

Thank you for purchasing your new SOLO WERKS S1 Coilover suspension.

### IMPORTANT

**DO NOT USE POWERTOOLS ON SHOCK SHAFTS WHEN INSTALLING -  
WARRANTY WILL BE VOID.**

**USE ALLEN KEYS ON ALL SHOCK SHAFTS WHEN INSTALLING**

SOLO WERKS recommends that you have this kit installed by a qualified professional. Solo Werks or its authorized agents are not responsible for damage or failure resulting from an improper or modified installation.

All suspension-related components must be inspected and in good working condition. You should inspect all bushings, tie rods, hubs, bearings, strut mounts, sway bar end links, wheels, tires, etc. and replace them if necessary.

This suspension system was designed to work best with the factory wheel/tire combination. Any deviations from these specifications could result in significantly altered handling characteristics and/or increased interference risk to other vehicle components.

**SOLO WERKS TIP: *Depending on the offset & size your wheels/tires, wheel spacers may be required for proper fitment.***

If suspension is lowered past the recommended measurements there can be possible interference with multiple vehicle components; (i.e. modification may be necessary to fender lips, seams etc...). This will also void your Solo Werks warranty.

After installing the suspension system, a four-wheel alignment must be performed according to manufacturer's specifications. Check and reset load- dependent brake compensator, ABS system and headlight aim according to manufacturer's specifications (If applicable).

ALL RUBBER- MOUNTED STRUT/ DAMPER ATTACHMENTS MUST NOT BE FULLY TIGHTENED UNTIL **AFTER THE SUSPENSION SYSTEM IS LOADED** (WHEELS ON THE GROUND). OTHER MOUNTING FASTENERS (FOR EXAMPLE BRACKETS) MUST BE SECURELY TIGHTENED BEFORE LOAD IS PLACED ON THE SUSPENSION SYSTEM

Every effort has been made to avoid printing errors in our literature. However, if there are any application or specification errors or omissions we must disclaim responsibility.

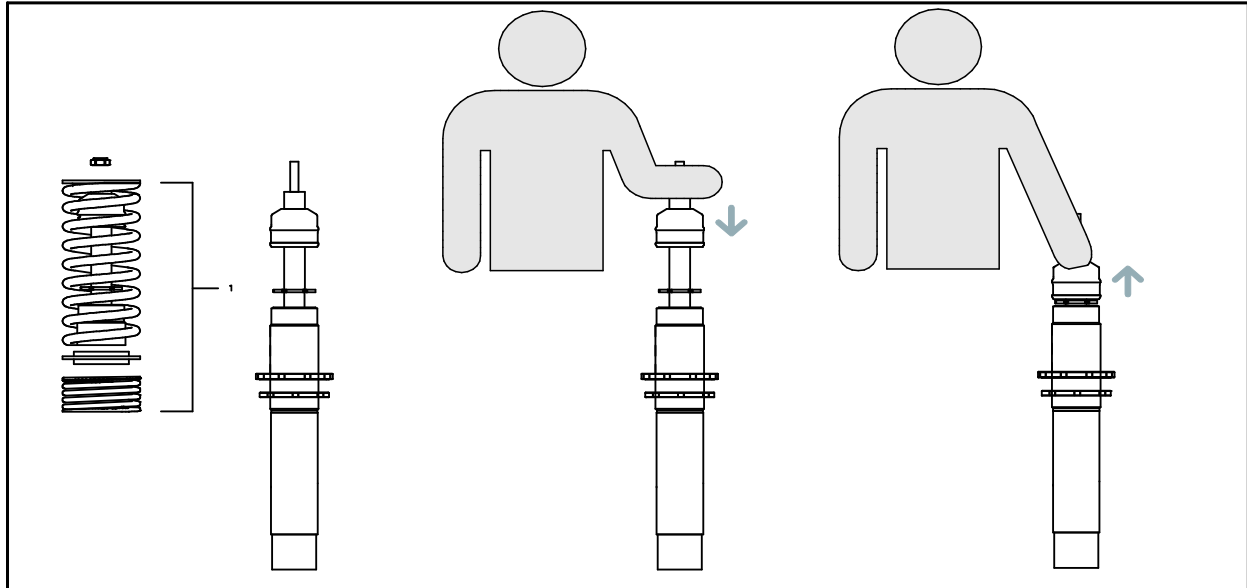
### Original Suspension Removal- Front:

