

Action code: AT FIRST OPPORTUNITY

Elongation Measurements of Hydraulically Tightened Bolts

Replacement of SL2018-656/JNN

SL2018-666/JNN November 2018

Concerns

Owners and operators of MAN four-stroke diesel engines.

Type:

Marine: L16/24, L21/31, L27/38,

L23/30H, L28/32H

Stationary: L21/31S, L27/38S, L23/30S,

L28/32S, V28/32S, V28/32H

Propulsion: L21/31, L27/38, L23/30A,

L28/32A, V28/32A

Dual Fuel: L23/30DF, L28/32DF

Change compared to SL2018-656/JNN

Page 2: "According to SL2015-606". With elongation measurement.

Attached

Work card 520-01.05/620-01.05



Dear Sirs and Mesdames

This service letter contains important information regarding introduction of elongation measurement in connection with hydraulic tightening of bolts.

The elongation measurement is introduced to reduce possible failures in connection with hydraulic tightening of bolts such as:

- Insufficient hydraulic pressure
- Missing pressure at one or more of the hydraulic jacks due to incorrect fixing of hydraulic snap coupling at the hose connection

With the introduction of elongation measurement the elongation of each bolt is monitored during the tightening process and hereby it is possible to determine if the correct hydraulic pressure has been applied to each bolt.

Please see page 2 for futher information.

In case you have any questions or comments, please forward your mail to Engineering-Support-Holeby@man-es.com with reference to this service letter.

Yours faithfully

Mikael C. Jensen, Vice President, Engineering Henrik Møller Hansen Senior Manager,

Production Support

MAN Energy Solutions

H. Christoffersensvej 6 4960 Holeby Denmark

Phone: +45 54 69 31 00 Fax: +45 54 69 30 30 info-hol@man-es.com Niels Juels Vej 15 9900 Frederikshavn Denmark

Denmark
Phone: +45 96 20 41 00
Fax: +45 96 20 40 30
info-frh@man-es.com

Branch of MAN Energy Solutions SE, Germany CVR No.: 31611792 Head office: Teglholmsgade 41 2450 Copenhagen SV, Denmark German Reg.No.: HRB 22056 Amtsgericht Augsburg



The tightening procedure with elongation measurement is as follows:

- 1. Install the hydraulic jacks with measuring device on the bolts concerned.
- 2. Apply the prescribed pressure according to the specification e.g. 200 bar and adjust the dial gauge to "0".
- 3. Increase the pressure to the specified tightening pressure and tighten the hydraulic nut.
- 4. Reduce the pressure to 0 bar.
- 5. Increase the pressure to the prescribed level again.
- 6. Read off the elongation at the dial gauge and check that the value is within the specification.
- 7. Release the pressure and remove the tool.

By introducing the elongation measurement we also have changed the retightening procedure after overhaul as follows:

Without elongation measurement: Retightening must be done according to SL2015-606.

With elongation measurement: No retightening needed.

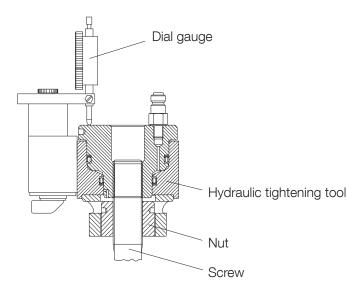


Fig 1: Measuring tool, 1 pc hydraulic jack will be needed.

The measuring tool needed for the elongation measurement is available through our Worldwide PrimeServ organisation.