



DIRECT REPLACEMENT  
INSTALLATION AND SETUP GUIDE

SUMMIT QSE COIL REAR TRACK SHOCK KITS

---

## FACTORY RACE SERIES

---

853-02-067: Kit: FOX Factory AM, BRP, Summit, FT [14.68, 4.35] 1.5 Zero QS3  
LRW, RT [18.09, 6.25] 1.5 Zero QSE LRW



FOX products are subject to continuous development and improvement. To find the most up to date product information such as color installation manuals, videos, and FAQs please visit:

**<http://ridefox.com/manuals>**

To locate the correct installation manual, use the 8-digit part number found on the end of the packaging box (see illustration below):



# CONTENTS

---

<b>COMPATIBILITY CHART</b>	<b>2</b>
<b>KIT CONTENTS</b>	<b>3</b>
<b>QSE HARNESS WIRING DIAGRAM</b>	<b>4</b>
<b>REQUIRED TOOLS</b>	<b>5</b>
<b>QSE SWITCH OPERATION</b>	<b>6</b>
<b>SAFETY INSTRUCTIONS</b>	<b>7</b>
<b>INSTALLATION GUIDELINES</b>	<b>8</b>
<b>DISASSEMBLY &amp; TUNNEL PREPARATION</b>	<b>9</b>
<b>TRACK SHOCK INSTALLATION</b>	<b>10</b>
<b>TRACK HARNESS ROUTING</b>	<b>11</b>
<b>MAIN HARNESS ROUTING</b>	<b>13</b>
<b>SWITCH INSTALLATION &amp; ROUTING</b>	<b>15</b>
<b>FINAL CHECKS</b>	<b>16</b>
<b>MAINTENANCE</b>	<b>17</b>
<b>WARRANTY INFORMATION</b>	<b>18</b>

# COMPATIBILITY CHART

## INSTRUCTIONS COVER KIT LISTED BELOW:

853-02-067: Kit: FOX Factory AM, BRP, Summit, FT [14.68, 4.35] 1.5 Zero QS3 LRW, RT [18.09, 6.25] 1.5 Zero QSE LRW

**IMPORTANT:** Kit not compatible with MY26 Summit X models.

SUMMIT FITMENT CHART					
YEAR	MODEL DESCRIPTION	MOTOR	PLATFORM	REAR SUSPENSION	TRACK LENGTH (INCH)
2024	Summit X with Expert Package	850 E-TEC / 850 E-TEC Turbo	Rev Gen 5	tMotion XT	154 / 165 / 175
2024	Summit X	850 E-TEC / 850 E-TEC Turbo		tMotion X	154 / 165
2024	Summit Adrenaline with Edge Package	600R E-TEC / 850 E-TEC		tMotion X	146 / 154 / 165
2024	Summit Adrenaline	600R E-TEC / 850 E-TEC		tMotion X	146 / 154
2024	Freeride	850 E-TEC / 850 E-TEC Turbo		tMotion XT	146 / 154 / 165
2025	Summit X with Expert Package	850 E-TEC / 850 E-TEC Turbo		tMotion XT	154 / 165
2025	Summit X	850 E-TEC / 850 E-TEC Turbo		tMotion X	154 / 165
2025	Summit Adrenaline with Edge Package	600R E-TEC / 850 E-TEC		tMotion X	146 / 154 / 165
2025	Summit Adrenaline	600R E-TEC / 850 E-TEC		tMotion X	146 / 154
2025	Freeride	850 E-TEC / 850 E-TEC Turbo		tMotion XT	146 / 154 / 165
2026	Summit X with Expert Package	850 E-TEC / 850 E-TEC Turbo		tMotion XT	154 / 165
2026	Summit Adrenaline with Edge Package	600R E-TEC / 850 E-TEC / 850 E-TEC Turbo		tMotion X	146 / 154 / 165
2026	Summit Adrenaline	600R E-TEC / 850 E-TEC		tMotion X	146 / 154
2026	Freeride	850 E-TEC / 850 E-TEC Turbo		tMotion XT	146 / 154 / 165

**NOTE:** If you can not find your snowmobile listed above please contact FOX Service Center at 1.831.740.4619 or servicemn@ridefox.com to check your fitment.

