

RMK STARTER KIT

POLARIS

ENGINEERED PARTS
ACCESSORIES & APPAREL

P/N 2889361; 2890511

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

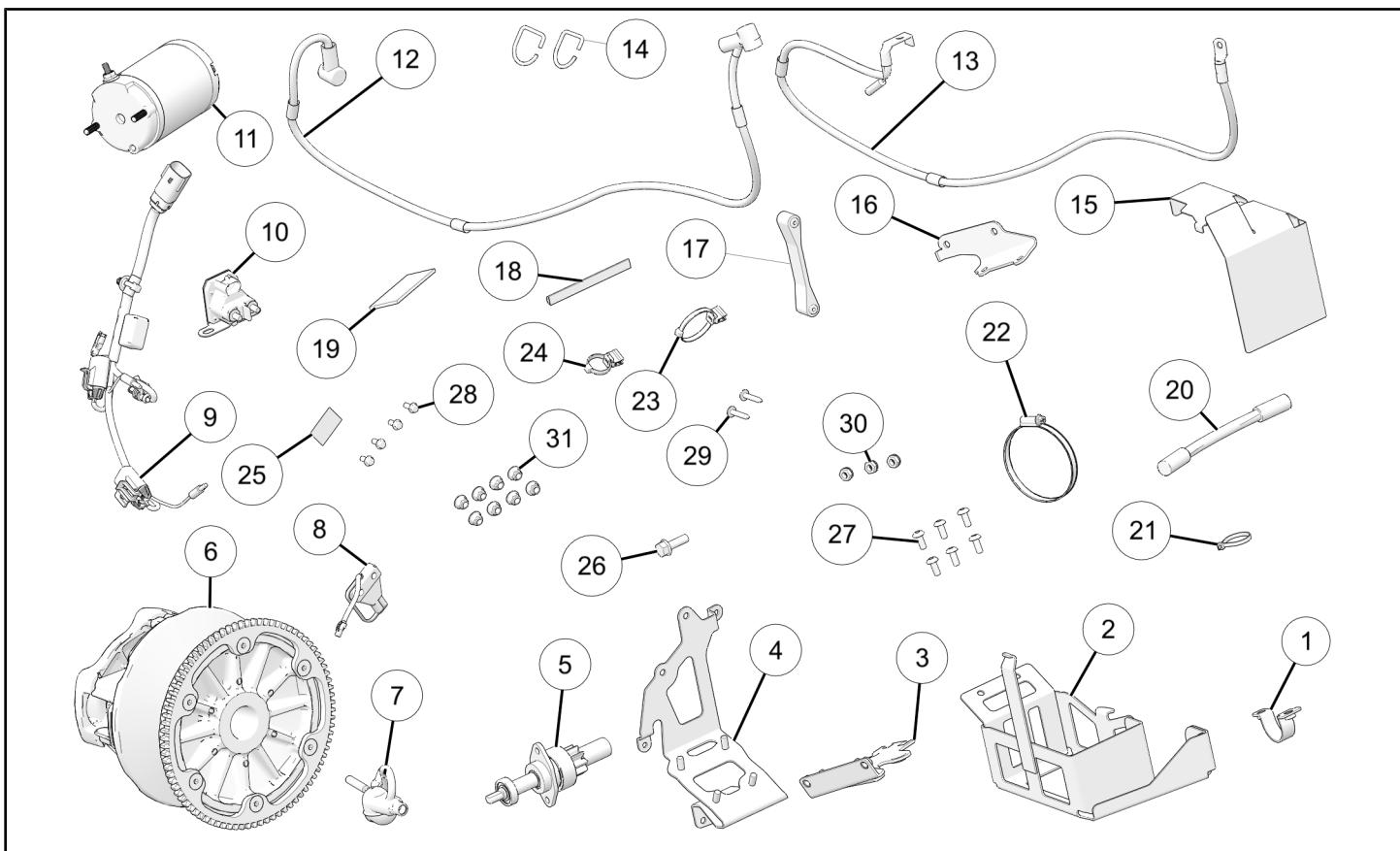
Verify accessory fitment at www.polaris.com.

REQUIRED SOLD SEPARATELY

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

- *Battery, Sealed*, P/N 4013045

KIT CONTENTS



REF	QTY	PART DESCRIPTION	P/N AVAILABLE SEPARATELY
1	1	Assembly - Bracket, Tube, Lower	1018033
2	1	Weld - Battery Box	1024159
3	1	Assembly - Bracket, Tube, Upper	1025865
4	1	Assembly - Battery Box Bracket	1026908

REF	QTY	PART DESCRIPTION	P/N AVAILABLE SEPARATELY
5	1	Assembly – Pinion	1205959
6	1	Assembly – Drive Clutch	1323613 (650,850) 1327375 (9R)
7	1	Assembly – Cable, Battery/Solenoid	2414664
8	1	Harness – Jumper, Battery	2416106
9	1	Harness – Electric Start	2416107
10	1	Solenoid – Starter, Sealed	4014655
11	1	Starter – Motor	4018147
12	1	Cable – Red	4018198
13	1	Cable – Black	4018199
14	2	D Hook	5224468
15	1	Shield – Heat, Battery	5262301
16	1	Bracket – Electric Start, Clip	5267454
17	1	Strap – Rubber	5410608
18	1	Seal – Bulb	n/a
19	1	Foam – Seal, Rear Cooler	5810947
20	1	Shaft – Flex, Starter	6230404
21	1	Cable Tie	7080138
22	1	Clamp – Band, Narrow	7081279
23	2	Clip – Edge	7082427
24	1	Clip – Edge	7082428
25	1	Decal – Battery Charge Port	7300016
26	1	Screw – Hex, Flanged, M8 x 1.25 x 25 mm	7516734
27	6	Screw – Torx® M6 x 1.0 x 15 mm	7518656
28	3	Screw – Hex, Flanged, M5 x 0.8 x 12 mm	7518894
29	2	Screw – Torx® M5 x 0.8 x 25 mm	7520280
30	3	Nut – Hex, 1/4 -20	7542105
31	9	Nut – Flanged, Locking, M6 x 1.0 mm	7547339
32	3	Washer, Spring Lock, 1/4 in	7552801

TOOLS REQUIRED

- Safety Glasses
- Exhaust Spring Tool
- Pliers, Side Cutting
- Scissors
- Socket Set, Metric
- Socket Set, Torx® Bit
- Torque Wrench
- Wrench Set, Metric
- **Special Service Tool:**
 - Drive Clutch Puller, P/N 2872085
 - Drive Clutch Holding Tool, P/N 9314177-A

IMPORTANT

Your RMK Starter 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

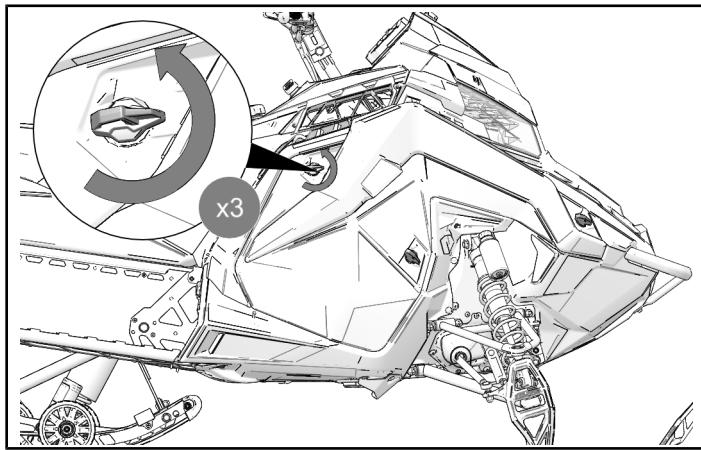
VEHICLE PREPARATION

GENERAL

1. Park vehicle on a flat surface.
2. Push engine stop switch to OFF position.
3. Turn key to OFF position and remove key.

