

Service Bulletin

DISTRIBUTION LIST

Jenbach, Subsidiaries, Service Providers, Customers

GE PROPRIETARY INFORMATION

The information contained in this document is General Electric Company proprietary information and is disclosed in confidence. It is the property of GE and shall not be used, disclosed to others or reproduced without the express written consent of GE. This includes but is not limited to use for the creation, manufacture, development or derivation of any repairs, modifications, spare parts, designs or configuration changes, or for obtaining government or regulatory approval to do so. If consent is given for reproduction in whole or in part, this notice and the notice set forth on each page of this document shall appear in any such reproduction in whole or in part.

Engine type **J612...J620-F/J with "H" cylinder heads (natural gas)**

Subject **Prechamber gas valves 7J-V16
Conversion to 7J-V16+**



SB-112 | 04 June 2018

Viktoria LENDEL
Jenbacher gas engines

T +43 5244 600-2823
F +43 5244 600-42823

Viktoria.Lendel@ge.com
www.ge-distributedpower.com



The Service Bulletin SB-112 describes the conversion of 7J-V16 prechamber gas valves used in Jenbacher Type J6-F/J gas engines with "H" cylinder heads to the new 7J-V16+ version and provides information on how to handle them.

AFFECTED ENGINES / SCOPE OF THIS BULLETIN

Jenbacher Type J612-F, J616-F, J620-F, J612-J, J616-J and J620-J gas engines equipped with "H" cylinder heads and 7J-V16 (TN 8000262) prechamber gas valves.

Engines with two-stage turbocharging (J624-H and J624-K) and 7J-V10 (TN 9018255) prechamber gas valves and engines with "F" cylinder heads are unaffected by the revision.

Table 1: Affected prechamber gas valve

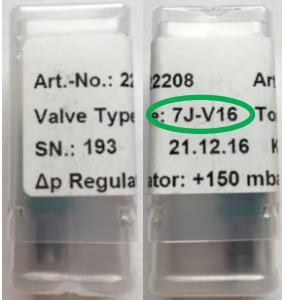
PART NUMBER	DESCRIPTION	IMAGE	PACKAGING
8000262	7J-V16	 <p>Later production batches have a circumferential groove and a hole in the plug.</p>	



Table 2: New prechamber gas valve 7J-V16+

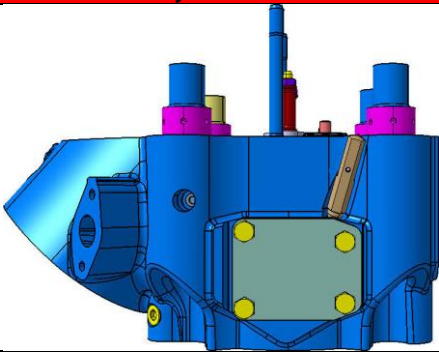
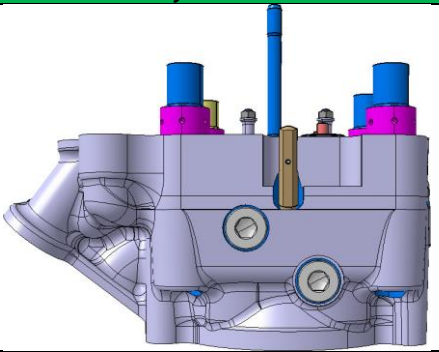
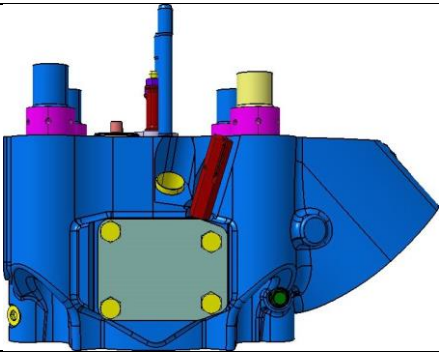
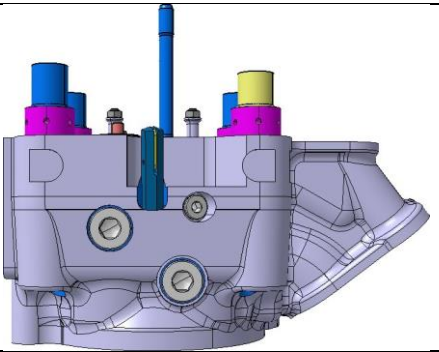
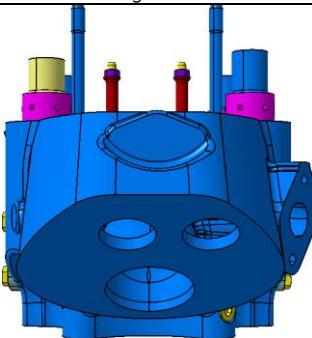
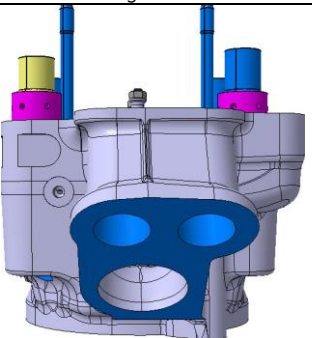
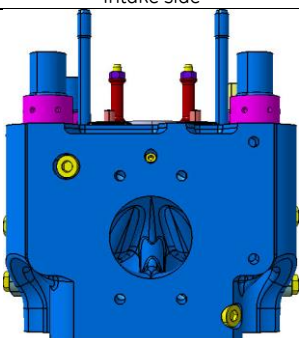
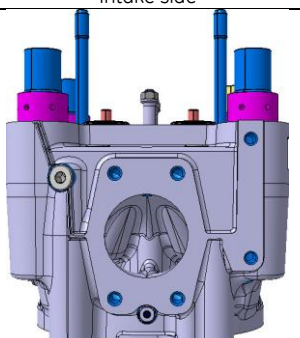
PART NUMBER	DESCRIPTION	IMAGE	PACKAGING
9029070	7J-V16+	 <p>Hole and circumferential groove in the plug.</p>	 <p>21.02.18 KV or: +150 mbar</p> <p>The pack contains a 7J-V16+ (7J-V16 with pressed-on insert) and a replacement insert.</p>

