

**AIR LIFT**  
**PERFORMANCE**

# Kit 78518

Nissan R35 GT-R  
**Front Application**



## 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.*





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# Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance air suspension made for the Nissan R35 GT-R. 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 a suspension replacement project. Special tools needed to complete the installation are noted on the Installation Diagram page.

Air Lift 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 Performance air management system is highly recommended for this product. Learn more at [air-lift.co/productlines](http://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 VEHICLE 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.

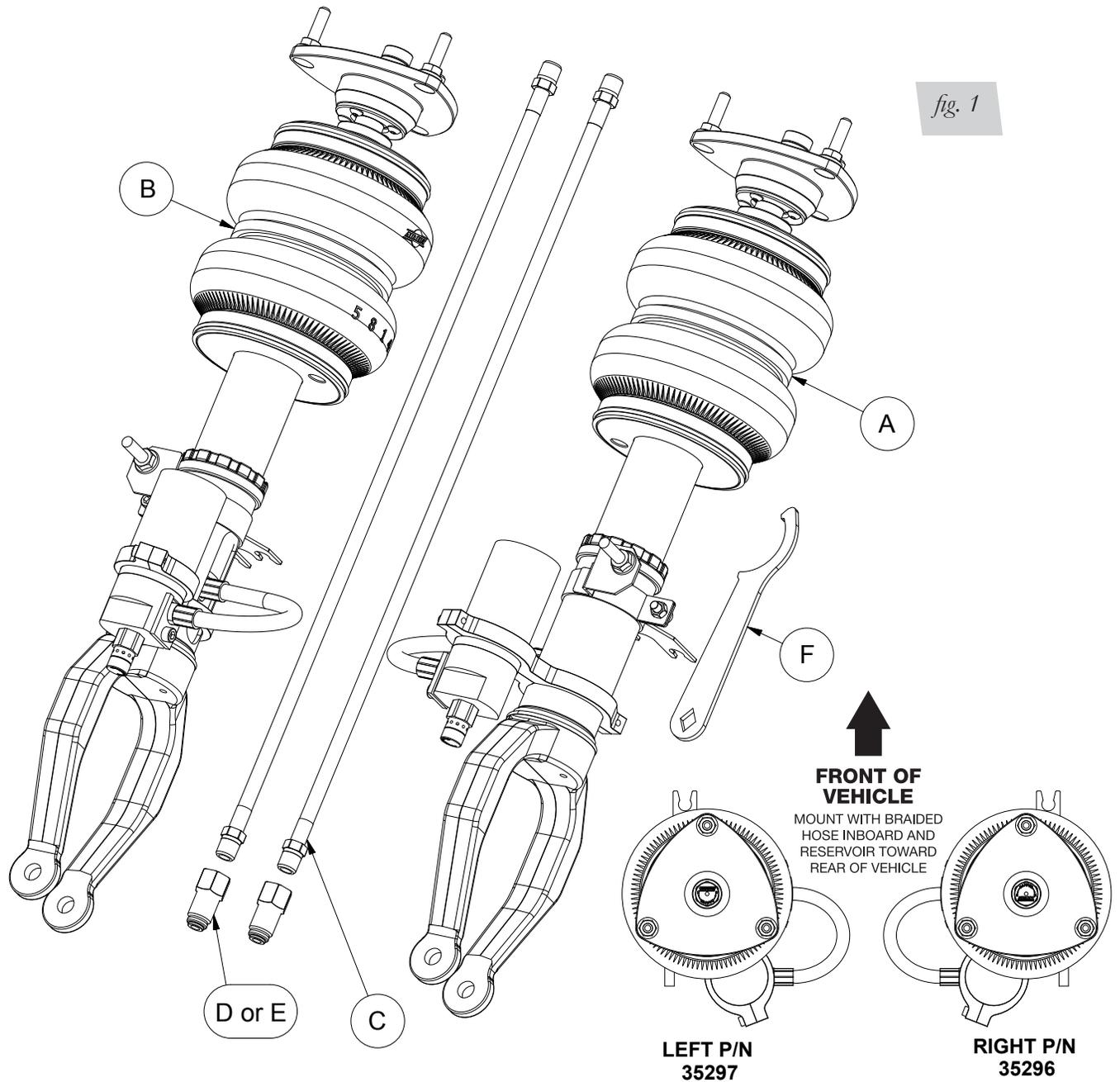


DO NOT WELD TO OR MODIFY PERFORMANCE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.



