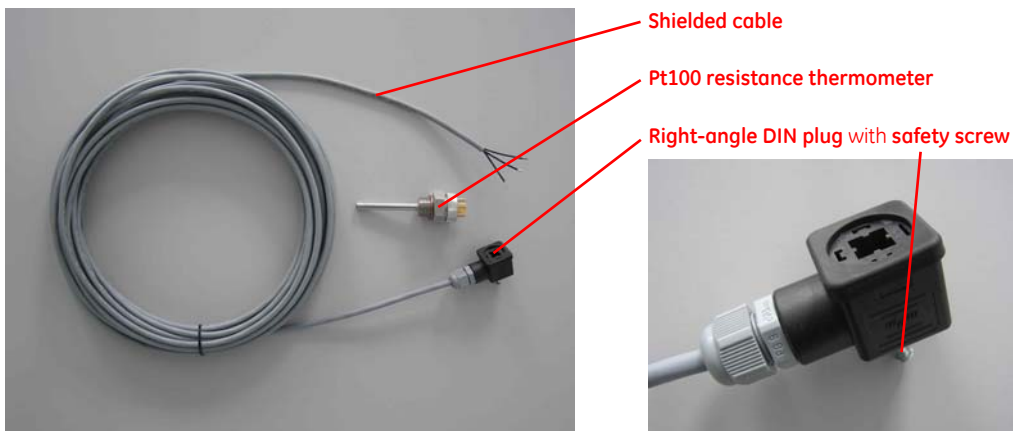
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Distribution:	Jenbacher Service Subsidiaries Service Service Providers	
Service Information		SI-064 29 October 2009

GENERAL: New Pt100 resistance thermometer

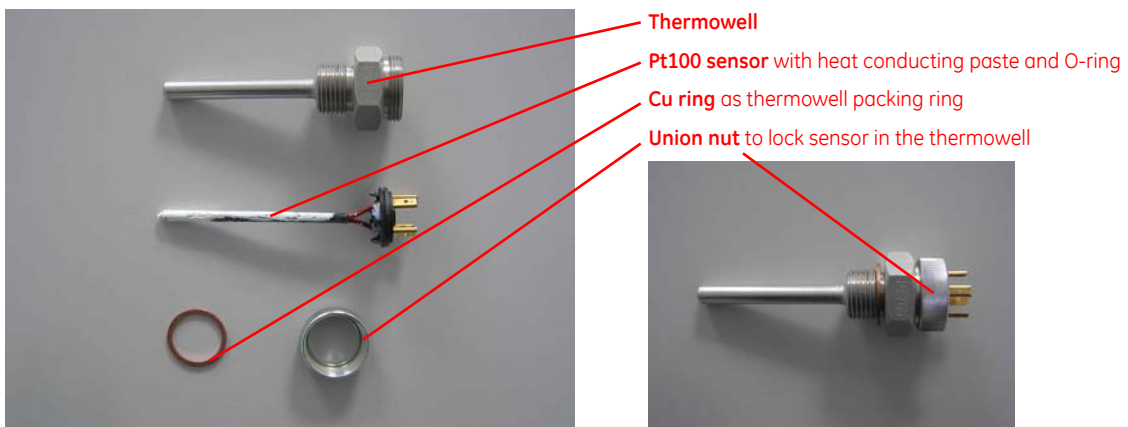
SI-064 covers the introduction of a new Pt100 resistance thermometer.

AFFECTED: Temperature measurements of media such as intake air, cooling water and oil for ALL engine types! NOT affected are Pt100 resistance thermometers that we use for mixture temperature measurements. These thermometers remain the unchanged.

DESCRIPTION: As of now, a Pt100 resistance thermometer WITH CONNECTOR PLUG (see illustrations 1 and 2) is available. In the case of a defective sensor, the difficult cable assembly work is no longer required. Because the thermowell can also remain in the engine, any future conversion activities – except for initial conversion – can remain LIMITED to replacing the sensor. Apart from a clear increase in ease-of-service, the new component features an increased protection against penetrating moisture.



