

# 850 RMK ELECTRIC START KIT



**P/N 2883931**

## APPLICATION

Verify accessory fitment at [Polaris.com](http://Polaris.com).

## BEFORE YOU BEGIN

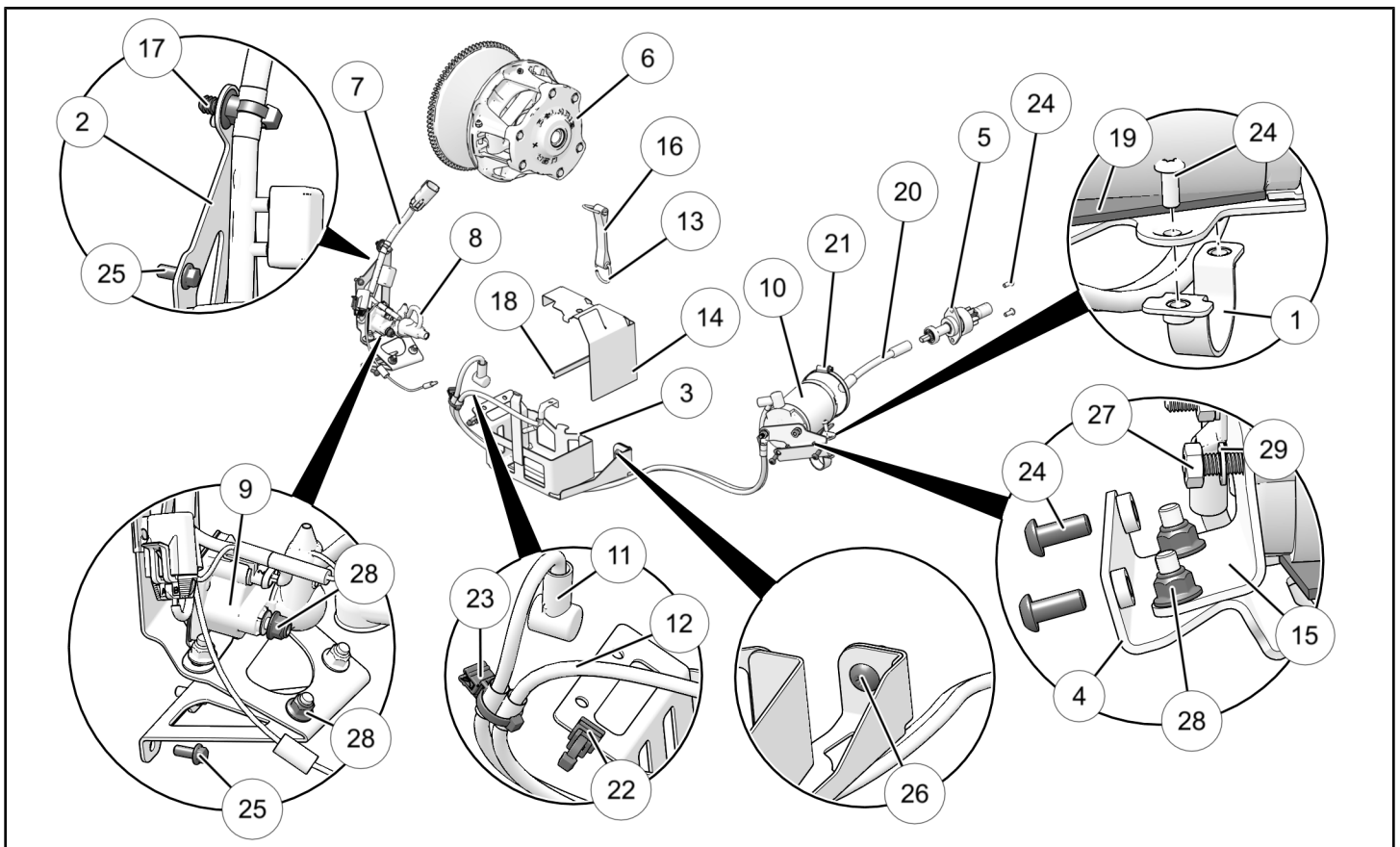
Read these instructions and check to be sure all parts and tools are accounted for. Please retain these installation instructions for future reference and parts ordering information.

## KIT CONTENTS

Full installation of this kit may also require the following additional parts (sold separately):

**PN 4013045 - Battery, Sealed**

This Kit includes:



REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Bracket, Lower Tube	1018033
2	1	Bracket, Battery box	1020323
3	1	Battery Box	1024159
4	1	Bracket, Upper Tube	1024505
5	1	Pinion	1205959
6	1	Drive Clutch	1323613

REF	QTY	PART DESCRIPTION	PART NUMBER
7	1	Electric Start Harness	2413923
8	1	Battery Cable, Solenoid	2414664
9	1	Starter Solenoid	4014655
10	1	Starter Motor	4018147
11	1	Battery Cable, Positive (RED)	4018198
12	1	Battery Cable, Negative (BLACK)	4018199
13	2	D-Hook	5224468
14	1	Heat Shield, Battery	5262301
15	1	Bracket, Electric Starter	5267454
16	1	Rubber Strap	5410608
17	1	Routing Clip	7081496
18	1	Seal, Bulb - .375"	5521697-14
19	1	Foam Seal	5810947
20	1	Flex Shaft, Starter	6230404
21	1	Band Clamp, Narrow	7081279
22	2	Edge Clip	7082427
23	1	Edge Clip	7082428
24	6	Screw, Torx Head - M6 X 1.0 X 15	7518656
25	4	Screw, Hex Head - M5 X 0.8 X 12	7518894
26	1	Screw - M8 X 1.25 X 25	7518906
27	3	Hex Nut, 1/4-20	7542105
28	8	Locking Flange Nut, M6 X 1.0	7547339
29	3	Lock Washer, 1/4 inch	7552801
	1	Instructions	9929374

