Kit 78577

Mercedes W204 RWD

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.

MN-1096 • (011906) • ERN 9094

TABLE OF CONTENTS

A. Introduction

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

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.

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

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

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

⚠ CAUTION — 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.

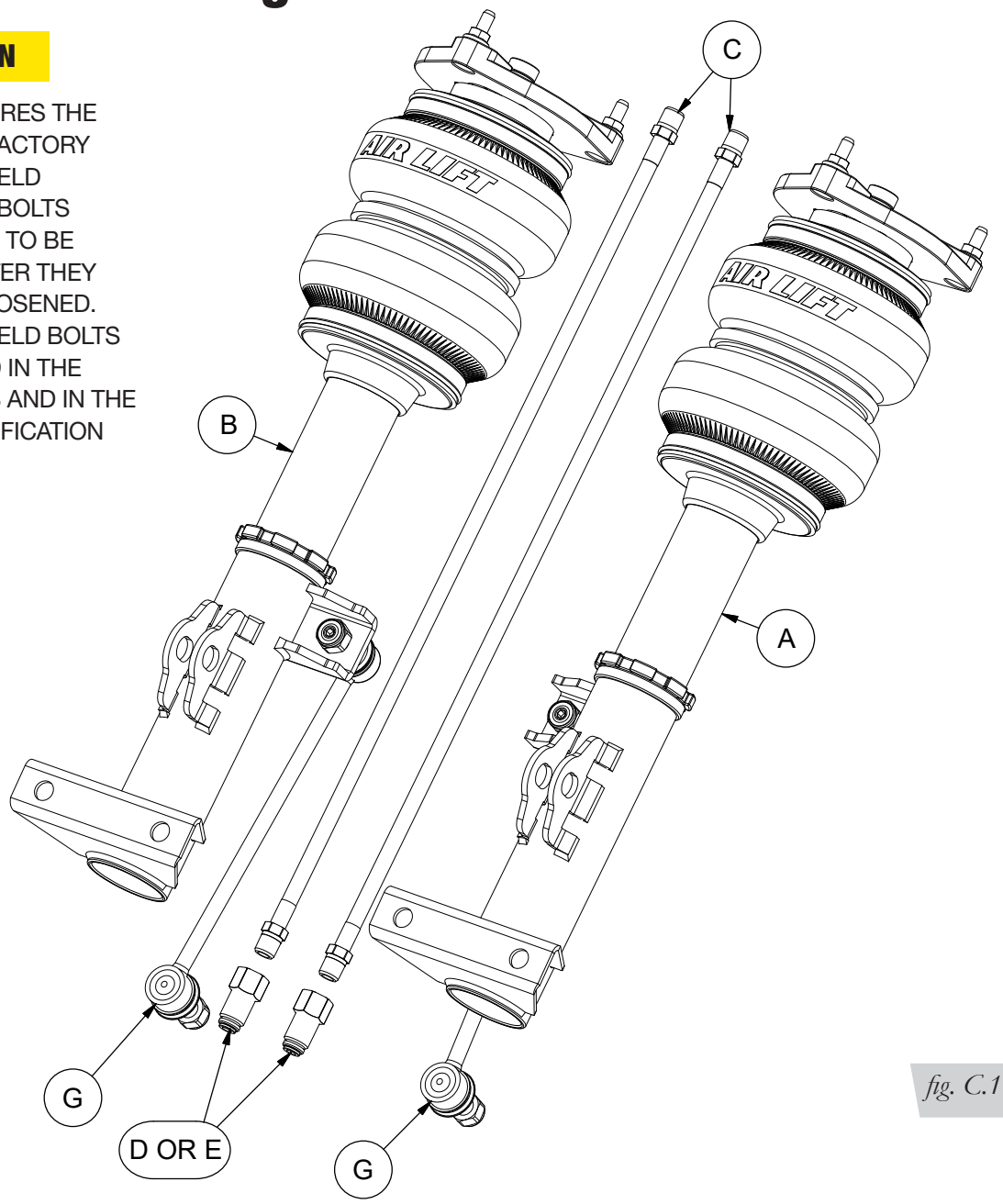

fig. C.1

HARDWARE LIST

Item	Part #	Description	Qty
A	35438	Strut, W204 right front	1
B	35439	Strut, W204 left front	1
C	20997	Leader line	2
D	21810	Fitting 1/4" FNPT x 1/4" PTC	2
E	21987	Fitting 1/4" FNPT x 3/8" PTC	2
F	11289	Spanner	1
G	26608-009	End link - W204 pair	1
H*	22635	Zip Tie	2

