INSTALLATION GUIDE

MITSUBISHI MQ L200 AND FIAT FULLBACK

2015+

Suspension Installation Instructions

NOTE: Occupational Health & Safety procedures must be observed at all times.

IMPORTANT: *Installations should only be done by a qualified person and it is the responsibility of this person to ensure correct fitment.*

TRITON
MQ L200
2015+

MITSUBISHI

Product			Part No.	Qty Req
FRONT SUSPENSION				
SHOCK ABSORBER				
Nitro Gas Strut			**12715GR**	2
Foam Cell Strut			**24715FE**	2
• Height adjustable with Ironman 4x4 Strut Trim Packers				
COIL SPRINGS	Est. Lift	Additional Load		
Standard	0mm	0 - 50kg	**MITS040S**	1
Comfort	25mm	0 - 50kg	**MITS040A**	1
Performance	30mm	0 - 80kg	**MITS040B**	1
Constant Load	30mm	80 - 110kg	**MITS040C**	1
STRUT MOUNTS				
Steel Strut Top			**ISST010**	2
TRIM PACKERS				
5mm Strut Trim Packer	(Nitro Gas / Foam Cell)		**HILFR05 / HILFR05F**	2
10mm Strut Trim Packer	(Nitro Gas / Foam Cell)		**HILFR10 / HILFR10F**	2
15mm Strut Trim Packer	(Nitro Gas / Foam Cell)		**HILFR15 / HILFR15F**	2
• ONLY Compatible with Ironman 4x4 Struts, lift height subject to 1:2 motion ratio. Unnecessary fitment may lift vehicle too high				
REAR SUSPENSION				
SHOCK ABSORBER				
Nitro Gas Comfort			**12729GRC**	2
Nitro Gas			**12729GR**	2
Foam Cell Comfort			**24729FEC**	2
Foam Cell			**24729FE**	2
LEAF SPRINGS	Est. Lift	Additional Load		
Comfort	30mm	0 - 200kg	**MITS047A**	2
Performance	30mm	0 - 300kg	**MITS047B**	2
Constant Load	30mm	300kg - GVM	**MITS047C**	2
• Two piece tailshaft models may experience driveline vibration, use 1201K to reduce vibration.				
U-BOLTS				
U-Bolt Kit			**437UBK**	2
U-Bolt Kit	Suits MITS047C		**437UBKL**	2
POLYURETHANE SPRING BUSHES				
Bush Kit			**1200UK**	1
DRIVELINE SPACERS				
Centre Bearing Spacer Kit			**1201K**	1
SPACER KIT				
Brake Hose Relocation Kit			**1205K**	1
GREASABLE SHACKLES AND PINS				
Greasable Shackle			**1199**	2
Non-Greasable Pin			**387-1**	2
HELPER SPRINGS				
Load Plus Helper Springs			**LP3**	1
Add-A-Leaf			**ISL6010**	1

SUSPENSION KIT

Comfort w/ Gas Shocks	**MITS047AKG**
Comfort w/ Foam Cell Shocks	**MITS047AKF**
Performance w/ Gas Shocks	**MITS047BKG**
Performance w/ Foam Cell Shocks	**MITS047BKF**
Constant Load w/ Gas Shocks	**MITS047CKG**
Constant Load w/ Foam Cell Shocks	**MITS047CKF**

• Specify Front Coil Springs when ordering

• Two piece tailshaft models may experience driveline vibration, use 1201K to reduce vibration

SUSPENSION KIT CONTENTS

Shock Absorbers	Leaf Springs	Strut Shock Absorbers	Brake Hose Relocation Kit
Coil Springs	Polyurethane Spring Bushes	U-Bolts	Centre Bearing Spacer Kit

INSTALLATION FORM

Please copy and complete this form at the time of installation. Keep in a safe place for future reference.

Always ensure you have all the correct parts before beginning installation.
Installing suspension often requires special tools and expert knowledge. All fitment should be performed by a qualified and experienced fitter.
Always tighten bushed components after the vehicle is let down onto the ground at normal ride height, otherwise damage from torsional stresses can occur.
Brake proportioning valves should only be adjusted by a qualified brake specialist if necessary.
Ironman recommends a wheel alignment after fitment of new suspension, consideration to natural spring settling should be taken into account before alignment is done.
Always adhere to vehicle manufacturers torque specification when tightening fasteners.
Always grease polyurethane bushes prior to fitment, Ironman 4x4 recommends a molybdenum based grease or grease specified for polyurethane.

