



# TRAILING ARM BUSH TOOL

## FORD MONDEO MK4 / S-MAX / GALAXY 2006 ON CT5202



### INTRODUCTION

Suitable for the removal/installation of the rear trailing arm mounting bushes on Ford vehicles. Can be used in situ without removing the arm from the vehicle. Also suitable for some Volvo vehicles that share the same Ford platform.

### SAFETY

**IMPORTANT!** These instructions are offered as a guide only, albeit compiled with good practical user advice. Always refer to the vehicle manufacturer's service instructions, or a proprietary manual to establish the current procedure and data.

**WARNING!** Ensure Health & Safety, local authority, and general workshop practice regulations are adhered to when using this tool.

**WARNING!** Familiarise yourself with the specific applications and limitations of the kit, as well as any potential hazards.

**WARNING!** This kit should be used in conjunction with inspection maintenance procedures recommended in the vehicle manufacturer's manual. Ensure that the kit is correct for the task.

Wear the appropriate personal protective equipment for the task.

**DO NOT** use the kit for any purpose other than that for which it is designed.

Ensure that the vehicle is properly supported with axle stands before working under the vehicle.

Keep children and unauthorised persons away from the working area.

**DO NOT** use the kit if any parts are damaged or missing, as this may cause failure and/or personal injury.

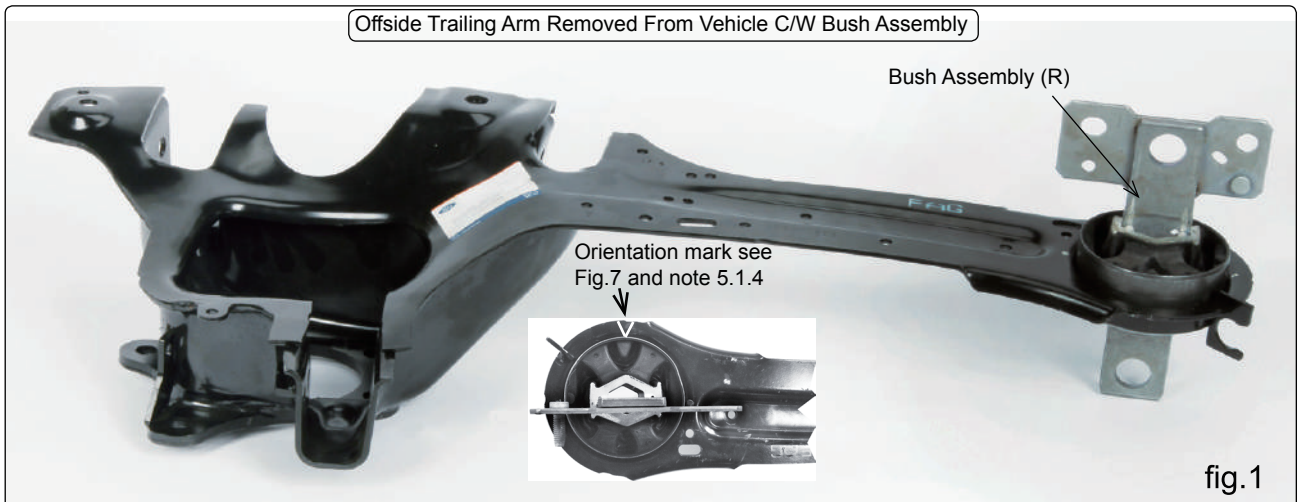
**DO NOT** use the kit when you are tired, or under the influence of alcohol, drugs or intoxicating medication.

After use, store in a safe, dry childproof area.

**WARNING!** Failure to adhere to safety and warning instructions may result in personal injury or damage which would invalidate the warranty. The bush extraction and insertion screw **MAXIMUM RECOMMENDED TORQUE IS 180NM**. Exceeding this torque value will shorten the life of the thrust screw and distort other components. The thrust screw is considered to be a consumable item and is **NOT** covered under warranty. Always lubricate the threads male and female with a molybdenum/copper based grease after removing from the carry case.

