



# Fractive Tuning System - Fox Fit4 Damper System Installation Manual

## Compatibility:

All Fox Fit4 dampers with LSC adjust (including Fox 40). For 32/34/36 these are Factory series. For 40s, these are Performance Series Elite.

*Forks without LSC adjust do not have sufficient low speed compression damping nor adjustability, however the parts do physically fit and function. Equivalent LSC setting is approximately 12 clicks from fully closed. Do not recommend installing in these forks.*

Shown Below: 34 Fit4 Factory topcap. Blue knob (mode selector) becomes HSC selector. Black knob (LSC adjuster) remains as is.



## Incompatibility:

Any Fit4 damper that does NOT have an external LSC adjuster knob

Any remote-equipped forks

Any non-Fit4 forks (eg RC2 dampers, Fit Grip, CTD etc)

## Fox nomenclature:

“Fit4 3pos **w/Adj**” or “Fit4 LSC (RC)” means a Fit4 damper with a LSC adjuster

3pos: 3 position mode selector (open/medium/very firm)

P-Se: Performance Series Elite

F-S: Factory Series

## Tune Calculator:

<https://vorsprungssuspension.com/pages/fractive-fork-tuning>

## Changes Made:

Compression piston replaced

Rebound damping not altered - external adjustment range is very wide and usually suitable for riders 65-110kg (140-240lbs). Riders outside that range will need rebound revalve.

## Manufacturer Parts Replaced:

222-01-290 (Piston, Compression, Fit4, Dished, Zinc, Die Cast) - remove entirely

FOX stock shim stack - remove entirely

## Manufacturer Service Manuals:

[2016-2018 36mm/40mm P-S/P-Se FIT4 LSC \(RC\) Damper Cartridge Rebuild](#)

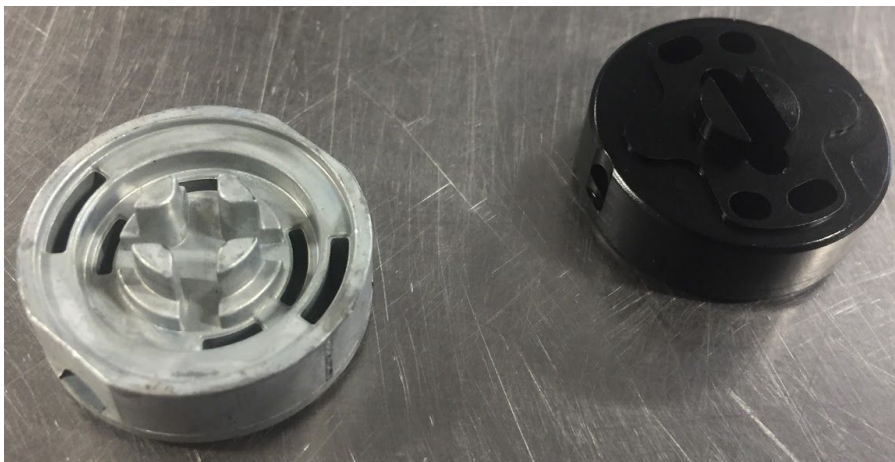
[2016-2018 36mm F-S/P-Se FIT4 3pos w/Adj Damper Cartridge Rebuild](#)

[2016-2018 32mm/34mm F-S/P-Se FIT4 3pos w/Adj Damper Cartridge Rebuild](#)

## Installation Instructions:

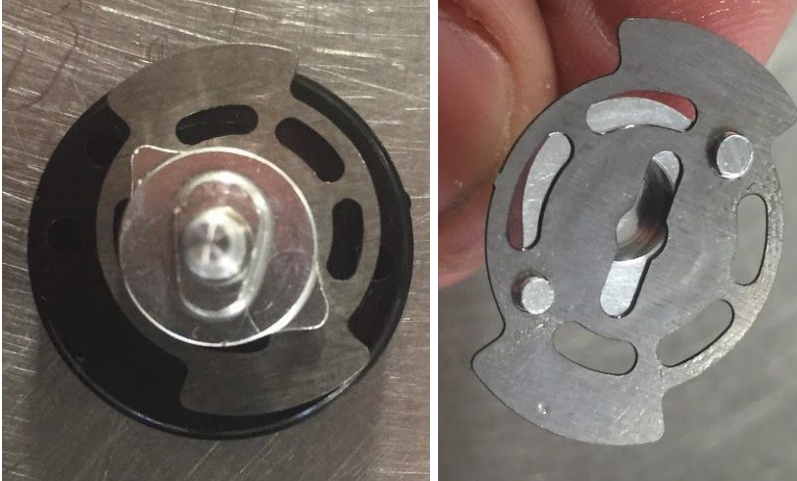
Before you begin, record all your settings (air pressure, rebound etc) and write them down.

