

Date: May 04, 2015
Subject: KBB Service Information S087 (09/2014); modification of compressor diffuser for reduction of blade excitation as part of a regular service inspection
Engine type: 9M25, 9M25C; generator and propulsion application

Caterpillar confidential: green

KBB HPR6000 compressor wheels

On KBB HPR 6000 turbochargers some defects to compressor wheel blades were noticed on 9M25 and 9M25C engines in generator and at propulsion applications. Please note the attached KBB Service Information S087. Check your turbocharger specification on the name plate. In case of defects or service requirement please contact your local KBB service or your local MaK service representative for support.

In case the engine is still covered by warranty please follow the standard warranty procedure.

In case of turbocharger maintenance please note that the new compressor diffuser will not be charged to you.

Subject: Modification of compressor diffuser for reduction of blade excitation as part of a regular service inspection

Valid for TC type: HPR6000

Valid for engines: CAT 9M25 and 9M25C

Modification of compressor diffuser for reduction of blade excitation as part of a regular service inspection

1 Reason of this modification

KBB compressor wheels are qualified for safe continuous operation.

After investigations as a result of field experiences KBB came to the conclusion that there is a risk of impeller blade damage caused by blade vibrations.

This occurrence is related to certain operating conditions depending on the operating profile on 9M25 and 9M25C.

To avoid an compressor damage KBB recommends an exchange of the compressor diffusers C25-17.0C (KBB spec. 5588354) or C25-17.6C (KBB spec. 5588251) into C23-17.6C (KBB spec. 5588250).



The modification for reducing the excitation of the impeller blade at HPR6000 on 9M25 and 9M25C includes only an exchange of the compressor diffuser.

It is not required to change any further parts of the turbocharger. This compressor diffuser exchange should be done as part of a regular service inspection.



KBB advises to perform a dye penetration test on compressor wheel to exclude any predamage (cracks)!

2 Affected HPR6000 specifications

The below listed TC specifications could be affected by this blade excitation and will get a new specification no. after exchange of compressor diffuser.

Old spec. no.	New spec. no.	Remark*)
5588705	5588068	MDO P CS 90
5588706	5588069	MDO G FE 0
5588727	5588070	MDO G FE 300
5588745	5588071	HFO P CS 0
5588746	5588072	HFO G FE 0
5588777	5588073	MDO G FE 270
5588781	5588074	HFO G FE 0
5588782	5588075	HFO P CS 60
5588786	5588076	HFO P CS 30
5588787	5588077	MDO P CS 0
5588009	5588078	MDO G FE 315
5588010	5588079	MDO P CS 45
5588011	5588080	HFO G FE 315
5588012	5588081	HFO P CS 45
5588028	5588082	HFO G FE 300
5588029	5588083	MDO G FE 330
5588036	5588084	MDO G FE 315

*) Fuel – Application – Installation – Exhaust elbow position



The TC specification number can be found on the TC name plate (see picture below).

All HPR6000 specifications which are not listed above are not affected by this recommended compressor diffuser change!

