



OLD MAN EMU FITTING INSTRUCTIONS

TOYOTA HILUX 2005 ON SUSPENSION SYSTEM

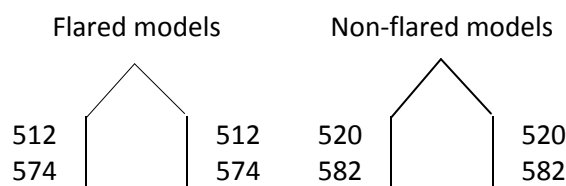
WARNING

- ◆ This product must be installed exactly as per these instructions using only the hardware supplied.
- ◆ In the event of damage to any suspension component, contact your nearest authorised ARB stockist. Repairs or modifications to the suspension system components must not be attempted.
- ◆ Do not use this product for any vehicle make or model, other than those specified by ARB.
- ◆ Do not remove labels from suspension components.
- ◆ This product or its fixing must not be modified in any way.
- ◆ The installation of this product may require the use of specialized tools and/or techniques
- ◆ It is recommended that this product is only installed by trained personnel
- ◆ These instructions are correct as at the publication date. ARB Corporation Ltd. cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer
- ◆ During installation, it is the duty of the installer to check correct operation/clearances of all components
- ◆ Work safely at all times

Note: These fitting instructions should be read in conjunction with the vehicle workshop manual or torque reference chart.

RIDE HEIGHTS REFERENCE

Manufacturer's specified ride heights, measured from **centre of hub to guard**, as published by the Australian government in Road Vehicle Descriptor documents. RVD's can be accessed on the web via these sites:
<http://myrta.com/rvd/welcome.do> or http://rvcs-prodweb.dot.gov.au/pls/www/pubrvcs.Notify_Search



FITTING REQUIREMENTS

HAND TOOLS REQUIRED

Ring open end spanner set metric
Socket set metric
Ball pein hammer
Lever bar
Paint Marker

WORKSHOP TOOLS REQUIRED

Vehicle hoist or jack and axle stands
Strut compressor
Tape measure
Trolley jack



OPTIONAL HAND TOOLS

Ratchet spanners metric – 14mm, 17mm, 19mm
Pry bar

OPTIONAL WORKSHOP TOOLS

Vehicle hoist
Grease gun
Impact driver
Straight edge
Axle stands

SAFETY EQUIPMENT REQUIRED

Protective eyewear		Hearing protection	
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Note: ‘WARNING’ notes in the fitting procedure relate to OHS situations, where to avoid a potentially hazardous situation it is suggested that protective safety gear be worn or a safe work procedure be employed. If these notes and warnings are not heeded, injury may result.

GENERAL CARE AND MAINTENANCE

By choosing Old Man Emu suspension, you have bought a product that is one of the most sought after 4WD products in the world. Your suspension system is a properly engineered, reliable, quality accessory that represents excellent value. To keep your suspension in original condition it is important to care and maintain it following these recommendations:

- As part of any Pre Trip Preparation, or on an annual basis, it is recommended that a thorough visual inspection of all components is carried out. Make sure that all bolts and other components are torqued to the correct specification. Also check that all bushings, mountings, and fasteners are free of damage. Replace any components as necessary. This service can be performed by your local authorized Old Man Emu licensed workshop.
- Vehicles fitted with leaf springs require leaf spring liners and polyurethane bushes to be greased as part of the annual regular maintenance. Follow instructions in Old Man Emu suspension maintenance guide for detailed procedures.

Front Suspension Fitment



Before starting, check all part numbers match invoice, Old Man Emu catalogue, or application guide.

Measure rim to guard heights and note rim diameter.

Fill out warranty form.

Note accessories already fitted.



Raise front of vehicle and remove front wheels.

Tools:
Jack and axle stands or vehicle hoist
Wheel brace or 19mm socket



Remove split pin and nut that secures front steering arm ball joint.

Loosen taper on ball joint with a ball joint puller.

