

ST 93 RIPPER INSTALL KIT



P/N 2883777;2883778;2883779

APPLICATION

The Timbersled Ripper ST93 Install Kit is designed to fit all Timbersled ST90 and ST93 Ripper models. This includes; Timbersled Model No. J17RTAXXA, J18RTAXXA and J19RTAXXA which are designed specifically for the motorcycle models listed below:

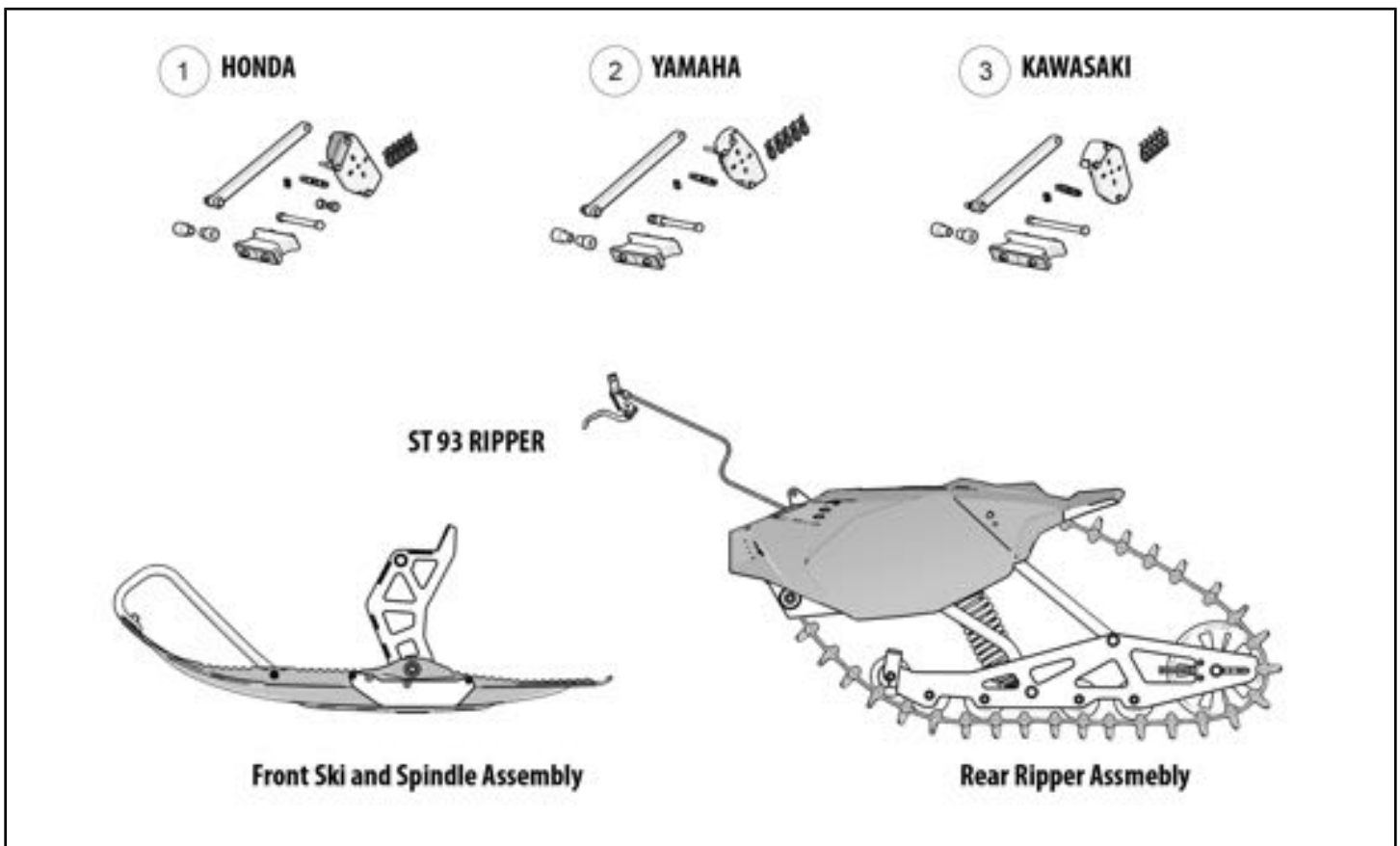
- Yamaha®— TTR110, 2008 to current
- Honda® — CRF110F, 2013 to current
- Kawasaki® — KLX110, 2003 to current; KLX110L, 2010 to current

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

The ST93 Ripper Install Kit includes: Qty.- 1, Install Kit for your specific motorcycle model. ST90 and ST93 Ripper sold separately.

