

**P/N 2883939**

## 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.

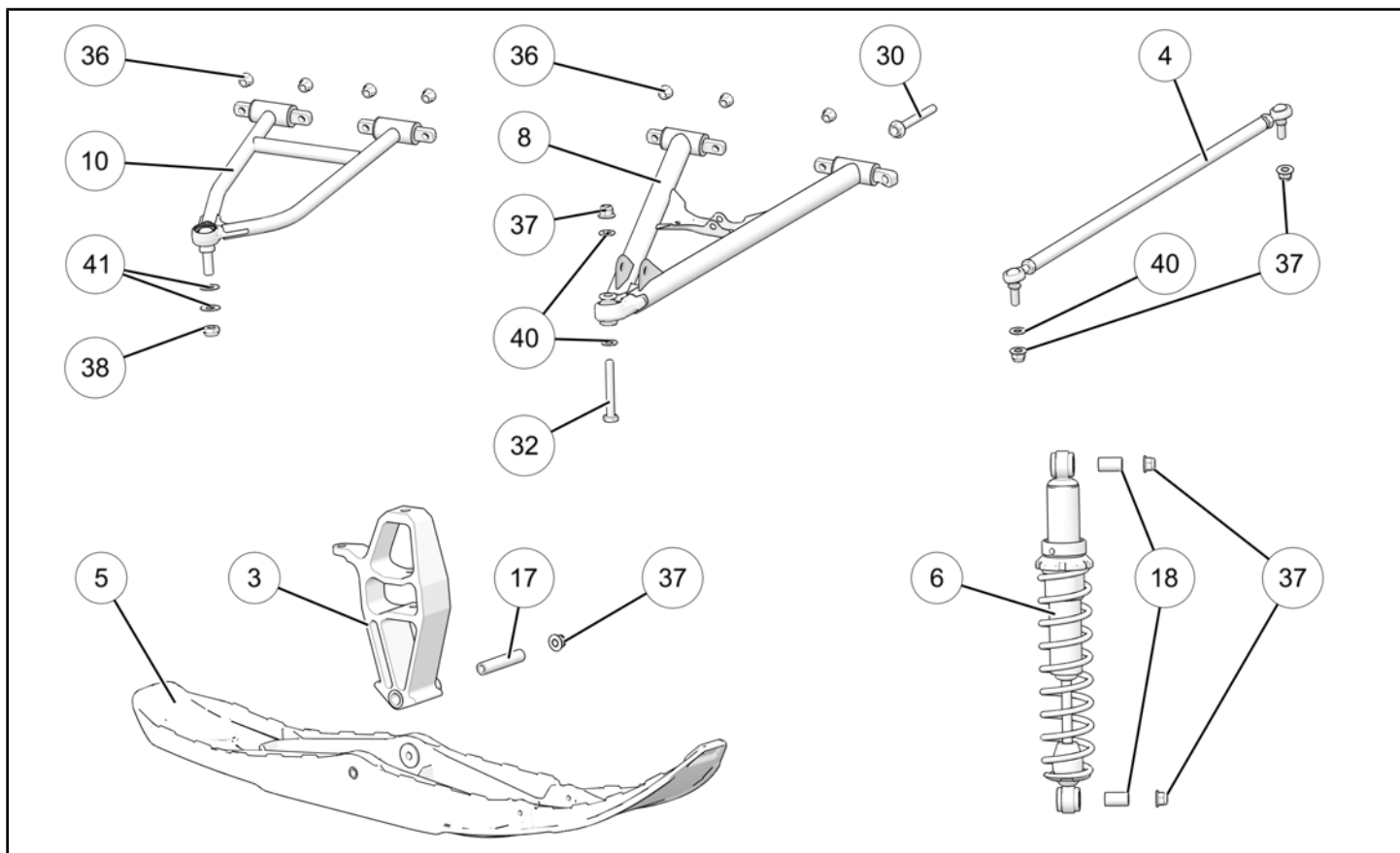
## KIT CONTENTS

This Kit includes:

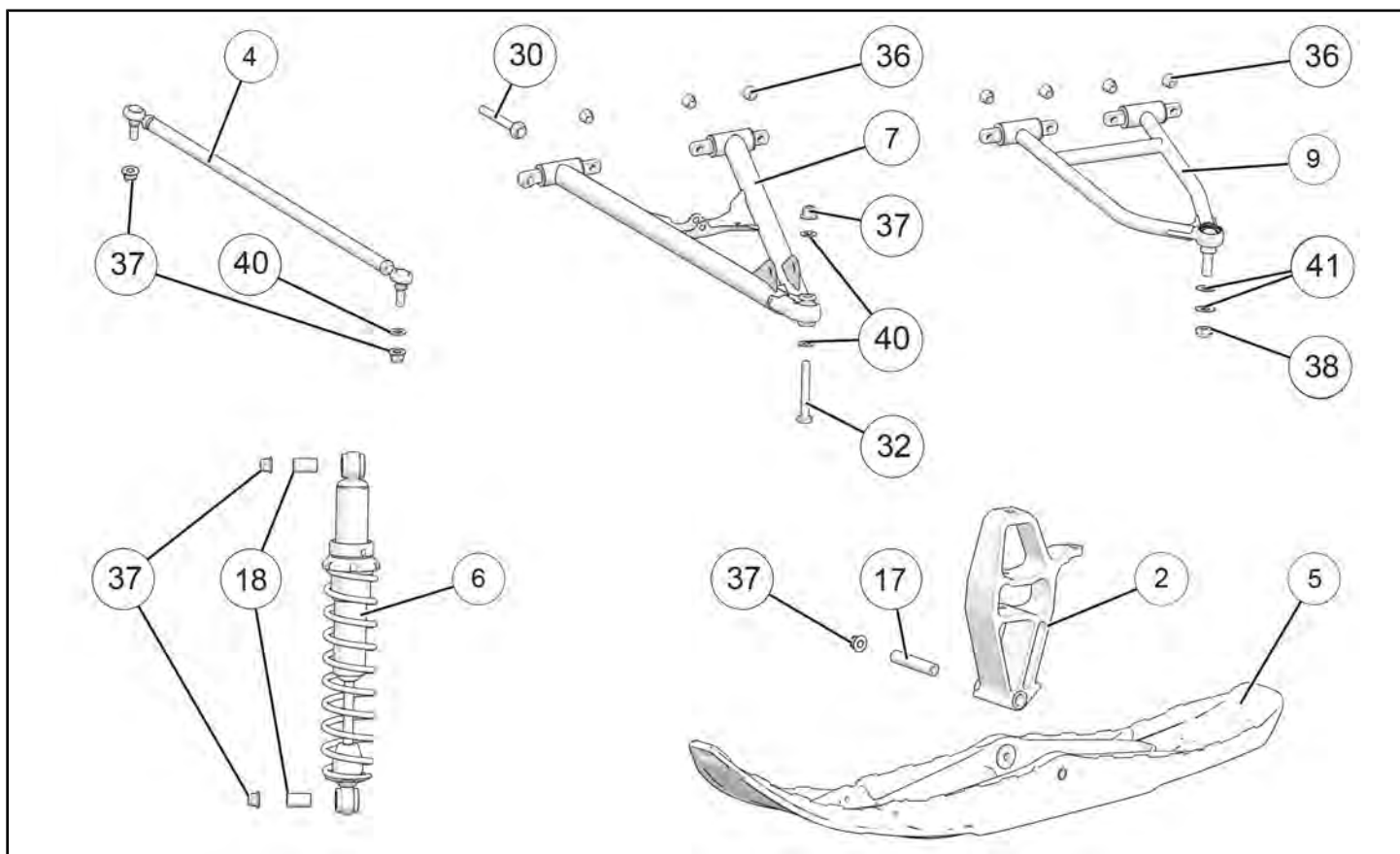
REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	ASM-SHOCK FRONT TRACK	1542993
2	1	ASM-SPINDLE F/C,LH	1823875
3	1	ASM-SPINDLE,F/C,RH	1823876
4	2	ASM-TIE ROD,WIDE,NAT	1823883-309
5	2	ASM-SKI SVC BLK	1823916-070
6	2	ASM-SHOCK IFS,WIDE,BLK	1824010-067
7	1	ASM-ARM LOWER CONTROL LH BLK	1824624-067
8	1	ASM-ARM LOWER CONTROL RH BLK	1824625-067
9	1	ASM-ARM UPPER CONTROL LH BLK	1824626-067
10	1	ASM-ARM UPPER CONTROL RH BLK	1824627-067
11	1	ASM-LEVER,HTR,HI/LO 35.5MM	2010431
12	3	SLUG-43 GR,CVT,135-1083	2205307
13	1	EC55 CDI INDY	3090428
14	1	SPROCKET-18T,3/4W,15 SPL,HV,PM	3221094
15	1	SPRKT-42T,3/4W,LWT,HYVO,PM	3222192
16	1	BUSHING-.385X.618X.95	5010422
17	2	BUSHING-15.88X10.13X76.20	5136910
18	4	BUSHING-M10X17.5X30	5137360
19	4	WASHER-DOMED	5220646
20	2	SLEEVE-.385X.560X1.24	5333905
21	1	SLEEVE-.385X.560X1.72	5333906
22	1	STRAP-LIMITER	5414450
23	1	SHOCK-R/T,ARVIN MPV	7043281
24	1	SPRING-TOR.,.347S,80,10#,LH BLK	7043859-329
25	1	SPRING-TOR.,.347S,80,10#,RH BLK	7043860-329

REF	QTY	PART DESCRIPTION	PART NUMBER
26	1	SPRING-DRV,202#,CVT 1151-1135	7044154
27	1	SPRING-DRVN,90#,CVT 5951-1006	7044155
28	1	SCR-5/16-18X1-1/2 TX/TAP,Y	7515391
29	1	SCR-5/16-18X1,TRX,GR5,Y	7518070
30	1	SCR-M10X1.5X95 HX FLG 10.9 ZOD	7518917
31	2	SCR-M10X1.25X20 8.8 HH ZOD P30	7519004
32	2	SCR-M10X1.5X75 10.9 HCS ZOD	7519015
33	2	SCR-HXFL-M6X1.0X12 8.8 ZOD P30	7519145
34	2	NUT-5/16-18,NYLOC,THIN-Y	7542344
35	4	NUT-3/8-24 FLG LOC	7547263
36	14	NUT-M8X1.25,FLG,NYLOC-OLIVE D	7547332
37	13	NUT-M10X1.5 HFN NYLOC ZOD	7547423
38	2	NUT-HEX-M12X1.5 8 ZOD NYL	7547464
39	5	WASHER-.189X.314X.015 - AL	7555730
40	6	WSHR-FL .406X.812X.065-Y	7555806
41	4	WASHER-7/16 SAE,STF,THRU-HRD-Y	7556212
	1	INSTRUCTIONS	9929062

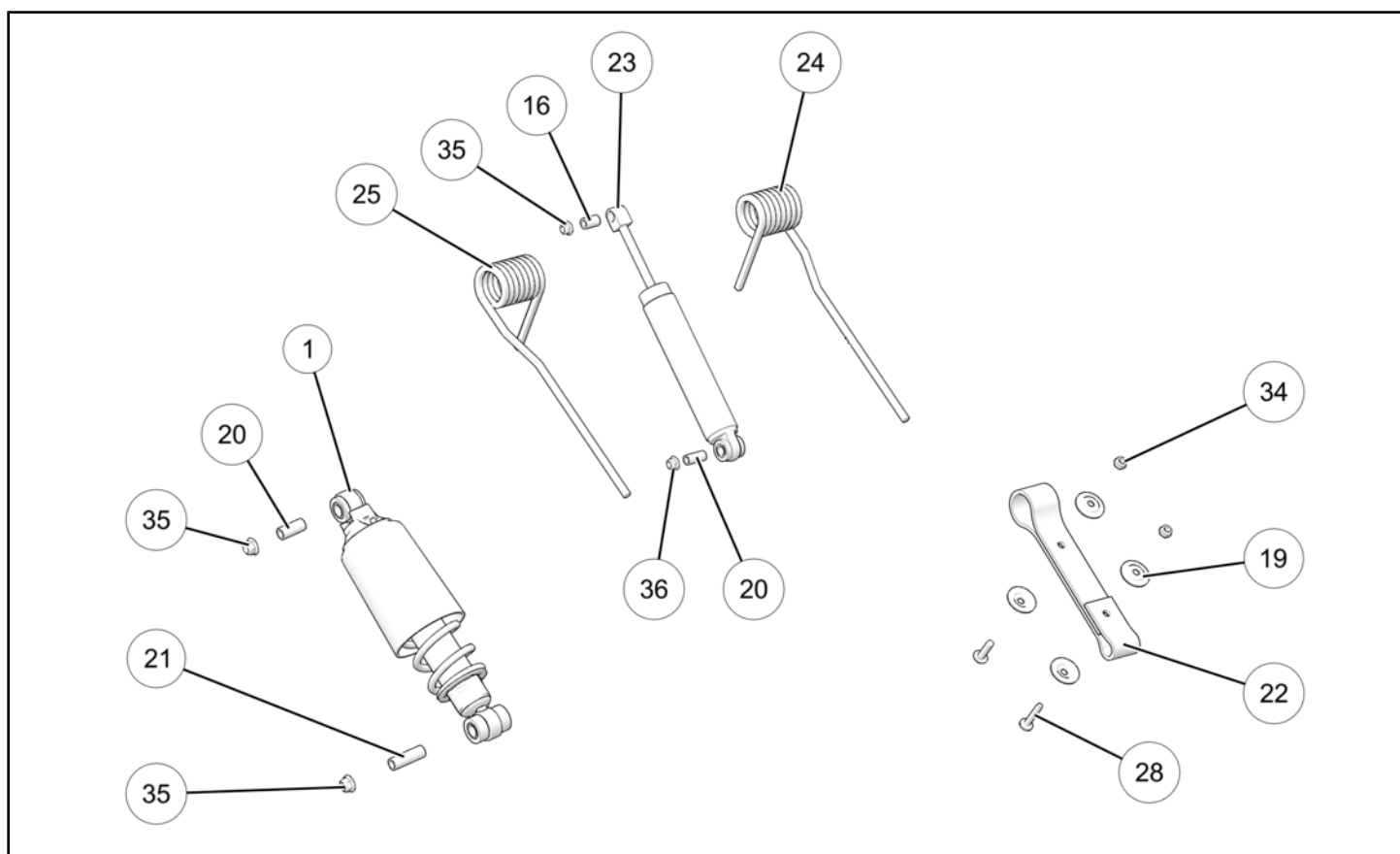
## Front Suspension Upgrade Components, RH



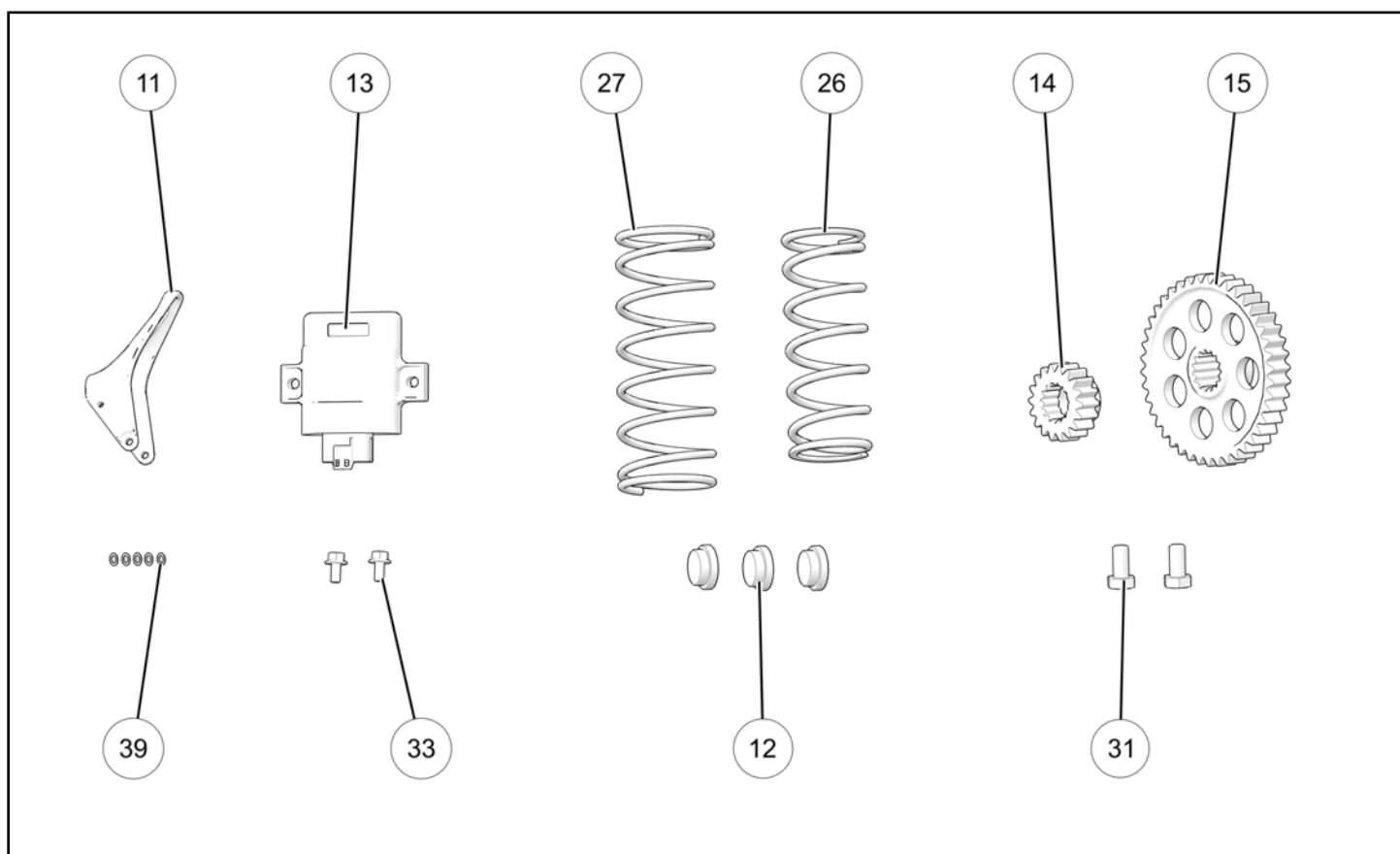
## Front Suspension Upgrade Components, LH



## Rear Suspension Upgrade Components



## Clutching/Gearing/Throttle/CDI Upgrade Components



## TOOLS REQUIRED

- Safety Glasses
- Drain Pan
- E-Clip Tool
- Pliers, Side Cutting
- Socket Set, Metric
- Tie-Down Straps (or equivalent)
- Torque Wrench
- Wrench Set, Metric
- Vehicle Lift/Support Equipment
- **Special Service Tools:**
  - **Alignment Bar (PN: 5333508)**
  - **PB50 Drive Clutch Holding Wrench (PN: PS-51184)**
  - **Drive Clutch Puller (PN: PS-51183)**
  - **Drive Clutch Holding Fixture (PN: 2871358-1)**
  - **Universal Clutch Compressor, PN: PU-50518-A**
  - **29 mm Short Drive Reamer (PN: 2870576)**

## CONSUMABLES REQUIRED

- Polaris Premium Grease (or equivalent)
- Polaris Synthetic Chaincase Lubricant (or equivalent)

## IMPORTANT

Your Indy® EVolution 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 6 hours

### NOTE

Installation time varies depending on experience level, optional steps and accessories installed.

