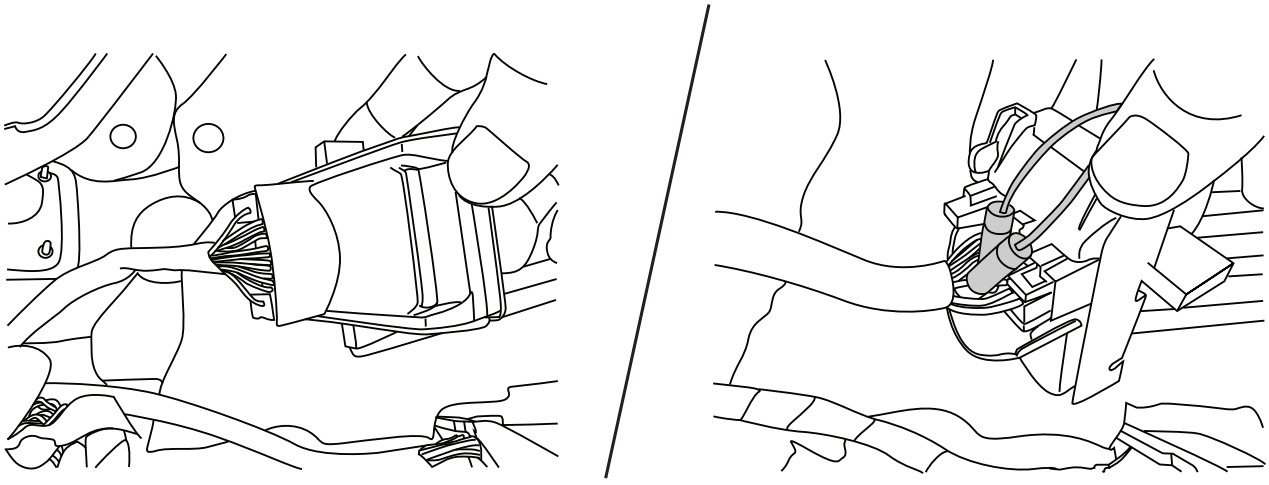
Locate large rubber boot on driver side firewall under the hood. Slice a small opening to run the trigger wire through. Find the trigger wire under the dashboard and strip the wire.



13

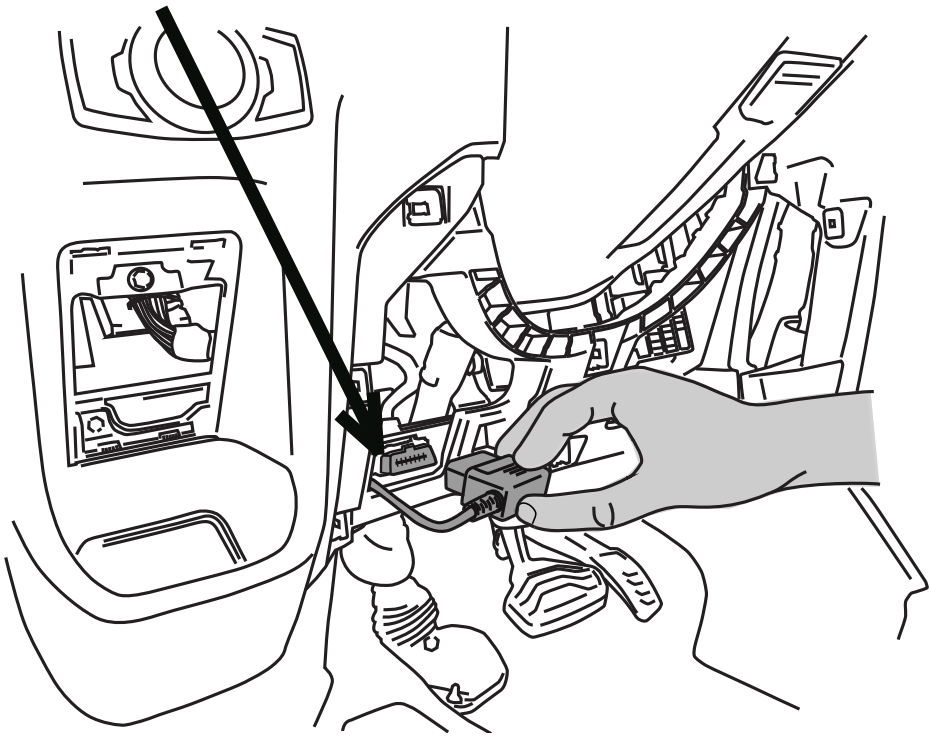
Locate the following wires and connect with supplied Posi-Tap™ to the following wire colors listed below.

