

AIR LIFT
PERFORMANCE

Kit 78677/78678

Mercedes W204

Rear Application

With or Without Shocks



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.



TABLE OF CONTENTS

A. Introduction	2
Notation Explanation	2
B. Important Safety Notices	2
C. Installation Diagram	3
Hardware List	3
Torque-to-Yield Bolts	3
D. Installing the Air Suspension	4
Preparing the Vehicle	4
Removing the Rear Coil Spring and Damper	5
Installing the Air Suspension	7
Routing the Air Lines	10
E. Before Operating	10
Torque Specifications	10
Suggested Driving Air Pressure and Maximum Air Pressure	10
Check for Binding	10
Installation Checklist	11
Damping Adjustment	11
Limited Warranty and Return Policy	12



A. Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance air suspension made for the Mercedes W204. 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**.

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 VEHICLE OR MINOR PERSONAL INJURY.

NOTE

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

B. Important Safety Notices

**WARNING**

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

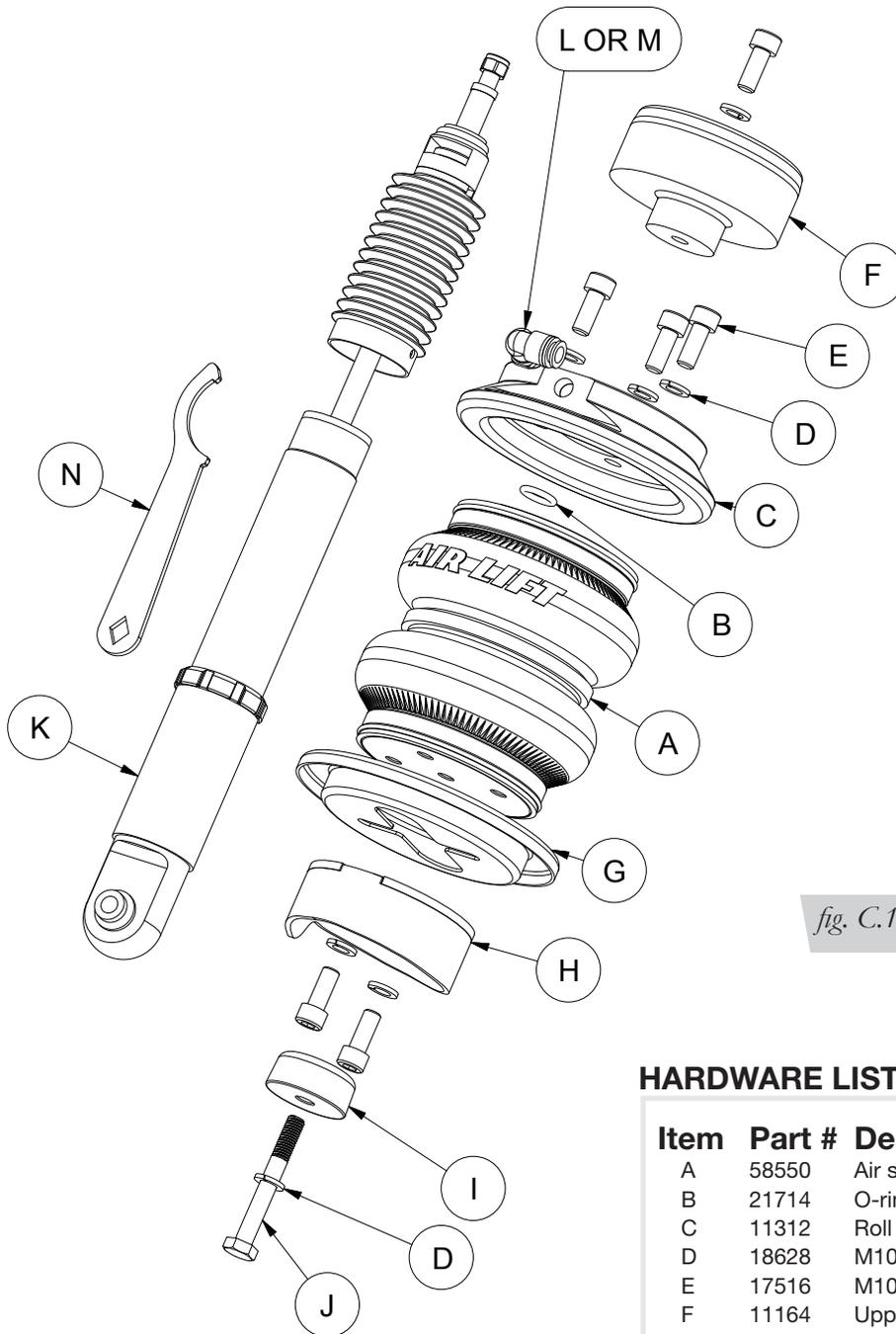
**CAUTION**

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

**WARNING**

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.

