LASER®

Part No. 6051

Front Subframe Bush Tool

- for Renault, Vauxhall, Nissan

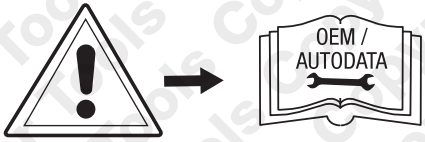
Instructions

MADE IN SHEFFIELD

www.lasertools.co.uk

The following instructions are for guidance only. Please refer to OEM derived data such as the vehicles manufacturers own data or Autodata.

The use of this tool is purely down to the user's discretion and The Tool Connection Ltd. cannot be held responsible for any damage caused what so ever.



Introduction

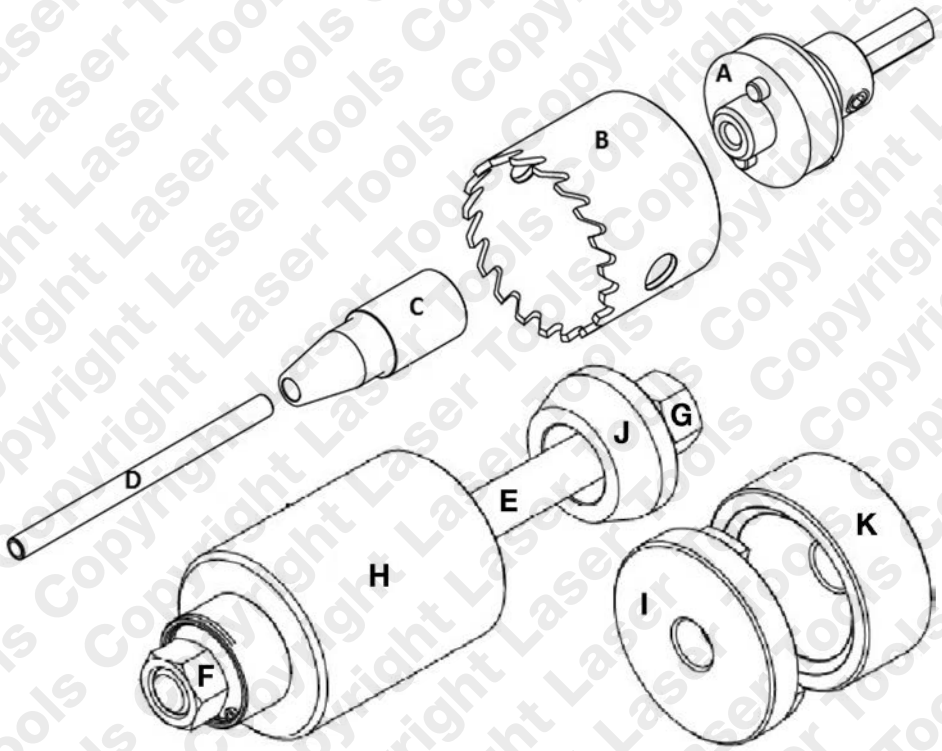
Developed to quickly and easily remove the sub-frame bushes fitted to the Vauxhall/Opel Vivaro, Renault Trafic and Nissan Primastar front sub-frame (2002 - 2013).

Due to a combination of the construction of the sub-frame and the type of bush used the raised outer ring of the bush must first be cut off flush to the sub-frame to allow the bush to be extracted without damaging the sub-frame. After cutting the outer ring off the remaining part of the bush can be extracted.

Being able to perform this task on the vehicle saves considerable time over the more traditional use of a workshop press that requires the sub-frame to be completely removed.

The kit includes a hole cutter that has been equipped with a special brass centring shaft and guide bush to allow the bush to be prepared for extraction. The components required for final extraction of the bush are also included in the kit.

Components



Ref.	Description
A	Arbor
B	Cutter (54mm)
C	Brass Guide bush
D	1/4" Centring Guide Shaft
E	M16 Force Screw
F	M16 Nut and Bearing Assembly
G	M16 Nut (Plain)
H	Extraction Support Cup
I	Insertion Cup
J	Tapered Extraction Cup
K	Insertion Support Cup

Applications

Make, Model, Range, Year			
Nissan	Primastar	X83	2001 - 2015
Vauxhall/Opel	Vivaro A	X83	2001 - 2014
Renault	Trafic II	EL, FL, JL	2001 - 2014

Always refer to the website for most up to date applications: www.lasertools.co.uk/product/6051

Spares Available

The cutter, force screw and nut assembly are considered consumable.