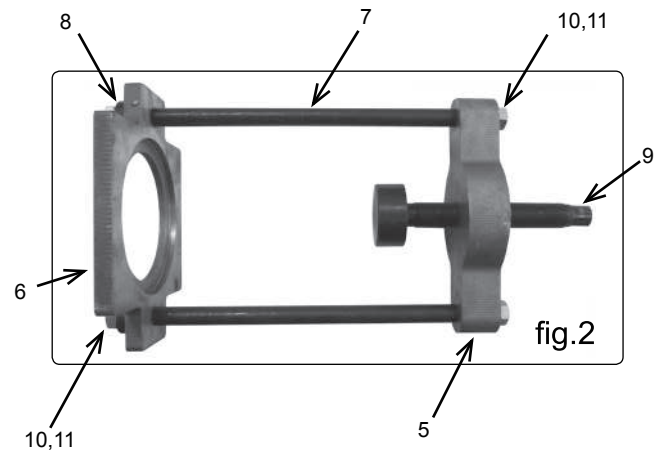
### APPLICATIONS

Make	Model	Year
Ford	Mk4 Mondeo	2007 - onward
Ford	S-Max	2006 - onward
Ford	Galaxy	2006 - onward
Volvo	S60, S80, XC60, V70, XC70	2006 - onward with Ford Platform



## CONTENTS

Item	Description	Qty
1	Adaptor	1
2	Depth Control Legs	2
3	15mm 'C' Ring	1
4	35mm 'C' Ring	1
5	Press Frame Top Plate	1
6	Press Frame Bottom Plate	1
7	Distance Studs	2
8	Spacer	2
9	Thrust Screw (M20 X 1.5)	1
10	Nut M12	4
11	Plain Washer $\phi 12$	4
12	M8 X 16 Screw	2

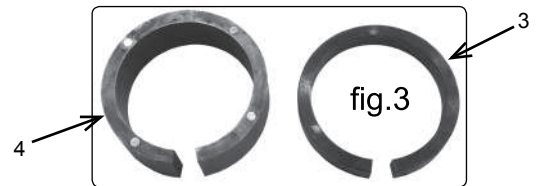


### 15mm Magnetic 'C' Ring (Fig.3 item 3)

A distance piece used in the bush extraction process only, integral magnets holds the ring in place. The slot in the ring clears the obstruction of the hose bracket.

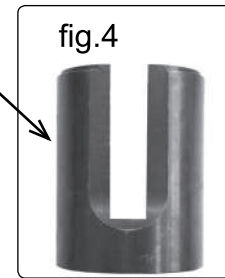
### 35mm Magnetic 'C' Ring (Fig.3 item 4)

A distance piece used in the new bush insertion process only, integral magnets holds the ring in place. The slot in the ring clears the obstruction of the hose bracket.



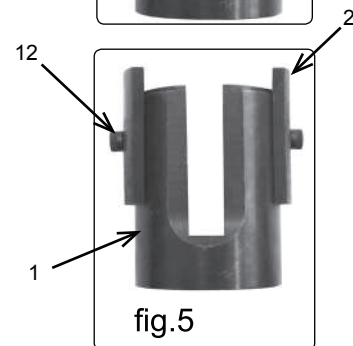
### Adaptor (Fig.4 item 1)

90mm Diameter x 115 long. Slotted, counterbored and recessed to accommodate extraction and insertion of the bush.