## INSTALLATION INSTRUCTIONS

### IMPORTANT

After installing this kit, reference the jetting, clutching and gearing specifications for a 2019 550 121 snowmobile.

1. Remove hood and side panels
2. Raise front of vehicle so the skis are no longer in contact with the working surface.

### WARNING

**ALWAYS** properly block and secure vehicle to avoid accidental tipping. Failure to comply could result in death or severe personal injury.

## VEHICLE PREPARATION

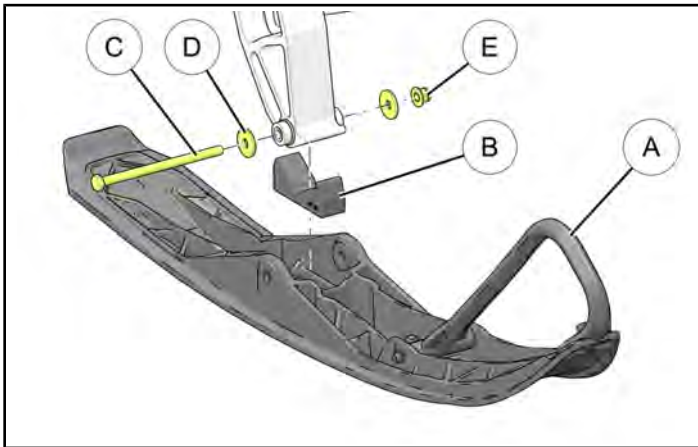
### CAUTION

**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.

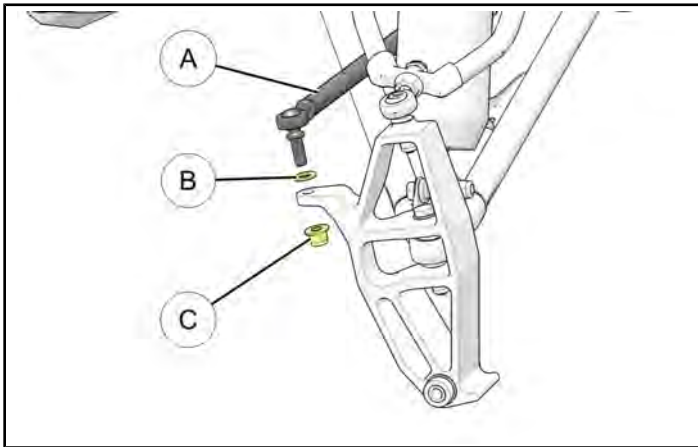
## FRONT SUSPENSION

### REMOVAL

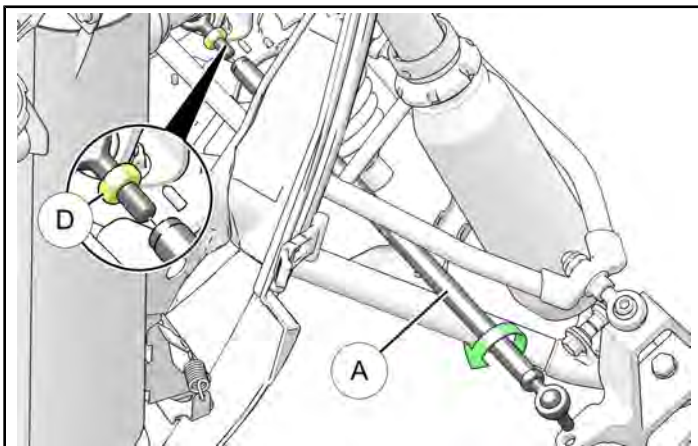
1. Remove ski assemblies (A).
  - a. Remove lock nut (E), washers (D), bolt (C) and ski rubber (B). Discard nut (E) and save remaining for later reinstallation.



- b. Repeat for opposite side.
2. Remove tie rod assemblies.
  - a. Remove lock nut (C) and washer (B) from outer tie rod end (A).



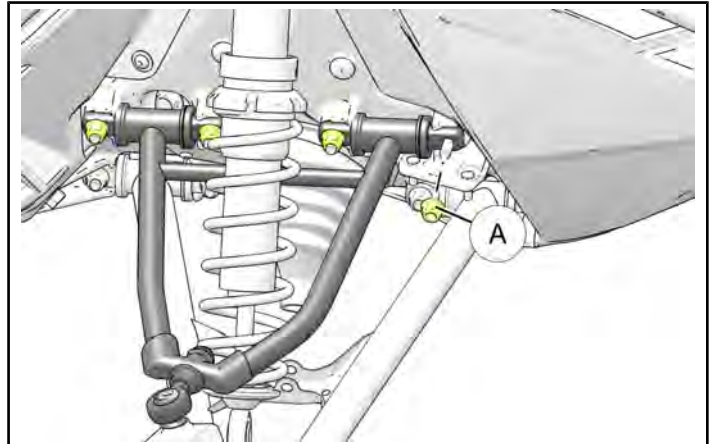
- b. Loosen inner tie rod end jam nut (D).



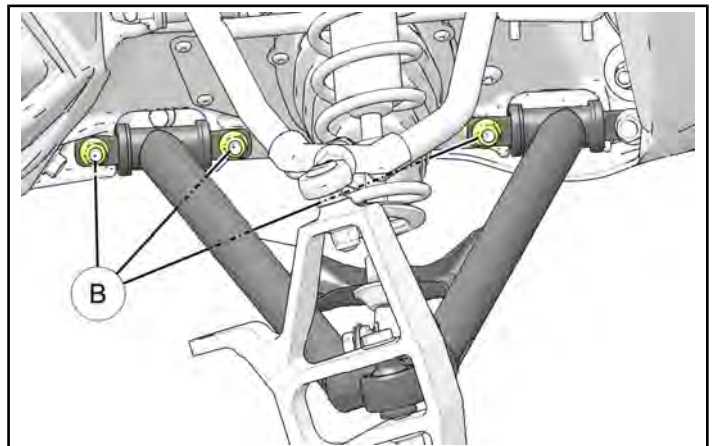
- c. Remove outer tie rod assembly (A) by unscrewing it from the inner tie rod end. Leave inner tie rod end attached to the steering frog.
  - d. Repeat steps 2a-2c for opposite side.

3. Remove IFS assemblies.

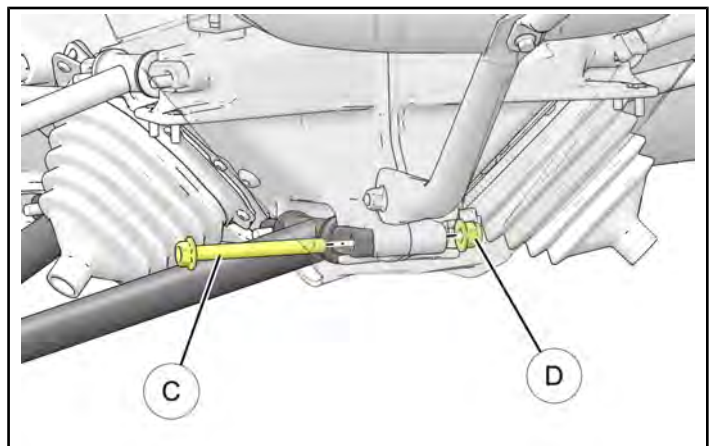
- a. Remove four locking nuts (A) from upper tie rod mounts.



- b. Remove three locking nuts (B) from the lower tie rod mounts.



- c. Remove forward most lower control arm mounting bolt (C) and lock nut (D).



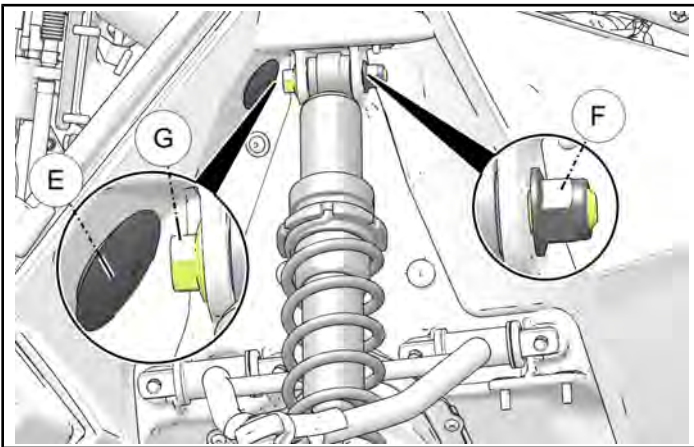


- d. Remove rubber plug ⑤ from the nosepan.
- e. Remove Locking nut ⑥ and slide the upper shock mount bolt ⑦ out thru the hole in the fender.

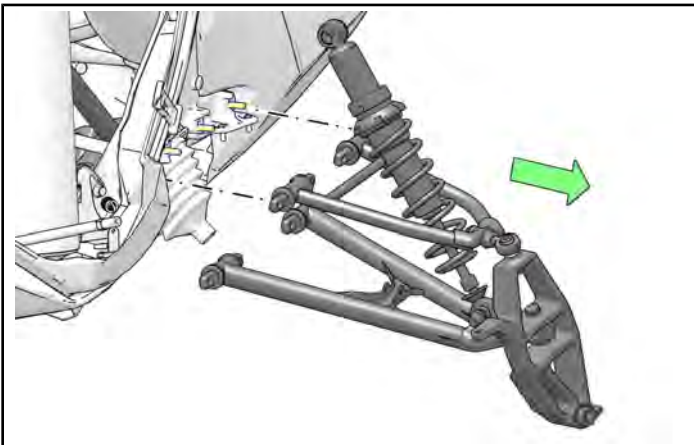
### CAUTION

#### PINCH POINT DANGER!

Removing upper shock bolt may allow the IFS assembly to fall, creating a pinch points between the arms and the underlying components. It is recommended to hold the spindle up with one hand while removing the bolt with the other. **Keep ALL body parts away from all pinch point areas. Failure to comply may cause serious personal injury.**



- f. Remove IFS assembly being careful to avoid all pinch point areas.



- g. Repeat steps 3a-3f for opposite side.

## NEW COMPONENT INSTALLATION

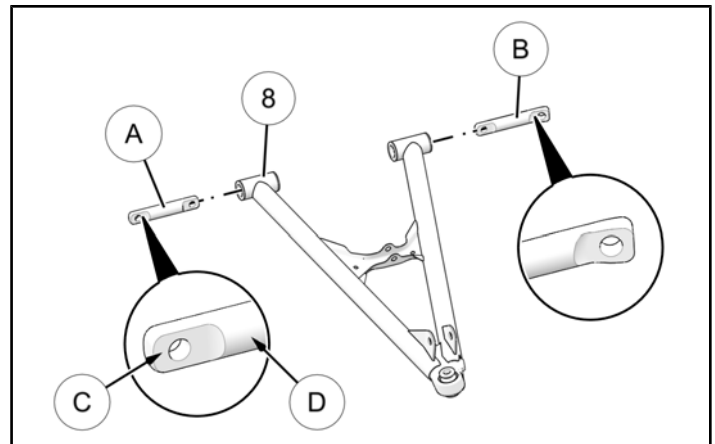
### 1. Install lower control arm.

- a. Install the pivot shafts ①/② into the lower control arm as shown with the angled pivot shaft ② oriented in the front of the control arm as shown.

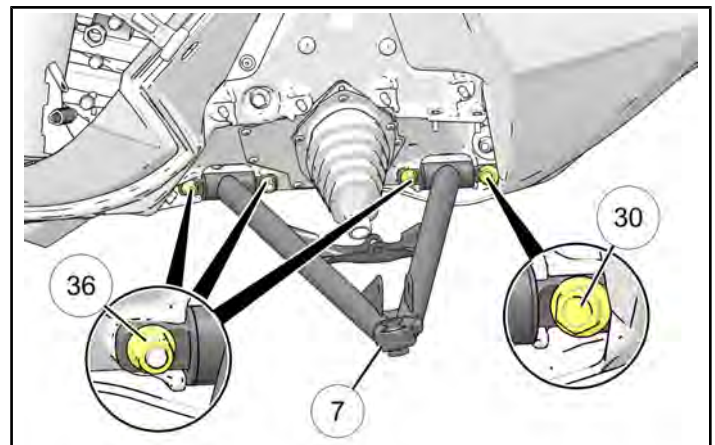
### NOTE

Place a light coat of Polaris Premium Grease (or equivalent) onto load bearing surface ④ of the pivot shaft.

Ensure the bolt surface ③ is free of all grease and debris.



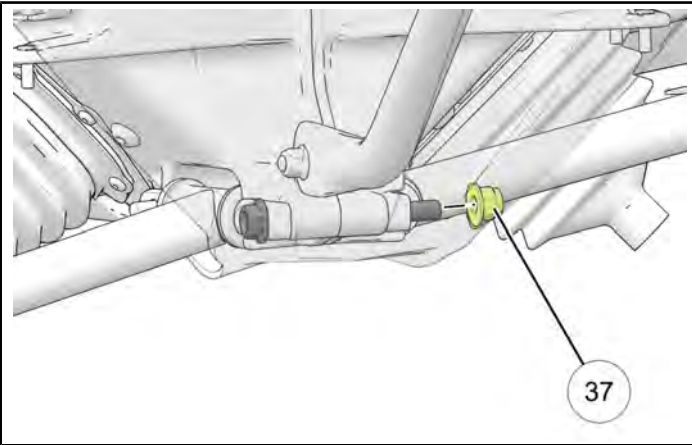
- b. Loosely install lower control arm as shown and secure into position using supplied locking nuts ③⑥ and lower control arm mounting bolt ③⑦ as shown.



- c. Repeat steps 1a-1b for opposite side.

**NOTE**

For opposite side you will need to install the supplied locking nut ③⑦ onto previously installed forward most lower control arm bolt as shown.



- d. Torque the three lower control arm locking nut fasteners on both sides of vehicle to specification.

**TORQUE**

30 ft. lbs. (41 Nm)

- e. Torque the forward most lower control arm bolt and locking nut

**TORQUE**

40 ft. lbs. (54 Nm)

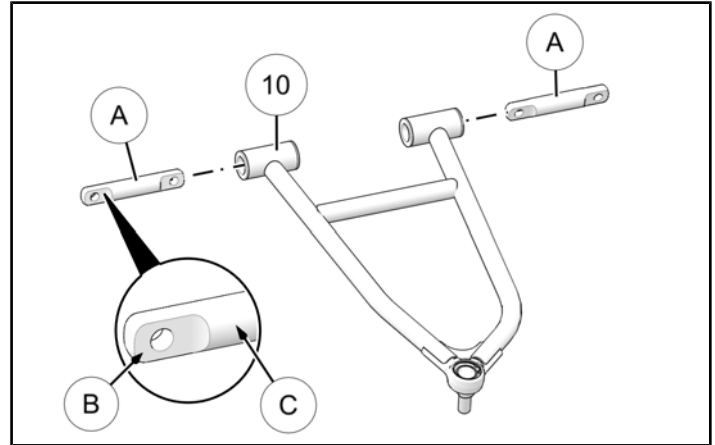
2. Install upper control arm.

- a. Install the pivot shafts ① into the upper control arm as shown.

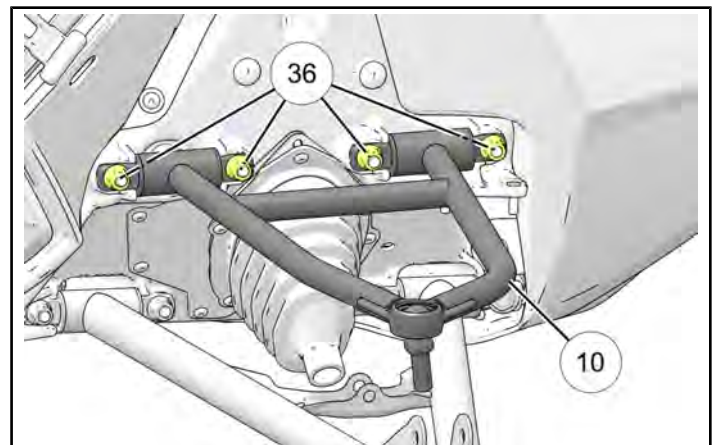
**NOTE**

Place a light coat of Polaris Premium Grease (or equivalent) onto load bearing surface ③ of the pivot shaft.

Ensure the bolt surface ② is free of all grease and debris.



- b. Loosely install upper control arm as shown and secure into position using supplied locking nuts ③⑥ as shown.



- c. Repeat steps 2a-2b for opposite side.  
d. Torque all upper control arm fasteners on both sides of vehicle to specification.