III. 1: New Pt100 resistance thermometer with cable disconnected



III. 2: New Pt100 resistance thermometer, component parts

The following GEJ part numbers are as of now available from the Service department:

PART NO.	DESCRIPTION	NOTE	ILL.
649673	New Pt100 resistance thermometer WITH 15m cable	For initial conversion	3
607324	New Pt100 resistance thermometer WITHOUT cable	For every subsequent conversion	4
637727	15m cable for new Pt100 resistance thermometer	If ONLY the cable is required	5

Tab. 1: GEJ service part numbers for the new Pt100 resistance thermometer



III. 3: 649673 – New Pt100 resistance thermometer with cable

This GEJ assembly module contains all separate components required for the initial conversion to the new Pt100 resistance thermometer.

Scope of supply:

- Thermowell with Cu packing ring and union nut
- Pt100 sensor with heat conducting paste and O-ring
- 15m cable with plug and safety screw

Although the cable of new installations is always made-to-measure, spare part 649673 only comes with the maximum cable length required (i.e. 15m). This cable length should fit on all engines.



III. 4: 607324 – New Pt100 resistance thermometer

This GEJ assembly module is used for every subsequent replacement of the new Pt100 resistance thermometer (i.e. in all cases where the right cable with the right plug is already fitted on the engine).

Scope of supply:

- Thermowell with Cu packing ring and union nut
- Pt100 sensor with heat conducting paste and O-ring
- Plug with safety screw

The thermowell and plug guarantee the safe transport of the Pt100 sensor and easy handling of the indispensable heat conducting paste. If a defective sensor has to be sent to Jenbach, it must only be transported in assembled condition (i.e. sensor + thermowell + plug).



III. 5: 637727 – Cable for new Pt100 resistance thermometer

This GEJ part number is used in the rather unlikely case that a cable is required without the Pt100 resistance thermometer.

Scope of supply:

- 15m cable with plug and safety screw

The cable is only supplied in a standard length of 15m.

The following GEJ part numbers are being replaced and are NO LONGER available:

The new Pt100 resistance thermometer is used for temperature measurements of media such as intake air, cooling water and oil and replaces all relevant part numbers used until now.

PART NO.	DESCRIPTION	NOTE	ILL.
169901	Old Pt100 resistance thermometer with 8m cable	Replaced by the new Pt100	6
211149	Old Pt100 resistance thermometer with 15m cable	Replaced by the new Pt100	7
124195	Old Pt100 resistance thermometer	Replaced by the new Pt100	8

Tab. 2: GEJ part numbers that are no longer valid due to the introduction of the new Pt100 resistance thermometer



III. 6: 169901 – Old Pt100 resistance thermometer with 8m cable

Replaced by the new Pt100!



III. 7: 211149 – Old Pt100 resistance thermometer with 15m cable

Replaced by the new Pt100!



III. 8: 124195 – Old Pt100 resistance thermometer

Replaced by the new Pt100!

The following GEJ part numbers are not being replaced and *CONTINUE* to be available:

The Pt100 resistance thermometers to measure the mixture temperature remain the unchanged.

PART NO.	DESCRIPTION	NOTE	ILL.
179609	Existing Pt100 resistance thermometer with 8m cable	Remains in use	9
211148	Existing Pt100 resistance thermometer with 15m cable	Remains in use	10

Tab. 3: GEJ part numbers that do not change as a result of the new Pt100 resistance thermometer



III. 9: 179609 – Existing Pt100 resistance thermometer with 8m cable

Remains in use!



III. 10: 211148 – Existing Pt100 resistance thermometer with 15m cable

Remains in use!

SOLUTION: When replacing a Pt100 resistance thermometer that is used to measure intake air, cooling water or oil temperatures, a clear distinction must be made between initial conversion to the new solution with plug and any subsequent replacements.