C. Installation Diagram



CAUTION

THIS KIT REQUIRES THE REMOVAL OF FACTORY TORQUE-TO-YIELD BOLTS. THESE BOLTS ARE DESIGNED TO BE REPLACED AFTER THEY HAVE BEEN LOOSENED. TORQUE-TO-YIELD BOLTS ARE INDICATED IN THE INSTRUCTIONS AND IN THE TORQUE SPECIFICATION CHART.

fig. C.1

HARDWARE LIST

Item	Part #	Description	Qty
A	58550	Air spring	2
B	21714	O-ring	2
C	11312	Roll plate	2
D	18628	M10 Split lock washer	14
E	17516	M10 x 1.5 x 25 Socket head cap screw	12
F	11164	Upper spring seat spacer	2
G	11801A	Roll plate	2
H	03064	Lower bracket	2
I	13993A	Centering spacer	2
J	17928	M10 x 1.5 x 80 Hex cap screw	2
K	26607	Rear shock	2
L	21779	1/4" MNPT x 1/4" PTC Elbow, DOT	2
M	21851	1/4" MNPT x 3/8" PTC Elbow, DOT	2
N	11290	Spanner wrench	1

TORQUE-TO-YIELD BOLTS*

Description	QTY
Control arm to crossmember	2
End link to control arm	2

* These bolts are not included with this kit



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

D. Installing the Air Suspension

NOTE

See Important Safety Notices on page 2.

CAUTION

RAISE THE REAR OF THE VEHICLE WITH A JACK AT THE APPROVED LIFTING POINTS AND USE SAFETY STANDS TO SUPPORT THE VEHICLE.

PREPARING THE VEHICLE

1. Elevate and support the vehicle with a hoist or safety stands.
2. Remove the rear wheel (Figs. D.1 & D.2). If changing shocks, remove fender liner (Figs. D.3 & D.4). If not changing shocks, proceed to next step.



fig. D.1



fig. D.2



fig. D.3



fig. D.4

REMOVING THE REAR COIL SPRING AND DAMPER

1. To remove the plastic control arm cover, unclip from the four attaching points on the control arm (Figs. D.5 & D.6).



fig. D.5

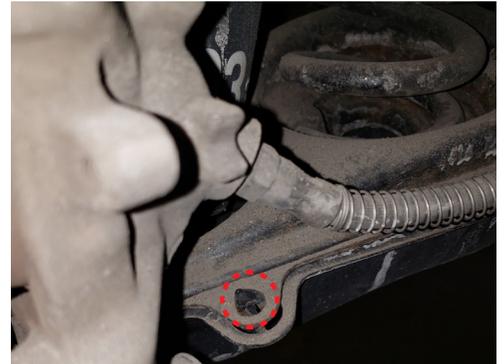


fig. D.6

2. Unbolt the stabilizer end link and lower shock eye (Fig. D.7).



fig. D.7

3. Support the lower control arm. Unbolt the lower control arm from the crossmember (Fig. D.8).



fig. D.8

4. Remove the coil spring and rubber spring seats (Figs. D.9 & D.10).

*fig. D.9**fig. D.10*

5. If installing the no-shock kit (78678) move to *Installing the Air Suspension*. If installing the shock kit (78677), unfasten the shock upper mount from within the luggage compartment (Fig. D.11). Remove the shock assembly (Fig. D.12).

*fig. D.11**fig. D.12*

6. Disassemble the upper mount from the shock rod (Fig. D.13).

*fig. D.13*

INSTALLING THE AIR SUSPENSION

1. Begin by applying thread sealant to the threads of the chosen fitting. Tighten the fitting to the air spring assembly 1 3/4 turns beyond hand-tight (Fig. D.14). If installing the no-shock kit, move to step 4 of *Installing the Air Suspension*.