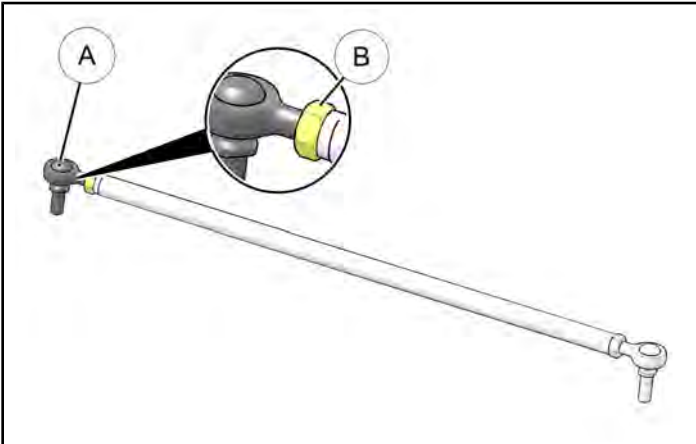
**TORQUE**

30 ft. lbs. (41 Nm)



3. Install new outer tie rod assembly.

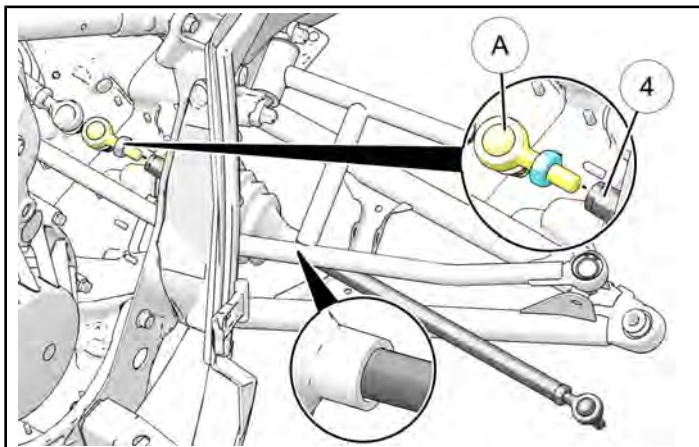
- a. Remove the inner tie rod end ① by loosening jam nut ② and unthreading from the outer tie rod assembly.



- b. Insert the tie rod assembly through the rubber tie rod boot and thread onto the inner tie rod end ① that is attached to the steering frog. Inner and outer tie rod end jam nuts will be torqued after the ski toe/ski alignment process.

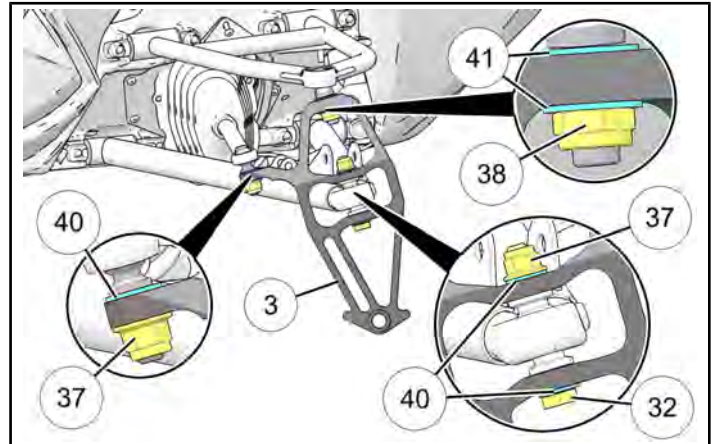
**NOTE**

Ensure there are approximately equal amounts of thread showing on each tie rod end.



4. Install spindle.

- a. Place spindle into position and attach at the three point as shown using the supplied fasteners.



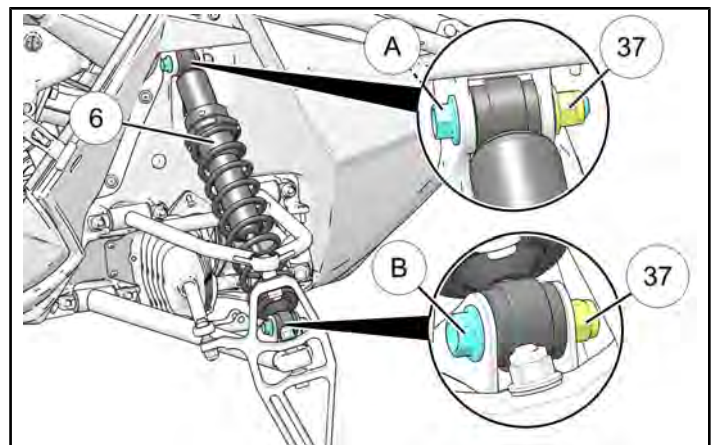
- b. Repeat step 3a for opposite side.  
c. Torque all spindle mounting fasteners on both sides of vehicle to specification.

**TORQUE**

- ⑦ **Outer Tie Rod:** 37 ft. lbs. (50 Nm)  
⑦ **Lower Control Arm:** 40 ft. lbs. (54 Nm)  
③ **Upper Control Arm:** 40 ft. lbs. (54 Nm)

5. Install new provided shock ⑥.

- a. Place upper portion of provided shock ⑥ into position and secure with previously removed upper shock bolt ① and new provided lock nut ⑦.  
b. Next, remove lower shock bolt from previously removed IFS assembly and secure lower portion on shock using the existing shock ⑧ bolt and new provided lock nut ⑦.



- c. Torque both upper and lower shock mounting fasteners on both sides of vehicle to specification.

#### TORQUE

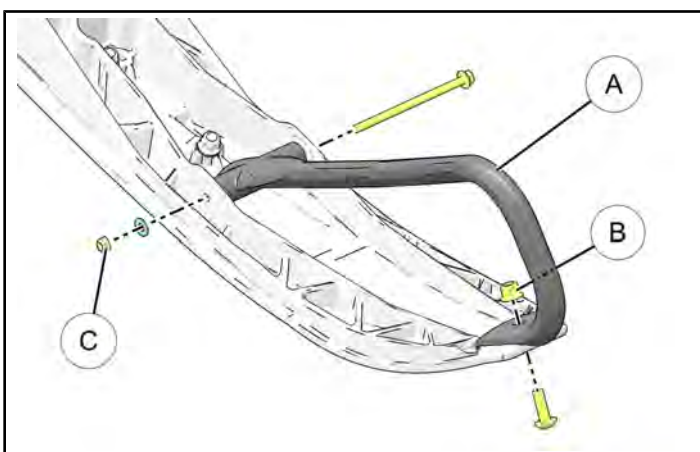
37 ft. lbs. (50 Nm)

- d. Repeat steps 5a-5d for opposite side.
6. Install ski assembly and related hardware.
  - a. Remove ski toe (A) from existing ski and install onto new provided ski using existing fasteners. Torque fasteners to specification.

#### TORQUE

Ⓒ 6 ft. lbs. (8 Nm)

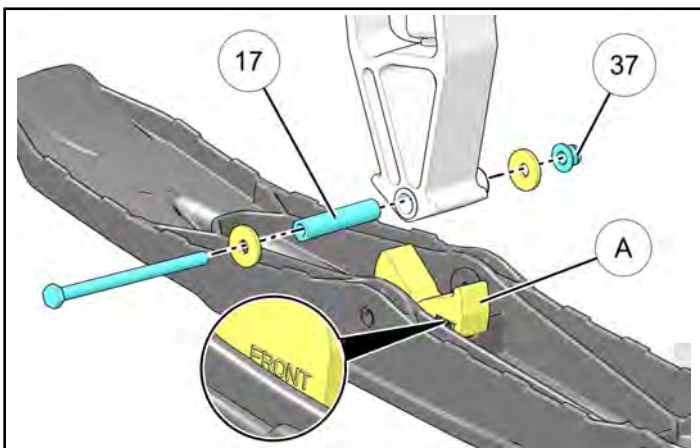
Ⓔ 8 ft. lbs. (11 Nm)



- b. Place ski rubber (A) into position and install ski onto spindle using previously removed mounting hardware and new provided ski bushing (17). Torque to specification.

#### TORQUE

37 ft. lbs. (50 Nm)



- c. Repeat steps 6a-6b for opposite side.

7. Verify all suspension fasteners have been torqued to proper specification.

#### ⚠ WARNING

You **MUST VERIFY** all suspension fasteners have been torqued to proper specification. Failure to comply may result in death or serious personal injury.

#### SKI ALIGNMENT/TOE ADJUSTMENT

#### ⚠ WARNING

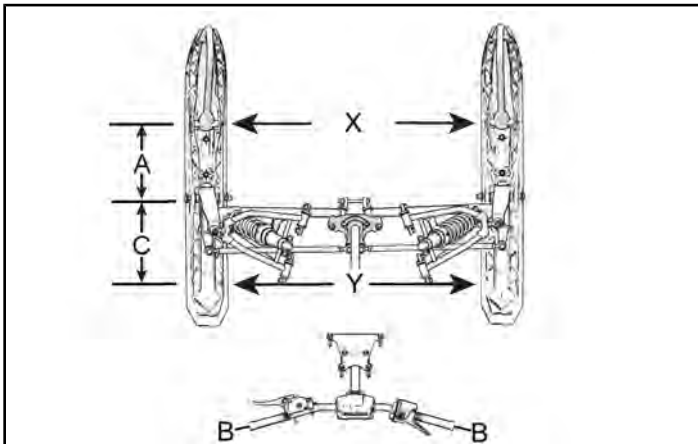
Improper ski alignment or adjustment may cause loss of steering control, resulting in serious injury or death.

#### IMPORTANT

Track alignment must be correct prior to starting this procedure. Ski alignment is measured at ride height.

1. Rock the front end of the snowmobile up and down and then set it down gently.
2. Place the handlebars in a straight-ahead position. Measure from each end (B) of the handlebar to a common center point at the rear of the snowmobile to verify.
3. Measure 10 inches (25.4 cm) forward from the center of the ski mounting bolt on both skis, preferably on the center line of the skags as indicated by measurement (A). The measurement between these two points will be measurement X.
4. Perform the same measurement rearward from the center of the ski mounting bolt as indicated by measurement (C). The measurement between these two points will be measurement Y.
5. Place a straight edge along side the one side of the track. Make sure that the straight edge is touching along the length of the track.
6. Record the measurements from the edge of the straight edge to the X and Y marks. Adjust the tie rods so both measurements are the same.
7. Repeat steps 5 and 6 on the opposite side.
8. These steps will align the skis with the track. At this point, verify the handlebars are still centered with the skis.
9. To set ski toe, raise the front of the snowmobile until the skis are off the ground.

10. Turn both steering tie rods equally to set ski toe. When finished, the overall measurement (X) should be 0 - 1/8 inches (0 - 3 mm) wider than the overall measurement (Y).



11. Once the proper measurement is obtained ensure the tie rod ends have equal thread engagement. Both inner and outer rod ends should also be parallel to allow the steering to be turned fully in both directions with no binding on the tie rod ends. Once you have verified there is no binding and there is equal thread engagement torque both inner and outer jam nuts on each tie rod to specification.

#### TORQUE

11 ft. lbs. (15 Nm)

12. Verify all steering fasteners have been torqued to proper specification.

#### **⚠ WARNING**

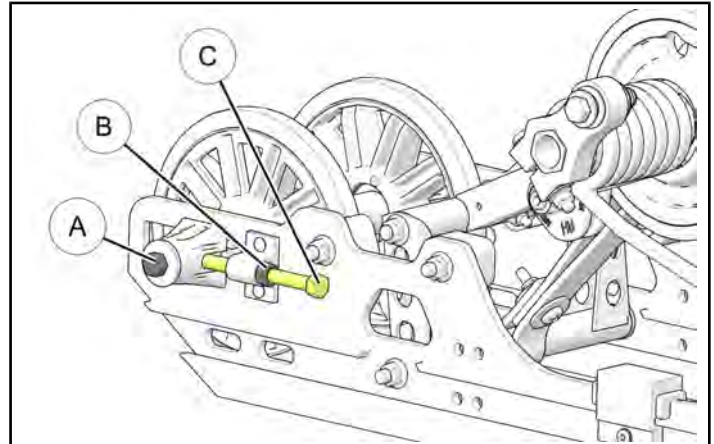
You **MUST VERIFY** all steering fasteners have been torqued to proper specification. Failure to comply may result in death or serious personal injury.

## REAR SUSPENSION

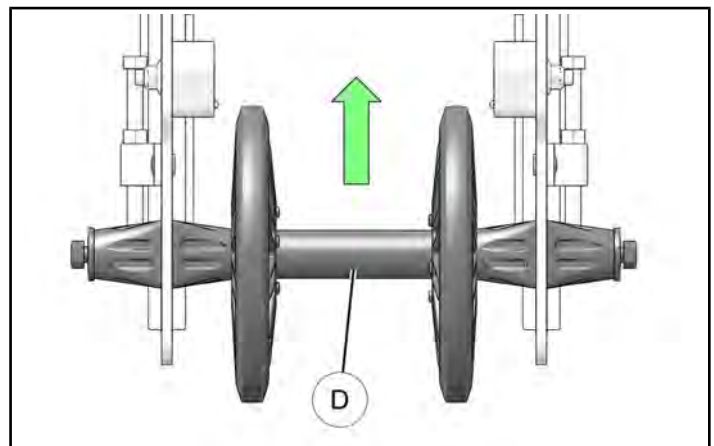
### REMOVAL

1. Remove rear suspension assembly.
  - a. Support the rear of the machine so that the track is off the floor.

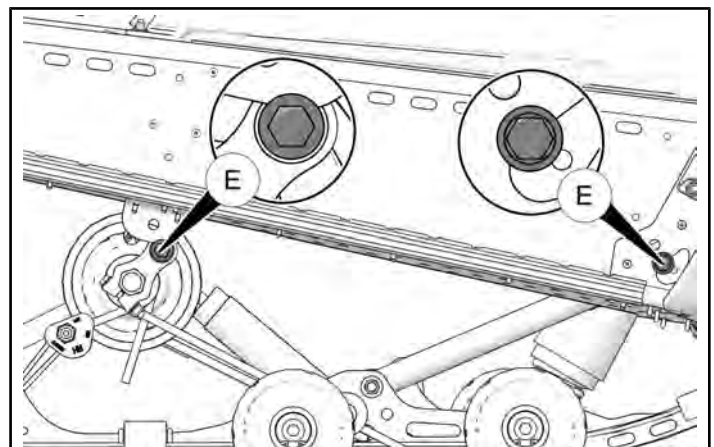
- b. Loosen the rear idler bolts (A). Loosen the rear idler adjuster jam nuts (B), and then retract the adjuster bolts (C). Repeat for opposite side.



- c. Once the adjuster bolts are fully retracted, push the rear idler assembly (D) forward.



- d. Remove the support from the tunnel letting the suspension carry the weight of the machine.
- e. Remove the fasteners (E) from each side securing the skid to the tunnel.



- f. Place a protective mat on the floor and slowly roll the unit over on the left side, supporting the sled on the end of the handlebar.
- g. Remove the suspension from the tunnel.



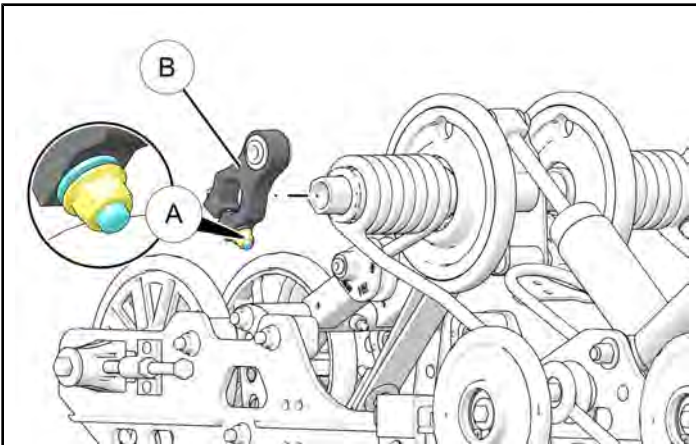
## NEW COMPONENT INSTALLATION

### 1. Remove rear torsion springs.

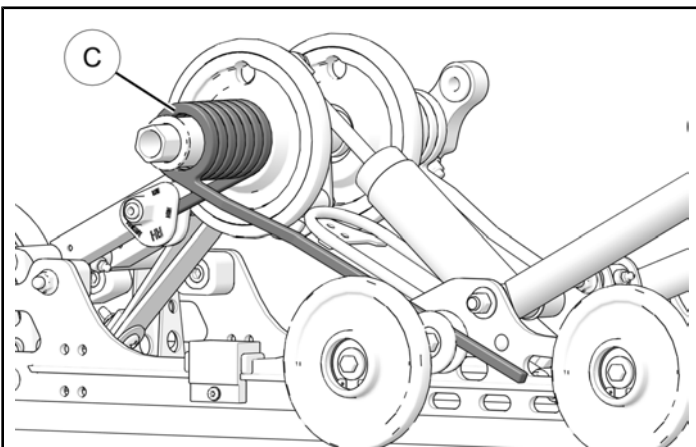
#### CAUTION

The rear torsion springs are under high torsional loads. Use extreme cautions when releasing tension from springs and avoid all pinch point areas.

- Loosen locking nut (A) securing rear suspension mounting arm (B) in place and remove mounting arm.



- Firmly lift upwards on the front most portion of the torsion spring (C) until it is able to clear the suspension wheel and carefully pull it outwards and over the wheel. Once cleared of the wheel, slowly lower the forward most portion of the spring back down to release all tension on the spring. After tension is released, remove spring (C) from torque arm.



- Repeat steps 1a-1b for opposite side.

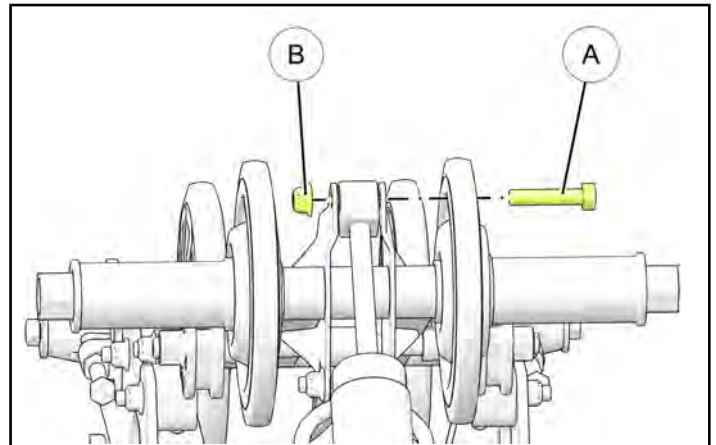
### 2. Remove rear track shock.

#### CAUTION

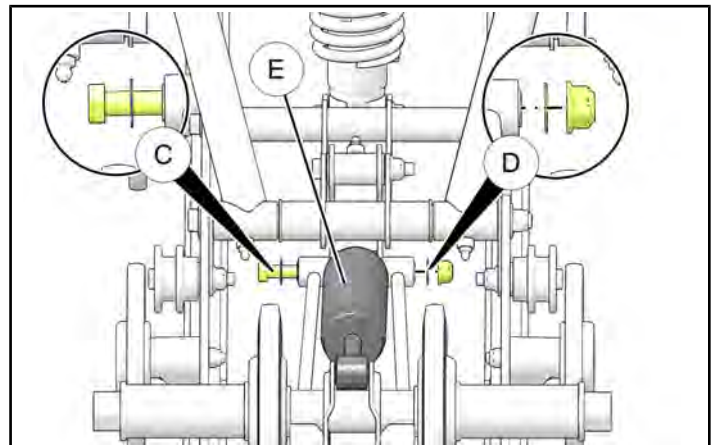
##### PINCH POINT DANGER!