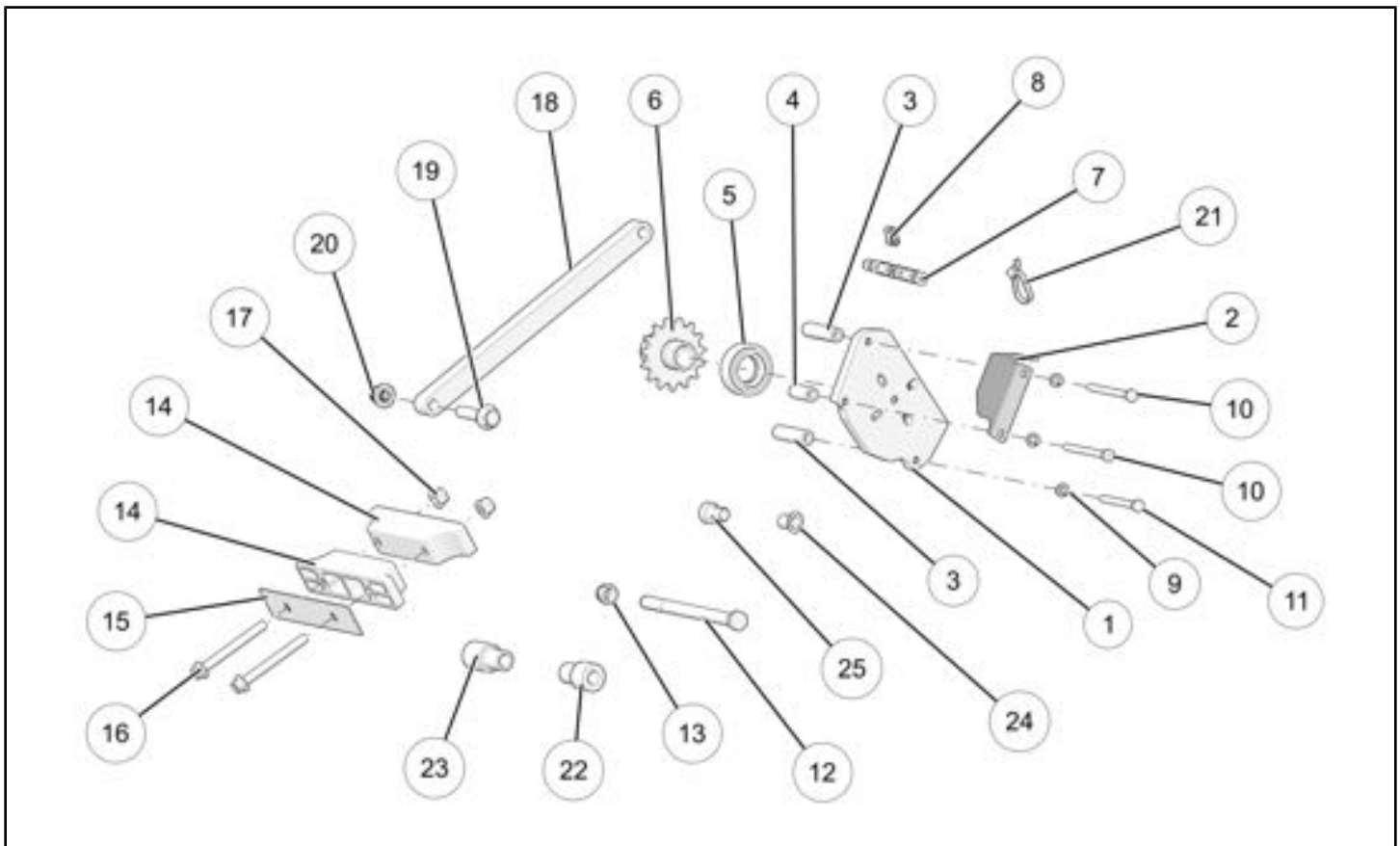


REF	QTY	PART DESCRIPTION	PART NUMBER
1*	1	Honda Install Kit	2883777
2*	1	Yamaha Install Kit	2883778
3*	1	Kawasaki Install Kit	2883779
4	1	ST 93 Ripper Install Kit instructions	9929172

Items marked (*) are specific to your make and model of motorcycle. Only items specific to your make and model of motorcycle are included in the Install Kit. See Install Kit drawings and parts lists for items specific to each Install Kit.

INSTALL KIT: 2883777

This install kit is specific to the Honda models listed in the application section:

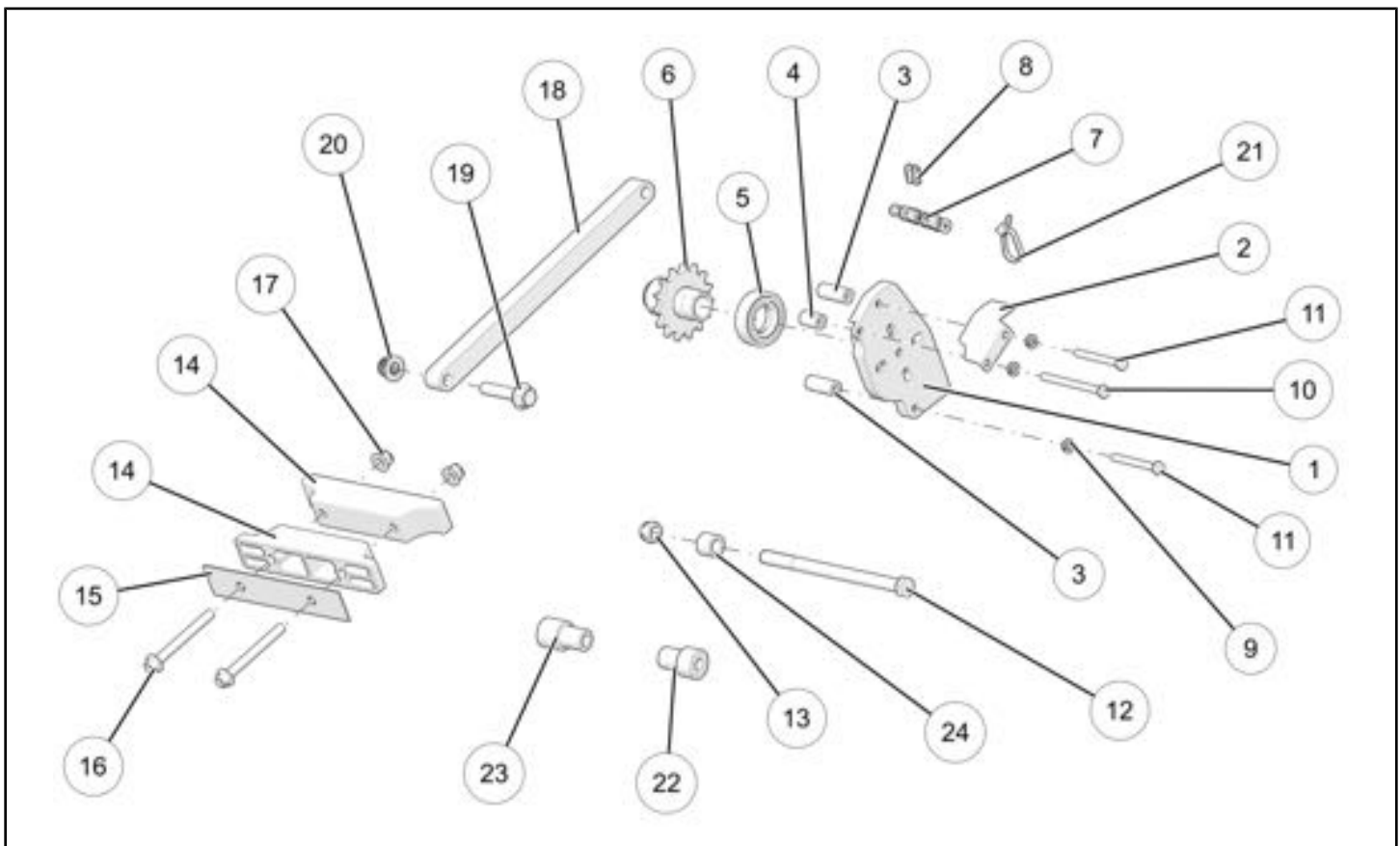


REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Asm, Backer Plate - Honda	1334174
2	1	Bracket, Chain Guard - Honda	5266683-458
3	2	Backer Spacer, Long - Honda	5142459
4	1	Backer Spacer, Short - Honda	5142460
5	1	Bearing-Ball	3514549
6	1	Drive Sprocket - Honda	1333882-329
7	1	Chain, 420 - Ripper	3222273
8	1	Master Link , 420 Chain	3222285
9	3	Lock Washer-Split	7557064
10	2	Screw - M6 X 1.0 X 75	7520729
11	1	Screw - M6 X 1.0 X 65	7520727
12	1	Screw - 7/16-14 X 6.5	7520726
13	1	Nut, Locking, 7/16-14	7542525
14	2	Clamp, Fork Tube - Ripper	5455474

