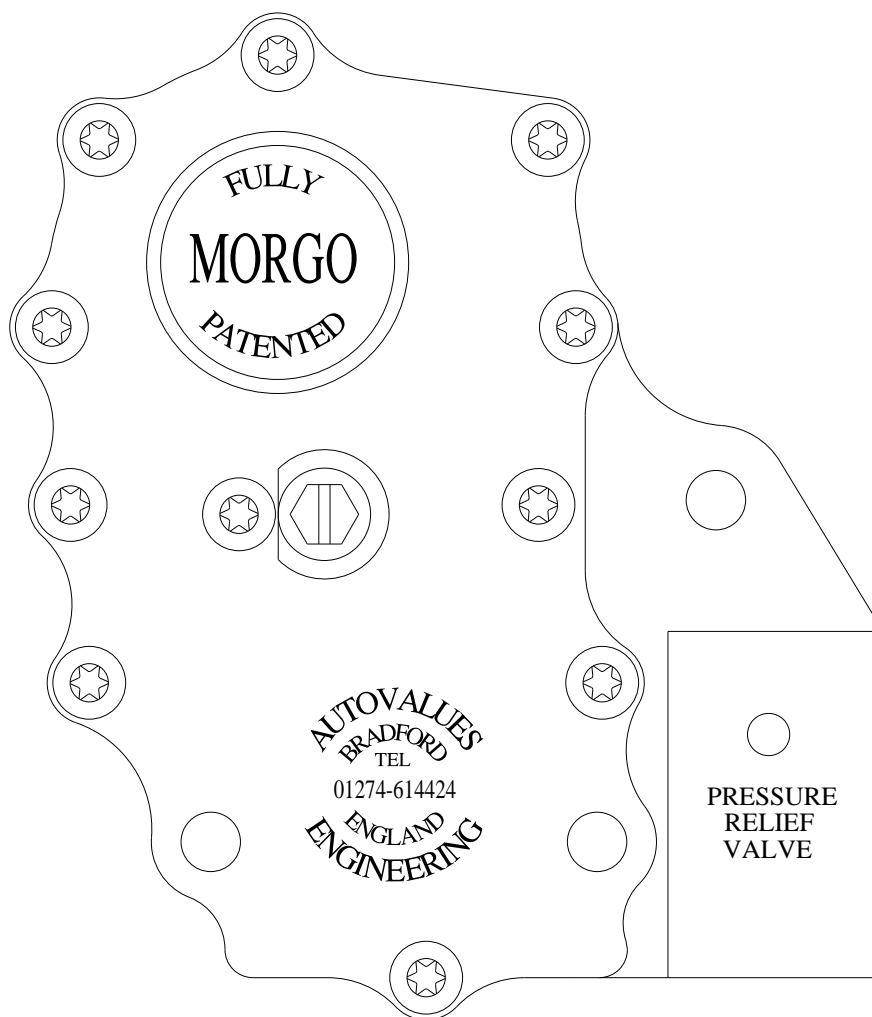


08/04/1998

MORGO®

ARIEL SQUARE FOUR MkII SUPER ROTARY OIL PUMP

(FOR ENGINES FITTED WITH SINGLE OR DUPLEX TIMING CHAIN)



FITTING INSTRUCTIONS

AUTOVALUES ENGINEERING

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1) Drain old oil from oil tank, remove timing cover and the three pump fixing nuts, slacken breather tube union, lift tube up out of the way of the old pump removal path. Remove the old pump and the three fixing studs. Now remove the worm gear camshaft nut (note it is left hand thread).

2) Fit the new Morgo drive nut on to the camshaft and nip up moderately. **NOTE:** On some cams the nut will be a free fit, this is to accommodate for the very wide thread tolerance found on the ariel cam thread, this is not in any way detrimental and is accommodated for in the design of the drive.

IMPORTANT: Push the cam chain wheel up to the face of the engine casing, this is to allow you to set the pump shaft to drive nut clearance.

NOTE: Single chain drive nut is 10mm thick, the duplex nut is 12mm thick. Have you ordered the right one?

3) **IMPORTANT:** In the case of a single drive chain engine offer the new pump up to the engine along with the gasket, temporarily without the drive unit fitted in the pump shaft and secure with the three bolts provided, (in the case of the duplex timing chain drive fit gaskets either side of spacer plate) this is to allow you to test the running clearance between the drive nut and the end of the pump shaft.

4) To set the running clearance, place a feeler gauge blade down the slot in the back of the pump body between the drive nut and the end of the pump shaft, making sure the feeler is between the nut and shaft and not nut and pump body only, set the clearance to .005"/.010" (See Fig 1) by adding shim washers under the drive nut, we have given you a selection of different thicknesses of shim washers in the pump kit.

