



# INSTALLATION MANUAL

**MC-3947/MC-3948  
Arnott Ultimate Ride Kit  
21-Current BMW R18 Series**



***ELEVATE YOUR RIDE.®***

# CONGRATULATIONS ON YOUR PURCHASE OF AN ARNOTT® MOTORCYCLE SUSPENSION SYSTEM

This system provides you with the ability to maintain your bike at a constant level regardless of load, resulting in enhanced vehicle ride, handling, and performance. We at Arnott LLC are proud to offer a high quality product with all the technical support you need. Thank you for your confidence in us and our product.



Download your TÜV certification here:

[WWW.ARNOTTCYCLES.EU/PAGES/TUV-CERTIFICATES](http://WWW.ARNOTTCYCLES.EU/PAGES/TUV-CERTIFICATES)

According to TÜV regulation, an air pressure gauge must be installed together with the Arnott Motorcycle kit. Arnott recommends using their digital pressure gauge K-3114 or K-3115 with motorcycle kits that have been certified for this purpose.

## GENERAL INFORMATION

Proper installation is essential to experience and appreciate the benefits of this system. Please take a moment to review these installation instructions before you begin to install these components on your motorcycle. The removal and installation of air suspension products should only be performed by a fully qualified, certified motorcycle professional.

It is equally important to be aware of all necessary safety measures while installing your new Air Suspension System. This includes proper lifting and immobilizing of the motorcycle and isolation of any stored energy to prevent personal injury or property damage.

Reading this manual signifies your agreement to the terms of the general release, waiver of liability, and hold harmless agreement, the full text of which is available at [www.arnottcycles.com](http://www.arnottcycles.com) and [www.arnottcycles.eu](http://www.arnottcycles.eu).



### WARNING:

DO NOT inflate the air suspension system until it is installed. Inflation of the air suspension system before both ends are supported by the motorcycle's frame and/or appropriate suspension components may result in serious personal injury and/or damage to the air suspension system. The maximum recommended air spring inflation pressure is 200 psi.

- Avoid damage to air lines and electrical components.
- Removal and installation is only to be performed by fully qualified personnel.

### CAUTION:

This manual is meant to provide basic installation guidelines which can help prevent damage to the motorcycle and air suspension system. Each owner or installer is unique, therefore installation of this system can be done many different ways. The mounting locations of the compressor and inflation switch are suggestions by our engineers. If proper wiring guidelines and instructions are followed, relocation of the compressor or switch will neither affect the system operation nor void your warranty.

To avoid the possibility of short circuits while working with electric components consult your owner's manual on how to disconnect your battery.

Refer to the Owner's Manual for the bike and instructions for the motorcycle lift for all correct lifting procedures. It is also recommended that you protect any chrome or painted surfaces that may be damaged during lifting, removal or installation process.

Adjust air shock pressure as required for desired ride quality to maximize the benefits of your system. Excess pressure will result in a firmer ride, too little pressure will allow the suspension to bottom out.

# COMPONENTS

## MC-3947 — 21-CURRENT BMW R18 SERIES — BLACK

20-18622 INFLATION KIT		
PART NO.	DESCRIPTION	QTY
11-MC-BMWR18	11-MC-BMWR18-INSTALL MANUAL	1
20-19053	BMW IGNITION CONNECTOR	1
21-11617	MANIFOLD ASSY-90 DEGREE PUSH TO CONNECT-MONO SHOCK	1
21-18636	COMPRESSOR ASSEMBLY BMW R18	1
21-2698	UNIVERSAL FUSE HOLDER	1
21-7267	ACCY KIT-1/4" NYLON TUBING	1
21-7268	ACCY KIT-4MM NYLON TUBING-6 FT	1
21-7271	ACCY KIT-HARNESS CABLE TIES	1
21-7272	ACCY KIT-SPLIT LOOM-1FT LENGTHS	1
21-7282	ACCY KIT, COMPRESSOR WIRE EXTENSION	1
21-7715	ACCY KIT-4MM VOSS FITTING	1
29-13435	RELAY-POTTED	1

21-18621 SHOCK KIT		
PART NO.	DESCRIPTION	QTY
21-17811	JRI BMW R18 20-CURRENT SINGLE ADJ 15.25_OAL 2.10_STK	1

HANDLE BAR SWITCH		
PART NO.	DESCRIPTION	QTY
K-3114	MOTORCYCLE HANDLEBAR PUSH BUTTON SWITCH WITH PRESSURE GAUGE, KIT, BLACK	1

