

Air Lift[™]
PERFORMANCE

Kit 75524
Volkswagen MKIV
Threaded Body
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.

PERFORMANCE SUSPENSION PARTS

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Volkswagen MKIV Threaded Body Performance kit.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information includes a hardware list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

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 MACHINE OR MINOR PERSONAL INJURY.

NOTE

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

IMPORTANT SAFETY NOTICES

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

Gross Vehicle Weight Rating: The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

Payload: The combined, maximum allowable weight of cargo and passengers that the vehicle is designed to carry. Payload is GVWR minus the Base Curb Weight.

 **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/SOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

Installation Diagram

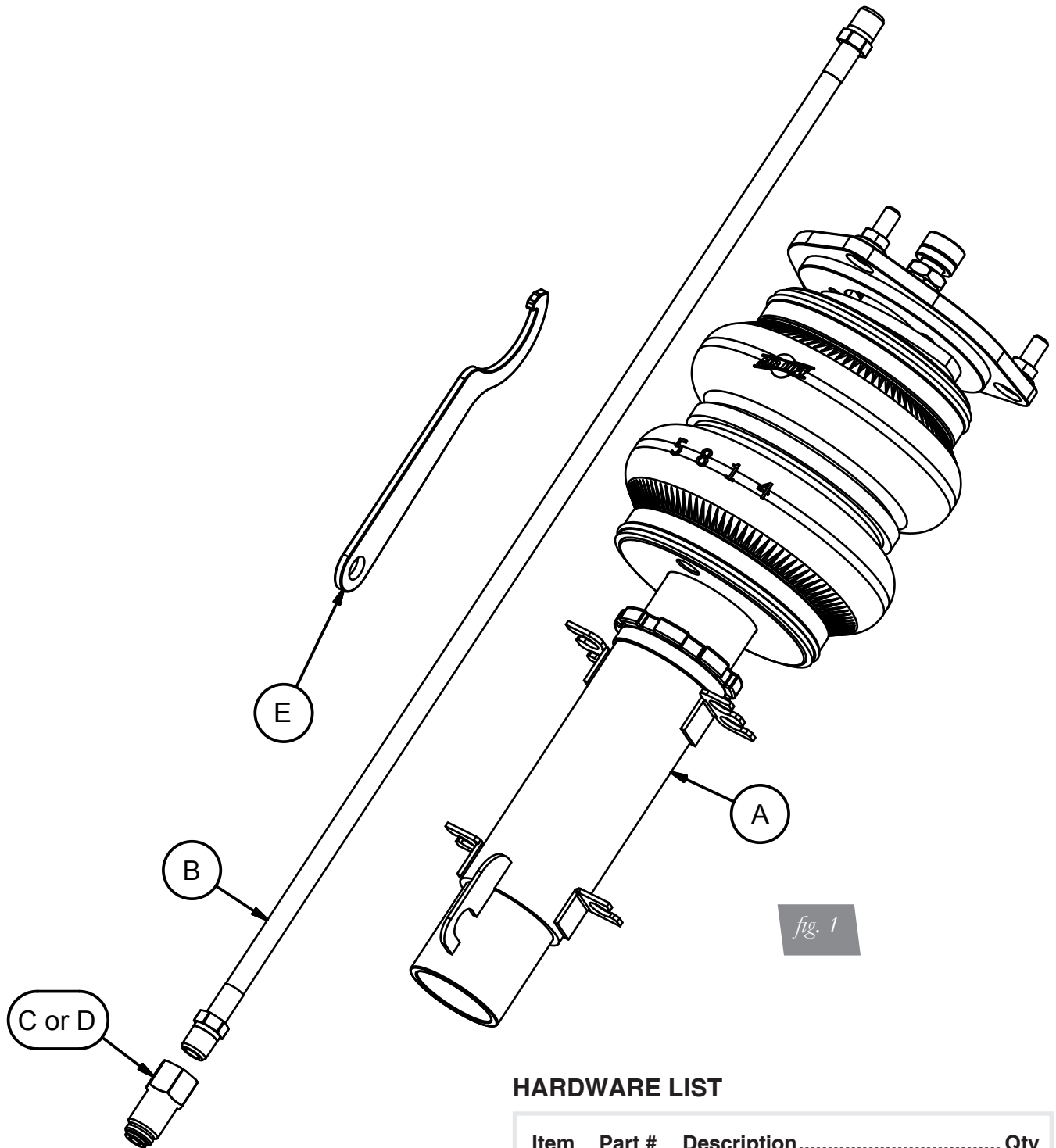