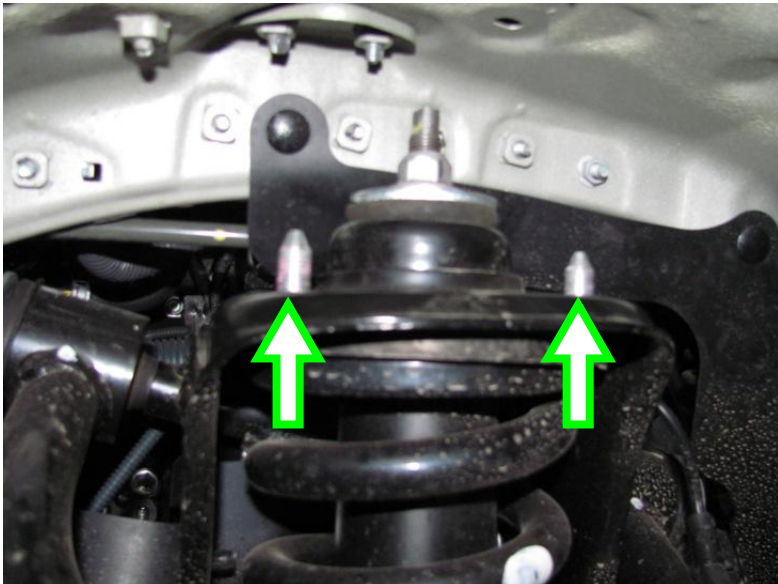
Tools:
Ball pein hammer



Remove sway bar nut and remove link from mount.

At this stage complete this step on both left and right hand sides of the vehicle.

Tools:
17mm spanner or socket



Remove 3 nuts that secure strut assembly.

DO NOT loosen centre nut that secures the damper to the top hat.

Tools:
14mm spanner (ratchet spanner is best)



Remove nut that secures damper to bottom arm.

Tools:
19mm spanner
19mm socket & ratchet or rattle gun



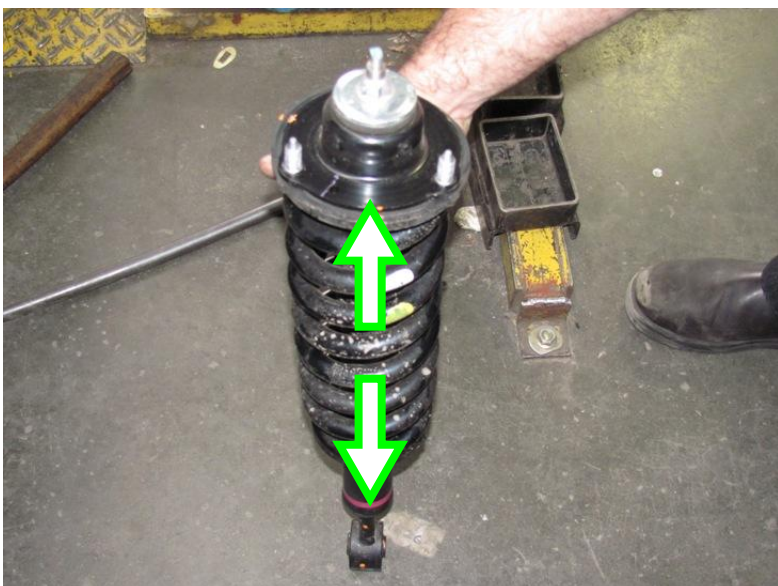
Remove sway bar saddle bolts. Rest sway bar on under vehicle splash pan.

Complete this step on both left and right hand sides of the vehicle.

Tools:
17mm socket



Remove strut assembly.



Note alignment of studs on top hat and eye direction. Mark front position with Paint marker

When assembled the OME damper must be oriented in the same manner.

Tools: Paint Marker



Using a spring compressor disassemble the strut assembly.

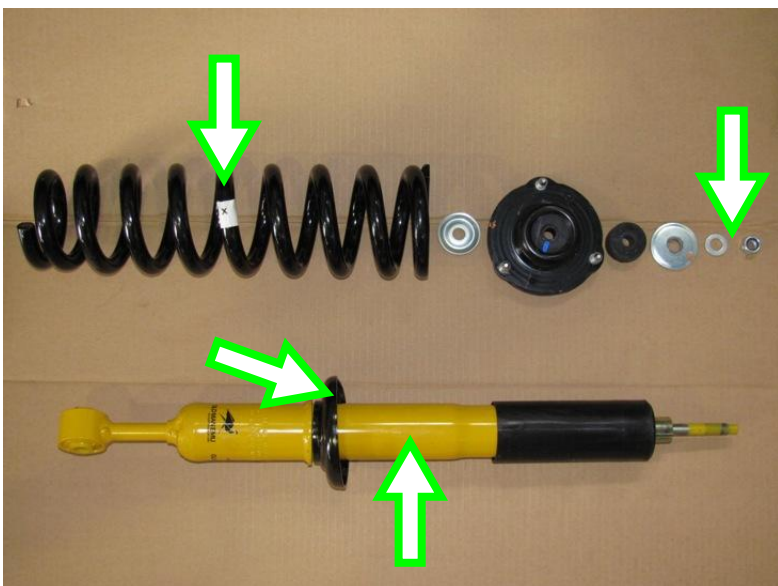
Tools:
 Strut compressor
 19mm spanner
 8mm spanner



Note components that make up the OE strut assembly.