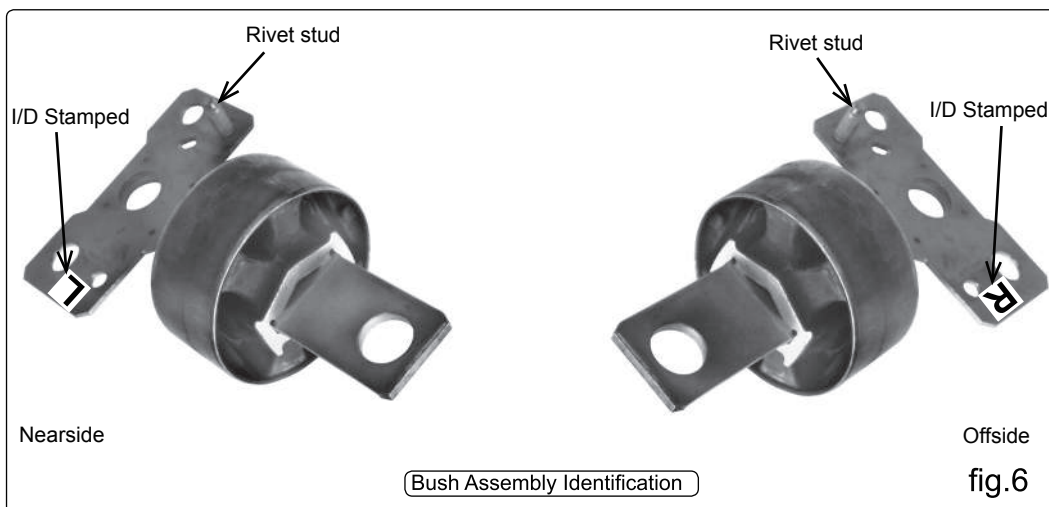


### Depth Control Legs (Fig.5 item 2)

Two Segments nest either side of the adaptor fixed with M8 screws. Only used when inserting new bush to correct depth.

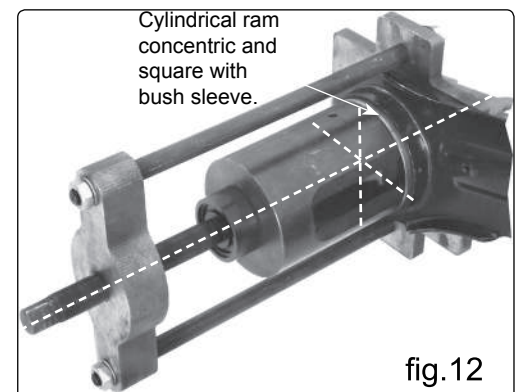
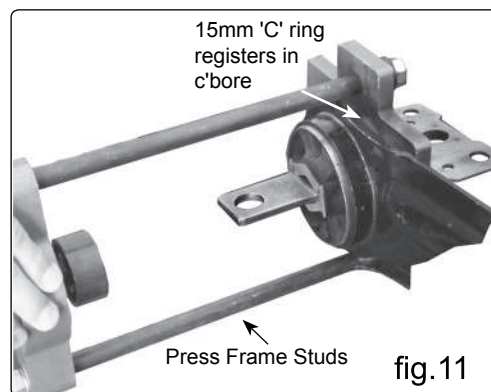
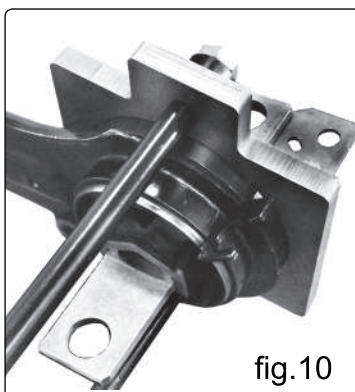
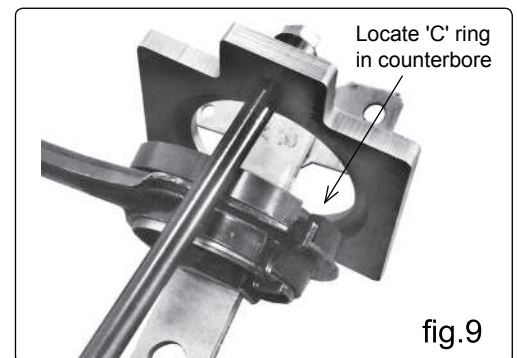
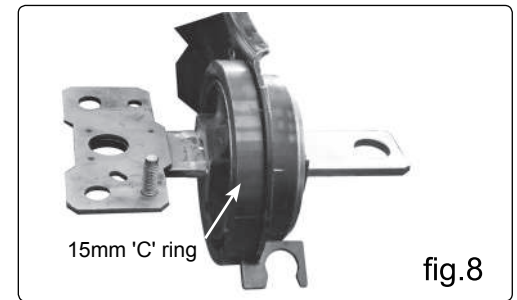
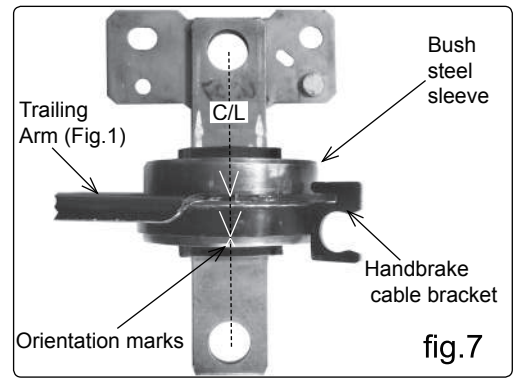


