		<b>GE Power</b>  <b>Sebastian GALEK</b> Mechanical Components Distributed Power  GE Jenbacher GmbH & Co OG Achenseestr. 1-3 A-6200 Jenbach, Austria T +48 22 3979576 <a href="mailto:Sebastian.Galek@ge.com">Sebastian.Galek@ge.com</a>
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<b>Service Technician Instruction</b>	<b>ST-207</b>	07 September 2017

Engine type **J412, J416 & J420**

Subject **Throttle valve linkage**  
**Measures to improve vibration characteristics**

The Service Technician Instruction ST-207 describes the installation method for the new throttle valve linkage on Type 4 engines.

#### AFFECTED ENGINES / SCOPE OF THIS BULLETIN

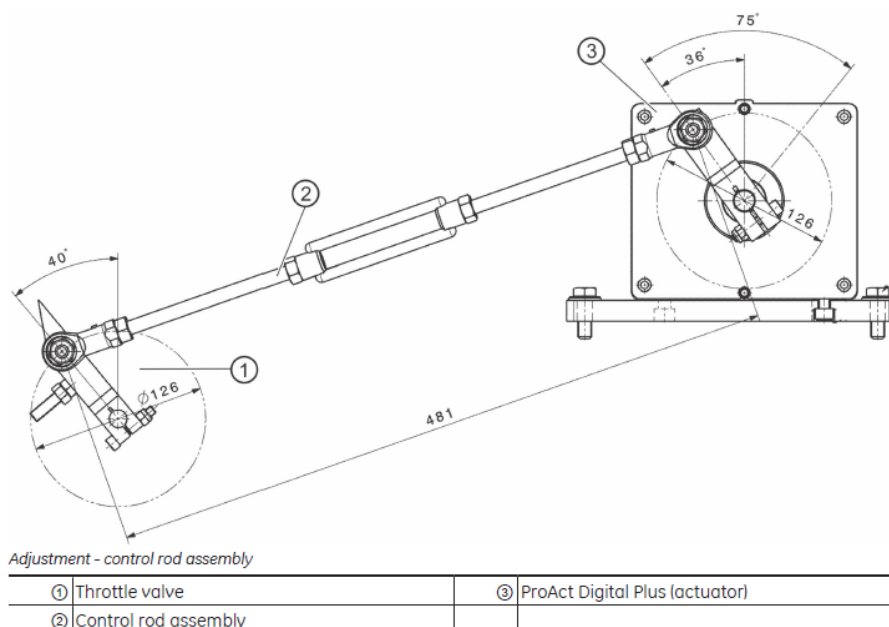
Jenbacher gas engine Types J412, J416 and J420.

The term 'throttle valve linkage' in this bulletin comprises the following.

Throttle valve linkage:

- Tensioning nut
- Rods
- Nuts
- Rod ends with spherical bearings

Throttle valve linkage is a subcomponent of the control rod assembly which on one side is connected to the servo-motor and the throttle valve on the other side (fig.01).



**Fig. 01:** Throttle valve linkage with servo-motor, throttle valve interfaces [W 0200 M4]

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### DESCRIPTION OF THE CONTENT

The following diagrams illustrate the throttle valve linkage replacement. The components to be replaced are marked in RED and those that have not to be replaced are in GREY or other.

Table below provides details about individual components and assign the item numbers used in diagrams to all relevant part numbers and component descriptions.

