

DIRECT REPLACEMENT
INSTALLATION AND SETUP GUIDE

POLARIS RMK QSE COIL REAR TRACK SHOCK KITS

FACTORY RACE SERIES

853-02-069: Kit: FOX Factory AM, POL, RMK KHAOS, FT [12.03, 3.80] 1.5 Zero QS3 LRW, RT [17.08, 5.65] 1.5 Zero QSE LRW

853-02-070: Kit: FOX Factory AM, POL, PRO-RMK, FT [11.63, 3.40] 1.5 Zero QS3 LRW, RT [17.08, 5.65] 1.5 Zero QSE LRW

853-02-071: Burandt Signature Series AM, POL, RMK KHAOS, FT [12.03, 3.80] 1.5 Zero QS3 LRW, RT [17.08, 5.65] 1.5 Zero QSE LRW

853-02-072: Kit: Burandt Signature Series AM, POL, Pro-RMK, FT [11.63, 3.40] 1.5 Zero QS3 LRW, RT [17.08, 5.65] 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):



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COMPATIBILITY CHART

INSTRUCTIONS COVER KIT LISTED BELOW:

853-02-069: Kit: FOX Factory AM, POL, RMK KHAOS, FT [12.03, 3.80] 1.5 Zero QS3 LRW, RT [17.08, 5.65] 1.5 Zero QSE LRW

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POLARIS RMK FITMENT CHART					
YEAR	MODEL DESCRIPTION	MOTOR	PLATFORM	TRACK LENGTH (INCH)	
2021	Pro RMK	850	Matryx	155 / 163 / 165 /174	
2021	Khaos RMK	850		155 / 163 / 165	
2022	Pro RMK	650 / 850		155 / 163 /174	
2022	Pro RMK Slash	850 / 850 Boost		155 / 163 /165	
2022	Khaos RMK	850		155 / 163 /165	
2022	Khaos RMK Slash	650 / 850 / 850 Boost		146 / 155 / 163 /165	
2023	Pro RMK	650 / 850		155	
2023	Pro RMK Slash	850 / 9R / Boost		155 / 163 / 165	
2023	Khaos RMK	850		155	
2023	Khaos RMK Slash	650 / 850 / 9R / Boost		146 / 155 / 163 / 165	
2024	Pro RMK	650 / 850		155	
2024	Pro RMK Slash	850 / 9R / Boost		155 / 165	
2024	Khaos RMK	850		155	
2024	Khaos RMK Slash	650 / 850 / 9R / Boost		146 / 155 / 165	
2025	RMK SP	650 / 850		155	
2025	Pro RMK	850 / 9R / Boost		155 / 165	
2025	Khaos RMK	850 / 9R / Boost		146 / 155 / 165	
2026	RMK SP	650 / 850		155	
2026	Pro RMK	850 / 9R / Boost		155 / 165	
2026	Khaos RMK	850 / 9R / Boost		146 / 155 / 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



218-00-052 MAIN HARNESS



REAR TRACK QSE SHOCK



FRONT TRACK SHOCK



218-00-053 TRACK HARNESS



218-00-059 SWITCH



026-00-017 CABLE TIES (10)



006-02-054 TUNNEL GUARD



019-01-145 BOLT (3)

019-01-147 WASHER (3)



018-05-064 WASHER (4)

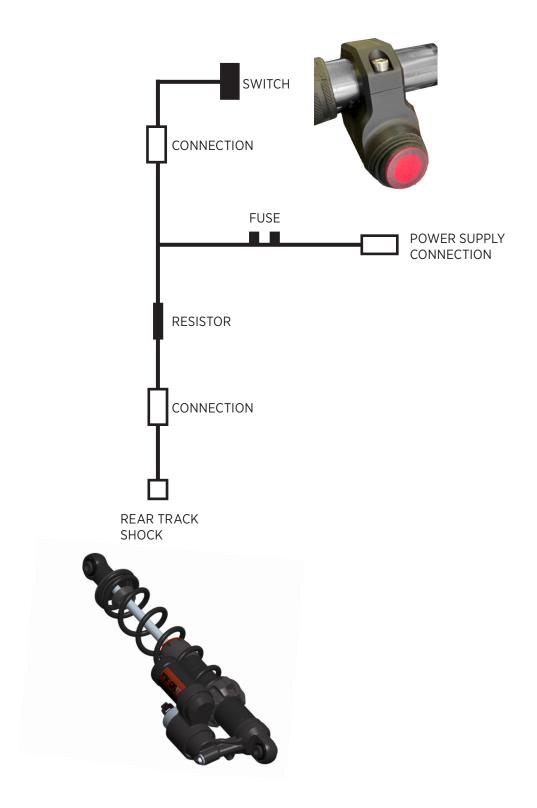


026-01-176 TUNNEL GROMMET (1)



006-02-052 WIRE ROUTING SHIELD

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: 10 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
- #11 step drill (for 0.875 inch tunnel hole)
- Torx® T25
- Torx® T30
- Flush cut side cutter (preferred)
- 6 inch flat scale
- Center punch and hammer
- Flat blade screwdriver
- Small clamp or vise grip
- Torque wrench
- Spring puller

Required tools and supplies may change over time. Visit ridefox.com or contact a representative for the most up-to-date details.