Initial conversion from an old Pt100 resistance thermometer to the new solution with a plug:

Defective engine part: Old-generation Pt100 resistance thermometer (see illustrations 6, 7 and 8)
Required spare part: 649673 – New Pt100 resistance thermometer WITH cable (see illustration 3)
The Pt100 resistance thermometer and cable with plug are assembled separately, i.e. if necessary loosen the safety screw which locks the plug and pull the plug from the Pt100 resistance thermometer (see illustration 1).

- Switch off the engine in accordance with Technical Instruction No. 1100-0105 and the Safety Instructions in accordance with TI2300-0005
- Disconnect the old Pt100 resistance thermometer in the interface cabinet
Take note of the clamping position of the white wire (see illustration 12)
- For cooling water and oil: Lower the fluid level to the measurement position
ATTENTION: Possible risks caused by pressure and temperature!
Follow the instruction contained in TI2300-0005!
- Disassemble old Pt100 resistance thermometer, including the thermowell
- Install the new Pt100 resistance thermometer, including thermowell and Cu packing ring (see small photograph, illustration 2)
- For cooling water and oil: Top up the fluid level
- Remove the old cable and install the new one
- Connect the cable to the new Pt100 resistance thermometer and fasten it using the safety screw
Loosen the union nut to turn the sensor in the thermowell and turn the plug in the correct position (see illustration 11)
- Cut the cable to the correct length and connect it correctly in the interface cabinet (see illustrations 12 and 13)
Pay attention when connecting cable lead 1. Cable leads 2 and 3 are interchangeable. Ground not connected.
 - Cable lead 1 = WHITE cable lead in circuit diagram
 - Cable lead 2 = RED cable lead in circuit diagram
 - Cable lead 3 = RED cable lead in circuit diagram
- Correct the circuit diagram on the spot (see illustration 14)

Replacing a new Pt100 resistance thermometer:

Defective engine part:

New-generation Pt100 resistance thermometer (see illustrations 1 and 2)

Required spare part:

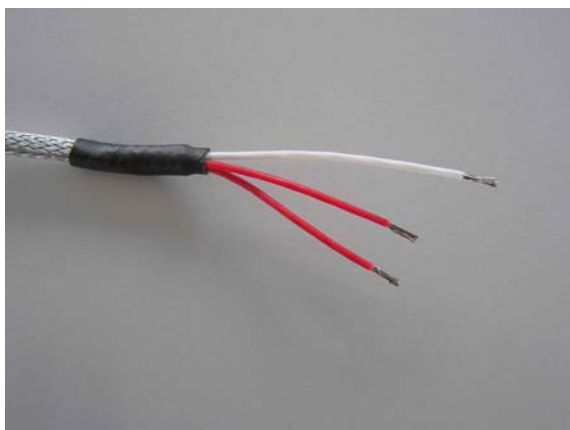
607324 – New Pt100 resistance thermometer WITHOUT cable (see illustration 4)

Only the spare part's Pt100 sensor and O-ring are required. The thermowell and the cable with plug of the Pt100 resistance thermometer remain on the engine. If the defective sensor has to be sent to Jenbach, use the replacement thermowell and plug for transport protection purposes.

- Switch off the engine in accordance with Technical Instruction No. 1100-0105 and the Safety Instructions in accordance with TI2300-0005
- Loosen the safety screw which locks the plug and pull the plug from the defective Pt100 resistance thermometer (see illustration 1)
- Loosen the thermowell union nut (see illustration 2)
- Replace the Pt100 sensor
- Re-assemble the union nut and plug, including the safety screw
ATTENTION: If tools are not used correctly, the union nut may be damaged/destroyed. That is why the nut should always be loosened/fastened manually without using excessive force.