1. Refer to OEM recommendations for proper jacking of vehicle
2. Support Lower Control Arm/Spindle with floor jack
3. Remove any hoses/lines from original suspension strut mounts
4. Locate top of strut in engine bay and remove cap from upper strut mount
5. Remove upper strut nut.
  - a. NOTE: It may be necessary to hold the damper shaft with Allen wrench to keep from spinning.
6. Disconnect Sway bar end link from lower control arm
7. Remove Lower retaining Bolts/Nuts from spindle (Caution: strut will now be free from vehicle)
  - a. Ensure that the lower control arm is still supported as to not stretch any brake hoses or lines
8. Remove strut assembly

**NOTE:** If you are using your existing upper strut mount and bearing (Fig 1 #2 & 4) you must remove these items from the strut assembly. These items are under extreme pressure from the front spring and must be removed using an appropriate spring compressor to relieve the pressure. Follow the directions given by the manufacturer of the Spring Compressor to safely remove the spring and disassemble the Strut Assembly.

**SOLO WERKS TIP:** *As the strut mounts and bearings are a consumable/wear item and are a known fail point on this chassis Solo Werks recommends replacing with new OEM mounts and new OEM Bearings and leaving your original suspension as an assembly. These parts are available from your Solo Werks Dealer or your local VW/Audi parts dealer.*

## Solo Werks Coilover Pre Assembly – Priming the Dampers



**SOLO WERKS TIP:** As the suspension is shipped and stored in a horizontal position, it is advisable to exercise or Prime the shock absorber before you install them to ensure that the internal contents are in the correct chambers. Therefore, we advise that before you assemble the coilover shock absorber, take a moment to purge the shock absorber.

To do this, one side at a time remove the following from one of the Coilover Assemblies (if equipped):

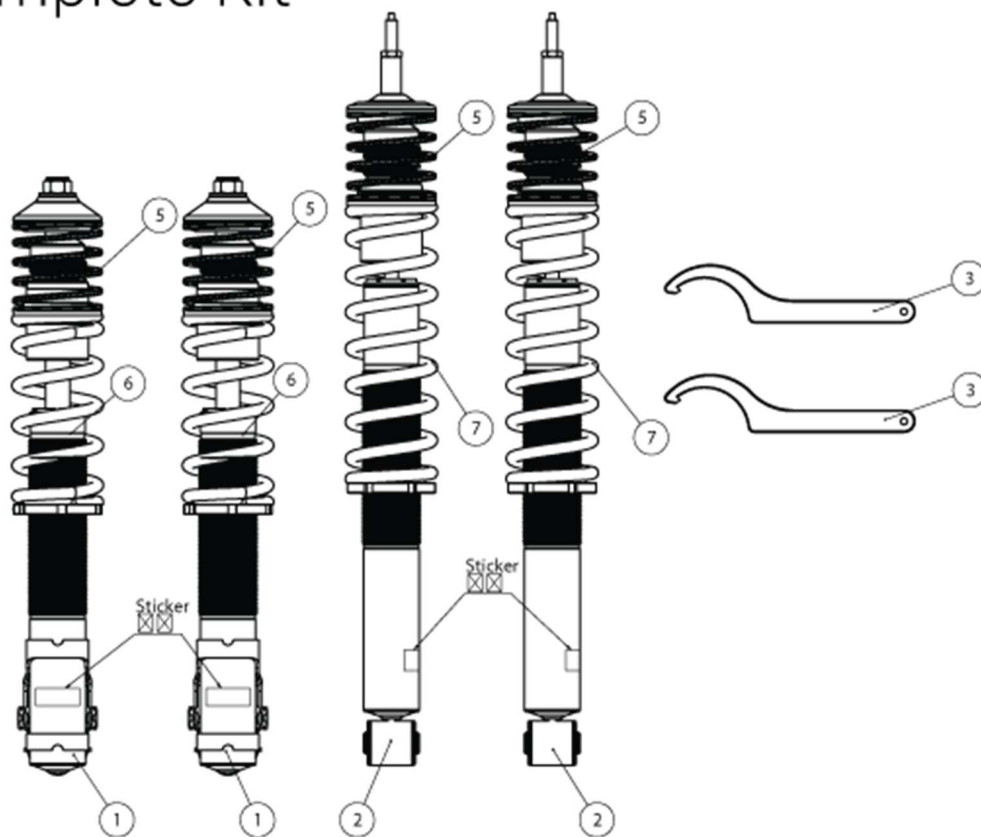
- Upper fasteners\* (lock nut and securing nut – model dependent)
- Upper Spring Perch
- Main Spring
- Spring Isolator
- Helper Spring