# KIT CONTENTS



218-00-050 MAIN HARNESS



952-02-067 REAR TRACK SHOCK



951-21-147 FRONT TRACK SHOCK



218-00-051 TRACK HARNESS



218-00-059 SWITCH



026-00-017 CABLE TIES (5)



006-02-020 WIRE ROUTING SHIELD

M4



019-01-145 BOLT (3)



019-01-147 WASHER (6)



019-00-021 NYLON LOCK NUT (3)

M8



019-01-065 WASHER (1)



019-01-293 BOLT (1)

M6



019-01-103 BOLT (1)



019-01-247 WASHER (2)



019-00-022 NYLON LOCK NUT (1)

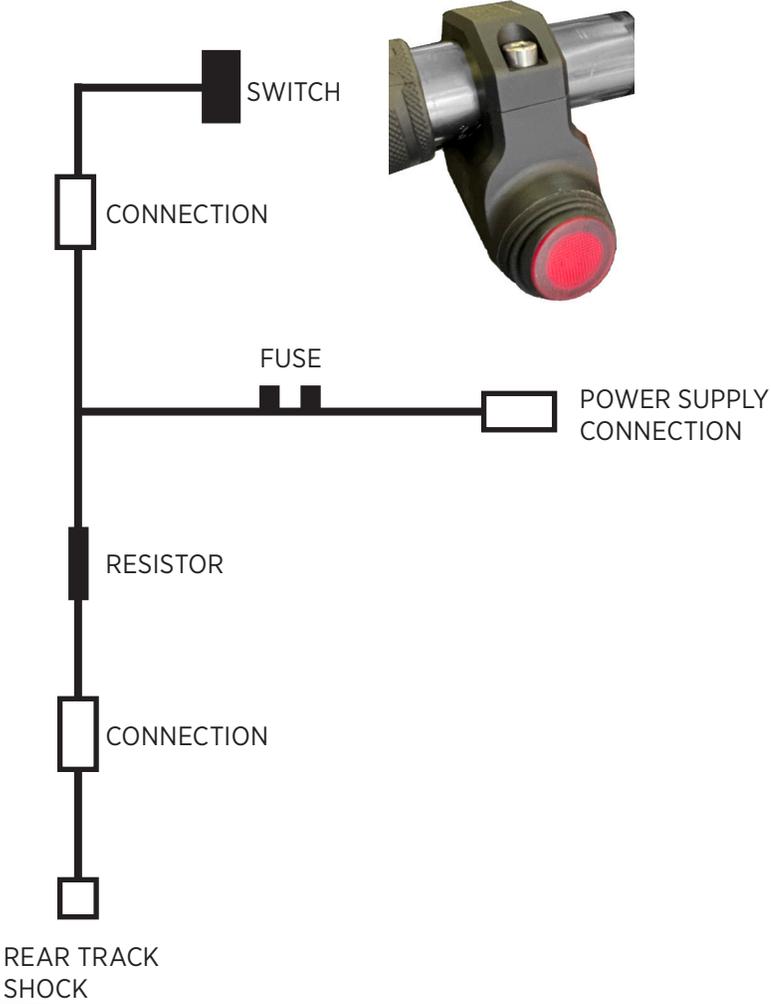


026-01-200 P-CLIP (2)



026-01-176 TUNNEL GROMMET (1)

# QSE HARNESS WIRING DIAGRAM



# REQUIRED TOOLS

---

- Gloves
- Safety glasses
- Vehicle manufacturer's workshop manual for torque specifications
- Metric hex key set: 2.5 mm - 5.0 mm
- Metric wrench set: 7 mm - 17 mm
- 3/8 inch metric socket set: 10 mm - 17 mm
- 3/8 inch ratchet
- 3/8 inch extensions
- 3/8 inch drill
- 15/64 inch drill bit (for rail P-clip hole)
- #11 step drill (for 0.875 inch tunnel hole)
- Torx® T25
- Flush cut side cutter (preferred)
- 6 inch flat scale
- Center punch and hammer
- Torque wrench
- Spring puller



#11 STEP DRILL

Required tools and supplies may change over time. Visit [ridefox.com](http://ridefox.com) or contact a representative for the most up-to-date details.