III. 11: Variable plug position – Loosen the union nut to turn the plug in any position



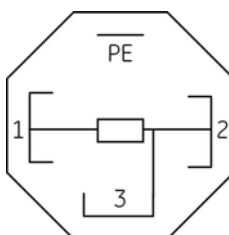
III. 12: Old cable – 3 x 0.25mm², cable leads white/red/red



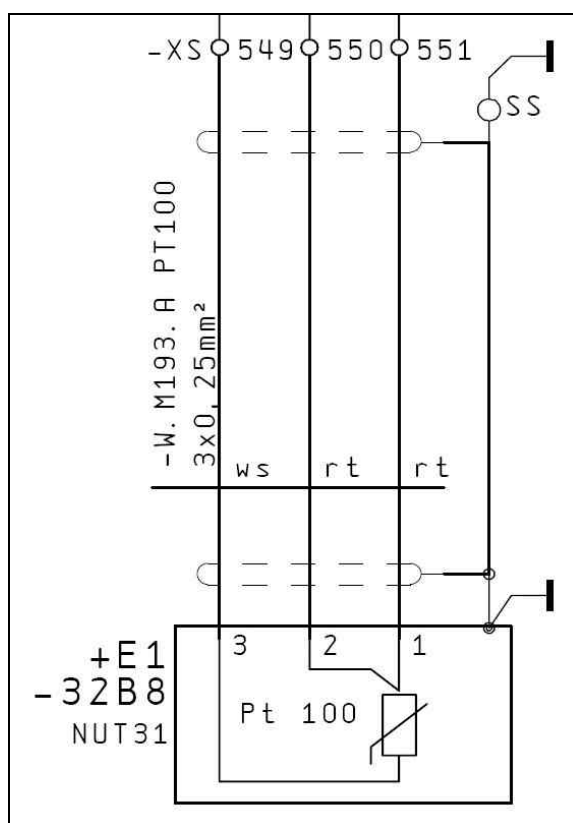
New cable – 3 x 0.75mm², cable leads 1/2/3



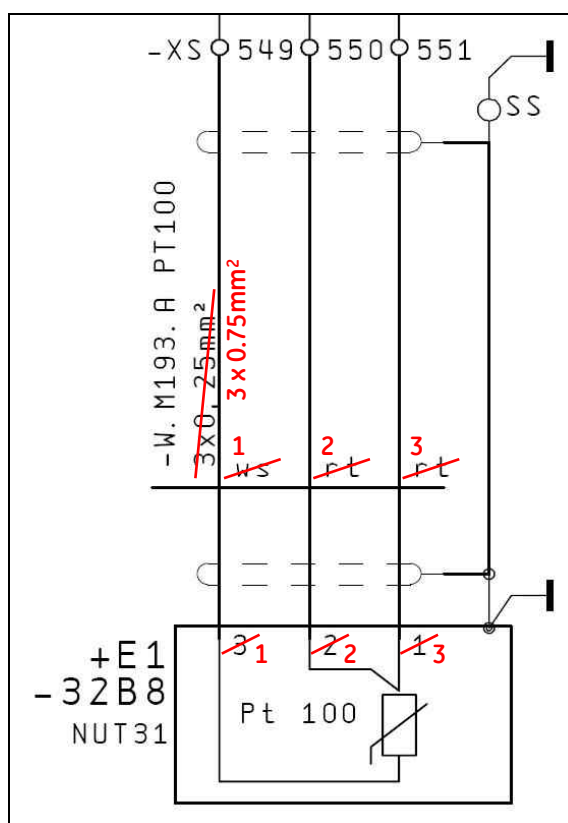
III. 13: New Pt100 resistance thermometer with PIN coding 1/2/3 and ground



Cable lead 1 = WHITE cable lead in circuit diagram
 Cable lead 2 = RED cable lead in circuit diagram
 Cable lead 3 = RED cable lead in circuit diagram
 Ground not connected.



III. 14: Circuit diagram BEFORE correction



Circuit diagram AFTER correction