The top hat, bushing and washers must be retained to be fitted with the OME components.

Check condition of all bushes including bushing bonded to underside of top hat (not visible in photo), replace as necessary.



New Old Man Emu parts supplied are the damper, spring, top nut, coil seat and washer.



Fit the coil seat to new Old Man Emu shock absorber as shown.



Fit the OE washer to the top shaft of the new shock absorber as shown.



Fit OE top hat and Old Man Emu spring to spring compressor.



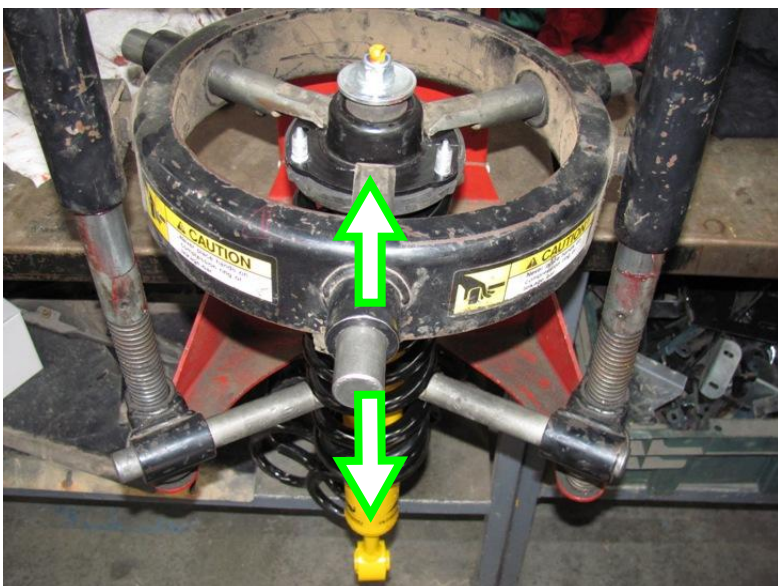
Compress spring such that the damper can be pushed home against the top hat without the spring seat coming up to contact the bottom of the spring.

Fit OE bush and washer and secure with new nut and washer supplied.

Tools:
19mm spanner
8mm spanner



As you unwind the spring compressor align spring seat with the end of the coil.



Align damper bottom mount and top hat studs as per OE.



Refit strut assembly.



Hold strut assembly in place with one or more nuts secured finger tight.



Use a lever bar as shown to aid alignment of the bottom mount in the arm.

Tools:
Lever bar



Using the lever bar in the top arm and screwdriver in the bottom eye, align the bottom mount.

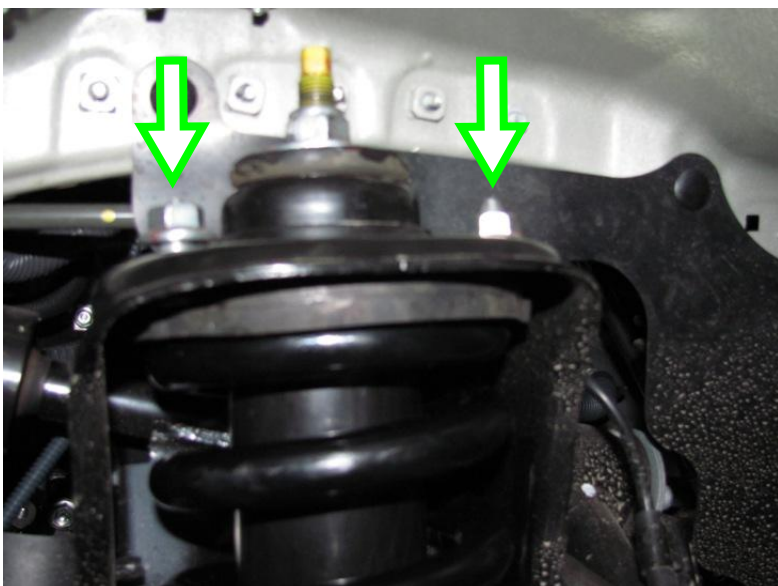
Tools:
Lever bar
Screwdriver



Secure with OE nut and bolt finger tight.

