

# **Air Lift**<sup>TM</sup> **PERFORMANCE**

**(2002 - 2007):**

Kits 75551 & 75552

**(2008 - 2012):**

Kits 75554, 75556

***Front Application for  
Subaru Impreza, WRX & STi***



## **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 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, 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.

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**NOTE**

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

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## 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.

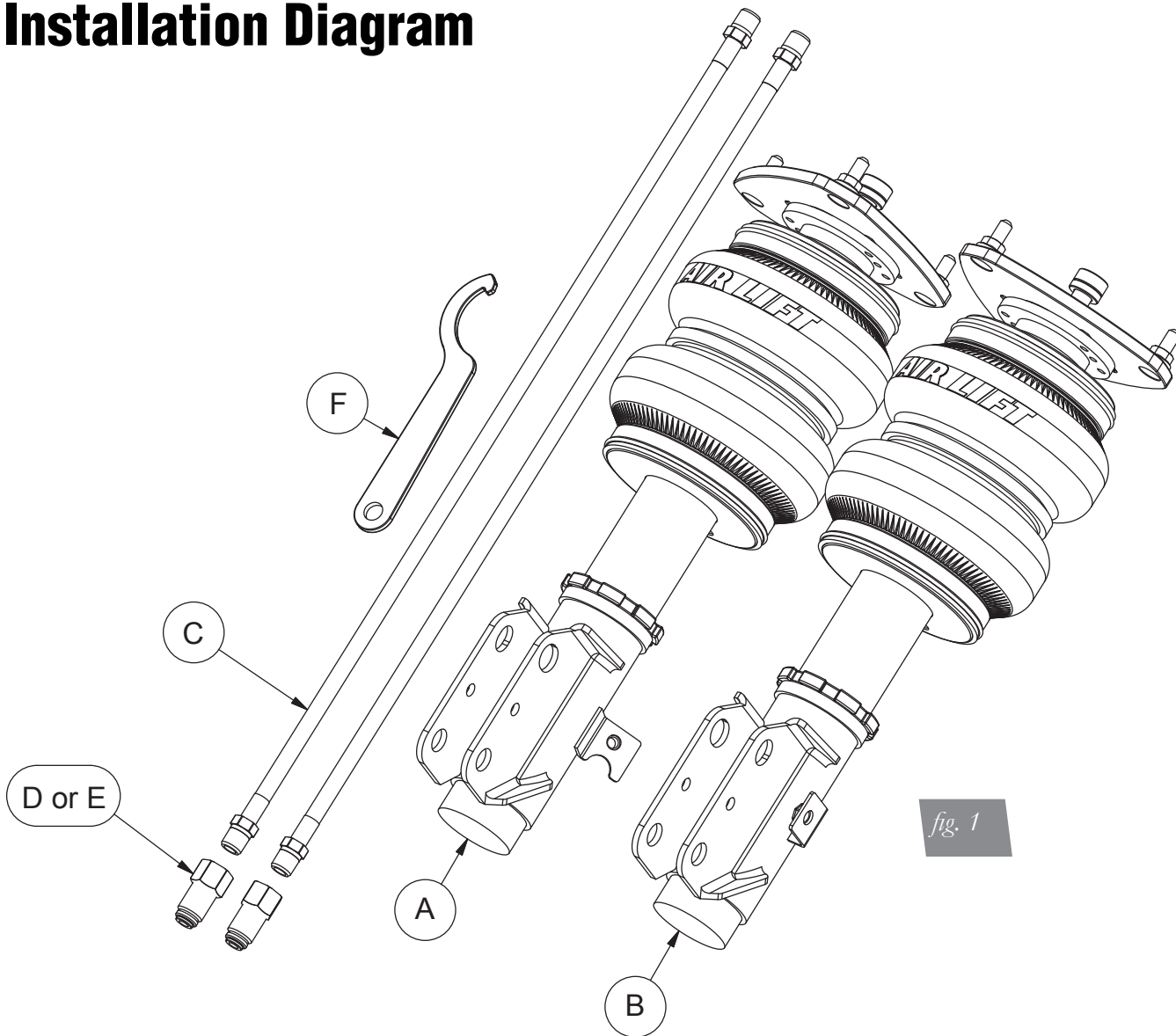
 **WARNING**

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/SOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