## TOOLS REQUIRED

- Safety Glasses
- Pliers, Side Cutting
- Socket Set, Metric
- Socket Set, Torx® Bit
- Torque Wrench
- Wrench Set, Metric
- Exhaust Spring Puller
- **Special Service Tools:**
  - Exhaust Spring Puller
  - Clutch Puller
  - Clutch Compression Tool

## IMPORTANT

Your 850 RMK Electric Start 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.

## ASSEMBLY TIME

Approximately 60 minutes

### NOTE

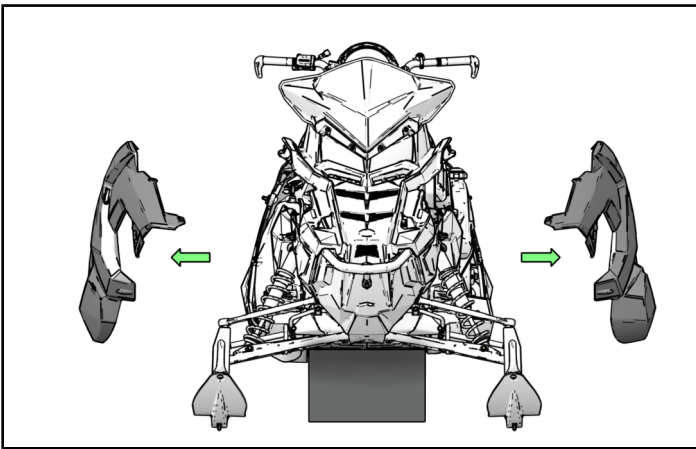
Additional time may be required for optional steps, or to accommodate other installed accessories.

## INSTALLATION INSTRUCTIONS

### CAUTION

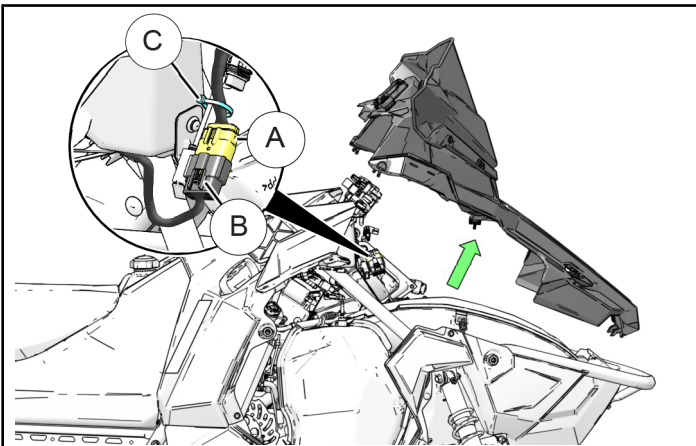
**BEFORE STARTING INSTALLATION**, always ensure vehicle is properly secured on a flat stable surface to avoid accidental tipping, unwanted movement and to prevent personal injury and/or damage to equipment. Turn key to "OFF" position and remove from vehicle.

### 1. REMOVE SIDE PANELS.



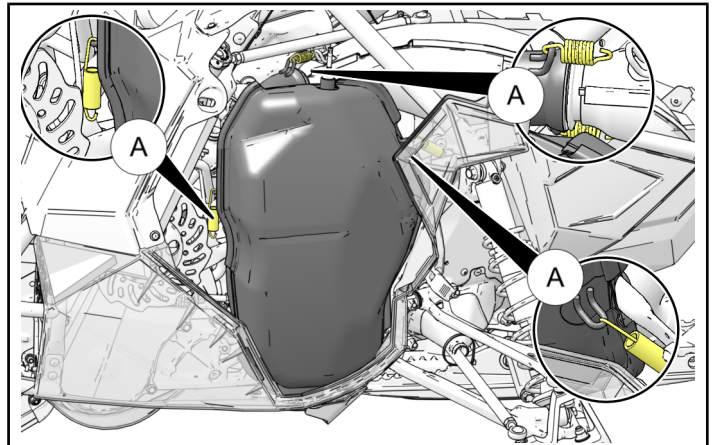
### 2. REMOVE HOOD.

- Slightly lift the rear of the hood assembly to gain access to the main hood harness connector (A) and disconnect from main chassis harness connector (B). If applicable, cut the cable tie (C) securing the hood harness to the chassis and remove hood.