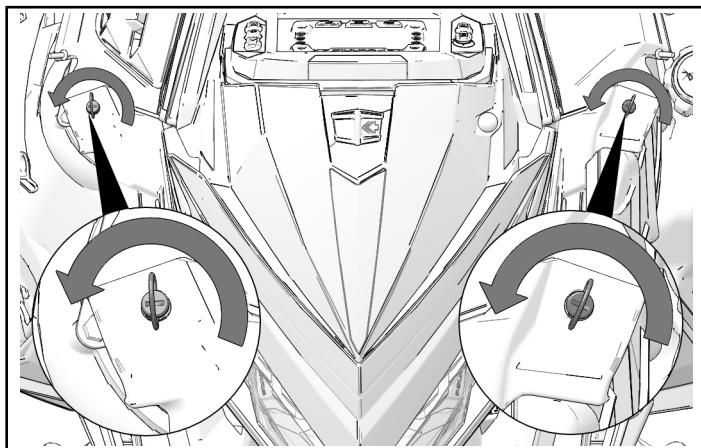
REMOVE SIDE PANEL

1. Turn three side panel latches toward rear of snowmobile to release, then remove side panel.

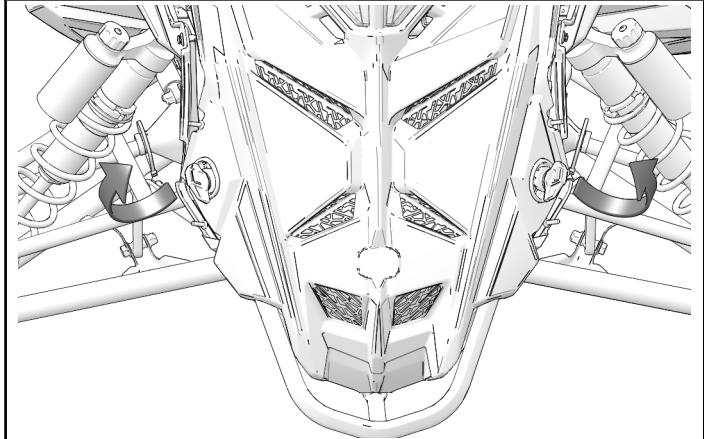


REMOVE HOOD

1. Turn hood fasteners counter-clockwise to release hood.



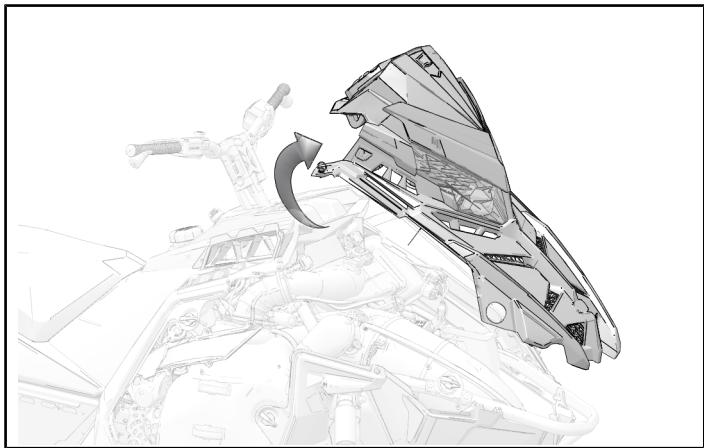
2. Pull sides of hood out away from side panel fasteners.



3. Lift hood up and away from snowmobile.

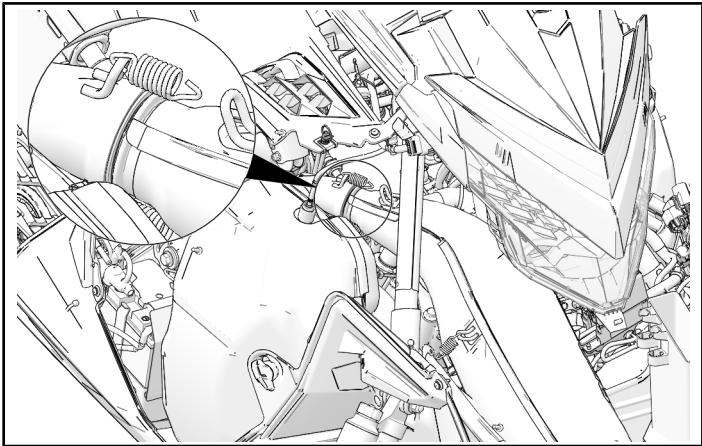
NOTICE

Disconnect wiring when removing hood.

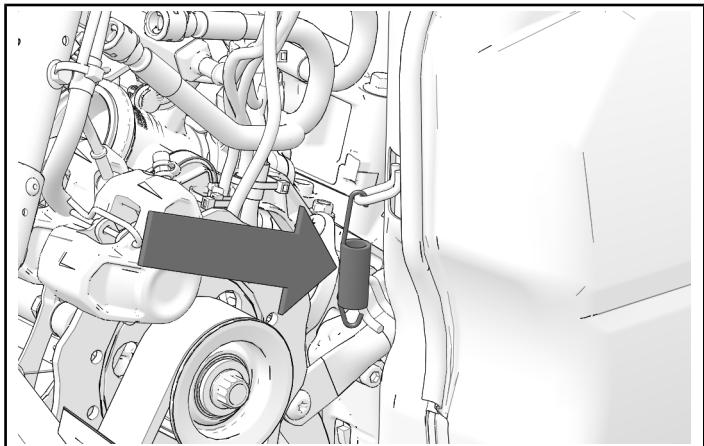


REMOVE EXHAUST

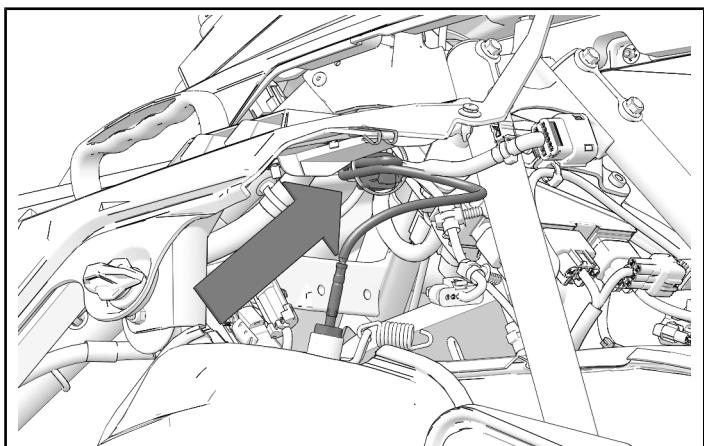
1. Remove two springs attaching exhaust pipe to silencer.



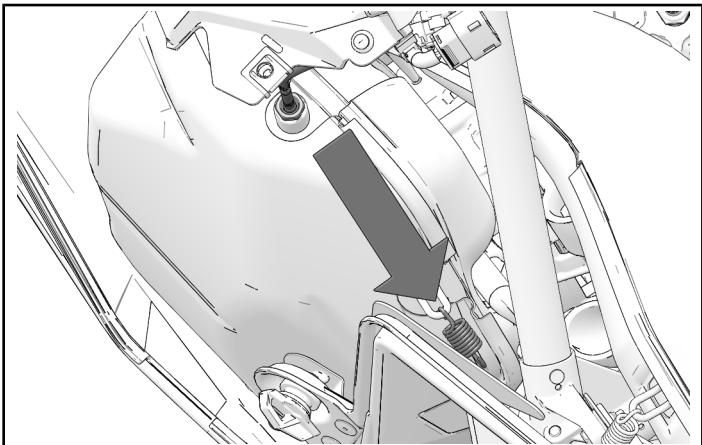
3. Remove the exhaust spring connecting the rear of the silencer to the chassis.



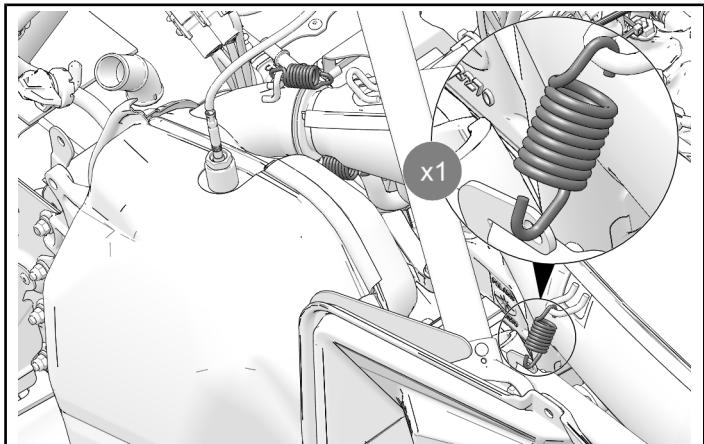
4. Cut cable tie and disconnect exhaust sensor from wiring harness in location shown under gauge pod.