# COMPONENTS

## MC-3948 — 21-CURRENT BMW R18 SERIES — CHROME

20-18622 INFLATION KIT		
PART NO.	DESCRIPTION	QTY
11-MC-BMWR18	11-MC-BMWR18-INSTALL MANUAL	1
20-19053	BMW IGNITION CONNECTOR	1
21-11617	MANIFOLD ASSY-90 DEGREE PUSH TO CONNECT-MONO SHOCK	1
21-18636	COMPRESSOR ASSEMBLY BMW R18	1
21-2698	UNIVERSAL FUSE HOLDER	1
21-7267	ACCY KIT-1/4" NYLON TUBING	1
21-7268	ACCY KIT-4MM NYLON TUBING-6 FT	1
21-7271	ACCY KIT-HARNESS CABLE TIES	1
21-7272	ACCY KIT-SPLIT LOOM-1FT LENGTHS	1
21-7282	ACCY KIT, COMPRESSOR WIRE EXTENSION	1
21-7715	ACCY KIT-4MM VOSS FITTING	1
29-13435	RELAY-POTTED	1

21-18621 SHOCK KIT		
PART NO.	DESCRIPTION	QTY
21-17811	JRI BMW R18 20-CURRENT SINGLE ADJ 15.25_OAL 2.10_STK	1

HANDLE BAR SWITCH		
PART NO.	DESCRIPTION	QTY
K-3115	MOTORCYCLE HANDLEBAR PUSH BUTTON SWITCH WITH PRESSURE GAUGE, KIT, CHROME	1

Use a solid, level surface to position the bike on a motorcycle lift and use all recommended safety techniques. Lift the bike so the rear wheel is just slightly off the ground.

**NOTE:** Use special adapter **MC-Lifter (BMW 465821)** to lift the bike safely and use safety jacks before starting to work on the motorcycle.

**CAUTION:**

Prevent any damages or scratches to the vehicle and parts by using only clean and correct specified parts and tools.

## SHOCK REMOVAL

1. Remove cover and screw to take off the seat by pulling carefully backwards.
2. Remove left side batter cover. Demount left side cover bracket by removing three (3) torxhead-screws. (Figure 1)

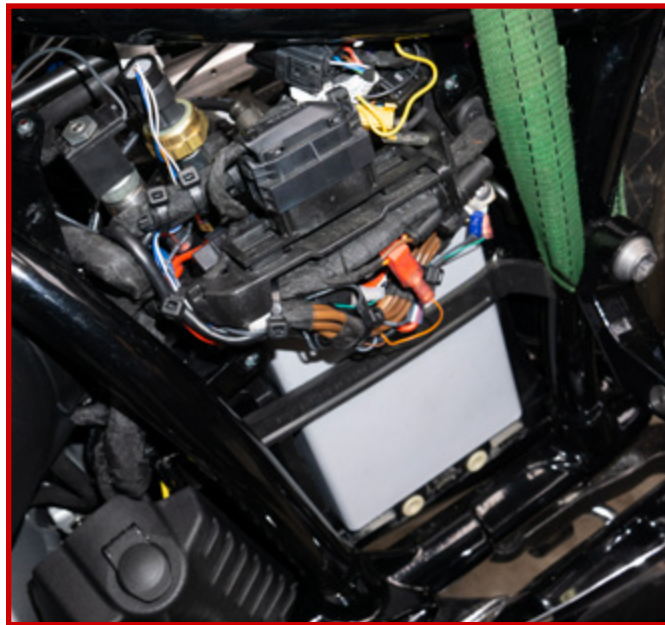


FIGURE 1

3. Remove frequency receiver with the bracket. Unplug connector (1) for rear lights located under side cover bracket. Take off rear fender frame by removing four (4) bolts. (Figure 2)



**WARNING:**

Ensure the frame is secured from breaking or falling.

Take care of the rear lights harness and ensure the connector is routed out safely.

