EPS KIT

P*LARIS

ENGINEERED PARTS

ACCESSORIES & APPAREL

P/N 2889464; 2890069

IMPORTANT

Due to the technical nature of this kit, Polaris® insists that this installation be performed by a certified Polaris® technician.

BEFORE YOU BEGIN

Read these instructions and check to be sure all parts and tools are accounted for. Please retain these installation instructions for future reference and parts ordering information.

APPLICATION

Fits Commercial mid-sized PRO XD models and Ranger 570 SP models

Verify accessory fitment at www.polaris.com.

APPLICATION RESTRICTIONS NOTE

This EPS kit, p/n 2889464, is not compatible with Ride Command® kit p/n 2889163.

REQUIRED SOLD SEPARATELY

NOTICE

PRO XD models are already equipped with the EPS harness and Pulse® bar kit. The EPS harness kit and Pulse® bar kit is only used for the Ranger 570 SP EPS installation.

Only parts for installation of the EPS Kit are included. For complete installation, the following additional kit is required (sold separately):

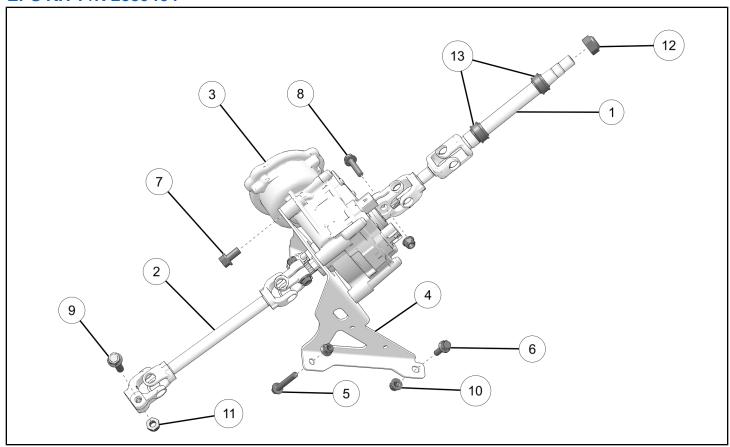
EPS Harness Kit, P/N 2890069 (Ranger 570 SP models only)

Only parts for installation of the EPS Kit are included. Prior installation of one of the following additional kits is also required (sold separately):

- Pulse® Bar Kit, P/N 2889185(3-passenger Ranger 570 SP models only) or
- Pulse® Bar Kit, P/N 2889568(Crew Ranger 570 SP models only)

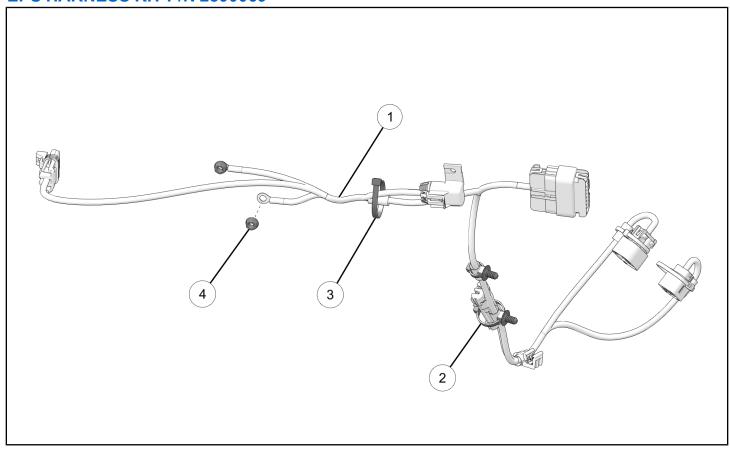
KIT CONTENTS

EPS KIT P/N 2889464



REF	QTY	PART DESCRIPTION	P/N AVAILABLE SEPARATELY
1	1	Shaft, Steering, Upper	1824164
2	1	Shaft, Steering, Lower	1830020
3	1	EPS Unit	2416569
4	1	Bracket, Power Steering	5258708-329
5	2	Screw, Hex Flange - M8 x 1.25 x 55 mm	7517281
6	1	Screw, Hex Flange - M8 x 1.25 x 25 mm	7518514
7	4	Screw, Hex Flange - M10 x 1.25 x 20 mm	7518558
8	2	Screw, Hex Flange - M8 x 1.25 x 35 mm	7519052
9	1	Screw, Hex Flange - M10 x 1.5 x 40 mm	7520994
10	5	Nut, Nyloc Flange - M8 x 1.25 mm	7547332
11	1	Nut, Hex - M10 x 1.5 mm	7547385
12	1	Nut, Hex - M16 x 2.0 mm	7547506
13	2	Bushing – Steering	7556675

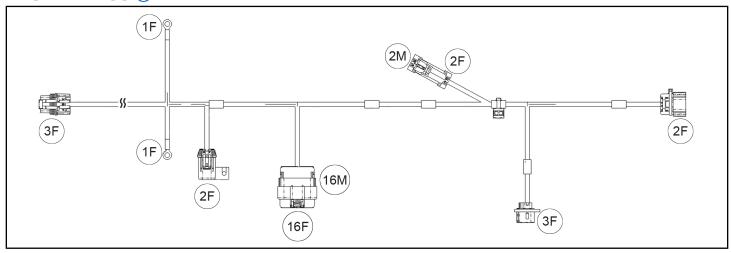
EPS HARNESS KIT P/N 2890069



REF	QTY	PART DESCRIPTION	P/N AVAILABLE SEPARATELY
1	1	Harness – EPS Accessory	2416699
2	2	Clip – Push Dart	7081496
3	1	Cable-Tie	7081953
4	2	Nut – Hex Flange Head, M6	7547270