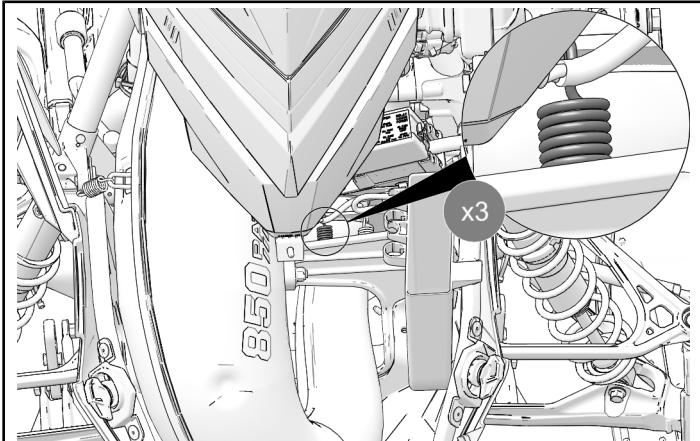
2. Remove the spring connecting the front of the silencer to the chassis.



5. Remove exhaust spring connecting the tuned pipe to the chassis.



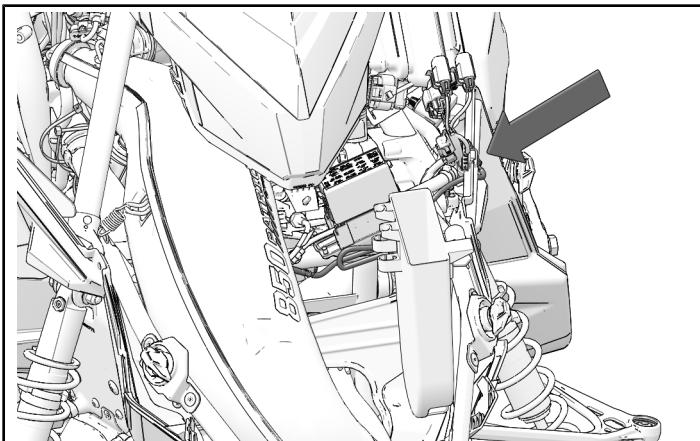
6. Remove three springs at exhaust manifold, and one spring on side of pipe.



7. Disconnect exhaust sensor from chassis wiring in location shown. Remove exhaust.

TIP

Rotate exhaust pipe back and forth to ease removal.



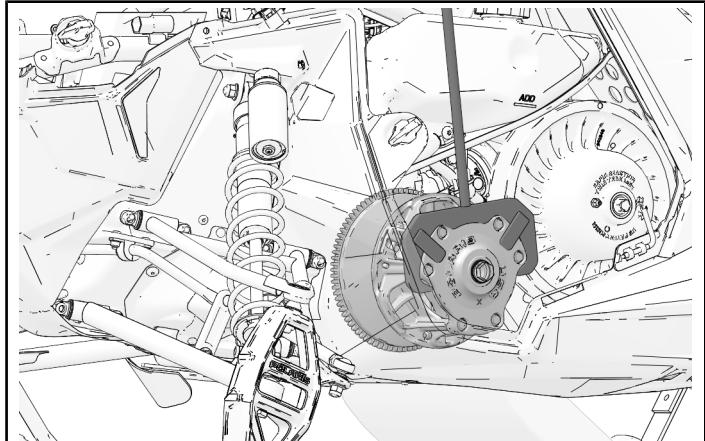
REMOVE DRIVE CLUTCH

IMPORTANT

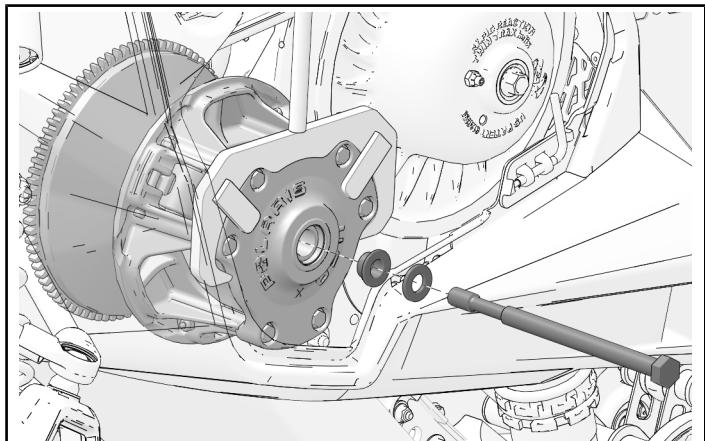
Do not use an impact wrench to remove or install the clutch bolt or operate clutch puller. Use of an impact wrench may result in damage to the clutch and/or crankshaft.

1. Remove drive belt as outlined in Owner's Manual.

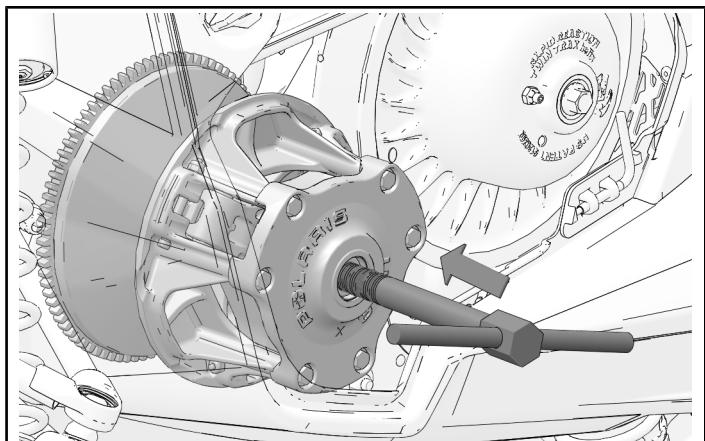
2. Put drive clutch holding tool on drive clutch.



3. Remove and keep clutch bolt, washer and bushing.



4. Install drive clutch puller and turn clockwise to thread into clutch. Continue turning tool until drive clutch pops off of crankshaft.



ACCESSORY INSTALLATION

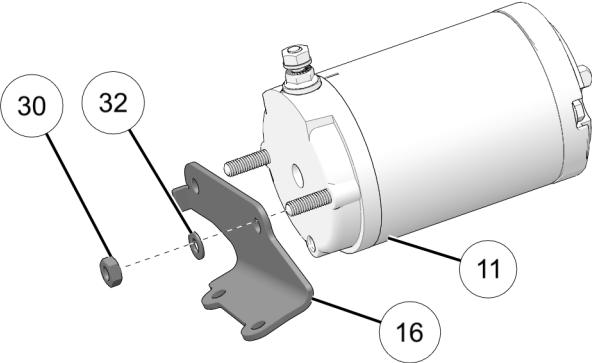
1. Install bracket ⑯ on starter motor ⑪ as shown. Attach bracket ⑯ using one washer ⑳ and one nut ⑳. Torque to specification.

NOTICE

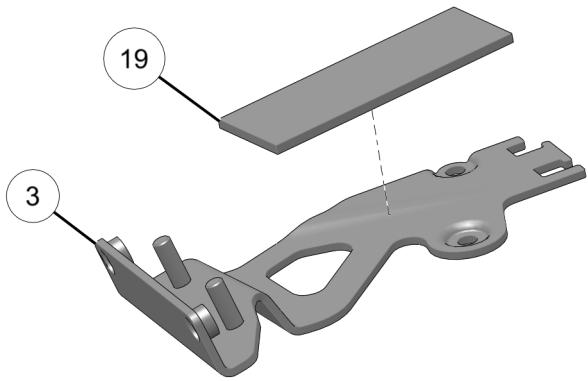
Second bracket fastener will be installed later.

