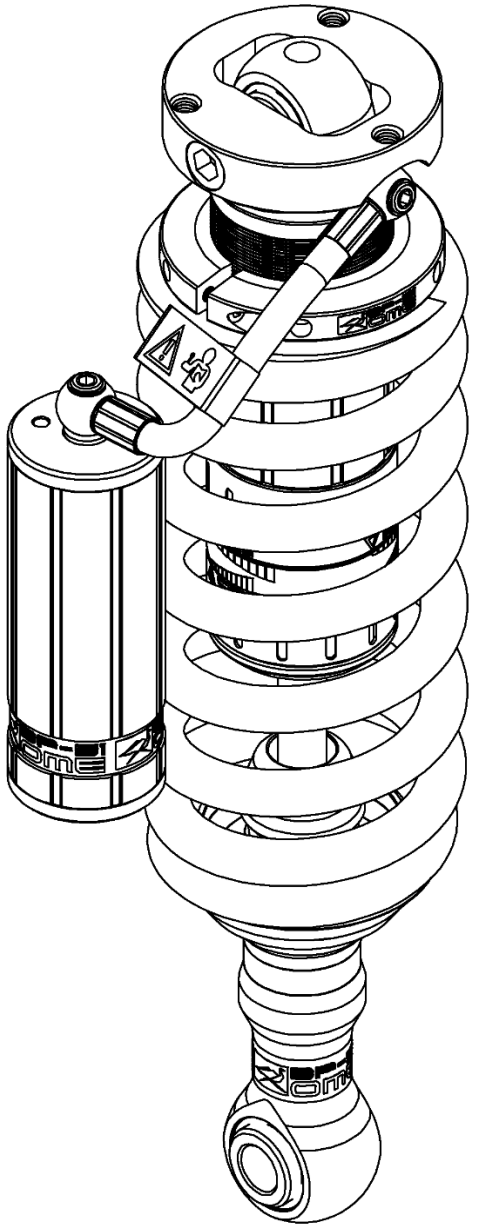
# BP5190012L & BP5190012R

## FORD RANGER PX3 FRONT



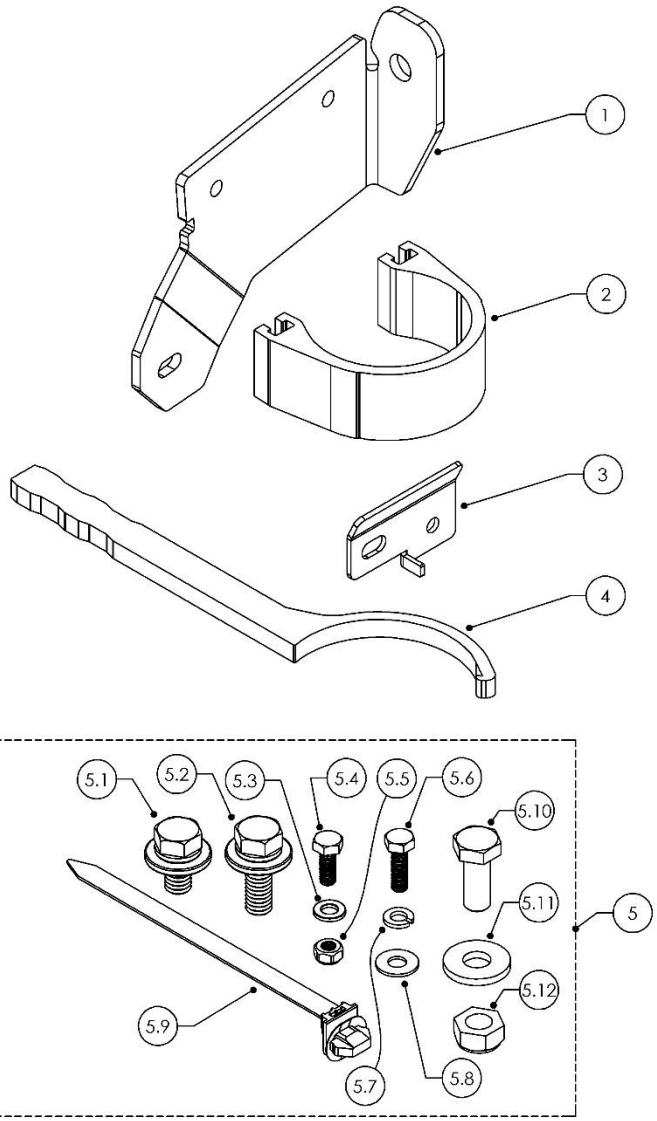
## WARNING

- 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.

## FITTING KIT CONTENTS – VM80010040

| Item | Description | Qty. | Part No. |
|---|---|---|---|
| 1 | FRONT RESI BRACKET LEFT | 1 | VE10020037L |
| | FRONT RESI BRACKET RIGHT (SHOWN) | 1 | VE10020037R |
| 2 | RESERVOIR CLAMP | 2 | VE10010003 |
| 3 | WIRE HARNESS BRACKET LEFT | 1 | VF60050046L |
| | WIRE HARNESS BRACKET RIGHT (SHOWN) | 1 | VF60050046R |
| 4 | ADJUSTER TOOL | 1 | VC10010071 |
| 5 | RANGER PX3 BP51 FASTENER KIT | 1 | VM60010035 |
| | 5.1 M10 X 1.5 X 20MM BOLT KIT | 2 | VD60030006 |
| | 5.2 M10 X 1.5 X 30MM BOLT KIT | 4 | 6151555 |
| | 5.3 M6 SMALL WASHER | 4 | VE70020005 |
| | 5.4 M6 X 16MM BOLT | 2 | VD60030003 |
| | 5.5 M6 NYLOCK NUT | 5 | VD60010003 |
| | 5.6 M6 X 20MM BOLT | 4 | 6151213 |
| | 5.7 M6 SPRING WASHER | 2 | 4581287 |
| | 5.8 M6 LARGE WASHER | 2 | 4584327 |
| | 5.9 CABLE BAND | 2 | 180711 |
| | 5.10 M10 X 25MM BOLT | 2 | 6151045 |
| | 5.11 M10 FLAT WASHER | 2 | 4581040 |
| | 5.12 M10 NYLOCK NUT | 2 | 6151322 |



## DAMPER PREPARATION
**(SPRING PRE-LOAD ADJUSTMENT)**

Before fitment, the spring preload may need to be adjusted to suit your front accessory fitment and desired ride height.

**Use workshop tool kit VM80020001 to aid spring adjustment.**
Refer to BP-51 Service and Parts Manual 1.2_Coilover Spring Adjustment for more detail.

The preload is set at the factory to 20mm as shown by the diagram.
This aims to achieve around 50mm increase in ride height over OE when a Bull bar and a winch are fitted.

Preload must be set before the strut assembly is fitted to the vehicle.
Use a spring compressor to compress the spring, loosen the pinch bolt (1) on the preload ring and adjust (2) to the desired setting (See table below).