HARNESS DETAIL

EPS HARNESS ①



REF	PART DESCRIPTION	CONNECTS TO		
3F	Pulse® Bar Connector	Pulse® Bar		
1F	Pulse® Positive (+) Stud Connector	Pulse® Positive Stud		
1F	Pulse® Negative (-) Stud Connector, Ground	Pulse® Negative Stud		
2F	Fuse Connector (not used)	Attach to Harness with Cable Tie		
16F	INFT Connector Cover	n/a – discard cover		
16M	INFT Connector	Infotainment Connection		
2M	Accessory Connector (not used)	Attach to Harness with Cable Tie		
2F	Accessory Connector (not used)	Attach to Harness with Cable Tie		
3F	EPS Signal Connector	EPS Unit Signal Port ③		
2F	EPS Power Connector	EPS Unit Power Port ③		
Exam	Example: 16F = 16 pin, Female / 16M = 16 pin, Male (Male terminal fits inside female terminal)			

TOOLS REQUIRED

- · Safety Glasses
- · Hammer, Soft Face
- · Pick and Hook Set
- · Pliers, Push Pin Rivet
- Pry Tool

- Screwdriver Set, Torx®
- · Socket Set, Hex Bit, Metric
- · Socket Set, Metric
- · Torque Wrench
- · Wrench Set, Metric

IMPORTANT

Your EPS Kit is exclusively designed for your vehicle. Please read the installation instructions thoroughly before beginning. Installation is easier if the vehicle is clean and free of debris. For your safety, and to ensure a satisfactory installation, perform all installation steps correctly in the sequence shown.

INSTALLATION INSTRUCTIONS

VEHICLE PREPARATION

GENERAL

- 1. Park vehicle on a flat surface.
- 2. Shift vehicle into PARK.
- 3. Turn key to OFF position and remove key.
- 4. Lift (or remove) bench seat. Remove storage compartment (if installed), then disconnect black negative (-) cable from battery.

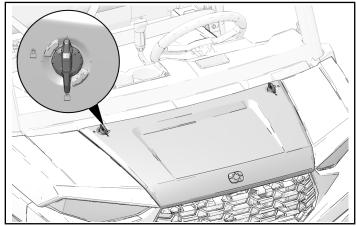
A WARNING

Ensure red positive (+) battery terminal is COMPLETELY COVERED by protective boot. Accidental tool contact across both battery terminals will result in high current electrical arc, and may result in battery explosion. Death or serious injury may occur.

Black negative (-) cable MUST be disconnected from battery terminal. Failure to disconnect cable may result in electrical arc when installing connections at terminal block. Death or serious injury, or damage to vehicle or accessory, may occur.

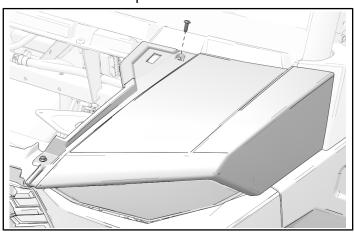
HOOD REMOVAL

1. Turn two quarter-turn fasteners to unlock position to remove hood from vehicle.

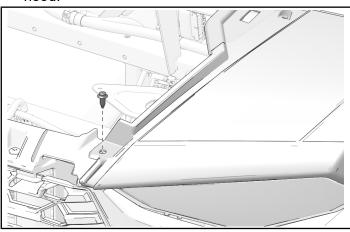


LEFT-HAND HOOD REMOVAL

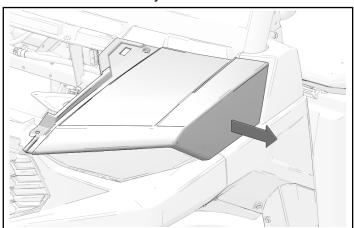
1. Remove and keep one screw from outer hood.



Remove and keep one push-pin rivet from outer hood.

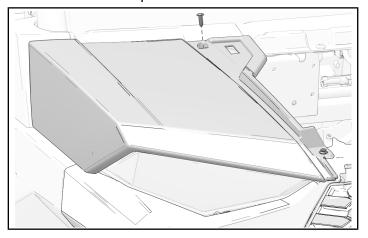


3. Pull outer hood away from vehicle.

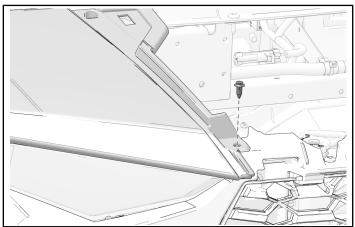


RIGHT-HAND HOOD REMOVAL

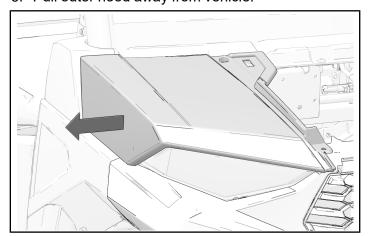
1. Remove and keep one screw from outer hood.