TORQUE

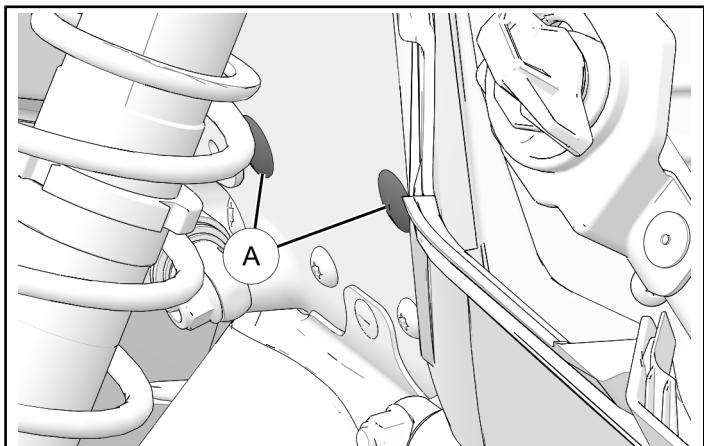
Bracket Mount Nut ⑳:
96 in-lbs (11 N·m)



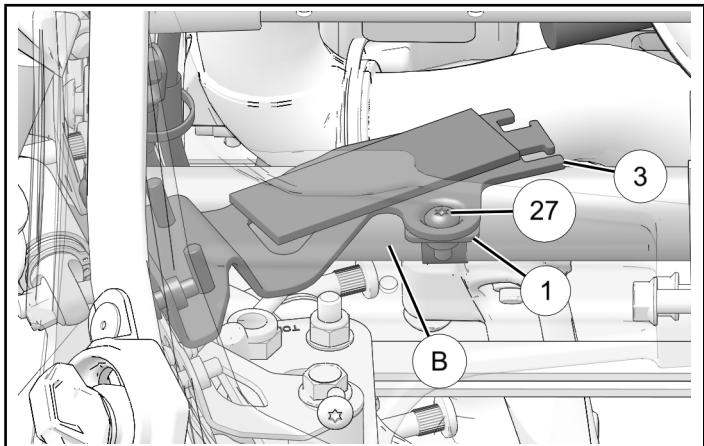
2. Put foam seal ⑯ on starter mount bracket ③ as shown.



3. Remove two plastic plugs ① behind shock absorber on right side of snowmobile.



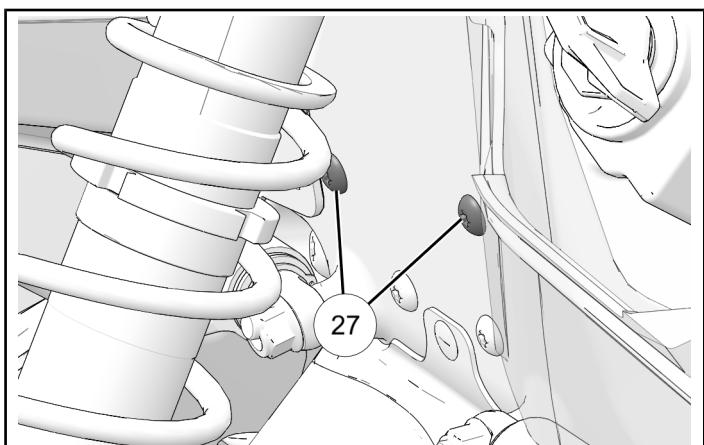
4. Loosely attach starter mount bracket ③ to snowmobile chassis bar ⑧ using bracket ① and two screws ⑰.



5. Install two screws ⑰ into starter mount bracket ③ (not shown). Torque four starter mount bracket screws ⑰ to specification.

TORQUE

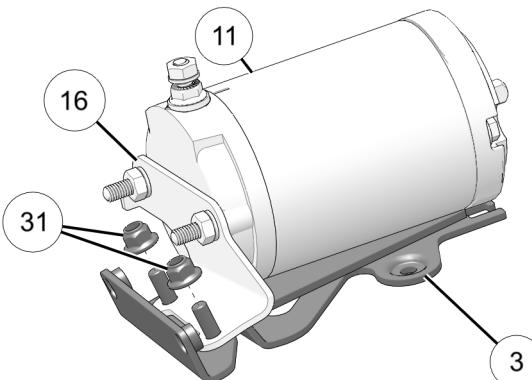
Starter Bracket Screws ⑰:
90 in-lbs (10 N·m)



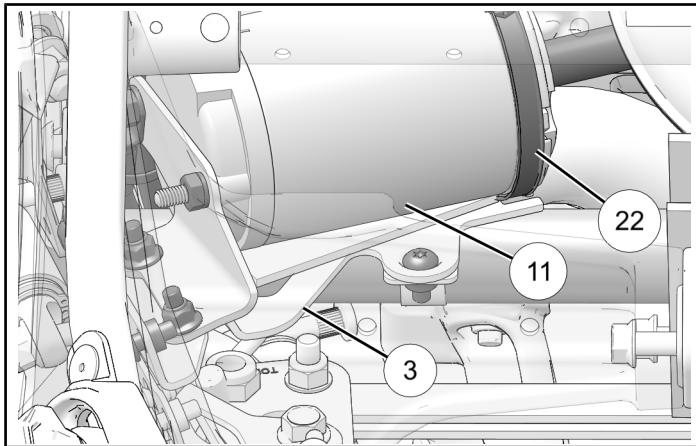
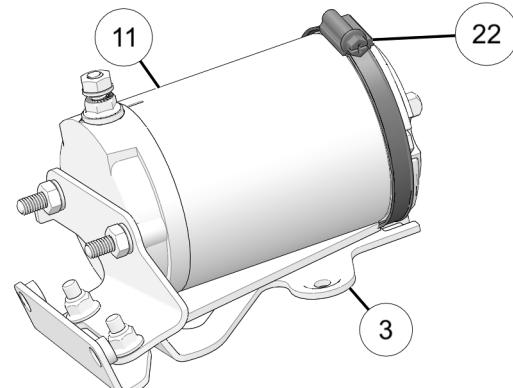
6. Install starter ⑪ and bracket ⑯ onto starter mount bracket ③ using nuts ⑳. . Torque to specification.

TORQUE

Starter Mount Bracket Nuts ⑳:
90 in-lbs (10 N·m)



7. Install band clamp ⑫ at front of starter ⑪. Make sure band clamp goes around tab mount on starter mount bracket ③. Tighten until secure.



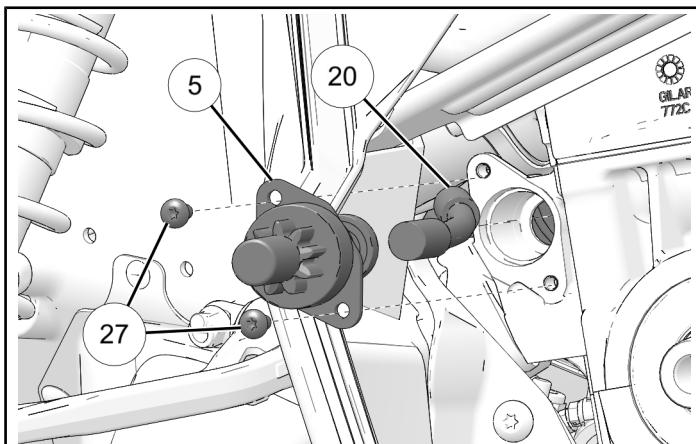
8. Install starter shaft ⑯ in pinion ⑤. Install on engine case using screws ⑰. Torque to specification.

IMPORTANT

Make sure starter shaft ⑯ is installed in starter motor ⑪.

TORQUE

Pinion Screws ⑰:
84 in-lbs (9 N·m)



9. Attach positive cable **12** to starter post using washer **32** and nut **30**. Attach negative cable **13** to starter mount bracket using nut **30**. Secure cables using cable tie **21**. Route cables under engine stator and through bulkhead section as shown.

NOTICE

Make sure cable ends marked with white tape are attached to starter and starter bracket.

TORQUE

Cable Nuts **30**:
90 in-lbs (10 N·m)

10. Install battery box bracket **4** in front of right side footwell using one nut **31** and three screws **28**. Torque to specification.

NOTICE

Some parts hidden for clarity.