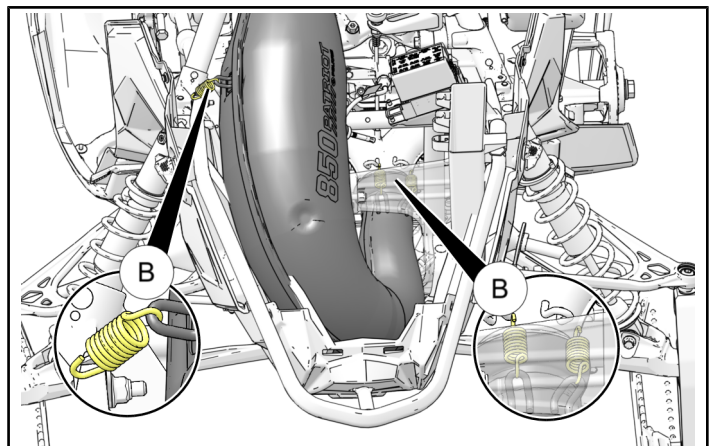


### 3. REMOVE EXHAUST SYSTEM.

- Remove exhaust silencer by removing four springs (A) then remove silencer.



- Next remove the exhaust pipe by removing four springs (B) as shown. There is one pipe to chassis spring and three pipe to head pipe springs (two on top and one on bottom).



### 4. REMOVE DRIVE CLUTCH.

### CAUTION

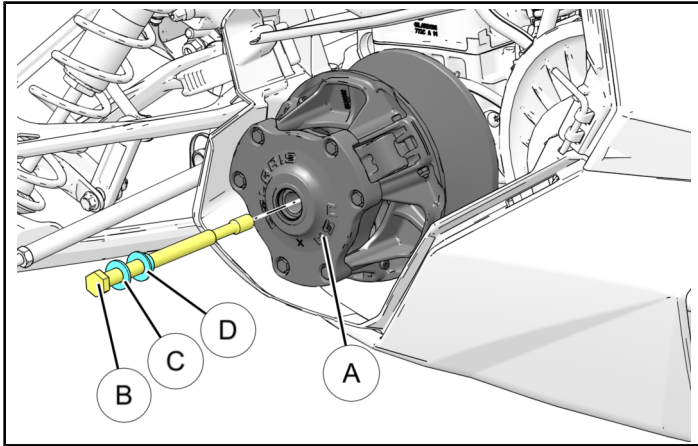
**DO NOT** use an impact wrench to remove or install the clutch bolt or clutch puller. Failure to comply may cause damage to the clutch and/or crankshaft.

### IMPORTANT

Refer to your service manual for proper clutch removal tools and procedures.

- Remove drive belt.

- b. Remove stock drive clutch (A) along with clutch bolt (B), washer (C) and spacer (D). Retain bolt, washer and spacer for later reinstallation.

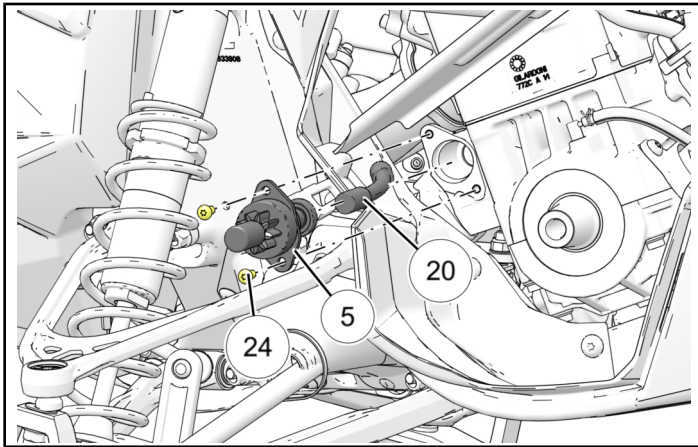


### 5. INSTALL PINION AND STARTER FLEX SHAFT.

- a. First place the starter shaft (20) onto the pinion (5) and place into position. Use provided screws (24) to secure pinion to engine case. Torque screws to specification provided.

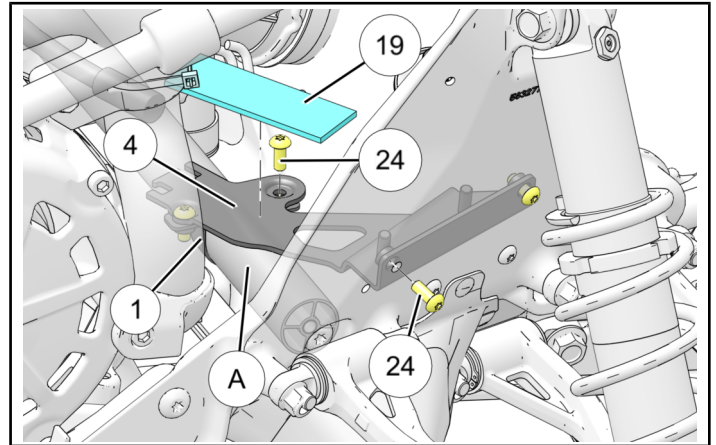
#### TORQUE

7.5 ft. lbs. (10 Nm)



### 6. INSTALL UPPER AND LOWER TUBE BRACKETS.

- a. Loosely install upper (4) and lower (1) tube brackets onto lower structure tube (A) as shown using supplied screws (24).

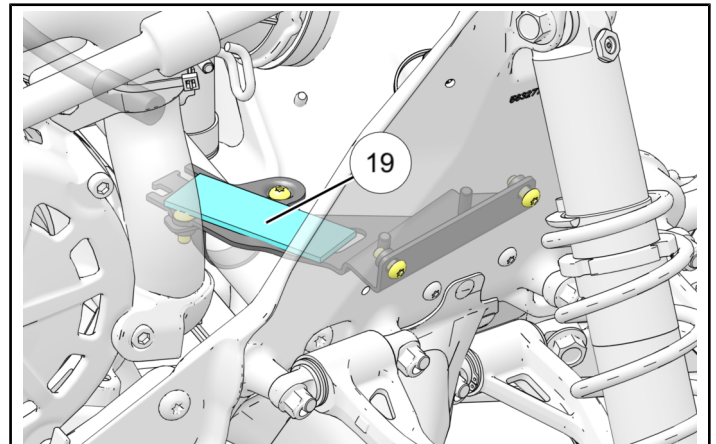


- b. Install the outer-most screws (24) to secure the outer portion of the tube bracket to the chassis as shown. Torque all four screws (24) to specification provided.

