Air Lift™ PERFORMANCE

Kit 75557

Subaru BRZ, Scion FRS and Toyota GT86

Front Application

AIR LIFT PERFORMANCE®

INSTALLATION GUIDE

For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

Failure to read these instructions can result in an incorrect installation.

PERFORMANCE SUSPENSION PARTS

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Subaru BRZ/Scion FRS/Toyota GT86 Performance kit.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information includes a hardware list, tool list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.

⚠ DANGER INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

⚠ WARNING INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

⚠ CAUTION INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE MACHINE OR MINOR PERSONAL INJURY.

NOTE *Indicates a procedure, practice or hint which is important to highlight.*

IMPORTANT SAFETY NOTICES

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

Gross Vehicle Weight Rating: The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

Payload: The combined, maximum allowable weight of cargo and passengers that the vehicle is designed to carry. Payload is GVWR minus the Base Curb Weight.

⚠ WARNING DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.

⚠ CAUTION DO NOT WELD TO, OR MODIFY PERFORMANCE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

Installation Diagram

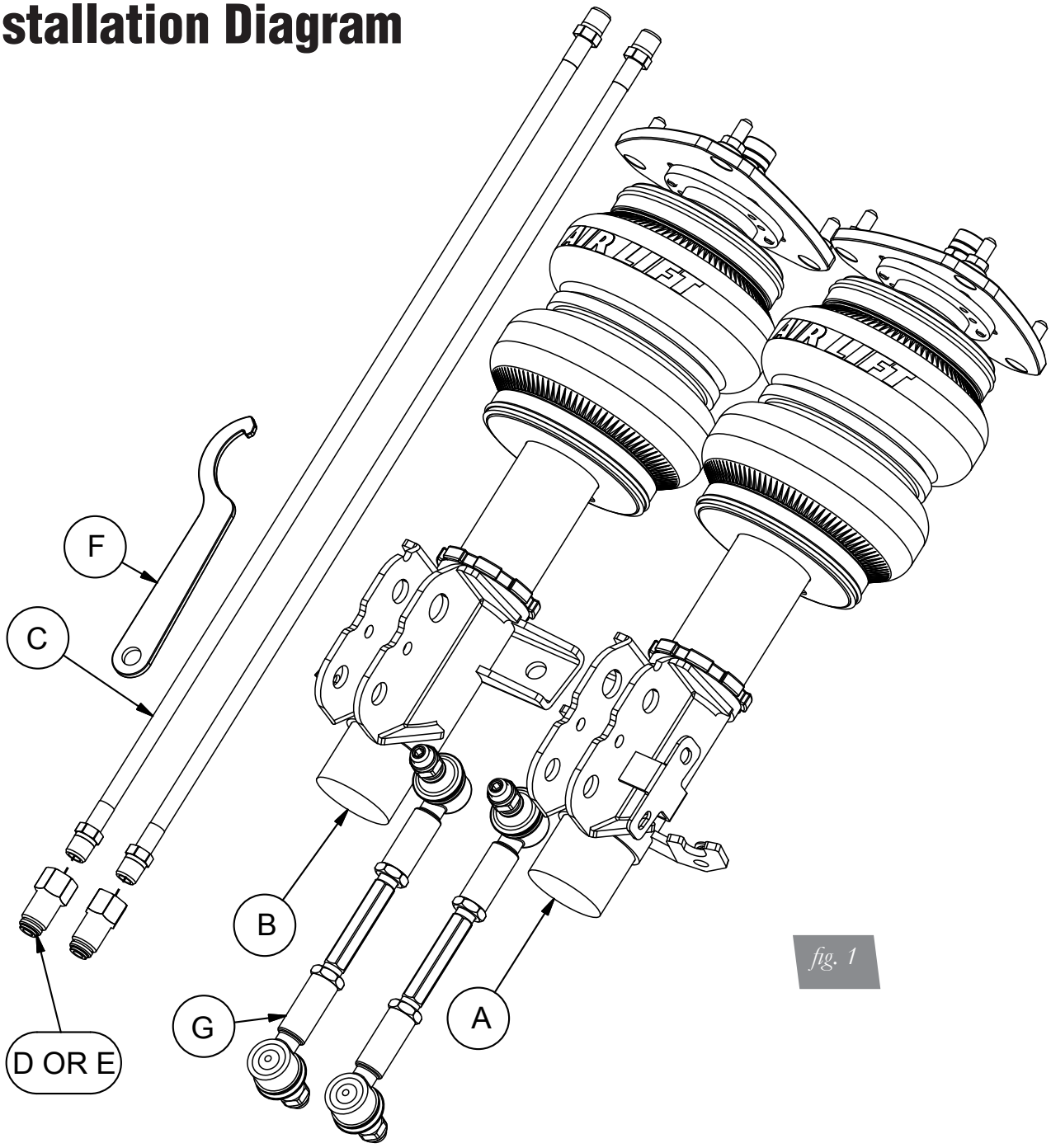


fig. 1

HARDWARE LIST

Item	Part #	Description	Qty
A	35222	Strut assembly, BRZ/FRS/GT86 Front Right	1
B	35221	Strut assembly, BRZ/FRS/GT86 Front Left	1
C	20997	Leader Hose, 1/4” ID	2
D	21810	Union, 1/4”FNPT X 1/4” PTC, DOT	2
E	21987	Union, 1/4”FNPT X 3/8” PTC, DOT	2
F		Spanner Wrench	1
G		Adjustable Sway Bar End Link	2