IMPORTANT

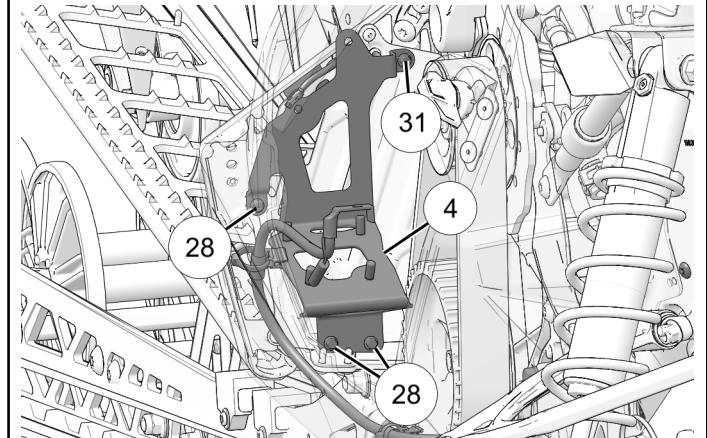
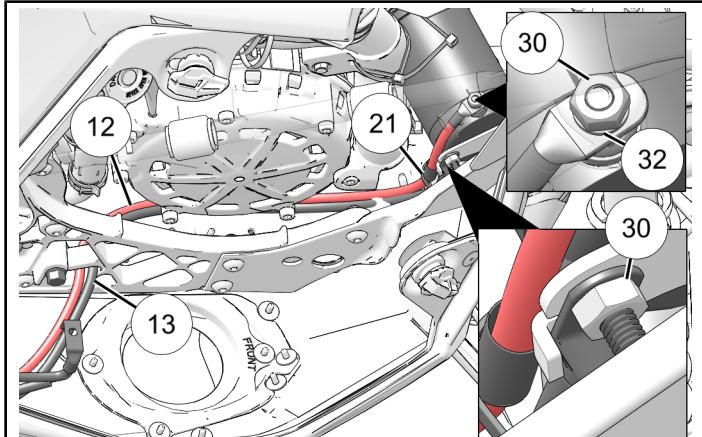
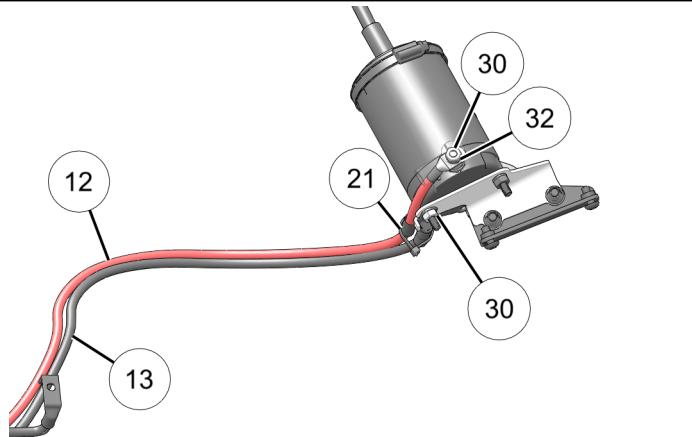
If snowmobile is equipped with Power-Up Kit P/N 2884303 remove battery and battery bracket.

TORQUE

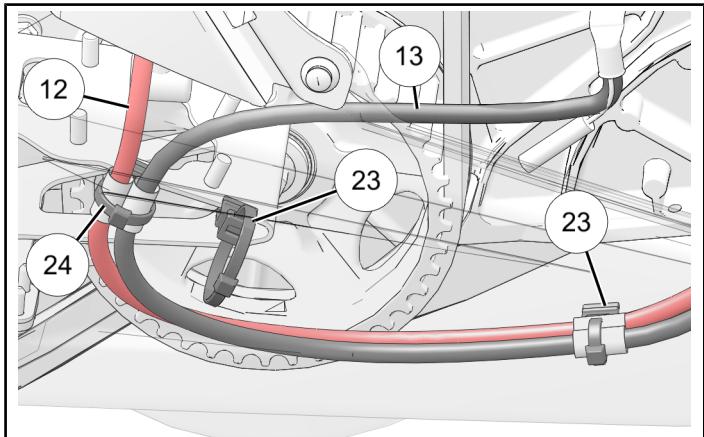
Battery Box Bracket Mounting Screws **28**:
22 ft-lbs (30 N·m)

TORQUE

Battery Box Bracket Nut **31**:
90 in-lbs (10 N·m)



11. Secure cables **12** and **13** using clips **23** and **24** in locations shown.



12. Install battery box ②. Attach to battery box bracket using two nuts ③ and to snowmobile bulkhead using screw ⑥. Torque to specification.

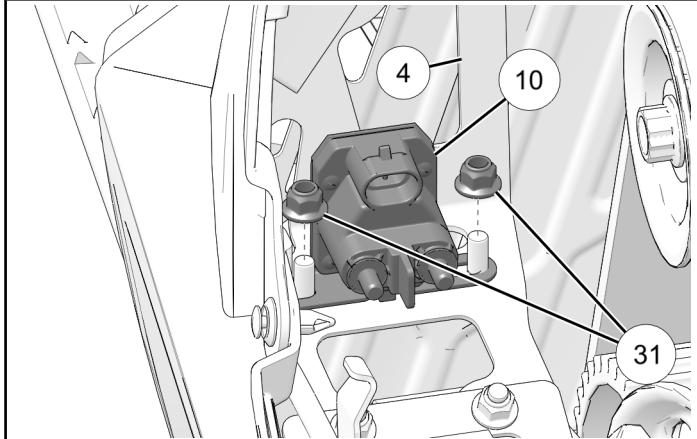
TORQUE

Battery Box Nuts ③:
90 in-lbs (10 N·m)

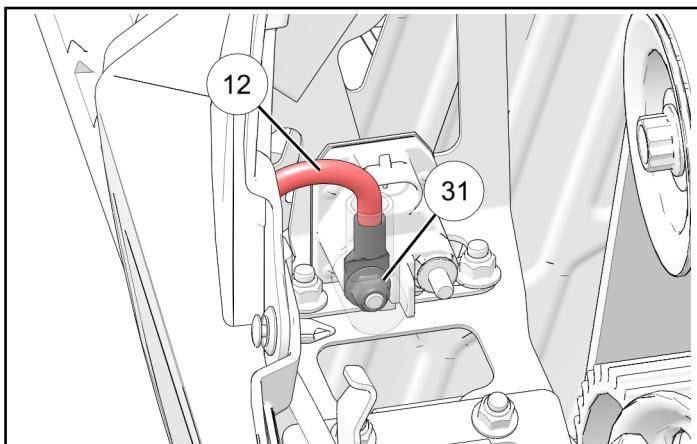
14. Install starter solenoid ⑩ onto battery box bracket ④ using nuts ③. Torque to specification.

TORQUE

Starter Solenoid Nuts ③:
90 in-lbs (10 N·m)



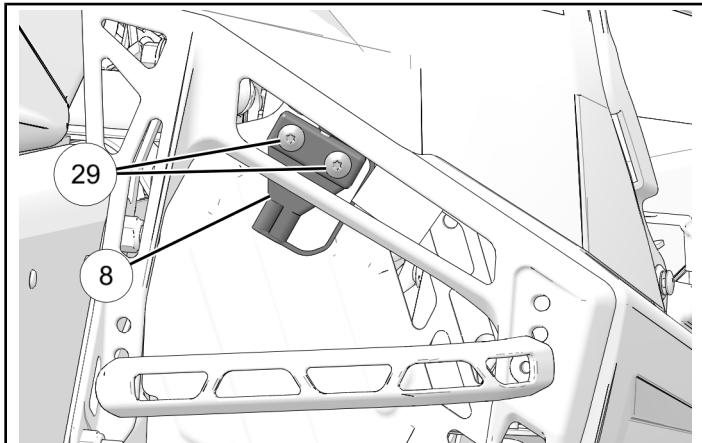
15. Attach positive battery cable ⑫ to outside post on starter solenoid using nut ⑬. Torque to specification.