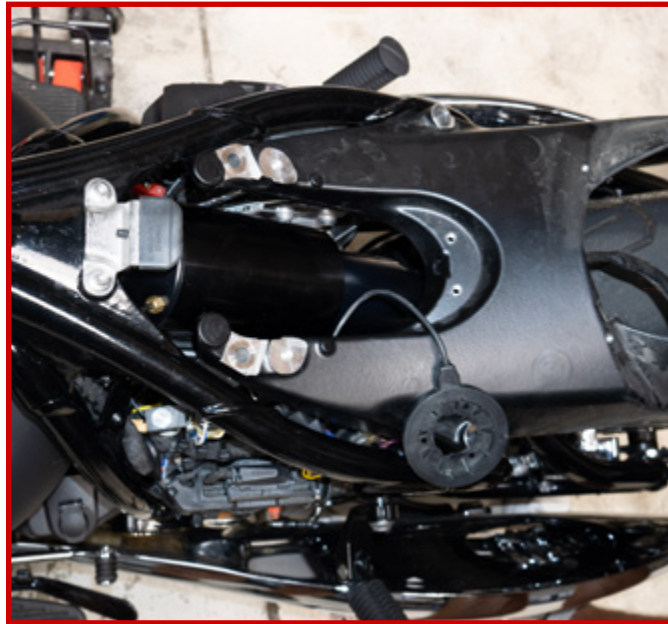


FIGURE 2

4. Raise the vehicle so that the rear wheel slightly touches the ground to remove all weight from the shock. Release the shock-bolts/screws with bushings and gently remove. Lift vehicle with scissor-type lifter until shock is removable. (Figures 3, 4)



FIGURE 3



FIGURE 4

## SHOCK INSTALLATION

1. Clean all areas underneath the shock. (Figure 5)



FIGURE 5

2. Remove the lower screw of the handlebar bracket. (Figure 6)



FIGURE 6



3. Install the digital gauge interface and tighten the screw carefully. (Figure 7)



FIGURE 7

4. Route the interface wire along the clutch line and strap it tight. (Figure 8)



FIGURE 8

5. Route the interface wire along the serial installed electric harness by using the original loops. Avoid stretching or forcing the wire. Secure wire with tie straps. (Figure 9)

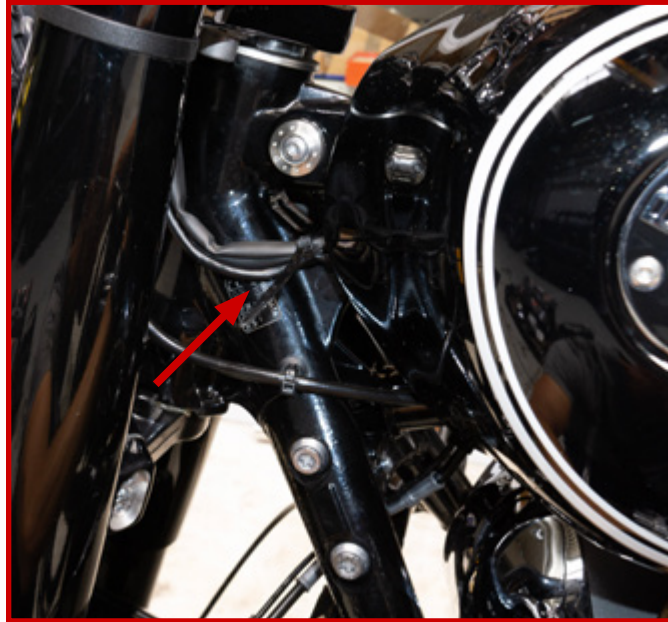


FIGURE 9

6. Continue routing the interface wire along the serial electric harness underneath the fuel tank to the left of the side cover and battery area. Secure wire with tie straps. (Figure 10)



FIGURE 10

7. Position the valve block with the 4mm air line connected, the exhaust valve and the pressure sensor it behind the serial harness left side of the vehicle above the battery. (Figure 11)

