

Warranty

Our products are designed to be used correctly and with care for the purpose for which they are intended. No liability is accepted by the Tool Connection for incorrect use of any of our products, and the Tool Connection cannot be held responsible for any damage to personnel, property or equipment when using the tools. Incorrect use will also invalidate the warranty.

This tool is covered under the standard 12 month Tool Connection warranty; this does not cover the maintenance tasks above, but covers for manufacturing defects or material failures. Abuse, wear and tear are also not covered.

If applicable, the applications database and any instructional information provided has been designed to offer general guidance for a particular tool's use and while all attention is given to the accuracy of the data no project should be attempted without referring first to the manufacturer's technical documentation (workshop or instruction manual) or the use of a recognised authority such as Autodata.

It is our policy to continually improve our products and thus we reserve the right to alter specifications and components without prior notice. It is the responsibility of the user to ensure the suitability of the tools and information prior to their use.



www.lasertools.co.uk



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Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: +44 (0) 1926 818186. Normal wear and tear are excluded as are consumable items and abuse.

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Part No. 7432

LASER[®]

Bush Tool

Spring Suspension HGV

Instructions



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Introduction

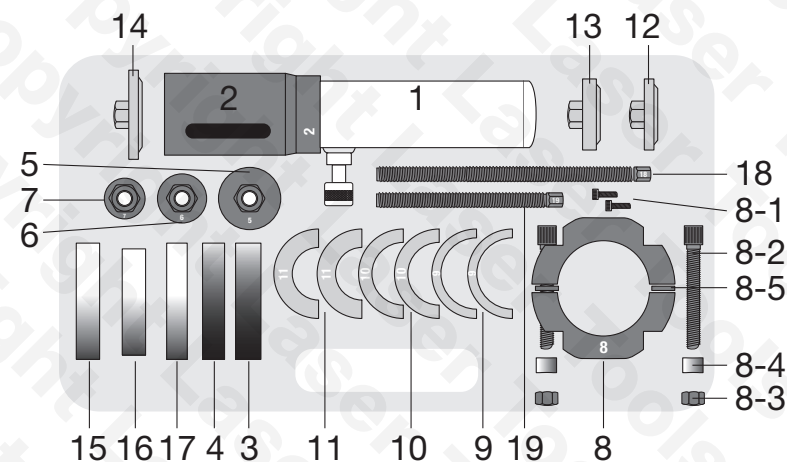
For the installation and removal of slotted bushes on HGV suspension leaf springs. Includes a 12 tonne hydraulic cylinder which will be used with the workshop hydraulic pump (hydraulic pump not included). The slotted bush is protected during the installation procedure due to the parallel working tension.

Suitable for use on the vehicle. Safe and easy to use.

Applications:

Volvo FM12; Renault 430, 450 & 460; MAN-TGA 410, 414 & 460.

Components



Ref.	Description	Quantity	Application
1	Hydraulic ram	1	
2	Extraction/Insertion Cup	1	
3	Extraction ring	1	MAN-TGA (410/414/460) Renault (430/450/460)
4	Extraction ring	1	Volvo FM12
5	Extraction block	1	MAN-TGA (410/414/460)
6	Extraction block	1	Renault (430/450/460)
7	Extraction block	1	Volvo FM12
8	Clamp body	1	
8-1	Screw M6 x 25mm	2	
8-2	Screw M12 x 80mm	4	
8-3	Nut M12	4	
8-4	Fix ring	4	
8-5	Washer	4	
9	Clamp blocks 1, internal Ø 68mm	2	MAN-TGA (410/414/460)
10	Clamp blocks 2, internal Ø 60mm	2	Renault (430/450/460)
11	Clamp blocks 3, internal Ø 51mm	2	Volvo FM12
12	Insertion block 1, 78 x 35mm	1	Volvo FM12
13	Insertion block 1, 78 x 37mm	1	Renault (430/450/460)
14	Insertion block 1, 98 x 36mm	1	MAN-TGA (410/414/460)
15	Insertion ring 1, 108 x 26mm	1	MAN-TGA (410/414/460)
16	Insertion ring 2, 103 x 26mm	1	Renault (430/450/460)
17	Insertion ring 3, 108 x 25mm	1	Volvo FM12
18	Insertion force screw M16 x 280mm	1	
19	Extraction force screw M16 x 195mm	1	