2. Remove and keep one push-pin rivet from outer hood.

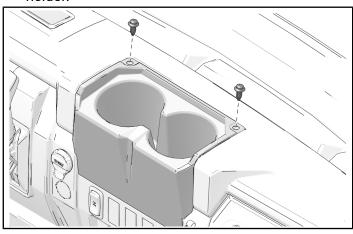


3. Pull outer hood away from vehicle.

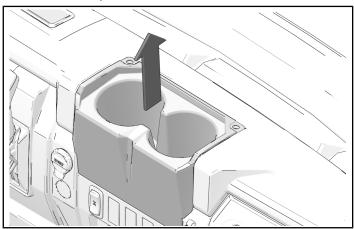


CUP HOLDER REMOVAL

1. Remove and keep two push-pin rivets from cup holder.

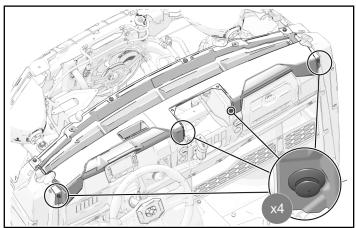


2. Remove cup holder from dashboard.

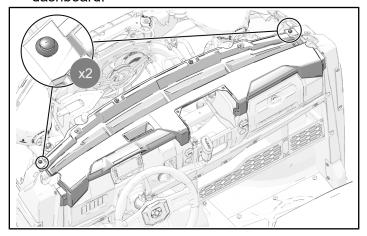


UPPER DASHBOARD REMOVAL

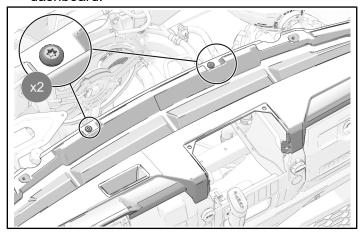
1. Remove and keep four push-pin rivets from upper dashboard.



2. Remove and keep two push-pin rivets from upper dashboard.



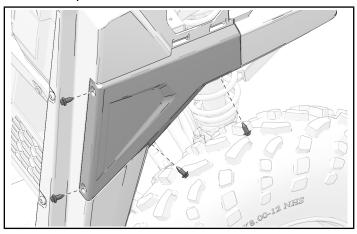
3. Remove and keep two screws from upper dashboard.



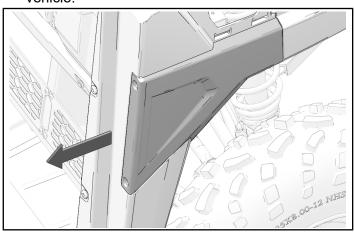
4. Remove upper dashboard from vehicle.

RIGHT-HAND SIDE ACCESS PANEL REMOVAL

1. Remove and keep four push-pin rivets from side access panel.



2. Move side access panel rearward to remove from vehicle.

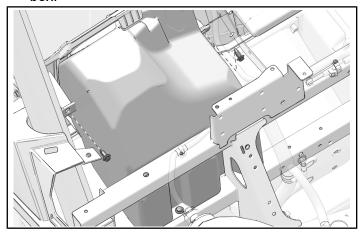


GLOVE BOX PUSH PIN RIVET REMOVAL

NOTICE

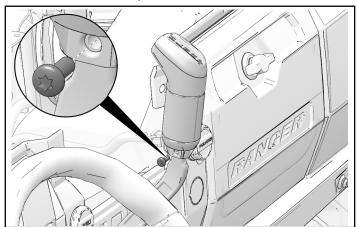
To remove the main dash, the push-pin rivets, located on the sides of the glove box, must be removed.

1. Remove and keep two push-pin rivets from glove box.

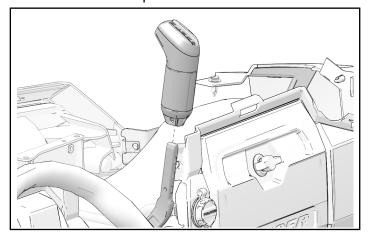


MAIN DASH PANEL REMOVAL

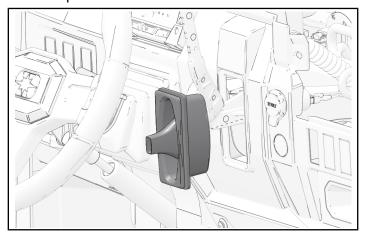
1. Remove and keep shift rod handle screw.



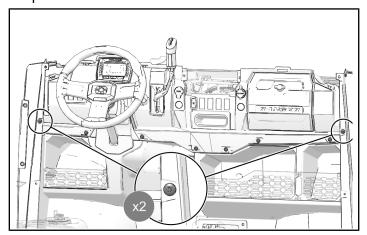
2. Remove and keep handle from shift rod.



3. Remove and keep shift rod boot from the main dash panel.



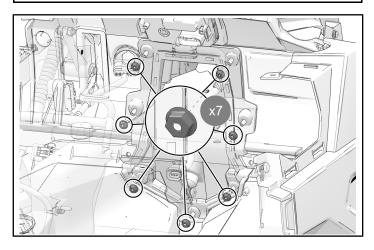
- 4. Label and disconnect electrical harnesses from instrument cluster, and any other switches, sockets, or devices mounted to the dash panel.
- 5. Remove and keep two screws from main dash panel.



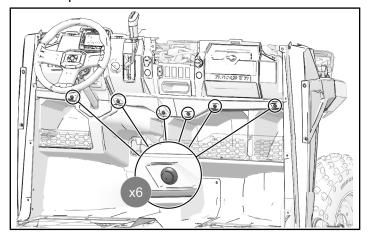
6. Remove and keep seven nuts from backside of steering wheel boot.