TORQUE-TO-YIELD BOLTS**

Description	Qty
Damper to spindle mount upper M14 bolt	2
Damper to spindle mount lower M12 bolt	4

* Not shown in Figure 1

**These bolts are not included with this kit

STOP! 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.*

PREPARING THE VEHICLE

1. Elevate and support the vehicle with a hoist or safety stands.
2. Remove the front wheel (Figs. D.1 & D.2).

fig. D.1

fig. D.2

REMOVING THE FRONT STRUT

1. If equipped, unbolt the height sensor from the stabilizer bar (Figs. D.3 & D.4).

fig. D.3

fig. D.4

2. Disconnect the stabilizer bar linkage from the stabilizer bar (Fig. D.5).

fig. D.5

3. Clip the plastic tie holding the brake line bracket and slide the bracket out from behind the mount. To get the bracket dislodged, push the tabs inboard to unclip, and rotate out from behind the mount (Figs. D.6 & D.7).

fig. D.6

fig. D.7

4. Unbolt the knuckle from the damper assembly (Figs. D.8, D.9 & D.10).

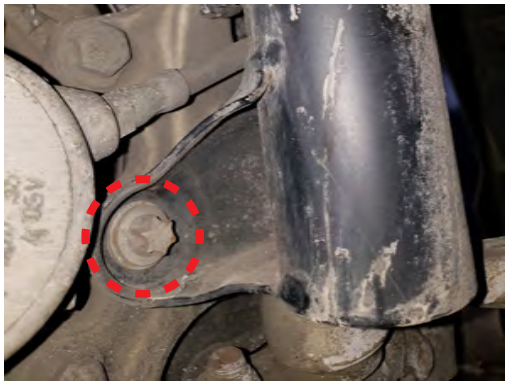

fig. D.8

fig. D.9

fig. D.10

5. Within the engine compartment, remove the three upper mount bolts, push in on to release the retention clip and remove the front strut (Figs. D.11 & D.12).

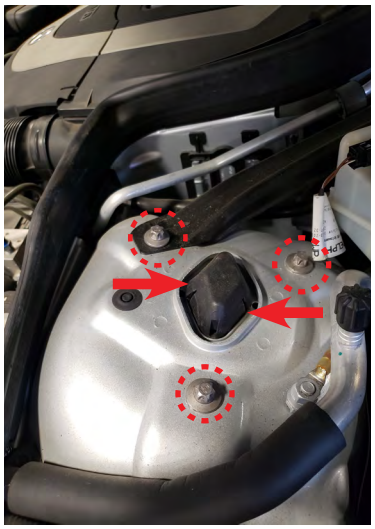

fig. D.11

fig. D.12

INSTALLING THE AIR SUSPENSION

1. Apply thread sealant to the threads of the leader line. Tighten the appropriate fitting to the air line by 1 3/4 turns beyond hand-tight. Tighten the leader line into the air spring 1 3/4 turns beyond hand-tight (Fig. D.13).

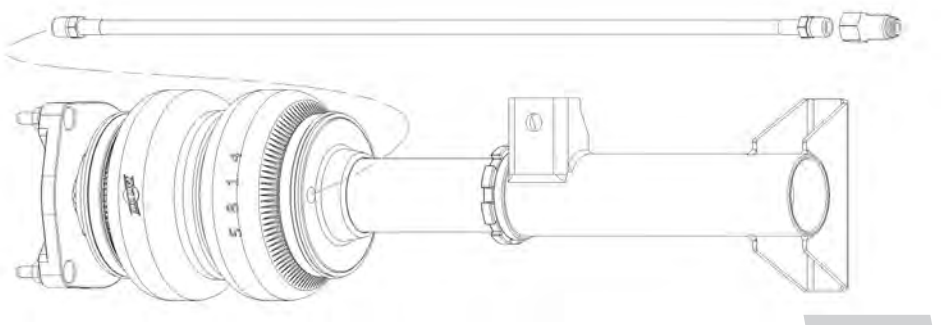

fig. D.13

2. Attach the camber plate to chassis. Torque nuts to 33Nm (24 lb.-ft.) (Fig. D.14).

fig. D.14

3. Attach the lower mount to the knuckle. Torque the lower M12 spindle bolts to 70Nm, release pressure and torque again to 100Nm (52 lb.-ft., then 74 lb.-ft.) (Fig. D.15). Torque the upper M14 spindle bolt to 100Nm + 90 degrees (74 lb.-ft. + 90 degrees) (Fig. D.16).