13. Install battery charging port ⑧ above right footwell using screws ⑨. Torque to specification.

TORQUE

Battery Charging Port Screws ⑨:
35 in-lbs (4 N·m)

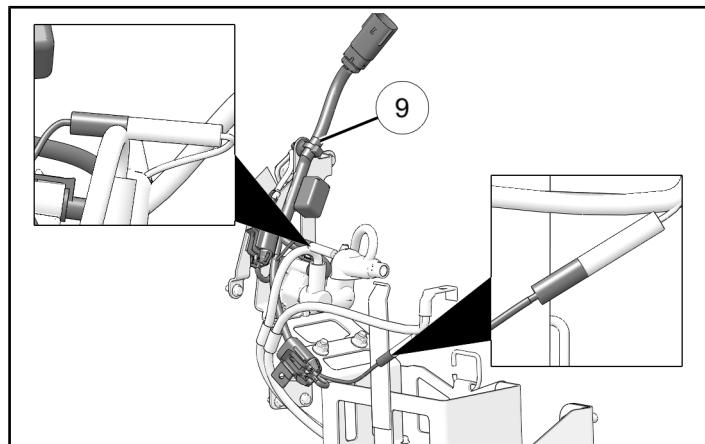
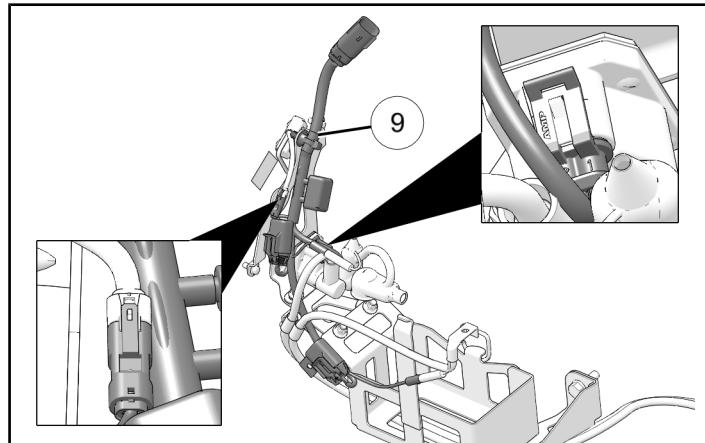
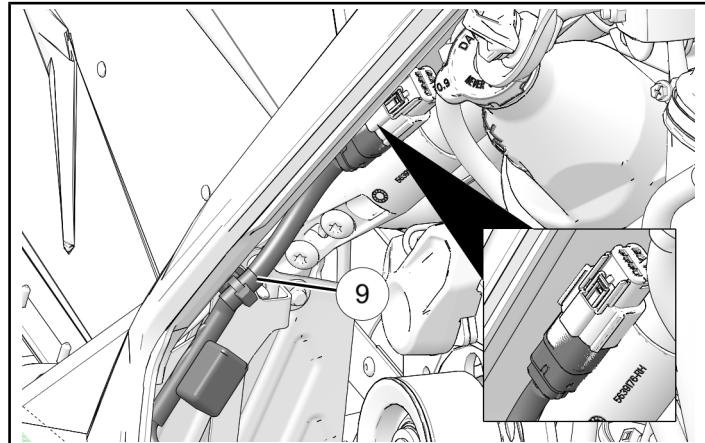


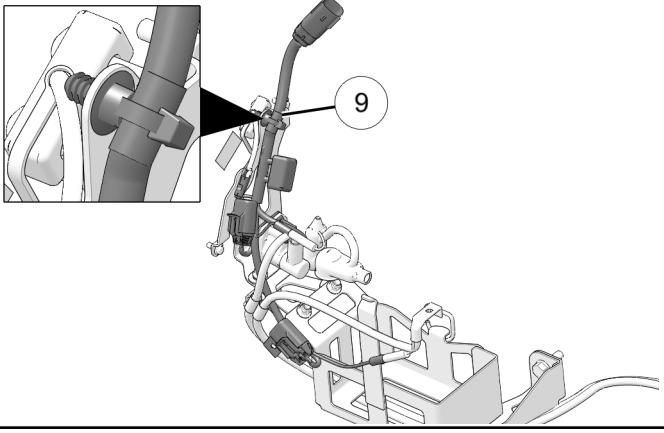
16. Attach cable ⑦ to inside terminal on starter solenoid using nut ③1 (not shown). Torque to specification.

TORQUE

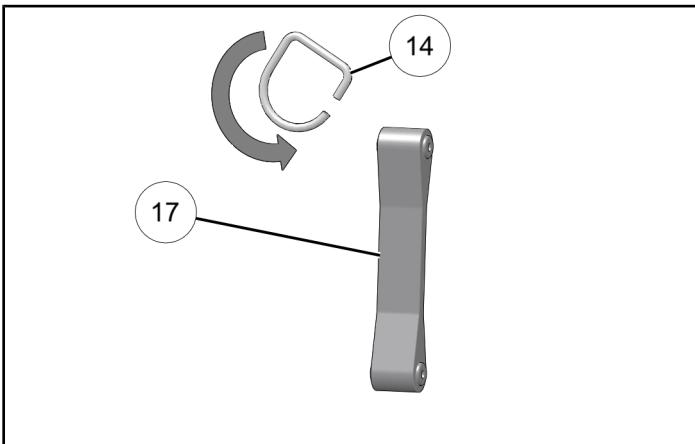
Starter Solenoid Cable Nuts ③1:
90 in-lbs (10 N·m)

17. Install electric start wiring harness ⑨. Connect wires as shown. Install push pin retainer in position shown.





18. Assemble battery strap (17) by fitting D-rings (14) to each end.



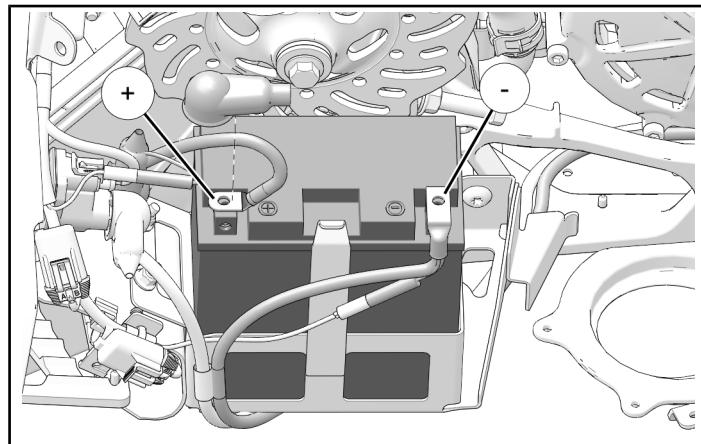
19. Install battery (purchased separately) in battery box. Connect red positive (+) solenoid cable to positive terminal using hardware supplied with battery. Connect black negative (-) cable to negative terminal on battery using hardware supplied with battery. Torque to specification.

⚠️ WARNING

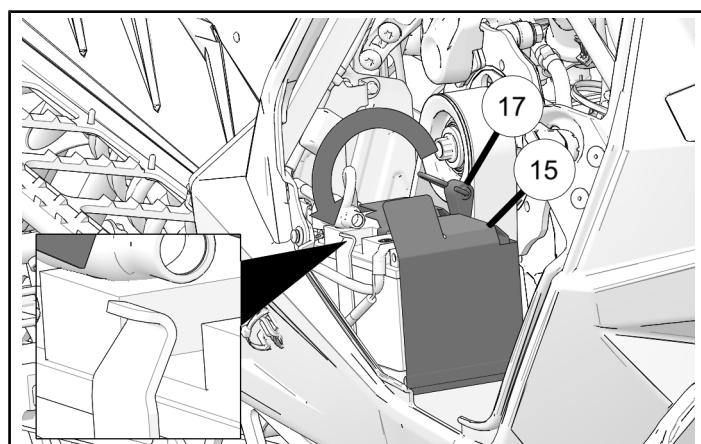
When both battery cables are disconnected always connect and tighten red positive (+) battery cable first. Failure to comply will result in a high current electrical arc, and may result in battery explosion, if tool touches ground or frame. Death or serious personal injury may occur.