1. Follow the relevant service manual up until the point where the compression piston is removed along with the shim stack.
2. Set the compression piston (heavy zinc unit) and factory shim stack aside. They will not be reused. The butterfly shim and the mode selector switch (sometimes called lockout selector or compression selector shaft) however will be reused. Take careful note of their orientation.  
OLD piston on left, new on right:

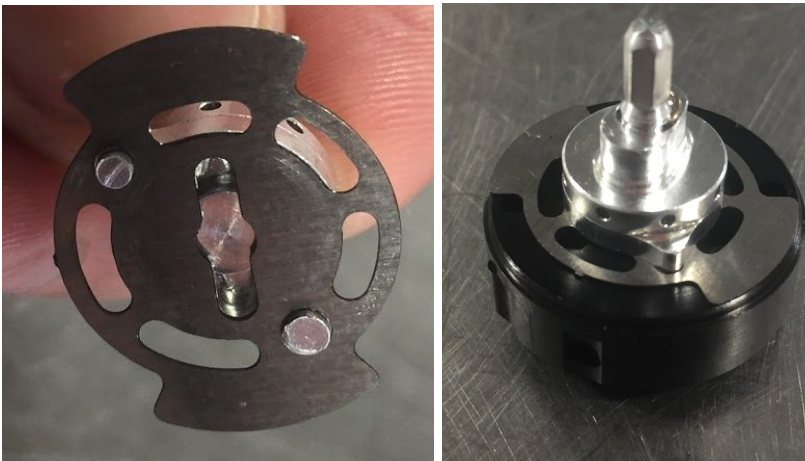


3. Reinstall the mode selector switch and butterfly shim into the topcap assembly as per factory service manual. Check the orientation carefully! It is easy to put the butterfly shim onto the mode selector upside down - it will not work like this.

**WRONG:**



**RIGHT:**



4. If the fork has a 3-position mode selector switch, use the blue knob to turn it to the middle of the 3 clicks. This ensures that the two pins poking through the butterfly valve align with the correct C-shaped slots in the piston (the pins are not the same size, nor are the slots).

5. Install Fractive piston with the small protrusion on the side of the piston aligned with groove in topcap assembly. Ensure that the two small shim tabs on the piston face are oriented away from the topcap (towards bottom of fork).

**SHIM TABS SHOWN POINTING UPWARDS IN THIS PHOTO:**



6. Install shim stack onto the shim tabs on the Fractive piston - largest shim first - while the topcap/Fractive piston are upside down. Ensure shims are correctly oriented - largest diameter shim should be against the piston, smallest diameter shim should be at the back of the stack, furthest from the face of the piston. Picture below shows piston with and without shims. They are on the opposite side of the piston to where the butterfly valve and mode selector engage.

**IMAGE SHOWN WITH PISTON OUTSIDE TOPCAP FOR CLARITY:**



7. Press down on the piston a few times with your finger. It should be able to move up and down a little bit due to the wave washer between the mode selector and the topcap.
8. Keeping topcap upside down, thread the damper body assembly and the top cap assembly back together until hand tight (no tools yet)
9. Verify that the mode selector can be turned to all 3 positions (if relevant) and that the LSC adjuster moves freely. If they do not, disassemble and investigate.
10. Re-torque the top cap assembly as per factory service manual
11. Reassemble all other components of the damper cartridge as per factory service manual

12. Rebleed cartridge as per factory service manual. Use a ~15cSt viscosity oil, such as the stock oil (Fox R3 wt), or similar viscosity alternatives such as WPL ShockBoost 2.5wt, Maxima RSF 3wt etc.
13. Reassemble cartridge into fork and complete service if necessary, as per factory service manual.

## Setup & Tuning:

1. First, ensure your spring and rebound settings are where they were before. If you were installing a Luftkappe into the air spring at the same time, you may need 0-10% higher pressure than you were running before, and one less air token.
2. Start with the **HSC** selector in the **middle** mode. This will be your default HSC mode to begin with.
3. Set **LSC** fully closed (clockwise), then back it off 7 clicks. This is your starting position, which we will refer to as **LSC-7**. All damper measurements should be measured in clicks from firmest/slowest, which is what we refer to as "fully closed".
4. Ride the bike and assess whether you want the fork feeling firmer or softer, adjusting the LSC dial clockwise for firmer or counter-clockwise for softer.
5. If you are in need of more support for steep trails, big hits or aggressive moves, flick the HSC selector clockwise to the Firm mode.
6. Conversely, on smoother/faster terrain, or flatter rough terrain at low speeds (eg pedalling through chunk on undulating/flatter ground), flick the HSC selector to the softest mode for a less supportive but more compliant ride.

## Notes on tuning:

1. The stock Fox LSC adjuster (not replaced with this system) is quite ineffective beyond approximately 12 clicks out from fully closed/firm. Although it has approx 22 clicks total, the 10 softest of these make little difference, so your realistic range is between 1-12 clicks from fully closed. We don't generally recommend running the adjuster fully closed - if you need to do that, you should either consider using a firmer HSC setting or installing a firmer valving. Likewise, if 12 clicks out is still too firm, use a softer HSC setting or a softer valving.
2. The difference made by the HSC mode selector **WILL NOT** be very noticeable pushing on the bike in the carpark. It is a true high-speed adjuster that has a considerable effect on the fork's performance on the trail, particularly for big hits, but almost no effect at low speeds - that is what the low speed damping is for.
3. Using a higher viscosity oil will create more low speed damping in both compression and rebound, without substantially affecting the high speed damping. We do not provide support for use of oil viscosities other than what we recommend here.