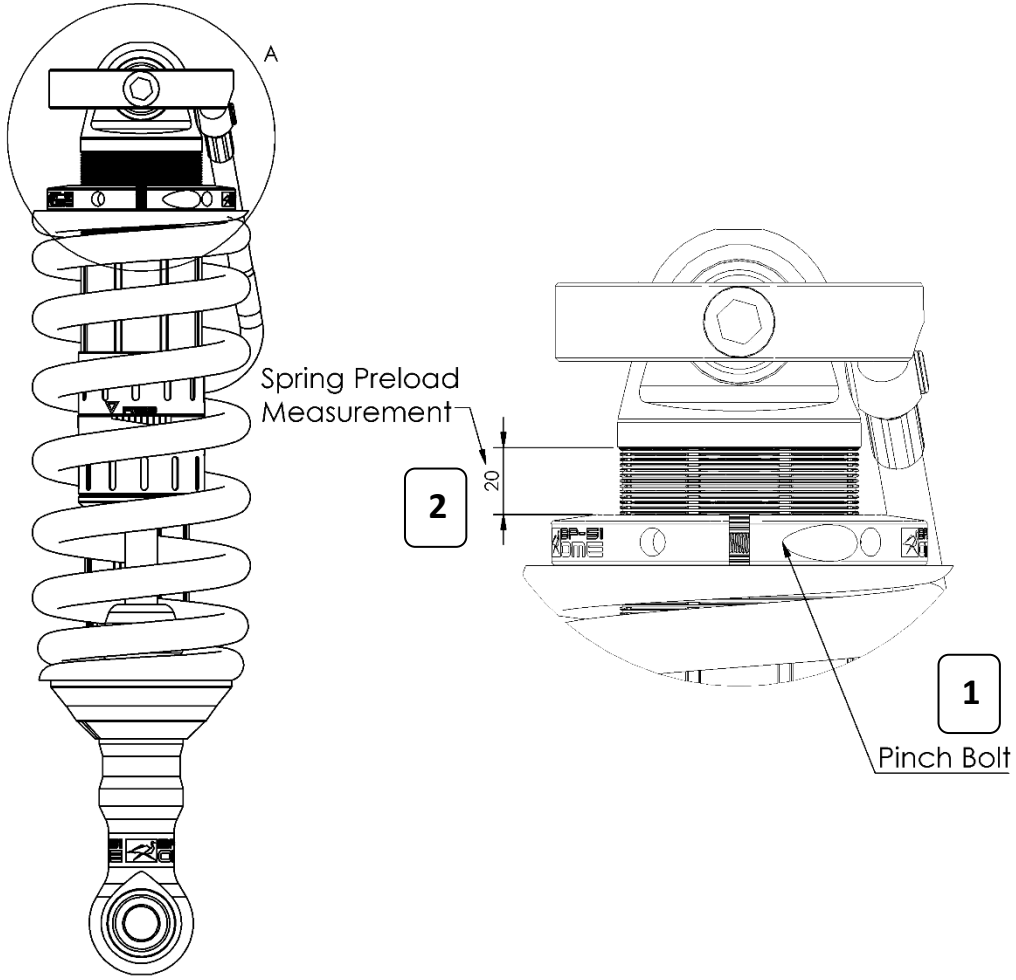
Tighten the pinch bolt and remove the strut assembly from the spring compressor.

As a guide, set the preload as specified below to achieve around 50mm (2”) increase in ride height.

| Front Accessories | Preload (mm) |
|---|---|
| Bar, Winch, UVP + | 25 |
| Bar & winch | 20 |
| Bar only | 15 |
| No accessories | 5 |

**Spring preload must only be adjusted when a spring compressor is used to take load off the preload ring.**

DO NOT attempt to adjust preload with load on the spring when fitted to the vehicle.



## VEHICLE PREPARATION
**(REMOVING STRUT)**

Use the following steps as a guide to remove strut. Ford Ranger workshop manual may also be used where available to remove the strut.

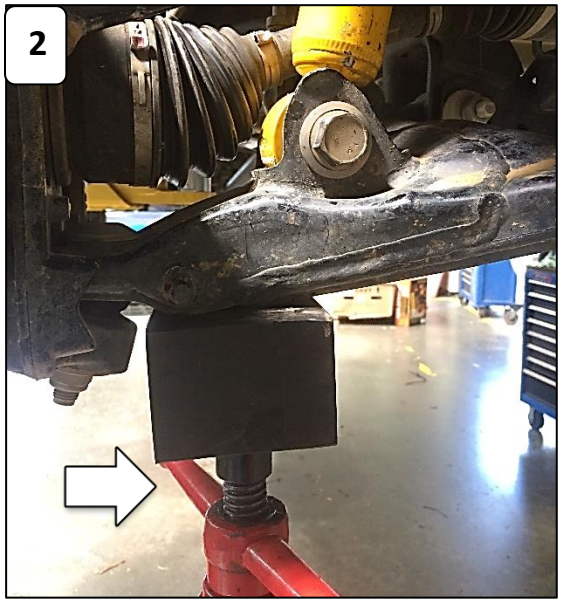
1. Remove wheel.

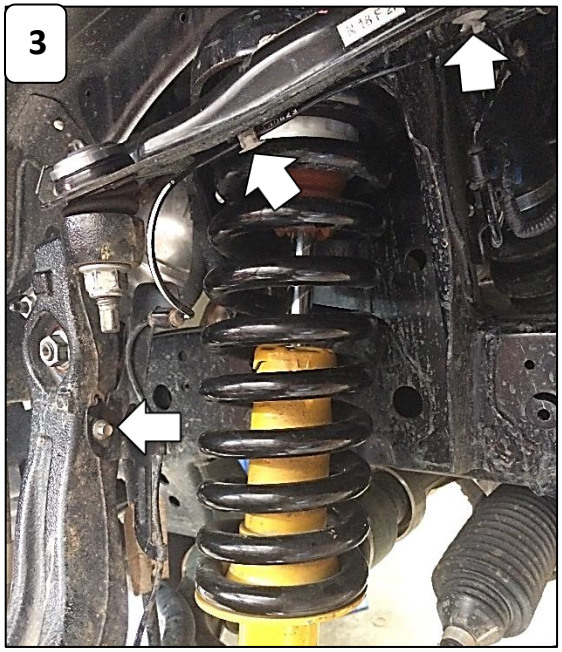
2. Support the Lower Control Arm with a jack stand or similar.