## BUSH REMOVAL



**NOTE!** Illustrations hereafter are with a section of the trailing arm removed from the vehicle and are all "R" (offside) assembly. Refer to manufacturer's service manual, or proprietary manual when using these instructions.

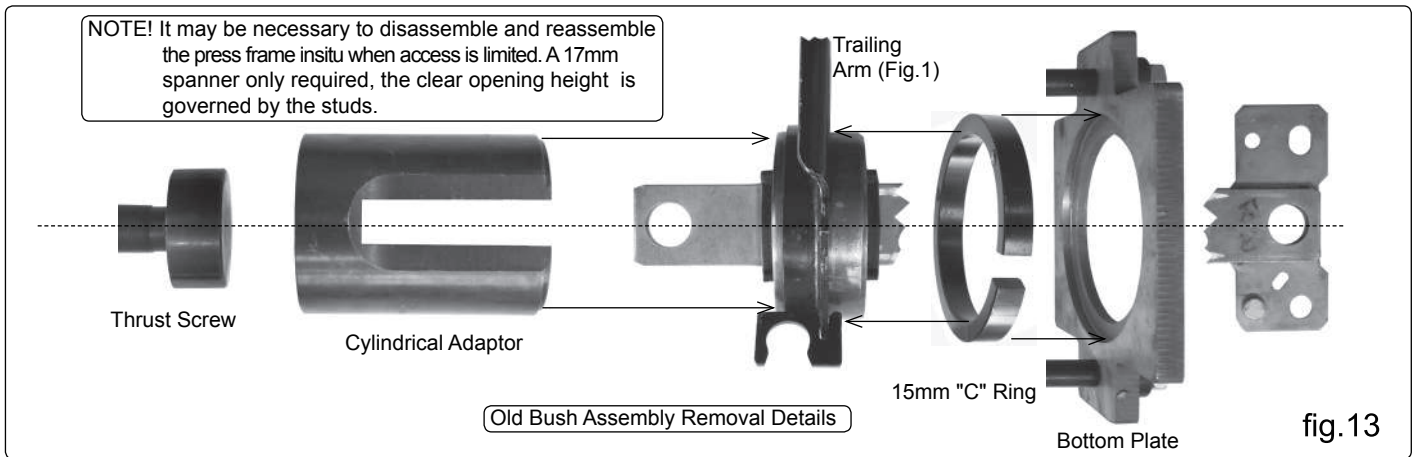
1. Jack up the vehicle, placing the jack clear of the rear suspension allowing it to wing down.
2. Support the rear suspension with axle stands whilst removing the trailing arm bush mounting nuts, bolts and washers. Unclip the handbrake cable and associated fixings. It may be necessary to remove further fastenings to allow the trailing arm to fully sweep beneath the vehicle, enabling maximum access and clearance for the bush extraction tool. Continue supporting the trailing arm and control during lowering.
3. With the area around the suspension now clear we suggest a thorough clean to avoid accumulated debris interfering with precision fitting processes. Spraying a proprietary 'free release' fluid on to the bush sleeve and housing may assist with removal in 5.1.7.
4. Note the orientation of the existing bush before removal. The method of marking is best decided by the engineer. A scribed line on the bush leaves and a mirrored orientation mark on the housing would give an accurate orientation, for example see Fig.7. See also the manufacturer's instructions.
5. Offer the 15mm 'C' ring on to the pressed steel housing, aligning the gap with the handbrake cable bracket. This will be held in place (Fig.8) by the three permanent magnets inserted in the ring. Ensure it is seated correctly on a grit free face.
6. Access and adequate clearance is essential for offering the bush press assembly over the trailing arm and bush housing. Weave the bottom plate end over the "Tee" plate (Fig.9) and locate the counterbore with the 'C' ring (Fig.10). Continue to support the opposite end with your hand (Fig.11). **It may be necessary to disassemble and reassemble the press frame insitu when access is limited.**
7. Two people are now recommended, with one continuing to support the press frame and the other positioning the adaptor (Fig.12), stepped end inside the bush sleeve. The shoulder of the stepped end will offer thrust to the steel bush sleeve. Please note for the removal of the bush, 360° orientation of the adaptor is not important and the side 'depth control legs' are not fitted. The second person can now wind in the thrust screw ensuring concentricity and squareness of both the press frame and the cylindrical adaptor. With a 16mm socket increase the torque and observe the bush sleeve projection from the housing, through to removal. **DO NOT EXCEED 180NM, IF THIS OCCURS, STOP IMMEDIATELY AND CHECK ALIGNMENTS.** There may be some resistance initially. Continued support to the press is required throughout, especially when the bush is removed from the housing as the bush is then free to fall. Remove the old bush, the press frame and prepare details for insertion of a new bush assembly. An "exploded" view (Fig.13) supports actions shown in (Fig.8) through (Fig.12)