This lower nut and bolt will be tightened to specified torque when the vehicle is back on the ground and suspension has settled at ride height.

Tools:
19mm spanner
19mm socket & ratchet or rattle gun



Tighten all three top hat nuts and torque to manufacturer's spec.

Tools:
14mm spanner or socket



When both left and right hand sides have been fitted, refit and tighten sway bar links and saddles.

Torque to manufacturers specifications.

Tools:
17mm spanner or socket
Torque wrench



Fit and torque ball joint nut to manufacturer's specification. Secure with split pin.

Tools:
17mm spanner or socket
Torque wrench
Pliers

Rear Suspension Fitment



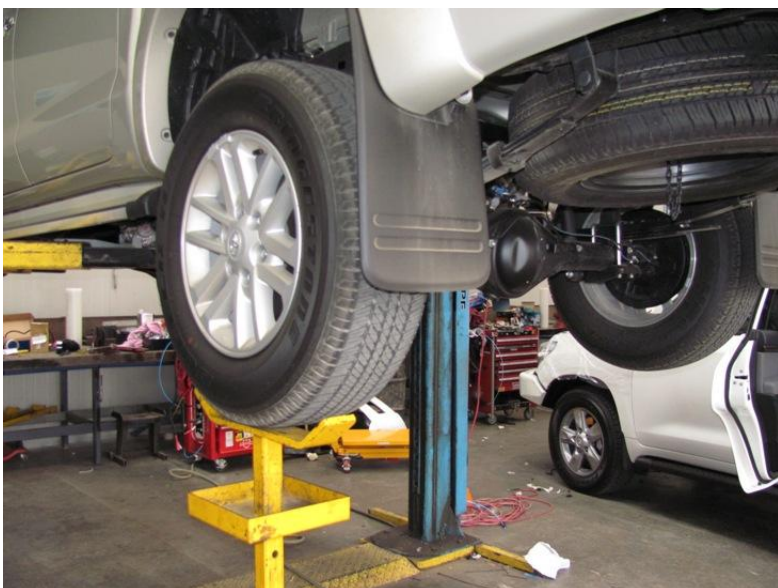
Before fitting measure and note free camber of both left and right hand springs.

Lay a straight edge across the top of the front and rear eyes and measure the vertical distance down to the top of the top leaf at the centre bolt.

If you do not have a straight edge, flip the spring upside down on a flat surface and measure the distance from the surface to the top of the top leaf at the centre bolt.



Lift vehicle on hoist. If you do not have a hoist, use a trolley jack.



Support one wheel on axle stand

Note: Rear suspension fitment should be carried out one side at a time. Complete all steps for one side of the vehicle then repeat for opposite side.



Remove LHS shock absorber.

Retain bolt and washer.

Remove bracket that secures hand brake cable to front end of leaf spring. Retain hardware.

Tools:
17mm spanner or socket



Remove U bolts.



Loosen spring front eye bolt.

Do not remove bolt at this stage

Tools:
17mm spanner or socket x 2



Loosen and remove rear shackle.

Tools:
17mm spanner or socket



Remove spring front eye bolt.



With assistance from another person,
remove the spring from the vehicle.



If fitting Old Man Emu Greasable Shackles assemble as shown by fitting instructions supplied with shackles.



Fit bushes to front and rear spring eyes as shown.

Apply lithium based high pressure grease to the inside of the bush and the end face.

You do not need to apply grease inside the spring eye or to the outer diameter of the bush.



Remove original bushes from chassis. Use pry bar to aid removal if necessary.

Once completed Fit new Old Man Emu bushes to chassis. Apply grease to hole in bush and end face.

Tools: Pry bar



Insert sleeve to front eye.

Use Multigrips to assist insertion if required.

Tools:
Multigrips



With assistance from another person, fit the new Old Man Emu spring.

Fit bolt in front eye to hold spring in place and secure nut finger tight.