# Installation Diagram



## HARDWARE LIST

### Kit Specific Hardware:

#### Kit #75551 (STi - GDF Chassis)

Item	Part #	Description.....	Qty
A	35211	Strut Assembly, Front Left.....	1
B	35210	Strut Assembly, Front Right .....	1

#### Kit #75552 (Impreza, WRX, STi - GDB Chassis)

Item	Part #	Description.....	Qty
A	35215	Strut Assembly, Front Left.....	1
B	35214	Strut Assembly, Front Right .....	1

#### Kit #75554 (STi - GRB Chassis)

Item	Part #	Description.....	Qty
A	35221	Strut Assembly, Front Left.....	1
B	35222	Strut Assembly, Front Right .....	1

#### Kit #75556 (Impreza, WRX - GH, GR, GV, GE Chassis)

Item	Part #	Description.....	Qty
A	35229	Strut Assembly, Front Left.....	1
B	35228	Strut Assembly, Front Right .....	1

### Common Hardware:

Item	Part #	Description.....	Qty
C	20997	Leader Hose, 1/4" ID .....	2
D	21810	1/4"FNPT x 1/4" Fitting "DOT" .....	2
E	21987	1/4"FNPT x 3/8" Fitting "DOT" .....	2
F		Spanner Wrench .....	1

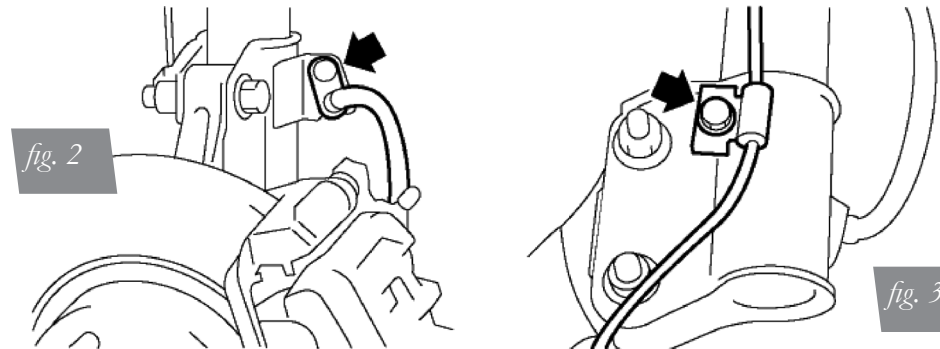
# Installing the Air Suspension

## PREPARING THE VEHICLE

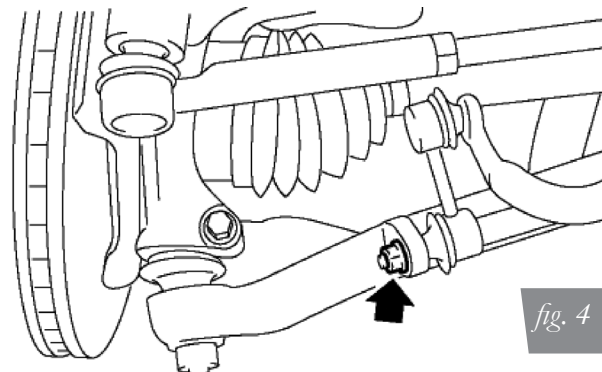
1. Support the vehicle with jack stands or a hoist at approved lifting points.
2. Remove the front wheels.