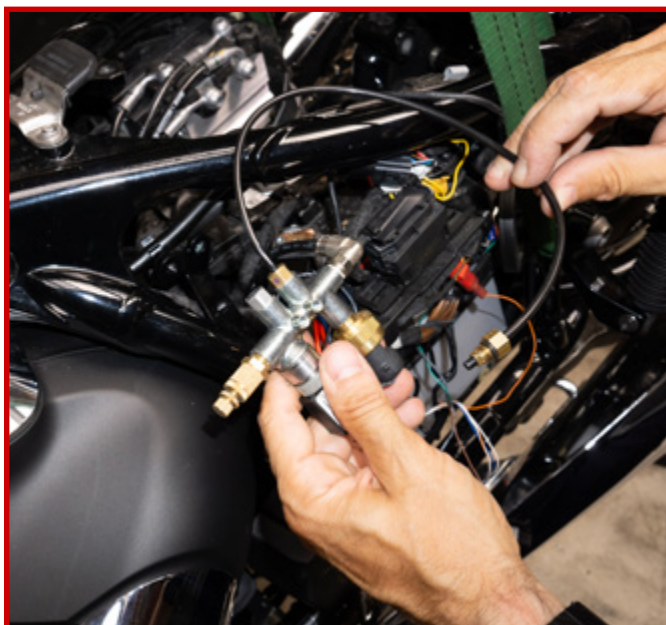


FIGURE 11

8. Plug in the pressure sensor connector coming with the interface harness to the pressure sensor. (Figure 12)



FIGURE 12

9. Connect the cables linked to the instruction and wiring diagram found in the manual **11-K-3114-3115 (Kit # K-3114, K-3115 Motorcycle Handlebar Switch Pressure Gauge)**. For ignition signal the red/yellow colored cable can be used from blanc plug of the serial harness. Use the provided counterpart connector provided with the Arnott kit. (Figure 13)

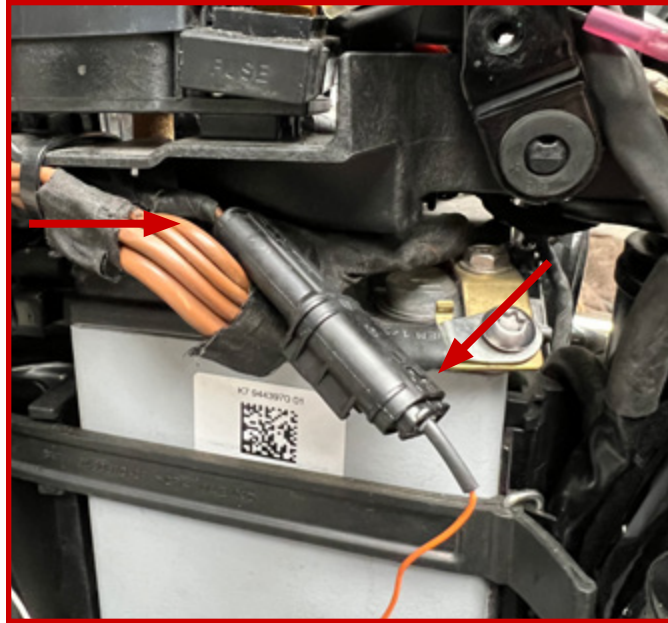


FIGURE 13

10. Install the relay and strap it to the serial harness together with the valve and all other cables. Route the compressor power cable together with the ¼" tube along the harness and frame down underneath the bike near the gear box. (Figure 14)

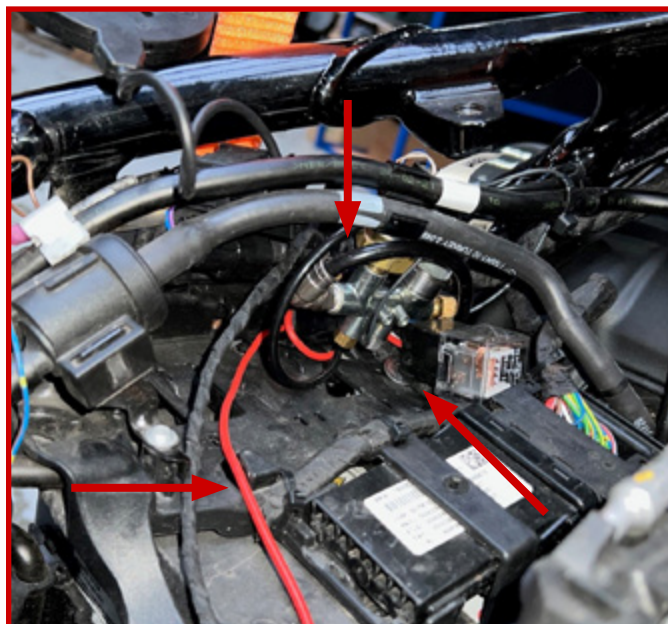


FIGURE 14

11. Connect all wires aligned to the wiring diagram. Connecting all ground wires to the serial distribution point (not using any other chassis ground). (Figure 15)

