

(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.

MN-790 • (031904) • ECR 9298

# TABLE OF CONTENTS

| Α. | Introduction  | 2  |
|----|---|----|
|    | Notation Explanation                                    |    |
|    | Important Safety Notices                                | .2 |
| B. | Installation Diagram                                    | 3  |
|    | Hardware List   |    |
| C. | Installing the Air Suspension                           | 4  |
| •  | Preparing the Vehicle                                   |    |
|    | Stock Suspension Removal                                |    |
|    | Installing the Kit Components                           |    |
|    | Routing Air Lines                                       | .6 |
| D. | Before Operating  | 7  |
|    | Torque Specifications                                   |    |
|    | Suggested Driving Air Pressure and Maximum Air Pressure | .7 |
|    | Check for Binding                                       |    |
|    | Installation Checklist                                  |    |
|    | Damping Adjustment                                      | .8 |
|    | Limited Warranty and Return Policy                      | 9  |

## A. Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered highperformance air suspension made for the Suabru Impreza, WRX and STi. Read these installation instructions to correctly and safely set up the vehicle for a #lifeonair.

Air Lift assumes that the installer has the mechanical knowledge and ability to work on vehicle suspension systems and has basic tools necessary to complete the project. Special tools needed to complete the installation are noted on the Installation Diagram page.

Air Lift Performance reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Performance at **(800) 248-0892** or visit **www.airliftperformance.com**.

An Air Lift air management system is highly recommended for this product. Learn more at air-lift.co/productlines.

#### 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.



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



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



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**

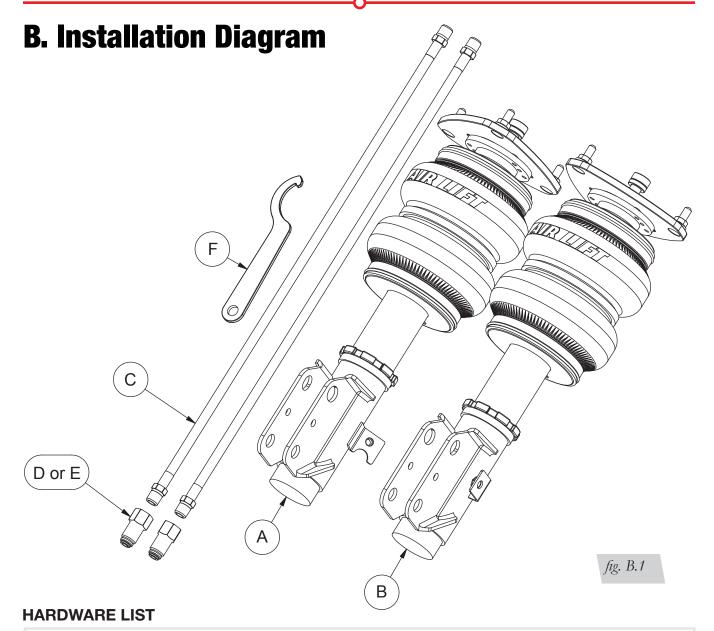


DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.



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





## Kit Specific Hardware:

| Kit #7 | 5551 (STi | - GDF Chassis)                 |     |
|--------|-----------|--------------------------------|-----|
| Item   | Part #    | Description                    | Qty |
| Α      | 35211     | Strut Assembly, Front Left     | _   |
| В      | 35210     | Strut Assembly, Front Right    |     |
| Kit #7 | 5552 (Imp | oreza, WRX, STi - GDB Chassis) |     |
| Item   | Part #    | Description                    | Qty |
| Α      | 35215     | Strut Assembly, Front Left     | 1   |
| В      | 35214     | Strut Assembly, Front Right    | 1   |
| Kit #7 | 5554 (STi | - GRB Chassis)                 |     |
| Item   | Part #    | Description                    | Qty |
| Α      | 35221     | Strut Assembly, Front Left     | -   |
| В      | 35222     | Strut Assembly, Front Right    |     |
|        |           |                                |     |

| Kit | #75556 | (Impreza, | WRX - GH, ( | GR, GV, | GE Chassis) |
|-----|--------|-----------|-------------|---------|-------------|
|     | B.     |           |             |         | •           |

| Item | Part # | DescriptionQty               |
|------|--------|------------------------------|
| Α    | 35229  | Strut Assembly, Front Left1  |
| В    | 35228  | Strut Assembly, Front Right1 |