Installing the Air Suspension

PREPARING THE VEHICLE

1. Support the vehicle with jack stands or a hoist at approved lifting points.
2. Remove the front wheels.

STOCK STRUT REMOVAL

1. Remove the bolts retaining the brake hose and unclip the ABS sensor wire (fig. 2).

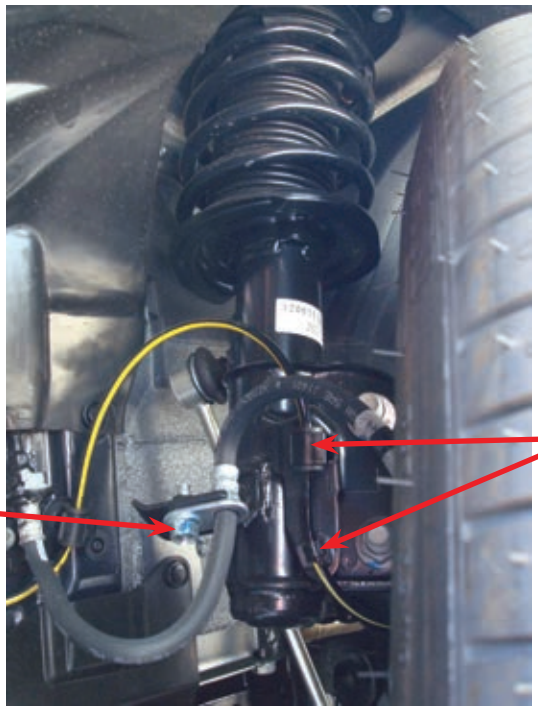


fig. 2

2. Disconnect the stabilizer bar from the strut body and the lower control arm (fig. 3).

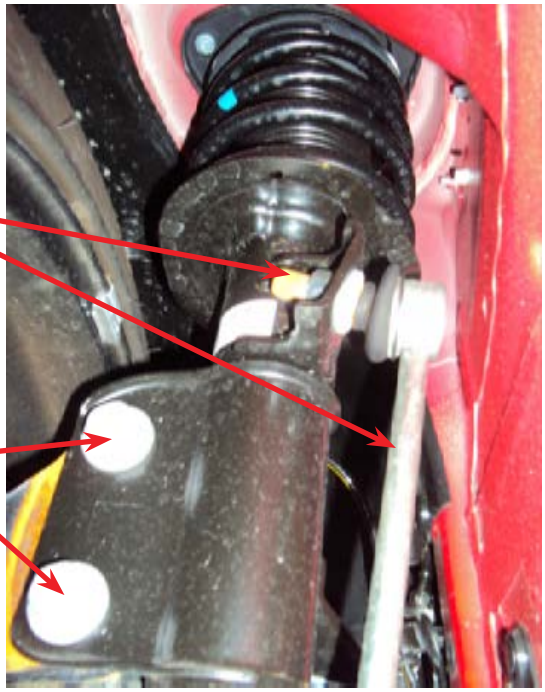


fig. 3

3. Support the hub then unbolt and remove the two lower strut mount bolts (fig. 3).

4. Unthread the three upper bracket nuts within the engine compartment and remove the strut from the vehicle (fig. 4).

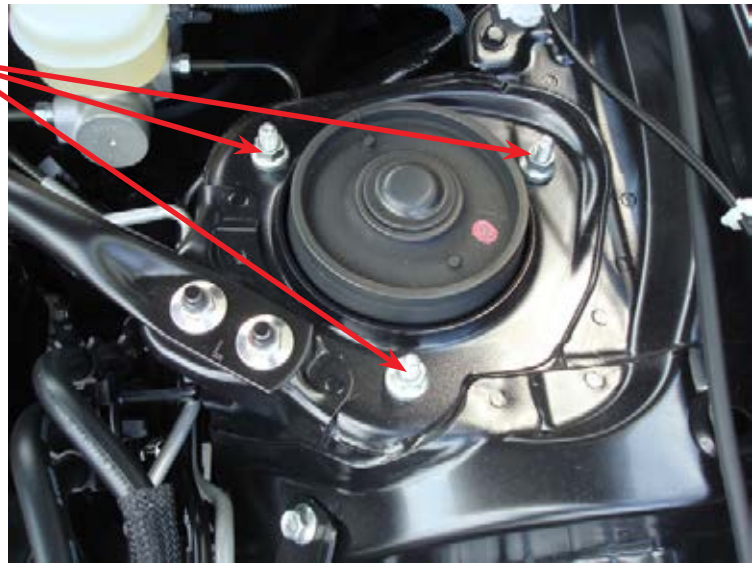


fig. 4

AIR SUSPENSION INSTALLATION

1. Begin by installing the leader line (C) into the air spring (fig. 5). Wrap the threads of the leader hose with Teflon tape or thread sealant. Tighten the appropriate fitting (D or E) to the airline 1 ¾ turns beyond hand tight. Tighten the leader line into the air spring 1 ¾ turns beyond hand tight.

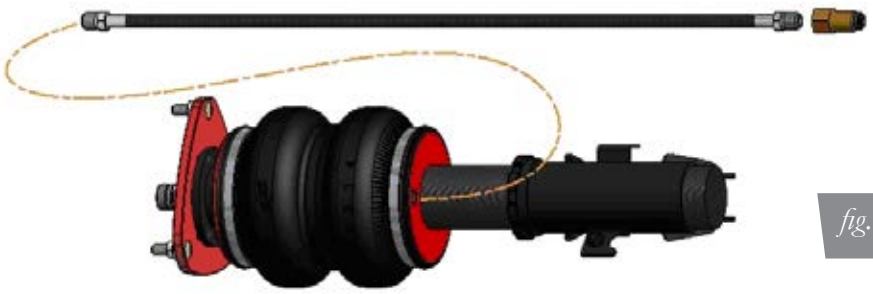


fig. 5

2. Align the strut assembly with the upper bracket holes in the strut tower. Thread the nuts onto the camber plate studs. Lift the hub assembly into the strut lower mount and reinstall bolts. *See Torque Specifications (Table 1).*
3. Reinstall the brake hose bracket and ABS sensor wire clips. *See Torque Specifications (Table 1).*
4. Install the supplied stabilizer bar endlink into strut body and lower control arm. *See Torque Specifications (Table 1).*

⚠ CAUTION INSTALLER MUST USE SUPPLIED, SHORTER, SWAYBAR ENDLINK OR POSSIBLE DAMAGE TO COMPONENTS MAY OCCUR.

5. Route the braided air line in a manner where the line will not be kinked or rubbed by anything. Cycle the suspension up and down and turn the wheel lock-to-lock to verify the air line is protected from damage. Generally, routing the air line along with the brake line is a good place to start.
6. With the suspension fully compressed, take a measurement from the fender to some reference point, typically the center of the axle. Record this as Max Compression (MC). Cycle the suspension to Max Extension (ME) and record the measurement from the same reference points. Take the difference between the two numbers and divide by two. Add that value to the Max Compression number and then set the suspension to that point (fig. 6). This position gives 50% stroke in either direction and is a great starting point for ride height. At this position torque the lower control arm bolts to manufacturer's specifications (Table 1).