You will then be left with the coilover strut with the bumpstop and vent disc on the shaft. Pull the bumpstop up to the top of the chrome shock shaft, just before the threaded portion.

With the shock upright (as it would be installed in the vehicle) compress the shock shaft until the bump stop touches the shock housing, and then pull to extend the shock shaft back to full extension.

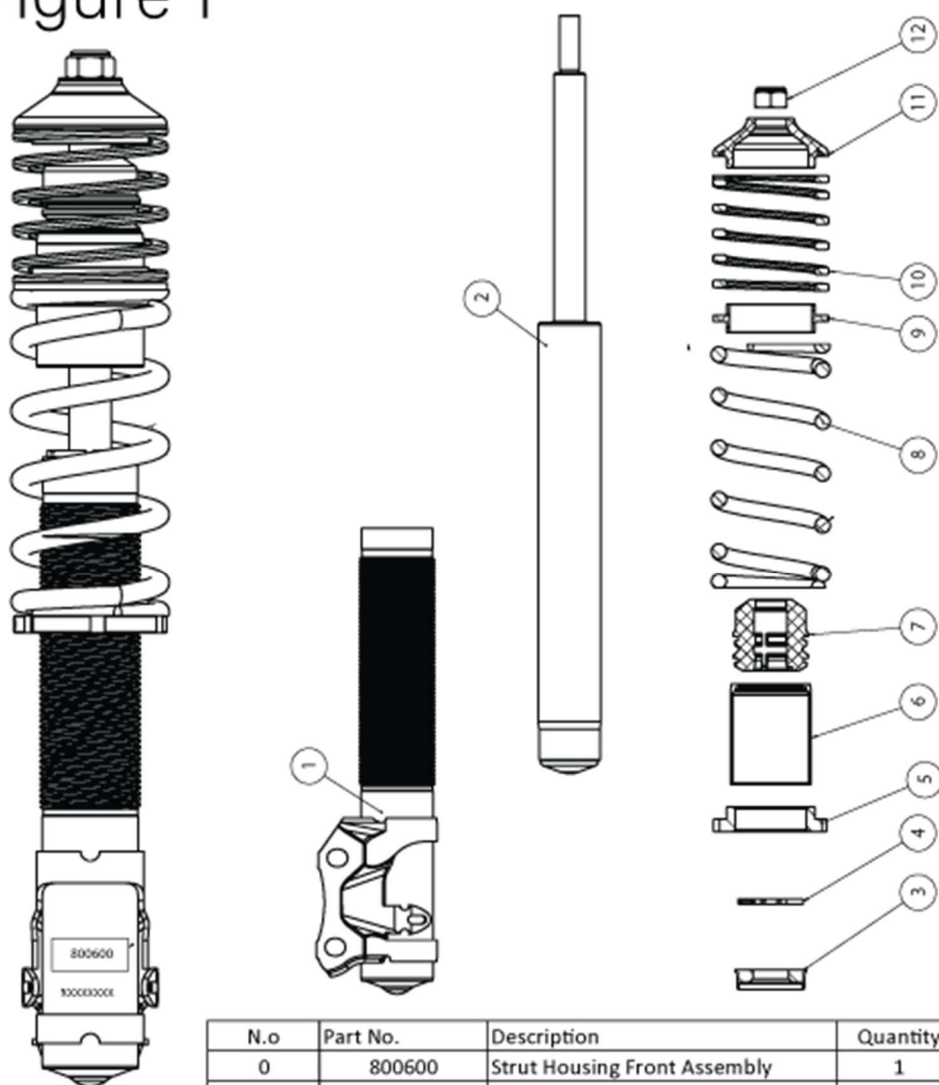
Repeat 3-5 times minimum. You will notice the shock forces getting progressively harder each time. Once they feel consistent each way, you are ready to install.

