YANMAR SERVICE NEWS

Subject	Inlet Temp. Setting of LT F.W. Engine (Rev.2 : Precaution statement edit)		No.: 13-2-G-04-003-L-Rev2 Date: Jun. 2013
Engine Model	All Models	Use	Marine Aux. Engines
		Engine Nos.	————————

In our marine auxiliary engines, we set the inlet temperature of the LT F.W. engine at 36℃ (or 38℃) as a standard specification, except for seawater spec. The purpose of this specification is to prevent the production of condensed water that would be produced when the charged air passes through the intercooler. Condensed water that may be produced depending on the LT. F.W. engine inlet temp. setting, can cause following malfunctioning as described below. Use the examples as a reference for your routine servicing of the engine.

1. Example of Malfunctioning (1) : Sulfuric Acid Corrosion

Condensed water is produced when the charged air passes through the intercooler. Condensed water combines with nitrous acid gas, (SO_2), that is produced by burning sulfur content (S) in fuel oil. This causes corrosion of the intake valve surface. (For details, please refer to our Service News, 12-2-G-01-001-O, already distributed.)

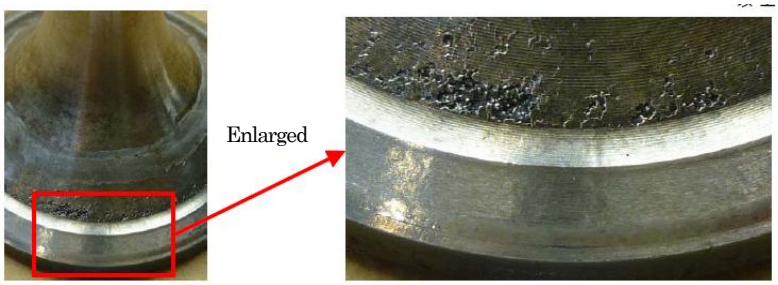

Photo 1. Intake Valve Corroded

2. Example of Malfunctioning (2) : Blow-by of Intake & Exhaust Valves

Condensed water produced in the intercooler is trapped in the bottom of the charge air chamber, which causes the charge air chamber interior wall to rust. Further, when the rusted fragments flowed into the combustion chamber together with the charged air and were embedded in the intake/exhaust valve seat, intake/exhaust valve blow-by is caused.

In addition, rusting of the cylinder block outlet charge air port or the cylinder inlet port can accelerate the leakage of air or condensed water through the clearance of V-packing during engine operation.

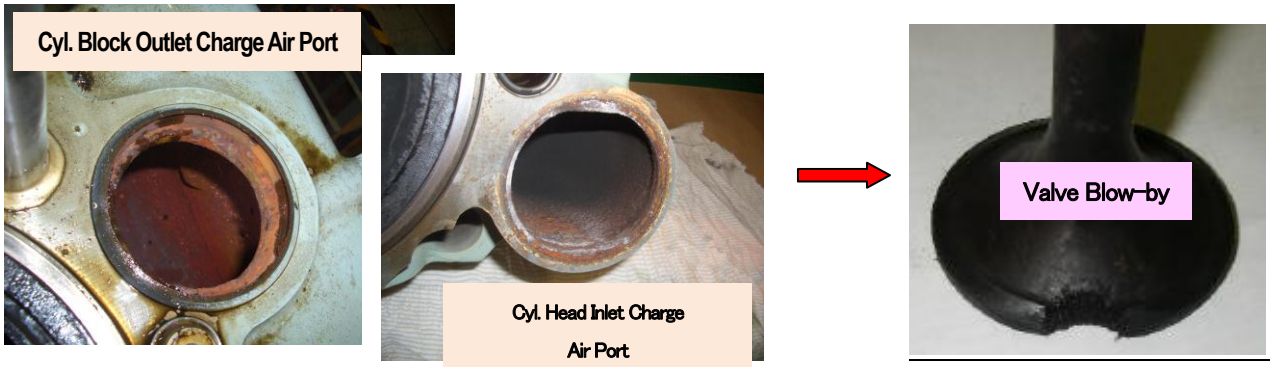

Photo 2. Valve blow-by caused by embedding rusted fragments in valve seat

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3. How to Treat Condensed Water

1） Setting of LT F.W. Engine Inlet Temperature

Check that F.W. temperature is adjusted to **36℃ (or 38℃)** by the hull-side temp. regulating valve.