Torque Specifications		
Location	Nm	Lb-ft
Camber plate to chassis	20	15
Camber plate adjustment bolts	15	11
Strut lower mount bolts	175	129
Brake hose bolt	32	24
Stabilizer bar to transverse link	30	22
Wheel bolts	120	89

Table 1

Formula for calculating ride height:

fig. 6

Step 1:	*Step 2:*	*Step 3:*	*Answer:*
$\frac{ME - MC}{X}$	$\frac{X}{2} = Y$	$\frac{Y + MC}{Z}$	**Z = DESIGN HEIGHT**

7. Reinstall wheels; retake the Max Compression and Extension measurements from the fender to lower wheel lip. Recalculate the ride height at 50% stroke and set the vehicle to that height. Make sure to get an alignment at the preferred drive height. Enjoy the new look and handling!

ALIGNING THE VEHICLE

1. Using the control system, set the vehicle height to the new custom ride height.
2. If the custom ride height is lower than stock, we recommend loosening all pivot points (bolts, nuts) on any control arm, strut arm or radius rod that contains bushings. Once they have been loosened, re-torque to stock specifications.

NOTE

It may be necessary to cycle the suspension to loosen the bushing up from its mount. This will help unload the bushing to make it last longer at its new position based on the custom ride height.

DAMPING ADJUSTMENT

The struts in this kit have 30 settings or "clicks" of adjustable compression and rebound damping characteristics. Damping is changed through the adjuster at the top of the strut. Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened. Each front strut is preset to "-15 clicks". This means that the strut is adjusted 15 clicks away from full stiff. Counting down from full stiff is the preferred method of keeping track/setting of damping. (Figs. 7, 8)

fig. 7

fig. 8

ADJUSTING EXTENDED OR DROP HEIGHT USING LOWER MOUNT

Your struts have been pre-set at the factory to provide maximum drop height while maintaining adequate tire clearance to the air spring. If you wish to gain more extended height (lift), which is the same as reducing drop height, or want to lower the chassis further and there is still adjustment available at the lower mount, please use the following procedure:

1. Support the vehicle with jack stands or a hoist at approved lifting points.
2. Remove the wheel.
3. Using the supplied spanner wrench, loosen the lower locking collar. (fig. 9)

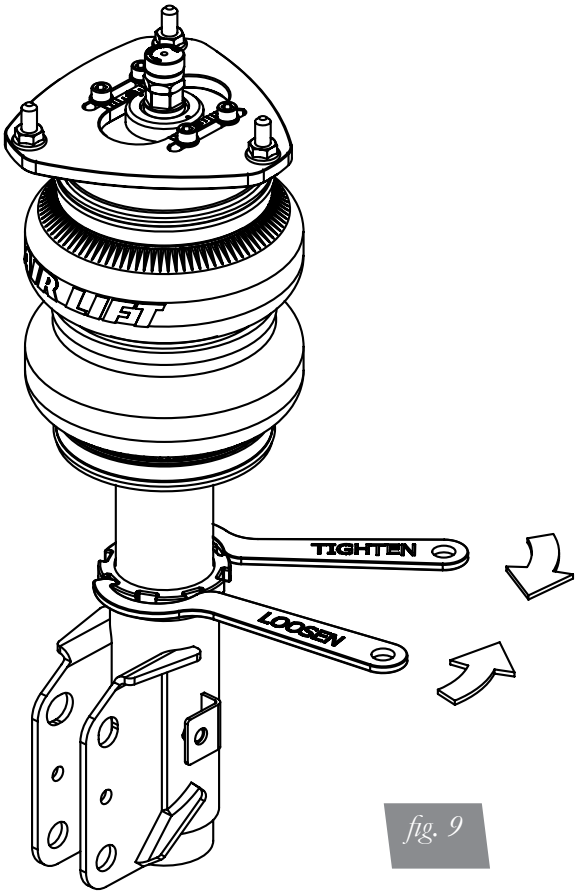


fig. 9

4. Deflate the air spring to 0 PSI on the corner you are adjusting.
5. Disconnect lower mount from suspension
6. Spin the lower mount to the desired location.

NOTE

Not all models will have further drop height available.

7. Re-install lower mount to suspension and torque fasteners.
8. Tighten the lower locking collar to the lower mount using significant force.