fig. 1

HARDWARE LIST

Item	Part #	Description.....	Qty
A	35237	Strut, Volkswagen MKIV Front.....	2
B	20997	Leader Hose, 1/4" ID.....	2
C	21987	Union, 1/4"FNPT X 3/8" PTC, DOT.....	2
D	21810	Union, 1/4"FNPT X 1/4" PTC, DOT.....	2
E		Spanner Wrench.....	1

Installing the Air Suspension

PREPARING THE VEHICLE

1. Elevate the vehicle and support the body with a hoist or jack stands.
2. Remove the front wheels

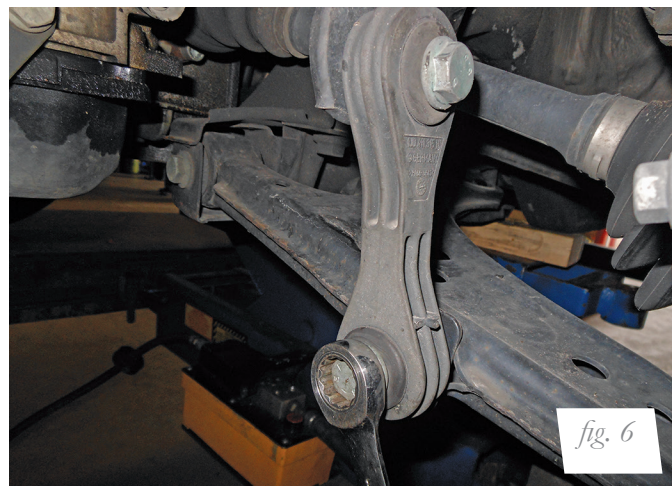
STOCK STRUT REMOVAL

1. Unthread the sensor wire support bracket (figs. 2-4). Unclip the sensor wire from the strut (fig. 5).

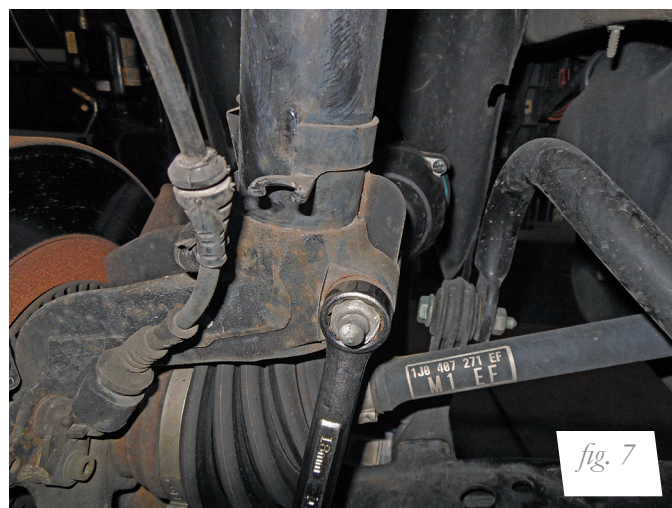




2. Disconnect the stabilizer bar from the lower control arm (fig. 6).

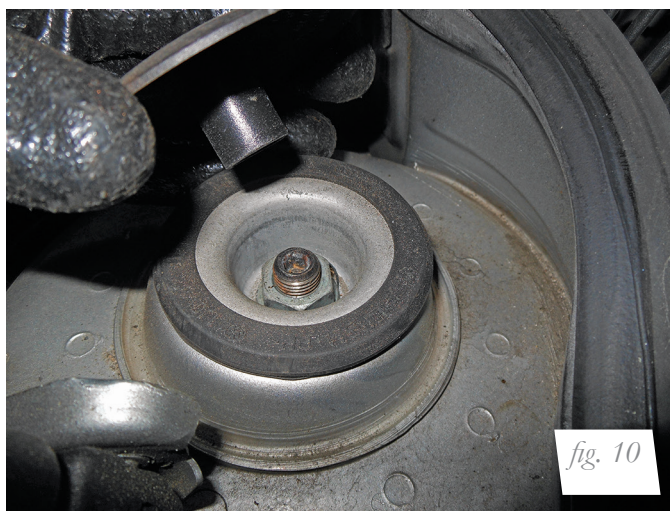


3. Support the hub assembly to prevent over extension. Remove the lower pinch bolt from the hub (fig. 7). Spread the hub assembly slot and push down on the hub to release the strut from the hub (fig. 8). With the hub free of the strut, do not allow to hang freely by the axle or sensor wires (fig. 9).





