G557STRIP 4.0LTR V8 Engine

Specification:
The development of the Rover V8 engine from the original 3.5ltr (3532cc) to 4.0ltr (3946cc) ran from the late 60s to late 90s. The supplied engine is drawn from factory tooling benefiting from 30+ years of modification and development so the essence of the MG factory V8 design remains and is the same albeit with a slightly increased displacement. Our engines are remanufactured by an official Land Rover manufacturing company within the UK. The 4ltr Rover V8 blocks are cross bolted for strength as it was noted that the earlier non cross-bolted engines used on MGs and SD1s were inherently weak in the crank. Our cross bolted Rover V8 4ltr engines will fit straight into an original MGB V8. Engines are supplied with Range Rover 3.9 cams with 285° duration. For further details refer to Range Rover Workshop Manual.

Supplied as follows:

- Stripped and untested (as per the Land Rover remanufacturing specs written and signed off by Land Rover Engineering, which doesn't specify for them to be tested.
- Compression ratio 9.35:1
- Includes camshafts, valves, timing chain, timing chain gears and sump.
- Supplied in wooden packing crates.
- Wrapped in polythene impregnated with corrosion inhibitor.
- Timing chain and gears wired to prevent their sliding off during handling.
- The right hand front main bearing cap bolt is recessed into the block to aid clearance of the original MGBV8 oil pump.
- On mid 90s Rover V8 engines using the Hotwire GEMS 8 Lucas EFI system, an alloy circular mounting boss will be present on rear left hand lower side of the block. This component is identified as part number ERR3693 and is designed to accept crank sensor NSC100690. In a non GEMS 8 ignition configuration it will be necessary to fix a simple metal strap to blank off the crank sensor mounting. This is a dry environment so the purpose only being to keep dust out.

NB Please check the engine thoroughly on arrival and contact us asap in the event of any issue.

To complete the following parts will be necessary:

- Crank Spacer (G557CRANKSPACER)
- Front cover (610391Z)
- Oil pump (BHH998)
- Water pump (GWP310) – Gasket included with water pump
- Water Pump Gasket (610756B)
- Flywheel & Ring gear
- Rocker covers (BHH1208/9)
- Rocker Cover Gaskets (AJM436B x 2)
- Inlet/Valley Gasket (OE Tin AJM693B) or improved LKJ500020 (Requires ERR7283 x 2)
- End Inlet/Valley Gasket Seals (GUG4033MG x 2 or ERR7283 X 2)
- If fitting composite valley/inlet gasket x2 ERR7282 manifold clamps required.
- Exhaust Manifold Gaskets (RV8 Spec GUG704448MG x4)
- Oil Pump Gasket (90602072)
- Front Cover Gasket (603775B)
- Oil Seal Crank Front (602178A)
- Oil Seal Crank Rear (611409)
- Oil Filler Cap (625038A) – reusing original is fine
- Sump Gasket (AJM539B) – sump included
- Breathers
- Carburettors with Inlet manifold (G008 Edelbrock- see separate data sheet) or Throttle Body with plenum chamber.
- Ignition (Distributor or EFI)
- Spark plugs (see set-up advice) and leads
- Alternator (GEU218X or GNU2398)

- Starter motor (GXE4442X)
- Drive belt (Std MGBV8 GCB11125)
- Rover Dipstick (ERR1922L) 547mm in length from the locating cap to the end. The original MGBV8 dipstick is 527mm. The original can be easily modified to provide 2cm further reach.
- Oil Cooler housing (BHA5286)
- Oil Gauge Pipe Braided (G128C)
- Modified Heater Adaptor (BHH1065X) – where using Offenhauser Inlet Manifold
- Heater Valve (BHA5297)
- Optional High Capacity Oil Pump Extension (G167) with 27mm gears + mandatory Uprated Oil Pump Spring (602067) available to increase oil capacity and increase pressure at idle & high rpms.

Please Note that the above list is not exhaustive, gaskets, fasteners, hoses have not been detailed. For more detailed part information please visit www.mgocspares.co.uk

Set up Advice:

It is not possible to provide settings due to the myriad of ignition and fuelling options available but where built to original MGB GT V8 specification, i.e with HIF44 carbs and distributor) we recommend the following

- Spark Plugs either BP5ES or BP6ES ¾" 19mm with 0.025-0.028" gap.
- As a starting point from which further alteration may be made, advance set to 10° at idle (vacuum off).
- High Octane Fuel only, not less than 97Ron.
- We do not recommend the use of waterless coolants.

PRIMING, INITIAL START-UP & RUNNING-IN PROCEDURES:

- To prime the engine before start-up Vaseline should be used to plug up the oil pump and distributor drive gears in the oil pump base. Disable the ignition, remove the spark plugs and coat the valve train with engine oil/running-in oil. Crank the engine on the starter motor for no more than 10 seconds, then rest the starter for 10 seconds and repeat crank for a further 10 seconds. This cycle should be carried out for three sessions until pressure begins to register on the oil pressure gauge (alternatively a specialist V8 cranking tool may be used to avoid stress to the starter motor by attaching to a variable speed combi drill, note this requires distributor removal). If no pressure registers on the gauge after three cranking sessions do not proceed to start the engine. Investigate to establish proper oil circulation. Refit the spark plugs and connect ignition.
- Use a running oil for the first 500 to 1000 (max) miles.
- On initial engine start-up run the engine between 1500 to 2000 rpm for 20 minutes to bed the valve-train in and ensure best oil flow. Monitor for any oil and coolant leaks, stopping if any become apparent.
- During the running in process you must avoid labouring the engine e.g driving in 5th gear, at a low rpm whilst going up a hill instead change down to achieve a higher mid-range rpm.
- You should also avoid holding the engine at a fixed RPM when driving at a sustained speed and duration i.e don't sit at 70mph on the motorway/dual carriageway in 4th or 5th gear for an hour's driving, instead you should drop down to 3rd or 4th gear to increase the RPM for five minutes before returning to top gear and lowering the rpm. Cycling through every 15minutes or so until you're off the motorway/dual carriageway
- It's recommended to keep cycling through the gears at mid-rpms to avoid glazing the bores.
- Do not red line the motor!
- After you've completed the running in process (500-1000miles) you change the oil
- Renew oil filter and fill with 15w 40 Mineral oil (5-5.5ltrs required fill). We do not recommend semi or fully synthetic.

Insurance:

The performance of the supplied Rover V8 engine 4.0Ltr (3946cc) is likely to exceed the nominal 119Bhp of production MGB GTV8s originally fitted with 3.5ltr (3532cc V8 engines). It is the vehicle owner`s responsibility to notify their insurer of any increases in performance. An accurate figure can only be obtained via a rolling road session and dependent upon the specification of ancillary equipment and final set up. Depending on configuration it is not uncommon for 4.0ltr Rover V8 engines to produce in the region of 185-200 Bhp.

Engine identification:
Engines are stamped `VP`MONTH/YEAR/BUILD NO.
Original engine numbers are removed when the block is refaced where still visible bear no relation to the specification of the engine supplied.

If you require further installation advice please contact sales@mgocspares.co.uk
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