NOTICE

Parts of vehicle have been hidden for clarity.



7. Remove and keep six push pin rivets from main dash panel.



8. Remove main dash panel and set aside.

ACCESSORY INSTALLATION

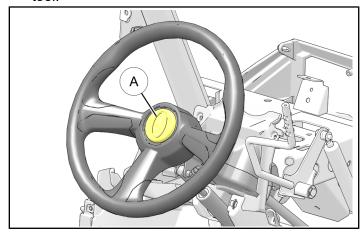
STEERING WHEEL REMOVAL

A CAUTION

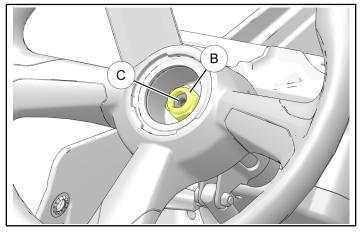
Striking steering shaft nut to remove steering wheel should ONLY be performed on vehicle WITHOUT EPS.

Using this procedure on vehicle equipped with EPS can permanently damage EPS unit.

 Remove steering wheel cap (A) by carefully prying from steering wheel using a non-marring prybar or tool.



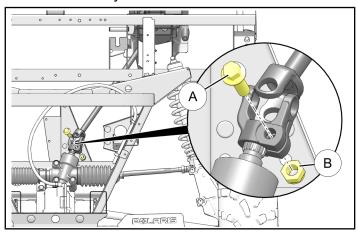
2. Loosen steering shaft nut (B), backing it half way off steering shaft (C).



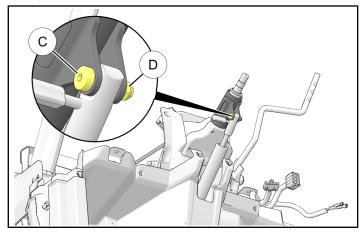
- 3. While applying upward pressure to bottom of steering wheel, use drift punch and hammer to lightly tap steering shaft.
- 4. Remove nut and steering wheel. Nut cannot be reused.

STEERING SHAFT ASSEMBLY REMOVAL

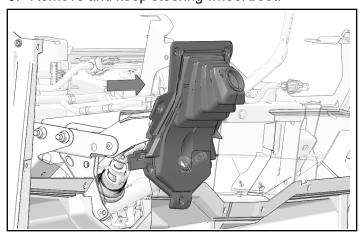
1. Remove and discard pinch bolt (A) and nut (B) securing lower end of steering shaft to steering rack assembly. Hardware will not be reused.



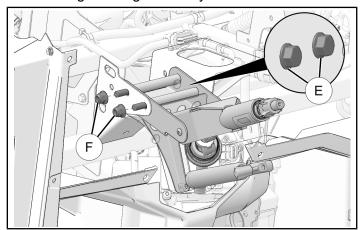
2. Remove and keep screw © and nut ® securing tilt cylinder to pivot tube bracket.



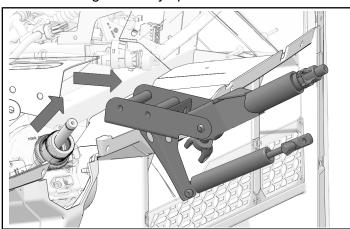
3. Remove and keep steering wheel boot.



4. Remove and keep two bolts (£) and two nuts (£) securing steering assembly to chassis structure.



5. Lift steering assembly up and out of chassis.



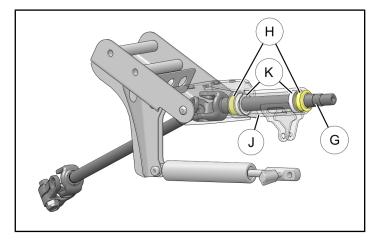
6. Remove and discard steering shaft © and two bushings ⊕ from pivot tube ①. Shaft and bushings will not be reused.

IMPORTANT

Do not damage two bearings ® pressed into pivot tube. Bearings will remain in pivot tube.

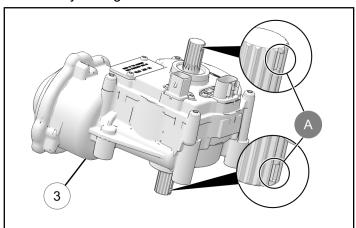
NOTICE

Some components hidden or shown partially transparent for clarity.



ASSEMBLE AND INSTALL EPS UNIT AND LOWER STEERING SHAFT

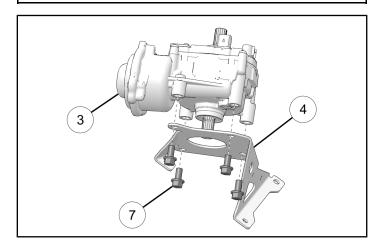
1. OPTIONAL: Use paint marker (or equivalent) to mark upper and lower skip tooth splines (A) on input and output shafts of EPS unit (3) to increase visibility during installation.