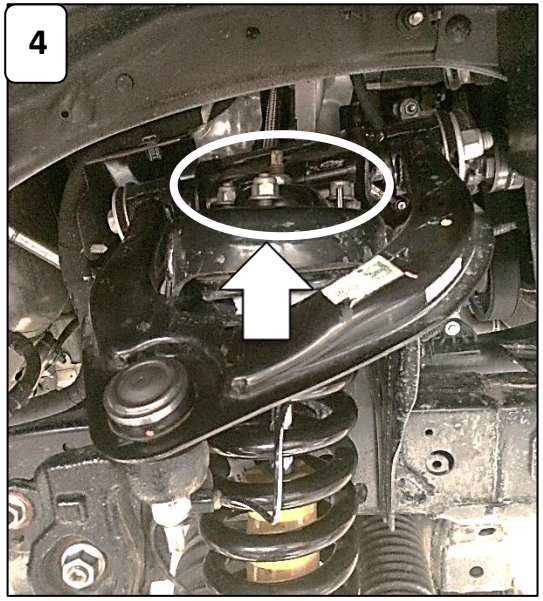
3. Detach ESC line.

4. Remove top mounting nuts (X3).

5. Loosen the lower mounting bolt.




## VEHICLE PREPARATION
**CONTINUED…**

6. Detach the ball joint from the upright.

7. Detach the sway bar link from the upright.

8. Detach the upright from the upper control arm (UCA). Take care to prevent the drive shaft from dropping out.

9. Remove lower mounting bolt and remove the strut from the vehicle.

10. Take care to prevent the drive shaft from dropping out. Re-attach the upright to the upper control arm (refer to picture No.8) loosely until the BP-51 is ready to be installed.

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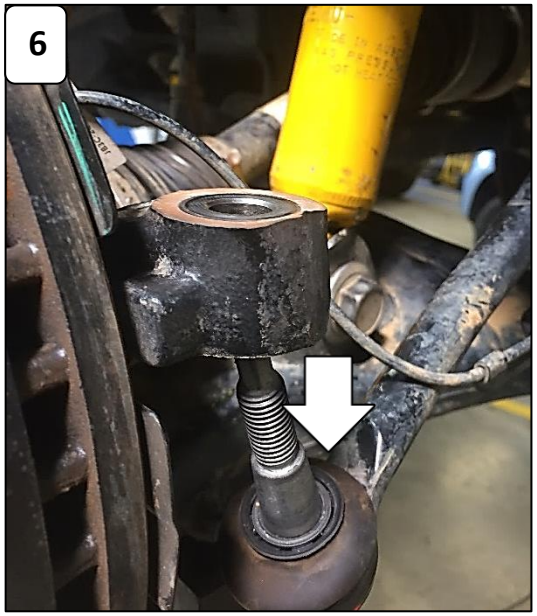

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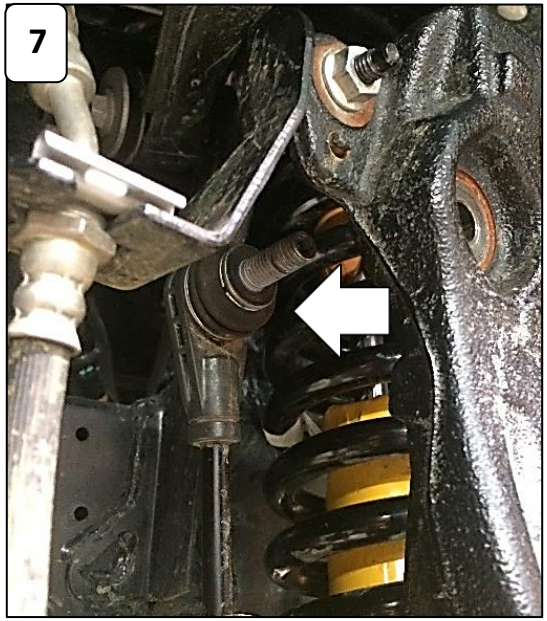

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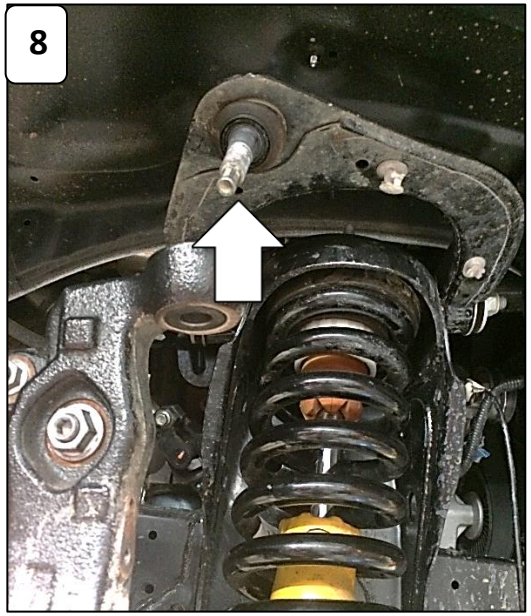

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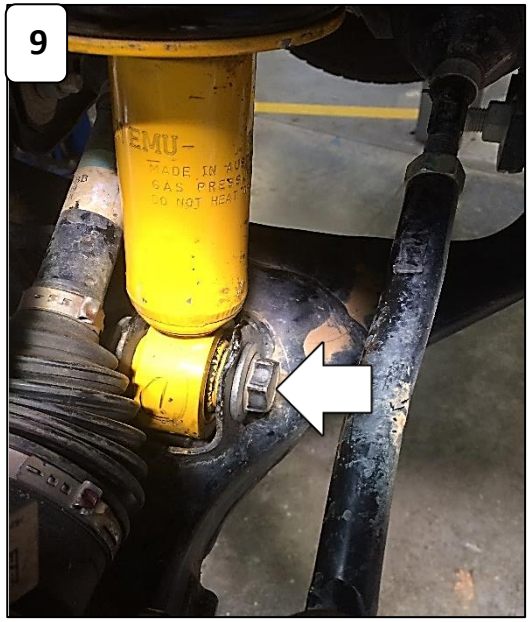


## DAMPER MOUNTING SEQUENCE

Left and Right Hand sides are the same with the exception of the way the hose exits the damper. L and R should be etched on the damper part number. When mounted in the vehicle the hose and reservoir should be behind the strut tower.

**Top Mount:**
Fit the damper and secure the top mount with bolts and washers (1) as shown in the pictures and diagram. Finger tight only.