## Complete Kit



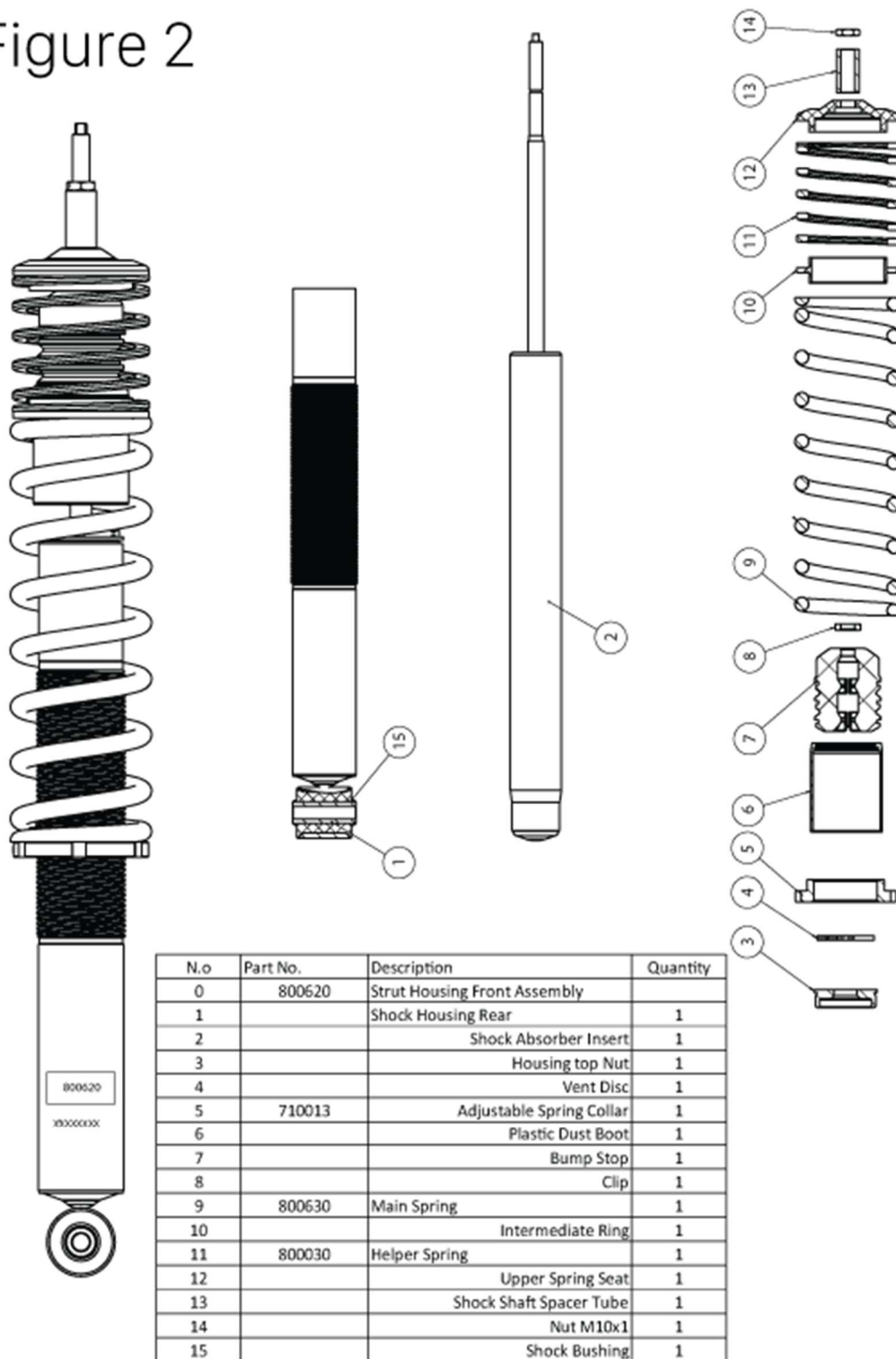
| N.o | Part No. | Description                  | Quantity |
|-----|----------|------------------------------|----------|
| 1   | 800600   | Strut Housing Front Assembly | 2        |
| 2   | 800620   | Rear Shock Assembly          | 2        |
| 3   | 700006   | Spanner Wrench               | 2        |
| 5   | 800030   | Helper Spring                | 2        |
| 6   | 800840   | Front Spring                 | 2        |
| 7   | 800630   | Rear Spring                  | 2        |