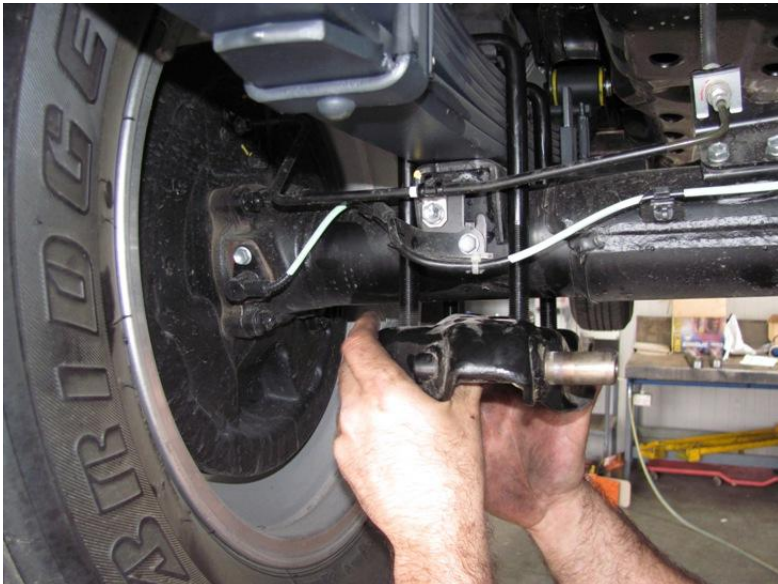


Fit shackle to chassis and rear eye as shown by instructions supplied with shackle kit.

Fit second plate washers and nuts and secure finger tight.



Locate spring centre bolt in axle and refit factory bump stop with Old Man Emu U bolts.



Fit fish plate and secure with flat washers and deep nuts.

Fasten securely with socket and ratchet.

Tools:
22mm socket and ratchet or impact driver



Refit hand brake cable bracket to leaf spring clip.

Tools:
12mm spanner



Fit spacer washer supplied with shock absorber behind original factory washer as described by instructions supplied with shock absorber.

Repeat for top shock absorber mount.



Refit factory washer and new bush as shown.

Repeat for top shock absorber mount.



For top and bottom mount fit small spacer to shock absorber mounting bolt as shown.



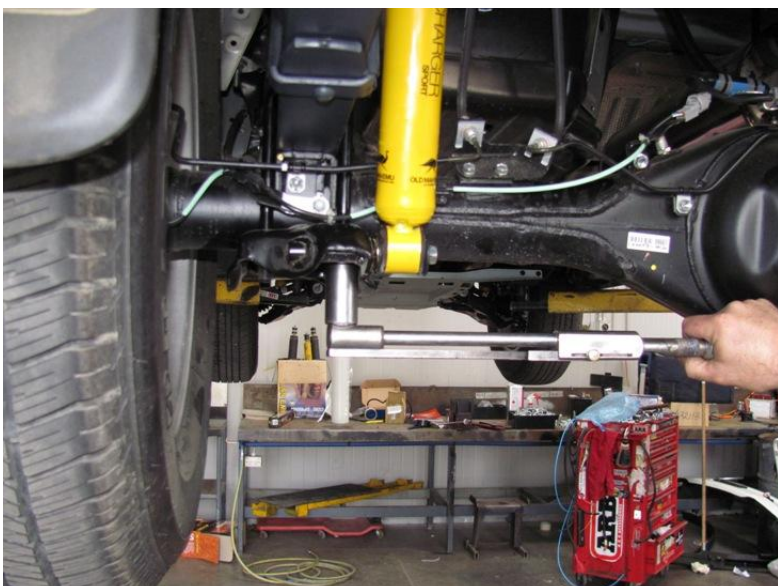
Fit shock absorber and remaining bushings. Secure to manufactures torque specification.

Tools:
17mm socket and torque wrench



Fasten all shackle hardware securely. Torque fasteners as per shackle kit instructions.

Tools:
22mm spanner then socket and torque wrench



Repeat the entire process to remove and refit the leaf spring assembly on the other side of the vehicle.

When complete, return vehicle to the ground and secure u bolts to 126 Nm (93 ftlbs)

Tools:
22mm socket and torque wrench

Post Fitment



Bounce the front a couple of times to cycle the suspension.

Secure the front lower strut bolt to the manufacturer's torque specification.

Tools:
19mm socket and torque wrench



Carry out wheel alignment to manufacture's specifications.

Road test including brake check.

On return measure ride heights and check all bolts are secure.

Complete and submit warranty form.