INSTRUCTIONS FOR:

GLOW PLUG THREAD REPAIR SET 33pc

MODEL No: VS311.V2

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

IMPORTANT: **PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.**

1. SAFETY INSTRUCTIONS

❒ **WARNING!** *Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using tools.*
✗ **DO NOT** use tools if damaged.
✗ **DO NOT** use this tool for purposes other than for which it is designed.
✓ Maintain tools in good and clean condition for best and safest performance.
✓ Wear approved eye protection. A full range of personal safety equipment is available from your Sealey dealer.
✓ Wear suitable clothing and tie back long hair to avoid snagging. **DO NOT** wear jewellery.
✓ Keep children and unauthorised persons away from the work area.
✓ Account for all tools and parts being used and do not leave them in or near the engine.
✗ **DO NOT** use the thread repair set when you are tired or under the influence of alcohol, drugs or intoxicating medicines.
✗ **DO NOT** attempt to start engine or move vehicle, whilst tools are fitted and work is in progress.
✓ Ensure any disconnected fuel pipes are plugged to avoid spillage.
✓ Account for all tools and parts being used, return all parts to the case and store this in a safe, dry, childproof location. **DO NOT** leave them in or near the engine
❒ ***IMPORTANT:*** *These instructions are provided as a guide only. Always refer to the vehicle manufacturer's service instructions, or a proprietary manual, to establish the current procedure and data.*
❒ **WARNING!** Failure to comply with these instructions may result in damage to the thread repair set or vehicle and/or personal injury.
❒ **WARNING!** The warnings referred to in this guide cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.

2. INTRODUCTION & SPECIFICATIONS

Fast and effective remedy for damage to cylinder head glow plug threads. Set includes tools for the precise insertion of threaded inserts into the head and features a unique tap guide system to ensure their correct alignment. Includes 4 sizes of threaded adaptors suitable for common sizes of glow plug. Supplied in storage case.

Specifications:

Model No: VS311.V2
Tap: M14x1.25, M12x1.25, M12x1.0, M10x1.25, M10x1.0, M8x1.0
Inserts:. M12x1.25, M10x1.25, M10x1.0, M8x1.0
Replacement Inserts (Packs of 5): VS311.01 (M8x1.0), VS311.02 (M10x1.0), VS311.03 (M10x1.25), VS311.04 (M12x1.25)

3. CONTENTS

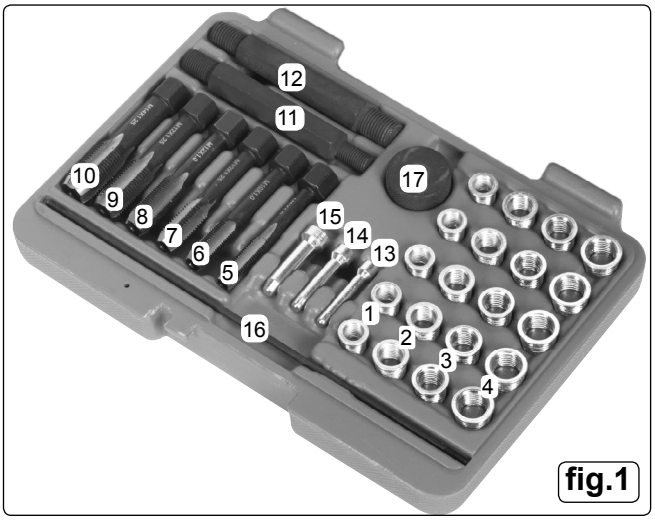

fig.1

Item No:	Part No:	Description:
1	VS311.01	Thread Insert M8 x 1.0
2	VS311.02	Thread Insert M10 x 1.0
3	VS311.03	Thread Insert M10 x 1.25
4	VS311.04	Thread Insert M12 x 1.25
5	VS311.05	Tap M8 x 1.0
6	VS311.06	Tap M10 x 1.0
7	VS311.07	Tap M10 x 1.25
8	VS311.08	Tap M12 x 1.0
9	VS311.09	Tap M12 x 1.25
10	VS311.10	Tap M14 x 1.25
11	VS311.11	Insert Driver M8x1.0 & M10x1.0
12	VS311.12	Insert Driver M10x1.25 & M12x1.25
13	VS311.V2.13	Tap Guide Pin ø8 x 45
14	VS311.V2.14	Tap Guide Pin ø10 x 45
15	VS311.V2.15	Tap Guide Pin ø12 x 45
16	VS311.16	Insert Guide Rod
17	VS311.17	Knurled Head