Factory Can Wire	OBD Module wire Color
Grey with Orange Stripe	White Wire
Purple with Orange Stripe	Blue Wire



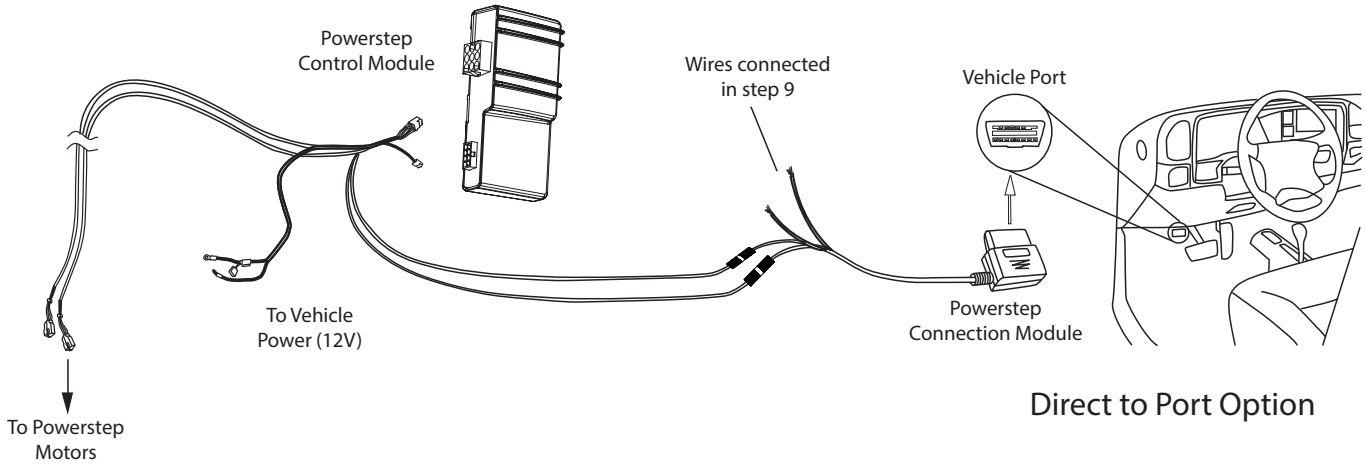
14

Once the trigger wire has been connected to the OBDII module (#18), remove the OBDII port from the vehicle by depressing the two plastic tabs on the sides and push the port back out of the bracket. Now connect the OBDII module to the OBDII port.