Removing upper shock bolt may allow the rear torque arm to fall, creating a pinch point between the arm and the underlying components. It is recommended to hold the torque arm up with one hand while removing the bolt with the other. Keep ALL body parts away from all pinch point areas. Failure to comply may cause serious personal injury.

- First, remove the upper shock mounting bolt (A) and lock nut (B). When removing upper shock mounting bolt make note of all bushings and spacers in the upper shock rod end.



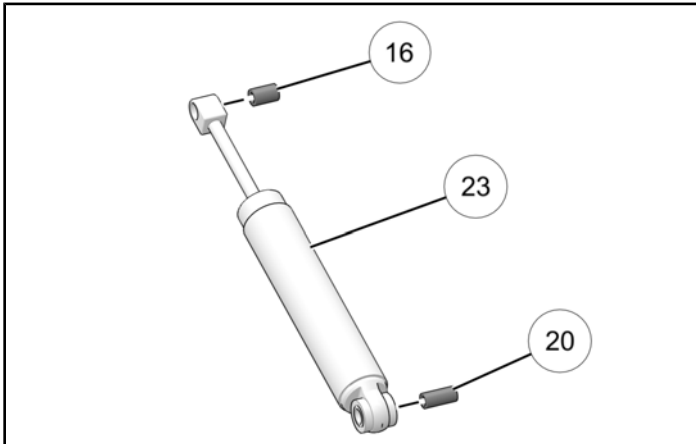
- Next, remove lower shock mounting bolt, locking nut and all related washers.



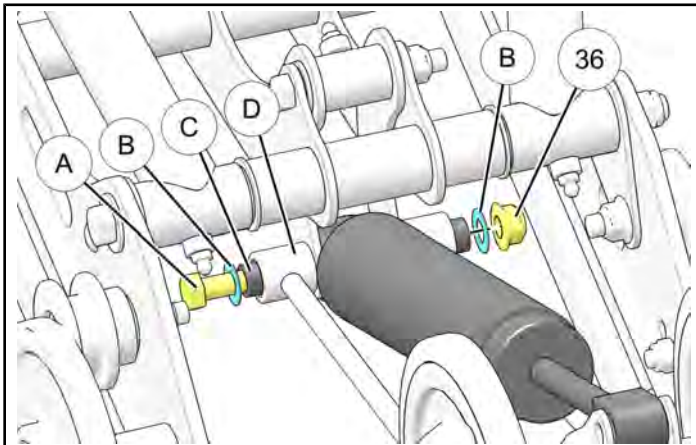
- Remove rear track shock (E). When removing, be sure to make note of all bushings and spacers and their placement.

3. Install new rear shock.

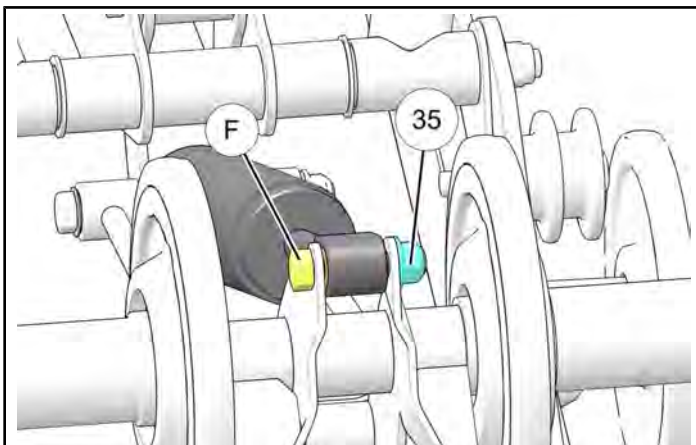
- a. Install supplied upper shock rod bushing ⑯ and lower bushing ⑳ as shown.



- b. Loosely install lower end of shock using previously removed bolt ①, washers ② and new supplied locking nut ③⑥ as shown. Be sure all required bushings ③ are in the shock rod ends ④ on both sides of the shock.



- c. Install upper end of rear shock using previously removed mounting bolt ⑤ and supplied locking nut ③⑤ as shown.



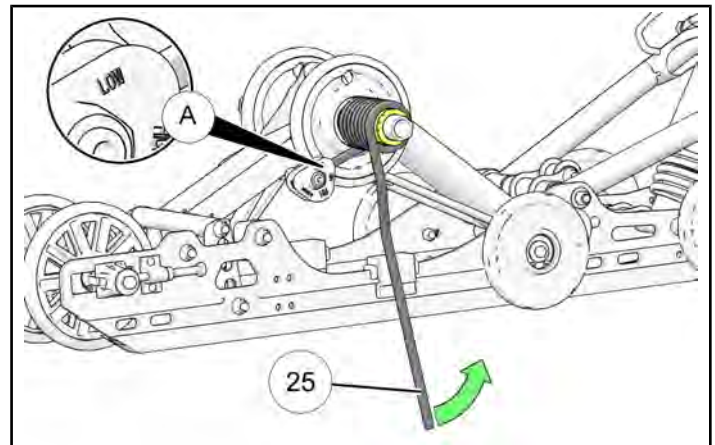
- d. Torque upper and lower shock mounting bolts to specification.

**TORQUE**

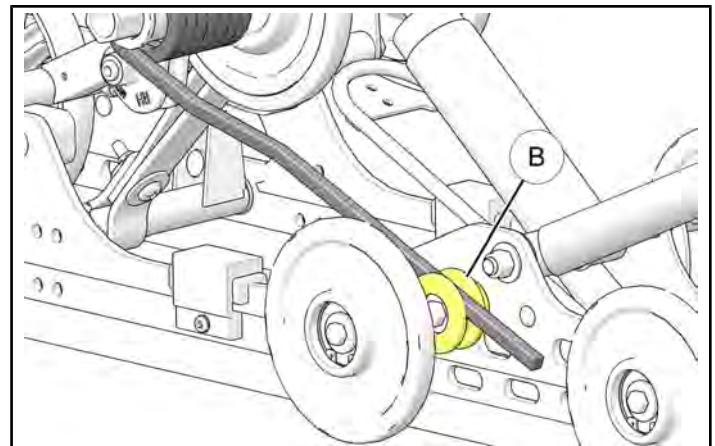
35 ft. lbs. (47.5 Nm)

4. Install new rear torsion springs.

- a. Place new rear torsion spring ②⑤ into position so the short leg of the spring is fully seated into the groove on the lowest setting of rear torsion spring adjustment block ① as shown.



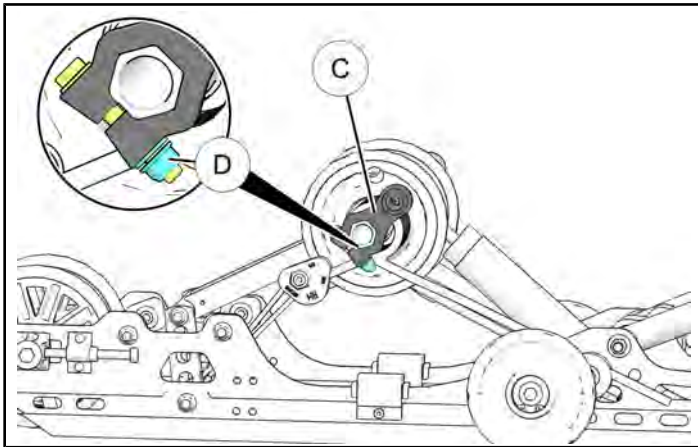
- b. Carefully rotate longer leg of torsion spring up and over the suspension wheel and seat it into the spring roller guide ②.



- c. Reinstall previously removed rear torque arm mounting arm ③ as shown. Torque nut ④ to specification.

### TORQUE

18 ft. lbs. (24 Nm)



- d. Repeat steps 4a-4c for opposite side.

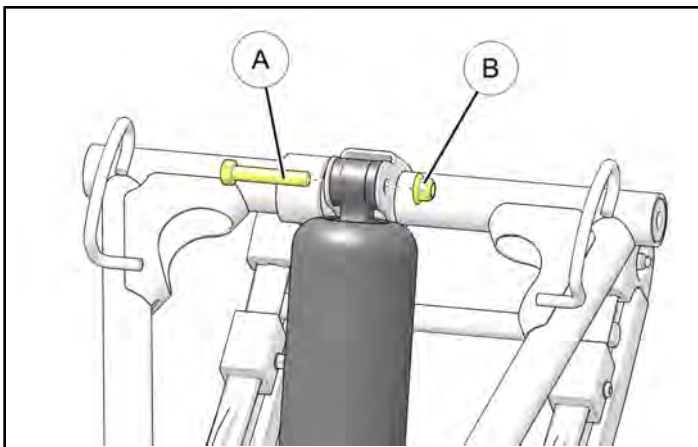
### 5. Remove front track shock.

#### CAUTION

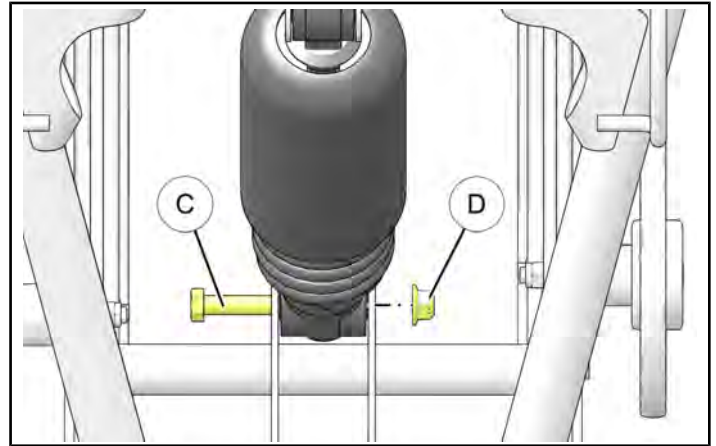
##### PINCH POINT DANGER!

Removing upper shock bolt may allow the front torque arm to fall, creating a pinch point between the arm and the rail beam. It is recommended to hold the torque arm up with one hand while removing the bolt with the other. Keep ALL body parts away from all pinch point areas. Failure to comply may cause serious personal injury.

- a. Remove upper shock mounting bolt ① and locking nut ②. Discard locking nut and retain bolt.

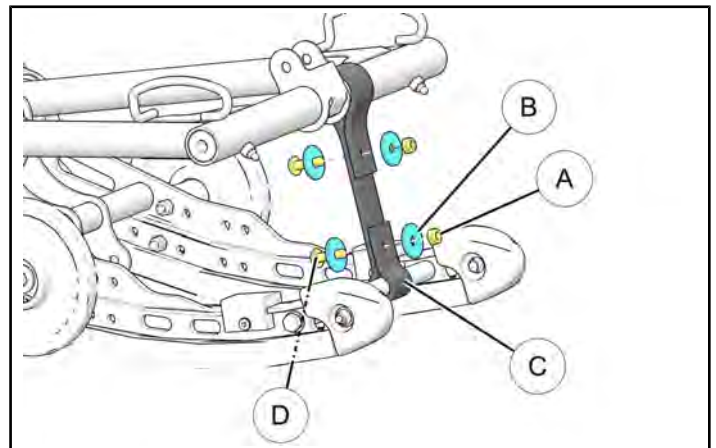


- b. Remove lower shock mounting bolt ③ and locking nut ④ and remove shock assembly. Discard locking nut and retain bolt.



### 6. Remove front limiter strap.

- a. Remove bolts ④, washers ⑤, nuts ⑥ and remove limiter strap ③.



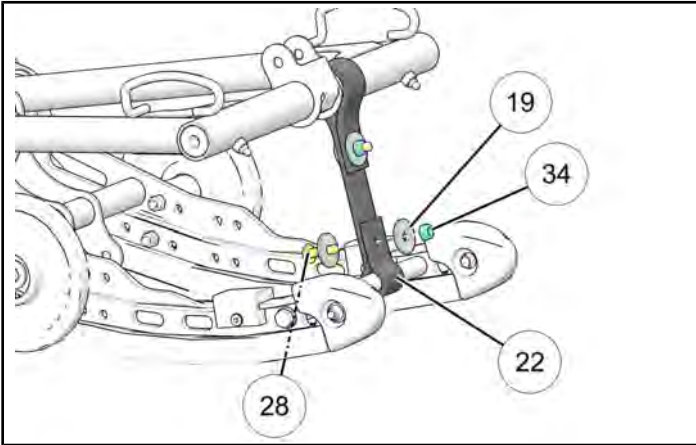


7. Install new limiter strap.

- a. Wrap upper and lower ends of new limiter strap ② around upper torque arm mounting tube and lower cross shaft as shown. Secure into position using provided mounting hardware as shown. Torque nuts ③④ to specification.

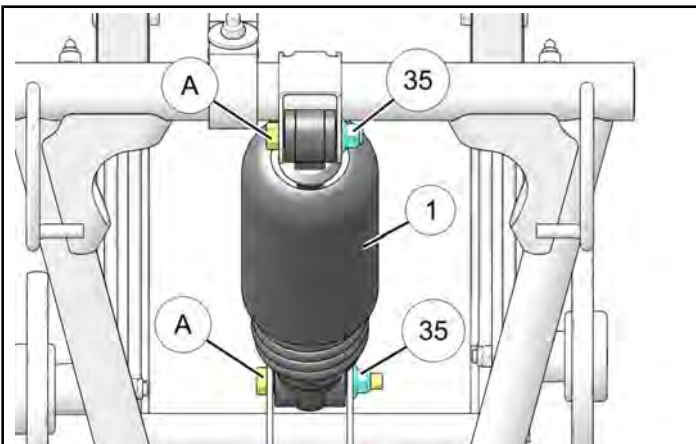
**TORQUE**

12 ft. lbs. (16 Nm)



8. Install new front track shock.

- a. Place lower portion of new front track shock ① into position and loosely install previously removed lower mounting bolt (A) and new supplied locking nut ③⑤.



- b. Install upper mounting hardware.
- c. Torque upper and lower locking nuts to specification.

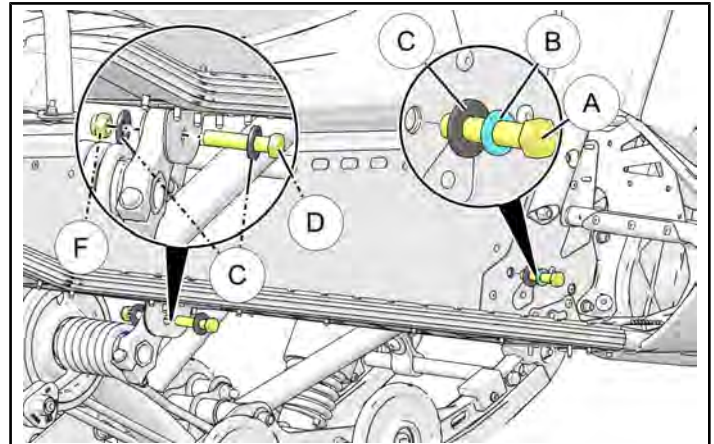
**TORQUE**

35 ft. lbs. (47 Nm)

REINSTALLATION

1. Place rail assembly into tunnel.

- a. With the unit on its left side, place the suspension in the tunnel and align the front and rear torque arms with the tunnel mounting holes.
- b. Ensure you have the proper washers (B)/(C) installed onto the mounting bolts (A)/(D) as shown. Apply LOCTITE® Threadlocker Blue 242® on the two front mounting bolts (A) and loosely install the two right side previously removed mounting fasteners.



- c. Next, set the snowmobile on the opposite side. Install the two remaining rear suspension mounting fasteners and related hardware.
- d. Slowly roll the snowmobile back to the upright position so the skis and track on the ground.
- e. Torque all four rail mounting fasteners to specification.

**TORQUE**

60 ft. lbs. (81 Nm)

**CLUTCHING**

REMOVAL

**Belt**

1. Remove drive belt.

**CAUTION**

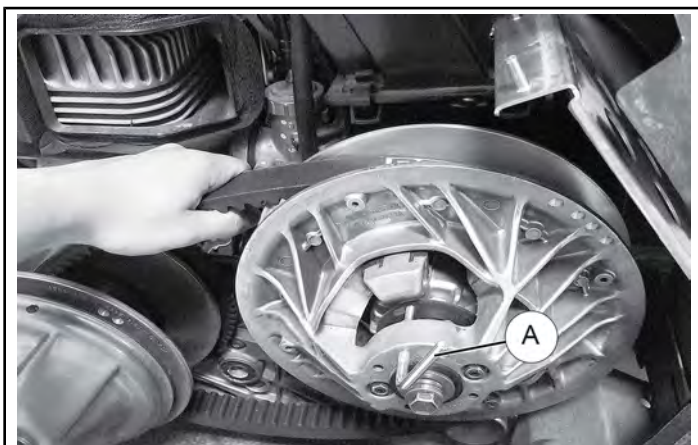
Verify the driven clutch is not in reverse. Damage to the driven clutch or L Wrench will occur when attempting to open the driven clutch with the clutch in the reverse position

- a. Verify the driven clutch is not in reverse.

- b. Install the **L Wrench (PN: 2875911)** ① into the threaded hole on the face of the clutch. Screw the L Wrench into the clutch.

#### NOTE

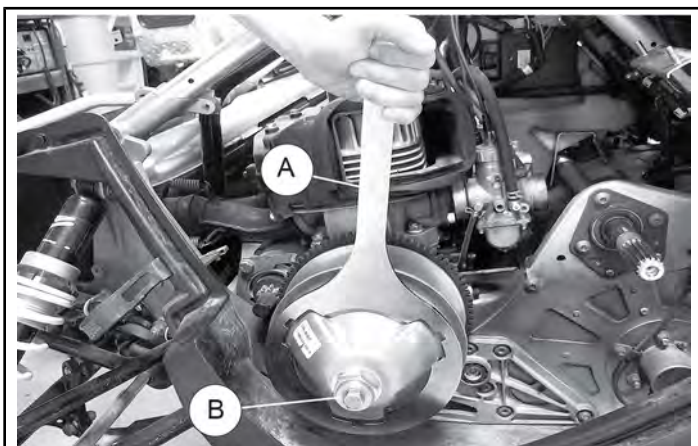
Do not bottom-out the L Wrench in the clutch.