TORQUE

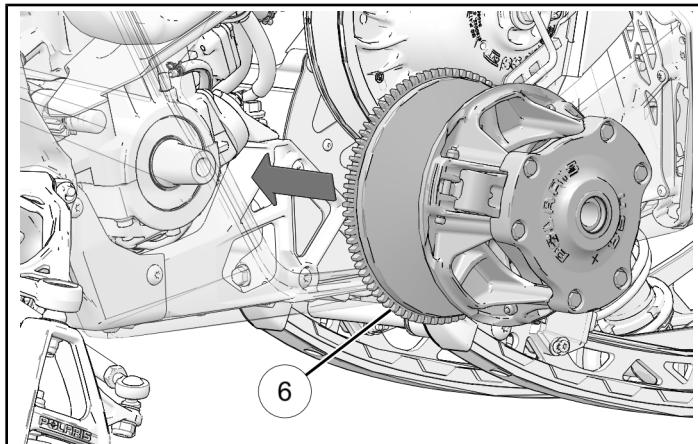
Battery Terminals:
40 in-lbs (4.5 N·m)



20. Install heat shield (15) then secure using battery strap (17).



21. Install drive clutch ⑥ on crankshaft snout.



VEHICLE REASSEMBLY

INSTALL EXHAUST

NOTICE

Make sure all exhaust joint seals are replaced when installing exhaust.

1. Put exhaust pipe in position on snowmobile. Attach with springs to manifold and snowmobile chassis bar in location shown.

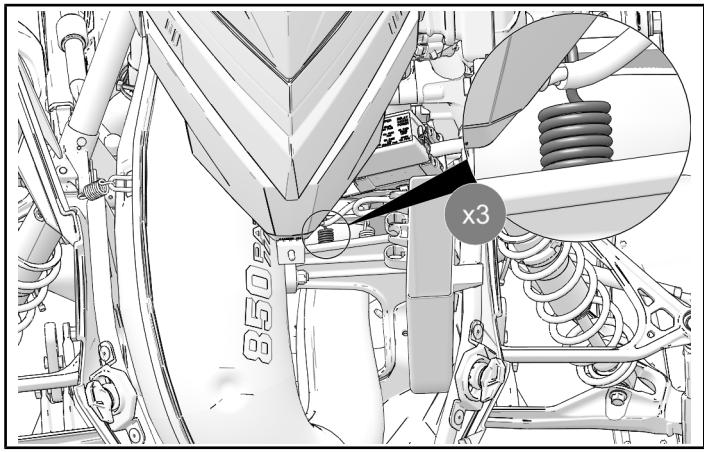
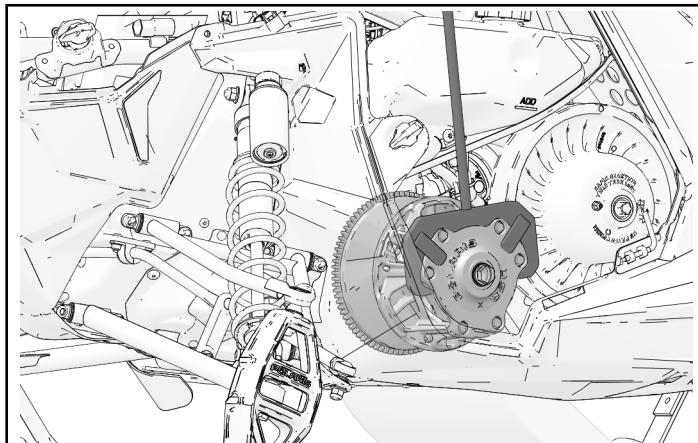
IMPORTANT

Stainless steel (gray) exhaust springs connect tuned pipe to exhaust manifold.

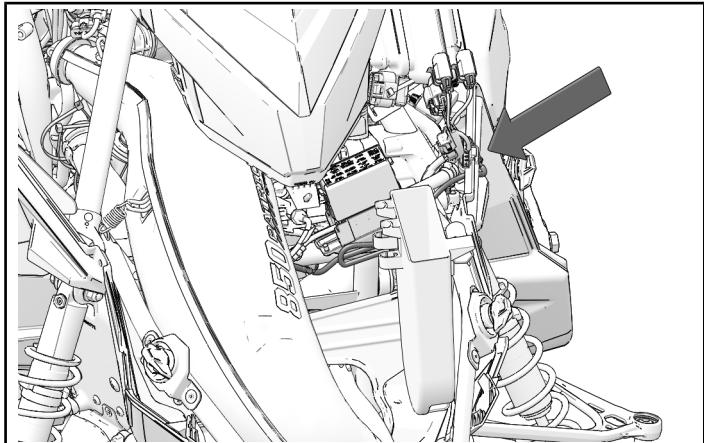
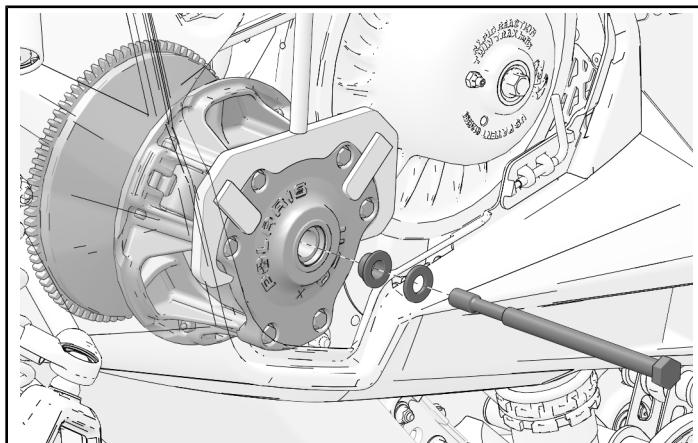
22. Use clutch holding tool to secure drive clutch, then install kept drive clutch bolt, washer and bushing. Torque to specification.

TORQUE

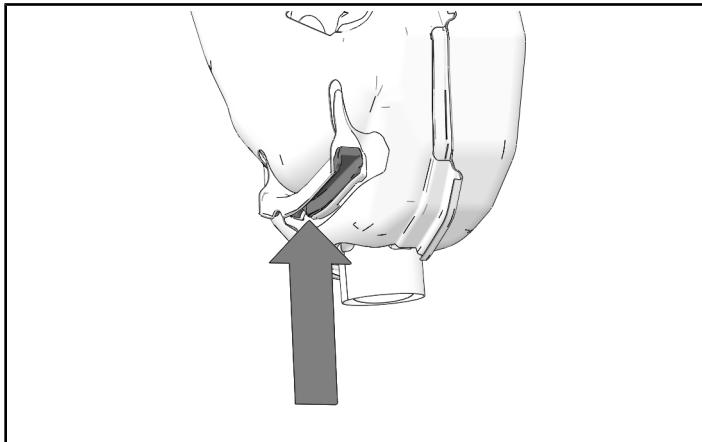
Drive Clutch Bolt :
80 ft-lbs (108 N·m)



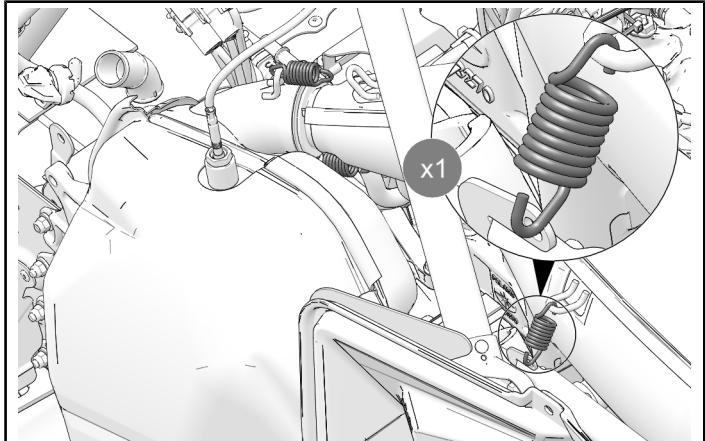
2. Connect exhaust sensor in location shown.



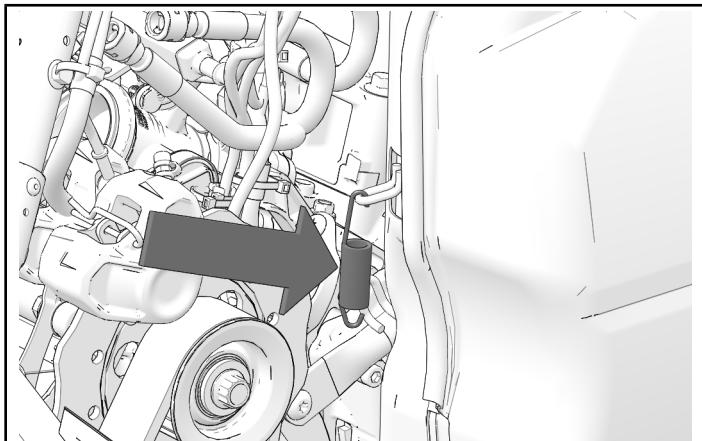
3. Install silencer. Make sure bracket on silencer is positioned on chassis mount.



