GE Power

Service Bulletin

DISTRIBUTION LIST

Jenbach, Subsidiaries, Service Providers, Customers

Engine type **J412, J416 & J420**

Subject **24V pre-lubrication pump (direct current)**
Introduction of enhanced version

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The Service Bulletin SB-113 is to introduce a new 24V pre-lubrication pump (direct current) implicating multiple advantages if installed or retrofitted such as an increased maintenance interval or the opportunity to replace its carbon brushes or electric drive only instead of the entire pump.

AFFECTED ENGINES / SCOPE OF THIS BULLETIN

Jenbacher gas engine types J412, J416 and J420 (all versions).

DESCRIPTION OF THE CONTENT / PURPOSE OF THIS BULLETIN

As part of our continuous improvement efforts, a new pre-lubrication pump for type 4 engines (PN 1237279 – Pos3) is replacing the current version (PN 360466) with immediate effect. The new pump has an unmodified pump head, however is fitted with a new electrical drive motor (PN 1241622 – Pos2) which is equipped with a new type of carbon brush set (PN 1241621 – Pos1).

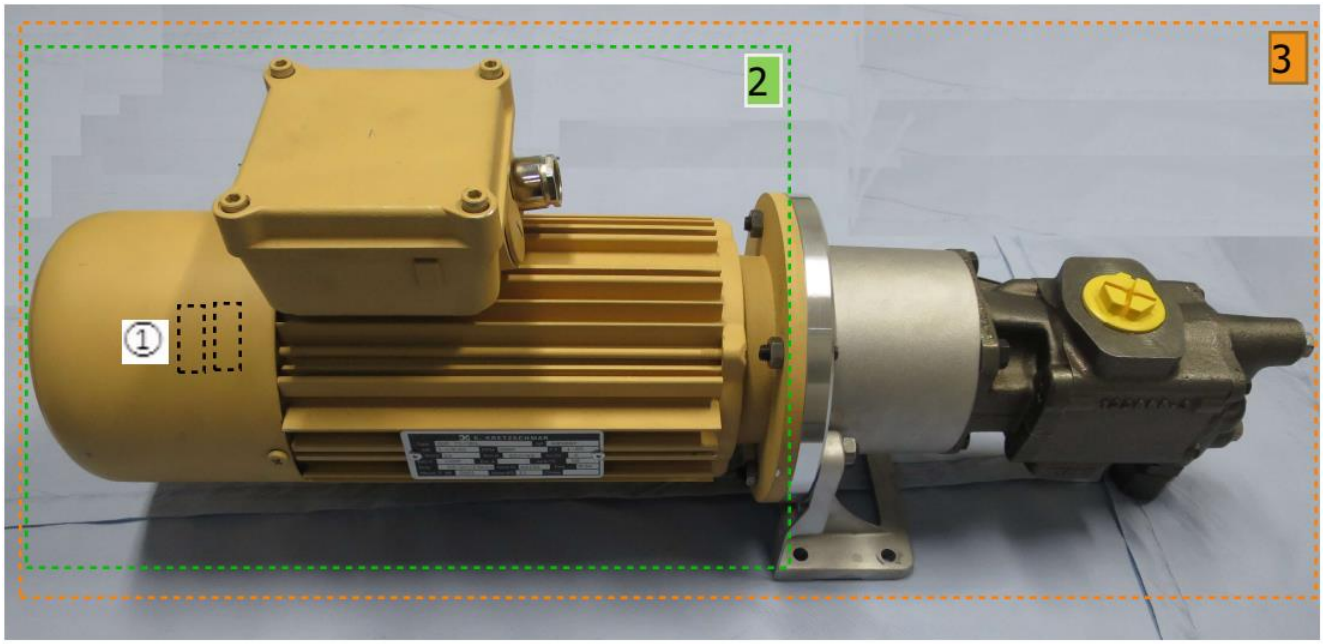

Figure 1: New 24V pre-lubrication pump (direct current)

REASON FOR CHANGE

The main contributors of lifetime costs for this pump are the regular inspection of the carbon brushes and the exchange of the complete pump unit in case of a (typically electrical) defect. After analysis of field data, the main root causes for the experienced issues and subsequent inability to start the engine were the:

- Demagnetization of the stator of the electromotor
- Early life wear of the carbon brushes
- Mechanical blocking of the fan via the end cover following maintenance work

The new pump has a motor that has a non-permanent magnet stator and improved brush wear characteristic which allows the inspection intervals to be increased to 10.000 operation hours / 3.000 starts from the current 2.000 operation hours / 1.500 starts. The new maintenance schedule reduces the risk of improper mounting of the end cover and thus the blockage of the fan. The new intervals and the importance of checking the alignment of the end cover and the fan is described in the updated Maintenance Instruction W 8054 M0.

In addition, with the availability of spare electromotor and brush sets, operators no longer need to exchange the complete pump in case of an electric defect or a brush wear out.

RECOMMENDATION: As the failure modes are related to the number of starts rather than operating hours, we advise our customers with <8 hrs / start to upgrade to the new pump proactively.

NOTE: The new carbon brush set only works with the new electric motor/pump, it cannot be used for PN 360466.

RELEVANT DOCUMENTS

When working on GE Jenbacher modules, all applicable local regulations must of course be observed in addition to our documentation. We would particularly like to emphasise observation of the following documents regarding this Service Bulletin:

- Technical Instruction TA 1100-0111: General conditions – Operation and maintenance
- Technical Instruction TA 2300-0005: Safety regulations
- Maintenance Instruction W 8054 M0: Pre-lubrication pump

REVISION CODE

INDEX	DATE	DESCRIPTION / REVISION SUMMARY
01	Jun. 05, 2018	First version of this document

Table 1: Revision history