



# Dobinsons Hydraulic Bump Stops

HBS59-019K

*Please leave this manual with the vehicle owner once finished.*

**Install Time** - 2-3 hours

**Tools Required**

- Floor Jacks and chassis stands
- Spanners, socket sets, hammer
- Drill and hole saw 58-63mm hole saw
- Black Spray Paint / Zinc Rich spray paint

Thankyou for purchasing Dobinsons hydraulic bump stops. Dobinsons hydraulic bump stops utilize a 30mm rod in conjunction with a 50mm diameter piston. This high quality hydraulic bump stop provides smooth bottom out control without excessive rebound associated with regular rubber and polyurethane bump stops. Dobinsons hydraulic bump stops have a M56 x 1.5 threaded high strength steel body for easy adjustment. It is important to ensure that the bump stops are installed and adjusted correctly and safely to provide optimum performance.

Always check your local federal, state or territory laws before installation to ensure compliance for road registered vehicles – if engineering approval is required an engineer should be consulted before install.

**Safety Warning:**

When fitting aftermarket replacement parts, it is important to note that your vehicle may behave and handle differently. Always follow relevant road rules and always use safe driving and vehicle operating practices.

These bump stops are pressurized with high pressure nitrogen gas and should never be heated or opened whilst pressurized. These bump stops should only be opened by a qualified technician. Take extreme care when de-gassing these bump stops and ensure that the bump stop is in the upright position for 10 minutes to allow the oil to settle to the bottom as there is no physical barrier between the oil and gas which may cause oil to escape from the shradar valve. Always cover the shradar valve with a cloth when de-gassing.

**Installation Warning:**

These bump stops should be installed only by a qualified technician. Attempts to install these products without knowledge or experience may jeopardize the safety of the vehicle. As bump stops are a universal product that can be installed in many applications it is the installer and engineers responsibility to ensure correct and safe installation. These instructions provide only a basic guideline for installation and do not cover vehicle disassembly or re-assembly. The installer is responsible to insure a safe and controllable vehicle after performing modifications. Do not perform test drives on public roads with partially completed installations.

Always double and triple check your work before use.

## Selection of Bump stops

For the rear of Landcruiser 80/105 with 0 – 4 inch lift kits the HBS56-009 bump stop is recommended, for 4-6” lifts HBS56-006 is recommended – this may require additional outer spacers

## Setup and Installation

**IMPORTANT NOTE:** Before commencing installation the vehicle must have the rest of the suspension components fitted, adjusted and aligned correctly. This is so that the vehicle is sitting at its finished ride height with the Panhard rod and castor adjustment products fitted and aligned correctly and will ensure that the bump stops contact the striking pad correctly at full compression.

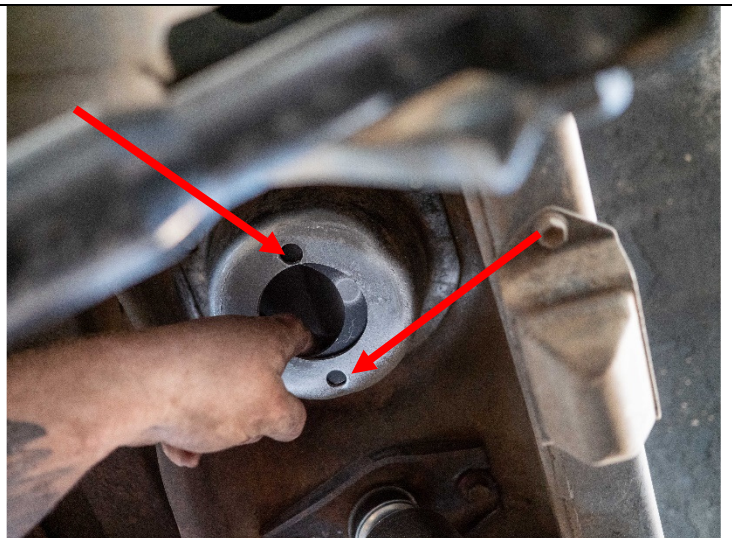
Always take extreme care not to damage the bump stop thread.

<p>1. Firstly apply a small amount of lubricant to the thread such as light oil or wd40 and thread the bump stops into the mounts to ensure they screw in correctly. Install one locking ring below the mount with the grub screw tip point towards the mount. The upper locking ring is not required. Thread the bumpstop fully in but Leave loose for now</p>	
<p>2. Using safe and proper workshop practices raise the vehicle and support with chassis stands. Remove the, coil springs, rubber coil seats and shocks. Use a 12mm socket and extension to remove the inner coil rubber bump stop.</p>	