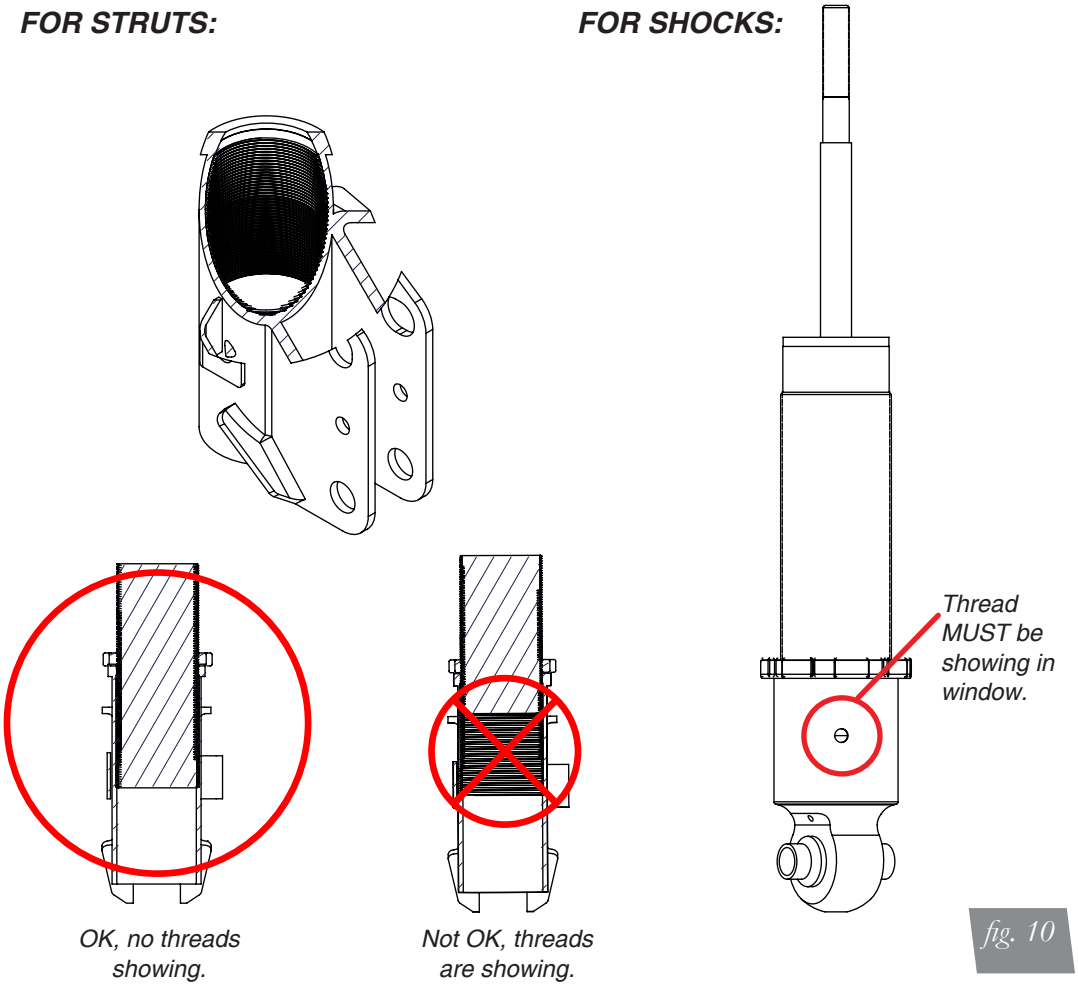
⚠ CAUTION

WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT. (FIG. 10) WHEN ADJUSTING DOWNWARDS, MAKE SURE THERE IS ADEQUATE AIR SPRING CLEARANCE TO THE TIRE/WHEEL ASSEMBLY. CLEARANCE MUST BE CHECKED WITH SYSTEM FULLY DEFLATED AS WELL AS FULLY INFLATED TO ENSURE THAT NO RUBBING OCCURS. FAILURE TO MAINTAIN ADEQUATE CLEARANCE CAN RESULT IN AIR SPRING FAILURE AND WILL NOT BE COVERED UNDER WARRANTY.

⚠ CAUTION

DO NOT ADJUST HEIGHT BY SPINNING AIR SPRING ON STRUT! DOING SO MAY CAUSE AN AIR LEAK AND COMPROMISE THE ASSEMBLY.

FOR STRUTS: ***FOR SHOCKS:***



OK, no threads showing.

Not OK, threads are showing.

fig. 10