Table 3: Unaffected prechamber gas valve

PART NUMBER	DESCRIPTION	IMAGE	PACKAGING
9018255	7J-V10		 <p>Art. Nr.: 21935 VEN. TIL: Vorkammer Serienr.: 892 Datum: 25.08.16</p> <p>Art. 9018 8255 FA.: 7167 769 gaseinblasventil 7J O Hub: 0,40 +/- 0,03</p>



Table 4: Distinction between "F" and "H" cylinder head

"F" cylinder head	"H" cylinder head
 Left side	 Left side
 Right side	 Right side
 Intake side	 Intake side
 Exhaust side	 Exhaust side



DESCRIPTION OF THE CONTENT / PURPOSE OF THIS BULLETIN

An improved version with the part number 7J-V16+ (TN 9029070) is introduced to improve the functionality and to reduce soot formation at the prechamber gas valve. 7J-V16+ is an assembly consisting of the 7J-V16 component and an insert.

For quick implementation on site, GE will provide the material for conversion to the 7J-V16+ version. The conversion kit includes an installation/removal tool and a set of valve inserts. New 7J-V16 prechamber gas valves are not included. The insert can be pressed directly onto the existing 7J-V16 prechamber gas valve and installed in the spark-plug sleeve. It is not necessary to replace the existing prechamber gas valve or spark-plug sleeve.

The insert may only be used once and must be replaced together with the prechamber gas valve during the 6,000 Oh maintenance or before. Whenever the prechamber gas valve is removed and reinstalled, the insert must be removed and replaced by a new one, which is pressed onto the valve. A single 7J-V16+ prechamber gas valve (including pressed-on insert) can be reordered (TN 9029070) if the valve has to be replaced.

We recommend converting from 7J-V16 to 7J-V16+ at the earliest opportunity either independently, through GE or through a company authorised by GE.

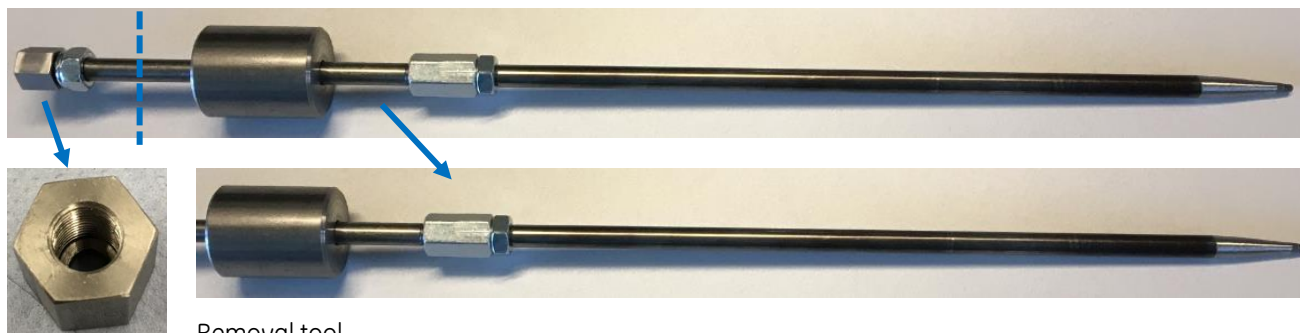
PROCEDURE FOR ASSEMBLY AND DISASSEMBLY OF 7J-V16+

Table 5: Required material

Description	Part number
Prechamber gas valve 7J-V16	8000262
Insert	9028941
Prechamber gas valve with pressed-on insert 7J-V16+	9029070
Assembly tool for 7J prechamber gas valves	9013489
Assembly and removal tool for inserts	9028982
Size 17 spanner	-
Torque wrench 15 Nm for pressing inserts onto the prechamber gas valves	-
Torque wrench 35 Nm for fitting valves in the spark-plug sleeve	-
Weld nut with fine thread M10x1 for removing insert from prechamber gas valve	113736