**CAUTION! Ensure M10X20 is used above hose fitting. Failure to do so will result in severe DAMAGE.**

**Bottom Mount:**
Fit the bottom mount using original bolt and nut (2). Finger tight only.

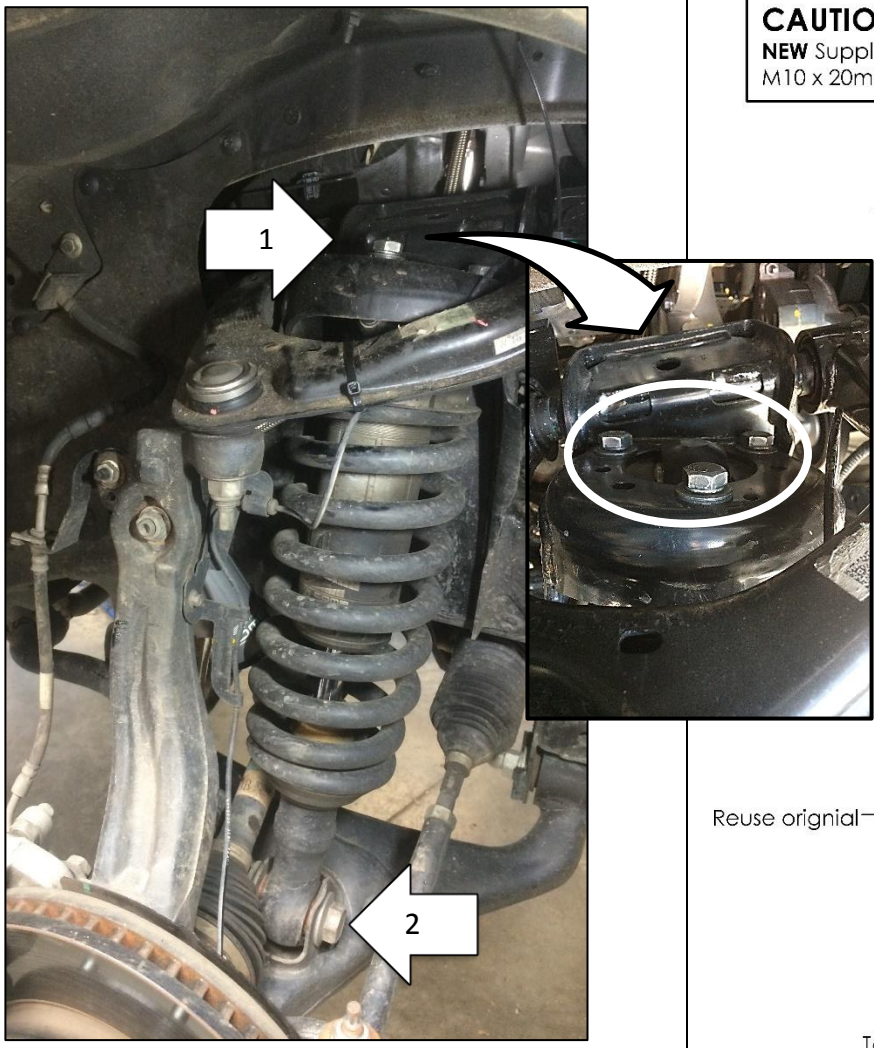
Securely fasten the top M10 fasteners.
***Torque: 44 Nm (32 ft.lbf).***

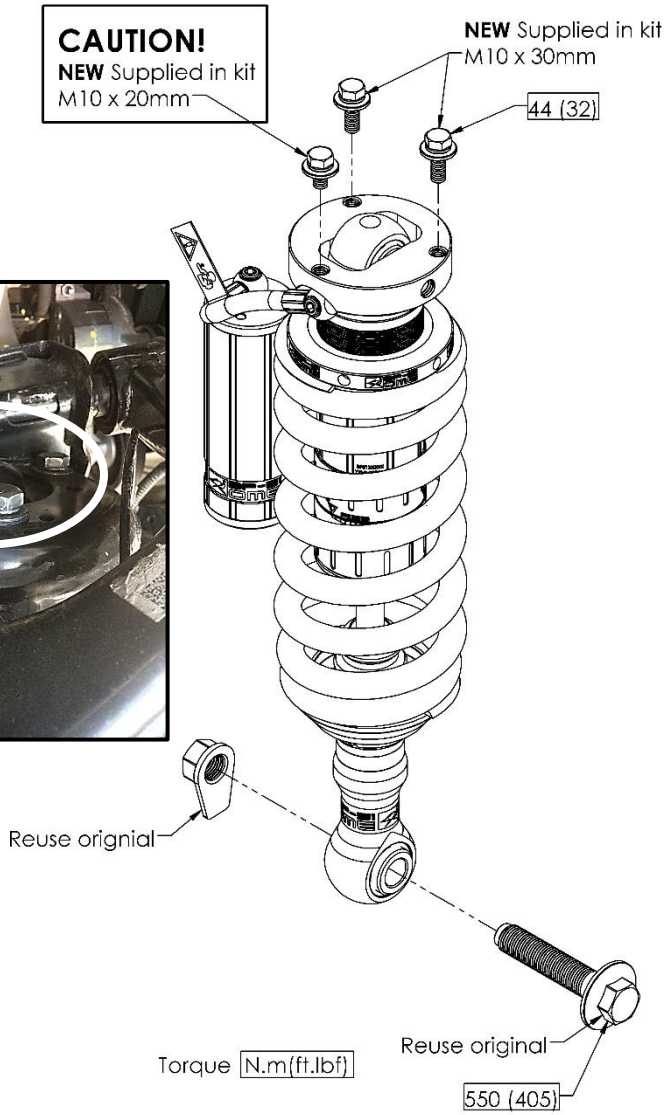
Securely fasten the lower M20 fasteners.
***Torque: 550 Nm (405 ft.lbf).***

Re-attach all components securely. Refer to the following table for torque specifications.

| Fastener | Torque N.m (ft.lbf) |
|---|---|
| Upper Control Arm | 103 (76) |
| Sway Bar Link | 115 (85) |
| ESC bracket | 6 (4) |
| Strut to Lower Control Arm | 550 (406) |
| Steering tie rod end to upright | 63(46) |

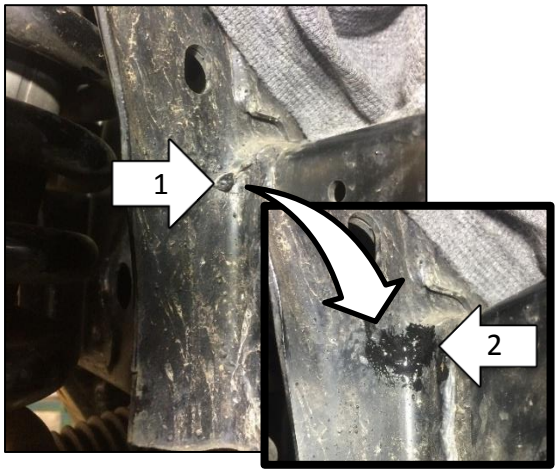
**(Right Hand Side Shown)**



## RESERVOIR MOUNTING SEQUENCE

**For both left and right, you may need to remove large spatter (1) in the corner as shown in the picture below. If you need to remove spatter, touch it up with appropriate paint (2).**




**(RIGHT HAND SIDE)**

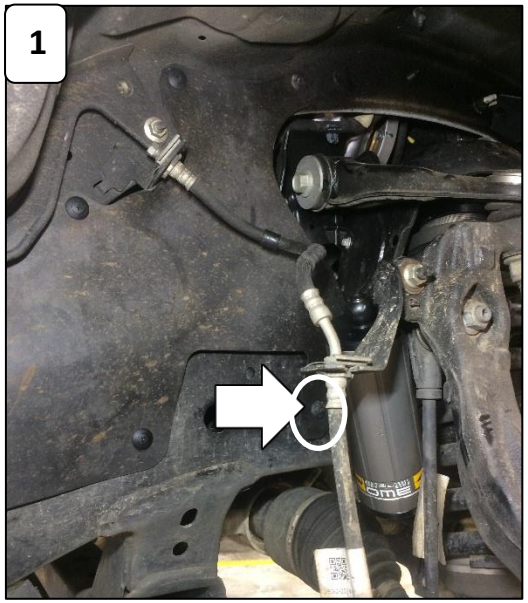
1. Behind the strut tower is a rubber liner. Remove only the clip indicated by the arrow in the picture that retains rubber liner to the chassis.