OWNER DETAILS

NAME: ..... PHONE: .....

ADDRESS: .....

VEHICLE DETAILS

MAKE: .....MODEL: .....REG / VIN:..... MILEAGE: .....

ENGINE TYPE: ..... BODY TYPE: .....

PRE EXISTING MODIFICATIONS OR WEIGHTED ACCESSORIES: .....

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PART NUMBERS TO BE INSTALLED

PART # ..... TYPE: ..... PART # ..... TYPE: .....

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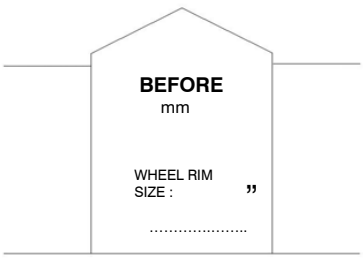
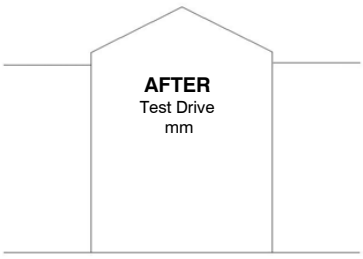
SUSPENSION MEASUREMENTS

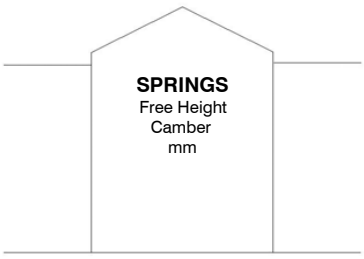
VEHICLE HEIGHT
LOWER OF WHEEL RIM TO GUARD





SUSPENSION MEASUREMENTS

ACTUAL MEASUREMENT OF NEW SPRINGS
PRIOR TO INSTALLATION



NOTES AND COMMENTS

NOTES: .....

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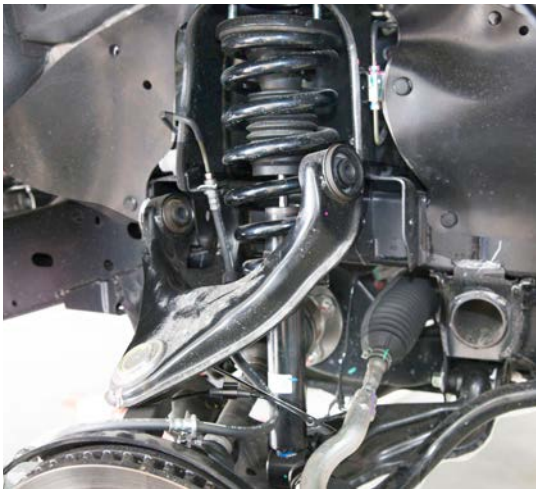
All measurements to be taken prior to installation, immediately after initial test drive and again at 500km check.
All vehicle height measurements to be taken from lower of wheel rim to guard unless otherwise stated. Up to 10 mm height reduction in springs can be considered normal setting over time. All measurements are metric except wheel rim size. Warranty period is 3 year or 60,000 km unless otherwise stated.

Front Suspension – Removing components

1. Raise the vehicle on the hoist, ensure vehicle is safely supported using stands or safety stops.
2. Remove the wheels

- Ensure all new components received are correct before removal of existing parts
- Coil Springs store massive amounts of energy when compressed, extreme care must be used when handling.
- Retain all OE hardware.
- Perform the following procedures one side at a time, unless otherwise shown.

STRUT REMOVAL



3. Remove bump stop on upper control arm and fasteners securing brake and ABS lines to control arm and strut.
4. Remove upper control arm mounting bolts and dislodge control arm.
5. Remove 3 nuts from top strut plate.
   (DO NOT remove centre rod nut at this time)

5.b Mark one of the 3 studs and its corresponding hole on the chassis with a paint pen or similar, this will aid in the orientation upon re-installation.