# QSE SWITCH OPERATION

SUSPENSION MODE DETAILS			
SWITCH POSITION	SWITCH LIGHT	LOCKOUT	RIDE CHARACTERISTICS
UP	Off	On	Easy side hilling, predictable climbing (limits weight transfer and trenching)
DOWN	On	Off	Balanced all-around setting

**NOTE:** Lockout mode is designed to improve stability for technical off trail maneuvers and may be uncomfortably stiff for normal trail riding.



 **WARNING**

# SAFETY INSTRUCTIONS

---

- Please read the entire manual before attempting to install the shock kit on your snowmobile. When working on this product, always see the vehicle manufacturer's work shop manual for vehicle-specific procedures and important specifications. Please call the FOX shock service center at 831.740.4619 if you have questions pertaining to this installation.
- If you do not possess the tools or technical knowledge to install your FOX shocks, we recommend you have this installation performed by an authorized dealer.
- Always use a calibrated torque wrench when tightening components and reference the manufacturer's work shop manual for all suspension hardware torque values.
- Always use the appropriate lift equipment to ensure the vehicle is securely supported during this installation. Placing body parts beneath an unstable vehicle may lead to serious injury or death.
- FOX direct-replacement shocks are designed to fit your snowmobile without modification. Take care to properly orient your shocks as illustrated in this document. Improper installation can cause interference with the action of the suspension resulting in damage, a potential loss of control, and/or serious injury or death. It is the customer's responsibility to verify proper clearance at all points in the travel if this FOX kit is being used with aftermarket suspension components.
- Any attempt to misuse, misapply, modify, or tamper with any FOX product voids any warranty and may result in **SERIOUS INJURY** or **DEATH**.
- FOX recommends that you become thoroughly familiar with the handling characteristics of your modified vehicle before operating it under rigorous conditions. This will help to avoid potential loss of control that could lead to serious injury or death. FOX further recommends that you use appropriate protective equipment at all times when operating your vehicle.

 **WARNING**

# INSTALLATION GUIDELINES

---

- FOX direct-replacement shocks should always be installed as a set for maximum performance.
- A snowmobile lift may be helpful when installing your wire harness, but it is not required for this installation. It is recommended to have the snowmobile on a level floor and tipped on the left hand side when installing the rear track shocks. Make certain the snowmobile is stable and well supported prior to working on the machine to avoid serious injury.
- Your new FOX rear suspension is equipped with coil spring preload adjustment. Reference the 605-01-234 Owners Manual provided with this kit to properly set sag and to establish the correct settings for your application. Position #2 is the standard setting for QS3 shocks.
- To achieve the best performance and product longevity, periodic service and maintenance is required. Please refer to the MAINTENANCE section for more information.

# DISASSEMBLY & TUNNEL PREPARATION

## DISASSEMBLY

1. Remove the side panels, hood, and exhaust silencer according to your snowmobile manufacturer's instructions.
2. Prepare a clean, flat work surface. Then, carefully place the snowmobile on the rider's left side (Fig. 1). Make sure the snowmobile is properly, safely supported and secure prior to working on it.
3. Remove the rear suspension assembly according to your snowmobile manufacturer's instructions. This step is technically optional, but may make the wire harness and shock installation easier.



Fig. 1: Place the snowmobile on the left side

## TUNNEL PREPARATION

1. You will need to drill a hole in the rider's right side tunnel for the wiring harness to route through. Measure 2.5 inches forward of the front torque arm mounting bolt and make a mark (Fig. 2).
2. Measure 1.5 inches up from the top of the running board and make a mark (Fig. 3). Use a hammer and center punch to mark the hole prior to drilling.
3. Use a #11 step drill to drill a 0.875 inch diameter hole through the tunnel. De-burr all sharp edges.



Fig. 2: Front torque arm mounting bolt (left arrow), first mark for drill hole (right arrow).

**⚠ CAUTION: Measure twice and drill once.** Do not drill holes in your tunnel unless you are absolutely sure the positioning is correct.