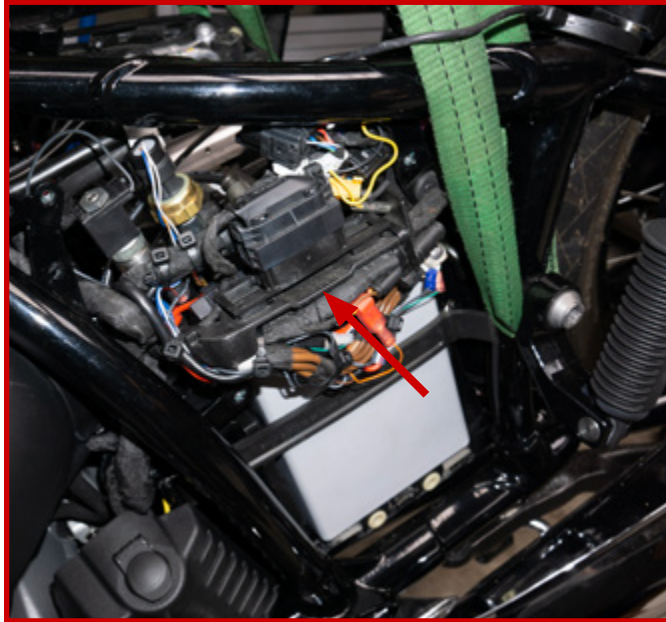


FIGURE 15

12. Connect 12V(+) power supply cable to the Batt (+) pole. (Figure 16)

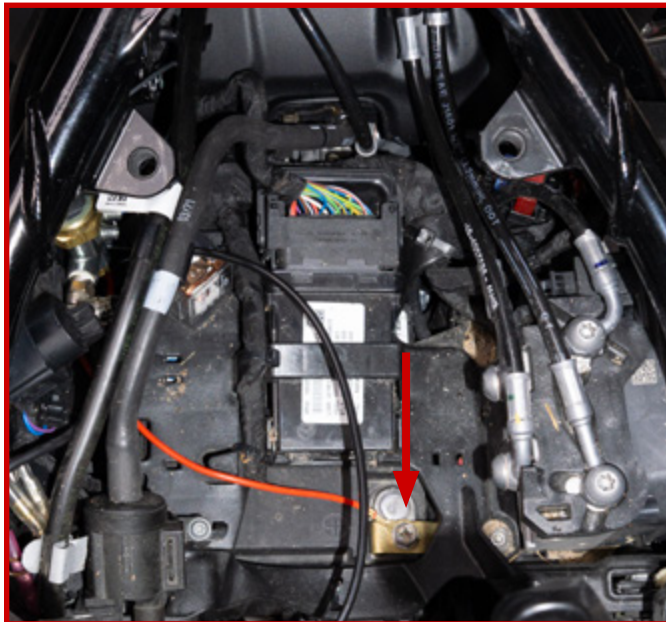


FIGURE 16

13. Ensure the connection points to mount the shock are clean and free of damage. (Figure 17)



FIGURE 17

14. Install the shock. Ensure the adaption bushings are in place to the pin ball bearing. Make sure the air inlet is pointing to FL. (Figure 18)



FIGURE 18

15. Bring the shock in correct position to mount it to the rear end bracket/swing arm. Ensure the mounting adapter bushings are correct in place. (Figure 19)



FIGURE 19

16. Put in the serial screw by using the T55 tool with extension. Tighten both bolts with **100Nm** for the strut by using the T60 nut. (Figure 20)



FIGURE 20

17. Screw a VOSS fitting into the air shock, finger tight. Then remove the white shipping pin. Insert the 4mm air line into the fitting until you feel it seat. Remove the fitting from the shock and confirm the keeper is on the air line. Reinstall the fitting on the shock and tighten snugly with a wrench. (Figures 21, 22, 23)