6. Remove lower shock absorber bolt.
7. Remove strut from vehicle.

8. Place strut in high quality strut spring compressor. Ironman 4X4 recommends a wall mounted or free standing compressor system, NOT hand held screw type. Compress spring in strut compressor until the strut assembly is loose with all pressure contained by the compressor.
9. Remove centre rod nut, top plate and strut away from coil. Carefully and gradually release pressure from spring.

Strut Mount Installation Guidelines

Part No. ISST010

Suitable for Mitsubishi:
Triton L200 ML/MN, MQ,
Challenger (Pajero Sport 2009+)
Fiat Fullback 2015+

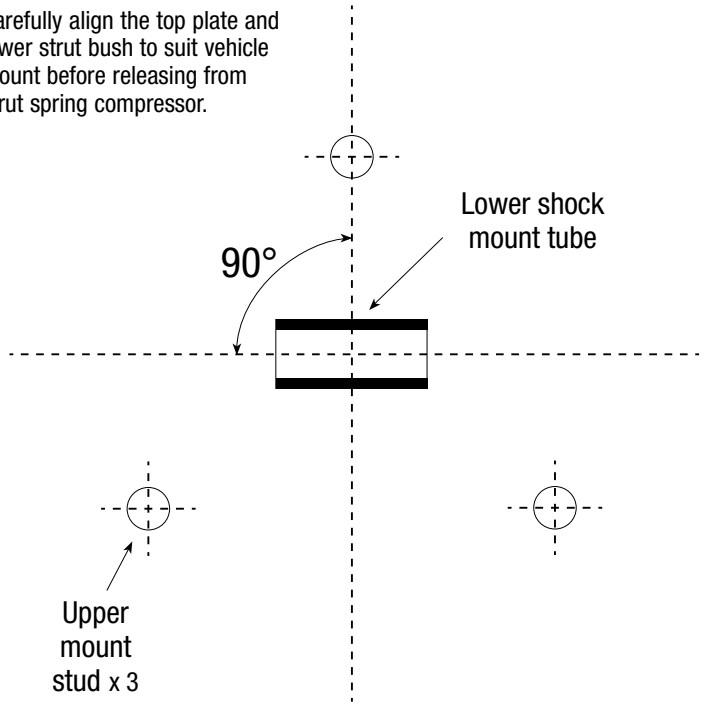
Struts:
12715GR, 24715FE

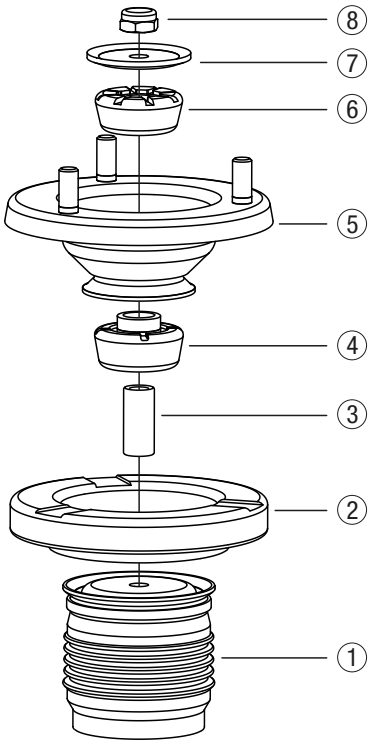
Springs:
MITS040S, MITS040A,
MITS040B, MITS040C

WARNING:
DO NOT LOOSEN OR REMOVE CENTRE TOP NUT UNTIL ALL SPRING TENSION HAS BEEN CONTAINED USING A HIGH QUALITY STRUT SPRING COMPRESSOR.

- Refer to vehicle manufacturers workshop manual for detailed removal and installation instructions.
- Expert knowledge and special tools will be required
- Follow assembly illustration as a guide only.
- Use newly supplied bushes and washers during re-assembly. Assemble in the order shown below.
- Ensure top nut is tightened fully with coil still compressed by a strut spring compressor.

Carefully align the top plate and lower strut bush to suit vehicle mount before releasing from strut spring compressor.