#### TORQUE

7.5 ft. lbs. (10 Nm)

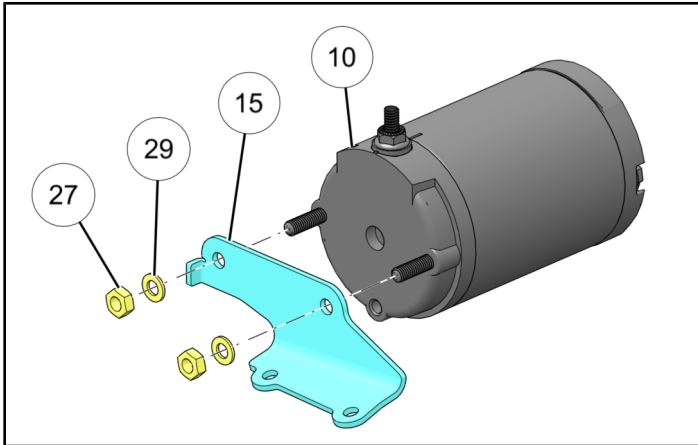
- c. Install foam pad (19) in approximate location shown.



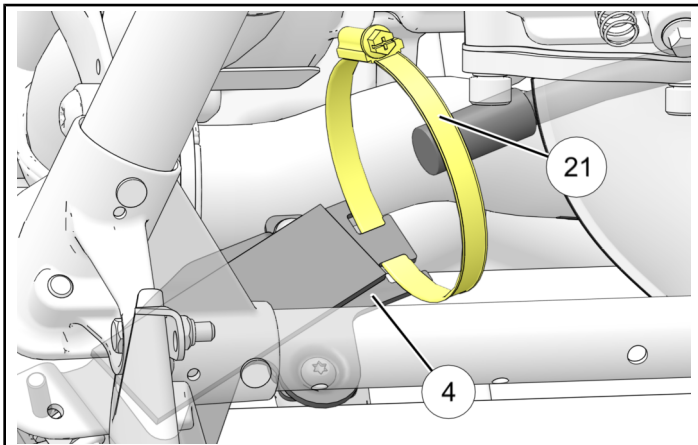


## 7. INSTALL STARTER BRACKET/MOTOR.

- a. First, loosely install the starter motor ⑩ to the starter bracket ⑮ using the supplied hex nuts ⑳ and lock washers ㉑. Fasteners will be torqued at a later step.



- b. Place the starter motor clamp ㉑ into position on the upper tube bracket ④ as shown.



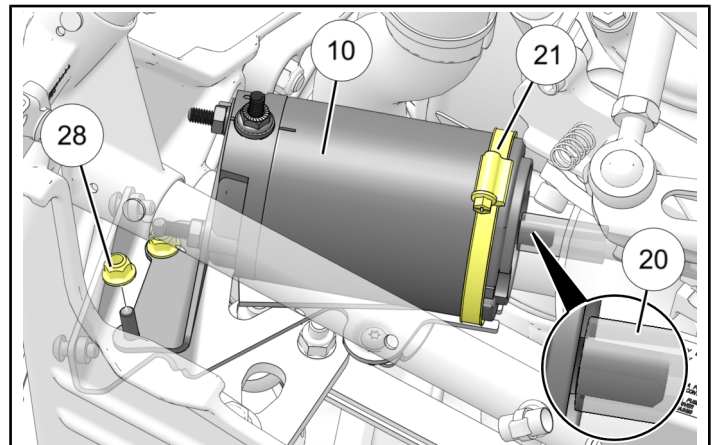
- c. Install starter motor assembly onto the lower tube bracket using the supplied locking nuts ㉒. Torque locking nuts ㉒ to specification listed.

### NOTE

Ensure starter motor shaft is fully engaged into the flex shaft ㉓ as shown before securing into position.

### TORQUE

8 ft. lbs. (11 Nm)



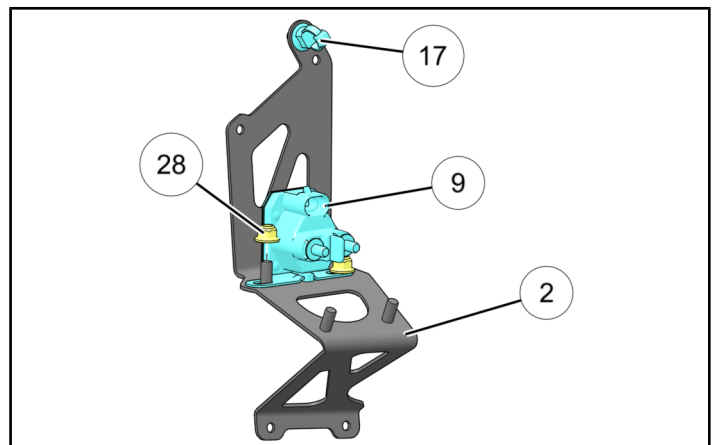
- d. Tighten starter motor clamp ㉑ until snug.