FIGURE 21

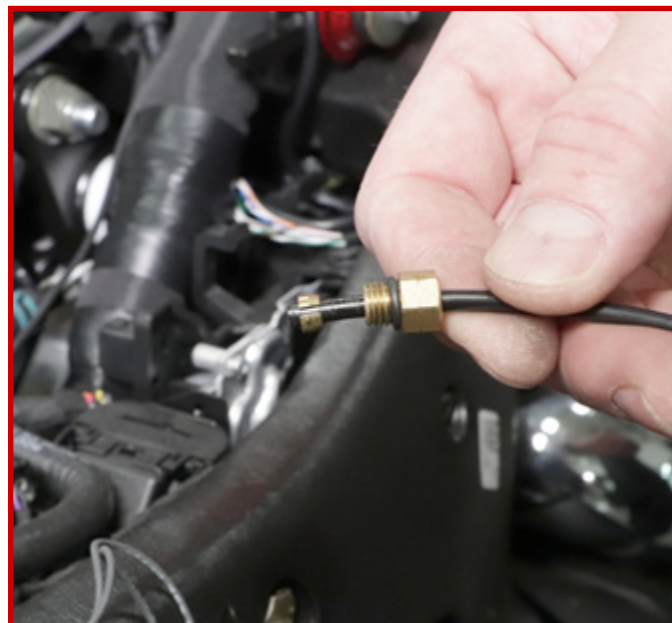


FIGURE 22



FIGURE 23



18. Connect the 4mm air line with the fitting to the strut. Using max. torque of **8Nm**. (Figure 24)



FIGURE 24

19. Install the compressor with the pre-mounted bracket to the serial M10 threaded holes from underneath the vehicle by using an extended HX8 nut. Tighten both M10 bolt head screws with **50Nm**. (Figure 25)

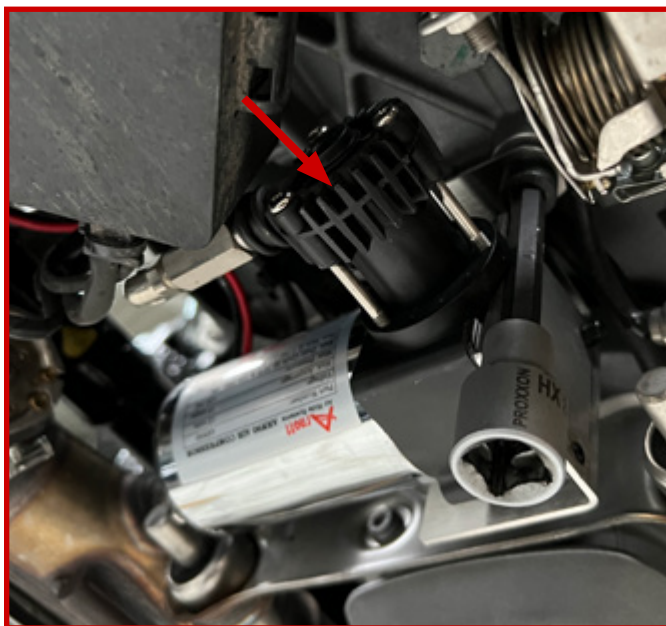


FIGURE 25

20. Connect the power supply cable (red) and ¼" air line coming from above. Route the cable and tubing along the serial harness, avoiding heat and sharp corners. (Figure 26)



FIGURE 26

21. Install the protection shield and fix it with the two lower compressor screws. Secure the shield with M5x12 screws, washers, and flange nuts, ensuring they point to the front. (Figure 27)