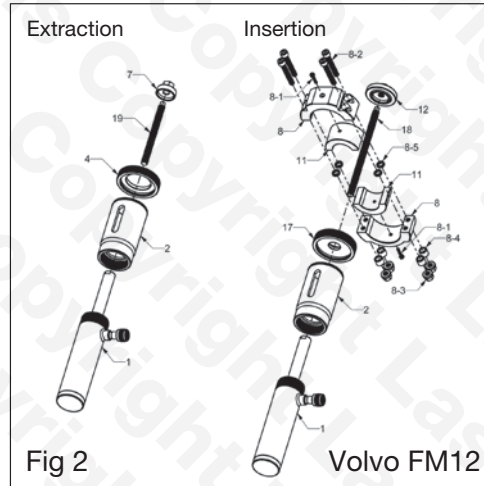
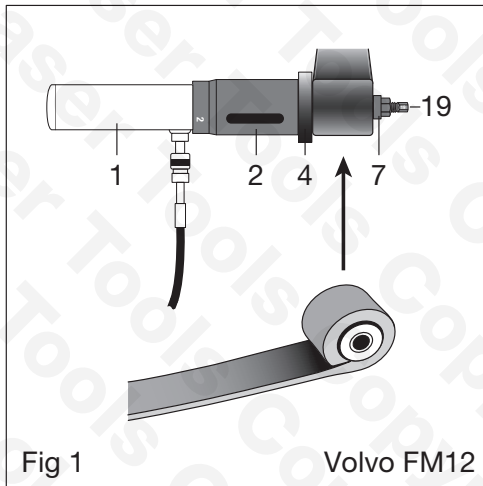
Instructions



Volvo FM12:

Bush Extraction:

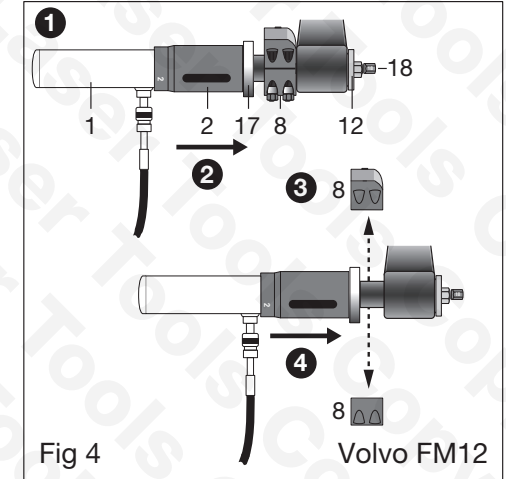
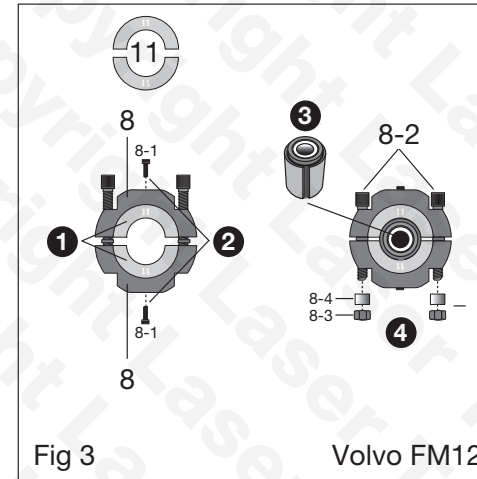
Refer to **Figures 1 and 2**, and components diagram (over) to assemble tool and fit to bush to be extracted. Then connect hydraulic ram (1) to suitable hydraulic pump and operate pump to extract the bush.



Instructions

New Bush Insertion:

Refer to **Figures 2 and 3**, and components diagram (above) to assemble bush clamp (8) and fit new bush into bush clamp.