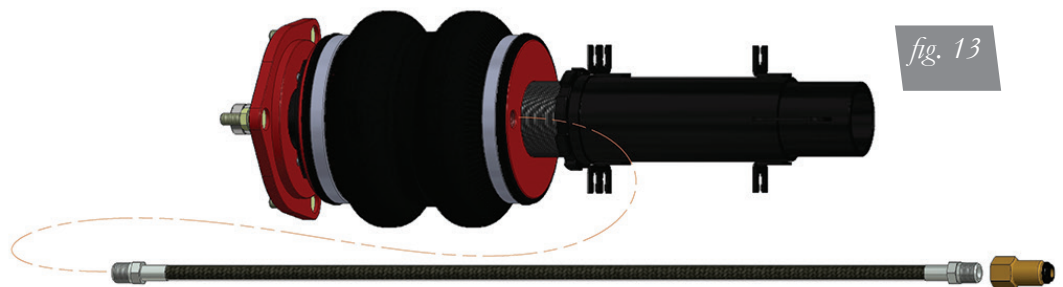
4. Remove the cover from the strut rebound washer (fig. 10). Support the strut and remove the rod nut and rebound washer (fig. 11). Remove the strut from the vehicle (fig. 12).





PREPARING FOR THE AIR SUSPENSION

1. Install the leader line into the air spring (fig. 13). Seal the threads of the leader hose with Teflon tape or thread sealant. Tighten the appropriate fitting to the airline 1 3/4 turns beyond hand tight. Tighten the leader line into the air spring 1 3/4 turns beyond hand tight.



2. Cut out the template supplied in the back of this manual and place it over the coned strut tower as shown (figs. 14 & 19). One hole is to face outboard the vehicle with the other holes inboard. Taping a string across the strut tower centers can be a useful way to ensure the centerline of the outboard stud hole (figs. 15 & 16). Center punch and drill an 11/32" hole at each center punch (figs. 17 & 18).



fig. 14



fig. 15

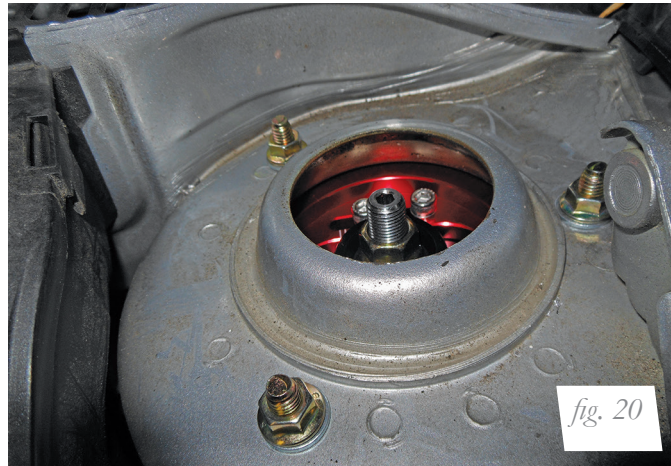


fig. 16



AIR SUSPENSION INSTALLATION

1. Insert the strut assembly into the strut pocket and attach the camber plate to the previously drilled holes (fig. 20). Torque camber plate nuts to 20Nm (15lb-ft).



2. Install the strut into the hub (fig. 21). Torque the pinch bolt to 70Nm + 90° (52lb-ft + 90°).



3. Reattach the sensor wire tab and sensor wires (fig. 22).



- Reinstall the stabilizer end link to the control arm (fig. 23). Torque to 30Nm (22 lb-ft).



- Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the leader hose that is clear of all suspension components and axle. Routing should also allow for the suspension to extend without kinking or pulling the line tight or rubbing on other components. Check clearances to all other components.
- With the suspension fully compressed, take a measurement from the fender to some reference point – typically the center of the axle. Record this measurement as Max Compression.
- Cycle the suspension to Max Extension and record the measurement from the same reference points.
- Add ME and MC then divide by 2. Set the suspension to this point. This position will give 50% stroke in either direction and is a starting point for ride height (fig. 24).

Formula for Calculating Ride Height

$$(ME+MC) \div 2 = \text{MID STROKE}$$

fig. 24

- With the suspension at this position, loosen, then re-torque the lower control arm bolts to manufacturer's specifications (Table 1).

Torque Specifications		
Location	Nm	lb-ft
Camber plate to chassis	20	15
Strut to hub pinch bolt	70 + 90°	52 + 90°
Stabilizer link to control arm	30	22
Wheels	120	89

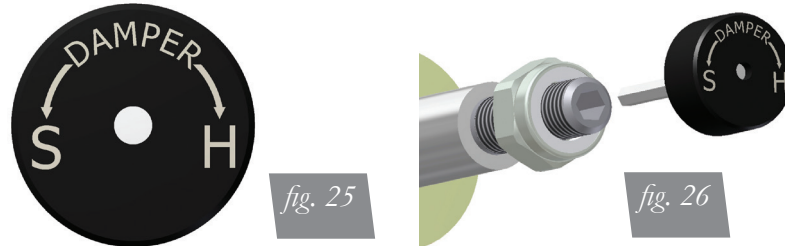
Table 1

DAMPING ADJUSTMENT

The struts in this kit have 30 settings, or “clicks”, of adjustable compression and rebound damping characteristics. Damping is changed through the strut rod using the supplied adjuster (figs. 25 & 26) or a 3mm allen wrench.

Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened.

Each shock is preset to “-15 clicks”. This means that the shock is adjusted 15 clicks away from full stiff. Counting down from full stiff is the preferred method of keeping track of, or setting, damping. This setting was developed on a 2002 Volkswagen Jetta TDi and may need to be adjusted to different vehicles and driving characteristics.



ALIGNING THE VEHICLE

CAUTION

WHEN MAKING CAMBER ADJUSTMENTS TO THE NEGATIVE SIDE FOR ALIGNMENT OR WHEEL FITMENT, IT IS VERY IMPORTANT TO MAKE SURE THAT AFTER THE ADJUSTMENT, THE AIR SPRING HAS ADEQUATE WORKING CLEARANCE ON THE INNER STRUT TOWER SIDE. ANY RUBBING OR CONTACT WITH THE AIR SPRING WILL CAUSE A FAILURE AND WILL NOT BE COVERED UNDER WARRANTY.

1. Using the control system, set the vehicle height to the new custom ride height.
2. If the custom ride height is lower than stock, we recommend loosening all pivot points (bolts, nuts) on any control arm, strut arm or radius rod that contains bushings. Once they have been loosened, re-torque to stock specifications.

NOTE

It may be necessary to cycle the suspension to loosen the bushing up from its mount. This will help re-orient the bushing at its new position based on the custom ride height.

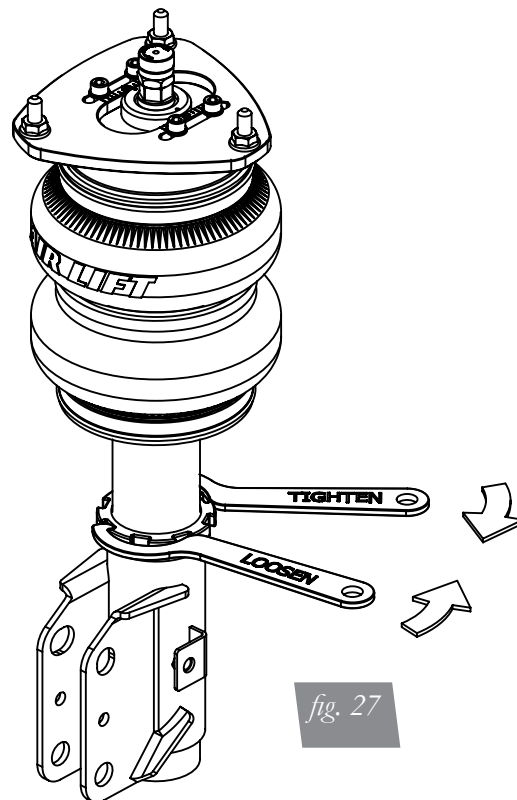
ADJUSTING EXTENDED OR DROP HEIGHT USING LOWER MOUNT

Your struts have been pre-set at the factory to provide maximum drop height while maintaining adequate tire clearance to the air spring. If you wish to gain more extended height (lift), which is the same as reducing drop height, or want to lower the chassis further and there is still adjustment available at the lower mount, please use the following procedure:

