



Dear Sirs

We regret to inform you about the issuance of our ALERT Service Bulletin ASB2009/12/23 for installed Turbocharger TCR16, TCR18, TCR20 and TCR22 which you can find enclosed in this letter.

Operation in the field has shown a damage of the compressor wheel in singular cases, which was initiated by foreign object impact. This caused a failure of the flange connection. As a consequence fragments could be released. For this reason the design of the flange connection has been optimized in order to safeguard the containment safety even under circumstances as described above.

The kits will be delivered by our Technical Service Department "free of charge". On the majority of the affected turbochargers the flange connection kits can be installed by the technical crew of the vessel. In few cases the conversion requires qualified personnel.

We ask you to kindly forward the enclosed ALERT Service Bulletin ASB 2009/12/23 to your technical staff on board your vessels and revert with the number of kits required for your vessels, in order for us to forward the spare part kits to you.

If you have any further questions, please do not hesitate to contact our Technical Service Department:

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Yours faithfully

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Action code: **Immediately**

ALERT Service Bulletin – Product Recall Action – ASB2009/12/23

April 2010

SL10-531/BTT

Concerns

Owners and Operators of MAN
Four-stroke Diesel Engines installed
with TCR16, TCR18, TCR20 and
TCR22.

MAN Diesel & Turbo

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German Reg.No.: HRB 22056
Amtsgericht Augsburg



ALERT Service Bulletin

ASB2009/12/23

Alert SB-Nr.:	ASB2009/12/23
Subject	Product recall of TCR16, TCR18, TCR20, TCR22 turbochargers Improvement of connection of bearing casing and compressor casing
Serial Numbers concerned	all
Reason	<p>During the development of the TCR turbochargers the containment safety of the existing flange connection was thoroughly proven by simulations and tests.</p> <p>Nevertheless operation in field has shown in singular cases a damage of the compressor wheel, which was initiated by foreign object impact. This caused a failure of the flange connection. As a consequence fragments of the compressor wheel could be released.</p> <p>For this reason the design of the flange connection was optimized in order to safeguard the containment safety even under circumstances as described above. This optimization regarding the containment safety of the TCR16, TCR18, TCR20 and TCR22 turbochargers by installation of the modified clamping claws and screws is now specified by MAN Diesel.</p>
Compliance	Mandatory
Description	<p>The turbocharger must be updated to an improved flange connection. The clamping claws were stiffened by the application of a second layer of claws. The new design has also stronger and longer screws. On the majority of the turbochargers this update can be carried out by the crew during a normal harbour stop. In few cases the update is more extensive and has to be carried out by qualified personnel.</p> <p>In order to exclude all eventualities: As long as the above described conversion has not been carried out we strongly demand to advise the crews on board of the affected vessels not to stay in the engine room as long as the engine operates above 80% load. For all other load profiles no person shall as usual stay unnecessarily in the danger zone of the turbochargers during operation (according to TC manual).</p> <p>After the conversion please refer to the normal safety instructions in your manual.</p>

New design

Figure 1 shows the new design flange connection.

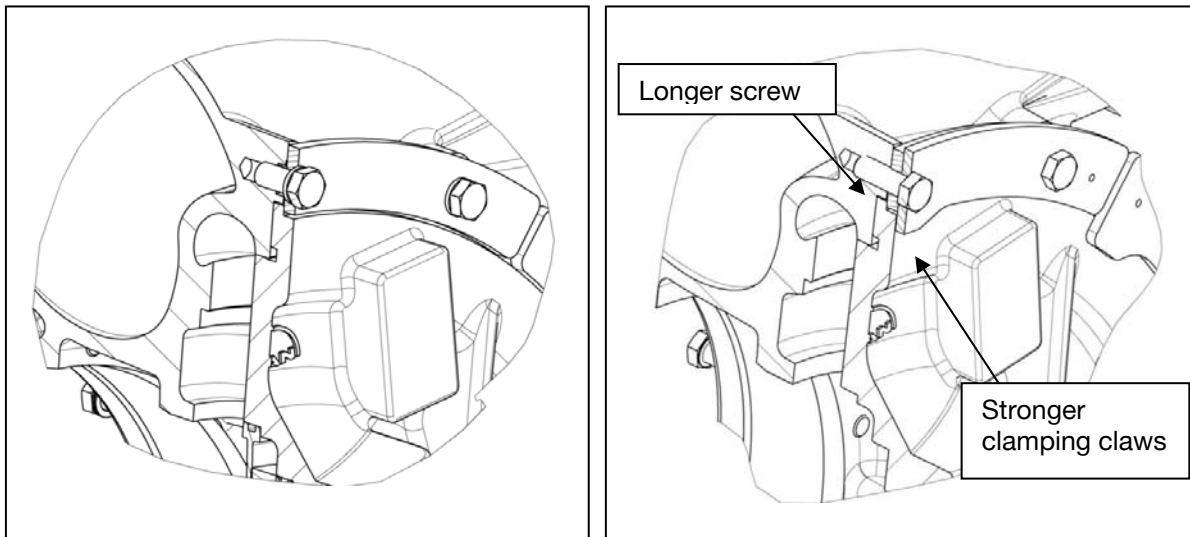


Figure 1. previous flange connection

improved flange connection

Spare parts

The upgrade kit can be ordered free of charge from MAN Diesel PrimeServ.

Contact

We demand you to contact our Technical Service Department which is always at your disposal:

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Please forward this information to your technical operating personnel!