PETROL CYLINDER COMPONENT TROUBLE TRACER CHART

PISTON PIN SEIZURE
Symptom: Engine noise.
Cause: Foreign matter entering combustion chamber and becoming trapped between piston and cylinder head.
Remedy: Replace damaged components. Ensure that the piston pin has the correct clearance and that it is seated securely in the connecting rod. Check that the connecting rod is properly and adequately lubricated and that it is aligned correctly.

EROSION OF PISTON SKIRT ADJACENT TO PISTON PIN HOLE. THE MATERIAL SOMETIMES APPEARS TO HAVE MELTED DAMAGE TO CYLINDER BORE.
Symptom: Engine noise, oil consumption.
Cause: Foreign matter assembled with piston, in pin bore, head springs, and connecting rod. Fuel, lubricant, and coolant mixed in the piston pin hole causing corrosion of the cylinder bore.
Remedy: Correct any piston or connecting rod misalignment. Replace damaged components. Replace damaged components.

FRACTURE OF PISTON RING LAND (NOTE FRACTURE ANGLE)
Symptom: Engine noise.
Cause: Foreign matter entering combustion chamber and becoming trapped between piston and cylinder head.
Remedy: Foreign matter entering combustion chamber and becoming trapped between piston and cylinder head.

SEIZURE OR SCRUFFING OF PISTON SKIRT THRUST FACE (NON-THrust FACE REMAINS RELATIVELY UNDAMAGED)
Symptom: Engine noise. Some power loss.
Cause: Oil starvation, possibly during initial use.
Remedy: Correct any piston or connecting rod misalignment. Replace damaged components. Ensure that the piston pin has the correct clearance in the connecting rod.

VERTICAL SCRATCHING OR SCRUFFING OF PISTON SKIRT. PISTON RINGS AND CYLINDER BORE MAY ALSO BE DAMAGED BY VERTICAL SCRATCHING.
Symptom: Oil consumption.
Cause: High combustion temperature.
Remedy: Clean and inspect all engine components. Clean all airways. Ensure that oil and all filters are clean and filtered with correct filter elements. Check the integrity of all connections. Replace damaged components. Replace damaged components.

INCORRECT (DIAGONAL) SKIRT CONTACT
Symptom: Oil consumption.
Cause: Incorrect or non-uniform contact between piston skirt and cylinder bore.
Remedy: Check that the piston pin is correctly fitted. Replace damaged components.

PISTON SEIZURE. SKIRT CONTACT AREAS MAY APPEAR SMOOTH AND POLISHED.
Symptom: Engine noise.
Cause: Insufficient piston skirt to cylinder running clearance.
Remedy: Check cylinder bore size and correct if necessary. Ensure that the piston rings are seated correctly.

HOLES IN PISTON CROWN. CROWN EDGE BURNING.
Symptom: Oil consumption, loss of power.
Cause: Excessive combustion chamber pressure. Overadvanced ignition setting. Increased combustion rates.
Remedy: Establish cause, and correct. Replace damaged components.

ACCELERATED SIDE FACE WEAR OF TOP COMPRESSION RINGS (OTHER RINGS MAY BE AFFECTED TO A LESSER DEGREE)
Symptom: Oil consumption, loss of power.
Cause: Oil starvation, possibly during initial use.
Remedy: Ensure that the piston pin hole in the crown is aligned correctly.

PISTON RINGS TRAPPED IN THEIR GROOVES. RAPID WEAR OF PISTON RING OUTER SURFACE.
Symptom: Oil consumption.
Cause: High combustion temperature.
Remedy: Ensure that the piston pin is correctly fitted. Ensure that the connecting rod and piston are properly aligned. Replace damaged components.

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