## 8. INSTALL BATTERY BOX BRACKET AND STARTER SOLENOID.

- a. First install routing clip ⑰ along with starter solenoid ⑨ onto bracket ② as shown. Secure solenoid with provided lock nuts ㉒. Torque to specification provided.

### TORQUE

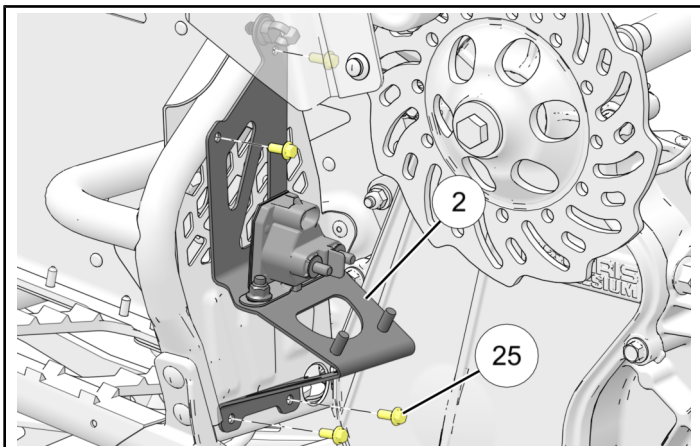
7.5 ft. lbs. (10 Nm)



- b. Install bracket assembly ② onto chassis using four provided screws ⑫. Torque to specification provided.

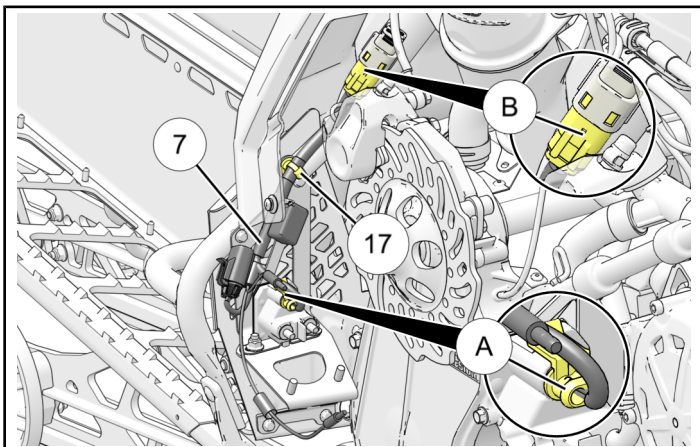
### TORQUE

22 in. lbs. (2.5 Nm)



## 9. INSTALL ELECTRICAL HARNESS AND BATTERY CABLES.

- a. Install electric start harness ⑦ by first connecting the solenoid connector ① to the solenoid.
- b. Next connect the main chassis side connector ② of the electrical harness to the existing chassis connector and secure in position with routing clip ⑬ as shown.

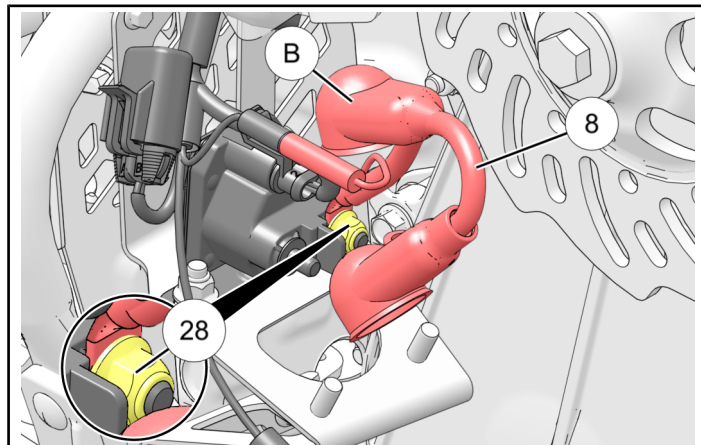


- c. Next install the red positive solenoid/battery cable ⑧ to the solenoid using supplied locking nuts ⑳. Torque locking nuts to specification provided.

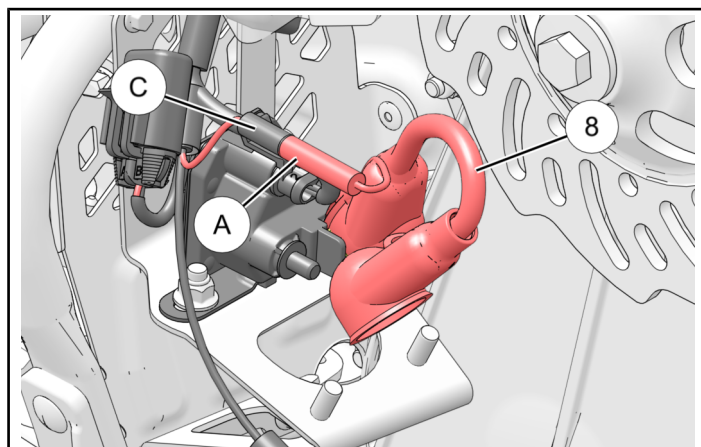
### TORQUE

7.5 ft. lbs. (10 Nm)

After torquing lock nut, place the red protective rubber cap ⑩ over the nut ⑳ so it completely encapsulates the connection.