Warranty will be voided by damage or failure caused by incorrect procedure.
Before proceeding to install strut mounts please fully read guidelines above and ensure that necessary tools are on hand.

Always wear personal safety protection ie. Safety glasses and gloves to prevent injury.

Front Suspension – Installing components

STRUT INSTALLATION
(See Page 5 for strut component detail)

10. Place MITS040 spring in compressor and compress to approximately the same length required to remove the OE coil.

    Assemble dust shield, 12715GR or 24715FE strut and top plate into the new coil spring. Using new Ironman 4x4 hardware supplied, fit centre rod nut finger tight. Rotate strut and top plate relationship so lower mount and 3 top studs are positioned correctly for installation into vehicle, take care to position your paint marked stud in the right location (See Page 5).

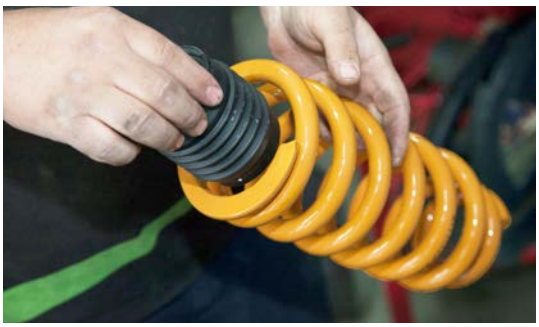
    This relationship must be accurate to within 2mm for successful installation. Tighten centre top nut until it bottoms out, then torque to 30Nm, using a torque wrench, NOT an impact gun.

11. Install the new strut assembly into the vehicle, reverse of removal. Re-attach all previously removed hardware.

    Repeat the same procedure for other side of vehicle.

    DO NOT Tighten lower strut bolts at this time. Leave only finger tight.

    Perform same operation to both sides of vehicle.



Rear Suspension – Removing Components

1. Support rear differential with floor stand/s to prevent damage to brake hoses from over stretching.

2. Working on one side at a time, remove OE shock absorber.

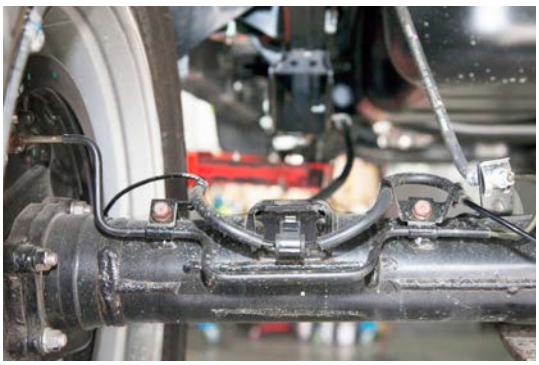
3. Remove bolt securing hand brake cable to leaf spring.

4. Remove the leaf spring U-bolts.

5. Remove the fixed end pin and the spring shackle.

6. Remove the spring from the vehicle.

7. Remove the OE frame shackle bushings.



Rear Suspension – Installing Components

8. Install the new bushings (P/N 1200UK) in the spring eyes and frame. Use a thin coat of grease (molybdenum disulphide) on the inside of the bush and the outer face of the flange.

   DO NOT grease the outside diameter of the bush.

9. Check new spring centre bolt is tight (45Nm).

10. Install new leaf spring (P/N MITS047), fixed end pin and greasable shackle (P/N 387-1 + 1199) on the vehicle, reverse of removal. Only finger tighten at this time, to prevent shackle lock.

11. Place the spring on top of the axle, making sure to align the spring centre bolt with the hole in the spring perch. Install new U-bolts (P/N 437UBK or 437UBKL), nuts and washers. Torque U-bolts to 120Nm.

    - If necessary, cut excessive thread from U-Bolts.

Greasable Shackle

1) Screw grease nipples into shackle pins and tension to 4-5ft/lb.
2) Screw shackle pins into head plate by hand until firm.

Press bushes into leaf spring eyes.
Grease inside of bushes and the head flange only if polyurethane bushes are being used. (Do not apply grease to outside of bush).

Also apply an even coverage of grease to shackle pin surface.

Insert shackle assembly through bushes, ensure mounting direction allows future access to grease nipples.

3) Place remaining shackle plate over pin ends.
4) Place spring washers and nuts over pin ends.