**IMPORTANT:** All measurements and figures shown are taken from the outside of the tunnel, NOT from the inside.

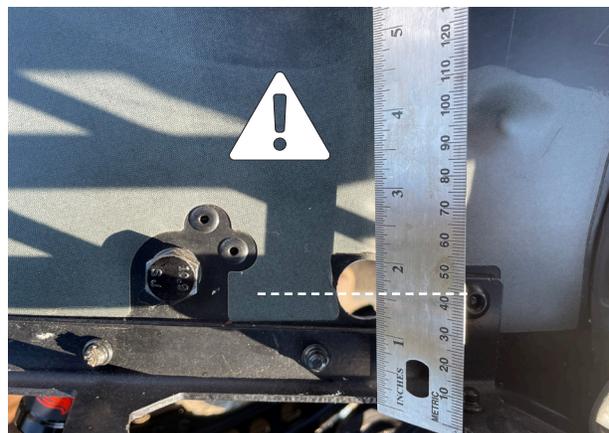


Fig. 3: Second mark for drill hole

# TRACK SHOCK INSTALLATION

**⚠ WARNING:** Improper installation of the shocks or wire harness can cause interference with the action of the rear suspension, resulting in possible loss of control and **SERIOUS INJURY** and/or **DEATH**.

1. Note the position of the front limiter strap. Remove the lower bolt to allow the front torque arm to fully extend.
2. Remove the stock front and rear track shocks from the rail according to the manufacturer's instructions. Take note or a photo of all hardware orientation and spacer placement.
3. Install the front track shock with the reservoir at the top (or closest to the front torque arm) and oriented toward the right side of the snowmobile (Fig. 4). Secure the shock using the stock hardware.
4. Position the rear shock with the body facing forward and oriented with the reservoir on the bottom side of the shock (Fig. 4). Secure the shock using the stock hardware.
5. Reinstall the limiter strap in the stock setting you noted in step 1.
6. Torque all hardware to the factory settings according to the manufacturer's workshop manual.



Fig. 4: Coil shock placement

# TRACK HARNESS ROUTING

1. Measure 2.75 inches above the rail rib and place a mark at the center of the diagonal just below the torque arm bolt on the right hand side of the rail. Make a center punch mark at this location and drill a hole with the 15/64 inch drill bit as shown (Fig. 5).
2. Identify the track harness (PN 218-00-051) and plug it into the mating connector on the rear track shock. Press the plug into the shock base valve until you hear a click, which indicates it is locked in place. The routing clip can then be pressed into the mounting boss on the right hand side of the shock (Fig. 6).
3. Route the track harness forward along the inside of the right hand rail beam. Use the supplied 3/8 inch P-clip and M6 hardware to secure the track harness to the inside of the right hand rail through the hole that was drilled in step 1 of this section. The bolt should face inward with the nut and washer securing the P-clip (Fig. 7).



Fig. 5: Drill a hole into the rail as shown



Fig. 6: Plug the track harness into the rear track shock. Install the routing clip as shown.



Fig. 7: Secure the track harness to the inside of the right hand rail, using the hole from Fig. 5.

4. Locate the wire routing shield (PN 006-02-020) and install it over the harness and the right hand tube of the front torque arm. The guard should be oriented with the open window of the guard closest to the front side of torque arm, and the harness on the outside of the tube. Place the guard 2.5 inches forward of the rear torque arm bolt along the flat section of the torque arm (Fig. 8). Make sure to center the two areas of protective heat shrink on the edges of the guard (Fig. 9).
5. Secure the guard to the arm using the provided M4 hardware. Make sure to use washers on the screw and nut side. Cycle the front arm travel, checking for proper harness motion between the P-clip and the guard and make adjustments, if necessary.
6. Route the wire harness plug through the track guard loop on the front torque arm and secure it to the front pivot tube with a cable tie (Fig. 10).
7. If the rear suspension was removed from the machine, it can be reinstalled at this time. Reference the manufacturer's workshop manual for proper procedure, torques, and track tension.
8. Install the supplied grommet (PN 026-01-176) in the tunnel hole and route the track harness along the bottom edge of the chain case. Remove the rear lower bolt from the chain case and use this fastener to secure the harness routing clip (Fig. 11). Orient the P-clip to the inside to keep the harness tight to the tunnel. Use the remaining M6 washer between the clip and the bolt.