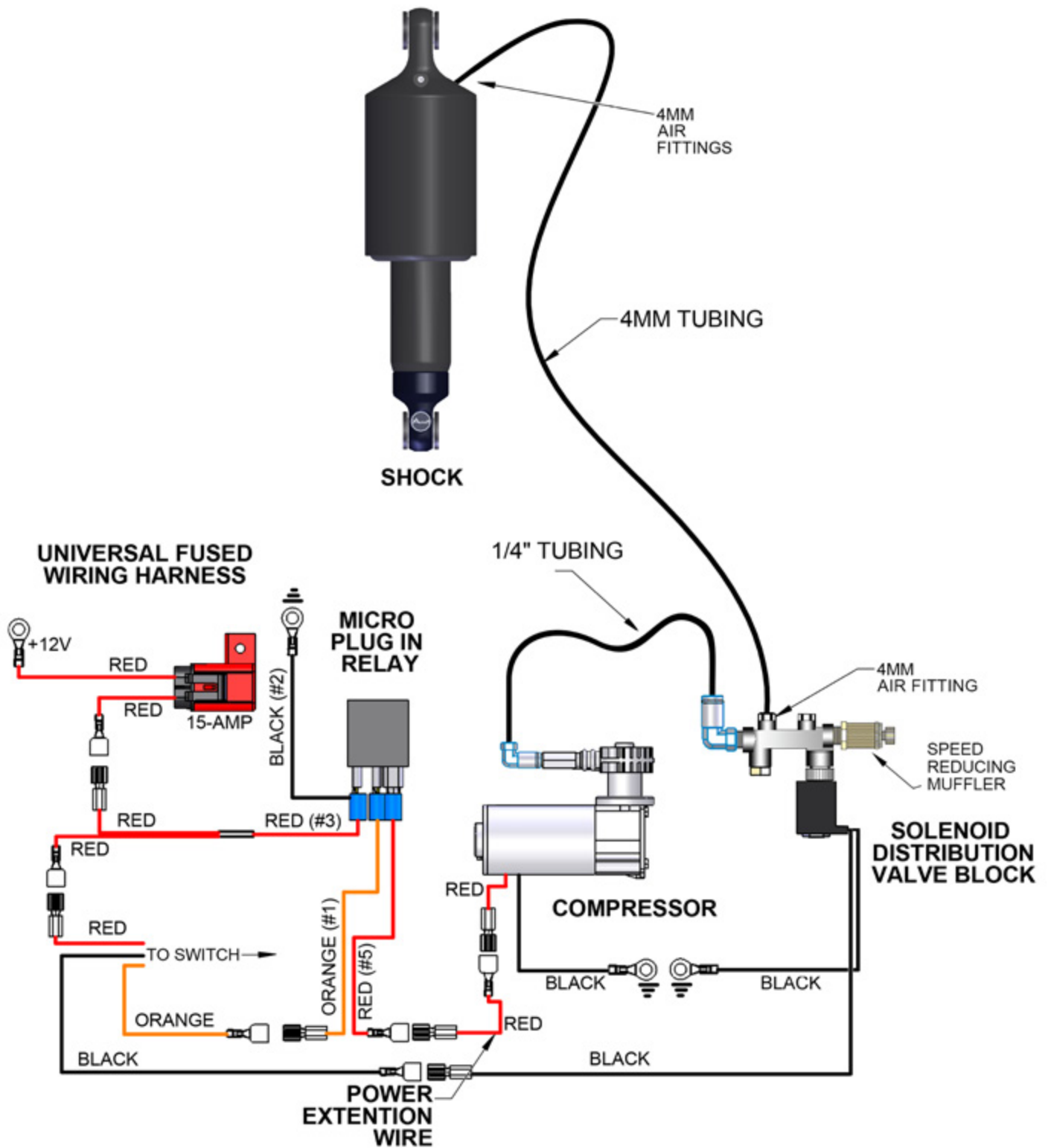
FIGURE 27

22. Do a test inflation and check all components mounted correctly and sealed before starting to re-install the rear-fender-frame. (Figure 28)



FIGURE 28

23. Use a max. torque of **56Nm** for tightening Screws (1) & (2). Tighten the side cover bracket screws M5x14 with max torque of **5Nm**. Hook in the seat front end carefully. Tighten Screw (1) M6x20 with max. torque of **8Nm**.



## FINAL CHECK

- The work as performed achieved the intended purpose.
- All reservoirs and containers have been filled and all fluids and lubricants are at their correct levels.
- All threaded fasteners released beforehand have been correctly re-tightened.
- The fuel system is free of leaks.
- The lights and signaling equipment are fully operational and the vehicle is roadworthy.
- The brake pads of the front and rear brakes are bedded against the brake discs.
- Function test, engine start suppression.

## FUNCTION TEST

1. Select neutral.
2. Switch on the ignition.
3. Neutral indicator light “N” lights up.
4. Select a gear.
5. Neutral indicator light “N” switches off.
6. Operate the starter switch.
7. Starter does not operate.
8. Extend the side stand.
9. Pull the clutch lever.
10. Operate the starter switch.
11. Starter does not operate.
12. Retract the side stand.
13. Operate the starter switch without releasing the clutch lever.
14. Starter operates.

# Arnott™

## Motorcycle Suspension

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