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.

# Installation Diagram



\* 1/4" FNPT x 3/8" PTC fittings are NOT included in this kit, but are available as a special order.

## HARDWARE LIST

Item	Part #	Description .....	Qty
A	35296	ASM, Shock, R-35 GT-R, RF .....	1
B	35297	ASM, Shock, R-35 GT-R, LF .....	1
C	20997	Leader Hose, 1/4" ID .....	2
D	21987	Union, 1/4"FNPT X 3/8" PTC, DOT* .....	2
E	21810	Union, 1/4"FNPT X 1/4" PTC, DOT .....	2
F		Spanner Wrench.....	1



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

# Installing the Air Suspension

## PREPARING THE VEHICLE

1. Elevate and support the vehicle with a hoist or safety stands.
2. Remove the front tire and support the hub assembly (Figs. 2 & 3).



## REMOVING THE FRONT SUSPENSION

1. Remove the axle nut and loosen the axle in the hub (Fig. 4).



2. Unclip the wheel sensor wire and brake line from the shock (Figs. 5a-5e).

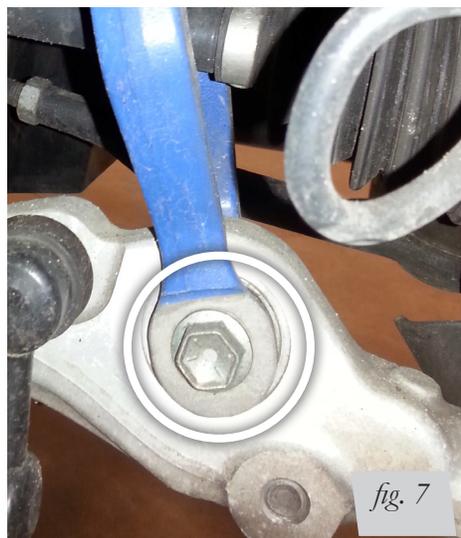




3. Loosen the forward pivot bolt for the lower control arm, but do not remove it (Fig. 6).



4. Support the hub and unbolt the lower shock mount from the control arm (Fig. 7).



5. Disconnect the stabilizer end link from the lower control arm (Fig. 8).



6. Support the hub and unbolt the steering knuckle from the upper control arm ball joint (Figs. 9 & 10).



7. Within the engine compartment, locate the connection for the Electronic Damping Control and disconnect it (Figs. 11 & 12).



8. With the EDC disconnected and the wire loose, unthread the three upper mount nuts and remove the shock from the vehicle (Figs. 13 & 14).



## AIR SUSPENSION INSTALLATION

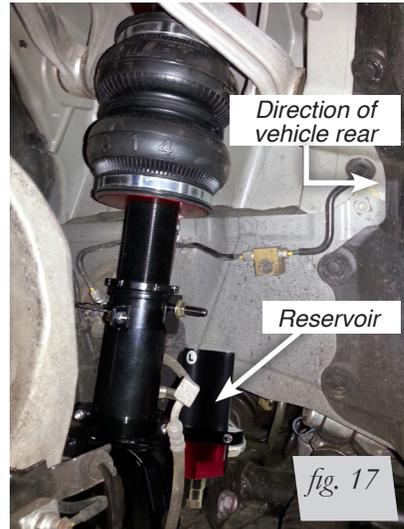
1. Begin by installing the leader line into the air spring (Fig. 15). Apply thread sealant to the threads of the leader line. Tighten the appropriate fitting to the leader line 1 3/4 turns beyond hand-tight. Tighten the leader line into the air spring 1 3/4 turns beyond hand-tight.