2. Fold the rubber liner toward the inside of the car as shown. Use the holes (shown in the picture) in the chassis to mount the reservoir bracket.

3. Pre assemble the reservoir bracket using the correct supplied fasteners as shown.

4. Fit the pre-assembled bracket to the vehicle using the supplied fasteners as shown.
   ***Torque M6 bolt to 12 N.m (9 lbf ft).***
   ***Torque M10 fasteners to 40 N.m (30 lbf ft).***

**1**



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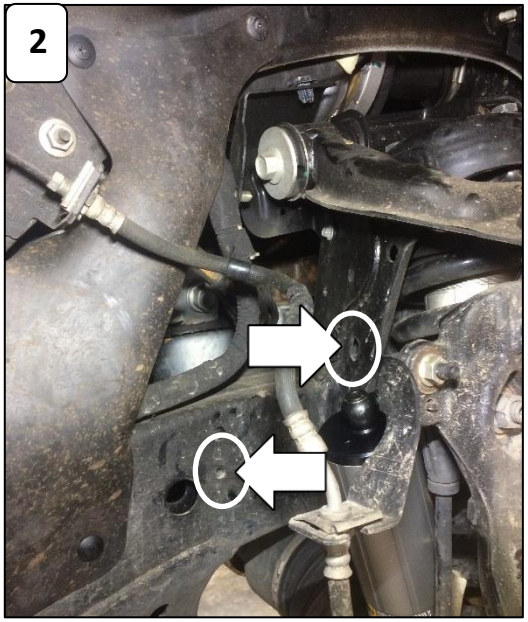

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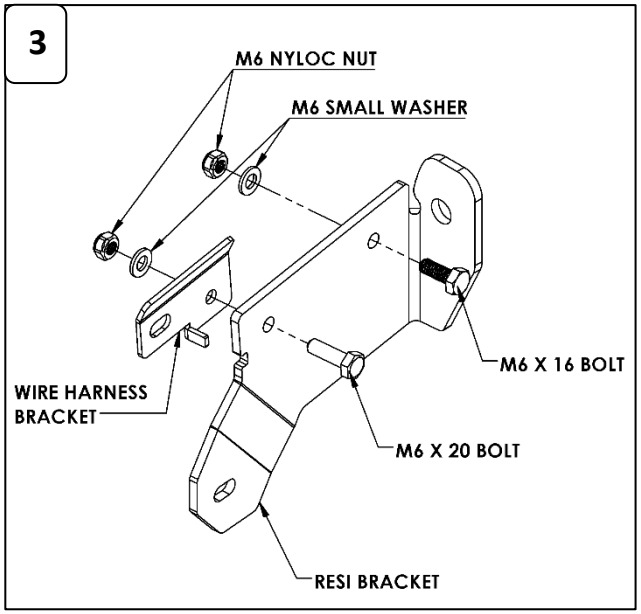
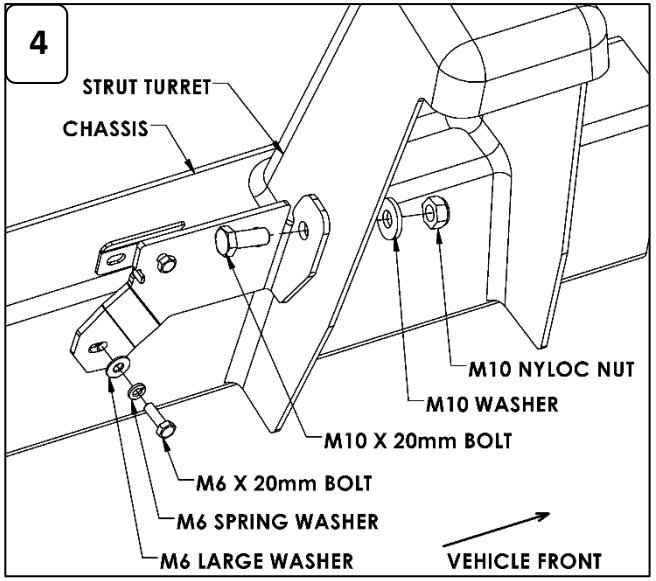



**4**



## RESERVOIR MOUNTING SEQUENCE
**(RIGHT HAND SIDE CONTINUED…)**

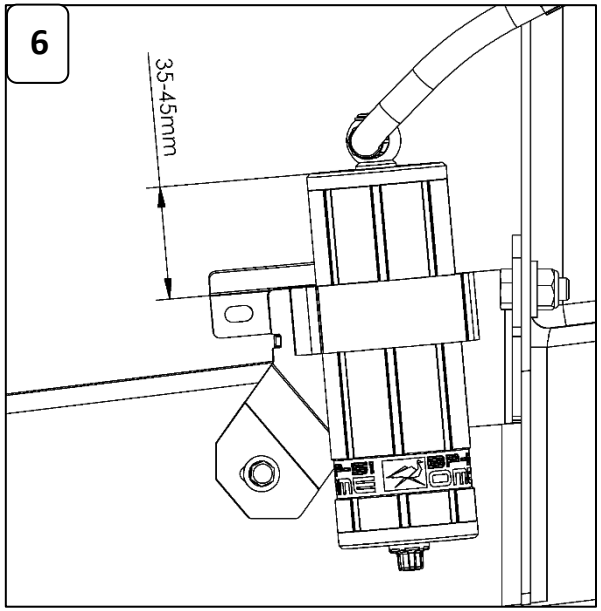
5. Tie the supplied cable tie loosely to the wire harness as shown in the picture.