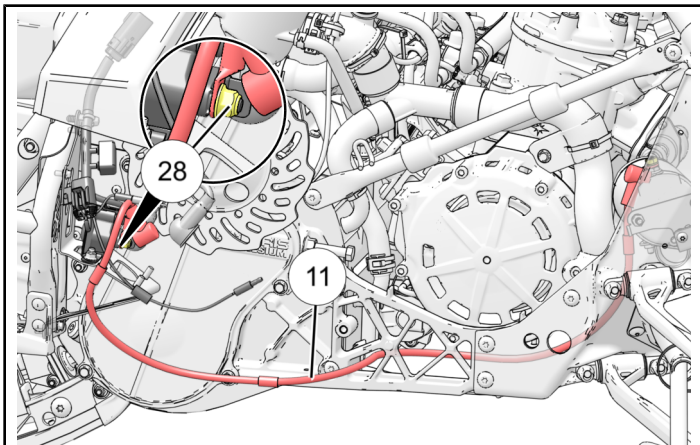
- d. Connect the red wire ④ from the electric start harness to the mating bullet connector ① on the red positive solenoid/battery cable as shown.



- e. Next install the red positive (+) battery cable ⑪ to the solenoid using supplied locking nuts ⑳.

### TORQUE

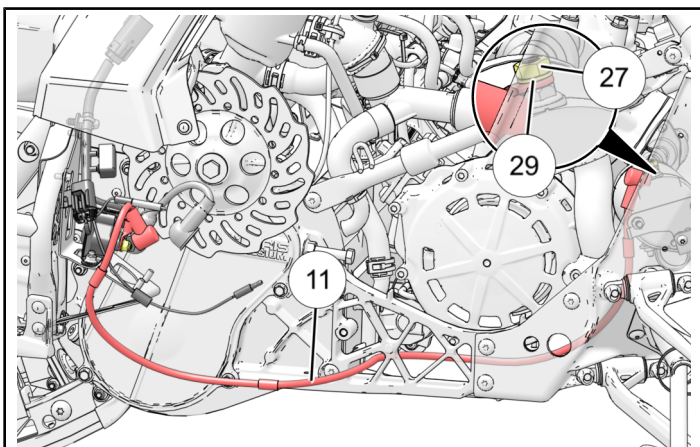
7.5 ft. lbs. (10 Nm)



- f. Route the red positive (+) battery cable to the starter motor as shown. Connect cable to starter motor using the supplied washer ㉑ and hex nut ㉒. Torque to specification provided.

### TORQUE

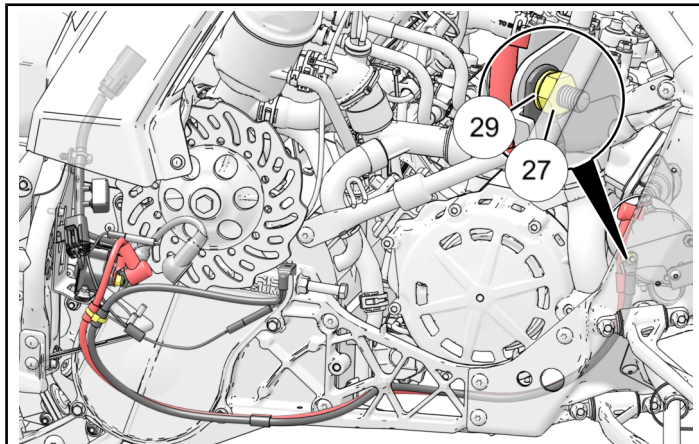
8 ft. lbs. (11 Nm)



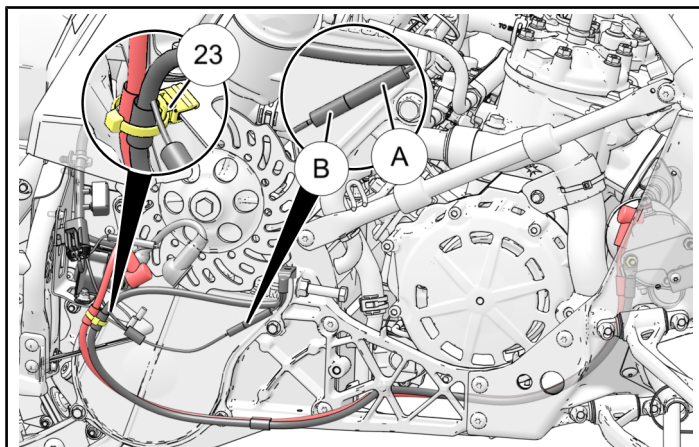
- g. Route the black negative (-) battery cable to the starter motor as shown. Connect cable to starter motor bracket using the supplied washer ㉑ and hex nut ㉒. Torque BOTH starter bracket nuts ㉒ to specification provided.

### TORQUE

8 ft. lbs. (11 Nm)



- h. Connect the male bullet connector ㉓ on the black wire from the electric start harness to the mating connector on the black negative (-) battery cable. Secure wires with edge clip ㉓ as shown.



