

# LASER<sup>®</sup>

Part No. 7663

## Oil Drain Repair Kit

38pc

### Instructions



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Introduction

This kit contains tools essential when draining oil or fluid from engines and transmissions: a magnetic sump plug removal tool; a drain plug thread repair set including replacement sump plugs and washers; and a handy pitch gauge that lets you easily measure a sump plug's diameter, depth, thread size and pitch.

Hot oil is dangerous; the magnetic sump plug removal tool lets the operator easily unscrew the sump plug without direct contact with this hot and dirty oil. The very flexible shaft of the tool ensures easy access. It can also be used as a magnetic pick-up tool.

If the threads on the drain plug hole have become stripped, worn or damaged, the drain plug repair set lets you tap a larger hole in the sump, then fit a correctly-sized new sump plug and copper washer. Four sizes of tap, replacement sump plug and copper washer are provided, with four examples of each included.

The pitch gauge lets the operator correctly identify a sump plug's diameter, depth, thread size and pitch. This is useful when determining the size of a damaged sump plug before choosing a replacement from the set. It also identifies the sump plug dimensions if a new, original-size sump plug is to be ordered.

Components

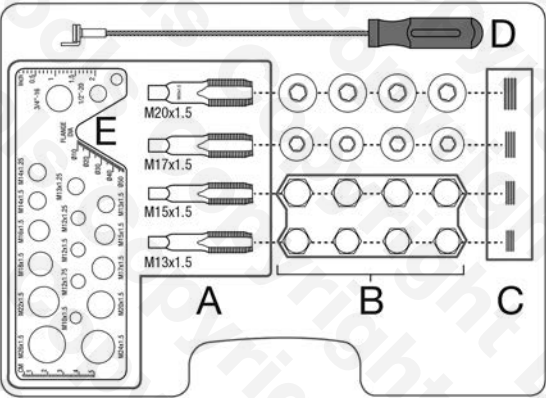


Fig 1

Ref.	Description
A	Taps (for enlarging and tapping damaged drain plug holes)
B	Replacement Sump Plugs
C	Replacement Sump Plug Washers
D	Magnetic Sump Plug Removal Tool
E	Pitch Gauge

Instructions

Magnetic Sump Plug Removal Tool:

The magnetic sump plug removal tool (component **D** in Figure 1), lets the operator easily unscrew the sump plug without direct contact with potentially dangerous hot and dirty oil.

1. Loosen the sump drain plug with a correctly-sized ring spanner or socket,
2. Fit the head of the sump plug removal tool to the sump plug; it will be held securely in place by the strong magnet.
3. Turn the tool anticlockwise to remove the sump plug; as the sump plug unscrews and comes away from the sump pan it will be held securely on the tool.

Pitch Gauge:

The pitch gauge (component **E** in Figure 1), lets the operator correctly identify a sump plug's diameter, depth, thread size and pitch.

To check thread size and pitch:

1. Screw the sump plug to be measured into a suitably sized hole in the pitch gauge.
2. Screw it in slowly and carefully; if the thread and thread pitch are correct, the sump plug will screw in easily and smoothly. If resistance is felt, the diameter may be correct but the thread pitch is wrong. Do not force the sump plug into the pitch gauge; the threads on the pitch gauge will be damaged.



Fig 2

## Instructions

To check diameter of sump plug:

1. Refer to Figure 2: position the threaded portion of the sump plug into the V-shaped groove.
2. Determine the point where the edge of the sump plug touches the pitch gauge flange diameter scale (see arrow on Figure 2).
3. Read off the sump plug diameter.



To check length of sump plug:

1. Refer to Figure 3: place the sump plug (or set screw or any component that needs length measured) to either side of the pitch gauge (metric scale on the left, imperial scale on the right).
2. Align the top edge of the sump plug with the top edge of the pitch gauge.
3. Read off the length at the bottom edge of the sump plug.

## Instructions

Oil Drain Plug Repair:



If the threads on the drain plug hole have become stripped, worn or damaged, the drain plug repair set lets you tap a larger hole in the sump, then fit a correctly-sized new sump plug and copper washer. Use the tap provided (four sizes in the kit, M20 x1.5, M17 x 1.5, M15 x 1.5 and M13 x 1.5) to enlarge the existing sump plug hole and cut a new thread. Then fit the corresponding new sump plug and copper washer from the kit.

1. Using the pitch gauge (see above) determine the thread diameter and thread pitch of the damaged sump plug and sump plug hole.
2. Determine if one of the four sizes in the kit (M20 x1.5, M17 x 1.5, M15 x 1.5 and M13 x 1.5) is “one size up” from the original sump plug.
3. Use the tap provided to enlarge the existing sump plug hole and cut a new thread. Ensure the tap is adequately lubricated with lithium or molybdenum grease during the tapping operation.
4. When the tapping operation is complete, carefully clean the sump pan and threads of any metal swarf.
5. Fit the new drain plug and copper washer and tighten to the manufacturer’s specified torque figure.

## Specifications & Applications

(Refer to Figure 1):

Taps (A) four sizes:

JIS SKS3 steel.

**M13 x 1.5:** BMW, Ford, Honda, Lincoln, Mercedes-Benz, Mercury.

**M15 x 1.5:** Acura, Audi, Chevrolet, Chrysler, Dodge, Ford, GMC, Honda, Hyundai, Isuzu, Land Rover, Lexus, Mazda, Mercedes-Benz, Saab, SEAT, VW.

**M17 x 1.5:** Corvette, Jaguar, Peugeot, Renault, Subaru Legacy, Volvo.

**M20 x 1.5:** Chevrolet, Dodge, Honda, Subaru.

Drain plugs (B) sized as taps:

Copper Washers (C):

Magnetic sump plug removal tool (D):

AISI 1050 carbon steel.

Four sizes (internal diameter): 13mm, 15mm, 17mm and 20mm.

Steel wire shaft (Ø 3mm, length 185mm); Polypropylene handle (Ø 23.5mm, length 79mm). Magnet sintered Nd-Fe-B.

Pitch Gauge (E)

Size and pitch:

M10 x 1.5; M12 x 1.25; M12 x 1.5; M12 x 1.75; M13 x 1.25; M13 x 1.5; M14 x 1.25; M14 x 1.5; M15 x 1.5; M16 x 1.5; M17 x 1.5; M18 x 1.5; M20 x 1.5, M22 x 1.5, M24 x 1.5; M26 x 1.5. Imperial: 1/2" x 20; 3/4" x 16.

## Precautions



- Always read these instruction carefully before using the tools.
- Ensure the working area has adequate lighting.
- **Eye and face protection** plus heavy work gloves and suitable work clothing **must be used**. **Never** wear loose clothing or jewellery that could be trapped by moving parts.
- Clean the tools after use and keep in the supplied case. Store in a clean and dry environment.
- Waste oil disposal: follow your local authority's guidelines as to the disposal of hazardous waste.

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.



**Safety First. Be Protected.**



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Distributed by The Tool Connection Ltd

Kington Road, Southam, Warwickshire CV47 0DR  
T +44 (0) 1926 815000 F +44 (0) 1926 815888  
[info@toolconnection.co.uk](mailto:info@toolconnection.co.uk) [www.toolconnection.co.uk](http://www.toolconnection.co.uk)

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