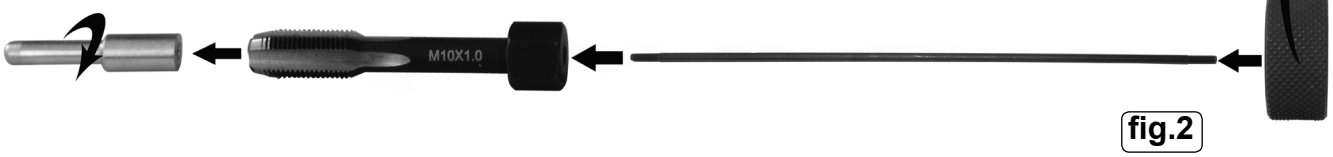

fig.2

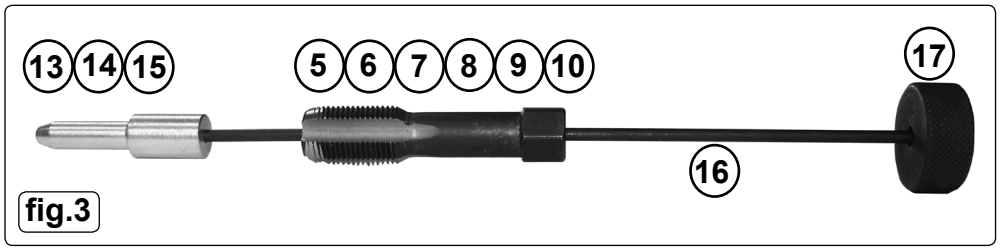

fig.3

4. INSTRUCTIONS

NOTE: To minimise the possibility of damage to the engine, it is advisable to remove the cylinder head from the engine prior to commencing work of this nature. The tap guide system included with this set will significantly reduce the ingress of swarf/debris into the combustion chamber and cylinder. Always wear eye and hand protection when cleaning any swarf/debris from the engine. A full range of personal safety equipment is available from your Sealey Dealer.

4.1. Repairing a damaged thread using a tap

❒ **WARNING! Ensure you have read, understood and apply Section 1 safety instructions.**

4.1.1. Determine the size of the thread to be repaired. This can be done by carefully using the insert drivers to compare with the thread of an undamaged glow plug aperture.

4.1.2. Using the correct size of tap and insert guide, assemble the set as shown in fig.2 and fig.3.

4.1.3. If a ring spanner is to be used, position on the tap before inserting the insert guide pin into the glow plug aperture. Apply a layer of general purpose grease to the insert guide to help prevent swarf/debris from entering the engine and place into the glow plug aperture.

4.1.4. Hold the knurled head (17) and position the guide rod (16) so that the insert guide pin is squarely positioned in the glow plug aperture.

4.1.5. Using a spanner with adequate downward pressure, carefully run the tap down the damaged thread 1/2 of a turn forward then 1/4 of a turn back to repair the damaged thread. Always use a suitable cutting fluid. Periodically remove the tap and insert guide to clean away the swarf/debris. Apply a layer of general purpose grease to the insert guide before re-inserting into the glow plug aperture. Continue until the full length of the thread has been repaired.

NOTE: It is very important to clean away as much swarf/debris as possible during the thread cutting process to avoid any ingress into the engine.

4.1.6. Once the thread has been repaired, ensure that all swarf/debris has been completely removed and carefully fit the glow plug.

4.1.7. Ensure all tools are removed from the engine bay and stored away. Store in a safe, dry, childproof location.

fig.4

Insert/Tap/Guide Configurations (Refer to fig.1 & fig.2)		
Insert Size:	**Tap Size:**	**Guide Size:**
M8x1.0 (1)	M10x1.0 (6)	M8 (13)
M10x1.0 (2)	M12x1.0 (8)	M10 (14)
M10x1.25 (3)	M12x1.25 (9)	M10 (14)
M12x1.25 (4)	M14x1.25 (10)	M12 (15)

4.2. Repairing a damaged thread using an insert

❒ **WARNING! Ensure you have read, understood and apply Section 1 safety instructions.**

4.2.1. Determine the size of the thread to be repaired. This can be done by carefully using the insert drives to compare with the thread of an undamaged glow plug aperture.

4.2.2. Using the table above, assemble the set, as shown in fig.2 and fig.3 with the correct tap and insert guide configuration for the size of insert required.

4.2.3. If a ring spanner is to be used, position on the tap before inserting the insert guide into the glow plug aperture. Apply a layer of general purpose grease to the insert guide to help prevent swarf/debris from entering the engine and place into the glow plug aperture.

4.2.4. Hold the knurled handle and position the guide rod so that the insert guide is squarely positioned in the glow plug aperture.

4.2.5. Using a spanner with adequate downward pressure, carefully run the tap down through glow plug aperture 1/2 of a turn forward then 1/4 of a turn back to cut a thread for the insert. Always use a suitable cutting fluid. Periodically remove the tap and insert guide to clean away the swarf and debris. Apply a layer of general purpose grease to the insert guide to assist with the removal of swarf/debris before re-inserting into the glow plug aperture. Continue until the length of thread cut is sufficient to accommodate the insert. Ensure that all swarf/debris is completely removed from the glow plug aperture.

4.2.6. Screw the insert onto the relevant insert drive (fig.4).

4.2.7. Apply a suitable thread locking solution to the exterior thread of the insert. Screw the insert into the prepared glow plug aperture until the flange at the top of the insert locates at the top of the aperture thread and tighten using a suitable spanner.

4.2.8. Remove the insert driver, taking care not to dislodge the insert.

4.2.9. Allow the thread locking solution to completely cure before fitting the glow plug.

4.2.10. Ensure all tools are removed from the engine bay and stored away. Store in a safe, dry, childproof location.

Environmental Protection.
Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycle centre and disposed of in a manner which is compatible with the environment. When the product is no longer required' it must be diposed of in an environmentally protective way

Butts of Bawtry
Station Yard Bawtry Doncaster South Yorks DN10 6QD UK
Tel: 0044 (0)1302 710868 Fax: 0044 (0)1302 719481
Web: www.buttsofbawtry.com Email: info@buttsofbawtry.com