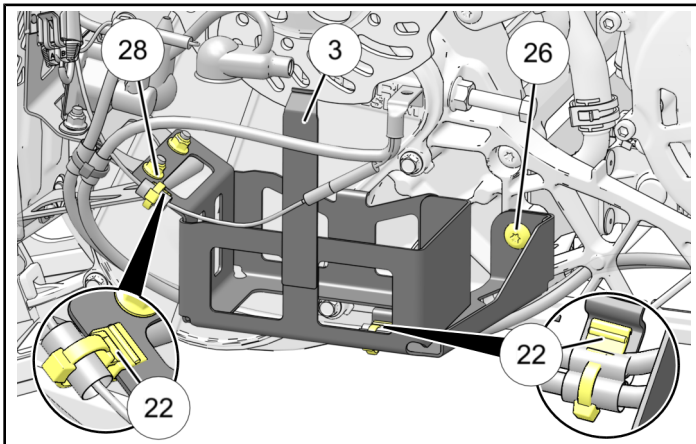


## 10. INSTALL BATTERY BOX.

- a. Place battery box ③ into position and secure with the provided locking nuts ⑳ and screw ㉔. Torque to specifications listed.

### TORQUE

**Locking Nuts ⑳:** 7.5 ft. lbs. (10 Nm)  
**Screw ㉔:** 22 ft. lbs. (30 Nm)



- b. Place edge clips ㉒ in approximate locations shown and secure harness wires.

## 11. INSTALL NEW DRIVE CLUTCH.

### IMPORTANT

Refer to your service manual for proper clutch installation tools and procedures.

- a. BEFORE installing new drive clutch you will need to remove the spring and clutch weights from the previously removed drive clutch and install the spring and weights into the new drive clutch that was supplied with your kit.

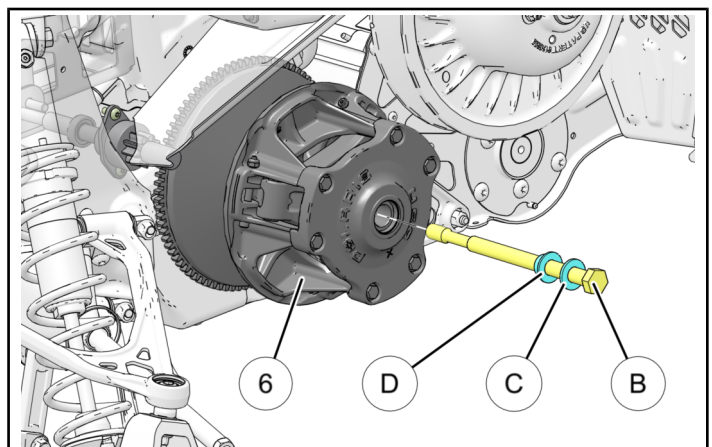
### IMPORTANT

Refer to your service manual for proper tools and procedures on clutch spring installation and removal.

- b. Install new drive clutch ⑥ using previously removed bolt ㉞, washer ㉟ and spacer ㉡. Torque bolt to specification listed.

### TORQUE

80 ft. lbs. (108 Nm)



- c. Reinstall drive belt.

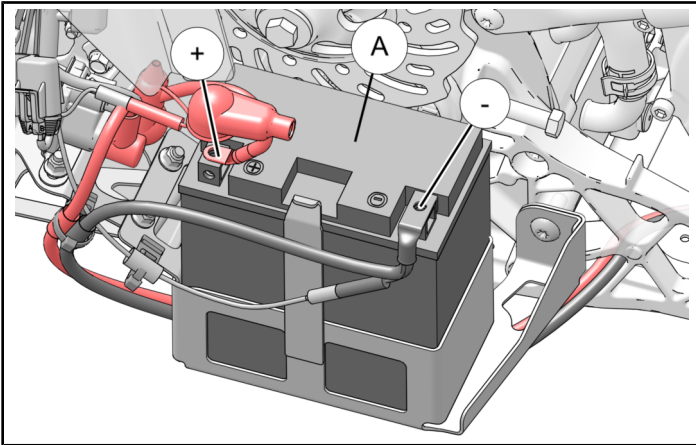


## 12. INSTALL BATTERY.

### **⚠ 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 grounded frame. Death or serious personal injury may occur.

- Place battery **A** (purchased separately) into battery box as shown.



- First connect the red positive (+) solenoid cable to the positive (+) battery terminal using the battery cable connection hardware supplied with your battery. Torque battery connection hardware to specification provided.

### **TORQUE**

40 in. lbs. (4.5 Nm)

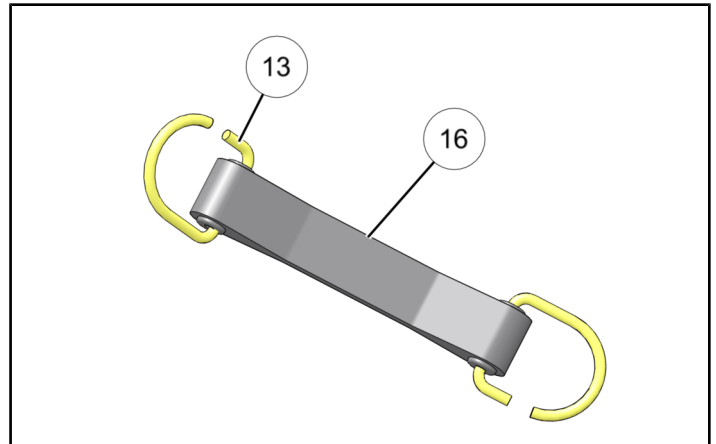
- Next, connect the black negative (-) battery cable to the negative (-) battery terminal using the battery cable connection hardware supplied with your battery. Torque battery connection hardware to specification provided..

