



**DIRECT-REPLACEMENT
INSTALLATION GUIDE**

FORD SUPER DUTY

TS/ATS STABILIZER

FORD SUPER DUTY (2008 - 2016): STOCK LOCATION

983-02-144 - 2.0 PERFORMANCE SERIES ATS Stabilizer

985-02-129 - 2.0 PERFORMANCE SERIES TS Stabilizer

FORD SUPER DUTY (2017+): STOCK LOCATION

983-02-143 - 2.0 PERFORMANCE SERIES ATS Stabilizer

985-02-132 - 2.0 PERFORMANCE SERIES TS Stabilizer

FORD SUPER DUTY (2017 - 2022): AXLE MOUNTED

983-02-251 - 2.0 PERFORMANCE SERIES ATS Stabilizer w/ Bracket

803-02-219 - ATS RELOCATION KIT

FORD SUPER DUTY (2023-ON): AXLE MOUNTED

983-02-252 - 2.0 PERFORMANCE SERIES ATS Stabilizer w/ Bracket

803-02-220 - ATS RELOCATION KIT

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INTRODUCTION

Thank you for choosing FOX direct replacement shocks for your vehicle. FOX products are designed, tested, and manufactured by the finest professionals in the industry.

FOX recommends that you become completely familiar with the handling characteristics of your modified vehicle before operating it under rigorous conditions, helping to avoid potential rollover situations and other loss of control events. FOX further recommends that you use appropriate protective equipment at all times when operating your vehicle.

To achieve the best performance and product longevity, periodic service and maintenance is required. Please refer to the Service and Upgrades section for more information.

IN THE BOX

- Mounting Hardware
- Steering Stabilizer
- Installation Manual

SUPPLIED PARTS

STOCK LOCATION STABILIZER ASSEMBLY				
FOX PN	DESCRIPTION		QTY	NOTES
983-02-143	ATS STEERING STABILIZER		1	Ford Super Duty (2017+)
985-02-132	TS STEERING STABILIZER		1	
983-02-144	ATS STEERING STABILIZER		1	Ford Super Duty (2008-2016)
985-02-129	TS STEERING STABILIZER		1	
MOUNTING HARDWARE				
FOX PN	DESCRIPTION	*HARDWARE REF.	QTY	NOTES
018-04-057	BOLT: M12 X 1.75" X 90MM HEX HEAD	A1	1	Mounts eyelet end of the stabilizer.
018-05-065	WASHER: M12	A2	1	
026-01-100-1	TIE ROD CLAMP TOP	B1	1	Clamp mounts the stabilizer to the drag link of the vehicle.
026-01-100-2	TIE ROD CLAMP BOTTOM	B2	1	
018-02-046	SCREW: 1/4"-20 X 1.25"	B3	4	The tie rod clamp uses 4 screws.

*Hardware Reference is used throughout the installation manual to provide notation of the supplied kit.

AXLE MOUNTED STABILIZER ASSEMBLY				
FOX PN	DESCRIPTION		QTY	NOTES
983-02-251	ATS STEERING STABILIZER W/ BRACKET		1	Ford Super Duty (2017-2022)
983-02-252	ATS STEERING STABILIZER W/ BRACKET		1	Ford Super Duty (2023-ON)
RELOCATION KITS				
FOX PN	DESCRIPTION		QTY	NOTES
803-02-219	ATS RELOCATION BRACKET		1	Ford Super Duty (2017-2022)
803-02-220	ATS RELOCATION BRACKET		1	Ford Super Duty (2023-ON)
MOUNTING HARDWARE				
FOX PN	DESCRIPTION	*HARDWARE REF.	QTY	NOTES
026-01-105-2	CLAMP: BOTTOM	C1	1	Clamp mounts the stabilizer to the tie rod.
018-02-046	SCREW: 1/4"-20 X 1.25"	C2	4	
018-00-026-A	NUT: 1/2"-20 NYLOC	D1	1	Mounts eyelet end of the stabilizer.
018-02-085	BOLT: 1/2"-20 X 3.5"	D2	1	
018-05-046	WASHER: 1/2"	D3	2	
018-00-50	NUT: 3/8"-16" NYLOC	E1	3	Bracket Hardware
018-02-085	BOLT: 3/8"-16 X 1.25"	E2	2	*2017-2022 ONLY*
018-02-087	BOLT: 3/8"-16 X 1.5"	E3	1	Bracket Hardware
018-02-071	U-BOLT: 3/8"-16	E4	1	
018-05-030-A	WASHER: 3/8"	E5	3	
019-01-291	BOLT: M8 X 1.25 X 30MM	E6	3	*2023-ON ONLY*
241-01-192	WASHER: CUSTOM	E7	2/3	2017-2022/2023-ON
026-01-105-2	CLAMP: TOP	F1	1	Hardware allows ATS in the stock location to install on the axle
241-01-042	REDUCER: 0.36" TALL	F2	1	
241-01-097	REDUCER: 0.6" TALL	F3	1	
241-02-082	BOLT: 1/2"-13 X 1"	F4	1	