- c. When the clutch sheaves are opened, remove the drive belt from the driven and then drive clutch.

#### Drive Clutch

1. Remove drive clutch.
  - a. Place the **PB50 Drive Clutch Holding Wrench (PN: PS-51184)** ① onto the drive clutch.



- b. Remove the drive clutch retaining bolt, collar and star washer ②.

- c. Insert **Drive Clutch Puller (PN: PS-51183)** ③ into the retaining bolt hole.

#### CAUTION

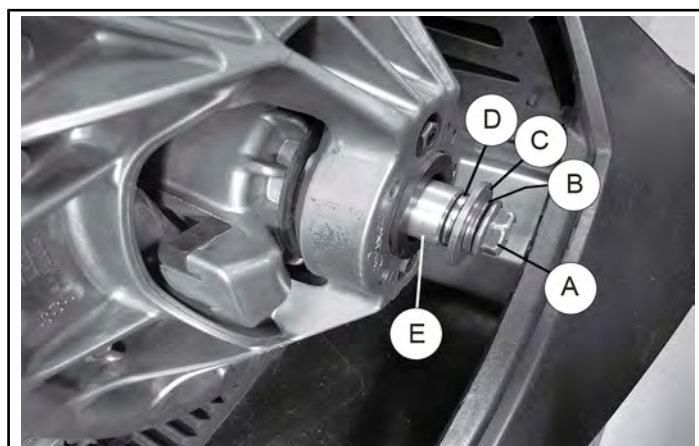
Do not use an impact wrench to remove or install the clutch bolt or clutch puller. Damage to the clutch and/or crankshaft can occur.



- d. Tighten the puller into the clutch. If the clutch does not come off, strike the clutch puller head with a hammer. If the clutch does not “pop” off, continue to tighten the clutch puller, and repeat this step.

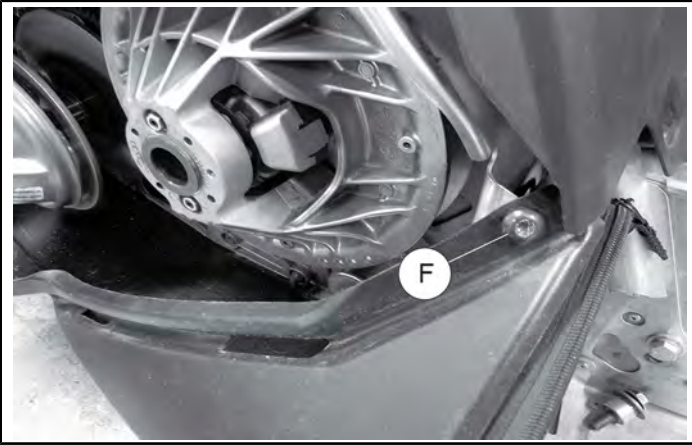
#### Driven Clutch

1. Remove driven clutch.
  - a. Remove the driven clutch bolt ①, .105 washer ②, large washer ③, float washers ④, and clutch spacer ⑤ from the driven clutch. Note the number of float washers installed on the bolt.





- b. Remove the screw ⑥ securing the fender to the steering hoop tube.



- c. Slide the driven clutch off of the jackshaft.

#### NOTE

Note the number and location of the spacer washers located behind the clutch.

### NEW COMPONENT INSTALLATION

#### Drive Clutch

#### CAUTION

Drive clutch spring is under extreme tension. Wear eye protection when servicing the driven clutch.

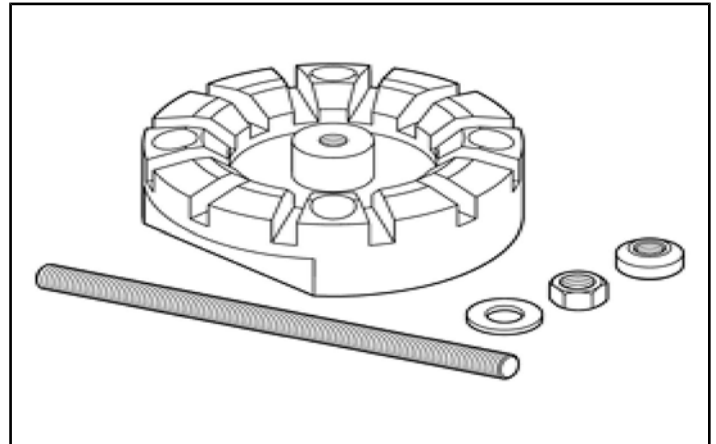
#### NOTE

Prior to disassembling the drive clutch, mark the cover, moveable sheave, and stationary sheave with a permanent marker.

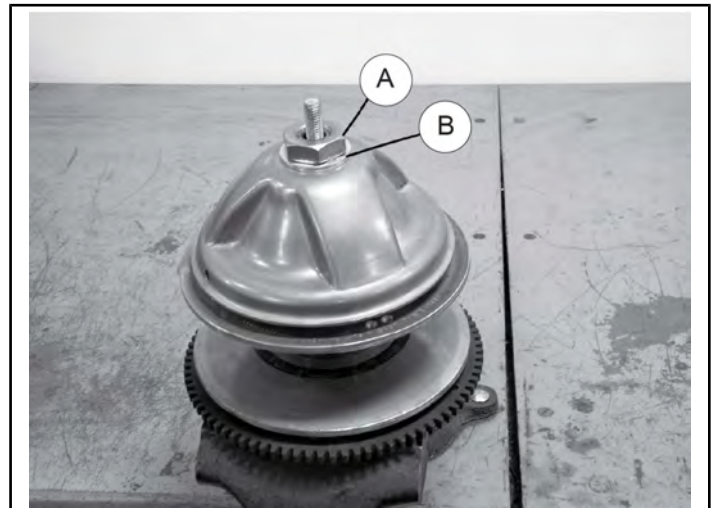


1. Remove existing drive clutch spring.

- a. Place the **Drive Clutch Holding Fixture (PN: 2871358-1)** in a bench vise.



- b. Place the drive clutch assembly onto the fixture tool and secure to base. Remove the nut ① and flat washer ② from the clutch assembly.



- c. Mark ③ the stationary shaft and cover with a permanent marker as shown .



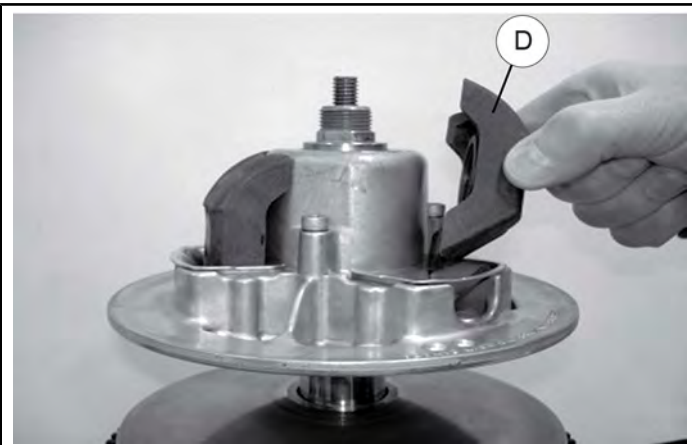
d. Remove cover.



e. Remove the three sliding blocks ① from the sheave.

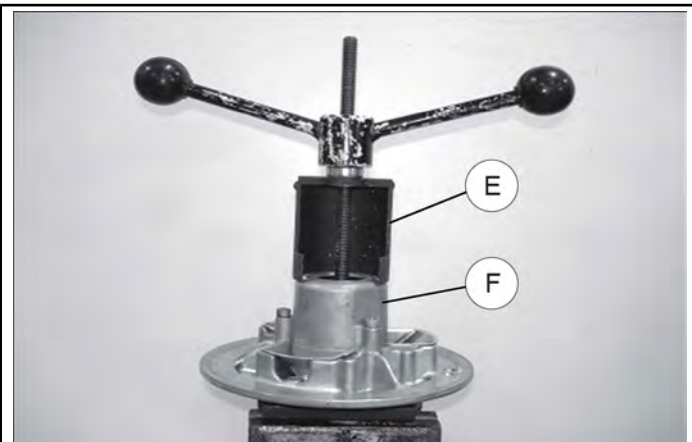
#### NOTE

Note the orientations of the sliding blocks. The curved side should be up and the straight side down.



f. Remove moveable sheave and place into the **Universal Clutch Compressor, PN: PU-50518-A**

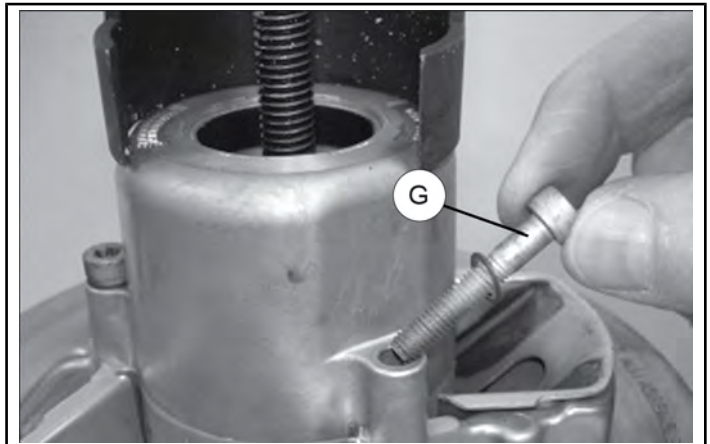
g. Tighten clutch compressor against spring cover.



h. Mark the cover and moveable sheave with a permanent marker.



i. Remove the screws ② securing the cover to the moveable sheave. Slowly release the clutch compressor and remove the spring cover.



j. Remove the old spring ③ from the spring guide ④.





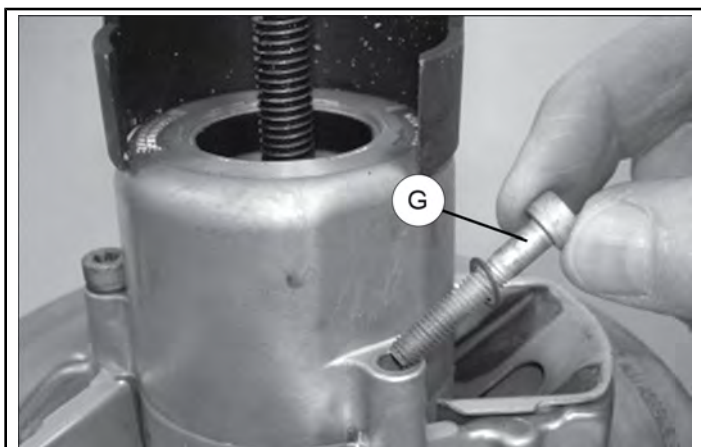
2. Install new provided drive clutch spring.
  - a. Place the new spring ②⑥ into the spring guide ①.



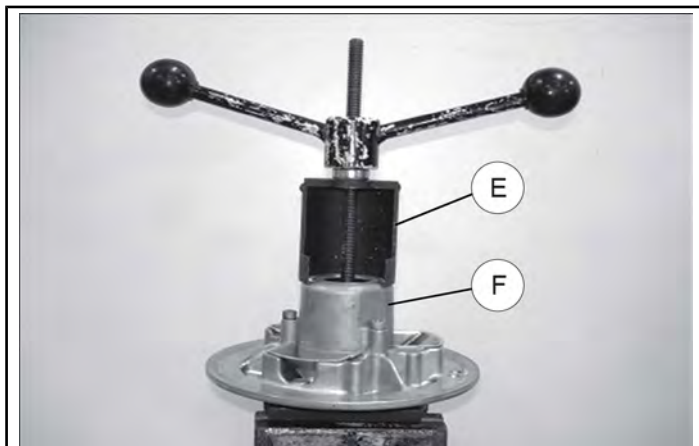
- b. Install the spring cover making sure the alignment marks between the cover and moveable sheave made during disassembly are aligned. Slowly compress the spring cover down using the Universal Clutch Compressor. Reinstall the screws ⑥ and torque to specification.

#### TORQUE

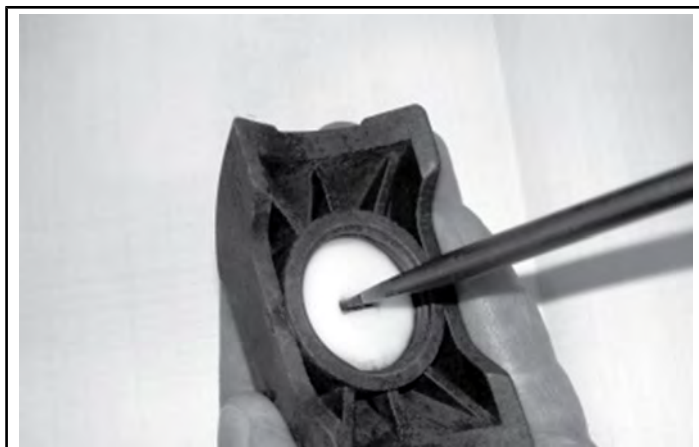
6 - 8.8 ft. lbs. (12 Nm)



- c. After tightening spring cover screws, slowly remove the clutch compressor ⑤ from the spring cover ⑥.



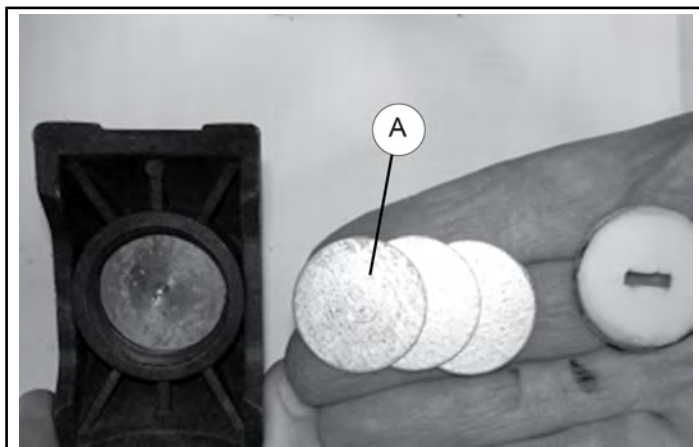
3. Install new provided slugs into sliding blocks.
  - a. Remove the caps from the blocks using a flat-blade screwdriver.



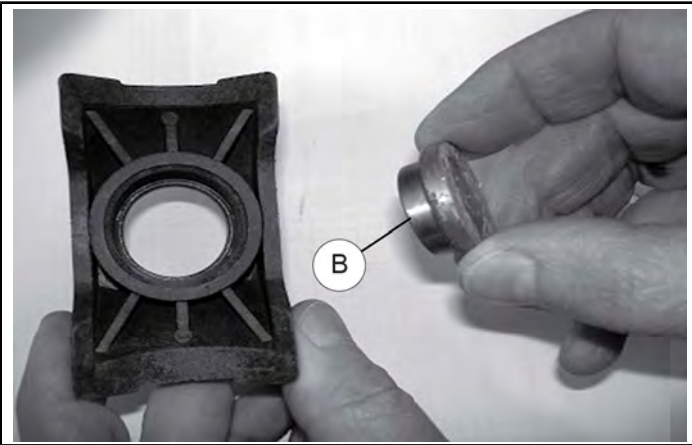
- b. Remove the shims ① from the blocks.

#### NOTE

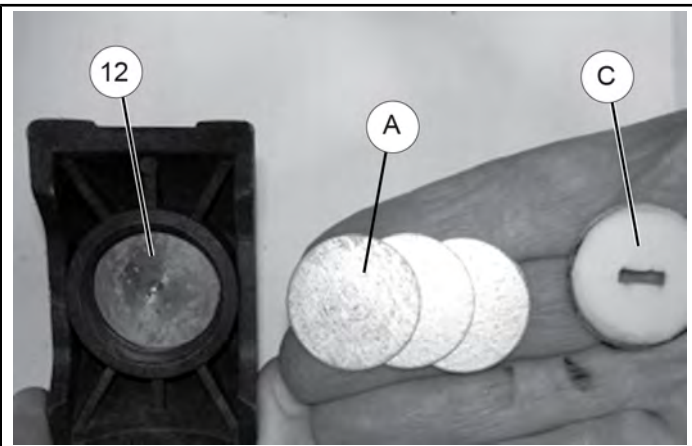
Note the number of shims on each block.



- c. Remove the slugs ⑤ from the blocks



- d. Install the new provided slugs ⑫ into each sliding block.  
e. Reinstall the shims ① along with cap ③ into each block.



- f. Secure the fixed sheave with **Drive Clutch Holding Fixture (PN: 2871358-1)**.  
g. Install the moveable sheave onto the fixed sheave.



- h. Install the sliding blocks ④ into the moveable sheave. Verify the curved sides are upwards and the straight sides are down.

#### NOTE

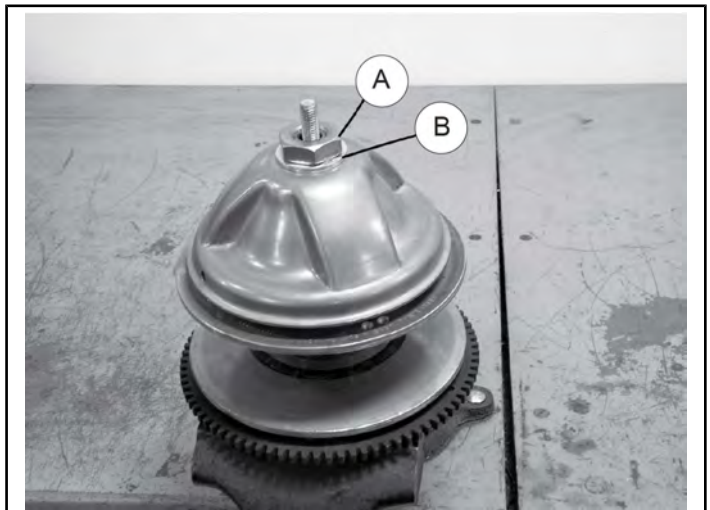
Verify all three sliding blocks have the same slugs and shims installed.



- i. Install the cover making sure the alignment marks between the cover and stationary shaft made during disassembly are aligned.  
j. Install the flat washer ② and nut ⑥. Torque nut ⑥ to specification.