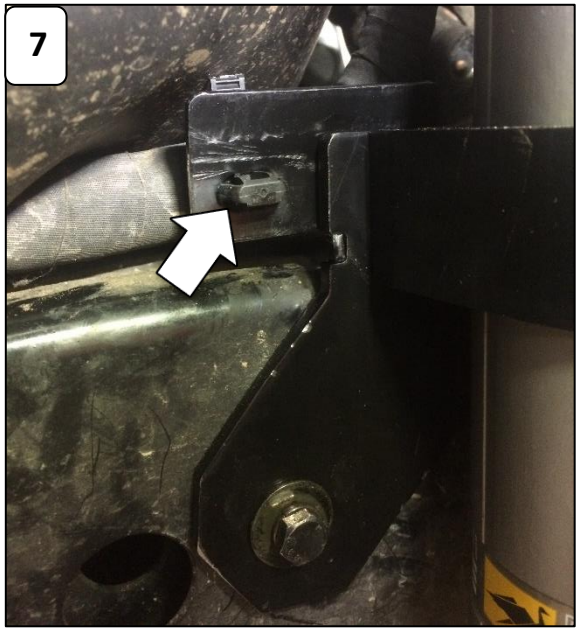
6. Slide the reservoir saddle onto the reservoir and over the heads of the bolts. Properly position the saddle on the mounting bracket and adjust the position of the reservoir as shown. Make sure the top of reservoir saddle is parallel with the top of the reservoir bracket.
   **IMPORTANT: Check the clearance between the brake line and the reservoir when the car is in full droop and the wheels are in full lock. Ensure there is enough clearance and the brake line is not rubbing hard on the reservoir.**

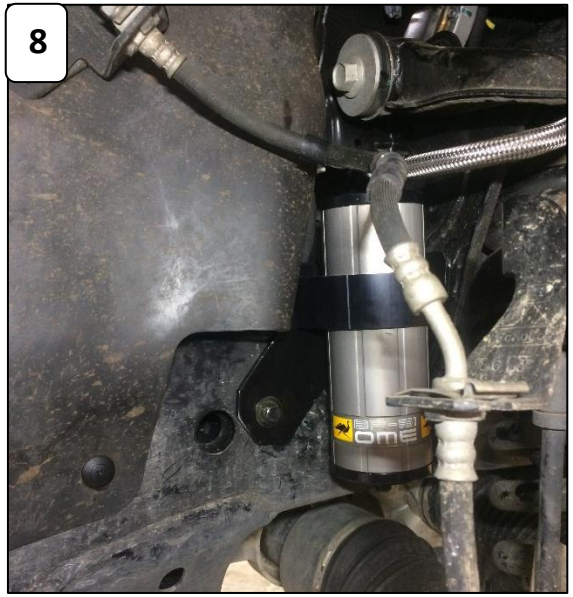
   Securely fasten the M6 nuts.
   ***Torque to 12 N.m(9 lbf ft).***

7. Fit the cable tie into the bracket as shown until it clicks and securely fasten it. Cut the excess.

**8.** Fold the rubber liner and place it neatly behind the reservoir. Alternately, you can trim it if preferred.

## LEFT HAND SIDE – Non Bi Turbo Model

### RESERVOIR MOUNTING SEQUENCE

**Reservoir fitment to the left hand side is different between the 2.0L Bi Turbo engine and NON-Bi Turbo engine model.**

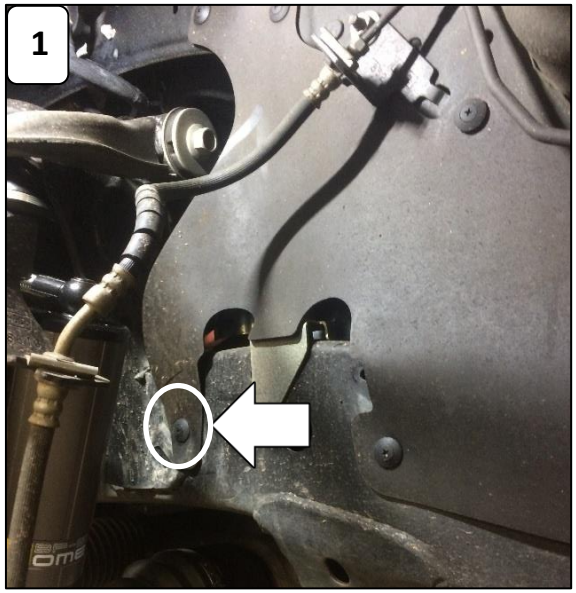
**(NON-BI TURBO ENGINE- LEFT HAND SIDE) Wire harness bracket is NOT required for this variant.**

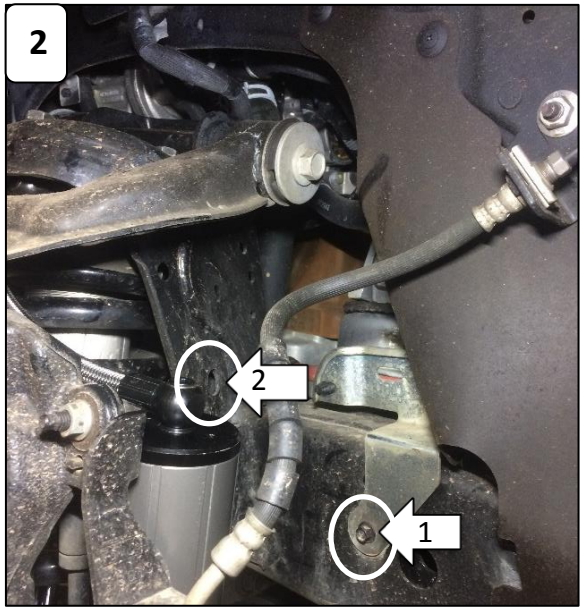
1. Behind the strut tower is a rubber liner. Remove only the clip indicated by the arrow in the picture that retains rubber liner to the chassis.

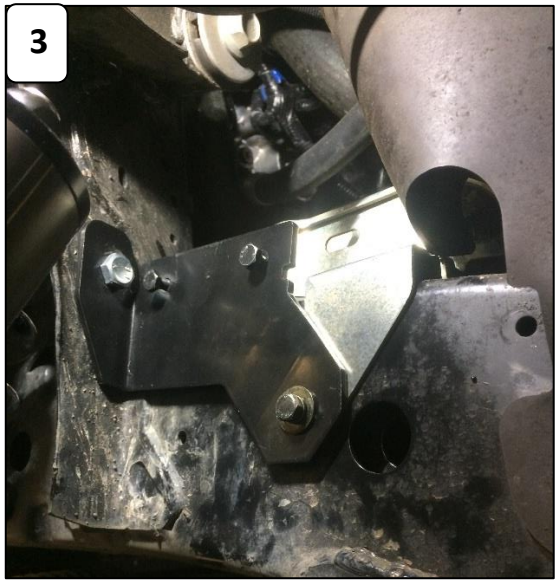
2. Remove OE bolt (1) shown in the picture and use this threaded hole as well as other hole (2) shown to mount reservoir bracket.

   Pre-assemble the reservoir bracket as per the right hand side but **WITHOUT** wire harness bracket.

3. Fit the pre-assembled bracket to the vehicle over the OE wire harness bracket as shown using supplied fasteners as per right hand side.



