

# Fitting Instructions #0168RIS

## Various Models

### *Greasable Rear Shackles with bushes*

**Important Note:** These components must be fitted by qualified persons only, to factory specifications, as per factory service manual.

- Tools required:
- Socket Set
  - Torque wrench
  - Grease gun with Molygrease

Before commencing any work, ensure that the kit contains the required componentry (See Table 1).

#### Installation Instructions:

- With the vehicle on a flat, hard surface, place chocks in front and behind both front wheels;
- Loosen shackle nuts on both sides of vehicle, but leave them still fastened;
- Use a jack to raise the rear of the vehicle and support chassis on vehicle stands so that both rear wheels are not touching the ground; or use a hoist to raise vehicle (recommended);
- Place a stand under rear axle housing and raise slightly to take the suspension hanging weight off the rear swing shackles;

**Note:** While the suspension is disconnected from the body, ensure that no cables/hoses/sensors that are attached to the leaf spring or axle housing are overstretched. – check leaf spring and both front and rear of axle housing for;

- Brake hoses
  - ABS sensor cables
  - Handbrake cables
  - Diff breathers
  - Diff locker cables/hoses/sensors
- Remove all old shackle hardware;
  - Remove old bushes from chassis and leaf spring rear eyes;
  - Remove any debris from chassis eyes and leaf spring rear eyes and clean with a rag;

Install the new SuperPro bushings and shackles with the following procedure:

- Screw the grease nipples in the end of each shackle pin and firmly tighten. **DO NOT** over tighten grease nipple as this will damage the thread;
- Screw and tighten the shackle pins into the threaded holes in the shackle plates as per figure 1;

Note: Actual product may vary; diagram for example only

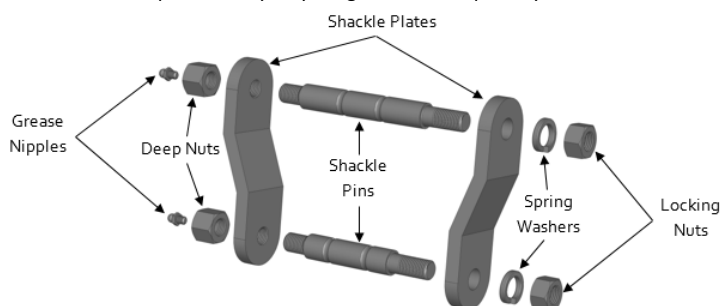


Figure 1: Diagram of rear swing shackle

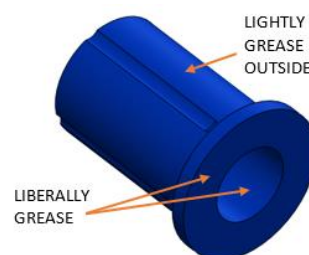


Figure 2: Diagram of bush greasing

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- Over the grease nipples, screw the deep nuts and only lightly finger tighten;
- Very lightly grease outer bore of bushes (figure 2) and fit into the leaf spring eyes and vehicle chassis;
  - For correct bush placement see Table 1.
- Grease the inside and the ends of the bushes (figure 2) and the surfaces of the shackle pins;

**Note:** The shackles for the Nissan D40 Navara and the 2011-on Ford PX Ranger/Mazda BT-50 are not symmetrical and must be installed in the vehicle as per the figure 3 and figure 4 below:

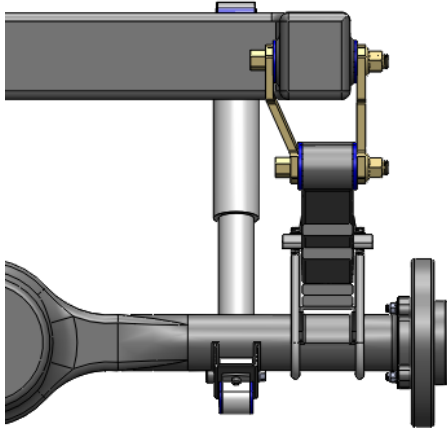


Figure 3: Nissan D40 Navara shackle orientation

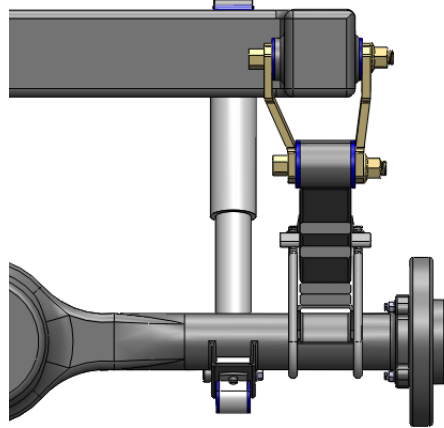


Figure 4: 2011-on Ford Ranger/Mazda BT-50 shackle orientation

- Install the shackle assembly through the bushes as per figure 5. Ensure that the grease nipples are accessible after the shackle is installed;
- Install the other shackle plate, spring washers and screw the locking nuts on the pins as per figure 1 and figure 6 but don't fully tighten them at this stage;