#### TORQUE

88.5 - 100 ft. lbs. (120 - 135 Nm)





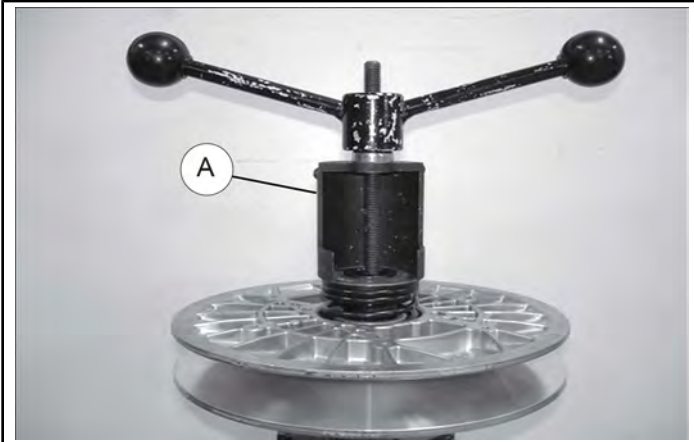
## Driven Clutch

1. Remove existing driven clutch spring.

### CAUTION

Driven clutch spring is under extreme tension. Wear eye protection when servicing the driven clutch.

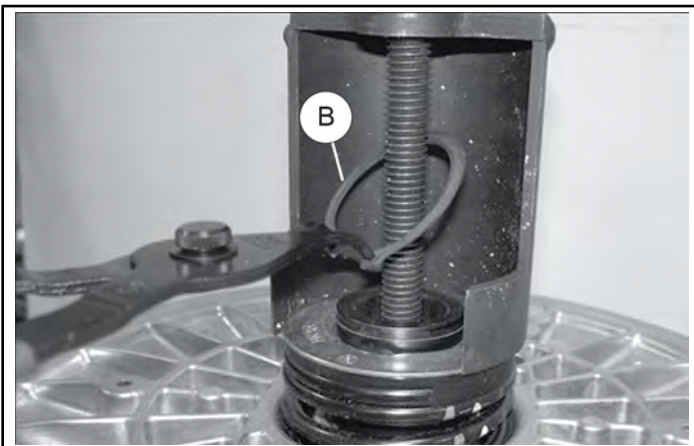
- a. Install driven clutch into **Universal Clutch Compressor (PN: PU-50518-A)** <sup>(A)</sup>.



- b. Compress driven spring enough to access and remove the snap ring.

### NOTE

When removing snap ring, note that it sits in the recess in the spring seat.



- c. Slowly release the clutch compressor.

- d. Remove the snap ring, spring seat, spring guide, and spring from the moveable sheave as shown.

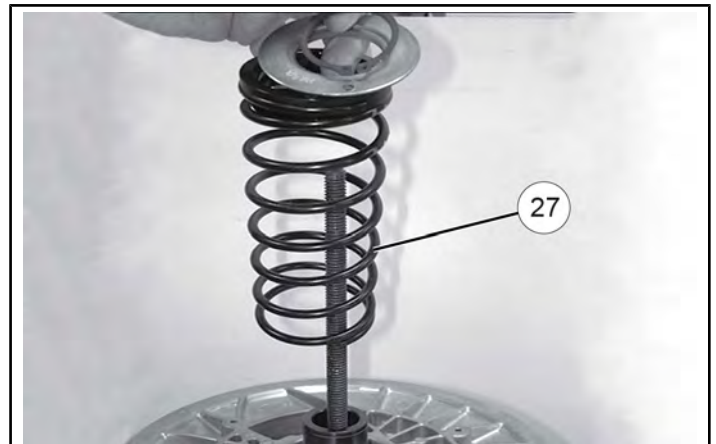


2. Install provided driven clutch spring.

- a. Install the spring <sup>(27)</sup>, spring guide, spring seat into the clutch.

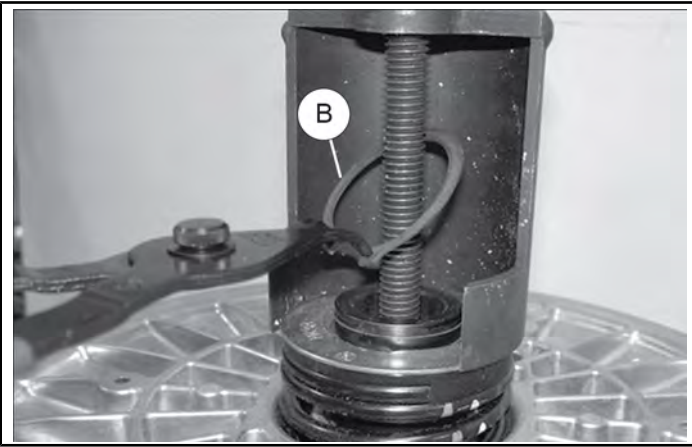
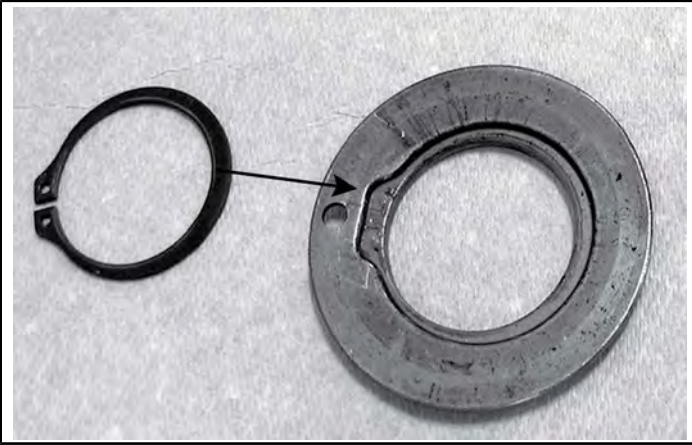
### NOTE

Verify the flat (sharp) edge of the snap ring is facing up.



- b. Compress the spring stack into the clutch using the Universal Spring Compressor. Compress stack enough to expose the snap ring groove in the fixed sheave shaft.

- c. Install the snap ring **Ⓑ** making sure the snap ring sits in the spring seat recess.



- d. Slowly unscrew the compressor handle and remove driven clutch from spring compressor.

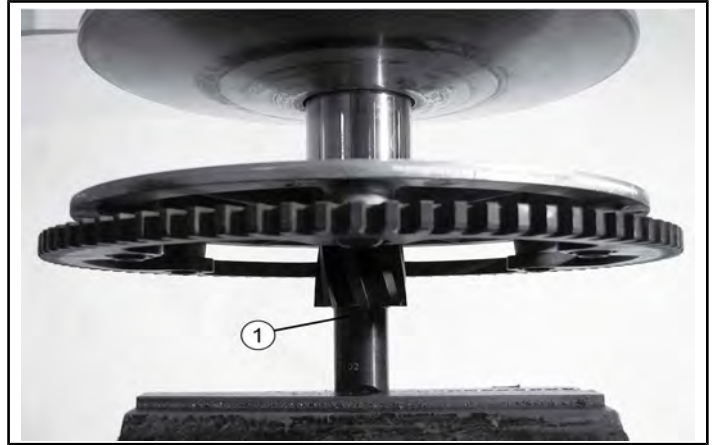
## REINSTALLATION

### Drive Clutch

#### NOTE

Always clean the clutch taper with a tapered reamer and crankshaft taper with isopropyl alcohol before re-installing clutch on engine.

1. Place a **29 mm Short Drive Reamer (PN: 2870576)** **Ⓐ** in a bench vise. Lubricate the cutting edges with cutting oil. Clean the clutch taper by manually rotating the clutch clockwise on the reamer one or two revolutions. Only use the weight of the clutch and do not push down on the clutch while turning.



2. Check crankshaft taper for galling or scoring. If necessary clean the taper evenly with 200 grit emery cloth.
3. Clean clutch and crankshaft tapers with isopropyl alcohol. Dry completely prior to clutch installation. Do not use harsh cleaners which may cause clutch taper to corrode, or damage the crank seal.
4. Slide clutch onto crankshaft taper.
5. Install the retaining bolt with all star washers and collars that were on the bolt when it was removed.
6. Secure the drive clutch using the **PB50 Drive Clutch Holding Wrench (PN: PS-51184)**.
7. Torque bolt to specification.

#### TORQUE

40 ft. lbs. (54 Nm)

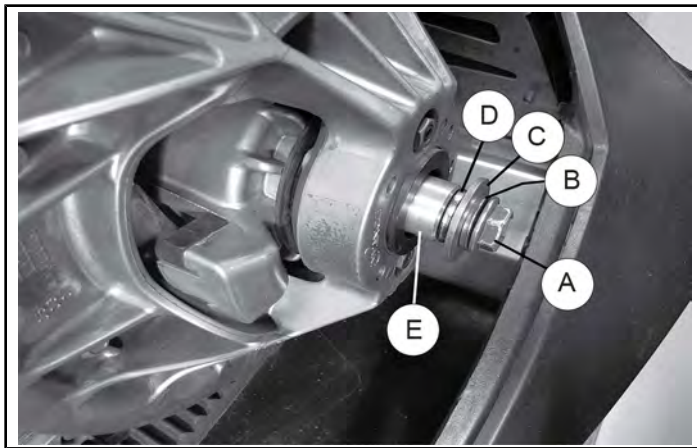
8. Run engine then re-torque the clutch bolt to specification.

## Driven Clutch

1. Verify the same number of spacer washers are installed on the jackshaft that were present when clutch was removed.
2. Apply a light film of Polaris Premium Grease to the jackshaft splines and shaft.
3. Install driven clutch onto jackshaft and secure with previously removed driven clutch bolt (A), spacer (E) and washers (B)/(C)/(D).
4. Torque bolt (A) to specification.

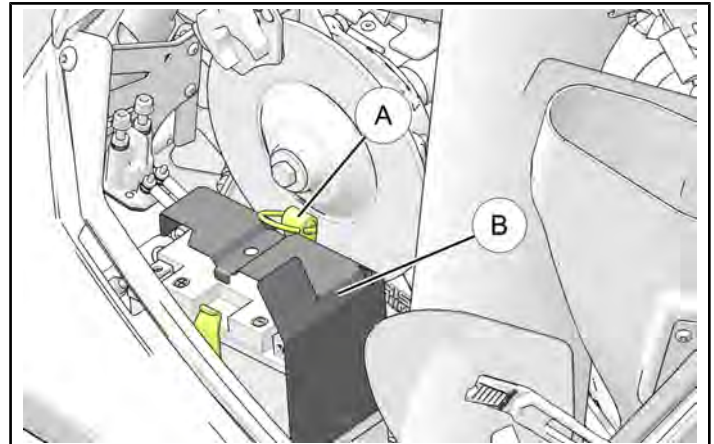
### TORQUE

18 ft. lbs. (25 Nm)

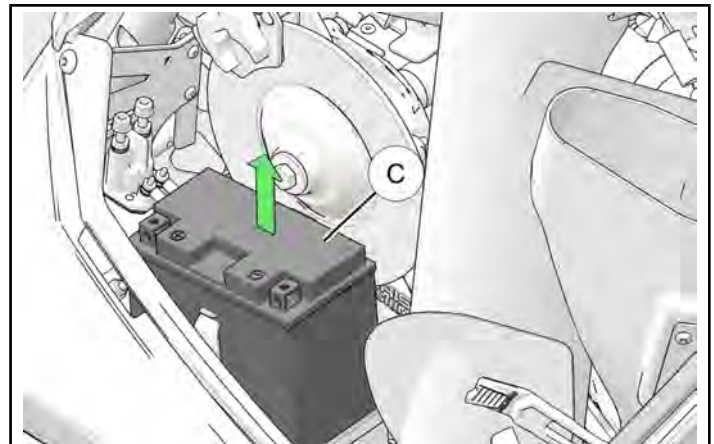


2. Remove battery and battery mounting bracket. *(If Equipped)*

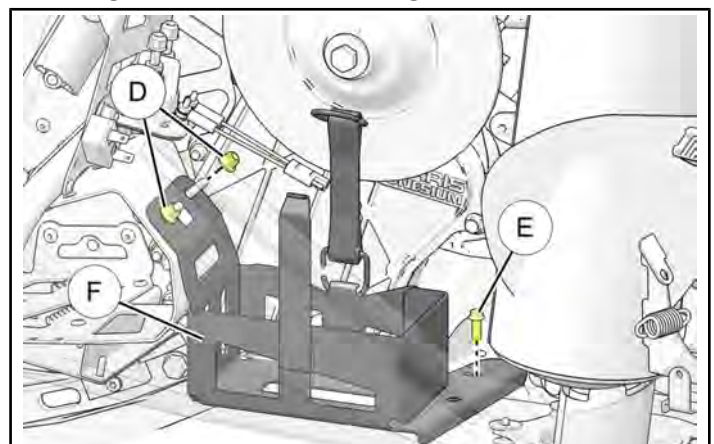
- a. Unhook rubber strap (A) and remove battery cover (B).



- b. Remove battery.



- c. Remove battery mounting bracket fasteners (D)/(E) and remove bracket (F).



## GEARING

### REMOVAL

1. Disconnect battery *(If Equipped)*.

### ⚠ WARNING

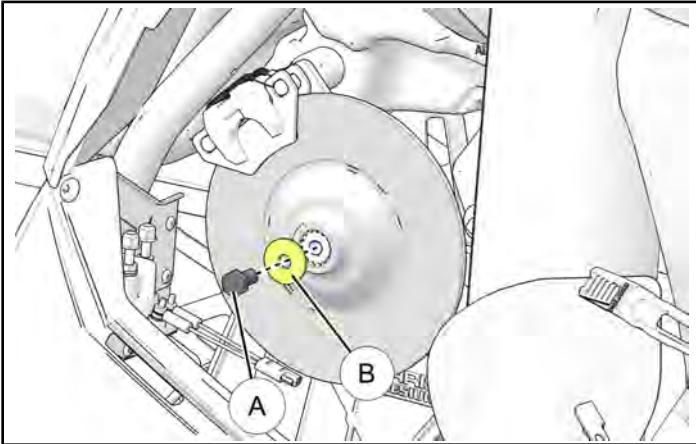
**ALWAYS** disconnect black negative (-) cable from battery **FIRST**. Failure to do so will result in a high current electrical arc, and may result in battery explosion, if tool touches grounded frame. Death or serious personal injury may occur.

- a. Disconnect black negative (-) cable from battery **FIRST**.
- b. Next, disconnect red positive (+) cable from battery.



3. Remove brake and brake disc.

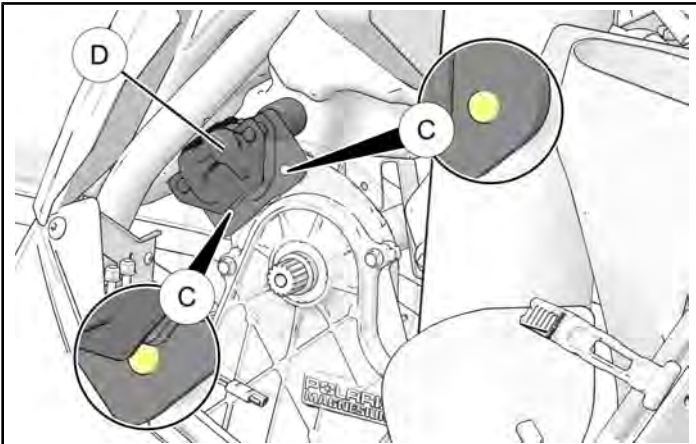
- a. Apply the parking brake and then remove the brake disc mounting bolt (A) and washer (B).



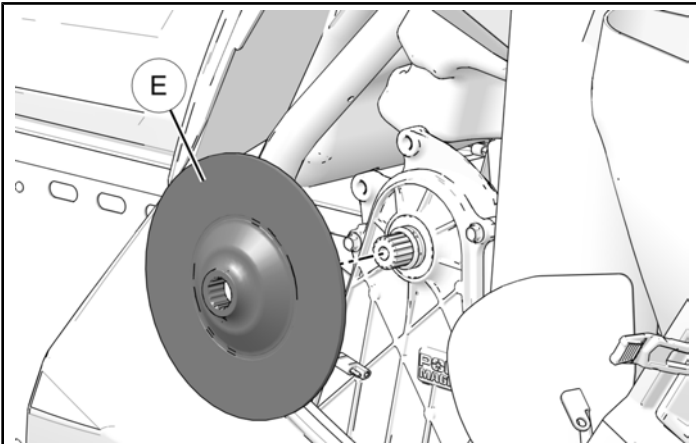
- b. Release the parking brake. Remove the brake caliper mounting bolts (C). Tie the caliper (D) to overstructure.

**CAUTION**

Do not allow the brake caliper to hang by the brake hose.



- c. Remove the brake disc (E) from the jackshaft.

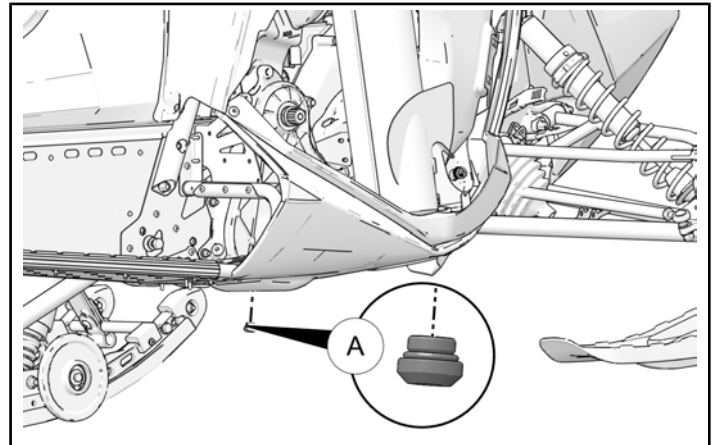


4. Drain chaincase.

- a. Place a drain pan under the chaincase. Remove the plug (A) to drain the oil. Clean the plug threads. Verify the o-ring is not damaged.
- b. Allow sufficient time for all lubricant to drain out of the chaincase then reinstall plug (A). Torque to specification.