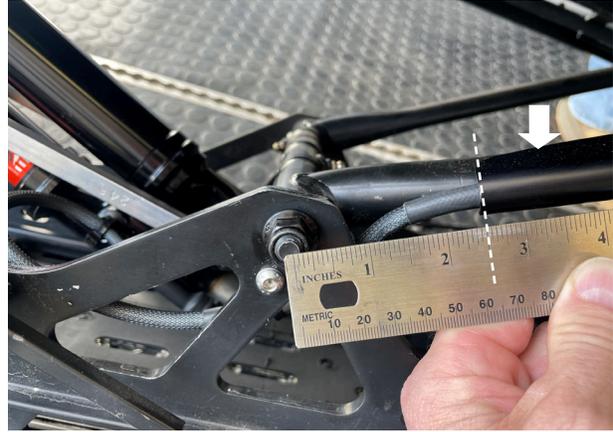


Fig. 8: Place the guard along the front torque arm, center the heat shrink on the edges of the guard.

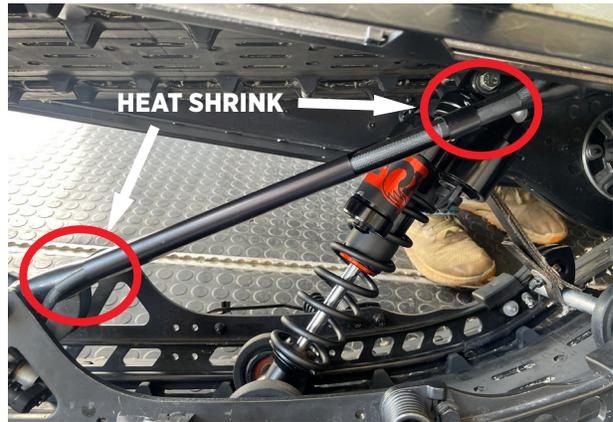


Fig. 9: Center the two heat shrink areas on the edges of the guard.



Fig. 10: Secure the wire harness onto the front pivot tube with a cable tie.



Fig. 11: Secure the harness routing clip.

# MAIN HARNESS ROUTING

1. Locate the main harness (PN 218-00-050) in the kit and the accessory power plug on your snowmobile. The accessory plug can be found behind the recoil handle on 2024 and newer Summit models (Fig. 12). You may need to disconnect the accessory plug from its protective cover prior to harness installation.
2. Identify the mating power connector on the QSE harness and plug it into the accessory power lead on your snowmobile, identified in step 1 of this section. Press the plugs together until they are fully seated and you hear a click, which indicates they are locked in place (Fig. 13). Tuck the accessory plug back into its original location behind the recoil pocket.

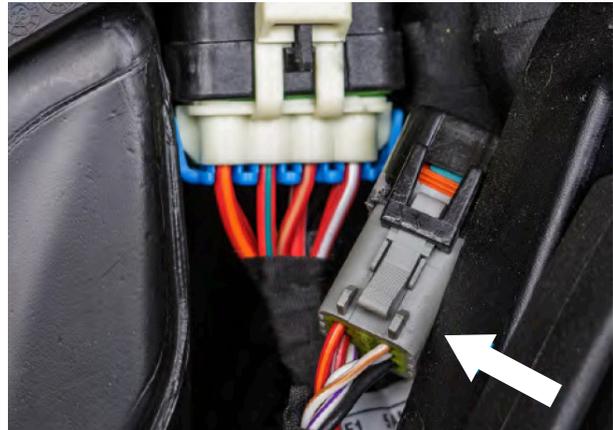


Fig. 12: Accessory Plug



Fig. 13: Plug the accessory plug into the QSE mating power connector.