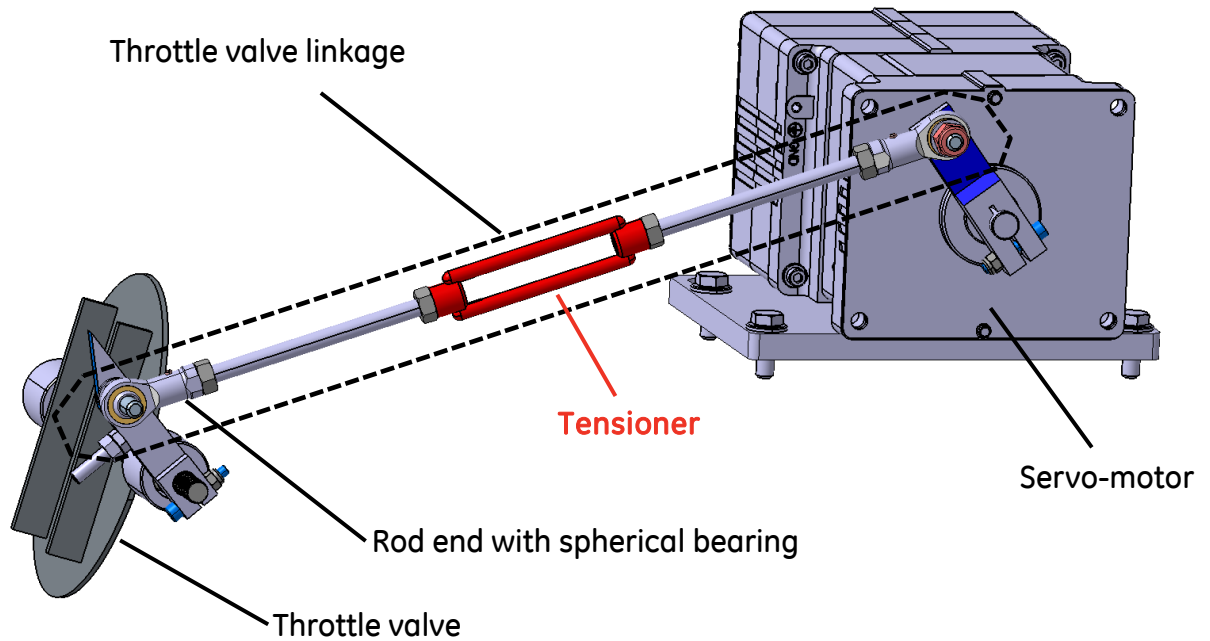


Fig. 02: Modifications to be made on throttle valve linkage (components to be replaced in RED)

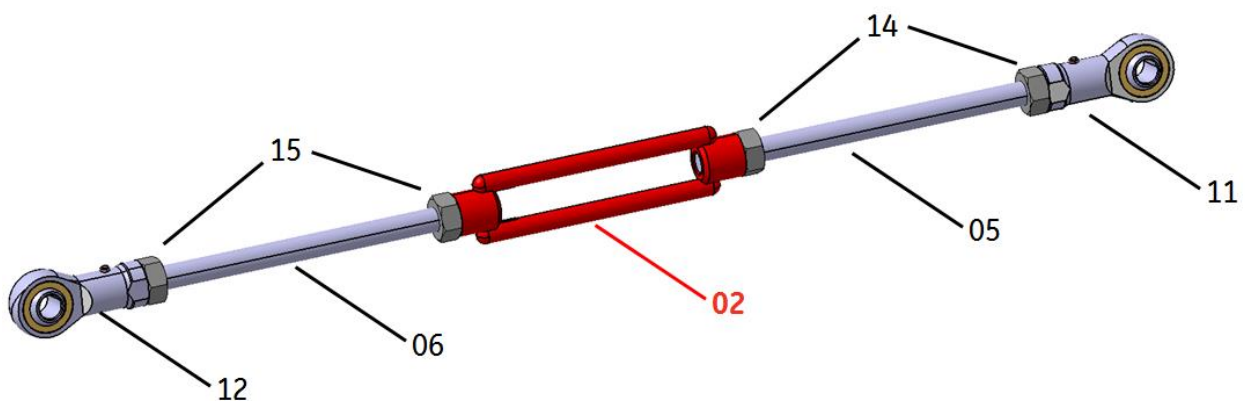


Fig. 03: Modifications made on throttle valve linkage (components to be replaced in RED)

