

Gas Fuel Filter Change Instruction

for

YAMAMA GT6 - GT9

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1 Introduction

1.1 Purpose of the document

The purpose of this document is to give instructions how to replace the gas fuel filter.



Warning! Use care when working with gas fuel due to the high risk of explosion.

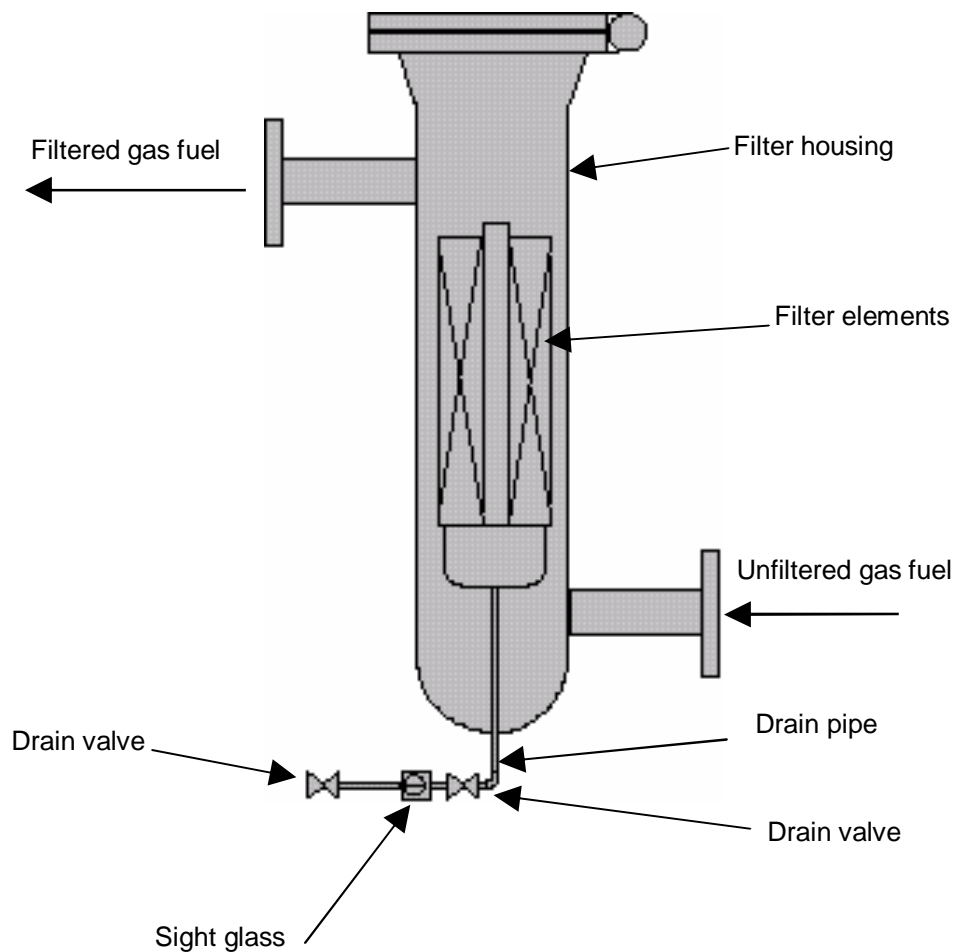
Before any action is taken, read the document *Maintenance Safety*.

2 Description and preparations

2.1 Description of the gas fuel filter system

The gas fuel system contains two parallel coalescer filters (2x100%), which serves to protect the gas turbine from solid and liquid particles. The unfiltered gas enters at the lower part of the gas fuel filter, passes through the filter and then passes out at the upper part of the filter unit. Liquid is collected in the drainpipe at the bottom part of the filter housing. See *Figure 1* below.

Figure 1: Gas fuel filter unit



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2.2 When to replace filter elements

When an alarm occurs due to high differential pressure (>0.5 bar) across the dirty filter elements at normal operating conditions, the dirty filter elements must be replaced.