(Do not tighten at this stage, firm finger tight will be sufficiant).
Lower vehicle to ground and bounce to neutralise. Ensure shackles are operating freely and have settled into correct position. (See fig 2)

5) After vehicle is lowered to ground, now you can tighten the short nuts to 90ft/lb.

6) Fit and tighten head plate deep nuts to 85ft/lb

Check all fasteners after 500km, re-grease periodically if polyurethane bushes have been fitted.

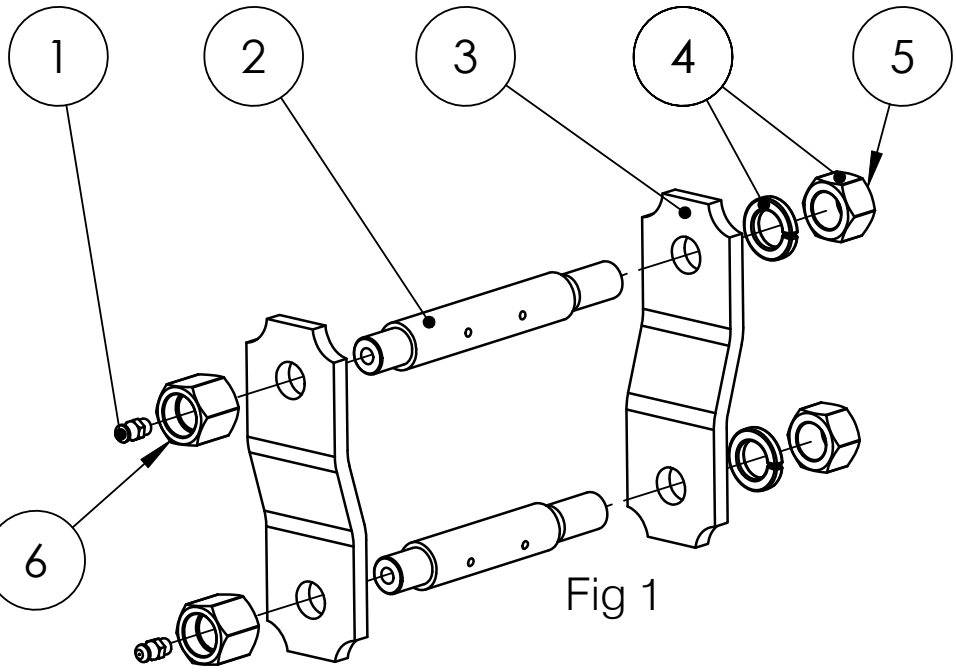


Fig 1

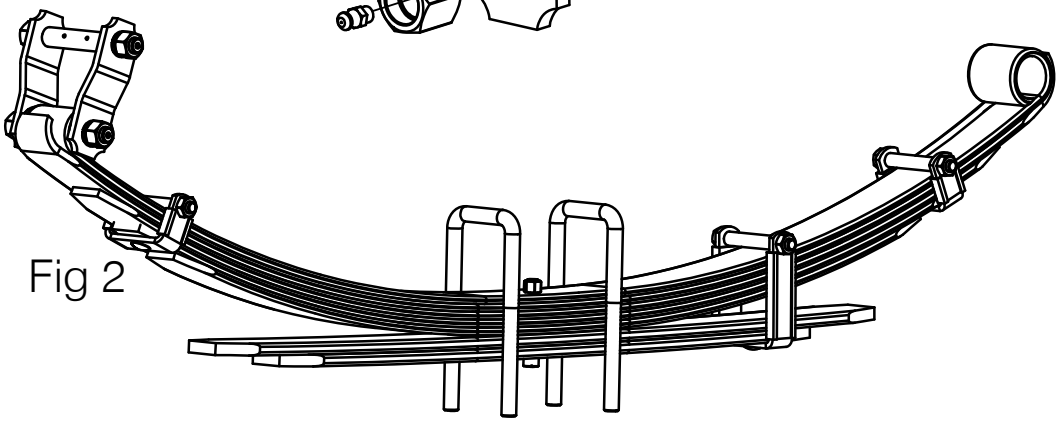


Fig 2

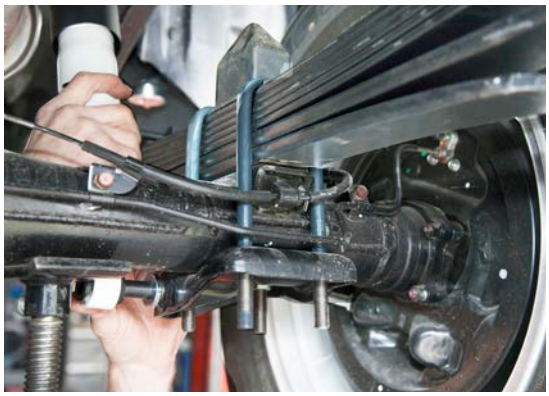
A small amount of thread locking compund is acceptable, however not essential.

Ironman 4x4 recommends Molybdenum Disulfide based grease for use with polyurethane bushes.

Actual components may vary depending on model.
Some image detail ommitted for clarity.

12. Install new Ironman 4x4 shock absorber, using supplied hardware and leave finger tight until vehicle is at ride height.

