# OFFROAD OWNERS MANUAL



FOR REDEFINE





# **OWNERS MANUAL**

#### INTRODUCTION

Thank you for choosing FOX offroad 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.

#### WARNINGS

FOX offroad shocks should always be installed as a pair for maximum performance.

Proper installation and service procedures are essential for the safe and reliable installation of chassis parts, 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 body protective gear including head protection when appropriate. Installation of vehicle roll bars or cage is highly recommended. FOX direct-replacement, smooth body 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, disassemble, puncture or incinerate a FOX Direct Replacement Smooth Body 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.

## **GENERAL CARE**

## WAX BODIES

FOX shock bodies and reservoirs are plated with zinc and clear coat. Before installing, and then several times a year, we suggest that you wax your shock bodies with a non-abrasive automotive wax. This will keep your shocks looking new for years to come.

#### SHAFTS

Each time your shock is fully compressed, the shaft is cleaned by the wiper seal. Since the shock is rarely fully compressed on most vehicles, the lower portion of the shaft will build up deposits and is more prone to corrosion. To avoid future problems, clean the shock shafts when needed.

#### NITROGEN PRESSURE

FOX shocks should be charged with Nitrogen only. Nitrogen will not hold moisture, and expands less as temperatures increase. Do not fill your shocks with compressed air because this will introduce moisture to the shock causing internal corrosion.

FOX shocks should be left at the factory setting of 200 psi of nitrogen. The nitrogen charge in the shock is to pressurize the internal floating piston (IFP) and avoid cavitation. Tuning should be performed through spring rates or shock valving changes and not with changes in nitrogen pressure.

We recommend checking the nitrogen pressure regularly. We also advise cleaning the bodies and shafts several times a year.





## **AIR SHOCKS**

FOX air shocks can be filled with 10 to 500 psi of nitrogen. To calculate the spring force, multiply the psi by 1.2 for 2" air shocks and 2.1 for 2.5" air shocks. (Example - 200 psi x 1.2 = 240 Pounds of spring force). The nitrogen pressure is used to set the ride height, and the oil volume can be increased to ramp up the spring curve to avoid bottoming the shock. Oil is added in 10cc increments (with the shock deflated and the valve core removed) up to a maximum of 30cc for 10" travel and shorter, and up to 50cc for longer shocks.

## **COIL-OVER**

Coil-overs are furnished without springs installed. Many models are setup to use two springs with a spring divider and adjustable cross-over ring. The set screws on the crossover ring must be tightened. The lower spring seats on the coil-overs are retained with either a retaining ring (for 2.0 shocks) or 2 semi-circular clips (for larger models). To install springs, slip them over the shock along with the spring seat, pushing it past its final position allowing you to install the retaining ring or clips. Preload can be adjusted by breaking free the backup ring, and threading the preload ring up or down the body of the shock. Once the height is set, the backup ring must once again be tightened against the preload ring (Spanner Wrenches required).

## VALVING

On the end of the shock shaft is a piston with (8) holes, (4) compression and (4) for rebound. Layered on either side of the piston are washers in different diameters and thickness. These washers make up the shim stack. The shim stack has to flex to allow the flow of oil in either direction of the shock.

The shim stacks range from 25 to 110. The higher the number, the more damping force the shock will produce.

When the shocks are built, we engrave the valve code on the bearing cap. The first number relates to the compression stack, and the second number to the rebound stack. You will also find the sales order # and the last 3 digits of the part number

## MOUNTING

## **EMULSION & AIRSHOCKS**

Emulsion shocks do not have a Internal Floating Pistion (IFP) separating the nitrogen and the oil. You must mount the shock body end up, shaft down. If you mount them upside down, then the first third of the shock stroke will be completely un-damped since the piston will be stroking through nitrogen rather than oil. This will create poor ride quality and is dangerous.

#### **RESERVOIR SHOCKS**

Reservoir shocks can be mounted in any position. We recommend body end up to help protect the reservoir and lines.

## TRAVEL LIMITS

FOX shocks are designed only to dampen the travel of the vehicle in compression and rebound. They are not intended to handle severe top-out or bottom-out forces. Be sure to use correct bottom out stops and limiting straps in severe applications.

## SERVICE INTERVALS

- •100% street use: every 50,000 miles
- •50% street / 50% offroad use: every 10,000 miles
- •100% offroad use: every 1,000 miles

#### FOX LIMITED WARRANTY

FOX Factory, Inc., a California corporation having offices at 130 Hangar Way, Watsonville, CA 95076 ("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) vear 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 PUNATIVE 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.

# SHOX NEED TOO

#### **SERVICE & UPGRADES**

Have your FOX serviced or upgraded by FOX technicians. Call our Offroad and Truck Service Center at 619.768.1800 to go over the service and upgrade options available for your shocks. Once you've setup your service or upgrades you will receive a return authorization number and shipping instructions.

#### SERVICE INTERVALS

100% street use: every 50,000 miles
50% street / 50% offroad use: every 10,000 miles
100% offroad use: every 1,000 miles

#### SERVICE MENUS & PRICING Please visit http://foxshox.info/orservice



# STAY INFORMED REGISTER YOUR PRODUCT



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 PN 605-00-035 REV B
 JUNE 2012