Figure 1



| N.o | Part No. | Description                  | Quantity |
|-----|----------|------------------------------|----------|
| 0   | 800600   | Strut Housing Front Assembly | 1        |
| 1   |          | Strut Housing                | 1        |
| 2   |          | Shock Absorber Insert        | 1        |
| 3   |          | Housing top Nut              | 1        |
| 4   |          | Vent Disc                    | 1        |
| 5   | 710013   | Adjustable Spring Collar     | 1        |
| 6   |          | Plastic Dust Boot            | 1        |
| 7   |          | Bump Stop                    | 1        |
| 8   | 800840   | Main Spring                  | 1        |
| 9   |          | Intermediate Ring            | 1        |
| 10  | 800030   | Helper Spring                | 1        |
| 11  |          | Upper Spring Seat            | 1        |
| 12  |          | Nut                          | 1        |

Figure 2



### Solo Werks Coilover Assembly and Installation – Front:

- 1. Work In the OEM Upper Bearings - Rotate the bearing a few times to break it in**
  - a. We have found that brand new or even existing bearings can get stuck as they have a very limited rotation when installed**
  - b. If they are stuck or too hard to move, they will not allow the assembly to rotate as it should and will create a spring bind that will produce a “boing” or “clang” sound of the springs recoiling**

Assemble the Coilover assembly with the OEM Strut Mount and bearing using the provided hardware as in the diagram Fig.1

- a. Top nut should be torqued to 44 ft.-lbs. (Fig. 1 #1)
- b. Once assembled, we recommend starting the main perch at 25mm (1”) of thread remaining below the main perch/spring seat using the included spanner wrench – actual vehicle height will be set later in the process. (Fig.1 # 10&11)

NOTE: Use of an anti-corrosion spray such as the Boeshield T-9 on the threads & main perch/spring seat at this point (Fig.1 # 10&11) can make the adjustment process much easier and will add an extra layer of protection. Boeshield T-9 is available from your Solo Werks dealer.

2. Insert strut assembly into vehicle
  - a. Reinstall upper strut mount nut and stop plate but do not tighten at this time. (Fig.1 #1)
3. Replace lower spindle bolts through spindle housing (Fig.1 #12)
  - a. Insert strut assembly into Spindle housing and torque camber adjustment bolts to proper spec.
    - i. 19mm nut = 59 ft.-lbs.
    - ii. 18mm nut = 70 ft.-lbs.
4. Reattach sway bar end links
5. Repeat procedure on the other side.
6. Once vehicle is placed back on the ground under its own weight, Torque upper strut mount nut to 44 ft.-lbs.