#11 STEP DRILL

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 workshop 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.

A 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.

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DISASSEMBLY & TUNNEL PREPARATION

DISASSEMBLY

- 1. Remove the side panels, hood, center console panel and exhaust silencer according to your snowmobile manufacturer's instructions.
- 2. Remove the clutch tool and the screw securing the lower left side of the console (Fig. 1).

 Removing these will allow the console to be moved out of the way for wire routing.
- 3. Place the snowmobile on the right side on a flat work surface (Fig. 2). Make certain the snowmobile is properly supported and secure prior to working on it.
- 4. Remove the rear suspension assembly according to your snowmobile manufacturer's instructions. This step is technically optional, but may make wire harness and shock installation easier.



Fig. 1: Remove clutch tool and console screw



Fig. 2: Place the snowmobile on the right side

TUNNEL PREPARATION

- 1. You will need to drill a hole in the rider's left side tunnel for the wiring harness to route through. Note that the hole placement differs between model year 24 and older and model year 25 and newer machines. Be sure to identify the correct year of your machine so you properly place this hole.
- 2. Forward Measurement: the measurement must be **parallel** to the running board. MY24 and older: Measure 2.16 inches forward of the front torque arm mounting bolt and make a mark (Fig. 3A).

MY25 and newer: Measure 1.63 inches forward of the front torque arm mounting bolt and make a mark (Fig. 3B).

- 3. Vertical Measurement: the measurement must be **perpendicular** to the running board. MY24 and older: Measure 0.50 inches up from the top of the running board and make a mark (Fig. 4A). MY25 and newer: Measure 0.94 inches up from the front torque arm mounting bolt and make a mark (Fig. 4B).
- 4. Verify all measurements are correct. Mark the drill center with a center punch and hammer prior to drilling. Use a #11 step drill to drill a 0.875 inch hole through the tunnel. De-burr all sharp edges.

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.

5. Install the routing grommet (P/N 026-01-176) into the hole.

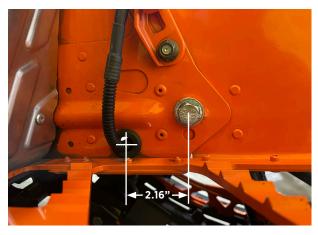


Fig. 3A: MY24 and older: First mark for drilled hole

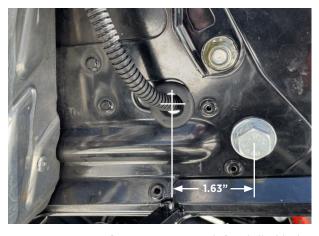


Fig. 3B: MY25 and newer: First mark for drilled hole

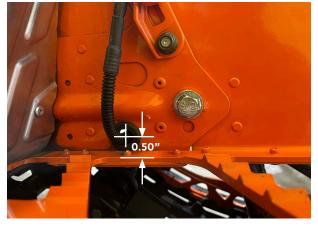






Fig. 4A: MY24 and older: Second mark for drilled hole Fig. 4B: MY25 and newer: Second mark for drilled hole

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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 and remove the lower bolt. This allows the front torque arm to fully extend.
- 2. Remove the stock front and rear track shocks from the rail. Take note 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 to the right side of the snowmobile (Fig. 6). Secure the shock using the stock hardware. **IMPORTANT:** The front track shock lower mount requires the four included washers (P/N 018-05-064) to be installed (Fig. 5). These washers will replace the OEM spacers.

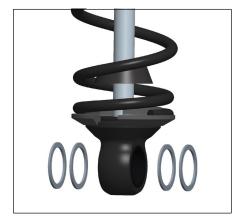


Fig. 5: Install kit washers

- 4. Position the rear shock with the body facing forward and oriented with the reservoir on the right side of the shock (Fig. 6). 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 identified in the manufacturer's workshop manual.