REF	QTY	PART DESCRIPTION	PART NUMBER
15	1	Plate, Fork Tube, Clamp	5264330-458
16	2	Screw - M8 X 1.25 X 75	7519948
17	2	Nut, Locking - M8 X 1.25	7547332
18	1	Strut, Fixed - Ripper 260MM	5141221
19	1	Screw - M10 X 1.5 X 50	7518971
20	1	Nut, Locking - M10 X 1.5	7547423
21	5	Cable Tie	7081504
22	1	Reducer-Spindle - Honda, LH	5141390
23	1	Reducer-Spindle - Honda, RH	5141389
24	1	Reducer, Ripper LH - Honda	5141218
25	1	Reducer, Ripper RH - Honda	5141219

INSTALL KIT: 2883778

This install kit is specific to the Yamaha models listed in the application section:

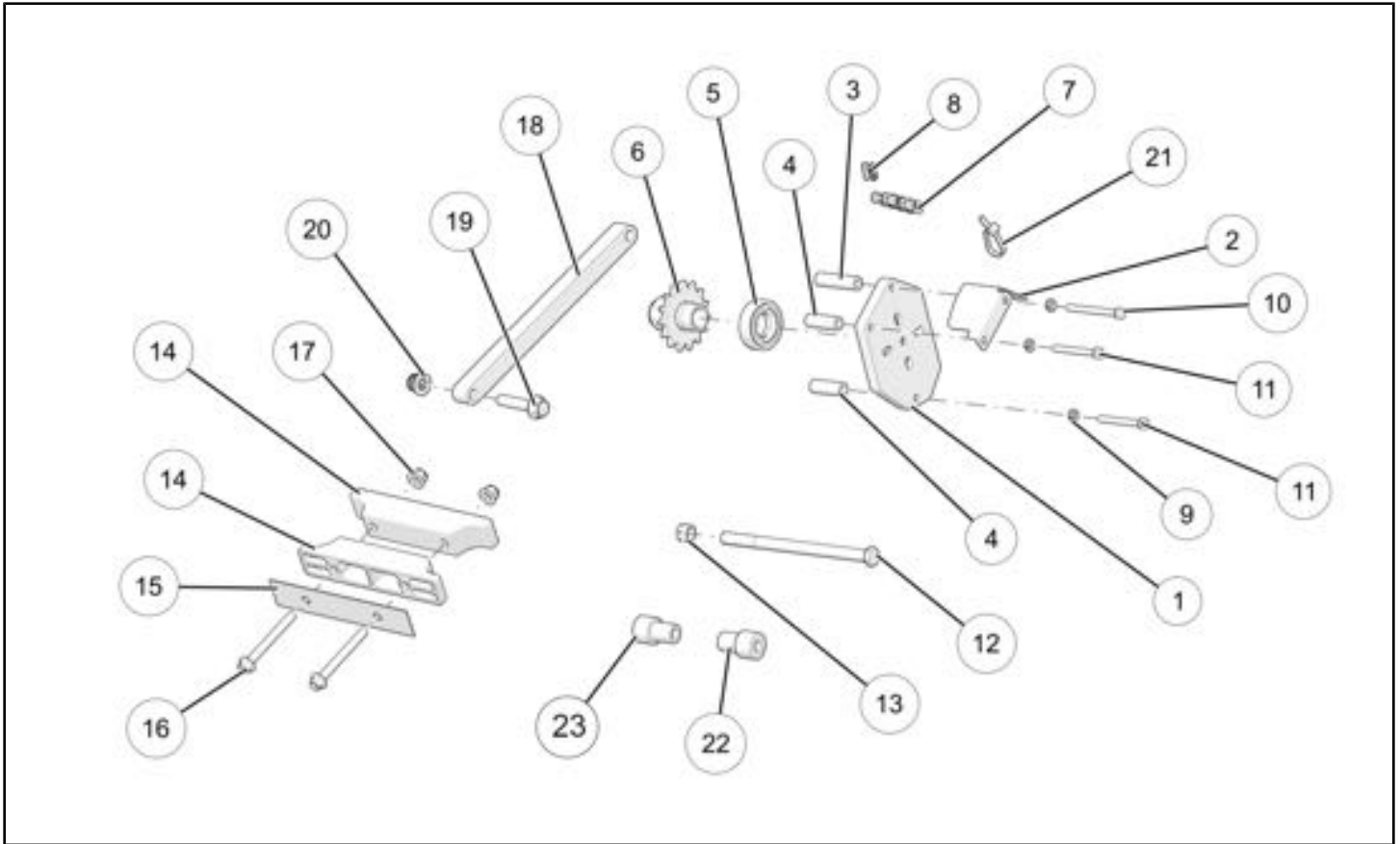


REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Asm, Backer Plate - Yamaha	1334172
2	1	Bracket, Chain Guard - Yamaha	5266675-458
3	2	Backer Spacer, Long - Yamaha	5142451

REF	QTY	PART DESCRIPTION	PART NUMBER
4	1	Backer Spacer, Short - Yamaha	5142452
5	1	Bearing-Ball	3514549
6	1	Drive Sprocket - Yamaha	1333888-329
7	1	Chain, 420 - Ripper	3222273
8	1	Master Link , 420 Chain	3222285
9	3	Lock Washer-Split	7557064
10	1	Screw - M6 X 1.0 X 80	7521016
11	2	Screw - M6 X 1.0 X 55	7520728
12	1	Screw - 7/16-14 X 6.5	7520726
13	1	Nut, Locking, 7/16-14	7542525
14	2	Clamp, Fork Tube - Ripper	5455474
15	1	Plate, Fork Tube, Clamp	5264330-458
16	2	Screw - M8 X 1.25 X 75	7519948
17	2	Nut, Locking - M8 X 1.25	7547332
18	1	Strut, Fixed - Ripper 260MM	5141221
19	1	Screw - M10 X 1.5 X 50	7518971
20	1	Nut, Locking - M10 X 1.5	7547423
21	5	Cable Tie	7081504
22	1	Reducer-Spindle - Yamaha, LH	5141394
23	1	Reducer-Spindle - Yamaha, RH	5141393
24	1	Spacer, Ripper - Yamaha	5141220

INSTALL KIT: 2883779

This install kit is specific to the Kawasaki models listed in the application section:



REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Asm, Backer Plate - Kawasaki	1334173
2	1	Bracket, Chain Guard - Kawasaki	5266678-458
3	1	Backer Spacer, Long - Kawasaki	5142454
4	2	Backer Spacer, Short - Kawasaki	5142455
5	1	Bearing-Ball	3514549
6	1	Drive Sprocket - Kawasaki	1333885-329
7	1	Chain, 420 - Ripper	3222273
8	1	Master Link , 420 Chain	3222285
9	3	Lock Washer-Split	7557064
10	1	Screw - M6 X 1.0 X 65	7520727
11	2	Screw - M6 X 1.0 X 55	7520728
12	1	Screw - 7/16-14 X 6.5	7520726
13	1	Nut, Locking, 7/16-14	7542525
14	2	Clamp, Fork Tube - Ripper	5455474
15	1	Plate, Fork Tube, Clamp	5264330-458
16	2	Screw - M8 X 1.25 X 75	7519948

REF	QTY	PART DESCRIPTION	PART NUMBER
17	2	Nut, Locking - M8 X 1.25	7547332
18	1	Strut, Fixed - Ripper 235MM	5141388
19	1	Screw - M10 X 1.5 X 50	7518971
20	1	Nut, Locking - M10 X 1.5	7547423
21	5	Cable Tie	7081504
22	1	Reducer, Ripper LH - Kawasaki	5141392
23	1	Reducer, Ripper RH - Kawasaki	5141392

TOOLS REQUIRED

- Safety Glasses
- Screwdriver, Standard
- Pliers, Slip Joint
- Pliers, Side Cutting
- Hex Key Set, Metric
- Socket Set, Metric

IMPORTANT

Your ST 93 RIPPER INSTALL 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

2-4 Hours

INSTALLATION INSTRUCTIONS

MOTORCYCLE DISASSEMBLY:

NOTE

The disassembly process listed is universal for all motorcycles using the ST 93 Ripper kit. This process may vary slightly between makes and models. Refer to your host bike's owners manual for specific references and disassembly procedures.

1. Place motorcycle on a stand or suitable support where both wheels are off the ground. Secure properly to prevent motorcycle from tipping when wheels are removed. (An adjustable stand is helpful for reassembly.)
2. Remove the seat and side panels.
3. Remove chain by disconnecting master link.
4. Remove the rear brake lever from frame and let hang (this includes the spring).
5. Remove upper rear shock bolt or pin.

NOTE

Keep upper shock bolt for later use as this item will be reinstalled.

6. Remove the rear swing arm bolt (this will drop the entire swing arm assembly off the motorcycle) and remove the shock, tire, brake, and swing arm assembly from the motorcycle as a complete unit.

NOTE

It is recommended to cable tie all bushings, spacers, etc. to their corresponding parts at all pivoting points to prevent losing any parts during storage.

7. Remove the front brake lever and cable retainer bolts from the front forks. (On some models use the provided cable tie to secure start button).
8. Loosen the front axle bolt and remove the front wheel.

NOTE

Keep front axle bolt for later use, this item will be reinstalled.

9. Remove the front drive sprocket and sprocket cover.
10. Check to ensure all previous steps are complete. You are now ready to start the assembly portion of the process.

REAR RIPPER ASSEMBLY

SWING ARM SPACER APPLICATION

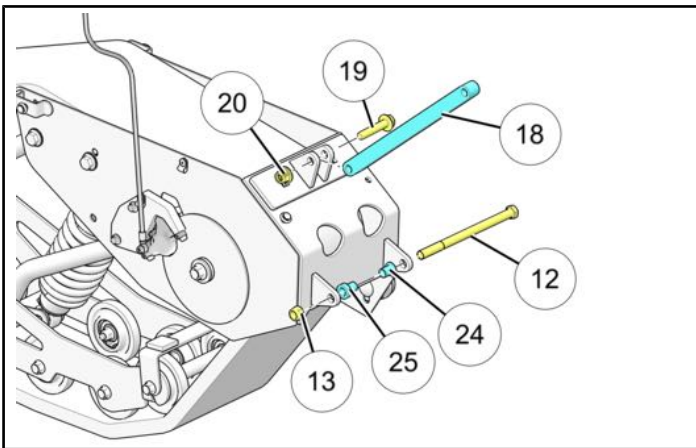
	Left Side		Right side	
	Spacer Spec.	Part #	Spacer Spec.	Part #
Honda	0.80 mm	5141218	6.87 mm	5141219
Kawasaki	N/A	N/A	N/A	N/A
Yamaha	N/A	N/A	15 mm	5141220

*Left and Right as positioned sitting on the bike

1. Position the Ripper rear track assembly up to the rear swing arm bolt location on the bike. Some fit kits will require spacers (24/25) on one or either side of the frame, located between the Ripper frame mount brackets and the motorcycle's swing-arm bolt bracket location. See swing arm spacer application table located at the beginning of this section for specific motorcycle model spacers and locations.

NOTE

Kawasaki KLX models do not require any spacers. Honda CRF models require left and right swing arm bolt spacers/reducers (24/25). Yamaha TTR models require a single spacer positioned on the right side of the motorcycle between the ripper frame bracket and the motorcycle frame.



2. Slide provided 7/16" x 6-1/2" swing arm bolt (12) in from the left hand side of the motorcycle and tighten lock nut (13) to listed torque specification.

TORQUE

54 Nm (40 Ft. Lbs)

3. Bolt the lower portion of the strut rod **18** to the rear Ripper assembly using the provided bolt **19** and lock nut **20**. **DO NOT TIGHTEN** until after upper portion of strut rod has been bolted in place.
4. See note below before continuing.

NOTE

KAWASAKI MODELS ONLY skip Step 4 below and complete Steps 5 and 6. For Honda and Yamaha models continue with Step 4.

Bolt upper portion of the strut rod **18** into the motorcycle's upper shock bracket using the bikes upper shock mount bolt or pin. For motorcycles using a bolt, torque to your specific motorcycle manufacturer's specifications. Once you have the upper portion of the strut rod in place, Torque the lower portion of the strut rod to the specification listed below.

