

Trouble shooting (causes and remedies)

Objectives : At the end of this lesson you shall be able to

- **causes and remedy for engine does not start**
- **causes and remedy for high fuel consumption**
- **causes and remedy for over heater**
- **causes and remedy for low power generation**
- **causes and remedy for exercise oil consumption**
- **causes and remedy for low oil pressure and high oil pressure**
- **causes and remedy for engine noss**
- **causes and remedy for engine does not start.**

Engine does not start

Probable causes	Remedies
Low fuel in tank	Fill fuel
Choked fuel hose	Replace
Clogged fuel filter	Replace
Air lock in fuel system	Blocked the air lock
Clogged exhaust ports	Clean
Reptured cylinder head gasket	Replace
Worn piston rings	Replace worn piston and rings
Broken valve turning belt/chain	Replace
Poor valve cycasting	Repair
Value seat pitted	Replace
Main fuse is blown off	Replace
Defective starting relay	Repair/Replace
Main ignition switch open circuited	Repair or Replace
Defective brushes in started	Replace
Open in field or armature circuit of starter	Repair/Replace
Loose battery terminal connection	Clean and retighten
Run down battery	Recharge

High fuel consumption

causes	Remedies
Wear compression	Replace pistoning/lime/piston
Fuel leakage in fuel system	Repair or Replace
Idle speed adjusting screw set in correctly	Adjust as prescribed
Clogged /dirty air filter	Replace or clean
Leakage of combustion gases from cyliner head	Retighten or replace head gasket
Value inproper scating	Repair
Value clearance inproper adjustment	adjust as prescribed
Injector defective	Overhand the injector
Inter cooler defective	Repair or Replace
Wrong injection timing	Set proper timing
Defective fuel pump	Overhand

Engine overheating

Causes	Remedies
Excessive carbon deposit in engine	Decarbonise
Loose or broken fan belt	Adjust or replace
Not enough coolant	Clean or top up coolant
Lack of lubrication	Top up engine oil
Erratically working thermostak	Replace
Radiator cores tubes clogged	Repair or Replace
Poor water pump performance	Repair or Replace
Wrong injection timing	Set proper timing
Leaky radiator core tube	Repair
Checked silencer	Clean
Closed radiator shutter	Open
Closed radiator fuel	Straighten the fuel
Clogged oil filter	Replace
Poor perfomance of oil pump	Repair or replace

Low power generation

causes	Remedies
Leaky cylinder head gasket	Replace
Improper valve seating	Repair
Broken valve spring	Replace
Worn piston ring/bore	Replace or rebore
Piston rings sized in grooves or broken	Replace
Exhaust port clogged	Clean
Weak compression	Adjust valve clearance
Defective fuel feed pump	Repair or Replace
Clogged fuel filter	Replace
Clogged air cleaner	Replace
Wrong injection timing	Set properly
Wrong tappet clearance	Adjust correct clearance
Defective injector	Repair or Replace

High oil consumption

causes	Remedies
External oil leakage	Rectify the leakage
High oil level	Remove excess oil
Valve oil seal damaged	Replace oil seal
Piston/rings wornout	Replace piston/rings
Engine oil low viscosity	Replace the oil
Oil reaching in exhaust manifold	Replace exhaust valve guides and valve stems
Oil reaching to combustion chamber	Replace the piston rings

Low oil pressure

causes	Remedies
Low oil viscosity	Replace oil
Oil strainer blocked	Clean
Wornout oil pump gear	Replace gears
Strainer pipe mounting loose	Lighten
Defective oil pressure gauge	Replace
Defective pressure relief value	Replace
Crank/camshaft bearing wornout	Replace bearing
Low oil level in the sump	Top up

High oil pressure

causes	Remedies
High oil viscosity	Replace oil and use correct viscosity
Defective oil pressure gauge	Replace
Defective pressure relief value	Replace or adjust correct value
Oil passages blocking	Clean the oil passages
High oil level in the sump	Frain and replace at correct level

Engine noise

causes	Remedies
Wornout gudgeon pins	Replace
Wornout piston and rings	Replace
Piston ring broken	Replace
Vehicle over load	Avoid over loading
Tighten wheel bearing	Adjust
Clutch slipping	Adjust or Repair
Big and bearing wornout	Replace