

Engine Failure Analysis

By Powergensetparts.com

Failure to start

- 1 the fuel system with the air, no oil in pump or oil intermittent supply.
- 2 injection timing is wrong.
- 3 piston rings, cylinder liner wear serious.
- 4 battery is dead.
- 5 Starter skid.
- 6 air filter clogging.
- 7 exhaust pipe blockage.

The power in shortage or power sudden drop down

- 1 air filter clogging.
- 2 valve clearance is wrong.
- 3 lack of compression pressure.
- 4 the fuel system with the air or blockage.
- 5 injector atomization is bad.
- 6 diesel engine overheating.
- 7 exhaust pipe is not smooth.

Abnormal sound when running

- 1 injection oil is too early, given the crisp sound of metal percussion rhythm.
- 2 fuel injection time is too late, producing a low clear voice.
- 3 plunger touch the valve piston, cylinder head low when heard near the metal percussion.
- 4 crankshaft and connecting rod gap is too large.
- 5 crankshaft and the crankshaft gap is too large.

The blue smoke

- 1 string of oil, piston rings upside down, Stuck or excessive wear.
- 2 valve and catheter clearance is too large.

The white smoke

- 1 injector atomization quality is not good, there are drip phenomenon.
- 2 The fuel with too much moisture.
- 3 The cylinder with water.

The Black smoke

- 1 diesel engine overload.
- 2 oil injection is too much.
- 3 oil supply is too late.

- 4 valve clearance or valve does not seal well.
- 5 air filter clogging.

Lack of oil pressure

- 1 engine oil pressure gauge is damaged.
- 2 machine oil is too little.
- 3 machine oil is too thin.

Oil temperature is too high

- 1 diesel engine overload.
- 2 lack of or too much machine oil.
- 3 piston rings leak seriously.

Cooling water is too high

- 1 Water temperature gauge or sensor plug is damaged.
- 2 lack of cooling water.
- 3 pump flow rate.
- 4 diesel internal blockage.
- 5 radiator is not good.
- 6 diesel engine overload.

Non-oil supply

- 1 pump failure.
- 2 diesel fuel or oil filter clogging.
- 3 oil pipeline with the air.

Automatic stop suddenly

- 1 crankshaft and bearing bush locking.
- 2 piston and cylinder locking.
- 3 the fuel system into the air.
- 4 the fuel system into the air.
- 5 air filter clogging.

Generator fail to power

- 1 carbon brush is still or not.
- 2 diesel engine less than speed.

The first step, add oil, to oil-foot scale. (Less down-cylinder, much of the tile. leakage Oil.)
Add Water, to fill. Power to run three minutes, the waters, coupled with dissatisfaction.
(Less cylinder)Battery, 24V. Positive then the starter, the negative terminal. Diesel fuel,
excluding air.

The second step, new car boot, 10-20 minutes idling rotation, will help the distribution of
oil to each hole, lubrication system is guaranteed, a small abrasion on the machine. See
oil pressure gauge, no pressure allowed to start the machine, identify the causes and
remove the cause.

Slow speed, reach 30HZ, 900 rpm or so, idling for 20 minutes. Added to 50HZ, 1500 forward, idling for 20 minutes.

The third step, the new car run is completed, the speed should reaches 54-58HZ, add the load to drive the load, HZ will decline, HZ should reach 50HZ, 50HZ is the standard 1,500 rpm, driving load of 50HZ.

Maximum ammeter should be 90A, diesel engine is 56KW, the motor is 50KW, the maximum can not exceed 90A, a big burning motor, not three bags.

Diesel engine load should be 80%, the maximum load on the machine wear is relatively large.

The fourth step, pull the load, and often see water meter, fuel gauge, oil pressure gauge, water, oil up to a maximum of 95 ° to 105 ° hydraulic table can not be less than 0.2.

The fourth step, stop, you must first send the load off the gate, not directly off the throttle, off load, the speed should be slowly going down, the temperature dropped, 1000 rpm, 40HZ, for 5 minutes, idling for 10 minutes before stopping.

With load, high-speed operation of parking, vehicles may be explosive death, car high temperature, cooling water can not be timely, oil, lubrication can not be given, blew up. No warranty.

The fifth step, stop end cars, the winter should turn on the water. If you do not turn on the water, cold water will break the body, no warranty.

The sixth step, before driving, you must check, oil and water.

Maintenance

Diesel generators worked 1,000 hours, should be replaced by oil, oil filter, fine filter, diesel filter, air filter.

Maintenance of the machine is good, the filter inside the miscellaneous things that can be immediately removed, the use of the machine long life.

Diesel engine running standard

Run-time engine operation is not less than 60 hours, running load. Time using the following specifications;

Engine load operation time

Idle 10 minutes

25% two hours

50% of the 15 hours

75% of the 30 hours

100% of the 15 hours

Check oil pressure, engine with or without sound and so on.

During engine running, at full throttle external, load values can be estimated based on the wear of the load, but must have the small load gradually loading principle.