Spares are available separately:

Cutter - **Part No. 6052**

Force Screw - **Part No. 2317**

Nut and Bearing Assembly - **Part No. 1810**

Preparation

- Mount the vehicle on a lift, wheels free.
- It is advised to cut the bush with the sub-frame held up against the chassis to help maintain the bush centre alignment.
- Remove the bush fixing bolt.
- It is advised that any mounting bolts should be sprayed with penetrating oil prior to dismantling.
- Clean the area around the bush with a wire brush to reduce dust.
- Ensure goggles, gloves, overalls and safety boots are worn during the cutting operation.

WARNING: Use an appropriate electric or air-powered drill. Do not use a hammer drill or hand drill. Do not use the trigger lock.

Where the centre of the old bush has worn loose due to wear, extra care must be taken when starting the cut to ensure the cutter does not oscillate or wander uncontrollably.

- Assemble the Arbor (A), Cutter (B) and Guide Shaft (D) as shown in Fig. 1 and 2.
- Loosen screw (X) and insert component D.
- Tighten screw (X) to grip component D.

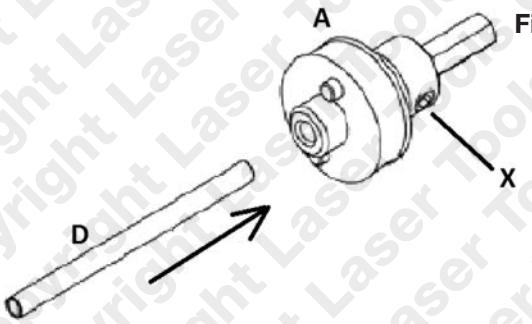


Fig. 1

- Fit the Cutter (B) by pulling back the Arbor collar so that the 2 pins retract then screw the cutter onto the Arbor until it bottoms.
- Release the pins and turn the Cutter slowly in an anti-clockwise direction until the pins click in to place. See Fig. 2.

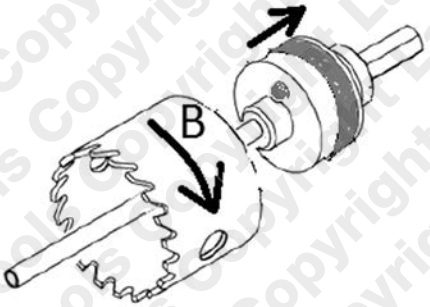


Fig. 2

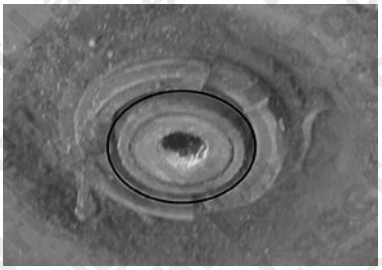
Instructions for use - cutting the bush

- Mount the Arbor assembly in a suitable drill.
- Insert the Brass Guide Bush (C) into the bush.
- Put a small amount of grease on to the Centre Guide and insert the Arbor and Centre Guide assembly as shown in Fig. 3 into the bush and start cutting.
- For the best results and to prevent excessive wear to the cutter stop frequently to check cut depth and allow cutter to cool.

Note: care should be taken when cutting through the outer rubber of the bush as it can bite.

Fig. 3

- Once the cutter has cut through the bush outer ring, stop and remove the cutter and drill.
- The bush can now be removed using the bush extraction kit.
- Fig. 4 shows before and after cutting.



Before

Fig. 4

After

Preparation for bush extraction

IMPORTANT: ensure the force screw is well lubricated with molybdenum disulphide grease.

Do not apply a torque exceeding 80Nm or damage will result.

For this reason the force screw and nut assembly are considered consumable.

- After preparing the bush for extraction with the cutter provided remove the sub-frame to chassis vertical mount bolts. See **Fig. 5** (image shown with engine removed for clarity only).