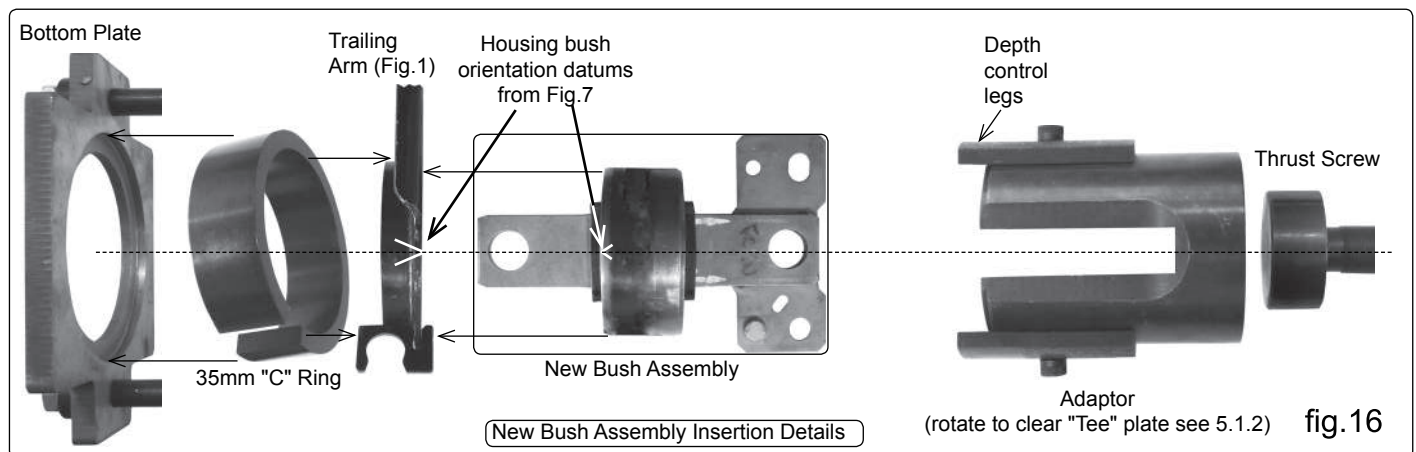
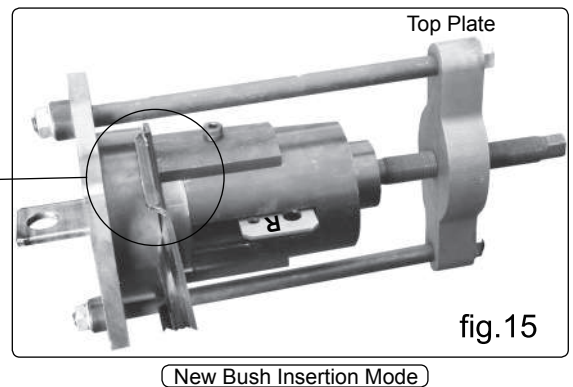
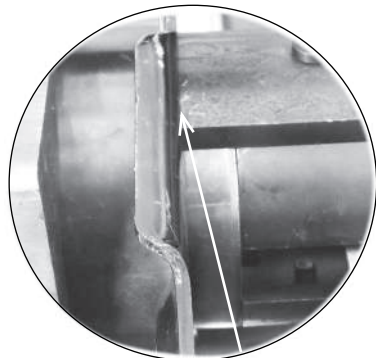
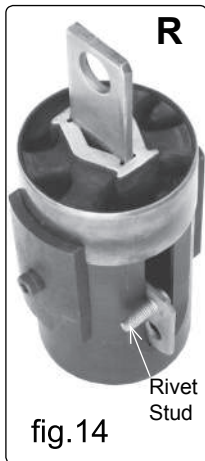
## INSERTING NEW BUSH