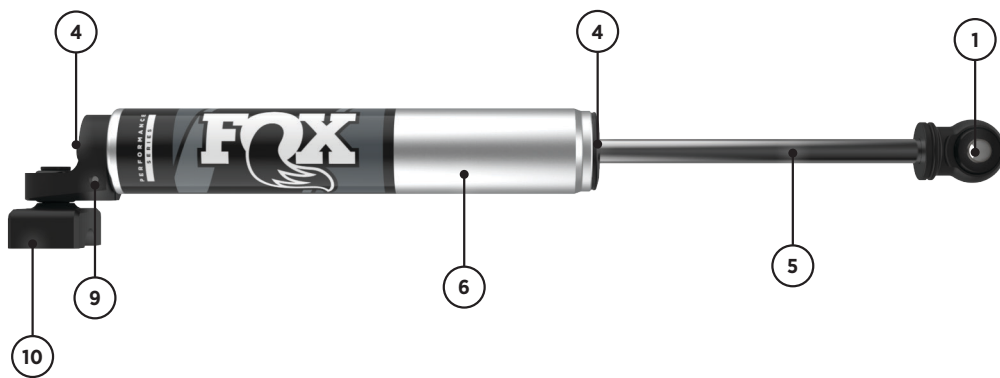
*Hardware Reference is used throughout the installation manual to provide notation of the supplied kit.

SHOCK DIAGRAM

ATS STABILIZER



TS STABILIZER



PART NO.	NAME	PART NO.	NAME
1	Eyelet	6	Shock Body
2	Reservior Bridge	7	Schrader Valve
3	Reservoir	8	Adjuster Screw
4	Wiper Seal	9	Pinch Bolt
5	Shaft	10	Tie Rod Clamp

WARNING

SAFETY INSTRUCTIONS

- FOX direct-replacement shocks are designed to fit and allow proper clearance with the factory suspension. If aftermarket suspension components are installed it is the customers responsibility to ensure that at full cycle the suspension clears the FOX shocks.
- FOX direct-replacement shocks should always be installed as a set for maximum performance.
- Proper installation and service procedures are essential for the safe and reliable operation of the suspension components, requiring the experience and tools specially designed for this purpose. Installation and maintenance procedures for this product must be performed by a qualified service technician, to avoid potentially unsafe vehicle handling characteristics, which may result in **SERIOUS INJURY** or **DEATH**.
- Modifying your vehicle's suspension will change the handling characteristics of your vehicle. Under certain conditions, your modified vehicle may be more susceptible to loss of control or rollover, which can result in **SERIOUS INJURY** or **DEATH**. Thoroughly familiarize yourself with the modified vehicle handling characteristics before any rigorous vehicle operation. Wear protective body gear and a helmet when appropriate. Installation of vehicle roll bars or cage is highly recommended.
- FOX direct-replacement shocks are gas-charged and are highly pressurized. Placing shocks in a vise or clamp, applying heat, or attempting to open or service the shock without the proper tools and training can result in **SERIOUS INJURY** or **DEATH**. Do not attempt to modify, puncture or incinerate a FOX direct-replacement shock absorber.
- Any attempt to misuse, misapply, modify, or tamper with any FOX product voids any warranty and may result in **SERIOUS INJURY** or **DEATH**.