2. Install EPS unit ③ to bracket ④ using four screws①. Torque screws to specification.

TORQUE

EPS Bracket Screws ①: 30 ft-lbs (41 N·m)



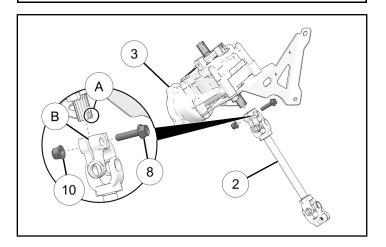
- 3. Observe that each end of lower steering shaft ② has different size fastener holes:
 - · UPPER yoke has M8 fastener hole
 - · LOWER yoke has M10 fastener hole
- Align slot ® in UPPER yoke of lower steering shaft
 with skip tooth spline A on lower (output) shaft of EPS unit 3.

Install middle pinch bolt ® and nut ®, tightening only enough to prevent steering shaft from detaching from EPS unit.

IMPORTANT

During installation, slot will be slightly offset to either side of skip tooth. Observe which direction slot is offset to match alignment when installing upper steering shaft (4) in later section.

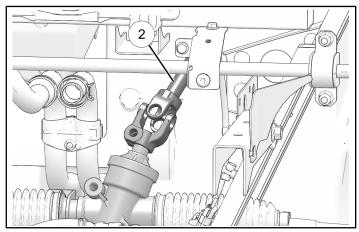
When properly aligned, yoke should easily slip onto splined shaft. Do NOT strike or force yoke onto shaft.



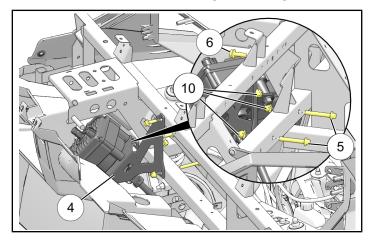
 Lower EPS assembly into chassis structure, installing lower yoke of lower steering shaft ② onto input shaft of steering rack. Pinch bolt and nut will be installed later.

NOTICE

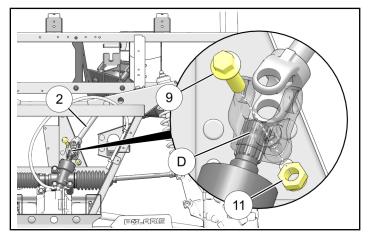
Unlike at the EPS unit, there is no specific slot alignment for the lower yoke.



- 6. Loosely install bracket ④ (with EPS unit) to chassis structure using the following hardware:
 - Lower LH corner: screw (5) and nut (10)
 - Upper RH corner: screw 6 and nut 10
 - Lower RH corner: screw (5) and nut (10)



- 7. Install lower pinch bolt (9) into fastener hole on lower yoke of lower steering shaft (2).
 - If bolt passes completely through yoke, then secure with nut (1).
 - If bolt doesn't pass completely through yoke, then loosen upper pinch bolt and nut (see previous Step 4). Grasp and move steering shaft
 up or down until bolt passes through annular groove (1) in steering rack input shaft. Secure with nut (11).



8. Torque fasteners to specification (in sequence shown below):

a.

TORQUE

EPS Unit Bracket Screws (5) and (6): 16 ft-lbs (22 N·m)

b.

TORQUE

Lower Pinch Bolt Nut (1): 49 ft-lbs (66 N·m)

C.

TORQUE

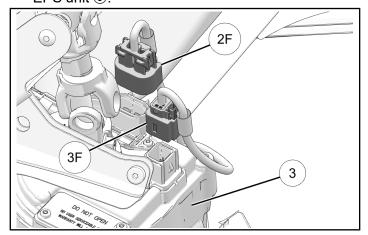
Middle Pinch Bolt Nut (10): 16 ft-Ibs (22 N·m)

EPS HARNESS CONNECTION (PRO XD MODELS ONLY)

NOTICE

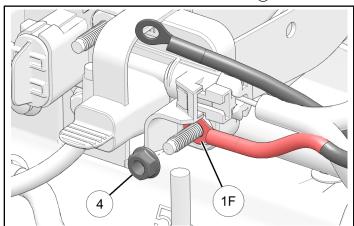
EPS harness ① is only used for the Ranger 570 SP EPS installation. PRO XD models are already equipped with the EPS harness.

1. Install existing harness connectors **2F** and **3F** to EPS unit ③.



EPS HARNESS INSTALLATION (RANGER 570 SP MODELS ONLY)

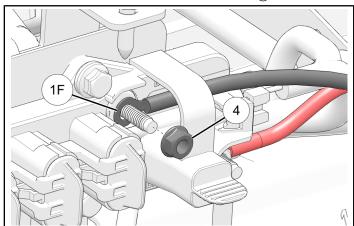
1. Connect positive (+) EPS harness **1F** to Pulse® bar terminal and install harness nut ④.



2. Torque nut to specification.

TORQUE Harness Nut ④: 44 ft-lbs (5 N·m)

3. Connect negative (-) EPS harness **1F** to Pulse® bar terminal and install harness nut **4**.

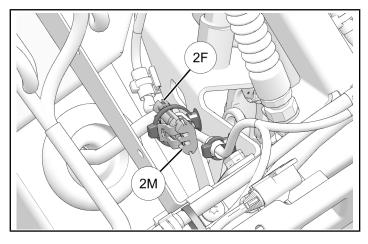


4. Torque nut to specification.

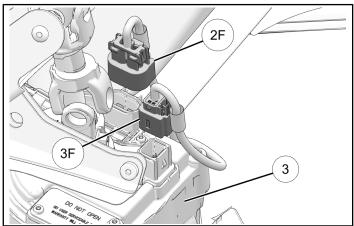
TORQUE Harness Nut ④: 44 ft-lbs (5 N·m)

5. Attach harness connectors **2M** and **2F** to EPS harness with a cable tie, as shown.

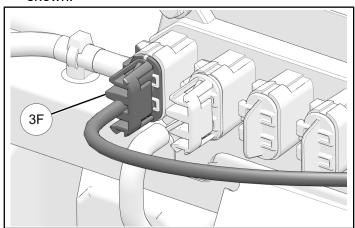
NOTICE Harness connectors 2M and 2F will not be used.