**NOTE!** Illustrations hereafter are with a section of the trailing arm removed from the vehicle and are all "R" (offside) assembly. Refer to manufacturer's service manual, or proprietary manual when using these instructions.

1. Clean the bore of pressed steel bush housing of any residual oil or grit. No lubricant or 'free release fluid' is to be present on the bush sleeve or the housing bore.
2. Place the new bush "Tee" plate inside the adaptor and locate the bush sleeve over reduced diameter and shoulder. It will only fit squarely one way. The slots in the cylinder are offset about the axis, with the smallest adaptor segment the same side as the rivet stud shown in (Fig.14). Clamp the depth control side legs (Fig.14) using the supplied M8 screws with a 6mm hexagon key. The legs should be symmetrical about the fixing hole, but it is worth checking that there is equal projection to obtain even thrust. Check that the bush is gripped and that datums (Fig.7) are clearly marked.
3. Place the 35mm 'C' ring on to the trailing arm (Fig.16), rotate the ring to clear the handbrake bracket. The four integral permanent magnets will hold the ring in place.



- Two people are now recommended, with one placing the adaptor and bush in (Fig.14) over the housing bore. See the orientation datums for correct alignment (Fig.7). The second person can offer the press frame over the entire group of items shown in (Fig.16) ensuring the bottom plate locates over the "C" ring. The second person can now wind in the thrust screw ensuring concentricity and squareness of both the press and the adaptor. With a 16mm socket increase the torque and observe the bush sleeve progress through to correct depth insertion. **DO NOT EXCEED 180NM, IF THIS OCCURS, STOP IMMEDIATELY AND CHECK ALIGNMENTS.** Observe closely the depth control legs, when they touch the trailing arm face resistance will increase abruptly, the bush is now fully inserted, see (Fig.15) telescopic view. **DO NOT** attempt to tighten any further.
- With possibility of heavy objects falling, special caution required whilst unscrewing the press and removing the entire kit.
- Clean and lubricate before returning the kit to the carry case.
- Refer to BUSH REMOVAL(1&2) and manufacturer's or proprietary manual to refit the suspension, trailing arm, handbrake cable and return the vehicle to the road for test drive.



## MAINTENANCE

It is essential to keep the kit dry and free of swarf and grit. After use clean all components thoroughly ensuring thrust screw threads are cleared with an air line, internal threads and external threads.

Inspect all components for signs of distortion, especially the screw threads and registration plate flatness. See warnings on torque, misalignment and concentricity in operation, included to prevent damage.

Before returning the kit to the carry case smear blackened components and unpainted surfaces with an oiled cloth.

To avoid condensation store indoors with carry case closed.