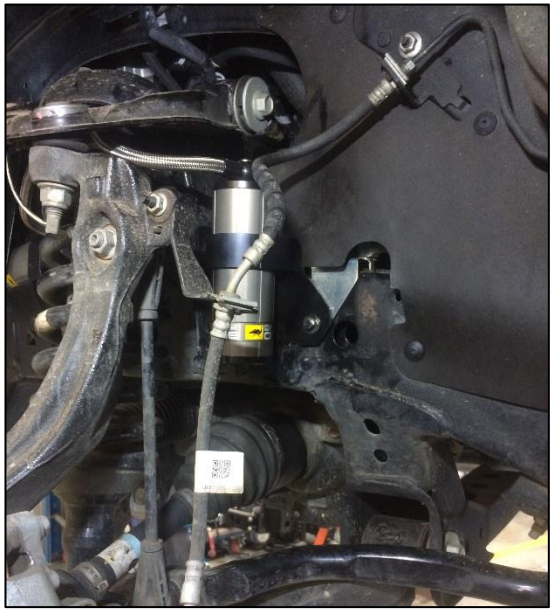



## RESERVOIR MOUNTING SEQUENCE
**(LEFT HAND SIDE NON-BI TURBO CONTINUED…)**

4. Slide the reservoir saddle onto the reservoir and over the heads of the bolts. Properly position the saddle on the mounting bracket and adjust the position of the reservoir as per right hand side. Securely fasten the M6 nuts.
   ***Torque to 12 N.m(9 lbf ft).***

5. Fold the rubber liner and place it neatly behind the reservoir. Alternately, you can trim it if preferred.



## LEFT HAND SIDE – 2.0L Bi Turbo Model

### RESERVOIR MOUNTING SEQUENCE

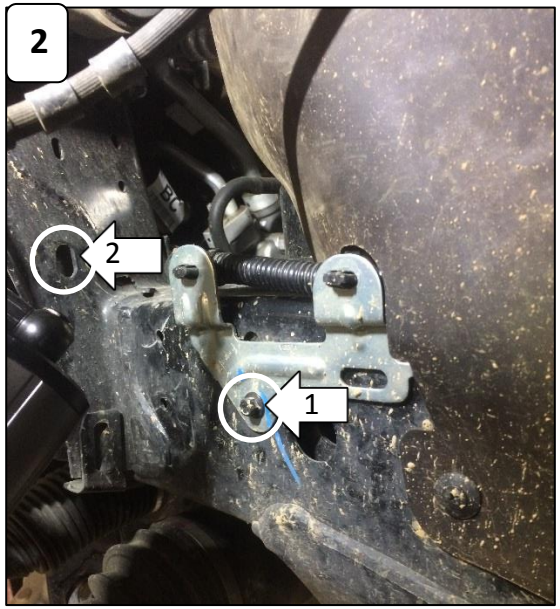
**(2.0L BI TURBO ENGINE- LEFT HAND SIDE)**
**Wire harness bracket is required for this variant.**

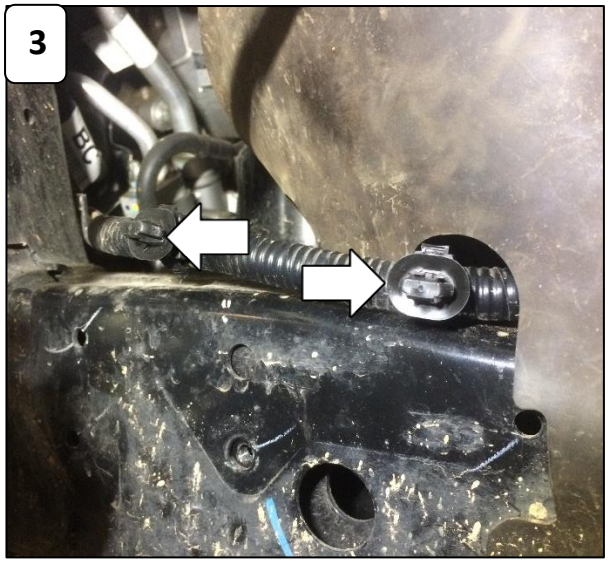
1. Behind the strut tower is a rubber liner. Remove only the clip shown in the picture that retains rubber liner to the chassis.

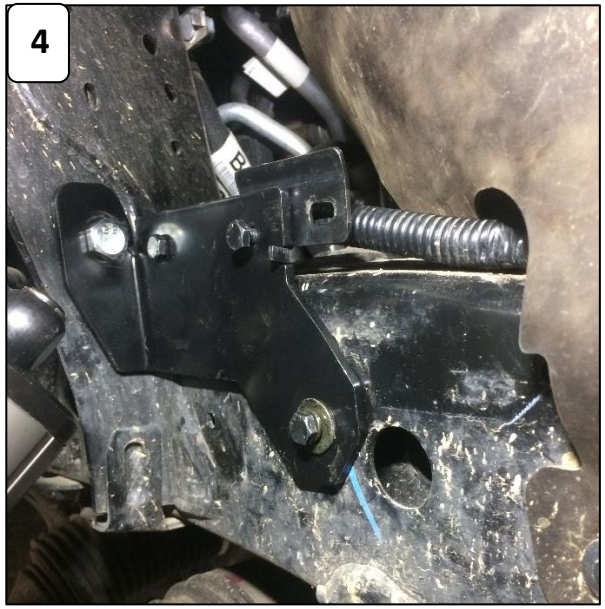
2. Remove OE bolt (1) shown in the picture and use this threaded hole as well as other hole (2) shown to mount reservoir bracket.

3. Remove the two clips from the bracket and from the wire harness.

4. Pre assemble the reservoir bracket using the correct supplied fasteners as per right hand side.
   Fit the pre-assembled bracket to the vehicle as shown using supplied fasteners as per right hand side.

## RESERVOIR MOUNTING SEQUENCE
**(LEFT HAND SIDE 2.0L BI TURBO CONTINUED…)**

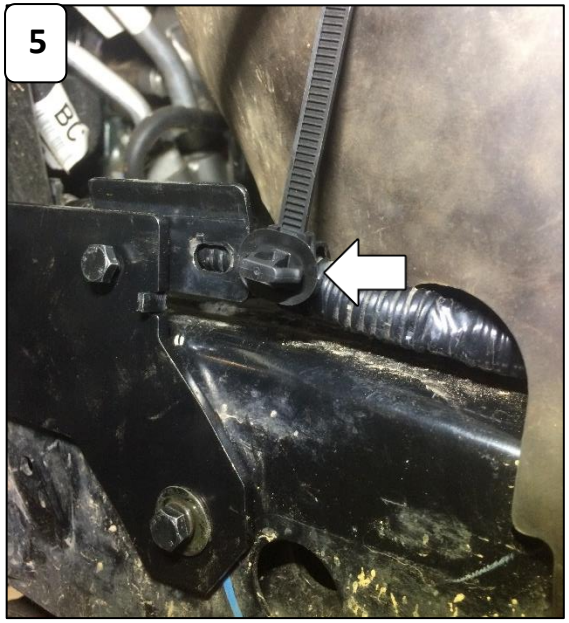
5. Cable tie the supplied cable on wire harness loosely as shown.