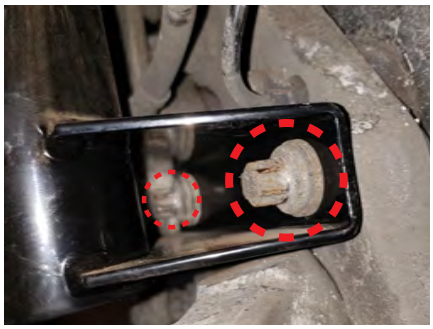

fig. D.15

fig. D.16

4. Route the supplied zip tie through brake line bracket and attach through the joining tabs (Figs. D.17 & D.18).

fig. D.17

fig. D.18

5. Attach the stabilizer end link to the damper and bar (Fig. D.19). Torque to 98Nm (72 lb.-ft.) (Fig. D.20).

fig. D.19

fig. D.20

6. Reattach the sensor to the stabilizer bar. Torque nuts to 12Nm (9 lb.-ft.). Reinstall wheels and torque to 110Nm (81 lb.-ft.).

fig. D.21

ROUTING THE AIR LINES

⚠ 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.

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 and steering components.
2. 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.
3. Reinstall the front wheels (see torque specifications in *Table 1*).

E. Finished Installation Photo

fig. E.1

F. Before Operating

SETTING THE RIDE HEIGHT

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

Torque Specifications			
Location	TTY	Nm	Lb.-ft.
Damper to spindle mount upper M14 bolt	✓	100 + 90 degrees	74 + 90 degrees
Damper to spindle mount lower M12 bolts	✓	70, release then 100	52, then 74
Camber plate to chassis		33	24
Stabilizer bar linkage to damper		98	72
Sensor to stabilizer bar		12	9
Wheel bolts		110	81
Damper locking collar		45 degrees beyond hand tight	
Braided leader line threads		1 3/4 turns beyond hand tight with thread sealant	

Table 1

⚠ CAUTION

TORQUE-TO-YIELD BOLTS ARE DESIGNED TO BE REPLACED AFTER THEY HAVE BEEN LOOSENED.

Suggested Driving Air Pressure	Maximum Air Pressure
45-60 PSI (3.1-4.1BAR)	**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.

⚠ 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 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 (Figs. F.1 & F.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 “-14 clicks.” This means that the damper is adjusted 14 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.

fig. F.1

fig. F.2

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**.

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Printed in the USA
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Kit 78677/78678

Mercedes W204

Rear Application

With or Without Shocks

INSTALLATION GUIDE

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MN-1098 • (011905) • ERN 9094

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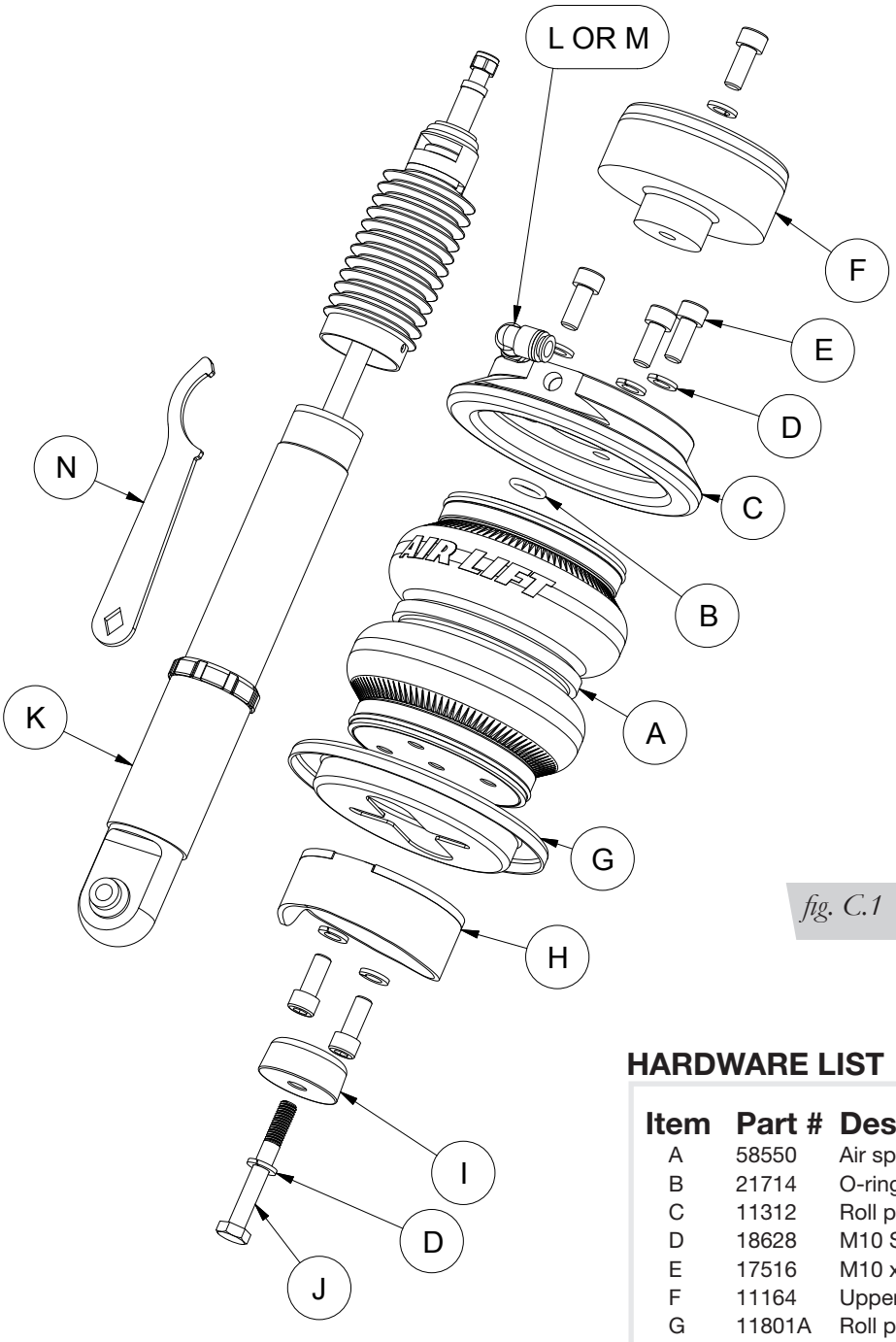