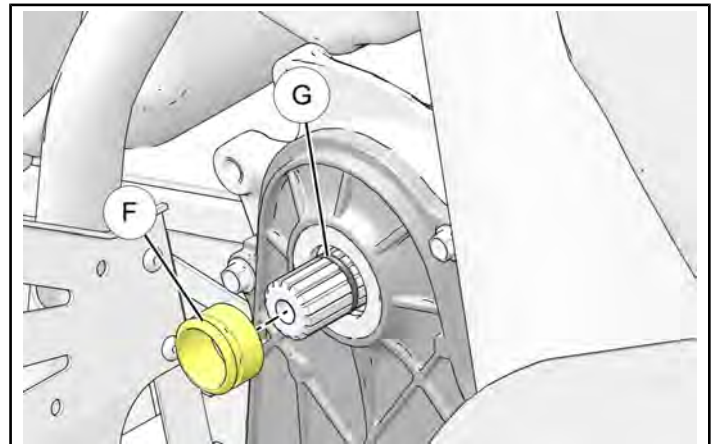
**TORQUE**

8 - 9.5 ft. lbs. (8 - 13 Nm)

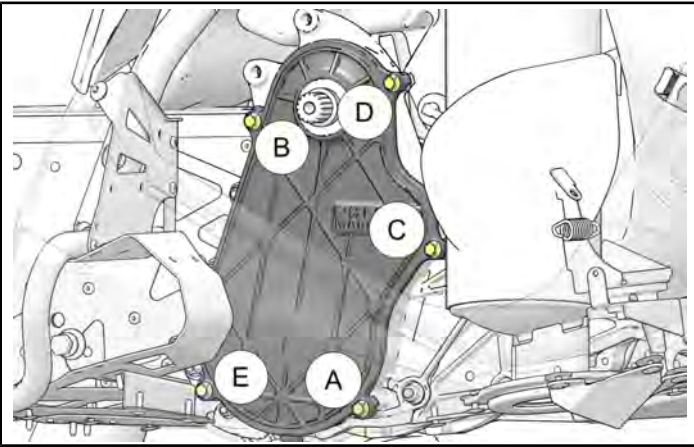


5. Remove chaincase cover.

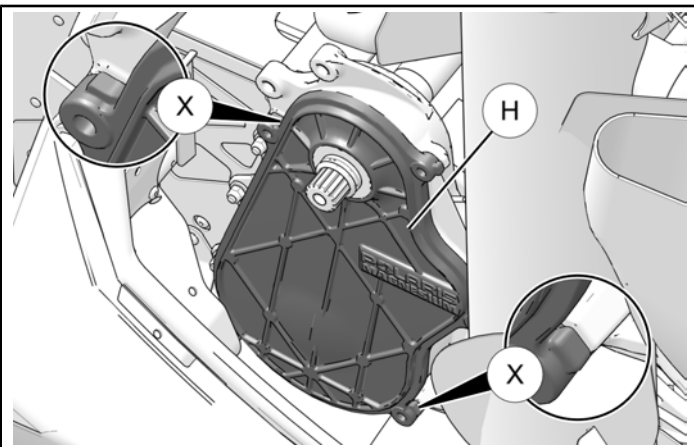
- a. Note the groove on the seal sleeve (F). Use a pair of flat blade screwdrivers or soft-jawed pliers to carefully pry the sleeve out of the cover.
- b. Locate the o-ring (G) on the end of the jackshaft inside the cover. Use a pick and carefully remove the o-ring. Inspect o-ring and discard if damaged or torn.



- c. Remove the five cover fasteners.



- d. Carefully remove the cover (H). Use a flat blade screwdriver at the pry points (X) to aid removal.



- e. After removing the cover, note the two dowels in the chaincase.

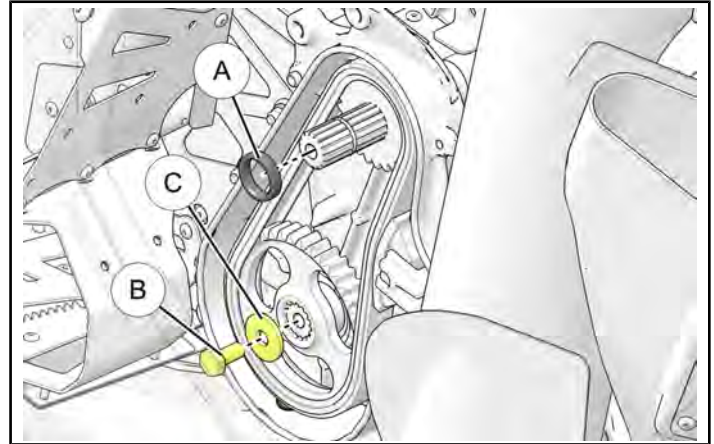
#### NOTE

Inspect the cover gasket for damage. Inspect the bearing and seal in the cover. Replace bearing if it no longer rolls smoothly. Replace the seal if damaged.

6. Remove chain and gears.

- a. Remove the chaincase sleeve (A) from the jackshaft.

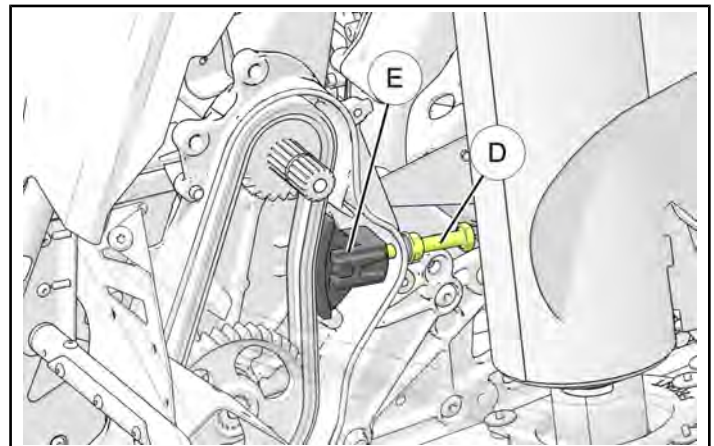
- b. Remove the lower gear screw (B) and washer (C). Note the beveled washer orientation. Discard screw (B).



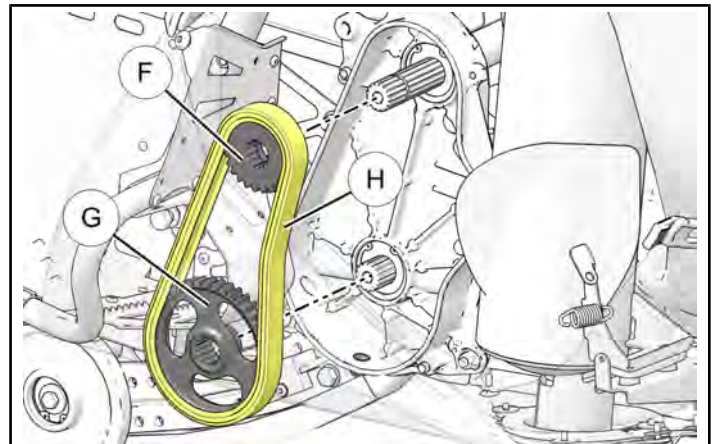
- c. Loosen the chain adjuster screw and remove the tensioner pad.

#### NOTE

Inspect the tensioner pad for damage. Replace if excessive wear is evident.



- d. Remove upper (F) and lower (G) gears along with chain (H).

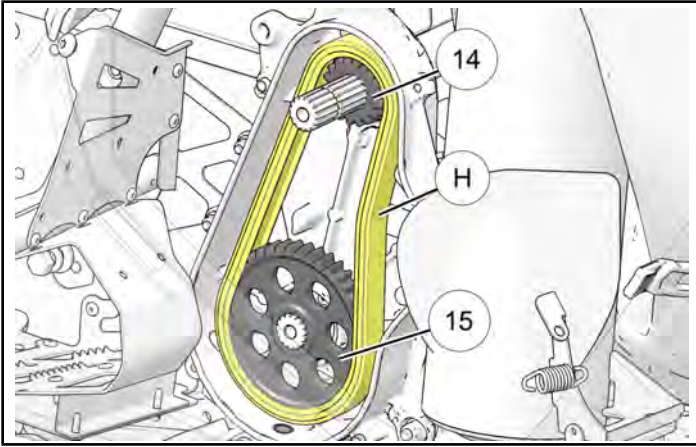




## NEW COMPONENT INSTALLATION

### 1. Install new gears.

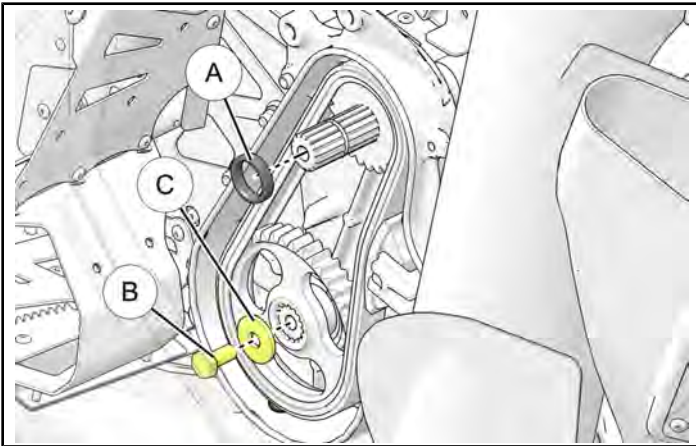
- Place both upper ⑭ and lower ⑮ gears into the chain ⑧ and install the gears and chain as a set..



- Install the chaincase sleeve (A) along with the new supplied lower gear screw (B) and beveled washer (C). Verify the beveled washer is installed dome side out. Torque screw to specification.

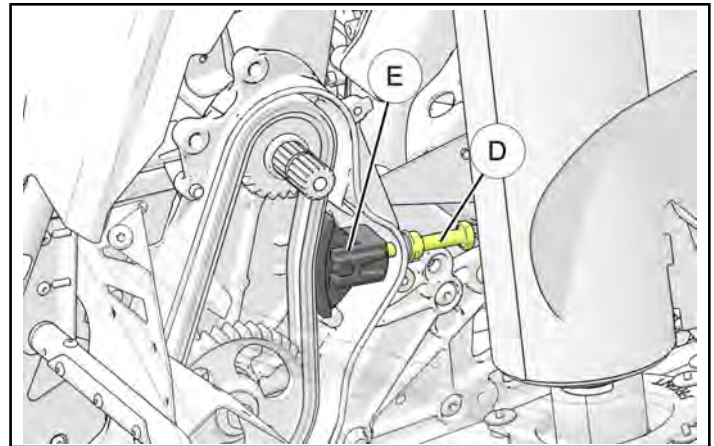
#### TORQUE

29 ft. lbs. (40 Nm)



- Rotate the driven clutch forward to move all of the chain slack to the tensioner side.

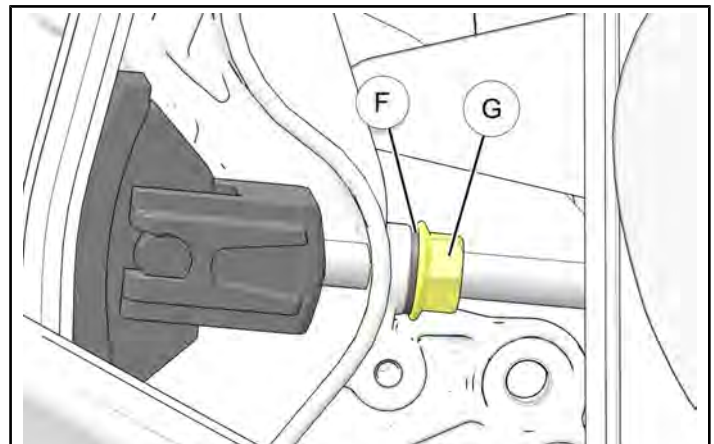
- Install the chain tensioner pad. Tighten the tensioner screw until there is 1/8" (3.175 mm) chain deflection on the backside of the drive chain.



- Verify the tensioner screw washer (F) is seated against the chaincase, and then torque the tensioner screw jam nut (G) to specification.

#### TORQUE

21 ft. lbs. (28 Nm)



## REINSTALLATION

### 1. Reinstall chaincase cover.

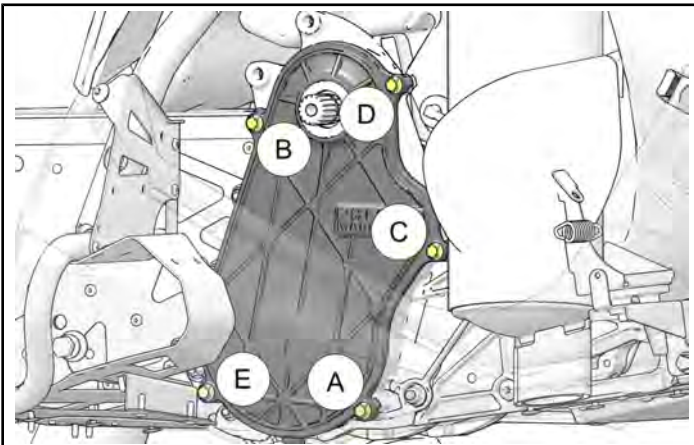
- Verify the gasket is installed flush in the cover and install the cover making sure the cover engages the two locating dowels evenly.
- Lightly tap on the cover with a soft-faced hammer to seat the cover.



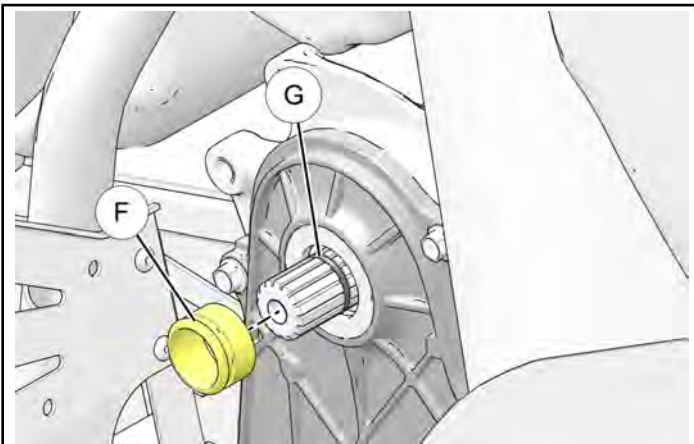
- c. Install the cover screws. Torque screws to specification using the specified sequence going in order from (A) to (E).

### TORQUE

9.5 ft. lbs. (13 Nm)

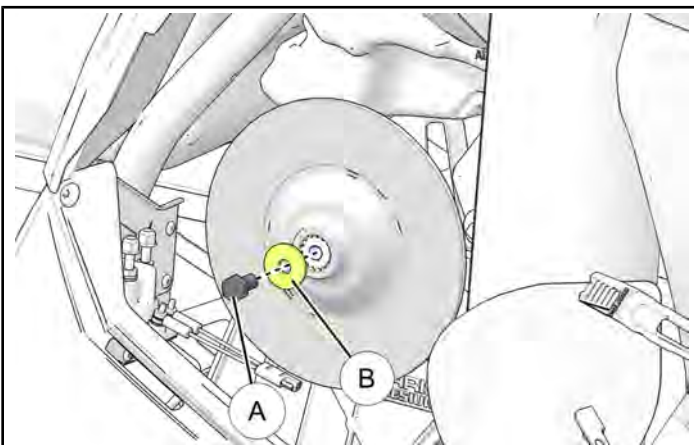


- d. Install the o-ring (G) on to the jackshaft. Verify the o-ring is sitting in the groove. Install the seal sleeve (F) with the groove facing out.

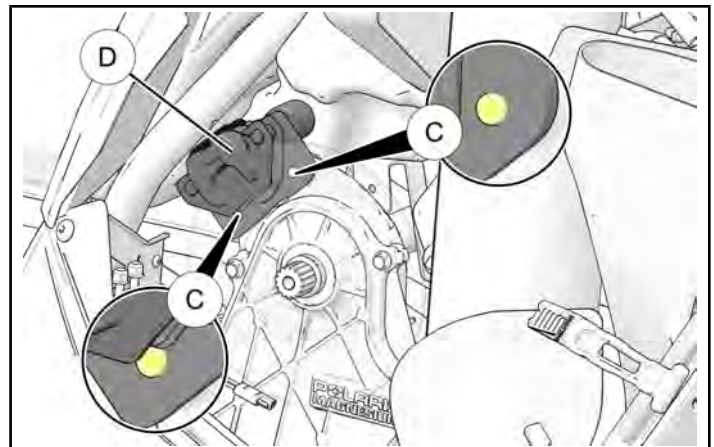


## 2. Reinstall brake disc and caliper.

- a. Clean the brake disc with brake cleaner and then install on to jackshaft.



- b. Install the brake caliper (D).



- c. Torque fasteners (C) to specification.

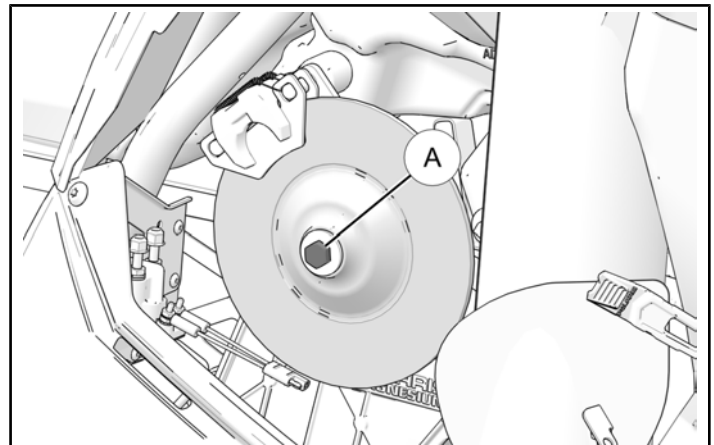
### TORQUE

18.4 ft. lbs. (25 Nm)

- d. Set the parking brake. Torque the brake disc screw (31) to specification. Release the parking brake.