Fig. 6: Coil kit shown

TRACK HARNESS ROUTING

- Identify the track harness (P/N 218-00-053) 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 locking it in place. The routing clip can then be pressed into the mounting boss on the cap (Fig. 7).
- 2. Route the track harness under the rear pivot of the front torque arm to the outside of the right side tube. The harness will route along the outside of the tube to the forward pivot.
- 3. Locate the wire routing shield (P/N 006-02-052) and install it over the harness and the right hand tube of the front torque arm. The shield should be installed with the alignment tabs closest to the rear pivot of the front torque arm. Install the three 4 mm screws and washers in the shield, but leave them loose at this time.
 - **TIP:** A clamp or small vise grip may be helpful when installing screws.
- 4. Slide the shield rearward, allowing the alignment tabs to determine proper placement. Adjust the harness so the white tape mark aligns with the edge of the shield (Fig. 8). Tighten the three 4 mm screws securing the shield in place.
- 5. The harness should exit the top of the shield and route over the top of the right side tube and along the bottom side of the front pivot tube. The harness should route behind the limiter strap and forward of the shock (Fig. 9).

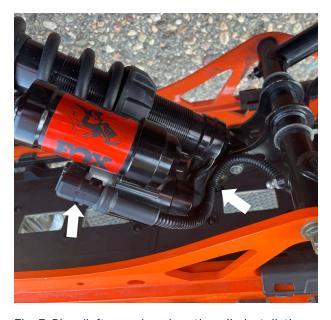


Fig. 7: Plug (left arrow) and routing clip installation (right arrow)



Fig. 8: Wire shield installation



Fig. 9: Harness routing

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- 6. Route the harness over the top of the left arm tube and through the left side track guard. Install three cable ties at the white tape marks securing the harness to the pivot tube (Fig. 10).
- 7. Route the harness over the top of the pivot tube and through the tunnel hole you drilled in the Tunnel Preparation section. See Fig. 11 for proper routing.
- 8. Loosen the front torque arm bolt on the left side of the tunnel and slide the wire guard (P/N 006-02-054) behind the bolt and washer (Fig. 12). Re-tighten the bolt and torque to factory specification.



Fig. 10: Secure the harness to the pivot tube



Fig. 11: Harness routing



Fig. 12: Install wire guard

MAIN HARNESS ROUTING

- 1. Locate the main harness (P/N 218-00-052) in your kit and identify the shock lead which will have a resistor on it. Remove the right side nut from the back side of your clutch guard. Mount the resistor plate to the guard with the shock lead exiting in the direction of the handlebar support structure. Reinstall the clutch guard nut to secure the resistor plate to the top of the clutch guard (Fig. 13).
- Route the shock lead of the main harness down the handlebar support structure tube to the left foot well area (Fig. 13 and Fig. 14). Take care to route the leads on the inside of the plastic and away from sharp edges that could damage the harness.
- Locate the mating connectors between the main and track harnesses and plug them together.
 Listen for the click that indicates the plugs are fully seated and secure.
- 4. Pull the harness slack to the top side of the tube and secure the harness to the handlebar support structure with the provided cable ties (Fig. 13). Add a second cable tie at the foot well (Fig. 14).



Fig. 13: Resistor mounting



Fig. 14: Main harness routing



- 5. Route the accessory power and switch leads forward from the resistor along the top edge of the air intake. Secure the harness routing clip to the intake ridge between the formed ribs (Fig. 15).
- 6. Identify the switch lead of the main harness containing the small 4-pin connector. Route this lead behind the intake to the steering post opening in the console (Fig. 15 and Fig. 16). This lead will be plugged into the switch harness in a later step.
- 7. Identify the accessory power lead containing the fuse block. Route this plug to the forward side of the air intake (Fig. 17). This plug will be connected to the hood accessory power in a later step.
- 8. Reinstall the console center panel (Fig. 18).
- 9. Identify the accessory power lead on the bottom side of your hood and connect this to the QSE main harness as you are reinstalling the hood. Press the plugs together until they are fully seated and you hear a click, indicating they are locked in place. Secure your hood as instructed in your vehicle's workshop manual. Refer to Fig. 17 for plug placement and identification.



Fig. 15: Secure the harness routing clip



Fig. 16: Switch lead routing



Fig. 17: Accessory power lead routing



Fig. 18: Reinstall console center panel

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SWITCH INSTALLATION & ROUTING

- 1. Locate the switch assembly (P/N 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. 19). 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 the placement of the brake lever and/or hand guards, or reverse switch 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. 20 and Fig. 21). Locate the switch lead on the main harness that was routed to the handlebar in step 6 of the previous section. Plug the switch into the main harness until you hear the click that locks it in place. Tuck the plug and excess wire under the console.
- 3. Use the reusable Polaris cable ties to secure the switch lead to 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 cause damage.



Fig. 21: Switch lead routing



Fig. 19: Switch position under handlebar



Fig. 20: 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, 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 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 or contact a representative at: 1.831.740.4619 if you have questions regarding this installation.

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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.

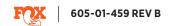
COMPLETE SERVICES

Every 2,000 miles

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Visit ridefox.com/service





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