WARNING

INSTALLATION GUIDELINES

- Always use a chassis lift for the installation of shocks, and make certain that the raised vehicle is securely attached to the lift to prevent the vehicle from slipping, falling, or moving during the installation process.
- DO NOT install any FOX product without the necessary special tools, expertise and chassis lift or you will subject yourself to the risk of SERIOUS INJURY or DEATH. If you elect to not use a chassis lift (which may result in SERIOUS INJURY or DEATH), ensure that the vehicle is: (1) on level ground, (2) that all tires on the ground during installation are blocked to prevent vehicle movement, (3) that at least two tires are on the ground at all times, and (4) that adequately secured jack stands are used to support the vehicle. NEVER get under the vehicle until you have checked to ensure that the vehicle will be stable during installation.
- FOX direct-replacement shocks are designed to fit your vehicle's shock mounts without modification except the reservoir placement on specific models and applications.

STOCK LOCATION STEERING STABILIZER INSTALLATION

TOOLS REQUIRED

- Manufacturer Torque Specs
- Torque Wrench
- Medium-Strength Thread Lock

STOCK STABILIZER REMOVAL

NOTICE: Medium-strength thread-lock is recommended on all bolts.

1. Please read the INSTALLATION GUIDELINES on page 5 for instructions on how to properly lift and secure the vehicle.

NOTICE: Ensure vehicle is at full droop during installation.

2. Remove the stock steering stabilizer.

FOX STABILIZER INSTALLATION

1. Install eyelet end of stabilizer with Group A hardware in stock location. Ensure the adjuster screw is pointed toward the front of the vehicle. Torque bolt to 60 ft-lb (Fig. 1).

NOTICE: If the vehicle has any amount of lift above stock height (Tremor is not considered stock height), then the axle mounted steering stabilizer is required.

2. Compress the stabilizer so an 1/8" of shaft is exposed between the eyelet and the body. For ATS models, turning the adjuster screw on the eyelet fully counter clockwise will make compression of the stabilizer easier (Fig. 1).

3. Turn the vehicle's wheels completely to the right so they rest against the steering stops.

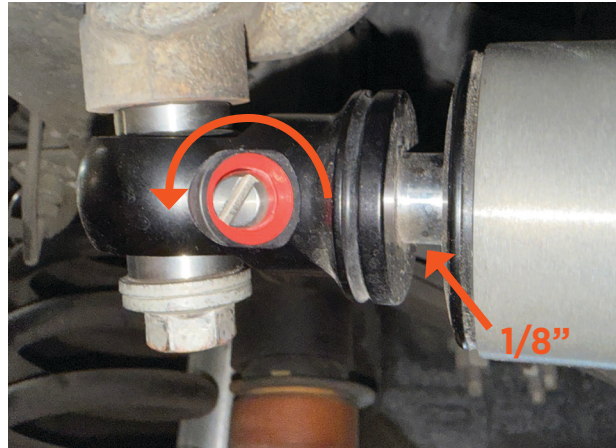


Fig. 1: Eyelet installed with 1/8" of shaft exposed.

4. Loosely mount stabilizer to drag link with Group B tie rod clamp and screws (Fig. 2 & 3).



Fig. 2: Loosely clamp the stabilizer to drag link.



Fig. 3: Use the supplied screws to mount clamp.

