ENGINE
TROUBLE - SHOOTING
CHART

Agricultural, Mining and Road Construction Machineries Engineering

CAUSES

COMPLANITS	Air / Exhaust System					Fuel System											Lubricating System									Cooling System				Maintenance Operation				Mechanical System																						Electrical System			
	Dust Entry in Air Inlet System	Dirty / Clogged air cleaner	High exhaust back pressure	Derating due to altitude	Derating due to temperature	No fuel	Poor quality of fuel	Air in fuel line	Chocked fuel line	External / Internal fuel leakage	Chocked fuel injector holes	Damaged or dribbling nozzle	Loose H.P. pipe connections	Dirty / Choked fuel filter	Control lever setting wrong	Faulty fuel pump	Water mixed with fuel	Wrong grade of lub. oil used	Dirty / choked suction tube strainer	Oil cooler choked	Lub oil dilution	Dirty / Clogged oil filter	Clogged oil passage	More oil in the sump	External and internal leakages	Faulty oil pump	Dirty air cooling fins	Loose fan belt	Air leakages through cowling	No water in Radiator	Engine over loading	Engine used after a long time	Wrongly adjusted tappets	Prolonged Oil Change Period	Blown head gasket	Valve leakages	T.C. compressor seal leaking	T.C.Turbine side seal leaking	Broken worn out piston rings	Excessive end play in crankshaft	Worn out liner & piston	Incorrect bearing clearance	Damaged main & connecting brg.	Worn out valves & valve guides	Incorrect valve & fuel timing	Injector needs adjustment	Engine seized	Faulty governor setting	One or more cylinders not working	Loose mounting bolts	Loose flywheel/Alignment wrong	Engine needs overhauling	Fuel pump rack stuck in stop position	Battery run down/under rated battery used	Faulty starter	Battery of wrong capacity	Loose or dislodged wiring
Engine will not start.		o	o			o	o	o	o	o	o		o	o	o	o															o	o		o	o							o							o	o	o	o	o
Engine fails to rotate.																															o			o	o													o			o	o	o	o
Engine has starting difficulty.		o	o				o	o		o	o	o																			o			o			o				o	o			o			o	o	o	o	o
Engine starts but stops after some time.		o				o		o	o		o			o		o	o														o			o			o				o		o		o			o	o	o	o	o
Engine lacks power.	o	o	o	o	o		o		o		o		o	o	o	o	o										o	o				o		o	o	o	o	o		o		o		o	o		o	o		o				
Engine misfires during operation .								o			o	o				o	o														o			o	o										o			o						
Engine speed does not remain constant.									o		o	o		o		o																													o			o						
Engine does not reach governed speed.									o					o	o															o																o									
Excessive smoke at no load.		o										o				o															o	o		o	o		o		o	o	o		o	o		o	o		o				
Excessive smoke at full load.	o	o		o	o		o				o	o			o	o												o	o		o			o		o	o	o	o	o	o	o	o	o	o		o	o		o				
Engine overheat.	o	o	o													o		o	o			o					o	o	o	o	o	o					o	o	o	o	o		o		o			o	o						
Engine gives out blue smoke.																		o						o							o											o												
Engine gives out white smoke.																	o																																							
Excessive fuel consumption.	o	o	o				o			o						o														o		o	o		o		o	o	o		o	o		o	o		o				
Mixing of diesel with lub oil.										o		o				o														o						o		o				o	o			o						
Excessive oil consumption.	o	o																o					o	o					o							o	o	o		o			o										
Low lub oil pressure.	o	o																o	o	o	o	o	o			o				o		o	o						o	o	o						o						
Bearing wear.	o																	o	o	o	o	o	o			o						o												o									
Excessive liner & piston ring wear.	o	o					o											o				o				o	o			o			o											o				o					
Excessive valve & valve guide wear.	o	o																o				o										o										o										
Braeking of valve springs.																		o				o										o	o									o										
Diesel knock.							o									o																																						
Mechanical knock.																															o					o	o	o	o	o														
Excessive vibration.																																																							
Engine rotates very slowly during starting.																																																							
Battery runs down frequently.																																																					o	o	o	o
Excessive fuel injection equipment wear.							o							o			o																																						