#### **Common Hardware:**

| Item | Part # | DescriptionQty                 |
|------|--------|--------------------------------|
| С    | 20997  | Leader Line, 1/4" ID2          |
| D    | 21810  | 1/4"FNPT x 1/4" Fitting "DOT"2 |
| E    | 21987  | 1/4"FNPT x 3/8" Fitting "DOT"2 |
| F    |        | Spanner Wrench1                |



Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

MN-790 3

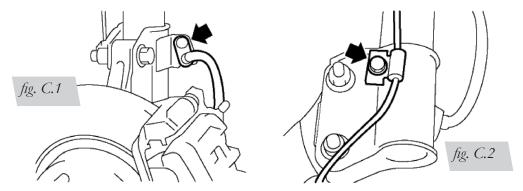
# **C.** Installing the Air Suspension

#### PREPARING THE VEHICLE

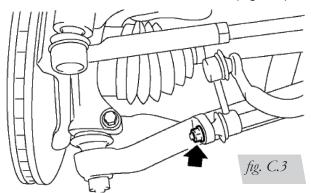
- 1. Elevate and support the vehicle with a hoist or safety stands.
- 2. Remove the front wheel and support the hub assembly.

#### STOCK SUSPENSION REMOVAL

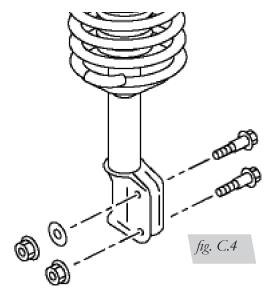
1. Remove the bolts retaining the brake hose and the ABS sensor wire (Figs. C.1 and C.2). Retain the bolts for kit installation.



2. Disconnect the stabilizer bar from the transverse link (Fig. C.3).

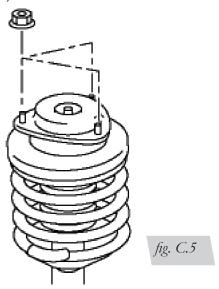


3. Support the hub then unbolt and remove the two lower strut mount bolts and hardware (Fig. C.4). Retain bolts and hardware for kit installation.



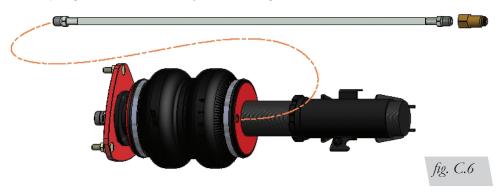


4. Unthread the three upper mount nuts within the engine compartment and remove the strut from the vehicle (Fig. C.5).



#### INSTALLING THE KIT COMPONENTS

1. Begin by installing the leader line (C) into the air spring (Fig. C.6). Tighten the appropriate fitting to the leader line 1 and 3/4 turns beyond hand tight. Tighten the leader line into the air spring 1 and 3/4 turns beyond hand tight.



2. To gain full use of the camber plates, some inner fender modifications should be done to ensure clearance around the new air spring assembly (Fig. C.7). 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).

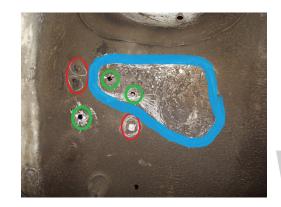


fig. C.7



- 3. Align the strut assembly (A or B) 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 and hardware. See *Torque Specifications* chart (*Table 1*).
- 4. Reinstall the brake hose bracket and ABS sensor wire bracket (Figs. C.1 & C.2). See *Torque Specifications* chart (*Table 1*).
- 5. Reinstall the stabilizer bar into the lower transverse link (Fig. C.3). See *Torque Specifications* chart (*Table 1*).
- 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.

#### **ROUTING THE AIR LINES**



AFTER INSTALLATION, ENSURE ALL ORIGINAL EQUIPMENT VEHICLE SAFETY FEATURES ARE PROPERLY CALIBRATED BY A QUALIFIED TECHNICIAN. CHANGING VEHICLE HEIGHT MAY AFFECT FUNCTIONING OF SAFETY SENSORS AND CAMERAS.

- Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the air line that is clear of all suspension and steering components.
- Routing should allow for the suspension to extend and steer without kinking, pulling the line tight or rubbing on other components. Following the brake line routing is often a good place to start. Check clearances to all other components.



# **D. Before Operating**

#### **SETTING THE RIDE HEIGHT**

1. Refer to the User Guide supplied with this kit to set up the suspension.

| Torque Specifications                          |     |       |
|--|-----|-------|
| Location                                       | Nm  | Lbft. |
| Camber plate to chassis                        | 20  | 15    |
| Camber plate adjustment bolts                  | 15  | 11    |
| 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    |

Table 1

| Suggested Driving Air Pressure | Maximum Air Pressure |
|--------------------------------|----------------------|
| 50 PSI                         | 125 PSI              |

FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) MAY RESULT IN EXCESSIVE BOTTOMING OUT AND WILL VOID THE WARRANTY.

Table 2

#### CHECK FOR BINDING

- 1. Inflate and deflate the system (do not exceed 125 PSI) to check for clearance or binding issues. With the air springs deflated, check clearances on everything so as not to pinch brake lines, vent tubes, etc. Clear lines if necessary.
- 2. Inflate the air springs to 75-90 PSI and check all connections for leaks.
- 3. Please refer to the User Guide included with this kit for more details on pressure settings and user guidelines.



MAKE SURE THE FRONT WHEELS ARE STRAIGHT WHEN DEFLATING AND REINFLATING AIR BAGS.

MN-790 **7** 



## **INSTALLATION CHECKLIST**

| <b>Clearance</b> — Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against the air spring. This should be checked with the air spring fully inflated and fully deflated.                                 |
|---|
| <b>Leak</b> — Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.  |
| <b>Heat</b> — Be sure there is sufficient clearance from heat sources, at least $6$ " (152mm) from air springs and air lines. If a heat shield was included in the kit, install it. If there is no heat shield, but one is required, call Air Lift customer service at <b>(800)</b> 248-0892. |
| Fastener — Recheck all bolts for proper torque.   |
| <b>Road</b> — Inflate the springs to recommended driving pressures (Table 2). Drive the vehicle 10 miles (16km) and recheck for clearance, loose fasteners and air leaks.   |
| <b>Operating instructions</b> — If professionally installed, the installer should review the operating instructions with the owner. Be sure to provide the owner with all paperwork that came with the kit.   |

#### DAMPING ADJUSTMENT

- 1. The dampers in this kit have 30 settings, or "clicks," of adjustable compression and rebound damping characteristics. Damping is changed through the damper rod using the supplied adjuster (Figs. D.1 & D.2) or a 3mm hex key (not included).
- 2. Turn the adjuster clockwise (H) and the damping settings are hardened, reducing oscillations and body motion. Turn the adjuster counterclockwise (S) and the damping is softened.
- 3. Each damper in this kit is preset to "-15 clicks." This means that the damper is adjusted 15 clicks away from full stiff, which starts at 0. Counting up from full stiff is the preferred method of keeping track of, or setting, damping. This setting was developed on a 2005 Subaru STi.

For more information, refer to the User Guide.





## **Limited Warranty and Return Policy**

Air Lift Company provides a 1-year limited warranty to the original purchaser of Air Lift Performance damper kits from the date of original purchase, that the products will be free from defects in workmanship and materials when used on vehicles as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy that is available online at www.airliftperformance.com/warranty.

For additional warranty information contact Air Lift Company customer service.

Air Lift Company reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Company at **(800) 248-0892** or visit **www.airliftperformance.com**.

MN-790 9

### **NEED HELP?**

The Air Lift Company customer service department is open from 8 a.m. to 8 p.m. ET Monday through Friday. Call (800) 248-0892 or (517) 322-2144 for calls from outside the U.S. and Canada.







Connect by searching for **Air Lift Performance** #LifeonAir





Thank you for purchasing Air Lift Performance products!

Air Lift Performance • 2727 Snow Road • Lansing, MI 48917 or P.O. Box 80167 • Lansing, MI 48908-0167 Toll Free (800) 248-0892 • Local (517) 322-2144 • Fax (517) 322-0240 • www.airliftperformance.com