



Below are areas to look at when you note problems with natural gas engines. This type of engine must be handled differently than their diesel engine counterparts. When looking for a reason of failure we must play detective and rule out the possibilities. When looking at a problem with this type of engine think about the following:

- If you note electrical pitting in the bearings and crankshaft area look on the oil side. This type of pitting usually indicates the electrical current flowing through the oil. You usually will not see the electrical ground problem on the coolant side.
- It is important to know at what temperature the engine is running. Standby engines sit cold and when they are brought up to engine temperature the temperature must be above 190°F to burn off any moisture. If the engine is allowed to run cold it has a tendency to make nitric acid.
- It is important to check the oil samples to see what the sulfate and nitrites are doing. If they are high, this is a good indication of combustion gases.
- It is important to know what the procedures are for operating the engine. Are they running then engine up to operating temperature once a week, bi-weekly, or once a month? Do they get it up to operating temperature so that all moisture is burnt off? If they just get the oil hot enough to expand the oil then shut the engine off and the oil contracts this will not burn off moisture. Over time this will cause nitric acid to form.
- Is there an air or electric starter on the engine? If it is an electrical starter then do they have an automatic battery charger on the system? It will eat it alive.
- An engine manufacturer was having a problem with their engines. They couldn't understand why they were getting eaten up. They had hooked up two starters on this engine, one on each side, and grounded the starters on each side of the engine block. These must be grounded to one side of the engine and not the block.