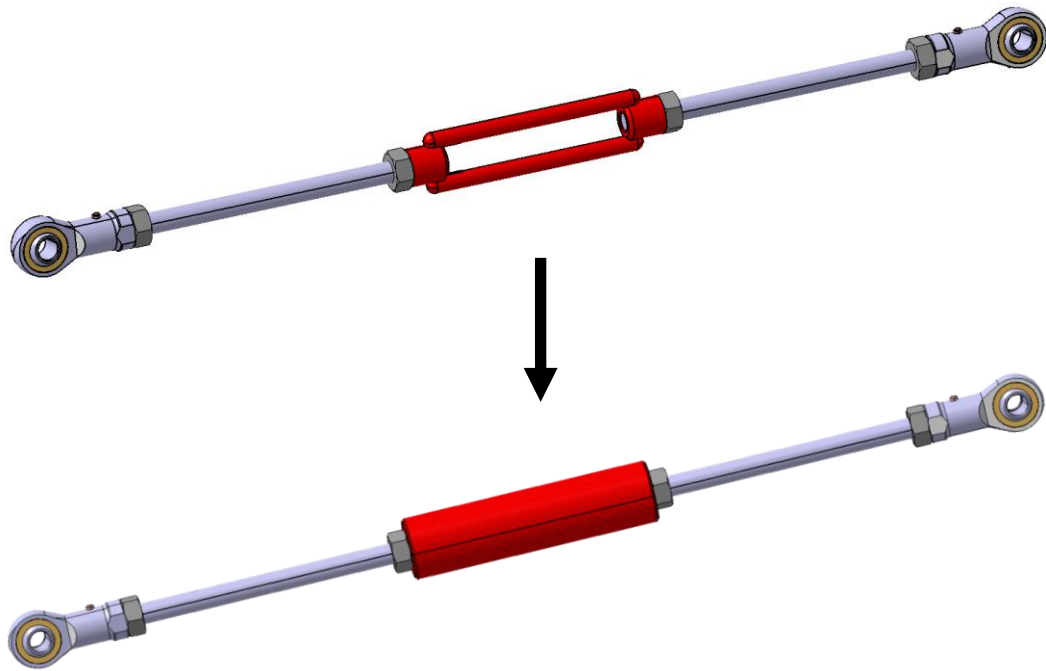


Fig. 04: Part replaced

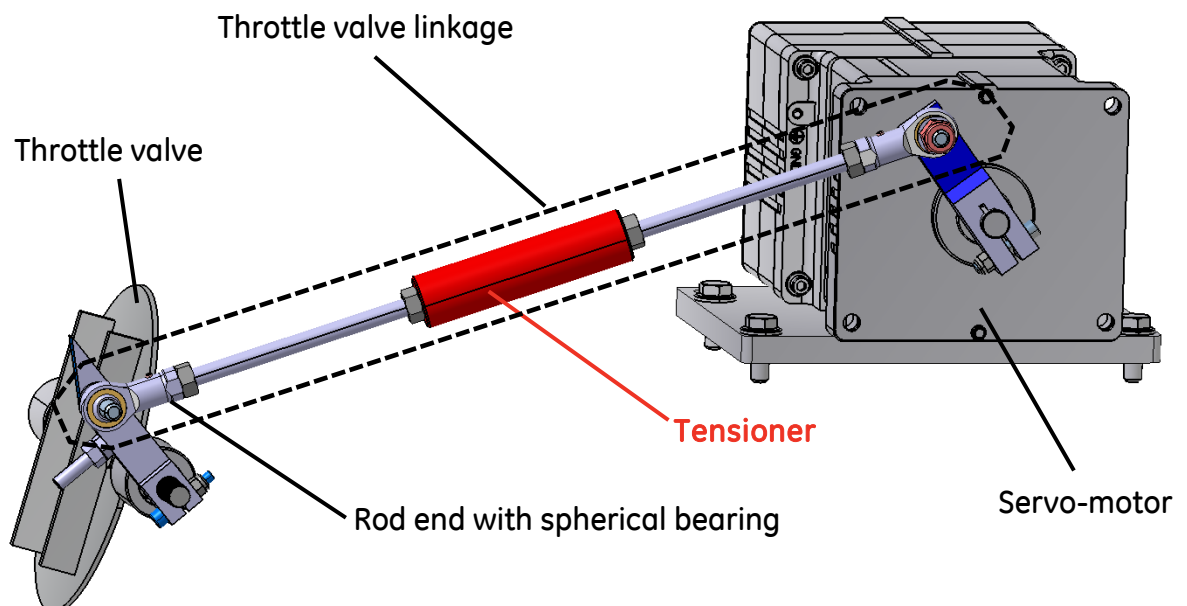


Fig. 05: Control rod assembly with replaced throttle valve linkage



### Part list for throttle valve linkage

Throttle valve linkage doesn't form its own assembly. Its components can be found under control rod assembly. Components composing the throttle valve linkage before and after the replacement are listed in the table below.

**Table 01:** Kept/replaced parts list for the throttle valve linkage

Item Sequence No.	Model Part Number		Quantity	Description
	Previous	New		
<b>Assembly drawing</b>	465240 (J 0859 357 00)	8000668 (E 17645 57 00)	1	Controller
02	101885	9023184	1	Tensioning nut/Tensioner
05	341497	No modification	1	Rod
06	341498	No modification	1	Rod
11	449408	No modification	1	Rod end with spherical bearing
12	449407	No modification	1	Rod end with spherical bearing
14	101820	No modification	2	Hexagonal nut LH
15	101815	No modification	2	Hexagonal nut

### **PURPOSE OF THIS BULLETIN / NEED FOR ACTION**

The purpose of this bulletin is to propose a replacement kit for a throttle valve linkage if a failure or significant vibrations of the throttle valve linkage occur.