6. Install harness connectors **2F** and **3F** to EPS unit 3.



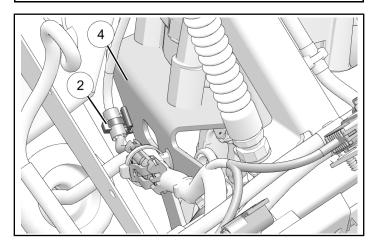
7. Install harness connector **3F** to Pulse® bar, as shown.



8. Install two edge clips ② to power steering bracket ④.

NOTICE

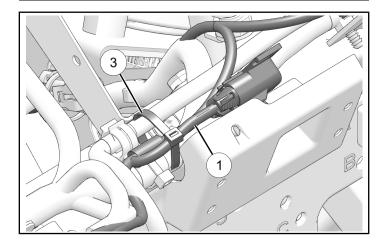
Only one edge clip shown in image.



9. Attach harness 1 to chassis with cable tie 3.

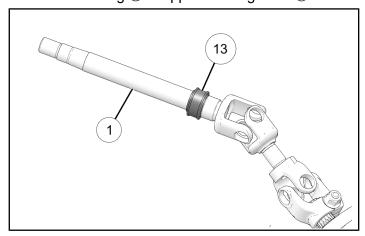
IMPORTANT

Make sure EPS harness is installed away from hot components, sharp edges, or moving parts.

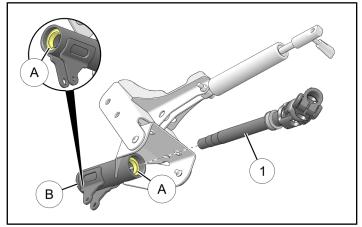


ASSEMBLE AND INSTALL UPPER STEERING SHAFT ASSEMBLY

1. Install bushing ③ to upper steering shaft ①.



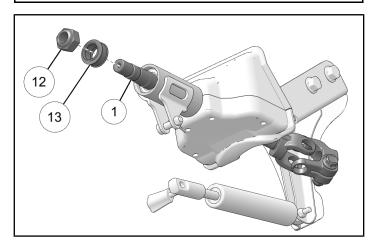
 Carefully insert upper steering shaft ① through two bearings ⓐ and out opposite end of pivot tube ⑥.



3. Install bushing 3 and nut 2 to steering shaft 1. FINGER tighten nut.

NOTE

Nut is temporarily installed to prevent steering shaft from falling out of pivot tube during installation.



4. Align slot © in LOWER yoke of upper steering shaft with skip tooth spline (a) on upper (input) shaft of EPS unit (1).

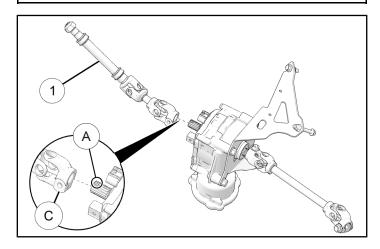
NOTICE

Vehicle hidden for clarity.

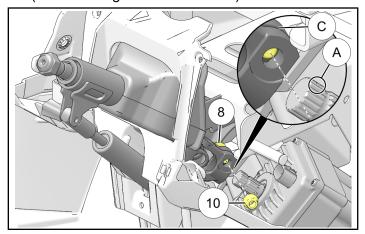
IMPORTANT

Rotate upper steering shaft so slot is on SAME side of skip tooth as lower steering shaft was in previous section, ASSEMBLE AND INSTALL EPS UNIT AND LOWER STEERING SHAFT, Step 4.

When properly aligned yoke should easily slip onto splined shaft. Do NOT strike or force yoke onto shaft.



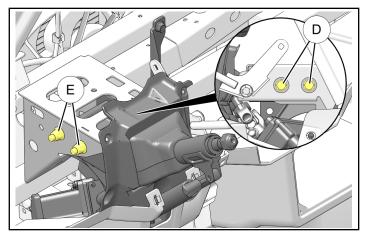
5. Install upper pinch bolt ® and nut ⑩. Finger tighten. Nut will be torqued to specification later (after steering wheel installation).



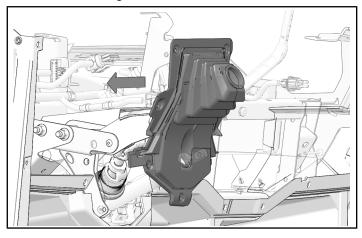
6. Reinstall steering assembly to chassis structure using two each retained bolts ① and nuts ②. Torque to specification.