NOTE:
It is the installer's responsibility to make sure that the shock absorber has adequate clearance.



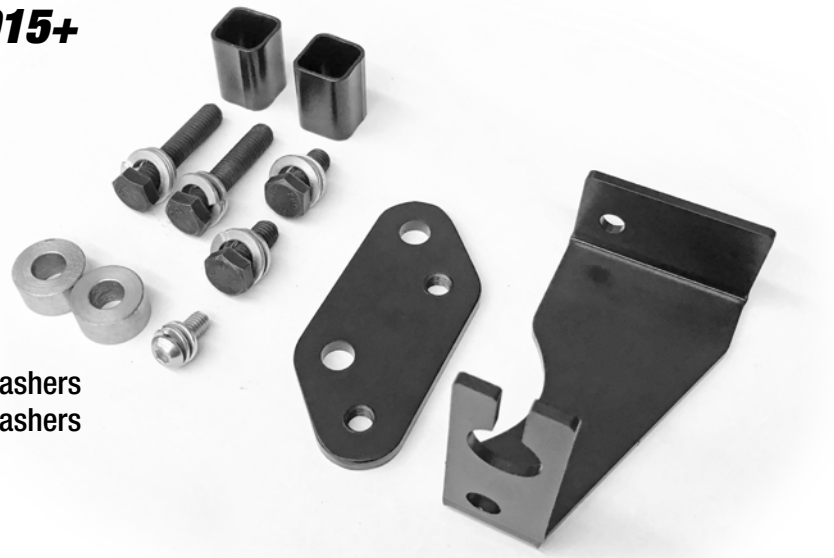
- Lower mounting is offset to provide additional clearance.
- Ensure the offset is correctly orientated for maximum clearance.

13. Check all brake lines and diff breather hose to ensure that no binding has occurred and that full extension does not stretch the lines. If necessary, install brake hose relocation kit (PN 1205K).

Brake Line Relocation Kit

Installation Instructions
Part No. 1205K

Mitsubishi MQ Triton L200 2015+



Kit Contains:

- 1 x brake line relocation bracket
- 1 x bracket mounting plate
- 2 x bracket spacers
- 2 x wiring spacers
- 1 x M6 x 14 button head bolt
- 1 x M6 nut, spring and flat washer
- 2 x M8 x 20 bolts with spring and flat washers
- 2 x M8 x 40 bolts with spring and flat washers