**No proactive replacement is recommended. Replacement should only be done with the new parts if there are problems with this engine component (e.g. fracture, vibrations).**

### Part replacement procedure

- Shut down the engine in accordance with Technical Instruction TA 1100-0105 and protect it against unauthorized restarts, observing TA 2300-0010.
- Read safety instructions TA 2300-0005 and wear the appropriate personal protective equipment.
- Replace the parts, observing Maintenance Instruction W 0200 M4.
- Adjust the throttle valve according to W 0200 M4.
- Rotate the linkage by hand to ensure that the spherical bearings are not blocked at any position: see figure 6. It is important that throttle valve linkage is in every position free and not blocked by the throttle arm or a nut. If the throttle arm gets blocked at the end stop, the vibration level of the throttle valve linkage can be changed and early life failure can occur.
- Update the BoM (bill of materials) in Oracle.

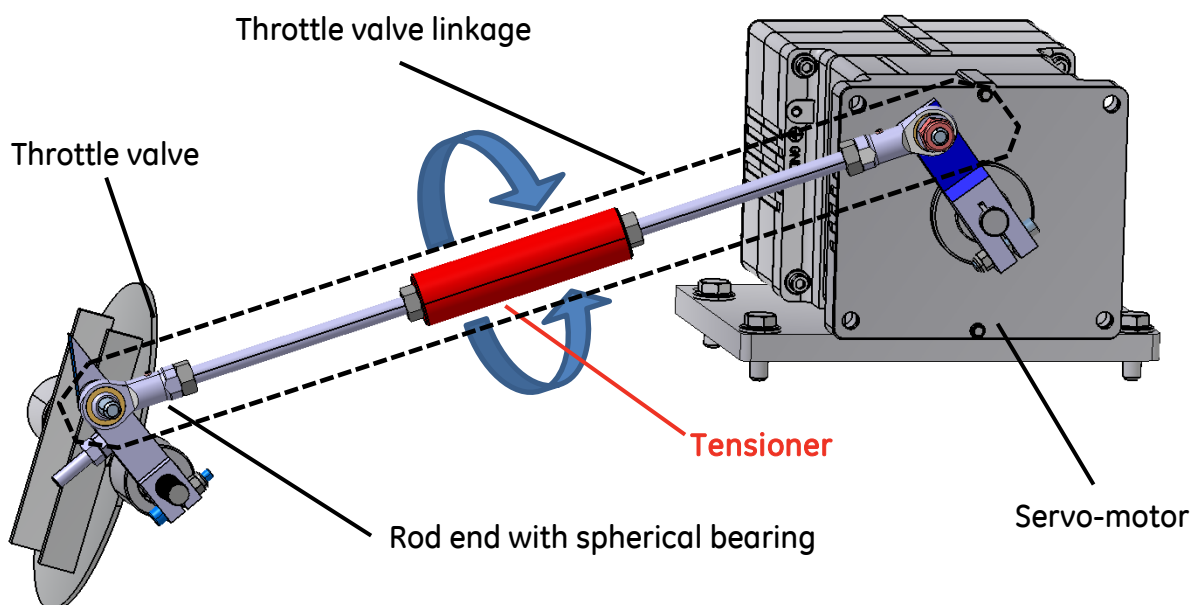


Fig. 06: Check rod assembly with replaced throttle valve linkage

#### RELEVANT DOCUMENTS

When working on GE Jenbacher modules, all applicable local regulations must of course be observed in addition to our documentation. In relation to this Service Technician Instruction we stress the fact that the following documents must also be observed:

- Technical Instruction TA 1100-0105: Engine shut-down
- Technical Instruction TA 1100-0111: General conditions – Operation and maintenance
- Technical Instruction TA 2300-0005: Safety instructions
- Technical Instruction TA 2300-0010: Guidelines for using the LOTO kit
- Maintenance instruction W 0200 M4: Control rod assembly/throttle valve/actuator

#### REVISION CODE

Table 02: Revision history

INDEX	DATE	DESCRIPTION / REVISION SUMMARY
01	Sep. 07, 2017	First version of this document