

# THE PRESSURE IS ON!

There is not an Ariel Square 4 owner alive who isn't constantly concerned about his precious engine getting sufficient oil supply. Given the well-known propensity of these beautiful engines to build up sludge in the crankshaft oil passageways (appropriately identified by the factory as "sludge traps"), frequently resulting in oil starvation to the rod bearings, oil flow is a concern.

A wise owner whose bike is not equipped with any external indication of oil pressure, will check for proper oil return at the oil tank EVERY TIME the engine is started.

Of course, evidence of oil return to the tank, or pressure from an external gauge, is not sufficient insurance against those easy-to-clog crankshaft passages. Restriction of those passages can only be confirmed by a full engine teardown, removal of the "sludge trap" plugs, and determining those passages are clear. A daunting task, no doubt, but trivial compared to the consequences of a destroyed engine. If you are a Square 4 owner and do not have first hand details of the history of your engine, please, please.. I urge you to consider this recommended remedy before you join the ranks of the claimed 60% of Square 4 owners who have experienced a broken rod, or worse (as I did).

One highly regarded recommendation for these engines is replacement of the original, failure-prone oil pump with a much higher-capacity and more reliable Morgo oil pump. In the long run, the \$300-400 cost of this pump is trivial insurance for a reliable flow of oil.

I have added the Morgo to my newly-rebuild/recovered engine. Installation couldn't have been simpler, and I can now be assured of summertime operating pressures of 50-60 PSI at cruise, and 20 PSI at idle.

Nevertheless, I have felt a need for an external oil pressure gauge so I can confirm positive oil flow just as soon as I start the engine. It is a shame that Ariel abandoned the in-tank oil gauges of their earlier models.

Aftermarket external oil gauges for British bikes typically rely on connection to the banjo bolt fittings at the rocker arm feed lines, usually at the point they attach to the head. Unfortunately, the flared/nut fittings on the Ariel external lines don't readily lend themselves to an external connection. I have seen some of the most gawdawful home made solutions for our bikes.. clumsily soldered "T" connections accompanied by a variety of fittings from the plumbing department of Home Depot. All of these solutions appear dubious at best, and interfere with the clean lines of the engine. Here is one

example (not recommended!)



I had previously purchased a gauge kit specifically designed for my Norton Commando, that was bolt-on simple, inexpensive, and elegant in design. The vendor is from, of all places, Greece, but he advertises regularly on eBay and has a 100% positive feedback rating, under the eBay seller name "tr\_triple". Based on my positive experience with the Norton installation, I contacted him:

Ioannis Neokosmidis [ioannisneokosmidis@gmail.com](mailto:ioannisneokosmidis@gmail.com), and described the Ariel setup, along with pictures. To my great surprise "John" (his English nom de plume) agreed to engineer a custom solution specifically for the Ariel AND at no additional markup over his "standard" British kits.

His solution is very elegant: He machines a special, extended length hollow oil feed stud to replace the original stud located at the aft, lower timing side of the crankcase, the fitting that feeds the external rocker oil supply line. This extended length stud allows the stacking of the original banjo fitting from the stock supply line along with his provided second banjo fitting which connects to the oil pressure gauge line. Here is what the completed installation at the crankcase looks like.. out of sight, out of mind:



I found ample clearance room to remove the old stud (a high quality stud remover socket is recommended) and replace with the new longer one. You can see the provided nylon sealing washers that go between the two banjo fittings and the crankcase, which have proven to be completely leak free.

The new gauge fitting attaches to a provided small-diameter nylon line, attaching at both ends (including at the gauge) via tiny compression fittings, again proving themselves to be completely leak free.

Finally, the kit is completed with a polished billet aluminum handlebar clamp, along with a small-face gauge that could very easily have been original equipment on this bike.



I couldn't be happier with the finished results, and with the added peace of mind from knowing I am able to constantly monitor my oil pressure while riding.

This article is by no means an endorsement of this vendor or the product, but merely intended to relate my own experience and pass along his contact information.

Phil Auldridge  
1953 Ariel Square 4 Mk II