

Fitting Instructions F4R-LC80-IS

Toyota Landcruiser 80 Series

91015 and 92015 F4R Shock Absorbers

F4R
FORMULA 4X4

Description of Shock

The F4R Formula 4x4 kit for the Toyota Landcruiser 80 Series is a 3-way adjustable remote reservoirs shock in the front and rear, specifically designed to suit your vehicle. The damper uses Fulcrums carefully chosen shim stacks to create the best damping characteristics for this vehicle.

The front damper is 3-way adjustable, compression Low-speed bypass, compression high-speed valve and rebound bypass.

The rear damper is 3-way adjustable, compression Low-speed bypass, compression high-speed valve and rebound bypass.

The adjustment clickers allow the user to carefully control how much oil is allowed to flow and bypass the shim stacks in each direction. Opening the clickers allows more oil to bypass and flow, reducing the damping effort in either compression or rebound.

This allows tuning for different load scenarios and road conditions.

Use of adjustments

Please note that before making any adjustments you should always make a note of what settings you have and what you change them too. This will ensure you keep track of the positions and don't get lost. If you are ever unsure wind the clickers all the way clockwise and count back out to the desired position. Each clicker has direction of positive (more damping) and negative (less damping) listed on their surface.

Fulcrum recommends the following damping settings as a starting point. (Note that this number of clicks anti-clockwise from the fully closed position.)

Front and rear Compression Low: 4 clicks (1 to 8 total) – Small adjuster on reservoir

Front and rear Compression high: position 3 (1 to 6 total) – large adjuster on reservoir

Front and rear Rebound: 2 clicks (1 to 12 total) – on shaft end mount, blue adjuster or silver pin clicker depending on vehicle.



Due to the heavy-duty design of the damper, it may be required to turn the adjusters one or two more clicks anticlockwise in compression and rebound for the first couple of thousand km, to reduce the stiffness and account for a running in period. Please make is full adjustment range on clickers before install as they may be stiff from assembly.

How to tune the damping settings

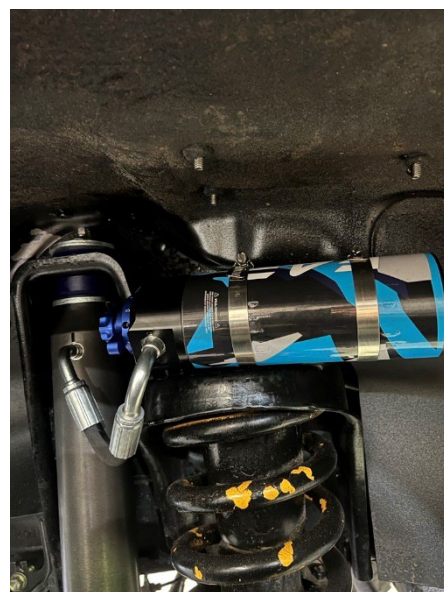
It is important to remember whenever tuning a passive damper, every adjustment is a compromise. An improvement in one area of ride and handling will detract somewhere else. The aim is to create the best compromise for your driving style and scenario.

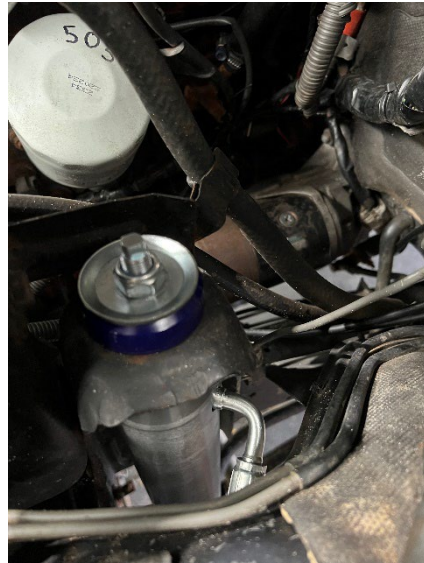
Problem	Damper Adjustment
Car easily bottoms out.	More high-speed compression.
Car feels lazy or unresponsive.	More low-speed compression.
Car feels too harsh over bumps.	Less low-speed compression on small bumps Less high-speed compression on large bumps
Car Kicks off bumps.	More rebound.
Car feels floaty.	More rebound.
Car is harsh over cracks or potholes.	Less rebound.
Front is too high.	Reduce front spring pre-load.
Front is too low.	Increase front spring pre-load.

Installation

Install the strut assembly - Front

With previous shock removed, insert the shock, body side up, into the shock tower. Then insert the lower end of the shaft into lower shock mount on axle and tighten. Orientation of bushes as pictured top and bottom with small taper on bush location in top and lower mount. Using existing bolts in spring tower, mount the reservoir bracket (left and right versions) with spacers under bracket to allow for clearance to tower. Mount reservoir to bracket using hose clamps and ensure there is no contact with tire to reservoir or hose on full lock or bump scenarios. To realign, simply undo clamps and readjust reservoir as needed. The reservoir is on a swivel hose, so can be rotated if necessary.





Once installed, attached all removed parts to complete front install.

Install the shock assembly – Rear

Bump stop spacers are required to be run with the shock due to its size. There are two spacers blocks and replacement bolts supplied in kit. Removed existing bump stop and re attached with spacer between it and the body.

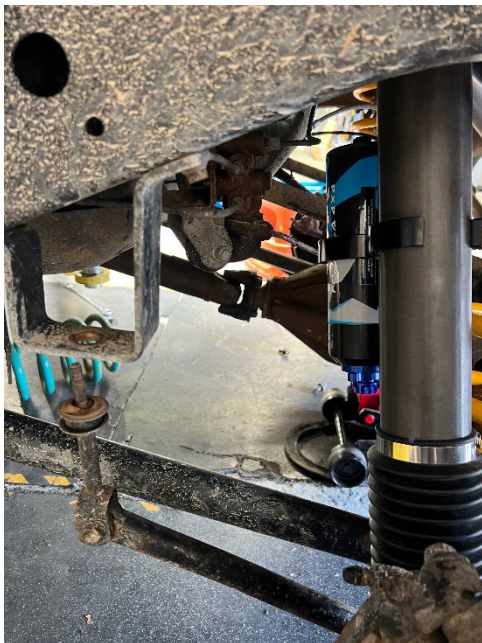


The orientation of the new shock will be fitted into the Vehicle with body on top and shaft below. The lower mount should have the rebound adjustment clicker point inwards to the vehicle making access easier. There will be a mount plate that will need to be removed off old shock and place onto new shock. The plates are left and right handed and attach with slotted hole in plate to the outside of the vehicle



The positioning the hose and reservoir may need to be adjusted to suit fitment in vehicle. Please see suggested images below on fitment. To realign, simply undo the bolt holding the clamp and place reservoir as need. The reservoir is on a swivel hose, so can be inverted if necessary. It is always recommended to fit shock before spring and jack each side up to full bump to ensure no contact is made with the reservoir positioning.

Left side of vehicle from side



Right side of vehicle from front