5. The tie rod clamp should be installed with a 7 degree angle to horizontal (Fig. 4).

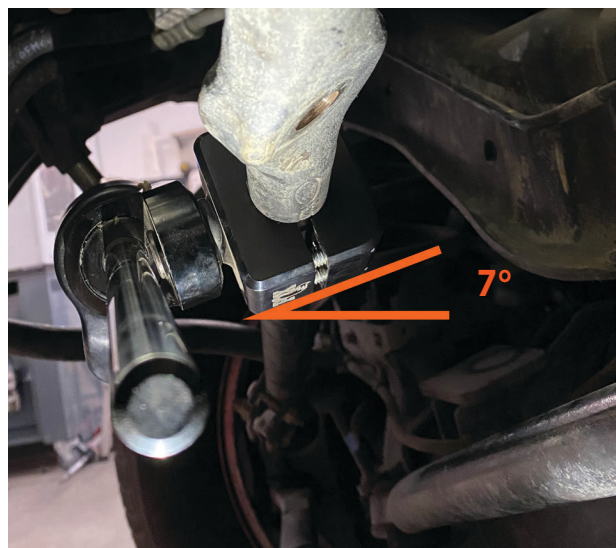


Fig. 4: Install the clamp at a 7 degree angle.

6. Orient the stabilizer to avoid interference with any parts of the vehicle (suspension, driveline, engine, etc.) through the entire range of steering and suspension travel. For ATS models, the stabilizer reservoir must point directly toward the ground.

7. If interference issues exist and cannot be resolved by rotating the tie rod clamp, rotate the stabilizer reservoir. Loosen pinch bolt on L-bracket between stabilizer clamp to rotate reservoir. Torque the pinch bolt to 12 lb-ft (Fig. 5).

8. With the wheels turned fully to the right and 1/8" of shaft exposed on the stabilizer, torque the 4 tie rod clamp screws to 12 lb-ft.



Fig. 5: The pinch bolt is located on L-bracket.

CHECK AND FINAL DETAILS

1. Check that the vehicle steers completely in both directions and is limited by the steering stops, not the stabilizer.

2. Place vehicle on the ground and check that the steering stabilizer does not interfere with anything (suspension, driveline, engine, etc.) through entire range of steering and suspension travel.

NOTICE: If after installing the steering stabilizer maintenance is performed requiring the removal of the stabilizer (such as a wheel alignment), you must re-mount the tie rod clamp at full droop height. Use the same steps outlined above to complete the clamp re-mount.

ATS RELOCATION KIT INSTALLATION

TOOLS REQUIRED

- Manufacturer Torque Specs
- Torque Wrench
- High-Strength Thread Lock

1. Please read the INSTALLATION GUIDELINES on page 5 for instructions on how to properly lift and secure the vehicle.

NOTICE: Ensure vehicle is at full droop during removal.

2. Remove the ATS stabilizer from the stock location.

3. Remove the old bolt and clamp and install the new bolt and clamp (Hardware F1 & F4). Apply high-strength thread lock and torque the bolt to 30 ft-lbs (Fig. 6).

4. Remove the reducers from the eyelet and replace with the new supplied parts (Hardware F2 & F3). Install the tall reducer on the bottom of the eyelet (Fig. 7).

5. Once the new hardware is installed on the stabilizer, go to Step 3 of the Axle Mounted Steering Stabilizer Installation to complete the installation.



Fig. 6: Apply high-strength thread lock and torque to 30 ft-lbs (Hardware C1 & C2).



Fig. 7: Install reducers with the taller reducer on the bottom (Hardware F2 & F3).

AXLE MOUNTED STEERING STABILIZER INSTALLATION

TOOLS REQUIRED

- Manufacturer Torque Specs
- Torque Wrench
- Medium-Strength Thread Lock

STOCK STABILIZER REMOVAL

NOTICE: Medium-strength thread-lock is recommended on all bolts.

1. Please read the INSTALLATION GUIDELINES on page 5 for instructions on how to properly lift and secure the vehicle.

NOTICE: Ensure vehicle is at full droop during installation.

2. Remove the stock steering stabilizer.

FOX STABILIZER INSTALLATION

1. Remove factory bolts from differential cover. There are 2 bolts for 2017-2022 models; Dana 60 (Fig. 8) and 3 bolts for 2023-On models; Dana 50 (Fig. 9).