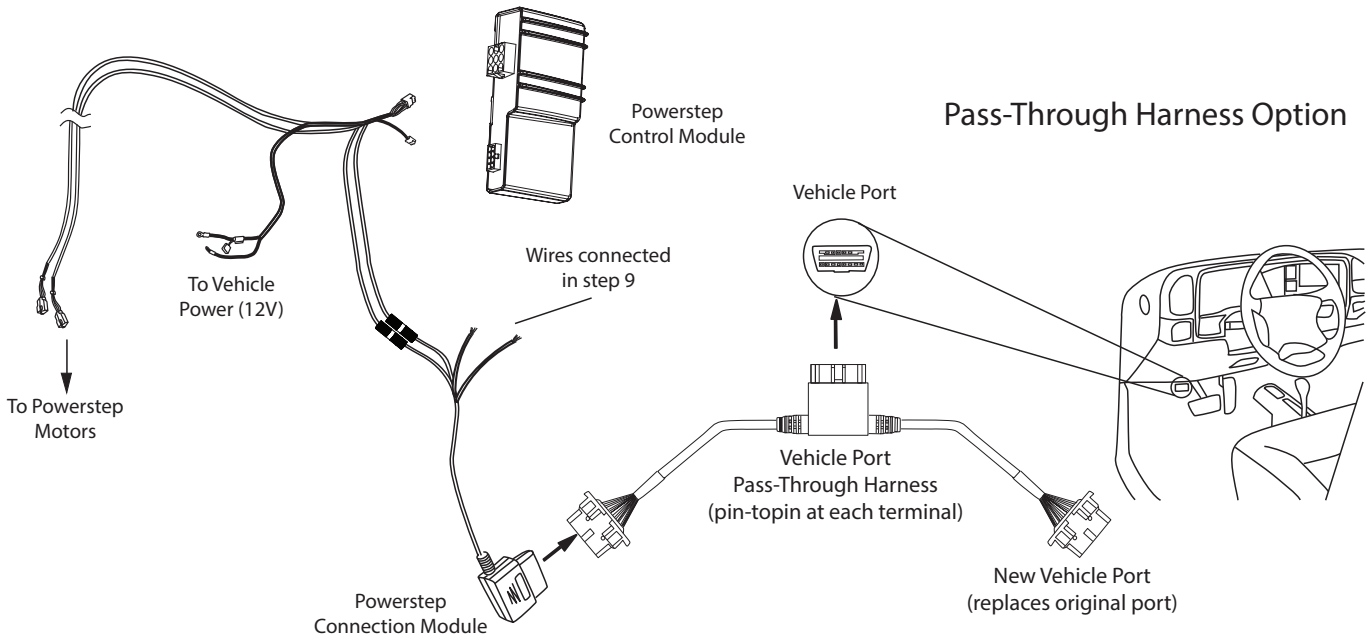
15

OBD II install: Use Supplied Posi-Lock™ connectors to attach the Plug and Play Module to the Harness. Attach matching colors on the harness to the wires on the module. Plug in module to OBD II port on the vehicle. Secure harness with supplied tie wraps. ***Note: If the OBD II pass thru harness (76404-01A) was purchased see install sheet supplied in packaging. The pass through harness allows for an open port for other accessories. See below for a brief description.***