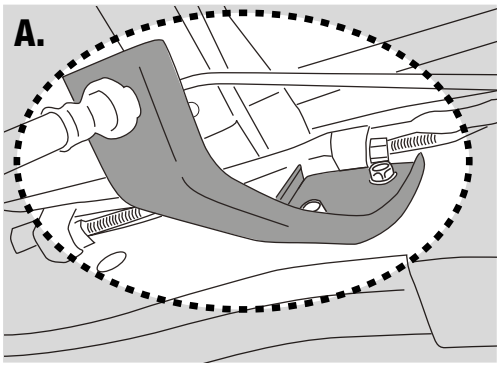
Tools & Equipment

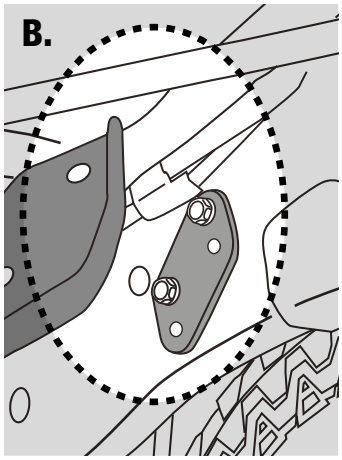
- 1 x 12mm socket
- 1 x 13mm socket
- 1 x ratchet
- 1 x 4mm allen key
- 1 x 10mm ring spanner
- 1 x pair of pliers
- 1 x small flat blade screwdriver

1. Remove 2 bolts securing bracket to chassis rail as shown in Fig A and fit plate using original hardware. Refer Fig B.

2. Reattach bracket to plate using new hardware provided ensuring spacers are used between the plate and bracket.

3. Remove clip securing brake line to bracket and gently pull brake line through bracket.

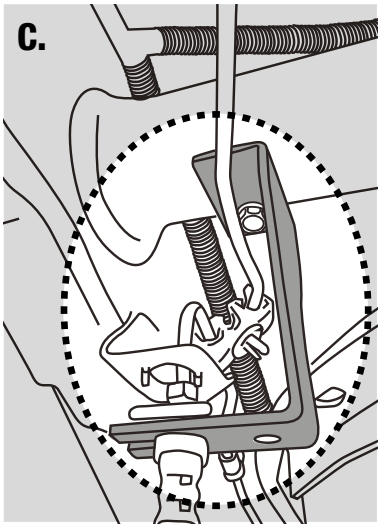


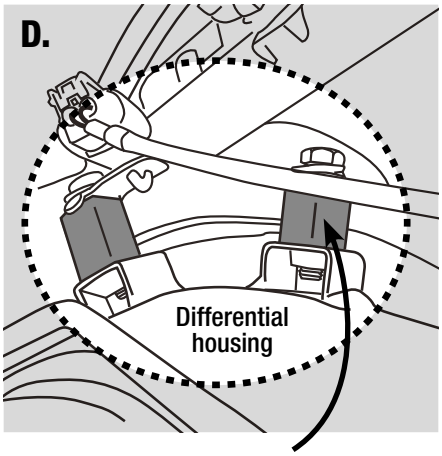


4. Disconnect plastic brake line clip from chassis. Feed brake line through relocation bracket and fasten to chassis using hole provided by removing plastic bracket.

5. Reattach brake line clip to secure brake line. Use plastic clip to secure both steel brake lines. Refer Fig C.

6. Remove bolt holding ABS line connectors to the top of the differential and install spacer using hardware provided. Refer Fig D.





NOTE: Optional spacer for Diff Lock wiring
(Repeat step 6 if applicable)

Warranty will be voided by damage or failure caused by incorrect procedure.
Before proceeding to install Brake Line Relocation Kit please fully read instructions and ensure that necessary tools are on hand.

Always wear personal safety protection ie. Safety glasses and gloves to prevent injury.

14. Refit all wheels. Tension wheel nuts to 110Nm. Lower the vehicle to the ground and bounce the vehicle to settle the suspension. Re-tension wheel nuts to 130Nm.

    Tighten leaf spring fixed end pin (120Nm) and shackle pins (90Nm)

15. Torque the rear shock absorber mounts (105Nm)

    Torque the front shock absorber lower mount to (95Nm) with the vehicle on flat level ground.

    Re-check all fasteners for correct torque.

16. Measure and record ride height after initial test drive using installation form (Page 3).

17. If required due to driveline vibration, install Centre Bearing Spacer Kit (PN 1201K). Refer to instructions on next page.

18. A wheel alignment should be carried out within a maximum of 2 weeks or 500km after fitment of suspension.
19. Check headlight alignment.
20. Check all fasteners after 2 weeks or 500km.

Mitsubishi Triton L200 MQ 2015+
Fiat Fullback 2015+
Centre Bearing Relocation Kit

PART NUMBER: 1201K

Lowers centre driveshaft bearing to reduce the severity of vibration often associated with suspension lift or unbalanced driveshaft.