TORQUE

61 Nm (45 Ft. Lbs)

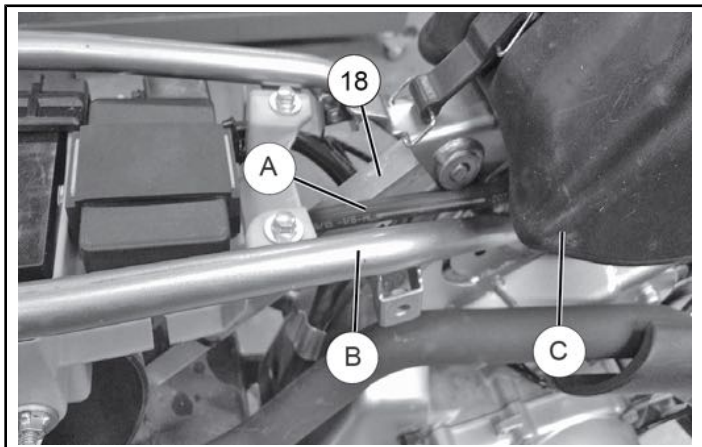
For Honda and Yamaha models continue to the *Brake Line Assembly and Routing* section.

5. See note below before continuing.

NOTE

This step includes the upper strut rod installation and brake line routing for Kawasaki models only.

Once you've completed Step 3 and before you fasten the upper strut rod bolt, move the strut rod **18** up to provide enough clearance, feed the brake line **A** and master cylinder over top of the rear right sub-frame tubing **B** of the motorcycle and under the gas tank **C** as seen in the image below. Now move the top of the strut rod **18** back down into position lining up the mounting holes.

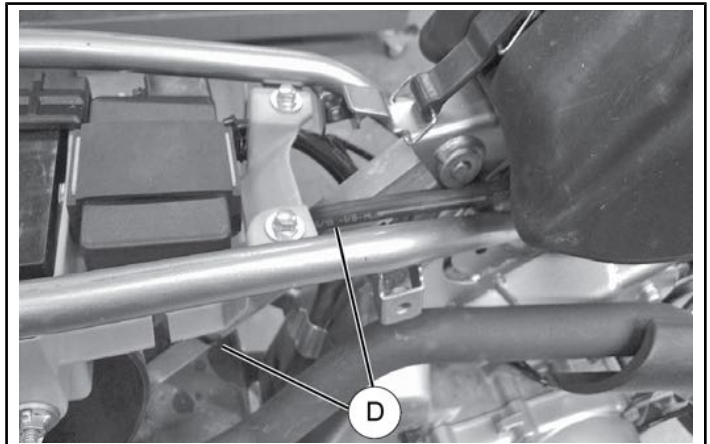


Finish bolting in place using the original upper strut rod bolt or pin and torque to your specific motorcycle manufacturer's specifications. Once you have the upper portion of the strut rod in place, Torque the lower portion of the strut rod to the specification listed below.

TORQUE

61 Nm (45 Ft. Lbs)

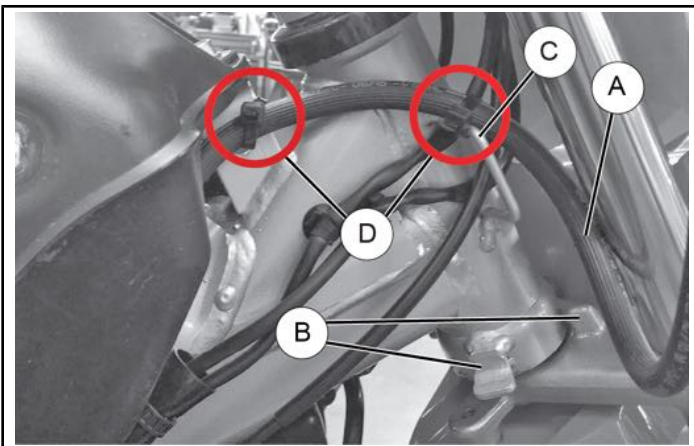
6. Keeping all of the slack out of the brake line, fasten the brake line to the top and the bottom of the strut rod with provided cable ties in the locations **D** indicated in the image below.



⚠ WARNING

When routing brake lines it is critical that you keep all brake lines away from any surfaces, such as engine or exhaust, that can become hot while operating the vehicle. Failure to comply will adversely affect the vehicles brake system and may lead to severe injury or death.

7. Run the brake line (A) forward under the bottom of the gas tank along the main frame of the motorcycle towards the front neck-tube. Make sure there is a minimum of one inch of clearance between the brake line and the lower head set turning stop posts (B) to prevent the brake line from being pinched. Place another cable tie (D) around the brake line fastening it to the motorcycle's throttle cable keeper bracket (C). The remaining brake line can free hang up to the master cylinder mounted on the right handle bar. Adjust the pitch of the brake lever, ensuring it is easily reached and easy to pull. Tighten the brake lever perch hand tight being careful to not strip the mounting perch threads. If needed, you can loop any remaining slack in the brake line in between the right fork tube upper and the neck-tube of the motorcycle frame as seen in the photo below. (Honda model shown for reference)



⚠ WARNING

When routing brake lines, make sure there is a minimum of one inch of clearance between the brake line (A) and the lower head set turning stop posts (B) to prevent the brake line from being pinched. Failure to comply will adversely affect the vehicles brake system and may lead to severe injury or death.

For Kawasaki models, once you have completed Step 7 continue to the *Drive Chain and Sprocket Assembly* section.

BRAKE LINE ASSEMBLY AND ROUTING

⚠ WARNING

When routing brake lines it is critical that you keep all brake lines away from any surfaces, such as engine or exhaust, that can become hot while operating the vehicle. Failure to comply will adversely affect the vehicles brake system and may lead to severe injury or death.

• Yamaha Models

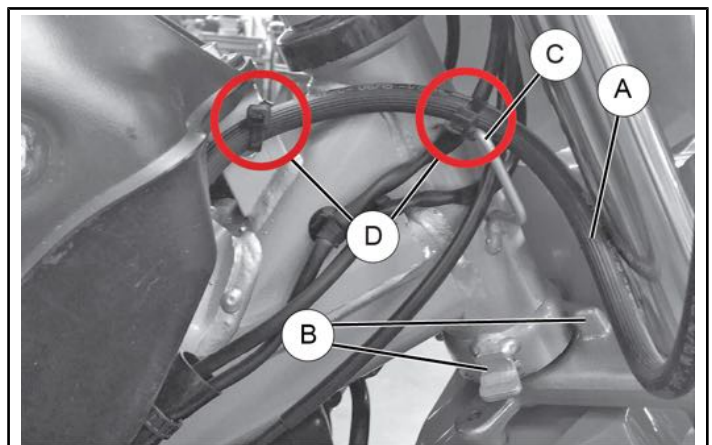
NOTE

Refer to images of Honda model for routing references.

- For the Yamaha TTR models, run the brake line forward either on top of the strut rod or located parallel against the left hand side of the strut rod. Secure the brake line to the strut rod with a cable tie located at the top of the strut rod and one at the bottom of the strut rod in a similar fashion to the photo for the Honda model. From here feed the brake line and master cylinder to the right side of the motorcycle feeding the brake line between the motorcycle's upper sub-frame column and the wiring harness brackets on the frame. This will help hold the brake line against the motorcycle's frame and as far away from the exhaust system as possible. From here route the brake line forward towards the front of the motorcycle underneath the motorcycle's fuel tank. Place another cable tie near the front of the motorcycle securing the brake line to the motorcycle's lower horizontal frame tube.