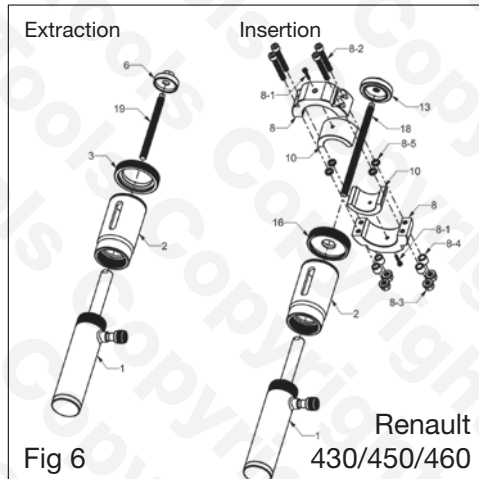
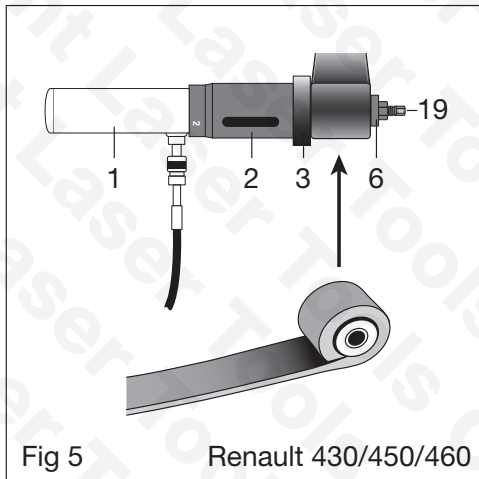
Refer to **Figure 4** and fit bush clamp (8) to insertion tool, then complete tool assembly to spring eye (**operation 1**). Operate hydraulic pump to start inserting bush into spring eye (**operation 2**). Remove bush clamp (**operation 3**), then operate hydraulic pump to fully fit the bush (**operation 4**).

Instructions

Renault 430/450/460:

Bush Extraction:

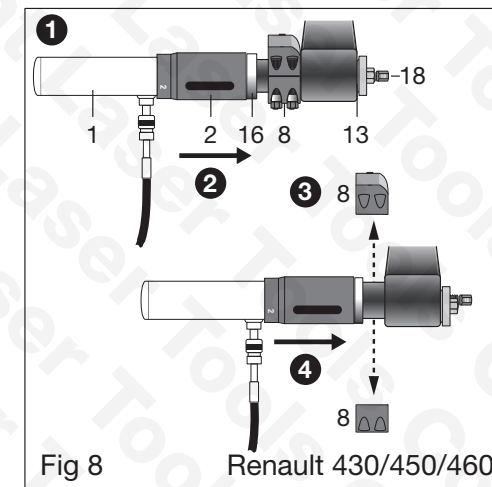
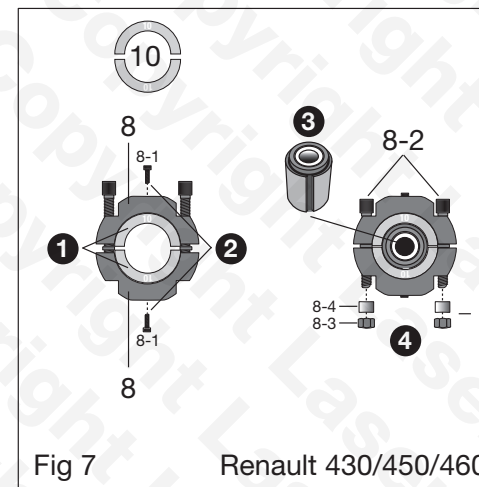
Refer to **Figures 5 and 6**, and components diagram (above) to assemble tool and fit to bush to be extracted. Then connect hydraulic ram (1) to suitable hydraulic pump and operate pump to extract the bush.



New Bush Insertion:

Refer to **Figures 6 and 7**, and components diagram (above) to assemble bush clamp (8) and fit new bush into bush clamp.