1. Locate original centre bearing cradle located on centre chassis crossmember and remove 2 x securing nuts.

2. Support driveshaft to prevent damage from dropping, separate the original cradle by sliding each half off the rubber insulator.

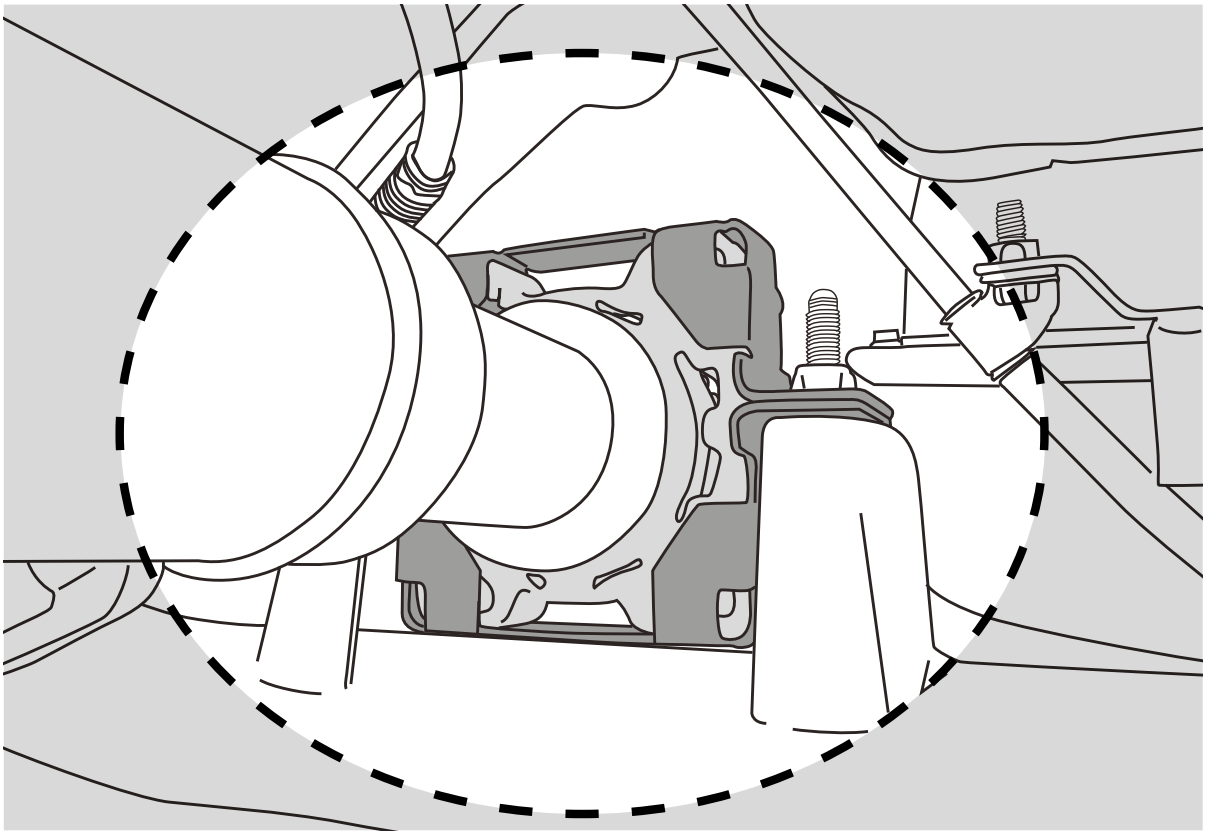
3. Inspect Ironman 4x4 cradle, notice flanges are offset from centreline. Insert deeper half to lower side of rubber insulator and shallow half to upper side.

   The new cradle will lower the centre bearing 6-8mm.

4. Using new mounting hardware provided, tension nuts to 45N/m (34ft/lb)

   This kit is intended to reduce the likelihood, but may not fully remedy the vibration.

   In some cases vibration may still exist as a result of differences in vehicle tolerance and ride height.



Thread:	M10 x 1.25
Tightening Torque:	45Nm