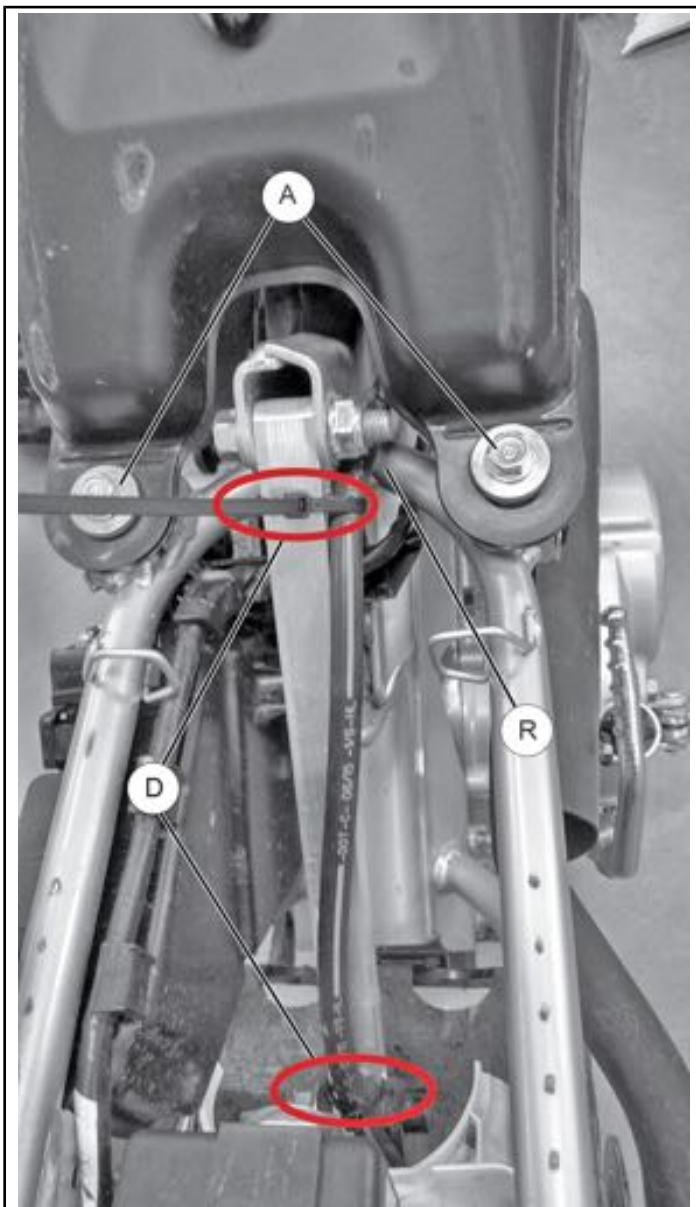
⚠ WARNING

When routing brake lines, make sure there is a minimum of one inch of clearance between the brake line (A) and the lower head set turning stop posts (B) to prevent the brake line from being pinched. Failure to comply will adversely affect the vehicles brake system and may lead to severe injury or death.



• **Honda Models**

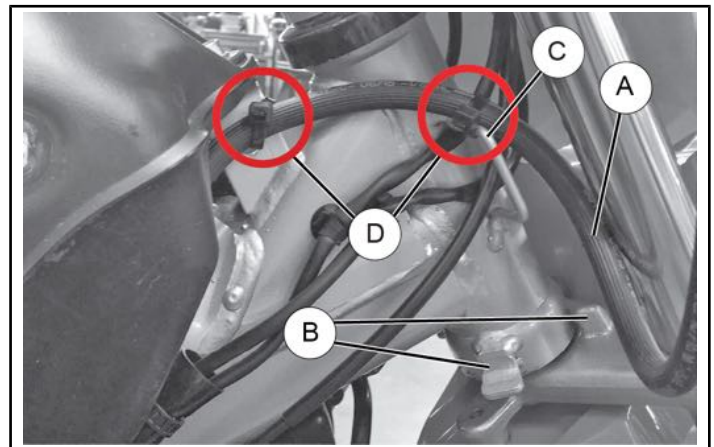
- Remove the two rear gas tank bolts (A) and loosen the front tank bolt on the motorcycle. Lift up on the rear of the gas tank giving yourself enough room to feed the brake line and master cylinder over top of the rear right sub-frame tubing of the motorcycle and under the gas tank as indicated in the image below (R). Feed the brake line forward under the bottom of the gas tank along the main frame of the motorcycle. Keeping all of the slack out of the brake line fasten the brake line to the top and the bottom of the strut rod with cable ties as shown (D). Reinstall the two rear gas tank bolts (A) previously removed and torque to your specific motorcycle manufacturer's specification. Next, torque the front tank bolt to manufacturer's specifications. See image below for brake line routing location reference (R).



- Near the front of the motorcycle where the brake line is approaching the front neck tube of the motorcycle, cable tie the brake line to the front gas tank frame mount and another cable tie to the bikes frame-mounted wire harness on the motorcycle's neck tube. See photo below for cable tie locations (D). The remaining brake line can free hang up to the master cylinder mounted on the right handle bar. Adjust the pitch of the brake lever, ensuring it is easily reached and easy to pull. Tighten the brake lever perch hand tight being careful to not strip the mounting perch threads. See image below:

⚠ WARNING

When routing brake lines, make sure there is a minimum of one inch of clearance between the brake line (A) and the lower head set turning stop posts (B) to prevent the brake line from being pinched. Failure to comply will adversely affect the vehicles brake system and may lead to severe injury or death.



DRIVE CHAIN AND SPROCKET ASSEMBLY

1. Install provided sprocket ⑥ onto motorcycle transmission output shaft.
2. Place backer plate spacers ③/④ and chain guard ② into position on the backer plate ① as shown and start bolts ⑩/⑪ with lock washers ⑨ as shown to hold spacers and chain guard in position.