3. Route the main harness lead containing the resistor along the outside of the chain case to the rider's right footrest area. Use the provided M8 bolt and washer to secure the resistor plate to the lower mounting boss on the chaincase cover. Refer to Fig. 14 for proper routing and resistor orientation.
4. Locate the mating connectors between the main and track harnesses and plug them together at this time. Listen for the click that indicates the plugs are fully seated and secure.
5. The main harness is to be routed vertically from the resistor and along the chain case vent line. Make sure the switch lead is routed behind the coolant lines to the back side of the turbo. Use one cable tie to secure the main harness to the vehicle harness (Fig. 15).
6. Route the switch lead from the back side of the turbo up to the steering post (Fig. 16). This lead will plug into the switch harness in a later step.

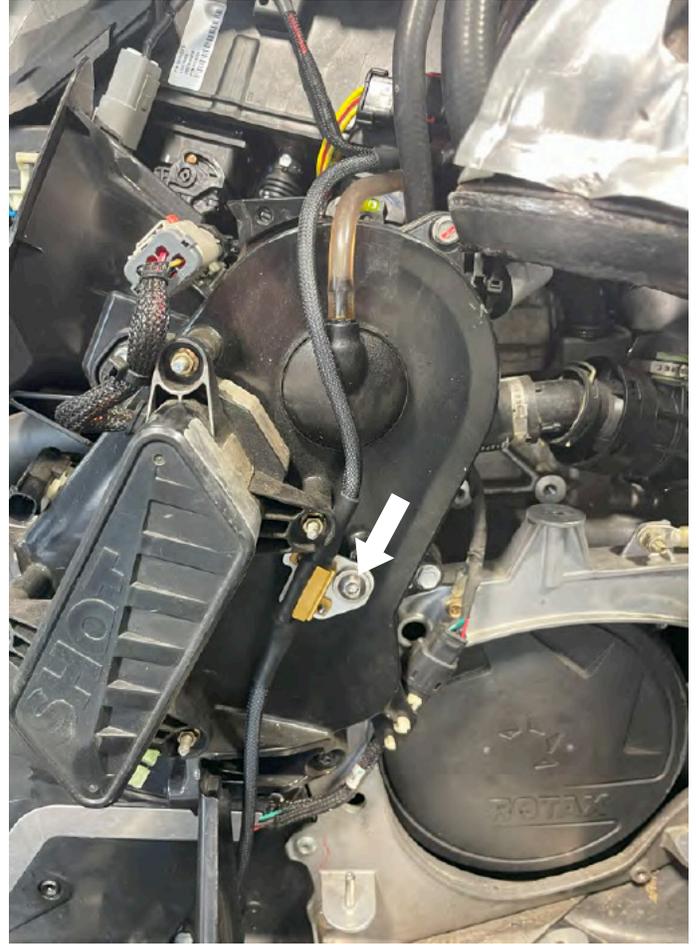


Fig. 14: Main harness routing and resistor orientation

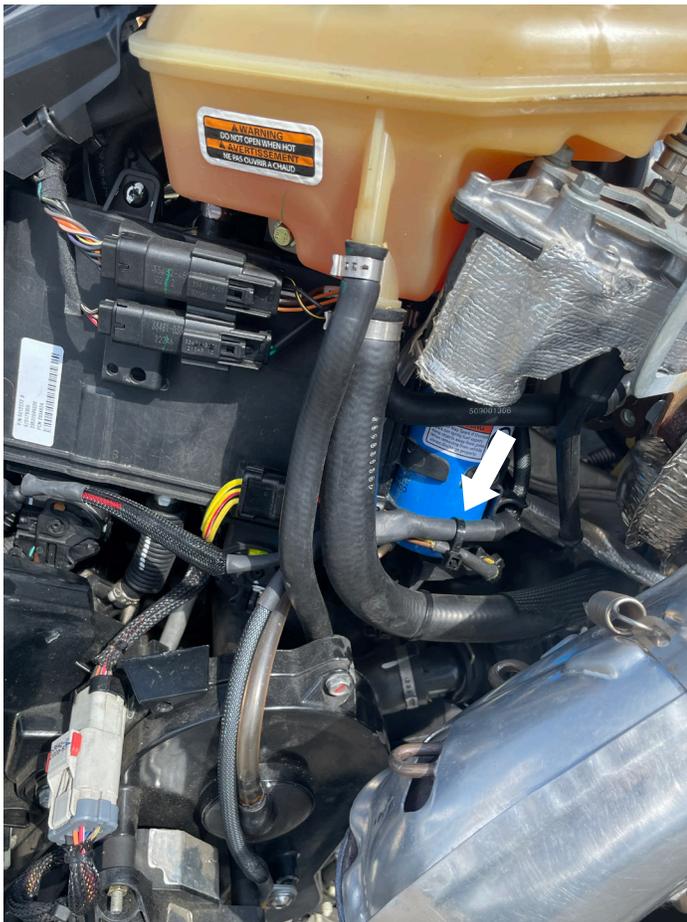


Fig. 15: Secure the main harness to the vehicle harness



Fig. 16: Route the switch lead (red line); plug into switch harness in a later step (arrow)

# SWITCH INSTALLATION & ROUTING

1. Locate the switch assembly (PN 218-00-059) in the kit. Install the switch on the handlebar just inward of the left hand grip. The switch should be mounted under the handlebar (Fig. 17). Adjust the switch angle so you can comfortably operate it from seated and standing positions. Tighten rear or switch side bolt first, then tighten the front bolt to properly secure the switch assembly to the handlebar.

NOTE: You may need to adjust placement of the brake lever and/or hand guards, or relocate the Shot Start on some models to make room for the switch housing.

2. Route the switch lead along the handlebar and down the front side of the steering post (Fig. 18 and Fig. 19). Locate the switch lead on the main harness that was routed behind the turbo in step 6 of the previous section. Plug the switch into the main harness until you hear the click that locks it in place.
3. Use the provided cable ties to secure the switch lead to other wires or the handlebar, as necessary. Rotate the handlebars from left to right when securing the harness to account for the full range of motion. Also take care to avoid sharp edges or pinch points that could damage the harness.



Fig. 17: Switch position under handlebar