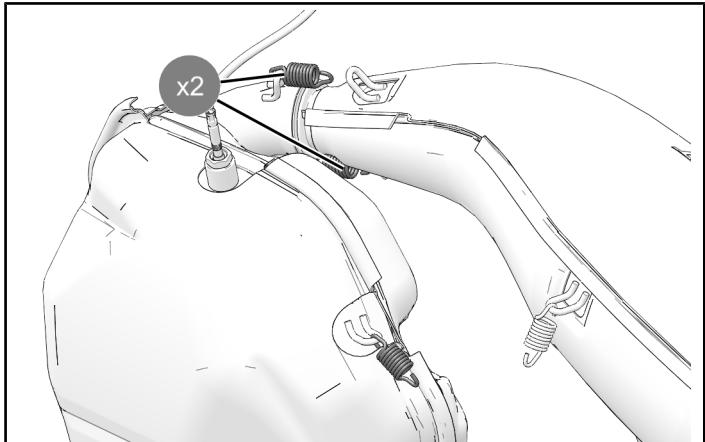
6. Install spring attaching tuned pipe to chassis.



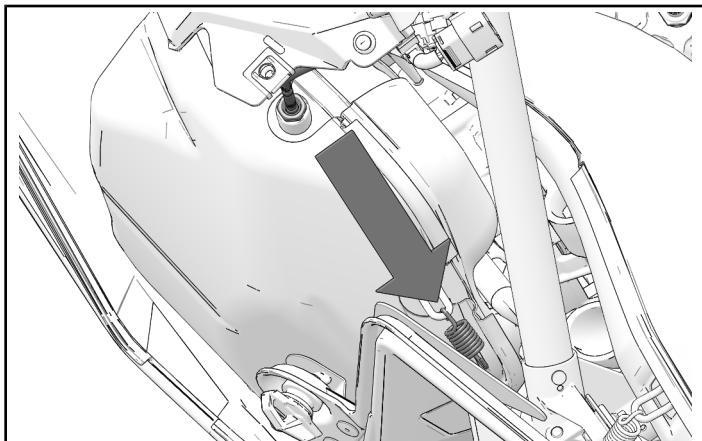
4. Attach rear of silencer to chassis using spring.



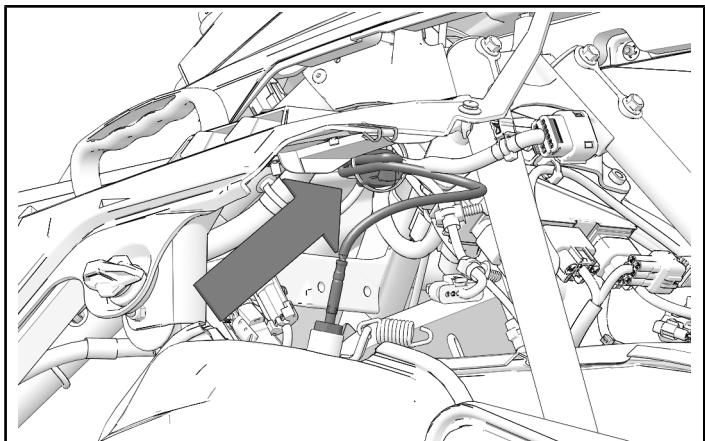
7. Attach tuned pipe to silencer using two springs.



5. Attach front of silencer to chassis using spring.



8. Connect exhaust sensor in location shown. Attach using cable tie.

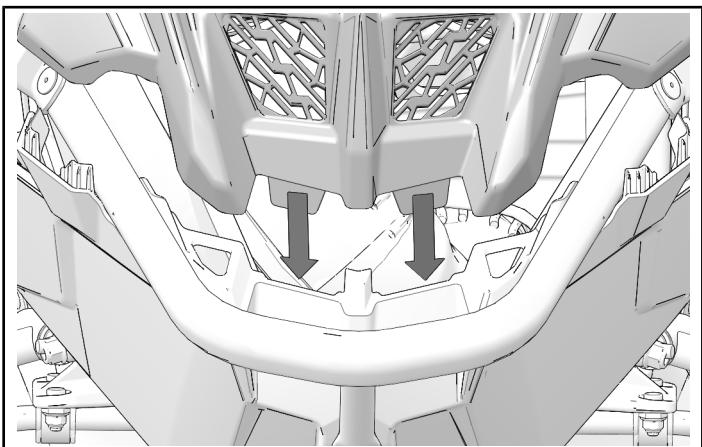
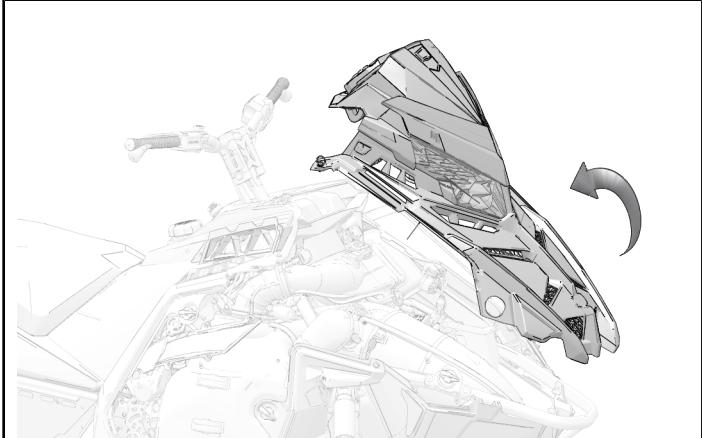


INSTALL HOOD

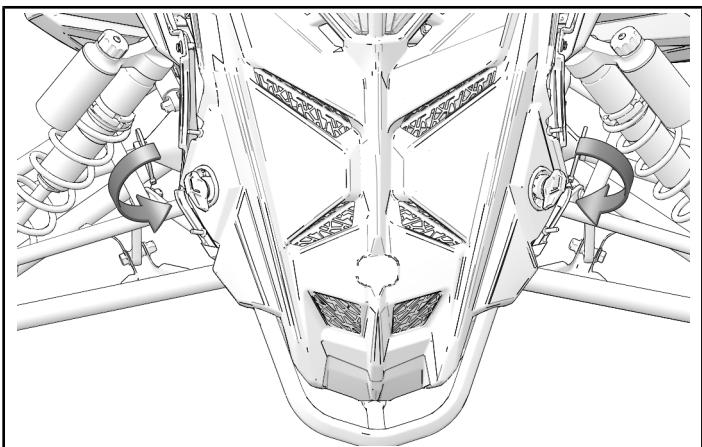
1. Install hood on snowmobile. Make sure tabs fit inside front pan.

NOTICE

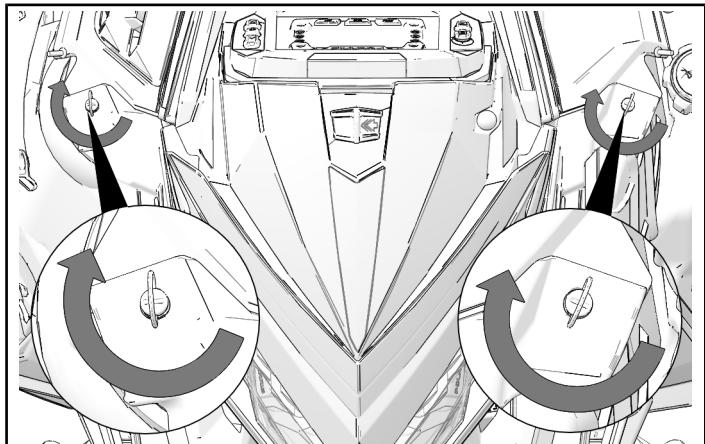
Make sure to connect hood wiring when installing hood.



2. Pull sides of hood out and install over side panel fasteners.



3. Turn hood fasteners clockwise to lock hood.



INSTALL RIGHT SIDE PANEL

1. Install side panel on snowmobile. Turn fasteners toward front of snowmobile to lock in place.