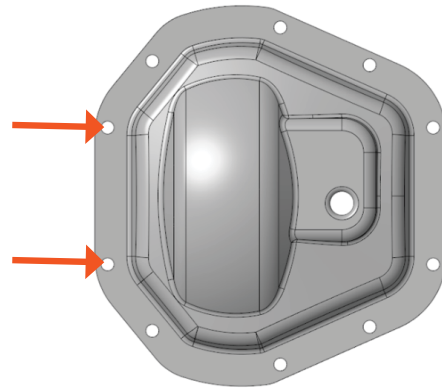


Fig. 8: Remove bolts from differential cover (2017-2022 models; Dana 60).

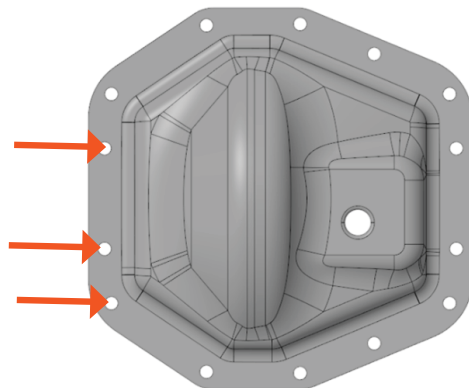


Fig. 9: Remove bolts from differential cover (2023-ON models; Dana 50).

2. Place the supplied washers on the backside of the L-bracket as shown (Fig. 10 and Fig. 11) and install the differential cover (Fig. 12). Torque the differential cover bolts to the following specification:

2017-2022 Ford Superduty with Dana 60 Axle:
2 bolt configuration using Hardware E2 and E7; torque to 35 ft-lbs (Fig. 10).

2023-On Ford Superduty with Dana 50 Axle: 3 bolt configuration using Hardware E6 and E7; torque to 25 ft-lbs (Fig. 11).

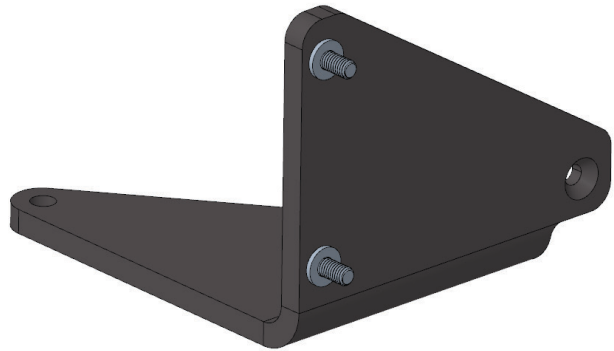


Fig. 10: Washers on L-bracket (2017-2022 models).

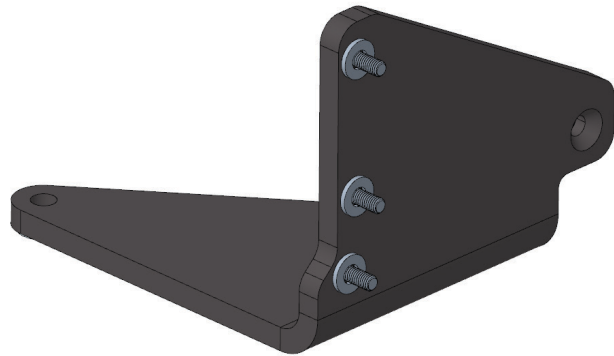


Fig. 11: Washers on L-bracket (2023-ON models).



Fig. 12: Install the correct differential cover hardware for your vehicle.

3. Attach the U-bolt bracket to the L-bracket with the supplied hardware: Hardware E3, E5, and E1 (Fig. 13). Torque the 3/8"-16 nyloc nut to 35 ft-lbs (Fig. 14). Ensure the U-bolt bracket sits flush against the axle.