1. ASSEMBLY

Two-way tool for inserts (TN 9028982)



Press-on
device

Removal tool



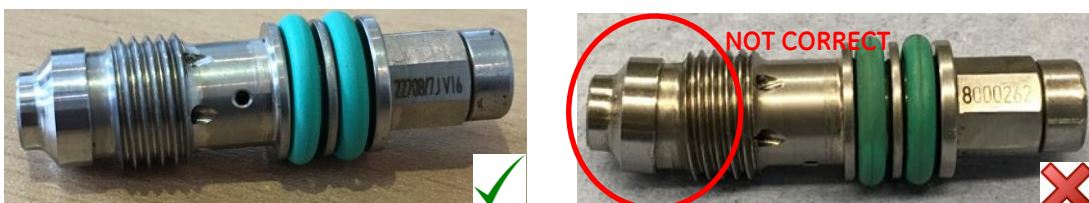
Remove the press-on device from the two-way tool and place the insert in the press-on device: The small outer diameter of the insert fits into the 5.9 mm bore of the tool. Please check the fit; the insert must not be skewed and must be pushed into the press-on device as far as it will go.



Clamp the tool in a vice with the side faces and screw in the J7-V16 prechamber gas valve using the assembly tool for 7J prechamber gas valves (9013489) and a torque wrench (**15 Nm**).



Unscrew the prechamber gas valve from the press-on device and check that the insert is straight and fits tightly. If the insert is straight but not tight, use pliers to tighten the insert. If the insert is not straight (see example in the image below), remove the insert and repeat the procedure with a new insert.



Install the prechamber gas valve and an insert in the spark-plug sleeve with 35 Nm torque.



2. ENGINE OPERATION

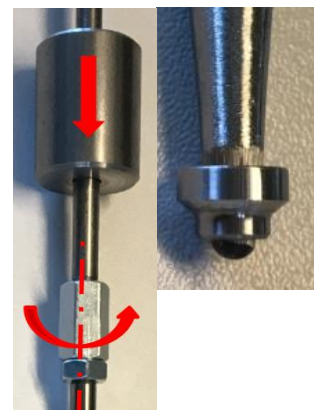
Check the LEANox settings during engine start-up. No further changes to the engine settings are required. If the engine does not start or misfire, check the prechamber gas valve and insert for leaks (soot deposits at the sealing points or between the prechamber gas valve and the insert).

3. REMOVAL – The insert should be disposed of in any case

If a prechamber gas valve is to be replaced, the insert must be removed and **disposed of**. The insert either remains stuck in the spark-plug sleeve (Case 1) or it comes out with the valve (Case 2).

Case 1: Insert remains stuck in spark-plug sleeve

Insert the removal tool (9028982) into the prechamber gas valve. Use the integrated mass to hammer the tool into the insert with light and repeated taps. At the same time turn the tool slowly around its axis using a size 17 spanner to better grip the insert (one turn is enough). Pull the tool out of the spark-plug sleeve and remove the insert with pliers.



Case 2: The insert remains stuck on the prechamber gas valve

Screw the prechamber gas valve into a weld nut with fine thread M10x1 (113736) and clamp it in a vice with the side faces. Use a screwdriver or similar to remove the insert.



When removing a 7J-V16+ always ensure that the insert DOES NOT REMAIN IN THE ENGINE!

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 in connection with this Service Bulletin:

- Technical Instruction TA 1100-0111: General conditions – Operation and maintenance
- Technical Instruction TA 2300-0005: Safety regulations
- Technical Instruction TA 1902-0228 E/F/J: Tightening torques for Type J6 engines, versions GS-E/F/J
- Technical Instruction TA 1503-0047: Engine adjustment instruction - Type 6 engines (DIA.NE XT)
- Maintenance Instruction W 0501 M6: Prechamber/prechamber gas valve
- Service Technician Instruction ST-099: Prechamber gas valves and prechambers – Overview
(Only accessible for Jenbacher service technicians, subsidiaries and service providers)

REVISION CODE

INDEX	DATE	DESCRIPTION / REVISION SUMMARY
01	Jun. 04, 2018	First version of this document

Table: Revision history