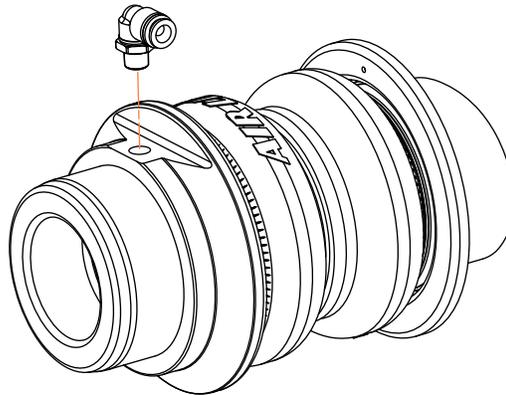


fig. D.14

2. Attach the upper mount to the new shock rod. Torque to 28Nm (21 lb.-ft.) (Fig. D.15).



fig. D.15

3. Install the shock assembly to the chassis and torque upper mount nuts to 15Nm (11 lb.-ft.), release pressure and continue torque to 35Nm (26 lb.-ft.) (Fig. D.16).



fig. D.16

4. Insert the air spring assembly and nest into the lower control arm. Lift the control arm and attach to the crossmember (Fig. D.17). Do not torque until at desired ride height with load.

*fig. D.17*

5. Attach the shock and end link to the control arm (Fig. D.18). Do not torque until at desired ride height with load.

*fig. D.18*

6. Secure the air spring assembly to the lower control arm with the centering spacer, lock washer, and bolt (Fig. D.19). Torque the bolt to 27Nm (20 lb.-ft.)

*fig. D.19*

7. Reinstall fender liner, if removed. Reinstall wheels and torque to 110Nm (81 lb.-ft.) (Fig. D.20).



fig. D.20

ROUTING THE AIR LINES

1. 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 components and axle.
2. Routing should also allow for the suspension to extend without kinking or 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.

WARNING

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.

E. Before Operating

Read the User Guide that came with this kit to set up the suspension.

Torque Specifications			
Location	TTY*	Nm	Lb.-ft.
Control arm to crossmember	✓	50+60 degrees	37+60 degrees
End link to control arm	✓	20+180 degrees	15+180 degrees
Shock to control arm		98	72
Shock rod to upper mount		28	21
Shock upper mount to chassis		15 then 35	11 then 26
Air spring bolts (all)		27	20
Wheel bolts		110	81
Air fitting		1 3/4 turns beyond hand-tight with thread sealant	

* Torque-to-yield bolts

Table 1

CAUTION

THIS KIT REQUIRES THE REMOVAL OF FACTORY TORQUE-TO-YIELD BOLTS. THESE BOLTS ARE DESIGNED TO BE REPLACED AFTER THEY HAVE BEEN LOOSENED. TORQUE-TO-YIELD BOLTS ARE INDICATED IN THE INSTRUCTIONS AND IN THE TORQUE SPECIFICATION CHART.

Suggested Driving Air Pressure	Maximum Air Pressure
55-80 PSI (3.8-5.5BAR)	125 PSI (8.6BAR)
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 [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.

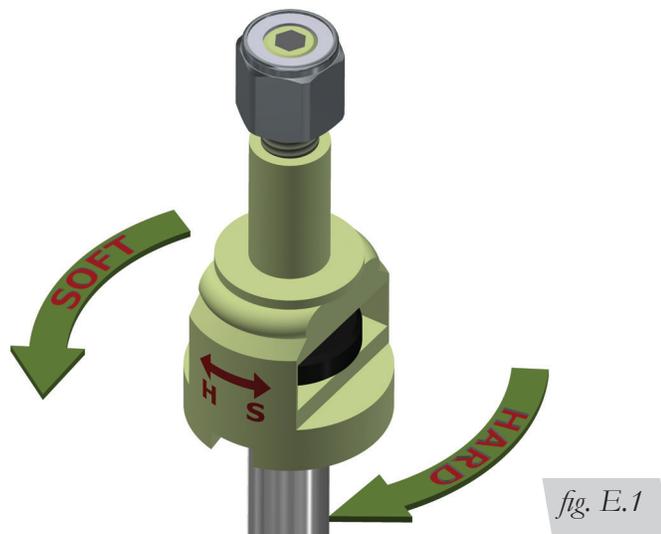
INSTALLATION CHECKLIST

- 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 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

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 (Fig. E.1) 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 “-16 clicks.” This means that the damper is adjusted 16 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 2009 Mercedes C300.

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.

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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