Fig. 18: Switch lead routing



Fig. 19: Switch lead routing

# FINAL CHECKS

---

1. Verify all wire connections are latched and secure.
2. Turn the handlebars to full lock in both directions to confirm there are no steering or wire routing issues, including kinks, pinch points, or contact areas that can rub and become damaged over time.
3. Make sure all cable ties are in place and that the harness is routed correctly.
4. Before you install the side panels and hood, check the wiring harness to make sure the wiring does not come in contact with the exhaust system, steering, or any other components that may damage the harness.
5. Verify all hardware is torqued to the manufacturer's specifications.
6. Adjust the track tension to the manufacturer's specifications if the rail was removed for this installation.
7. Reinstall the hood, side panels, and exhaust according to the manufacturer's instructions.
8. Refer to the 605-01-234 Owner's Manual to properly adjust the suspension for your specific weight and application.
9. Start the sled and verify proper QSE shock function.
  - Switch down: the switch light should be "ON" and the system should be soft.
  - Switch up: the switch light should be "OFF" and the system should be in Lockout Mode.
10. Test ride the machine and verify wire placement. Adjust wire routing, if necessary.
11. Occasionally monitor your QSE system to ensure there has been no movement of parts, wiring, or cable ties.
12. Contact FOX at [servicemn@ridefox.com](mailto:servicemn@ridefox.com) or contact a representative at: 1.831.740.4619 if you have questions regarding this installation.

# MAINTENANCE

---

PROPER INSPECTION AND MAINTENANCE IS ESSENTIAL TO MAINTAIN THE PERFORMANCE AND RELIABILITY OF YOUR SHOCK ABSORBERS.

**NOTICE:** To avoid corrosion, you should keep the shocks and springs clean and free of salt, debris and moisture. The wiper seal will clean deposits from the shaft, but the shock won't fully compress every time. This means you could accumulate debris at the bottom of the shaft and underneath the jounce bumper. Make sure you clean these areas completely to prevent shaft corrosion. Avoid using a high-pressure washer near the shaft seals or adjusters, as this could drive moisture inside the shock.

Make sure the ends of the spring and shock threads are clean and free of salt and debris before adjusting the preload ring. This will make the adjustment easier and reduce wear.