## STOCK STRUT REMOVAL

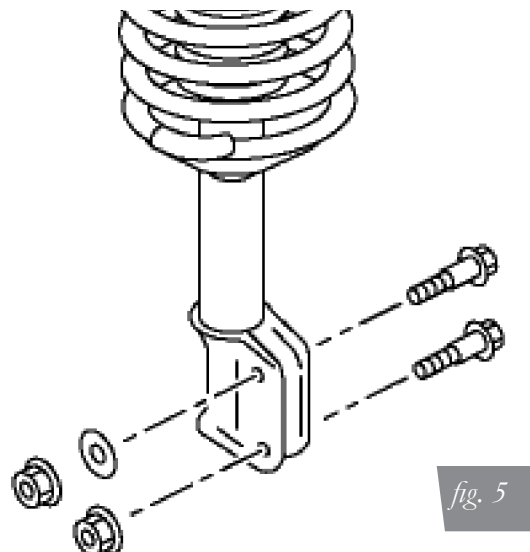
1. Remove the bolts retaining the brake hose and the ABS sensor wire (figs. 2 and 3).



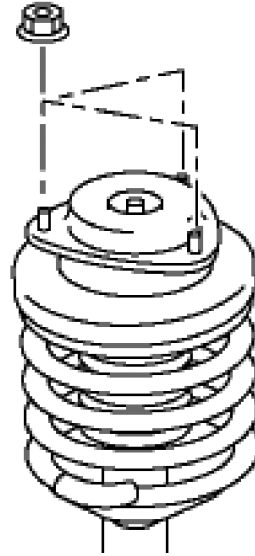
2. Disconnect the stabilizer bar from the transverse link (fig. 4).



3. Support the hub then unbolt and remove the two lower strut mount bolts (fig. 5).



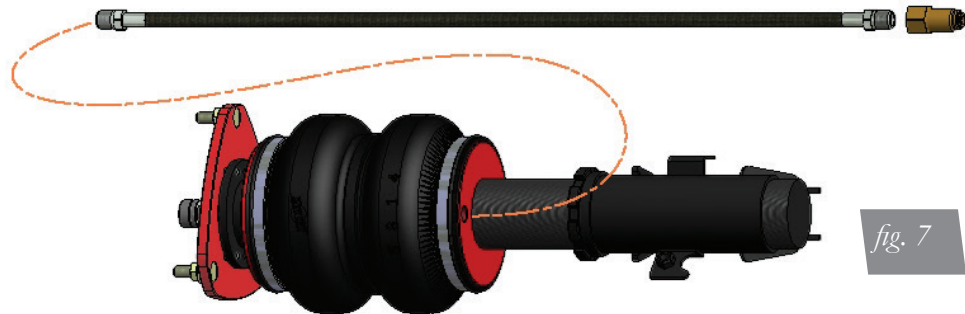
4. Unthread the three upper bracket nuts within the engine compartment and remove the strut from the vehicle (fig. 6).



*fig. 6*

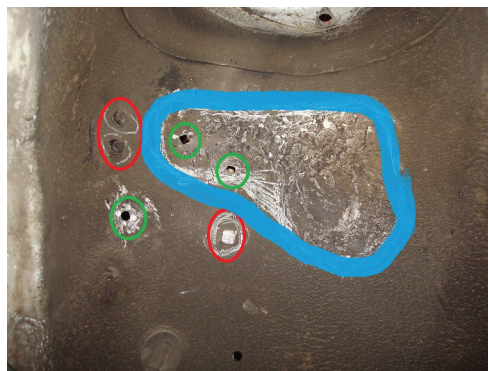
## AIR SUSPENSION INSTALLATION

1. Begin by installing the leader line into the air spring (fig. 7). Wrap the threads of the leader hose with Teflon tape or thread sealant. Tighten the appropriate fitting to the airline 1 and 3/4 turns beyond hand tight. Tighten the leader line into the air spring 1 and 3/4 turns beyond hand tight.



*fig. 7*

2. To gain full use of the camber plates, some inner fender modifications should be done to insure clearance around the new air spring assembly (fig. 8). All bolts should be trimmed flush with the mounting nuts. All unused nuts should be removed. Some vehicles may require some modification to form the sheet metal away from the air spring (2005 STi left inner fender shown: RED=trim, GREEN=remove, BLUE=form).