NOTE

Since all kits are designed to provide maximum drop, driving regularly at a pressure/height greater than recommended in this manual may create a situation called "topping". This occurs when the available wheel travel is restricted in the rebound direction by shifting the ride height past the mid-point as described in this manual. The result is an uncomfortable ride and, potentially, a knocking noise when going over bumps as your damper runs out of travel. If your wheel/tire combination requires greater clearance or you need a taller ride height, you can eliminate topping by adjusting your damper to a longer length overall as detailed below. A good rule of thumb is to have at least 1/3 of the available wheel travel available for rebound (extension) travel.

1. Support the vehicle with jack stands or a hoist at approved lifting points.
2. Remove the wheel.
3. Using the supplied spanner wrench, loosen the lower locking collar (fig. 27).



4. Deflate the air spring to 0 PSI on the corner you are adjusting.
5. Disconnect lower mount from suspension.
6. Spin the lower mount to the desired location.

NOTE

Not all models will have further drop height available.

7. Re-install lower mount to suspension and torque fasteners.
8. Tighten the lower locking collar to the lower mount using significant force.

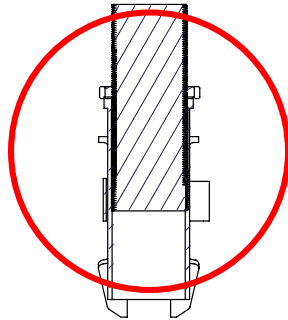
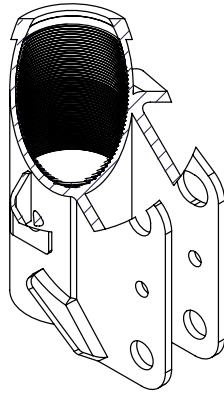
CAUTION

WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT (FIG. 28). WHEN ADJUSTING DOWNWARDS, MAKE SURE THERE IS ADEQUATE AIR SPRING CLEARANCE TO THE TIRE/WHEEL ASSEMBLY. CLEARANCE MUST BE CHECKED WITH SYSTEM FULLY DEFLATED AS WELL AS FULLY INFLATED TO ENSURE THAT NO RUBBING OCCURS. FAILURE TO MAINTAIN ADEQUATE CLEARANCE CAN RESULT IN AIR SPRING FAILURE AND WILL NOT BE COVERED UNDER WARRANTY.

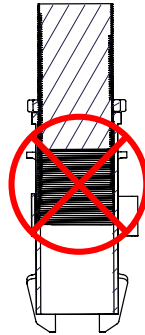
CAUTION

DO NOT ADJUST HEIGHT BY SPINNING AIR SPRING ON STRUT! DOING SO MAY CAUSE AN AIR LEAK AND COMPROMISE THE ASSEMBLY.

FOR STRUTS:



OK, no threads showing.



Not OK, threads are showing.

FOR SHOCKS:

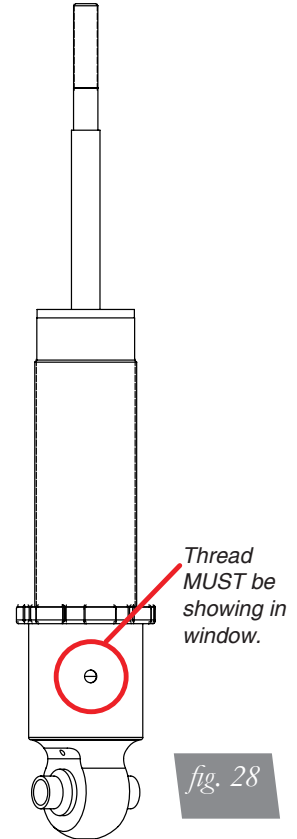


fig. 28

Template