Ideally, the shocks should be clean around the adjusters. Use a small amount of contact cleaner before making adjustments will keep these parts clean and operating smoothly for years.

## FOX SERVICE AND UPGRADES

HAVE YOUR FOX SHOCKS SERVICED BY FOX TECHNICIANS. CALL OUR SERVICE CENTER AT 831.740.4619 TO GO OVER THE SERVICE AND UPGRADE OPTIONS AVAILABLE FOR YOUR PRODUCT. ONCE YOU'VE SETUP YOUR SERVICE AND/OR UPGRADES YOU WILL RECEIVE A RETURN AUTHORIZATION NUMBER AND SHIPPING INSTRUCTIONS.

## COMPLETE SERVICES

Every 2,000 miles

## SERVICE MENUS AND PRICING

visit [ridefox.com/service](http://ridefox.com/service)



**WARNING: Cancer and  
Reproductive Harm –**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# WARRANTY INFORMATION

---

## FOX LIMITED WARRANTY

FOX Factory, Inc., a Georgia corporation having an office at 6634 Highway 53 Braselton, GA 30517 (“FOX”), makes the following LIMITED WARRANTY with respect to its suspension products:  
LIMITED ONE (1) YEAR WARRANTY ON SUSPENSION PRODUCTS.

Subject to the limitations, terms and conditions hereof, FOX warrants, to the original retail owner of each new FOX suspension product, that the FOX suspension product, when new, is free from defects in materials and workmanship. Unless otherwise required by law, this warranty expires one (1) year from the date of the original FOX suspension product retail purchase from an authorized FOX dealer or from a FOX authorized Original Equipment Manufacturer where FOX suspension is included as original equipment on a purchased vehicle. If law requires a warranty duration of greater than one (1) year, then, subject to the other provisions hereof, this warranty will expire at the end of the minimum warranty period required by such law.

## TERMS OF WARRANTY

This warranty is conditioned on the FOX suspension product being operated under normal conditions and properly maintained as specified by FOX. This warranty is only applicable to FOX suspensions purchased new from an authorized FOX source and is made only to the original retail owner of the new FOX suspension product and is not transferable to subsequent owners. This warranty is void if the FOX suspension product is subjected to abuse, neglect, improper or unauthorized repair, improper or unauthorized service or maintenance, alteration, modification, accident or other abnormal, excessive, or improper use.

Should it be determined by FOX in its sole and final discretion, that a FOX suspension product is covered by this warranty, it will be repaired or replaced, by a comparable model, at FOX’s sole option, which will be conclusive and binding. THIS IS THE EXCLUSIVE REMEDY UNDER THIS WARRANTY. ANY AND ALL OTHER REMEDIES AND DAMAGES THAT MAY OTHERWISE BE APPLICABLE ARE EXCLUDED, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR PUNITIVE DAMAGES.

This limited warranty does not apply to normal wear and tear, malfunctions or failures that result from abuse, improper assembly, neglect, alteration, improper maintenance, crash, misuse or collision. This limited warranty gives the consumer specific legal rights. The consumer may also have other legal rights which vary from state to state or country to country. Some states and countries do not allow the exclusion or limitation of incidental or consequential damages or warranties, and if dictated by law the above limitations or exclusions may not apply to you. If it is determined by a court of competent jurisdiction that a certain provision of this limited warranty does not apply, such determination shall not affect any other provision of this limited warranty and all other provisions shall remain in full effect.

THIS IS THE ONLY WARRANTY MADE BY FOX ON ITS SUSPENSION PRODUCTS AND COMPONENTS, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREIN. ANY WARRANTIES THAT MAY OTHERWISE BE IMPLIED BY LAW INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED.

# CONTACT

---

## **FOX FACTORY**

A DIVISION OF FOX FACTORY INC.

13461 Dogwood Drive

Baxter, MN 56425

## **SALES**

1.800.FOX.SHOX (1.800.369.7469)

psamsales@ridefox.com

## **SERVICE**

1.800.FOX.SHOX (1.800.369.7469)

servicemn@ridefox.com

