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New PTFE Backup Rings

Affected Propeller:

All MT propellers MTV-()-R(G), -R(P), -R(A), -R(W), -R(GE) installed on Garrett / Pratt & Whitney / Allison-Rolls Royce / Walter / GE engine applications which are already equipped with the piston O-rings C-047-()-4 (black colored with green dot on the outside) (manufacturing/repair date after mid of April 2024)

Accomplishment:

Installation of the new propeller piston PTFE backup ring C-510-().

Reason:

A new piston PTFE backup ring C-510-() is introduced after several internal piston oil leak have been reported.
The new backup ring C-510-() in combination with the new black colored O-ring with the green dot on the outside C-047-()-4 guides the O-ring to avoid any flexing in the groove, which possibly leads to an oil leakage.

Part Numbers:

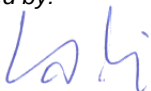
PTFE backup ring C-510-X (X = piston / cylinder diameter)
Black colored O-ring with green dot on the outside C-047-()-4

Documents affected:

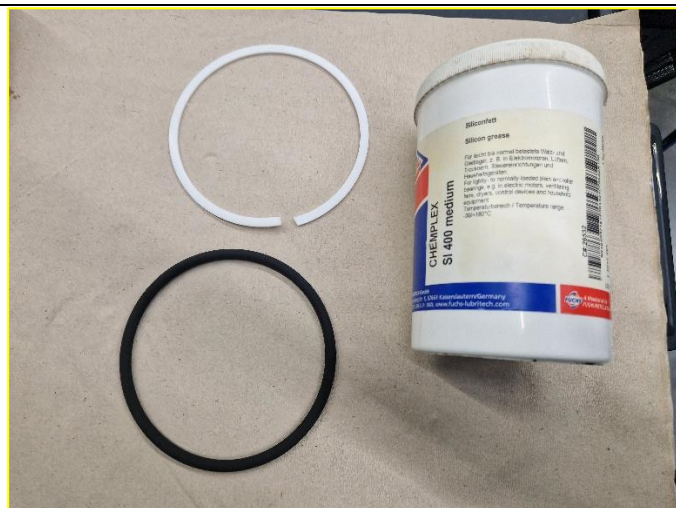
MT-Propeller Overhaul Manual E-680 for turbine installations
MT-Propeller Service Bulletin No. 40

Contact:

MT-Propeller Entwicklung GmbH
Flugplatzstrasse 1
94348 Atting
Germany
e-mail: techsupport@mt-propeller.com

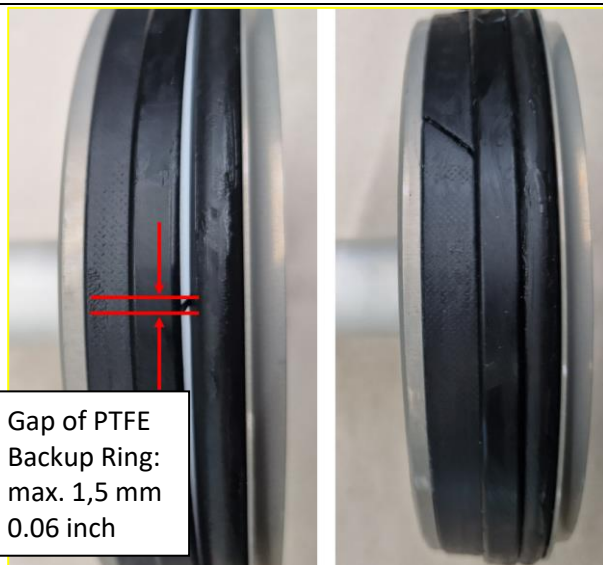
Edited by:  Lara Neitzel	Original Issue: March 8 th , 2024 Revision 1: April 10 th , 2024	Checked and Approved by MPL:  Martin Albrecht
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Lubricate the PTFE backup ring on the antithrust side and the O-ring with a silicone grease (e.g. CHEMPLEX SI 400 medium by FUCHS LUBRITECH).

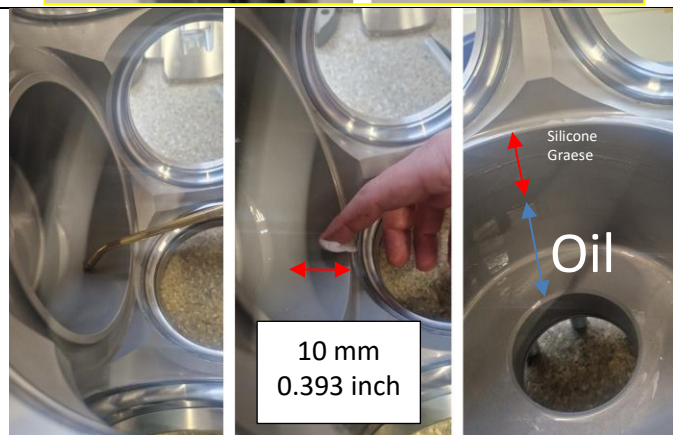
Install the O-ring and the PTFE backup ring in the groove of the piston.



Gap of PTFE
Backup Ring:
max. 1,5 mm
0.06 inch

Put a ty-rap over the black guide ring – if applicable – and the white PTFE backup ring. If needed use two ty-raps. Lubricate the ty-raps again with the silicone grease.

Attention:
The gap of the new PTFE backup ring should be not more than 1,5 mm (0.06 inch).



10 mm
0.393 inch

Apply silicone grease to approx. 10 mm (0.393 inch) of the beginning of the cylinder area and oil to the remaining cylinder area surface.

To be continued on next page!

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Install the front plate with the guide bushing already installed to guide the piston straight in and not damage the O-ring or back-up ring as it enters the cylinder.

Insert the piston with moderate pressure by hand.

Optionally, the piston can be installed with the guide rod by hand without the front plate installed.

Make sure the cylinder is open so that the air inside can escape during installation. After installation of the O-ring and back-up ring, check to see if the white backup ring, the black guide ring – if applicable, or the black O-ring itself have been sheared off.



Remove the front plate again to take out the ty-rap(s) that slipped off automatically during insertion of the piston by using a wire cutter.

Attention:
Be careful not to damage any part of the propeller when removing the ty-rap(s).

Now entirely insert the piston.