Replacement of filter elements can be done during operation on gas fuel.

Before replacing the filter, find a small bucket for liquid and spanners for dismantling the filter housing and the filter elements (see sub-suppliers documentation for dimensions).



Warning! A mixture of air and gas fuel is extremely explosive.

Smoking is not permitted in the enclosure.

Replacement of gas fuel filter elements is only allowed to authorised personnel.

3 Replacement instruction

Caution! It is of utmost importance that the gas fuel filter replacement is performed according to the following instruction. Negligence to follow the instruction may lead to severe damage to the gas turbine.

3.1 MBP05AT015 Gas fuel filter replacement

- 1. Manually activate the other filter line by opening shut-off valves MBP05AA040, MBP05AA045, MBP05AA050 and MBP05AA055.**
Make sure that the ventilation valves MBP05AA240, MBP05AA245 and MBP05AA250 are closed before opening the shut-off valves.
- 2. Manually close the shut-off valves MBP05AA020 and MBP05AA035.**
- 3. Depressurise the gas fuel system by manually open the ventilation valves MBP05AA225, MBP05AA230 and MBP05AA235.**
- 4. Check that the system is depressurised, by reading the pressure indicator MBP05CP010.**
- 5. Manually open the drain valve MBP05AA265 and drain possible liquid into a bucket and then close the valve.**
- 6. Connect a Nitrogen bottle to valve MBP05AA305. Open the valve and purge the gas fuel filter and piping with nitrogen. Close the valves MBP05AA025/AA030 alternatively during purging , to ensure purging of the piping upstream the filter and the filter itself. Close the valve MBP05AA305.**
- 7. Manually close the shut-off valves MBP05AA025 and MBP05AA030.**
- 8. Check that the system is depressurised, by reading the pressure indicator MBP05CP010.**
- 9. Dismount the filter elements.**
See sub-suppliers documentation for instructions.
- 10. Replace filter elements.**
See sub-suppliers documentation for instructions.
- 11. Close the ventilation valves MBP05AA225, MBP05AA230 and MBP05AA235.**
- 12. Open the valves MBP05AA020, MBP05AA025 and MBP05AA030 to pressurise the filter and the piping.**
- 13. The filter unit is now ready for operation.**

3.2 MBP05AT025 Gas fuel filter replacement

1. **Manually activate the other filter line by opening the shut-off valves MBP05AA020, MBP05AA025, MBP05AA030 and MBP05AA035.**
Make sure that the ventilation valves MBP05AA225, MBP05AA230 and MBP05AA235 are closed before opening the shut-off valves.
2. **Manually close the shut-off valves MBP05AA040 and MBP05AA055.**
3. **Depressurise the gas fuel system by manually open the ventilation valves MBP05AA240, MBP05AA245 and MBP05AA250.**
4. **Check that the system is depressurised, by reading the pressure indicator MBP05CP025.**
5. **Manually open the drain valve MBP05AA280 and drain possible liquid into a bucket and then close the valve.**
6. **Connect a Nitrogen bottle to valve MBP05AA310. Open the valve and purge the gas fuel filter and piping with nitrogen. Close the valves MBP05AA045/AA050 alternatively during purging , to ensure purging of the piping upstream the filter and the filter itself. Close the valve MBP05AA310.**
7. **Manually close the shut-off valves MBP05AA045 and MBP05AA050.**
8. **Check that the system is depressurised, by reading the pressure indicator MBP05CP025.**
9. **Dismount the filter elements.**
See sub-suppliers documentation for instructions.
10. **Replace filter elements.**
See sub-suppliers documentation for instructions.
11. **Close the ventilation valves MBP05AA240, MBP05AA245 and MBP05AA250.**
12. **Open the valves MBP05AA040, MBP05AA045 and MBP05AA050 to pressurise the filter and the piping.**
13. **The filter unit is now ready for operation.**

REVISION

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