TORQUE

Steering Assembly Bolts D and Nuts E: 40 ft-lbs (54 N·m)

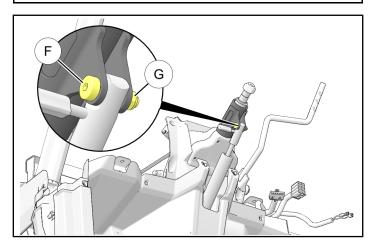


7. Install steering wheel boot.



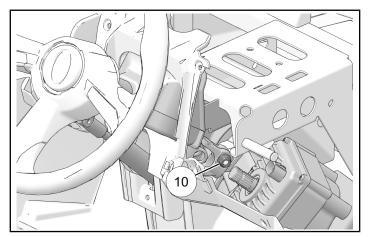
8. Reinstall tilt cylinder to pivot tube bracket using screw (F) and nut (G). Torque to specification.

TORQUE Tilt Cylinder Screw ⑤ and Nut ⑥: 7 ft-lbs (9 N·m)



- 4. Reinstall steering wheel cap.
- 5. Torque upper pinch bolt nut 10 to specification.

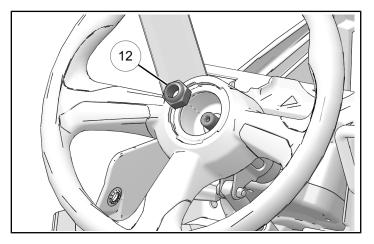
TORQUE Upper Pinch Bolt Nut ⑩: 16 ft-lbs (22 N·m)



STEERING WHEEL INSTALLATION

- 1. If nut ② was temporarily installed to upper steering shaft, then remove it now.
- 2. Make sure front wheels are centered on vehicle, then center and reinstall steering wheel on steering shaft.
- 3. Install steering wheel nut ①. Torque to specification.

TORQUE Steering Wheel Nut ⑫: 65 ft-lbs (88 N·m)



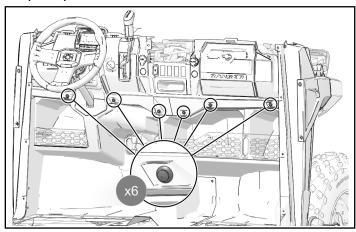
VEHICLE REASSEMBLY

RECONNECT BATTERY

- 1. Reconnect black negative (-) cable to battery.
- 2. Reinstall underseat storage compartment (if removed) and seat.

MAIN DASH PANEL INSTALLATION

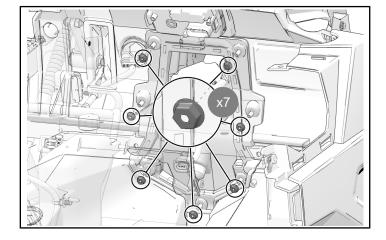
1. Install main dash into vehicle with six retained push pin rivets.



2. Install seven retained steering wheel boot nuts. Tighten until fully seated.

NOTICE

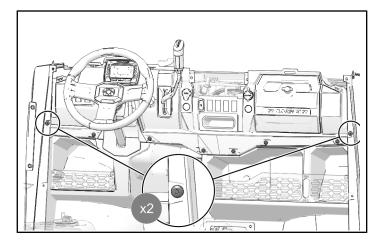
Parts of vehicle have been hidden for clarity.



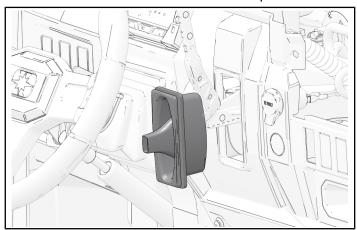
3. Install main dash panel with two retained screws. Torque to specification.

TORQUE

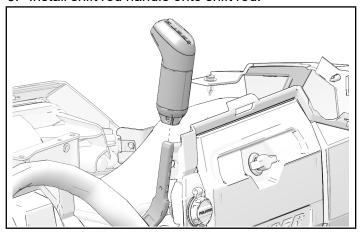
Main Dash Panel Screws: 44 in-lbs (5 N·m)



- 4. Reconnect electrical harnesses to instrument cluster, and any other switches, sockets, or devices mounted to the main dash panel.
- 5. Install shift rod boot onto main dash panel.

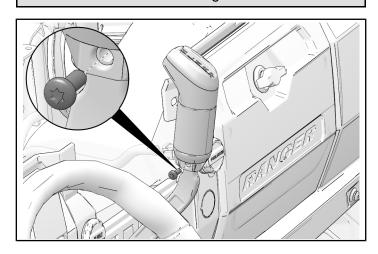


6. Install shift rod handle onto shift rod.



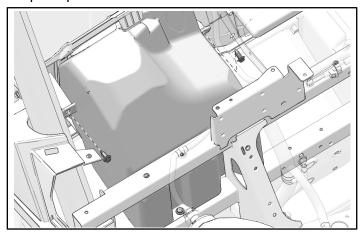
7. Install shift rod handle screw. Tighten until fully seated.

Do not overtighten.



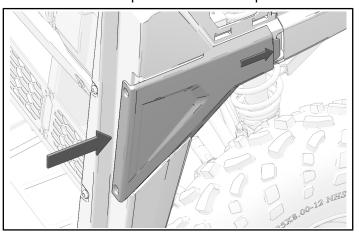
GLOVE BOX PUSH PIN RIVET INSTALLATION

1. Install glove box to main dash with two retained push-pin rivets.

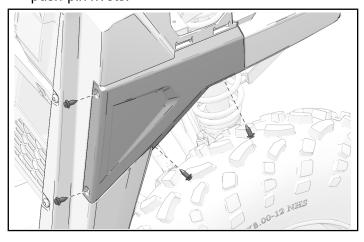


RIGHT-HAND SIDE ACCESS PANEL INSTALLATION

1. Put side access panel into installed position.



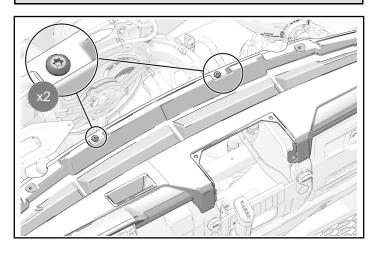
2. Install side access panel with four retained push-pin rivets.