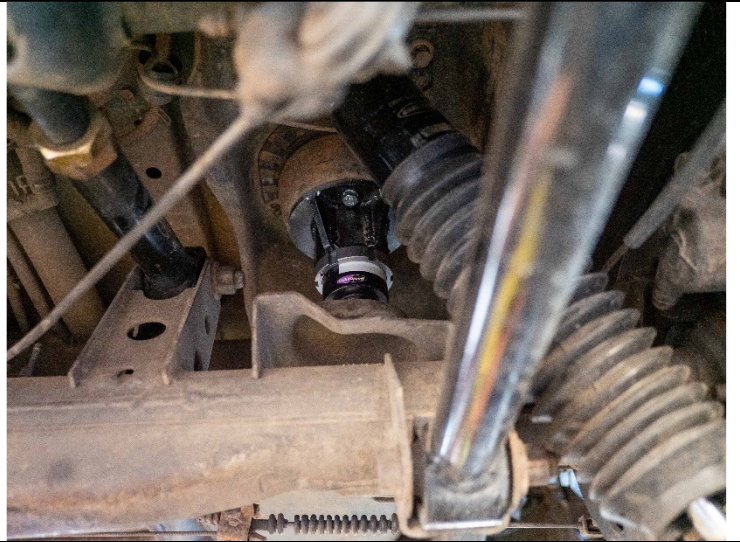
3. Using a hole saw between 58 and 63mm, drill a hole into the bumpstop mount using the centre threaded hole as a guide



4. Deburr the hole and paint to prevent rust.
5. Install the half circle plates with nuts through the hole and align with the existing bump stop holes.



6. Bolt the bump stop and mount into the vehicle using the bolts supplied and red high strength Loctite using the M8 x 35mm bolts, spring washers and flat washers combined, bolting to the half circle plates. Bolt one side in first to hold the half circle plate and then rotate into place to get the second nut.



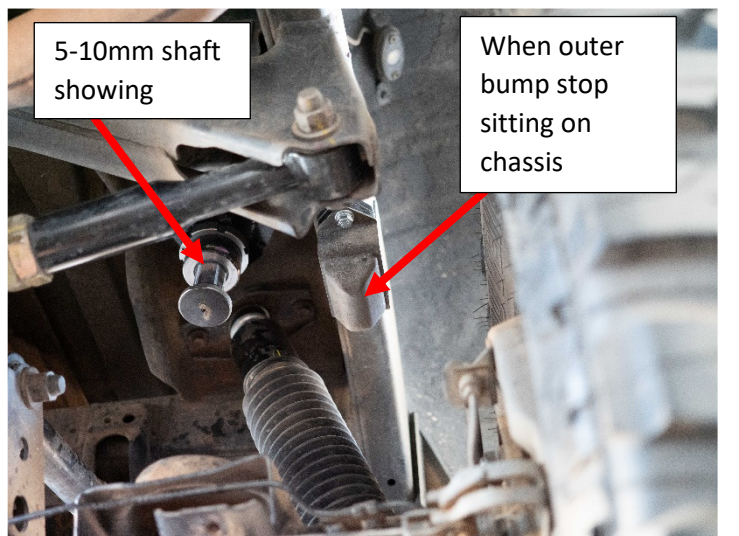
7. Bolt the striker pad into the bottom inner coil bump stop mount using the countersunk bolt and handle nut supplied along with red Loctite.

8. Setting the bump stop height: The Dobinsons hydraulic bump stop kit are designed to work in conjunction with the original under chassis rubber bump stop.

The under chassis rubber bump stop must be contact when the hydraulic bump stop has 5 - 10mm of shaft remaining / travel remaining.

Use the spacers provided on the outer bump stop and adjust the hydraulic bump stop to achieve this whilst also ensuring clearances on all contact areas such as diff housing, shock absorber full compression (must have 5 - 10mm shaft showing at full bump), coil bind and all other areas that may cause issues.

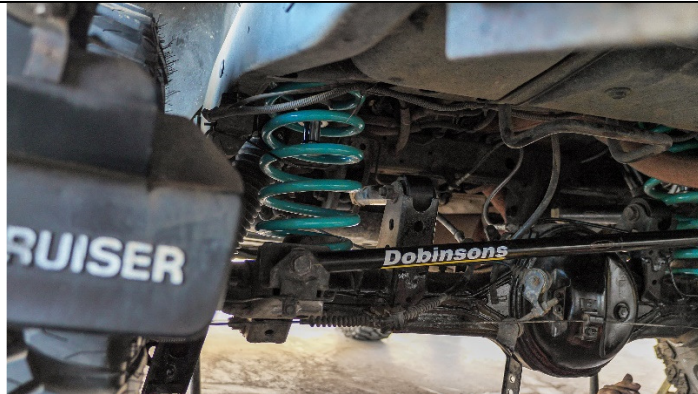
Cycle the suspension and adjust both the hydraulic bumpstop and under chassis rubber bump stop until this is achieved.



9. Tighten the lock nut on the hydraulic bump stop and then tighten the locking grub screw



10. Re-install coils, shocks, wheel and other removed items.



## Maintenance

Dobinsons hydraulic bump stops are completely rebuildable and tunable. The bump stops should be kept clean and the locking rings inspected regularly to ensure they are tight. For non-race applications the bump stops can be inspected periodically and at regular service intervals for signs of oil leaks, damage to the shaft and gas pressure. For race applications the bump stops should be inspected before and after each meet for signs of damage or oil leaks. Gas pressure should be checked before each race meet. For severe race applications it is recommended to rebuild and service the bump stops periodically.

## Warranty

Dobinsons hydraulic bumpstops have a limited 2 year warranty for non-race vehicle applications from date of original sale against faulty manufacture. For full warranty terms and conditions for hydraulic bump stops please visit [www.dobinsonsprings.com](http://www.dobinsonsprings.com)