



VR Remanufactured Engine Procedures

Inspection

- 1.) Once the engine has been received, a visual inspection of the engine is made; the engine is then checked for missing or unusable engine components. The customer will be notified of any discrepancies that may result in additional charges, such as missing or damaged components.

Disassembly

- 1.) Complete tear down of engine and components.
- 2.) Inspect for any cracked / broken major components such as the engine block, cylinder head, manifolds and any castings.

Scope of work performed

- 1.) The engine block, head and crankshaft are sent to the machine shop where they are magnafluxed and checked for discrepancies.
 - A.) Engine block: New lower counter bores installed and machined in all six cylinders, Line bore is checked and machined if necessary, all bolt holes are tapped and surfacing done if necessary.
 - B.) Cylinder head: Cylinder head is pressure tested and resurfaced if necessary. All wear parts are replaced such as guides, valves, seats and stem seals.
 - C.) Crankshaft: Connecting rod journals and main bearing journals are inspected, measured and polished to the manufacturer specifications. If the crankshaft does not meet standard specs it will be replaced with a new one.
- 2.) All engine components are washed and cleaned of debris and gasket material.

Assembly

- 1.) The following items are replaced with new factory OEM parts.
Carburetor, belt tensioner bearing, governor, governor linkage, main bearings, rod bearings, connecting rods, cam bearings, complete gasket set, piston, wrist pin, snap rings, piston rings, liners, liner O-rings, coils, spark plugs, spark plug wires, wiring harness, fan hub bearing, water pump, oil pump, camshaft, lifters, belts, thermostat, hoses and cam plug.
- 2.) Rocker arm assembly is rebuilt or replaced with new if out of tolerance.
- 3.) All engines will receive the following updates.
 - A.)New style valve stem seals
 - B.)New style Piston
 - C.)New style Governor oil lines
 - D.)New style water pump
 - E.)Upgraded gasket materials
 - F.) New style rocker arm oil tube

Engine test and detailed

- 1.) Upon engine completion, it will be load tested and observed for 1 hour under normal operating conditions for any fluid leaks or operational discrepancies.
- 2.) A detailed load bank report will be documented and filed for reference.
- 3.) Engine will be painted primer gray
- 4.) Engine will be detailed, bagged and ready for shipment.