PISTON SEAL INSTALLATION INSTRUCTIONS

The purpose of PISTON SEAL is to compensate for excessive clearance between cylinder walls, pistons and rings. It does this by forming a pliable, self-lubricating seal.

PISTON SEAL is not designed to remedy broken piston rings, worn bearings, oil leakages from gaskets, etc., but within its scope is an interim treatment for heavy oil consumption and reduced compression. It has a history of success covering 25 years.

Before using PISTON SEAL on a very old engine that has not been dismantled for a long period it is advisable to ensure that the rings are not "gummed in their grooves by using Holts MOTOR TUNE-UP. This product will ensure that the system is in the best condition to benefit from the use of PISTON SEAL.

To install PISTON SEAL is easy but it is important to use the correct method. Read the instructions carefully before starting the treatment.

IMPORTANT

NOT SUITABLE FOR ENGINES WITH CONCAVE HEADED PISTONS, ROTARY ENGINES OR TWO STROKE ENGINES

INSTALLATION PROCEDURE

(1) This pack contains sufficient material to treat engines of up to 4½ litre capacity. For larger engines two packs are necessary.

(2) Squeeze tube from end to end with light pressure to thoroughly mix contents. In very cold weather warm the tube in warm water to assist flow through the rubber tube.

(3) Cut tip of nozzle with scissors or knife. Fix rubber tube *firmly* to threaded section of nozzle and press fully home to the shoulder of the Piston Seal tube.

(4) The engine must be warm to assist the flow of the material. Do not have engine hot as Piston Seal cannot seal if rings and pistons are fully expanded.

(5) Ensure that ignition is OFF.

(6) Remove one sparking plug, turn engine by means of the fan belt or starter motor until the Rotor arm is pointing towards the lead to this plug. Remove the distributor cap to see this. This ensures that the piston is at the top of its stroke and both valves are shut.

(7) Insert rubber extension piece into the sparking plug hole. Push well home to deposit the Piston Seal on the piston crown. The tube contains sufficient to treat all the cylinders as the amount is not critical. Divide the contents of the tube as evenly between the cylinders as possible.

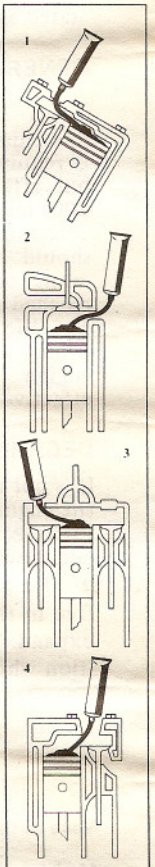
When withdrawing, avoid dripping compound onto the valves. This will not cause damage but could cause difficult starting if the material is thrown back onto the plugs.

(8) Replace the sparking plug but do not tighten completely and treat another cylinder in the same way by following procedures 6) and 7).

(9) Replace the second plug but do not tighten completely. (See diagram on reverse side). Run engine for 5 minutes at the slowest speed possible. DO NOT RACE THE ENGINE.

(10) Allow engine to cool and treat the next two cylinders and so on until treatment is complete. This may be carried out over several days as there is no necessity to treat all the cylinders at the same time.

(11) For the first 30 miles after installation speeds should be restricted to 30 mph and then normal driving resumed.



HOW PISTON SEAL IS INSTALLED IN VARIOUS TYPES OF ENGINES IS SHOWN IN THESE DIAGRAMS:

1. V-TYPE "L" HEAD
2. "I" HEAD,OR VALVE-IN-HEAD
3. "T" HEAD
4. "L" HEAD

Procedure for 2-CYL. or 4-CYL. HORIZONTALLY OPPOSED ENGINES

To obtain the best results with engines of this type the recommended method is as follows: Remove cylinder heads. Then place the compound round the edge of the piston, smearing a small quantity on to the cylinder wall. Replace head, start engine and allow to idle until normal operating temperature is reached. Do not race engine. Car may then be used but speeds should be restricted to 30 m.p.h. for the first 30 miles.

As an alternative to this method follow the installation procedure for normal engines, first jacking the car well up on the side being treated in order that the cylinders may take up a slightly inclined position.

Procedure for STATIONARY, MARINE and TRACTOR ENGINES

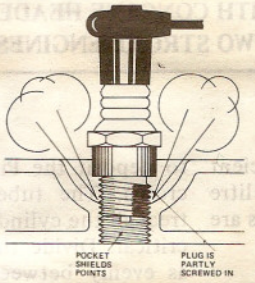
PISTON SEAL may be used on any of these, unless they are one of the engine types stated as not suitable in the warning box overleaf.

GENERAL NOTES

(a) PISTON SEAL does not immediately show results. Time is required for it to "work in", but after 100 miles and up to 200 miles improvements in oil consumption and compression should become apparent. Maximum improvement should be reached after 400 miles running. The life of PISTON SEAL depends on the condition of the engine but normally remains effective for 8,000/10,000 miles.

DECARBONISING

It is not necessary to decarbonise the engine before treating it with PISTON SEAL. Stress is again laid, however, on the importance of the piston rings being quite free in their grooves and able to expand. This is an essential condition which can be obtained by using MOTOR TUNE-UP.



During the initial "running-in" period after the installation of PISTON SEAL, the sparking plugs should not be screwed right home but should be replaced as shown in the diagram to prevent the compound being thrown on to the sparking plug points. While no damage would be caused if this happened, some inconvenience in starting may result as well as necessitating cleaning the plugs.

(b) Excessive clearance between cylinder walls and pistons is caused by frictional wear and corrosive action. Oil starts to leak past the rings. Original compression is lost. Power is weakened. More petrol is required. Pistons become sloppy. PISTON SEAL increases the compression (subject to the compression being below normal). A compression test before PISTON SEAL is used and after the car has been driven 400 miles affords positive proof of its value as a worn cylinder compensator. A table is given below for recording the compression values obtained when tests are carried out.

If for the purpose of valve maintenance the cylinder head has been removed, installation of PISTON SEAL can be carried out in accordance with the recommended procedure for HORIZONTALLY OPPOSED ENGINES.

RECORD OF COMPRESSION

Make of Car _____ Date _____

Model _____ Mileage _____

Year _____ Normal Compression _____

CYLINDERS	1	2	3	4	5	6	7	8
AFTER								
BEFORE								
TOTAL GAIN								