Actual product may vary; pictures are for example only



Figure 5: Installing greasable shackle

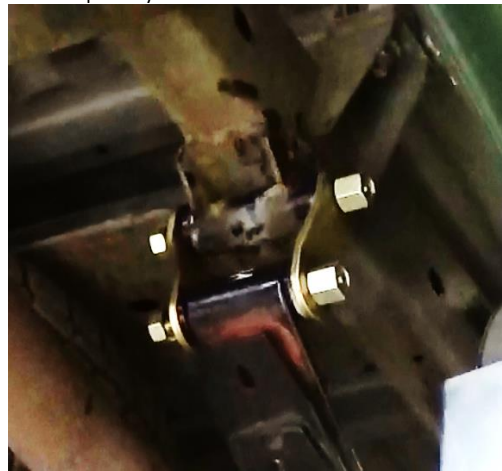


Figure 6: After greasable shackle installation

- Re-install any other components that were removed for installation, lower the vehicle to the ground and settle the suspension by bouncing the rear of the car up and down;
- **FIRSTLY** tighten the locking nuts to 120 Nm **AND THEN** the deep nuts to 115 Nm (order important);
- Use a grease gun with Molygrease to grease all grease nipples – Follow greasing procedure;

## Greaseable Shackle and Pin Greasing Procedure:

- Place grease gun fitting onto grease nipple.
- Apply steady pressure to the back of grease gun to ensure an adequate seal
- Pump handle (until significant amount of grease starts coming out from around the fitting)
- Wipe away excess grease with a rag.

**Note:** check all fasteners after 1000km and re-grease the bushes periodically.

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**TABLE 1: KIT CONTENTS AND BUSH LOCATION**

	Bush Position							
	Upper Rear Chassis		Rear Leaf Spring Rear Eye		Rear Leaf Spring Front Eye		Hardware	
Kit No.	Bush No.	Qty	Bush No.	Qty	Bush No.	Qty	Shackle Qty	Steel Tube Qty
KIT096RSK	SPF2672	4	SPF2671	4	-	-	4	-
KIT136RSK	SPF1708	4	SPF1708	4	-	-	4	-
KIT141RSK	SPF2768	4	SPF2767	4	-	-	4	-
KIT143RSK	SPF0187	4	SPF1710	4	-	-	4	-
KIT156RSK	SPF1781	4	SPF1798	4	-	-	4	-
KIT168RSK	SPF3803	4	SPF3804	4	-	-	4	-
KIT185RSK	SPF4040	4	SPF2231	4	-	-	4	-
KIT193RSK	SPF3596	4	SPF3595	4	-	-	4	-
KIT070SK	SPF2231	4	SPF2231	4	SPF0972	4	4	2
KIT083SK	SPF0187	4	SPF1710	4	SPF1082	4	4	2
KIT096SK	SPF2672	4	SPF2671	4	SPF2670	4	4	2
KIT136SK	SPF1708	4	SPF1708	4	SPF1163	4	4	2
KIT141SK	SPF2768	4	SPF2767	4	SPF2766	4	4	2
KIT143SK	SPF0187	4	SPF1710	4	SPF1082	4	4	2
KIT145SK	SPF0753	4	SPF0502	4	SPF2670	4	4	2
KIT156SK	SPF1781	4	SPF1798	4	SPF1798	4	4	0
KIT168SK	SPF3803	4	SPF3804	4	SPF3802	4	4	2
KIT185SK	SPF4040	4	SPF2231	4	SPF2670	4	4	2
KIT193SK	SPF3596	4	SPF3595	4	SPF3595	4	4	0
KIT211SK	SPF2767	4	SPF2767	4	SPF2766	4	4	2
<b>Note: Bush part numbers are embedded in the bush and consist of the last four digits (ie. SPFXXXX)</b>								