2） Discharge of Charge Air Chamber Drain

Even when the LT F.W. temperature is 36℃, condensed water can be produced depending on the condition of ambient air or boost pressure, especially under the high-temperature and humidity environment. When the production of condensed water is excessive, operate the engine with opening the drain cock so that no condensed water may be trapped inside the charge air chamber.

In spite of being in operation or under suspension, please confirm always the air vent port of I/C as shut, except for being bleeding the air of I/C.

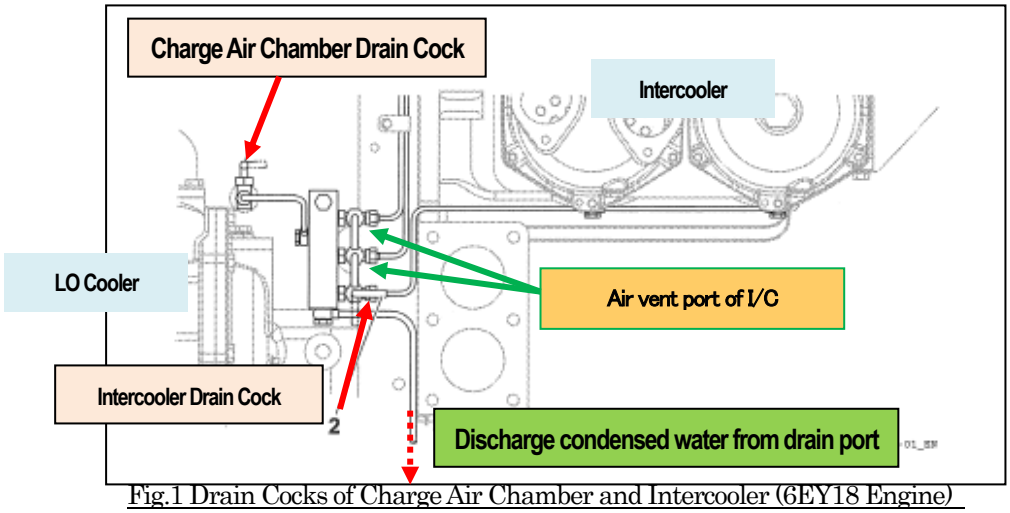

Fig.1 Drain Cocks of Charge Air Chamber and Intercooler (6EY18 Engine)

3） Repair by Coating Interior Wall of Charge Air Chamber

If the coating on the interior water of charge air chamber was found to be exfoliated, coat the wall with **epoxy resin paint (use Haiphong 40or equivalent of Nippon Paint)** for repair.

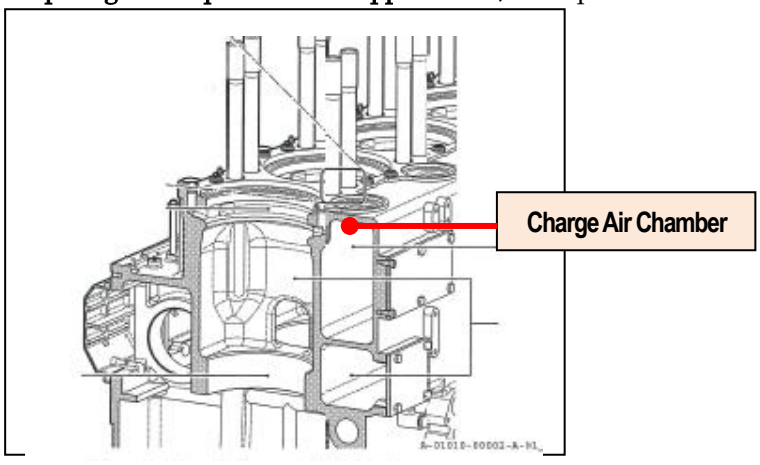

Fig. 2 Structure of Charge Air Chamber