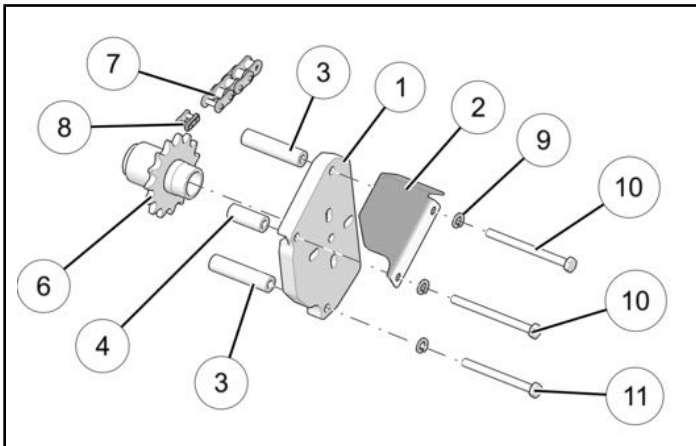
IMPORTANT

Reference your specific install kits contents image at the beginning of the instructions for spacer ③/④ and bolt ⑩/⑪ locations as they vary per kit. Make sure to use Blue Loctite® 243 on the provided 3 button head screws ⑩/⑪.

3. Next, slide backer plate, spacer and chain guard assembly onto transmission output shaft and into position.
4. Tighten sprocket backer plate ① to the engine case and torque to bike manufacturers specifications before chain ⑦ is installed and chain tension is set.

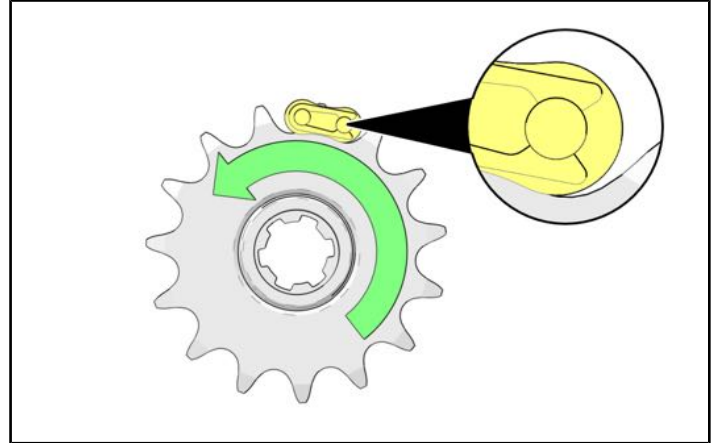
NOTE

Reference your host bikes owner's manual or manufacturers specifications for proper torque specifications.



5. Route chain ⑦ around both front and rear sprockets.

6. Complete the assembly of the chain with the master link ⑧ provided. Be sure to install the master link with the opening of the link facing rearward in relation to the chain direction as shown.



7. Set the proper chain tension by loosening chain slider nut and bolt. Slide the chain slider up or down until 1/2"-5/8" of vertical deflection is met in the upper chord of the drive chain. Torque chain slider nut to specification below when proper tension is achieved.

TORQUE

25Nm (18 Ft. Lbs)

IMPORTANT

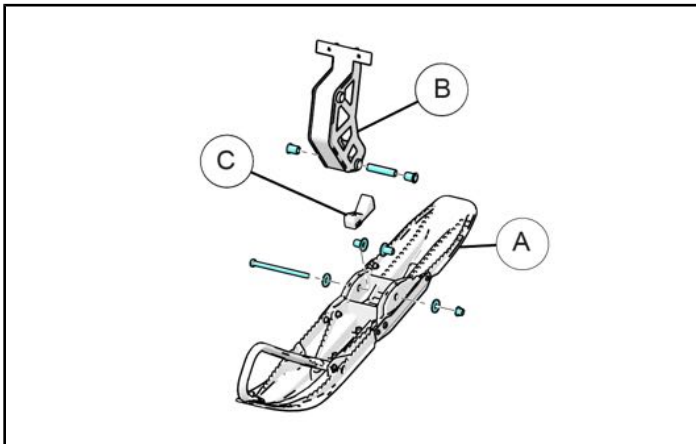
Chain will stretch within the first 5hrs. You **MUST** check for proper chain tension after the initial break-in period and readjust as necessary. Chain slider is not intended to roll and can be rotated as needed to keep proper chain tension on usable surface of slider.

FRONT SKI AND SPINDLE ASSEMBLY

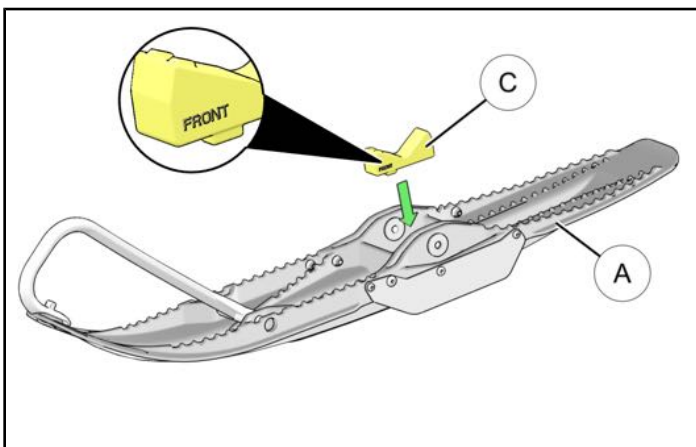
SPINDLE SPACER APPLICATION				
	Left Side		Right side	
	RDCR Spec.	Part #	RDCR Spec.	Part #
Honda	18.03 mm	5141390	25.4 mm	5141389
Kawasaki	17.35 mm	5141392	17.35 mm	5141392
Yamaha	14.91 mm	5141394	20.49 mm	5141393

*Left and Right as positioned sitting on the bike

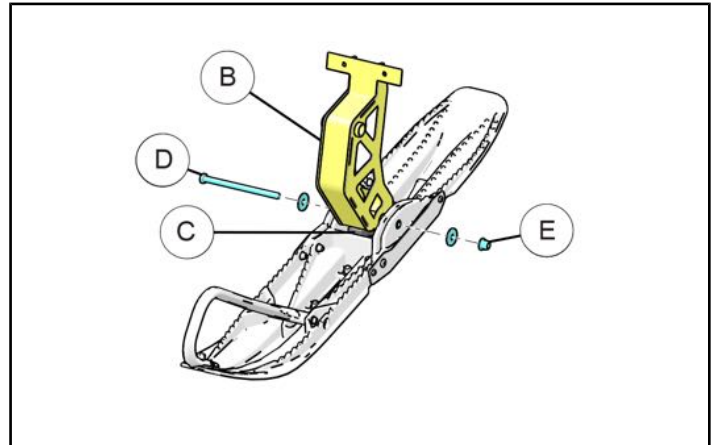
1. Locate the front ski (A), spindle (B), ski rubber (C), and provided hardware.



2. Place the Ski Rubber (C) on top of the center of the ski (A) with the indicated "Front" of the Ski Rubber towards the front tip of the Ski.