2. Remove the paper gasket from the factory shock upper mount and place onto the new shock assembly (Fig. 16).



3. Insert the shock assembly so that the braided line faces toward the engine compartment, and the external reservoir faces the rear of the vehicle (Fig. 17). Torque upper mount nuts (Fig. 18) to 27Nm (20 lb.-ft.)



4. Reattach the upper control arm to the steering knuckle (Fig. 19) and torque pinch bolt (Fig. 20) to factory specification.



5. Lift the lower control arm up and reinstall the lower shock mount bolt (Fig. 21). Do not torque at this time.



6. Align the stabilizer end link and insert it into the lower control arm (Fig. 22). Torque to 100Nm (74 lb.-ft.) (Fig. 23).



7. Attach the brake line to shock (Fig. 24) and torque nut (Fig. 25) to 13Nm (10 lb.-ft.)



8. Re-seat and torque the axle nut (Fig. 26) to factory specifications.



9. Cycle the suspension and check for clearances around the air spring. The air spring is quite close to the upper control arm attaching bolts (Fig. 27). Sourcing a round head bolt may be required if contact with the air spring occurs.



# 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	lb-ft
Lower shock mount bolt/nut	107	79
Lower control arm forward bolt	100	74
Swaybar endlink to lower control arm	100	74
Upper mount nut	27	20
Brake line attachment nut	13	10
Air Fitting (with sealant)	1 1/2 - 3 turns beyond hand-tight	
Lower damper locking collar	1/2 turn beyond hand-tight	
Reservoir collar bolts	5	44 lb.-in.
Wheel studs	131	97

Table 1

Suggested Driving Air Pressure	Maximum Air Pressure
<b>70 PSI (4.8BAR)</b>	<b>125 PSI (8.6BAR)</b>
FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) MAY RESULT IN EXCESSIVE BOTTOMING OUT AND <b>WILL VOID THE WARRANTY.</b>	

Table 2

## CHECK FOR BINDING

1. Inflate and deflate the system (do not exceed 125 PSI [8.6BAR]) 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 (5.2-6.2BAR) and check all connections for leaks.



**CAUTION**

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

## INSTALLATION CHECKLIST

- Clearance** — 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.
- Leak** — 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.
- Heat** — 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 **(800) 248-0892**.
- Fastener** — Recheck all bolts for proper torque.
- Road** — Inflate the air springs to recommended driving pressures (Table 2). Drive the vehicle 10 miles (16km) and recheck for clearance, loose fasteners and air leaks.
- Operating instructions** — 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.

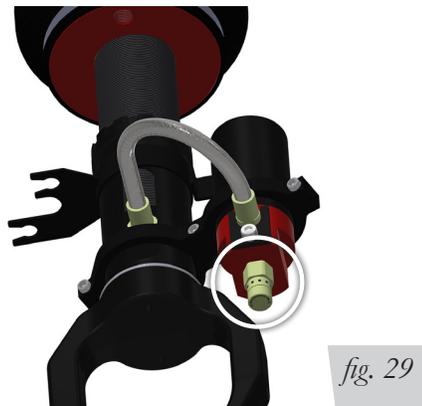
## DAMPING ADJUSTMENT

There are two forms of damping adjustment with this Nissan R35 GT-R suspension kit.

Rebound adjustment is controlled by the adjuster on the shock rod, located within the engine compartment (Fig. 28). Turn the damping knob clockwise to "harden" the suspension rebound. Turn the knob counterclockwise to "soften" the suspension rebound. The Air Lift setting is -17R (17 clicks away from full hard). This was developed on a 2009 GT-R and may need adjustment to meet vehicle differences or driving demands.



Compression damping is adjusted through the remote reservoir attached to the shock body (Fig. 29). Turn the damping knob on the reservoir clockwise to "harden" the suspension compression setting. Turn the knob counterclockwise to "soften" the suspension compression setting. The Air Lift setting is -21C (21 clicks away from full hard). This was developed on a 2009 GT-R and may need adjustment to meet vehicle differences or driving demands.



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## 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](http://www.airliftperformance.com/warranty).

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## 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.



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