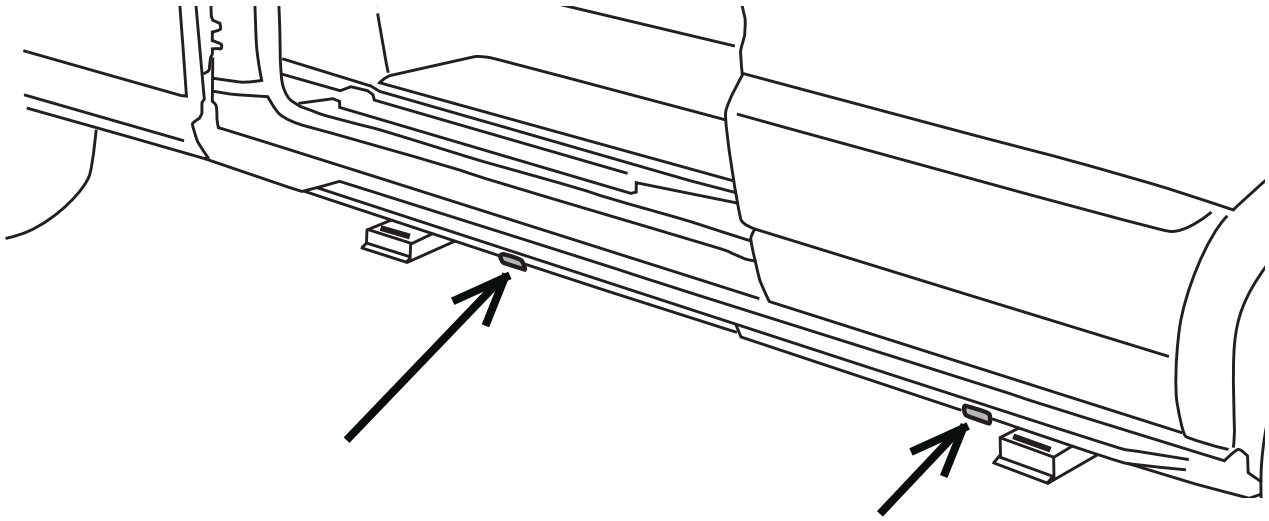


Direct to Port Option

Pass-Through Harness Option

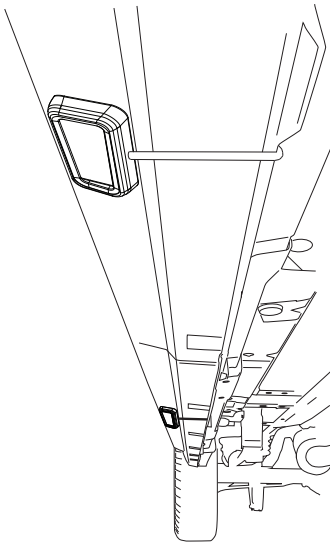


On the sides of the vehicle place the LED Lights (#14) at the center of each of the doors.



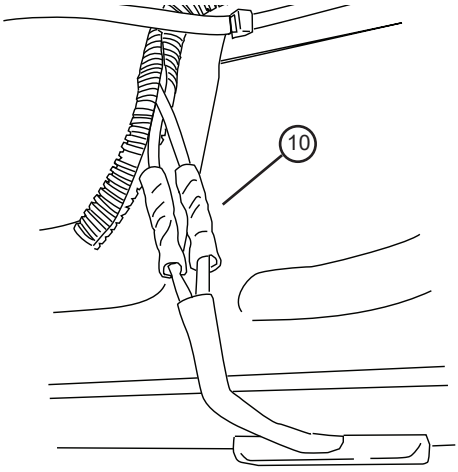
17

Affix lamps to rocker panel surface. Make sure the lamp is affixed to a clean, flat surface. The outside the rocker face is the ideal location affix the lamp just at its edge. If already equipped with a step, the rear door rocker will be different but the light shall be placed in the position shown in the previous step.



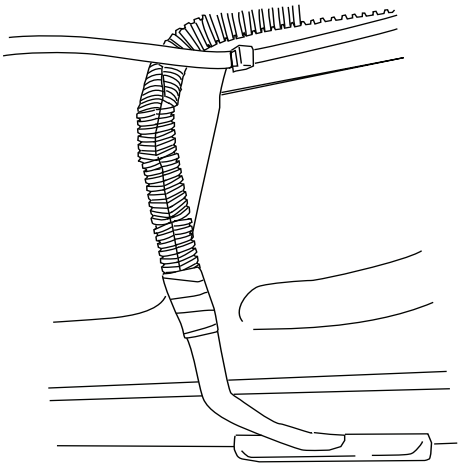
18

Using supplied butt connectors (10), connect the lamp wires. Red to Red, Black to Black. Once Crimped use heat gun to shrink tube.



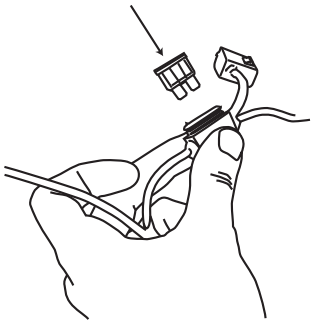
19

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



20

Reinstall fuse.