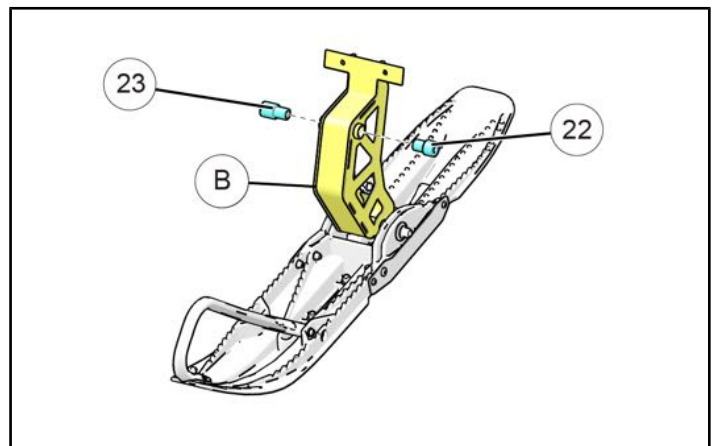
3. Place the lower portion of the Spindle (B) on top of the Ski Rubber (C) in the ski saddle as shown below. Line up the bottom bolt hole and insert the M 10 x 155 mm bolt (D) and install nut (E) onto bolt and torque to specification listed below.



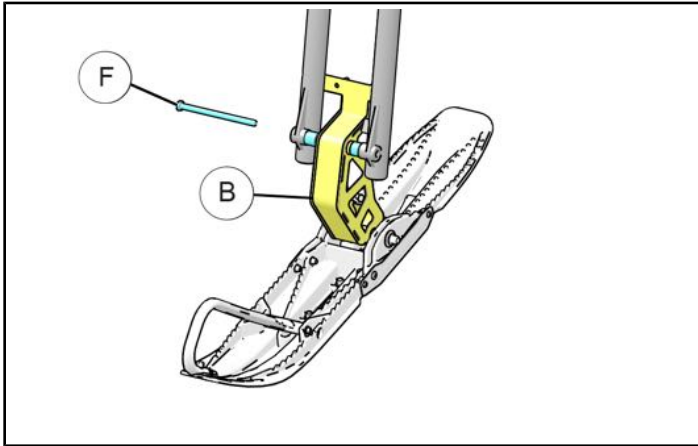
TORQUE
50Nm (37 Ft. Lbs)

⚠ WARNING
Failure to torque fasteners as directed will adversely affect the steering system and may lead to severe injury or death.

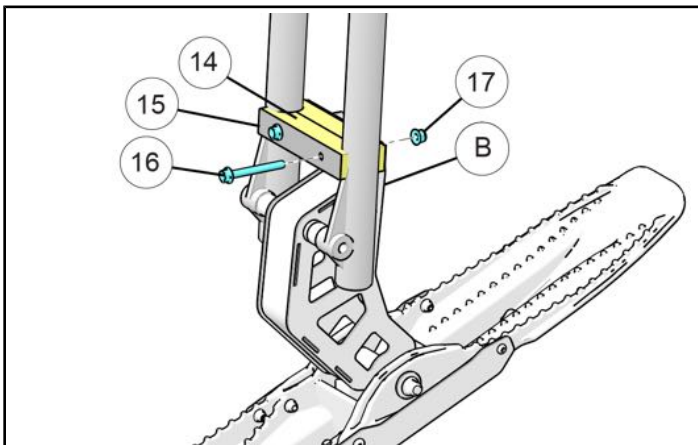
4. Insert front spindle reducers (22/23) into spindle (B). The spindle reducers will change per motorcycle manufacturer. Your individual motorcycle model fit kit will come with the appropriate spindle reducers/spacers, see the spindle spacer application table at beginning of this section for spindle reducer placement for your specific motorcycle model.



- Use existing front axle bolt (F) to attach the front spindle (B) to the forks. For now, just snug the front axle bolt, do not tighten until after step 6.



- Using the composite fork clamp (14) (fork clamp halves are identical), place one half of the fork clamp in front of the fork tubes with the concave portions sitting around the face of the lower fork tube. Take the other half and mate it around the back side of the fork tubes between the fork tubes and the spindle backer plate (B). Take the fork clamp plate (15) and place it over the face of the front fork clamp lining up the bolt holes of the washer plate with the clamp.



Using the provided two fork clamp bolts (16) supplied with your kit, insert bolt through the fork clamp plate, both halves of the fork clamp, and through the spindle backer plate. Apply the supplied locking nuts (17) and torque to specification listed below.

TORQUE

20Nm (15 Ft. Lbs)

- Tighten front axle bolt (F).

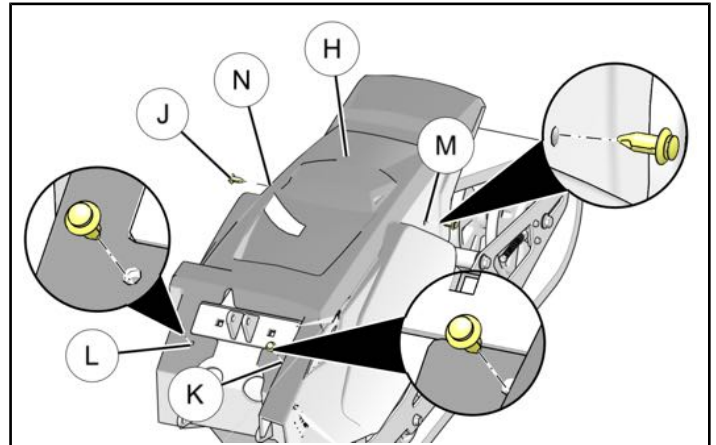
IMPORTANT

Refer to manufacturers specifications for proper torque setting.

- Check to ensure all previous steps are complete then move on to the rear cowling assembly section.

REAR COWLING ASSEMBLY

- Install the rear cowling (H) with the provided, Qty.–4, nylon rivet fasteners (J). To do so, first slide cowling (H) forward under bikes rear fender making sure the front left chain guard portion of the cowling is positioned behind the Drive Sprocket Plate.



- Next, start with the front left side mounting hole (K) and insert nylon rivet fastener (J). Repeat process for the front right side mounting hole (L), inserting nylon rivet fastener securely.

NOTE

The rear cowling is pliable, the easiest process for lining up the rear fastener mounting holes of the skid frame with the cowling holes is to pull out on the bottom most part of the cowling in the middle of the molding. This will pull the rear hole in the cowling forward allowing you to line up the holes to insert the nylon rivet fastener.

- Repeat this process for both left (M) then right (N) rear mounting holes.
- Check to ensure all tools are accounted for and all steps have been completed in the proper order.

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.