*fig. 8*

3. 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 the bolts. See *Torque Specifications* chart (Table 1).
4. Reinstall the brake hose bracket and ABS sensor wire bracket. See *Torque Specifications* chart (Table 1).
5. Reinstall the stabilizer bar into the lower transverse link. See *Torque Specifications* chart.
6. 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; turn the wheel lock-to-lock to verify the air line is protected from damage. Generally, routing the air lines along with the brake line is a good place to start.

Table 1

Torque Specifications		
Location	Nm	lb-ft
Camber plate to chassis	20	15
Camber plate adjustment bolts	15	11
Strut lower mount bolts (1992 - 2001)		
Strut lower mount bolts (2002 - 2007)	175	129
Strut lower mount bolts (2008 and up)	155	114
ABS speed sensor bolt	33	24
Brake hose bolt	32	24
Transverse link rear bushing	190	140
Transverse link to cross-member	125	92
Stabilizer bar to transverse link(STi)	45	33
Stabilizer bar to transverse link(Impreza/WRX)	30	22
Wheel bolts	90	66

## 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 rod. 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. This setting was developed on a 2005 STi and may need to be adjusted to different vehicles and driving characteristics.



fig. 9

## 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 the original height, 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.

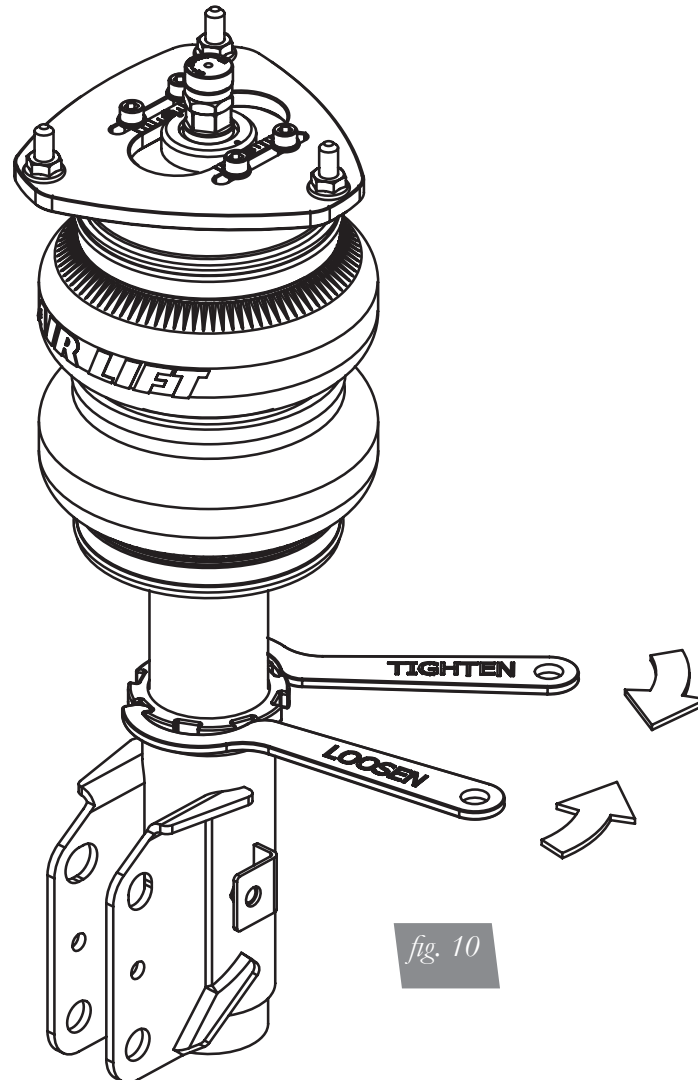
### NOTE

*It may be necessary to cycle the suspension to loosen the bushing up from its mount. This will help re-orient the bushing at its new position based on the custom ride height.*

## 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. 10).



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.

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### 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 THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT (FIG. 11). 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:**