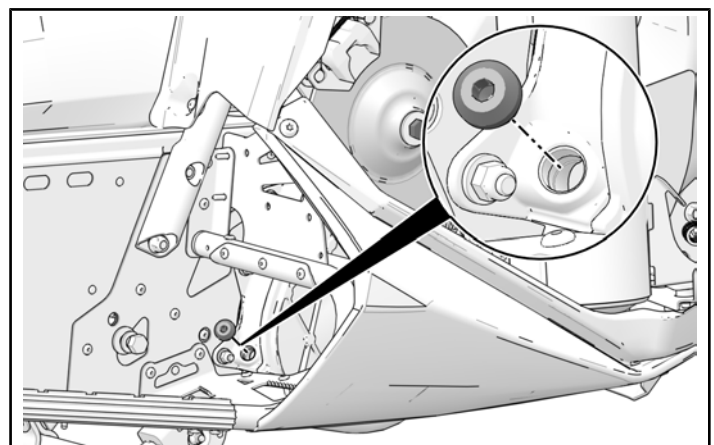
### TORQUE

30 ft. lbs. (40 Nm)



## 3. Install new chaincase lubricant.

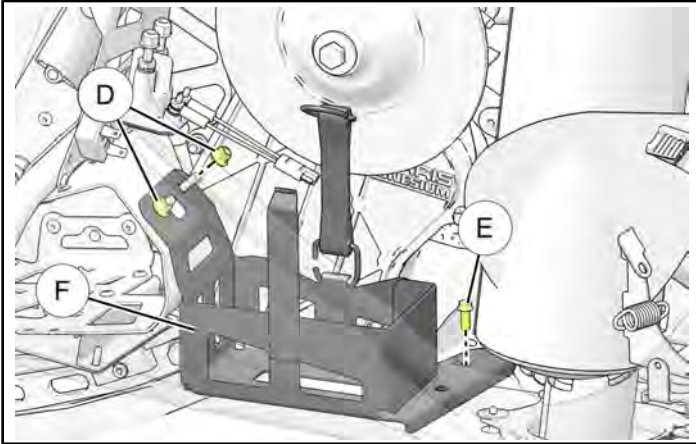
- a. Remove chaincase fill plug as shown.



- b. Refill the chaincase with synthetic 80W lubricant. Fill to specification or when lubricant reaches the fill plug bore opening.
  - c. Reinstall fill plug. Tighten until snug.
4. Reinstall battery box. *(If Equipped)*
- a. Place battery box into position and secure with original fasteners ① and ②. Torque fasteners to specification.

#### TORQUE

7.5 ft. lbs. (10 Nm)

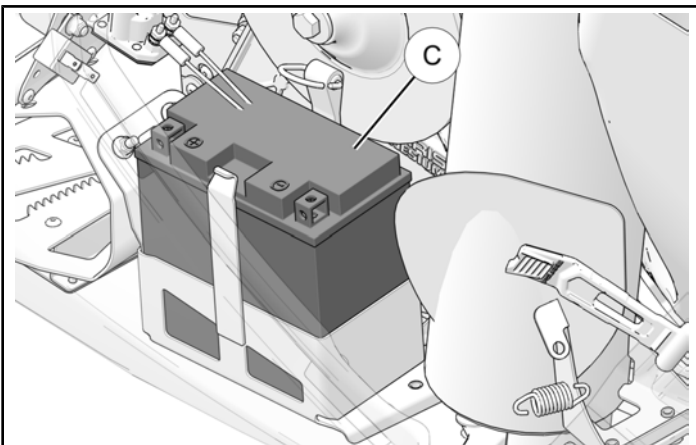


5. Reinstall battery. *(If Equipped)*

#### ⚠ 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.

- a. Place battery ③ into battery box as shown.



- b. 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

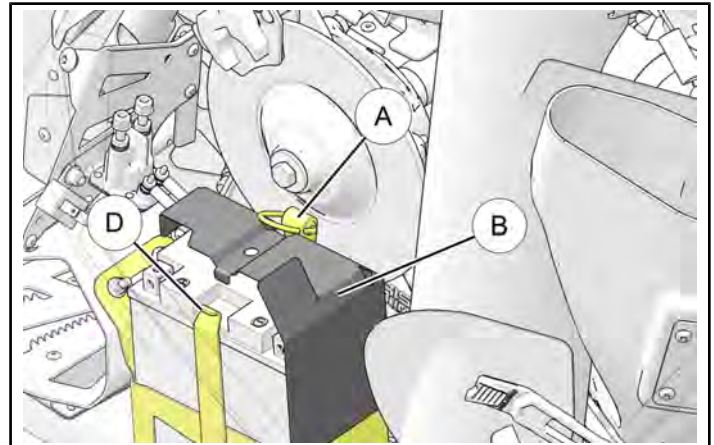
40 in. lbs. (4.5 Nm)

- c. 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)

- d. Reinstall battery cover ④ and secure with rubber strap ⑤. Ensure hook on rubber strap is fully seated in the groove on the mounting tab ⑥.



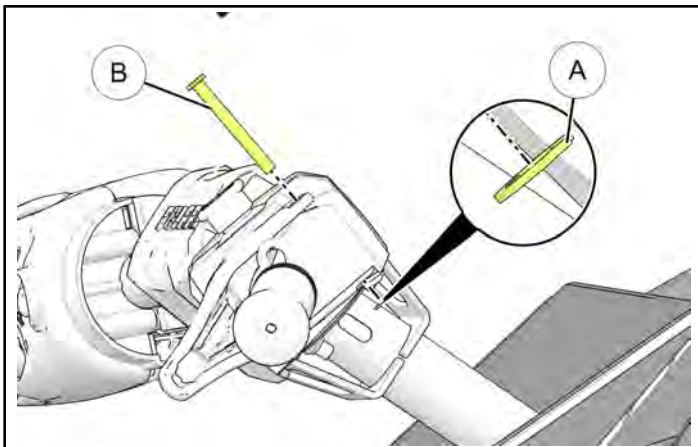
## THROTTLE

### REMOVAL

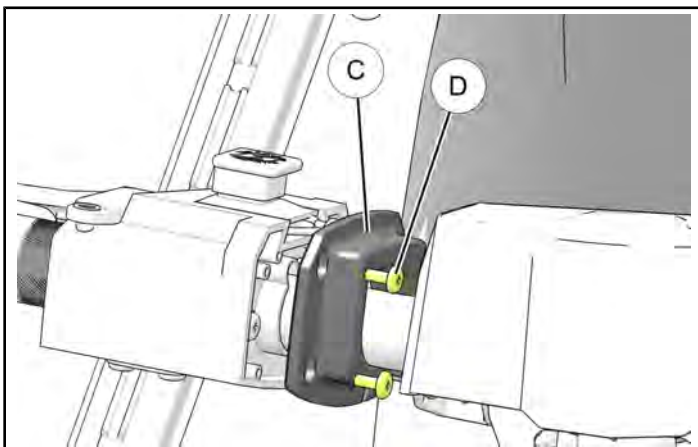
1. Note the number and location of spacer washers on the throttle pin BEFORE removing E-clip or throttle pin. These will need to be replaced with the washer provided when installing the new throttle.
2. Remove existing throttle lever.
  - a. Unseat throttle cable.



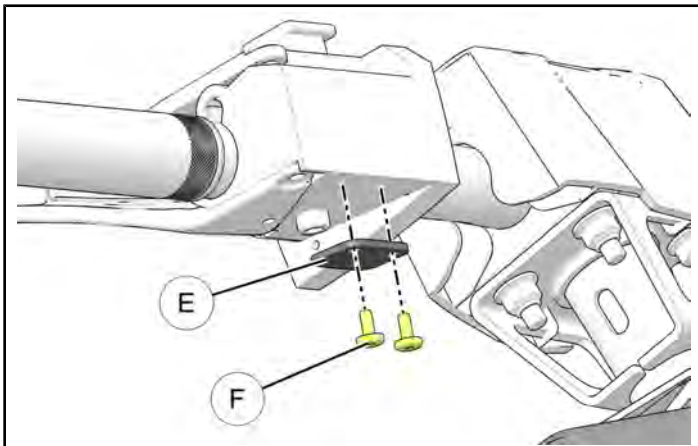
- b. Remove E-clip (A) and throttle pivot pin (B).



- c. Remove the four screws (D) holding the throttle block cover (C) on and remove cover.



- d. Remove the two screws and wire retaining cover to allow the heated throttle flipper wire and throttle flipper to be removed.

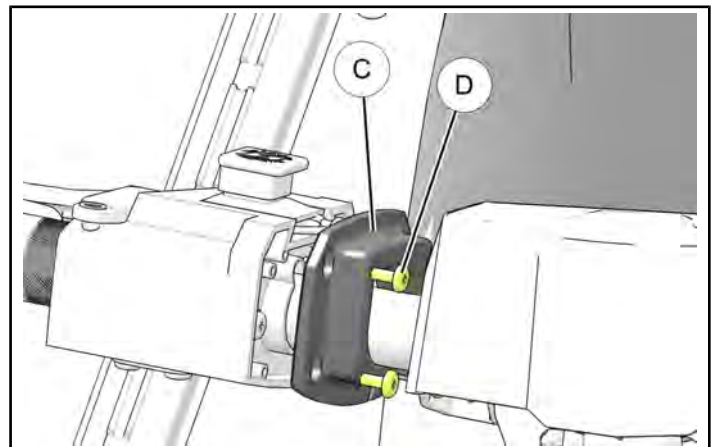


- e. Follow thumb warmer wire down to the electrical bag located under the console. Unplug the thumb warmer connection and remove throttle lever.

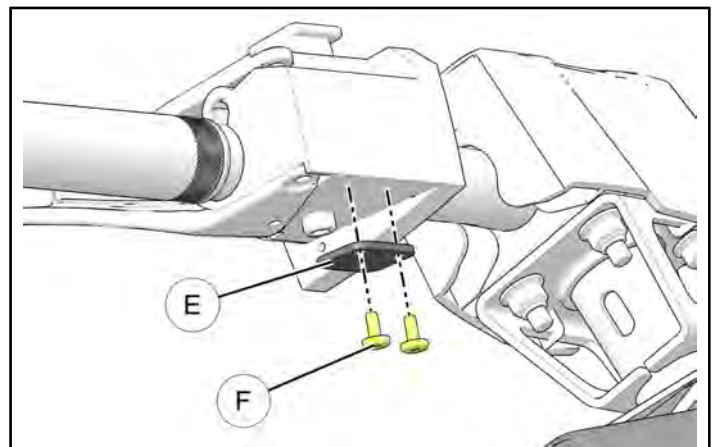
## NEW COMPONENT INSTALLATION

1. Install provided throttle lever.

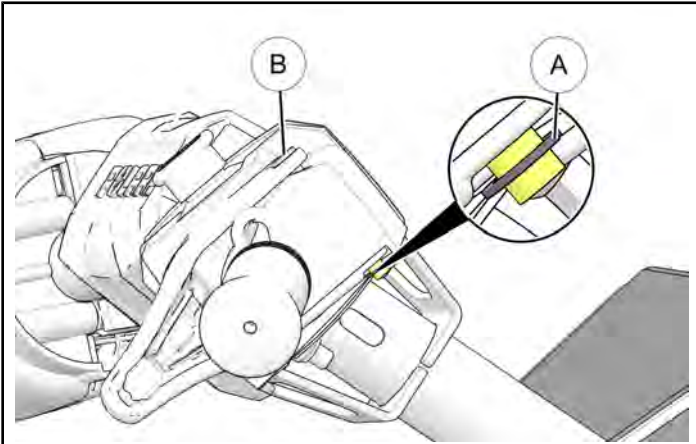
- Plug in the new throttle flipper heater wire into previously unplugged heater wire connection.
- Route heater wire back to throttle flipper and through the groove in the bottom of the throttle block.
- Place throttle block cover (C) back into position and secure with previously removed fasteners (D).



- d. Reinstall the wire retaining cover (E) and secure with the two previously removed screws (F).



- e. Install throttle pin (B) and secure with E-clip (A) being sure the supplied spacers are installed in the original locations to allow free movement of the throttle flipper.



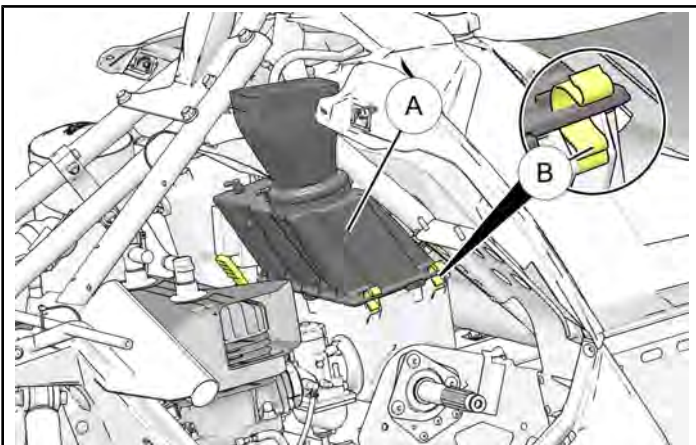
- f. Reconnect throttle cable. Be sure cable is fully seated into new throttle flipper.

2. With the engine off, operate throttle flipper through full range of motion and verify throttle is properly functioning.

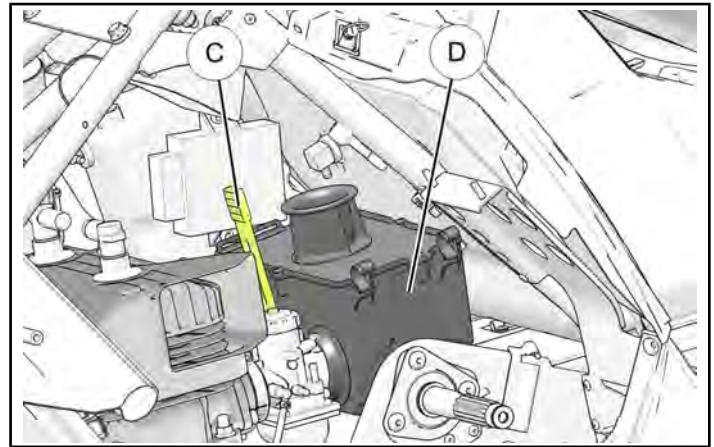
## ELECTRICAL

### REMOVAL

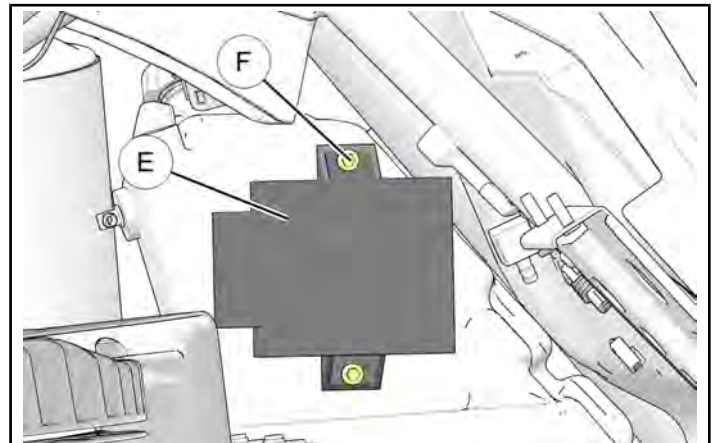
1. Remove existing CDI box.
  - a. If not already done so, remove clutch guard.
  - b. Remove the upper portion (A) of the airbox by rotating the two wire clips (B) outward.



- c. Next, remove the lower portion (D) of the airbox. To do so, unhook the rubber strap (C) from the mounting tab located on the back side of the engine and rotate the lower portion of the airbox towards the rear of the machine and lift upwards.



- d. Remove the two screws (F) securing the CDI (E) to the oil bottle assembly.



- e. Unplug and remove existing CDI (E).

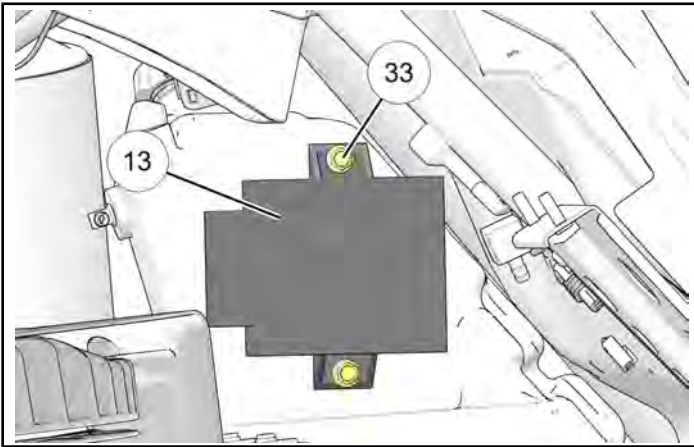
## NEW COMPONENT INSTALLATION

### 1. Install provided CDI box.

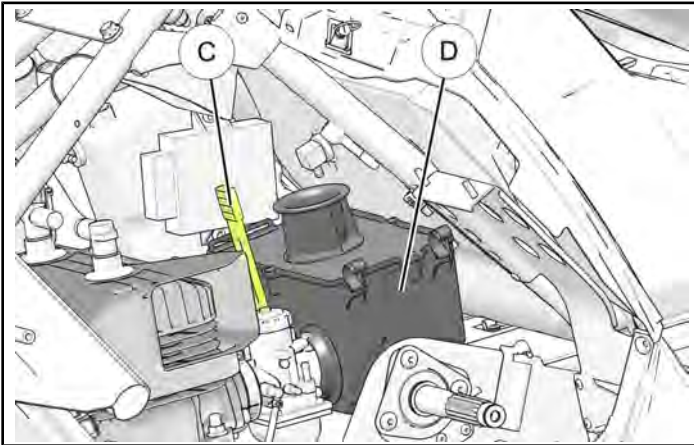
- Secure the new CDI box ⑬ into position using the supplied screws ③③ Torque to specification.

#### TORQUE

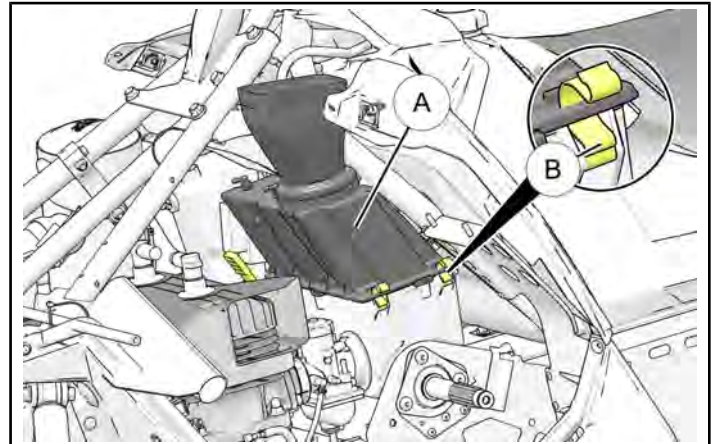
7.5 ft. lbs. (10 Nm)



- Reinstall lower portion ① of airbox being sure both rubber boots are fully seated around the carburetors. Secure with the rubber airbox strap ③.



- Reinstall upper portion ② of airbox being sure the hinge mechanism on the far side is fully engaged and then securing upper portion with wire retaining clips ④.



- Reinstall clutch guard.

### 2. Reinstall hood and side panels.

## VERIFY WORK

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

## 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