6. Slide the reservoir saddle onto the reservoir and over the heads of the bolts. Properly position the saddle on the mounting bracket and adjust the position of the reservoir as per right hand side.
   Securely fasten the M6 nuts.
   ***Torque to 12 N.m(9 lbf ft).***

7. Fit the cable tie into the bracket as shown until it clicks and securely fasten it. Cut the excess.

8. Fold the rubber liner and place it neatly behind the reservoir. Alternately, you can trim it if preferred.

5



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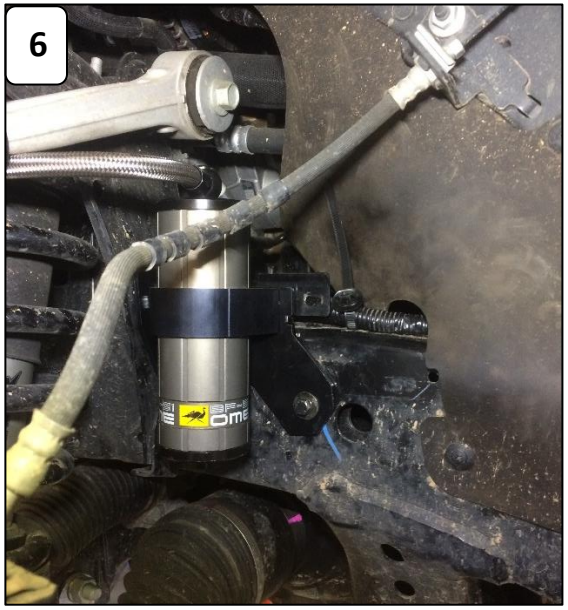

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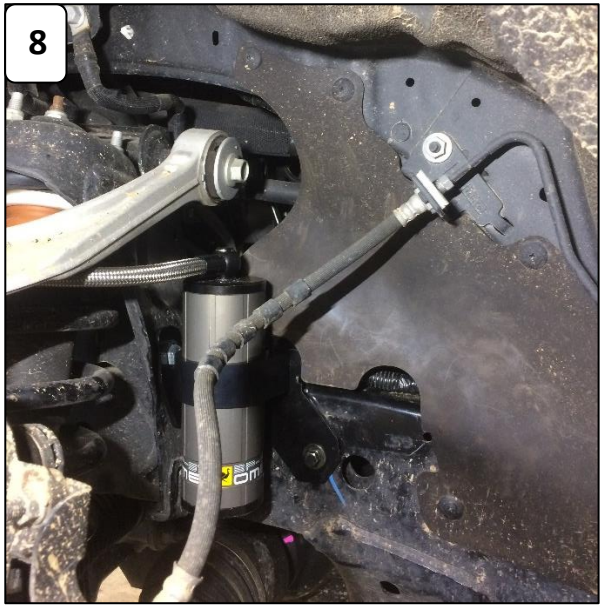
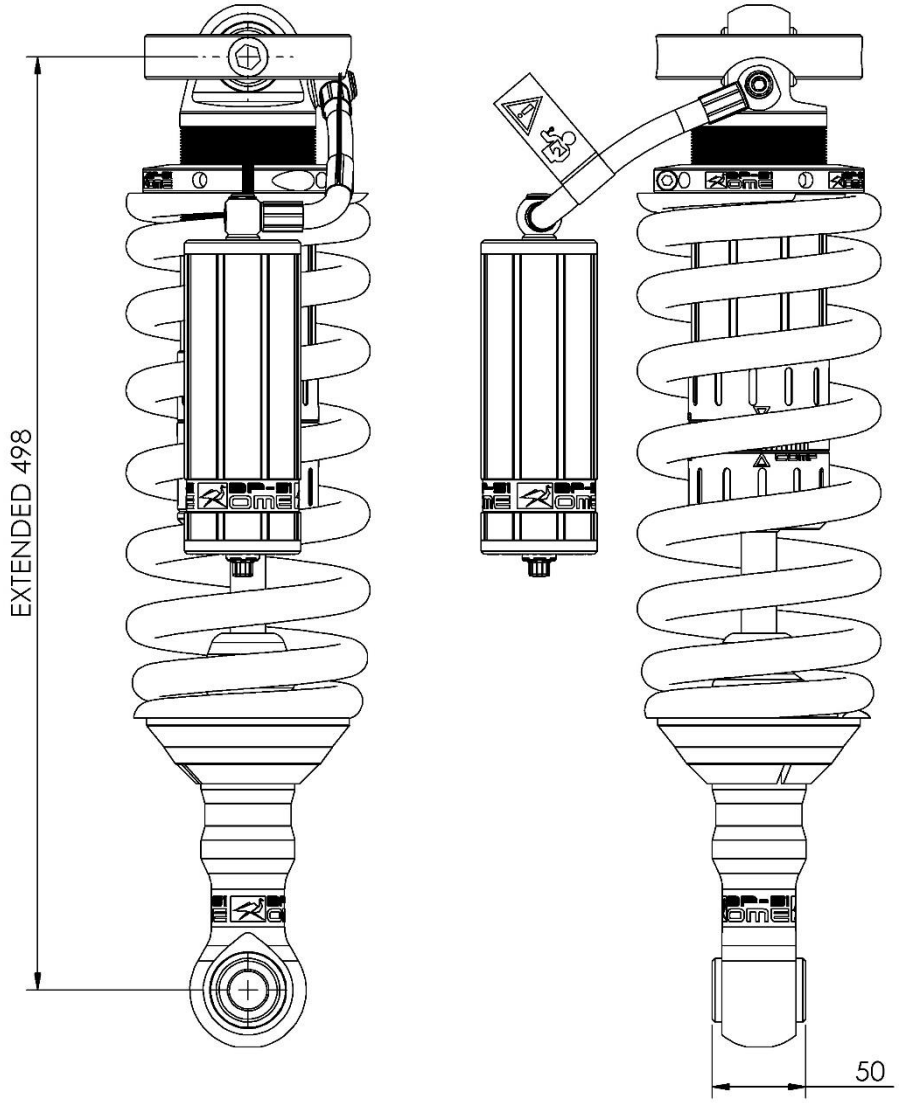


## DAMPING ADJUSTMENT

These dampers have been set in the factory to be used for a vehicle with Bull Bar and Winch fitted.
If your accessory fitment differs, use the table below as a guide for recommended Compression and Rebound adjuster settings.

Refer to the Owner's Manual for more information.

| Front Accessories | Compression | Rebound |
|---|---|---|
| Factory setting | 3 | 6 |
| | | |
| Bar & winch | 4-8 | 6-10 |
| Bar only | 2-6 | 5-9 |
| No accessories | 0-4 | 4-8 |




## SPECIFICATIONS

| | | |
|---|---|---|
| 1 | Extended Length | 498 mm |
| 2 | Compressed Length | 392 mm |

## SPARE PARTS

Refer to Service And Part manual, section: **BP-51 S&P 3.1-BP5190012L&R.**