Fig. 5

- Lower the rear of the sub-frame away from the main chassis to allow clearance for components G and J.
- In some cases it may be necessary to disconnect the steering column to allow the column side of the sub-frame to drop. This is easily done from inside the vehicle.
- Always centre the column and rack first.

Instructions for use - Extraction

- Ensure the outer ring of the bush has been removed as shown in Fig. 4 (after) to ensure the extraction support cup can sit squarely on the sub-frame bush internal support.

WARNING: If the above process is not carried out correctly the bush tool cannot be used.

- Assemble the tool as shown in Fig. 6 so that the old bush pulls out of the sub-frame downwards into component H.
- Ensure J and H remain in line and J pulls into the sub-frame.

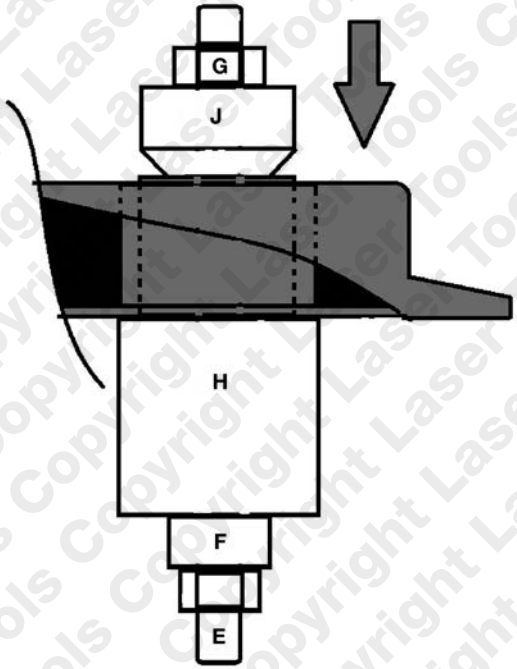


Fig. 6

IMPORTANT: ensure all components remain straight and aligned or damage will result.

Never exceed 80Nm maximum torque.

Instructions for use - Insertion

- For insertion set the tool as shown in **Fig. 7**.
- Pull the new bush vertically into the sub-frame ensuring the outer ring of the bush contacts the sub-frame.

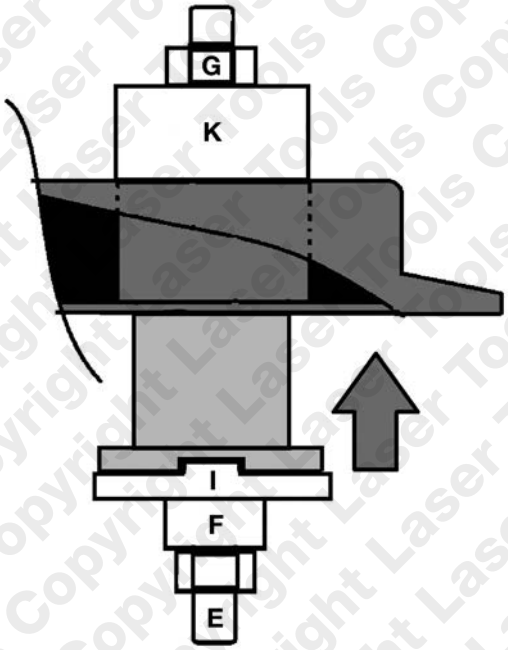


Fig. 7

Safety Warnings - please read

ALWAYS:

- Ensure the force screw and nut assembly are well lubricated with molybdenum disulphide grease.
- Ensure the brass guide bush, tube and cutter are correctly fitted before use.
- Do not apply a torque exceeding 80Nm or damage will result.
- Ensure all components remain straight and aligned or damage will result.
- Do not work on or under a vehicle supported only by a jack. If lifting the vehicle with a jack it must be securely supported on safety axle stands.
- Clean off all rust, grime etc and prime with penetrating oil.
- Leave the oil to soak in for quite a while before attempting to remove.
- Inspect the tool for worn and broken parts before use.
- Wear appropriate safety equipment.
- Use common sense and caution at all times.

These tools are specific to the vehicle they are designed for and should not be used on any other vehicle.

Safety First. Be Protected.

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.

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.

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