fig. C.1

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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

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

STOP! 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

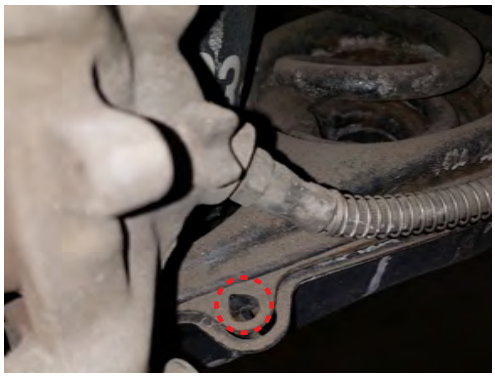

fig. D.6

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*.

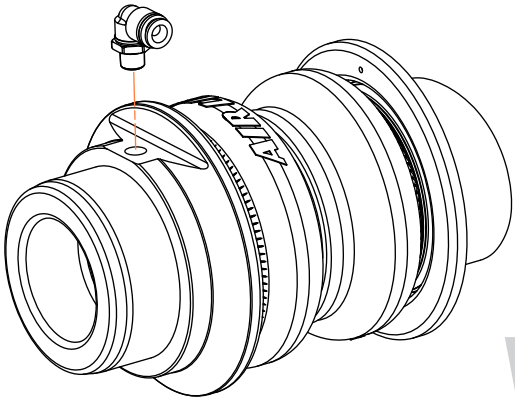

fig. D.14

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.

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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

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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

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- ☐ **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.
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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.

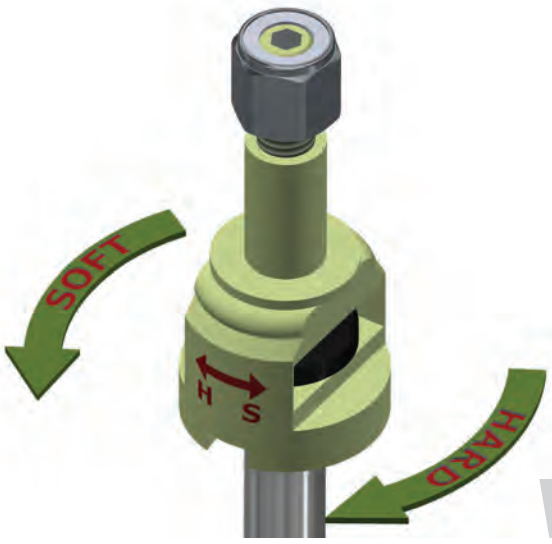

fig. E.1

Limited Warranty and Return Policy

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