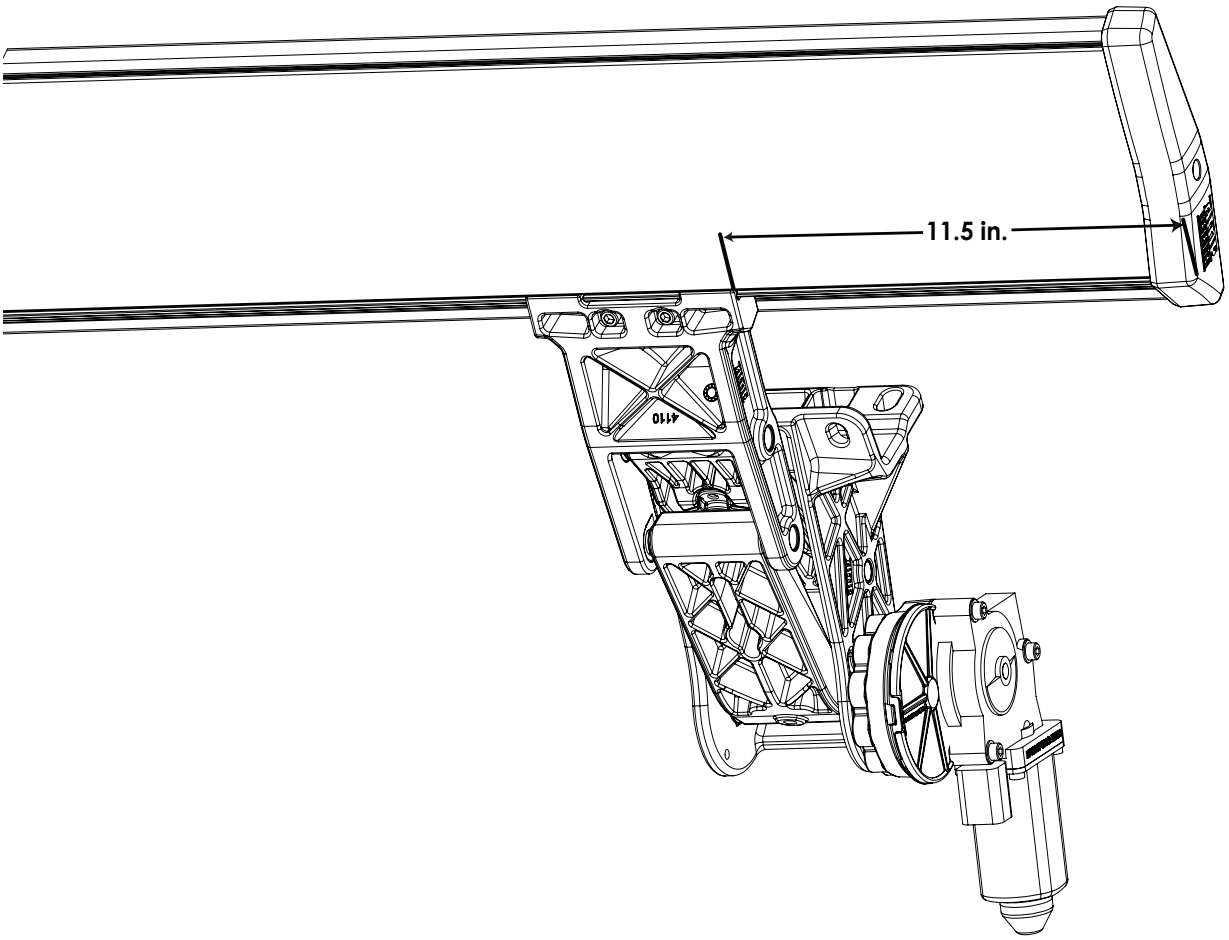


21

Installing Step Extrusion

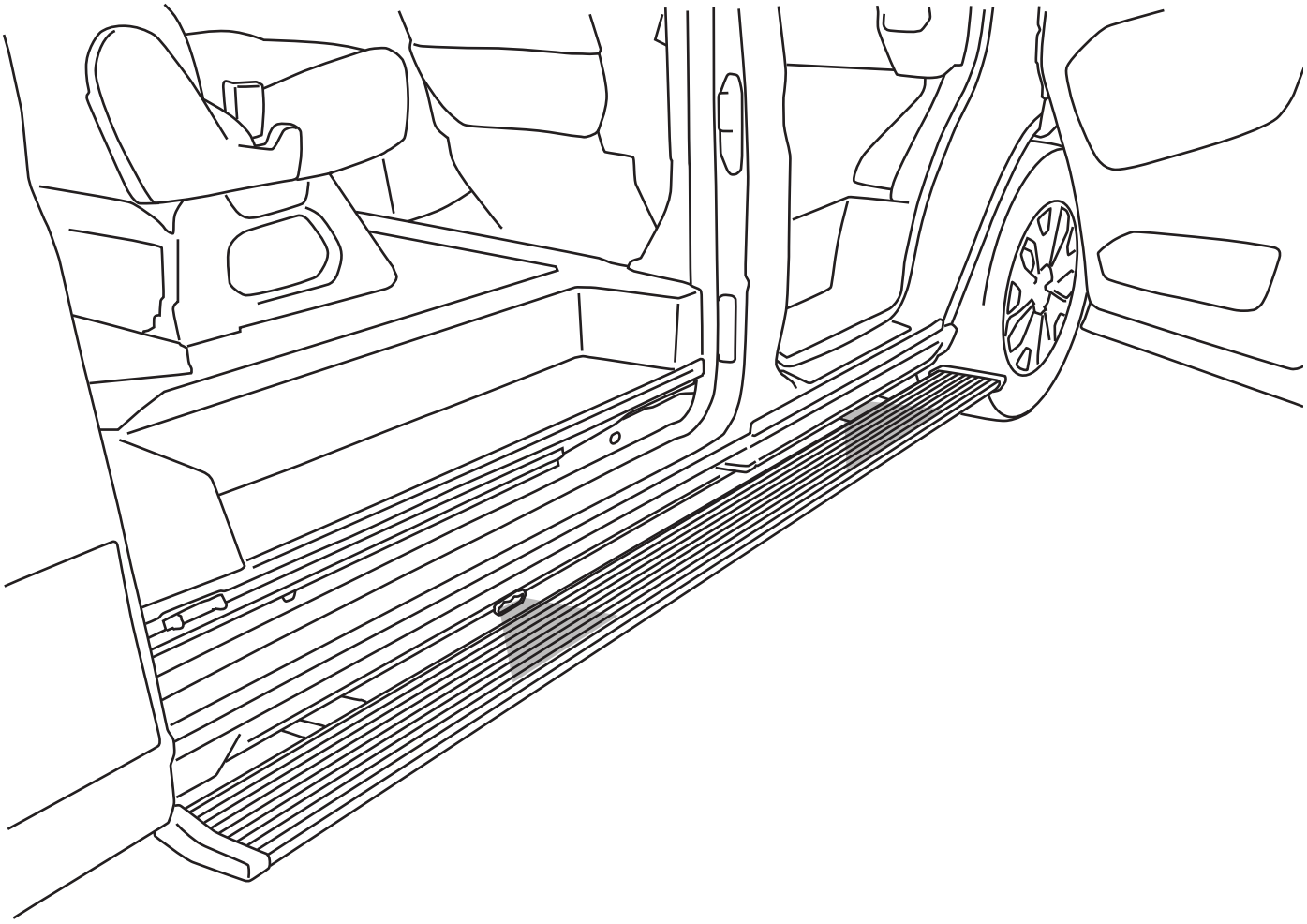
First, open a door on the side of the vehicle you are working on. This will extend and sync both linkages, **keep door open while attaching the Step Extrusion.**
Slide the front mounting T-nut into position, place the Step Extrusion 11.5 inches from the Linkage front edge. Finger tighten only. Align the rear T-nut and bolt it to the rear linkage. Then tighten all 4 fasteners. Finger tighten only. Align the rear T-nut and bolt it to the rear linkage. Then tighten all 4 fasteners. Close the door and confirm step functions correctly.

Torque to 10 ft.lbs.



Check for Power

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 reillumintated by closing and opening any door of vehicle.

AMP RESEARCH PowerStep™

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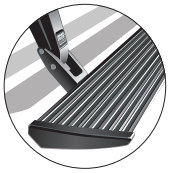
Rev 01.05.21

AMP RESEARCH PowerStep™

Congratulations on your purchase of the genuine AMP Research PowerStep! Here's what you should know...

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

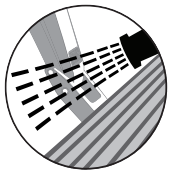


Automatic power deploy:
The running boards will extend down and out when the doors are opened.

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.