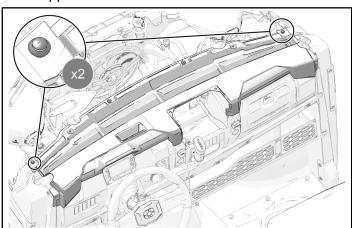
UPPER DASHBOARD INSTALLATION

1. Loosely install upper dashboard with two retained screws.

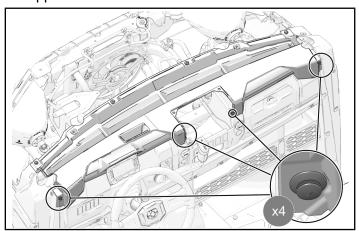
Do not torque screws at this time.



2. Install two retained push-pin rivets into front edge of upper dashboard.



3. Install four retained push-pin rivets into rear face of upper dashboard.



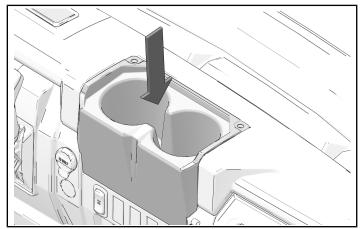
4. Torque two upper dashboard screws to specification.

TORQUE

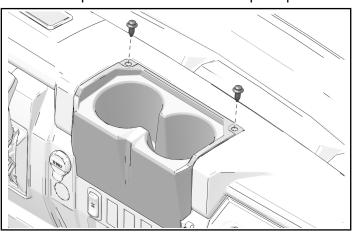
Upper Dashboard Screws: 44 in-lbs (5.0 N·m)

CUP HOLDER INSTALLATION

1. Put cup holder in vehicle.

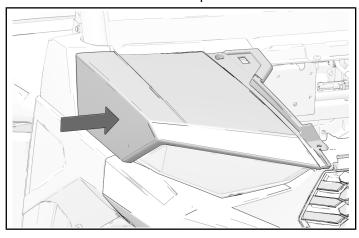


2. Install cup holder with two retained push-pin rivets.

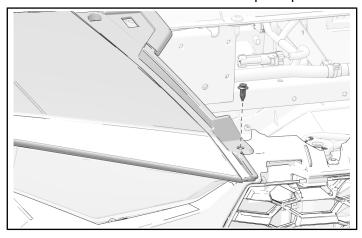


RIGHT-HAND HOOD INSTALLATION

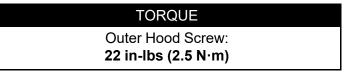
1. Put outer hood in installed position.

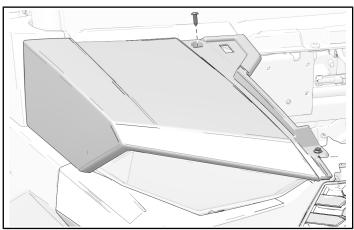


2. Attach front of outer hood with one push-pin rivet.



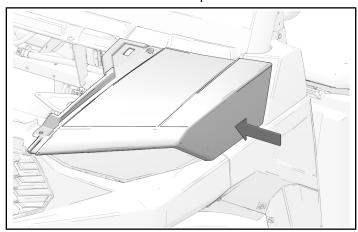
3. Attach rear of outer hood with one retained screw. Torque outer hood screws to specification.



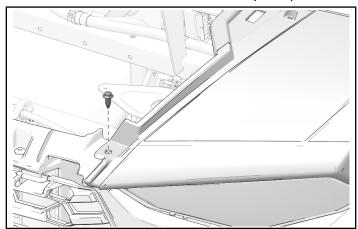


LEFT-HAND HOOD INSTALLATION

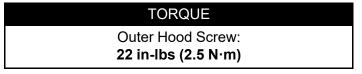
1. Put outer hood in installed position.

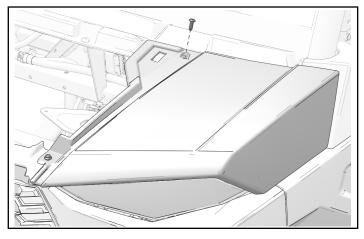


2. Attach front of outer hood with one push-pin rivet.



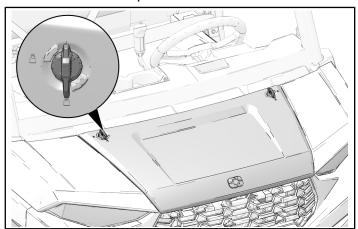
3. Attach rear of outer hood with one retained screw. Torque outer hood screws to specification.





HOOD INSTALLATION

1. Align hood with vehicle and turn two quarter-turn fasteners to lock position to install hood.



INSTRUCTION FEEDBACK FORM

A feedback form has been created for the installer to provide any comments, questions or concerns about the installation instructions. The form is viewable on mobile devices by scanning the QR code or by clicking **HERE** if viewing on a PC.