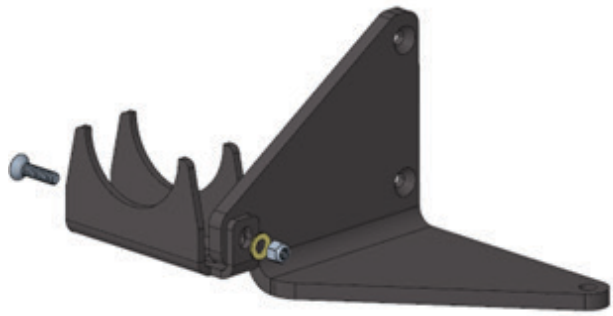


Fig. 13: Attach the U-bolt bracket to the L-bracket



Fig. 14: Torque the nyloc nut (35 ft-lbs); ensure the U-bolt sits flush against the axle.

4. Install the U-bolt around the axle and onto the U-bolt bracket. Use Hardware E1, E4, and E5. Torque the nyloc nuts to 30 ft-lbs. Ensure that the number of threads exposed is equal on both sides (Fig. 15).



Fig. 15: Torque the nyloc nuts (30 ft-lbs); ensure exposed threads are equal on both sides.

5. Before installing the stabilizer, ensure both wheels are pointed straight and the steering wheel is centered. Then, ensure the stabilizer is centered in its travel with an equal amount of chrome shaft exposed on both sides (4.125"). Install the ATS stabilizer clamp onto the tie rod and hand tighten it using Hardware C1 and C2 (Fig. 16). Do not torque the bolts yet.



Fig. 16: Attach the stabilizer to the tie rod with the clamp.

6. Attach the stabilizer eyelet to the L-bracket using Hardware D1, D2, and D3. Install the bolt from the bottom (Fig. 17). Torque the nyloc nut to 85 ft-lbs.



Fig. 17: Attach the stabilizer eyelet to the L-bracket; torque the nyloc nut (85 ft-lbs).

7. Check to make sure the stabilizer is in-line with the tie rod (Fig. 18). Torque the clamp bolts to 12 ft-lbs.



Fig. 18: Stabilizer in-line with tie rod.

CHECK AND FINAL DETAILS

1. Check that the vehicle steers completely in both directions and is limited by the steering stops, not the stabilizer.
2. Place the vehicle on the ground and check that the steering stabilizer does not interfere with anything (suspension, driveline, engine, etc.) through the entire range of steering and suspension travel.

NOTICE: If after installing the steering stabilizer maintenance is performed requiring the removal of the stabilizer (such as a wheel alignment), you must re-mount the tie rod clamp at full droop height. Use the same steps outlined above to complete the clamp re-mount.

RETORQUING PROCEDURE

After 1,000 miles, retorque the following bolts in this order:

1. Differential cover bolts:

2017-2022 Ford Superduty with Dana 60 Axle:
torque to 35 ft-lbs (Fig. 8).

2023-On Ford Superduty with Dana 50 Axle:
torque to 25 ft-lbs (Fig. 9).

2. U-bolt nuts, 30 ft-lbs.
3. Eyelet bolt, 85 ft-lbs.
4. Clamp bolts, 12 ft-lbs.

MAINTENANCE

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

To avoid corrosion, you should keep the shocks and springs clean, free of dirt and moisture. The wiper seal will clean deposits from the shaft, but the shock won't necessarily fully compress every time. This means you could accumulate dirt 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 dirt inside the shock.

Make sure the ends of the spring and shock threads are clean and free of dirt 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

NOTICE: Keep the shock and spring clean and free of dirt or water to avoid corrosion. Keep the shock shaft clean and free of mud. Avoid using a high-pressure washer near the shaft seals and adjusters. Before adjusting preload or the crossover ring, clean the threads of the shock body for easier adjustment and mitigating wear.

FOX SERVICE AND UPGRADES

HAVE YOUR FOX SHOCKS SERVICED BY FOX TECHNICIANS. CALL OUR SERVICE CENTER AT 619.768.1800 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

100% street use: Every 50,000 miles

50% street/ 50% off-road use: Every 10,000 miles

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**WARNING: Cancer and
Reproductive Harm —**
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.

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