### **TORQUE**

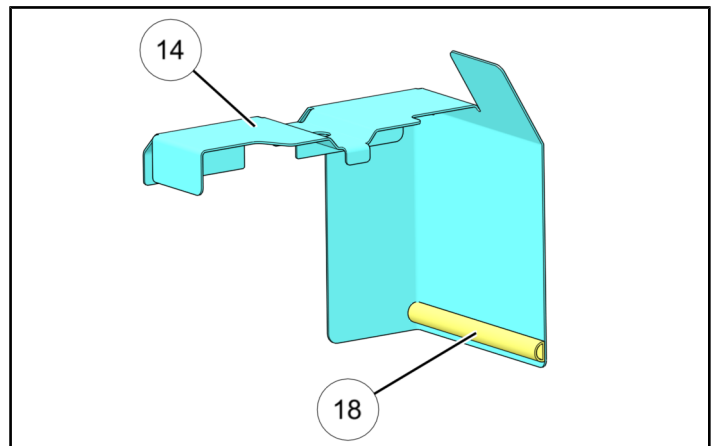
40 in. lbs. (4.5 Nm)

## 13. INSTALL BATTERY COVER.

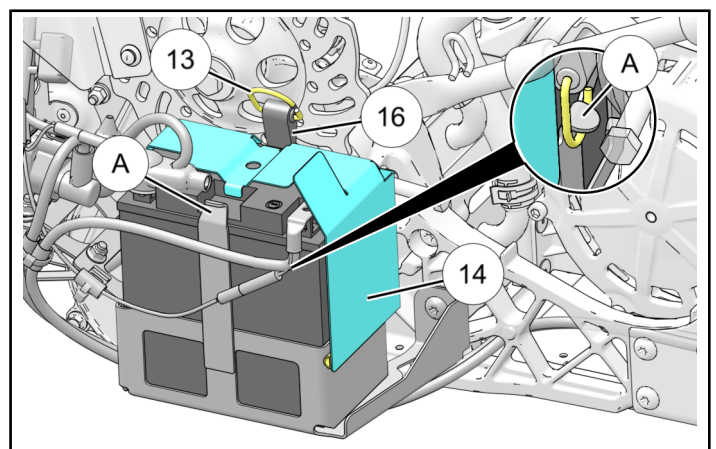
- First install strap D-hooks **13** onto rubber strap **16** as shown.



- Next, place the rubber seal **18** onto the battery cover **14** in the approximate location shown.

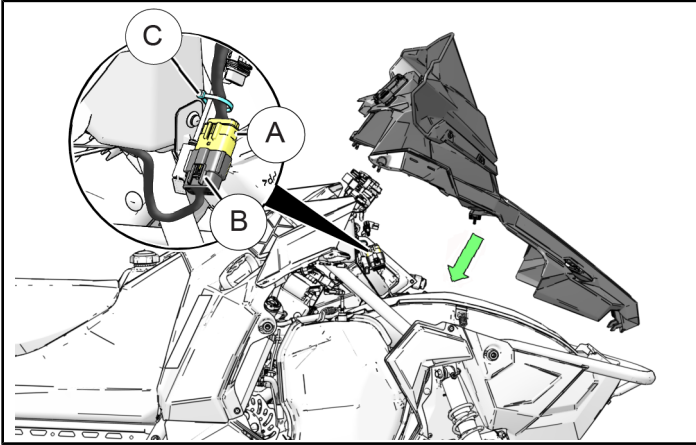


- Install battery cover **14** and secure into position using rubber hold down strap **16**. To do so, hook one of the D-hooks around the tab **A** on the back side of the battery box. Then stretch strap over the top of the battery box and secure by placing the opposite D-hook **13** over the tab **A** on the front side of the battery box.



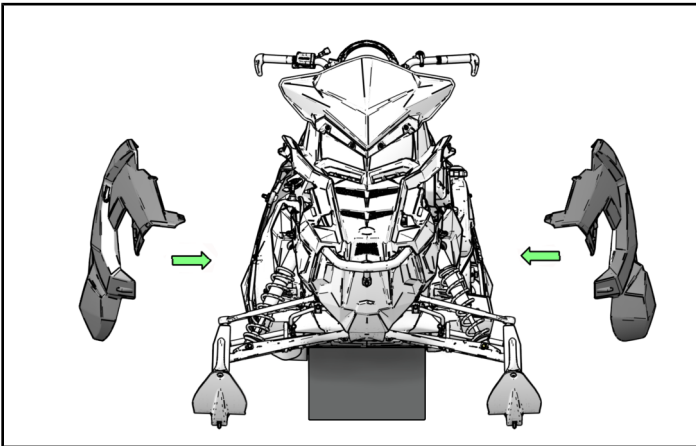
#### 14. REINSTALL HOOD.

- a. Install hood being sure to connect the hood harness **A** and chassis harness **B** connection. Replace cable tie **C** if applicable. Secure hood into position with hood latch fasteners.



#### 15. REINSTALL SIDE PANELS.

- a. After installing hood, install both side panels making sure all quick turn fasteners and rubber straps are fully secured.



### 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.

#### FEEDBACK FORM



#### 16. VERIFY WORK.

##### **WARNING**

**NEVER** operate vehicle with clutch cover or side panel removed. Failure to comply may result in serious injury or death.

- a. Ensure all steps have been completed and all tools are accounted for.