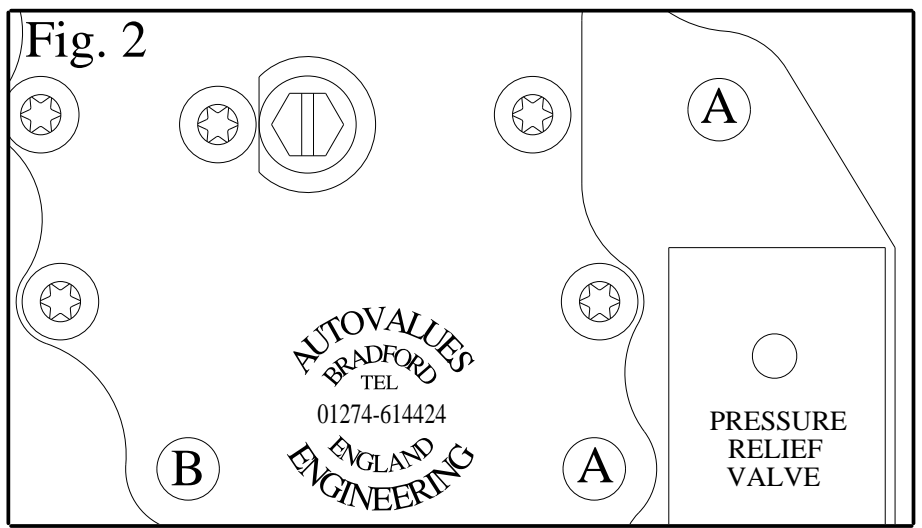
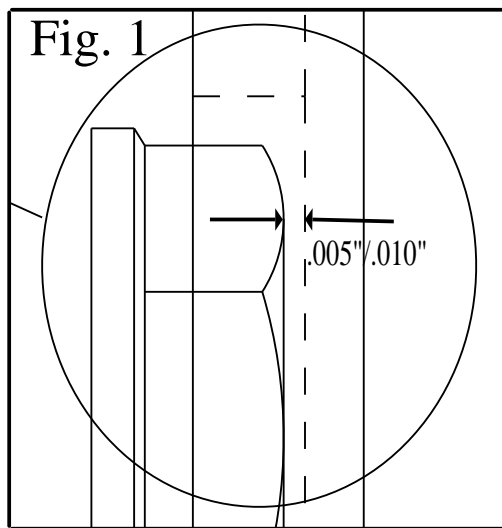
5) Final fixing of the pump. Now you have satisfied yourself the running clearance is ok, remove the pump and pump oil into every hole in the back of the pump, also into the holes in the engine case. In the case of a dry or newly built engine put 1/2 to 3/4 of a pint of oil into the crank case. Now refit the pump complete with drive unit insert and gasket, putting the lock tab washers on bolts marked 'A' and a spring washer on bolt 'B'. (See Fig. 2) Bolt 'B' holds the breather pipe where fitted. If breather pipe is not fitted **do not** use spring washer direct on to pump face, use additional lock tab provided, as the spring washer will damage the pump face.

IMPORTANT

Note the bolts we have provided may be too long, this is because we have found some engines are threaded deeper than others, therefore you have the option of threading the hole slightly deeper to give more thread or shortening the bolts, obviously the more thread there is in the hole the better, making sure the thread is not bottoming before the pump is fully secured. Not forgetting to re-tighten the breather pipe at the outlet end. The breather pipe may need pushing nearer the pump body.

6) Remove the bleed hexagon slotted screw from the centre of the pump, fill the oil tank with oil, allow a generous amount of oil to run out until oil only and no air is present, refit the screw with lock washer firmly, Squirt some oil onto the drive nut down the slot, re-fit outer cover, kick the engine over about ten times without ignition, then start the engine and watch the oil return, as the engine temperature increases so will the oil return flow rate.

Note: The only difference between the duplex and the single chain drive is the thickness of the nut and an additional gasket.



Other products available from MORGO

Triumph parts

750 Big Bore Kit in Cycle or UNF.

Tappet blocks Standard and Thruxton.

Rotary oil pumps Unit and Pre-unit (for 500, 650, 750 engines).

Plunger oil pumps two valve Unit and Pre-unit (for 350 to 750 engines).

Hex drive crankshaft bungs (7/8" and 11/16" with BSF or UNF threads).

Triumph spares

750 Big Bore kit head gasket (low and high compression).

Cylinder base nuts (stainless steel).

Pistons Std, +.020 and +.040.

Ring sets Std, +.020, +.040, +.060.

Gudgeon pins & Cir-Clips.

Oil pump gaskets Unit (Black) and Pre-unit (Red).

Rotary drive nut set (Drive nut, Coupling & Shims). Rotary bleed screw and tab washer.

Rotary BSF bolt set for fine thread engines.

Con-rod nuts only.

BSA parts

Hex drive crankshaft bungs (7/8" BSF threads).

Ariel oil pumps

Mk1 Rotary oil pump. For engines 1937-1953 4G Iron 1000 + 600, 4G Mk1 1000

Mk2 Rotary oil pump. For engines fitted with single and duplex timing chain.

350/500 Single Rotary oil pump (VH,RH etc.)

Ariel spares

Rotary drive nut set (Drive nut, Coupling & Shims). Bleed screw, tab washer, fixing bolts.

Oil pump gaskets (Black).