Instructions



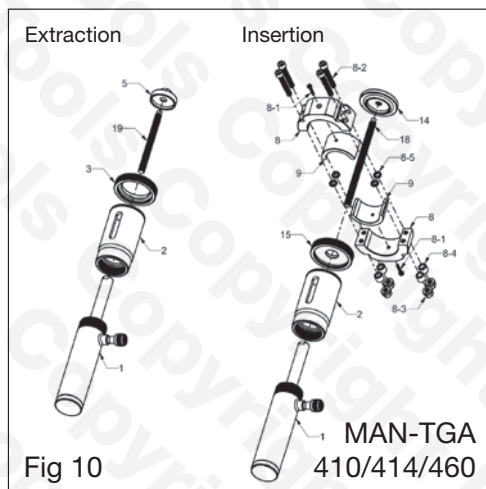
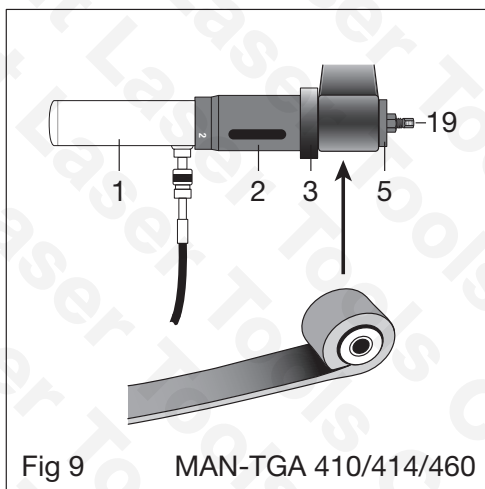
Refer to **Figure 8** and fit bush clamp (8) to insertion tool, then complete tool assembly to spring eye (**operation 1**). Operate hydraulic pump to start inserting bush into spring eye (**operation 2**). Remove bush clamp (**operation 3**), then operate hydraulic pump to fully fit the bush (**operation 4**).

Instructions

MAN-TGE 410/414/460:

Bush Extraction:

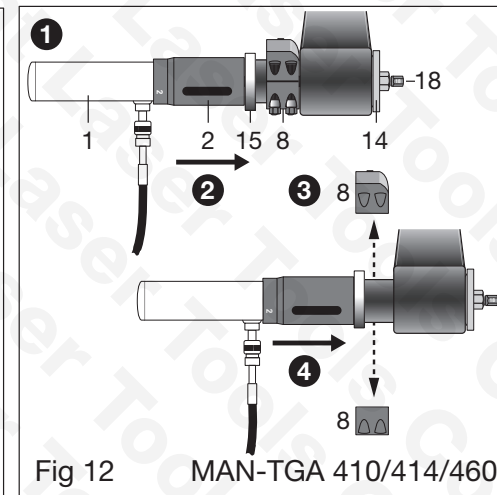
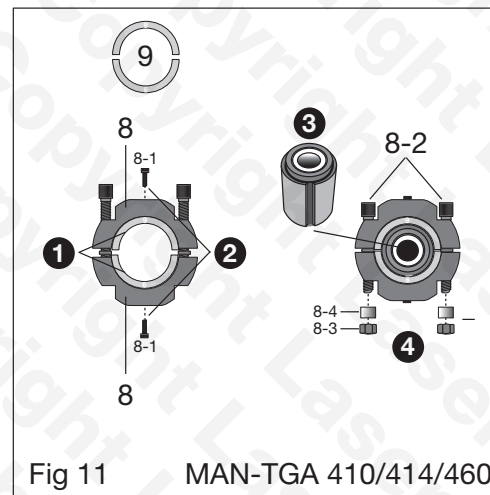
Refer to **Figures 9 and 10**, and components diagram (above) to assemble tool and fit to bush to be extracted. Then connect hydraulic ram (1) to suitable hydraulic pump and operate pump to extract the bush.



New Bush Insertion:

Refer to **Figures 10 and 11**, and components diagram (above) to assemble bush clamp (8) and fit new bush into bush clamp.

Instructions



Refer to **Figure 12** and fit bush clamp (8) to insertion tool, then complete tool assembly to spring eye (**operation 1**). Operate hydraulic pump to start inserting bush into spring eye (**operation 2**). Remove bush clamp (**operation 3**), then operate hydraulic pump to fully fit the bush (**operation 4**).

Safety Precautions



- Wear approved eye, hand and foot protection.
- Read, study, understand, and follow all instructions before operating this device.
- Observe standard workshop safety procedures when using the tool.
- Inspect the tool components before each use. Do not use if damaged, altered, modified, in poor condition, leaking hydraulic fluid, or unstable due to loose or missing hardware or parts. Make repairs before using.
- Adequately support the vehicle before starting repairs. Consult the vehicle manufacturer for the recommended lift and support locating points.
- **Trapping danger:** keep hands and fingers away from moving parts when using the tool.
- Ensure that ill-fitting clothing, ties or long hair (for example) cannot get caught up in the mechanism when using the tool.
- Do not allow untrained persons to use the tool.
- Do not operate the tool if parts are damaged or missing.