### Original Suspension Removal- Rear:

**SOLO WORKS TIP:** *It is necessary to access the upper rear strut mount via the trunk. Some trim panels may need to be removed to accomplish this.*

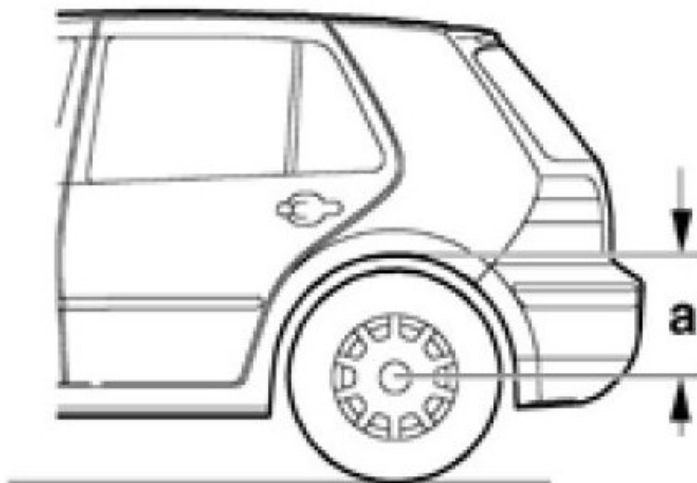
1. While Supporting lower control arm in the compressed position (loaded as if it is on the ground) Remove the strut top cap from upper strut mount and undo the upper securing nut.
2. Remove the dished washer and undo the second retaining nut
  - a. Now remove the thrust washer and upper bearing ring/bushing
3. Remove the lower strut mount bolt and lower the control down and out of the way
  - a. Caution: OEM strut will now be free from vehicle
4. Remove OEM strut from vehicle

### Solo Werks Coilover Assembly and Installation – Rear:

**SOLO WORKS TIP:** *Just like the front struts, it is advisable to Prime the rear shocks as well. To purge the rear shocks: Refer to procedure on page 3.*

1. Before installation of Solo-Werks Coilover take care to clean any mounting surfaces so they are free of any dirt or debris.
2. Assemble Coilover per diagram (Fig. 2 Rear)
  - a. Strut top cover nut = 11 ft.-lbs.
  - b. Strut spacer retaining nut = 11 ft.-lbs.
3. Place top of strut into chassis and install OEM thrust washer and upper bearing ring. (fig.2 # 2&3)
4. Install OEM dished washer and tighten second retaining nut.
  - a. Replace rear strut top cap
5. Replace lower strut mount bolt but do not tighten until all weight is on vehicle.
  - a. Torque lower strut mount bolt to 52 ft.-lbs.
6. Make final inspection, inspect all hardware is tight and torqued to proper values.
7. Adjust ride height.

## Solo Werks Coilover Final Details – Heights & Working Ranges



|           |         | Lowering Range |       |           |           |
|-----------|---------|----------------|-------|-----------|-----------|
|           |         | in Mm          |       | in Inch   |           |
| Model     | Year    | Front          | Rear  | Front     | Rear      |
| VW MK 2/3 | 85'-92' | 43-83          | 43-83 | 1.7"-3.3" | 1.7"-3.3" |

| Front Measurement |              |             |               |        |          |
|-------------------|--------------|-------------|---------------|--------|----------|
| Max low mm        | Max low Inch | Max high mm | Max high Inch | OEM mm | OEM Inch |
| 310               | 12 1/4"      | 350         | 13 3/4"       | 393    | 15 1/2"  |

| Rear Measurement |              |             |               |        |          |
|------------------|--------------|-------------|---------------|--------|----------|
| Max low mm       | Max low Inch | Max high mm | Max high Inch | OEM mm | OEM Inch |
| 345              | 13 1/2"      | 385         | 15"           | 428    | 16 3/4"  |

- These measurements are in place to allow both front and rear dampers to operate properly and allow for ample shock travel.
- All measurements will be referenced from "center of wheel hub to bottom lip of fender (see example figure "a")
- Using this system outside of this range can cause premature failure and is cause to void your manufacturer specified warranty.
- Helper springs are intended to keep preload on the main spring under full suspension extension, do not remove!