

Component Examination

02-06-19

Re: C018-2 Clutch Assembly
C166-4 Shaft S/N 4066
C188-3 Sprag S/N 4936 Rev G

TIS – 1680.9 Hours

At the request of the NTSB, a visual examination was performed on the C018-2 clutch assembly, previously removed from R44 N484AB SN11390.

Pilot reported while climbing, heard a loud bang sound and experienced a yawing motion, an autorotation was performed.

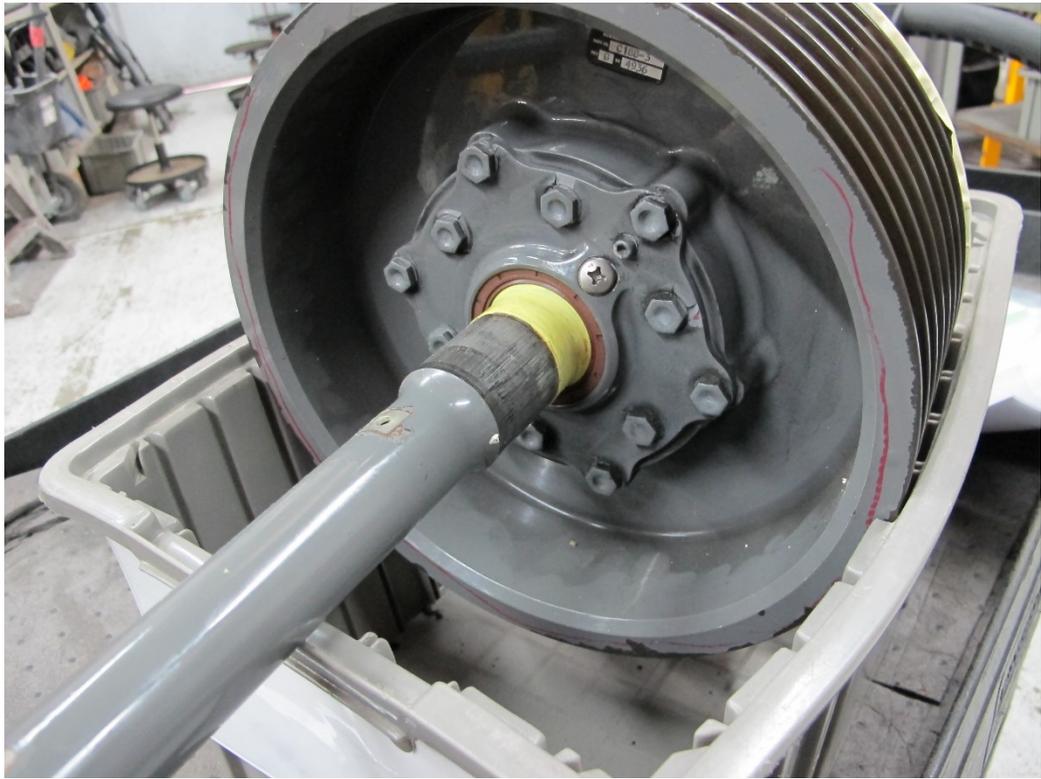
Mechanic reported very small metallic debris in the clutch oil.

Visual examination after disassembly revealed galling between the sprags and the sprag contact surfaces on the shaft and the hub. See attached photos.

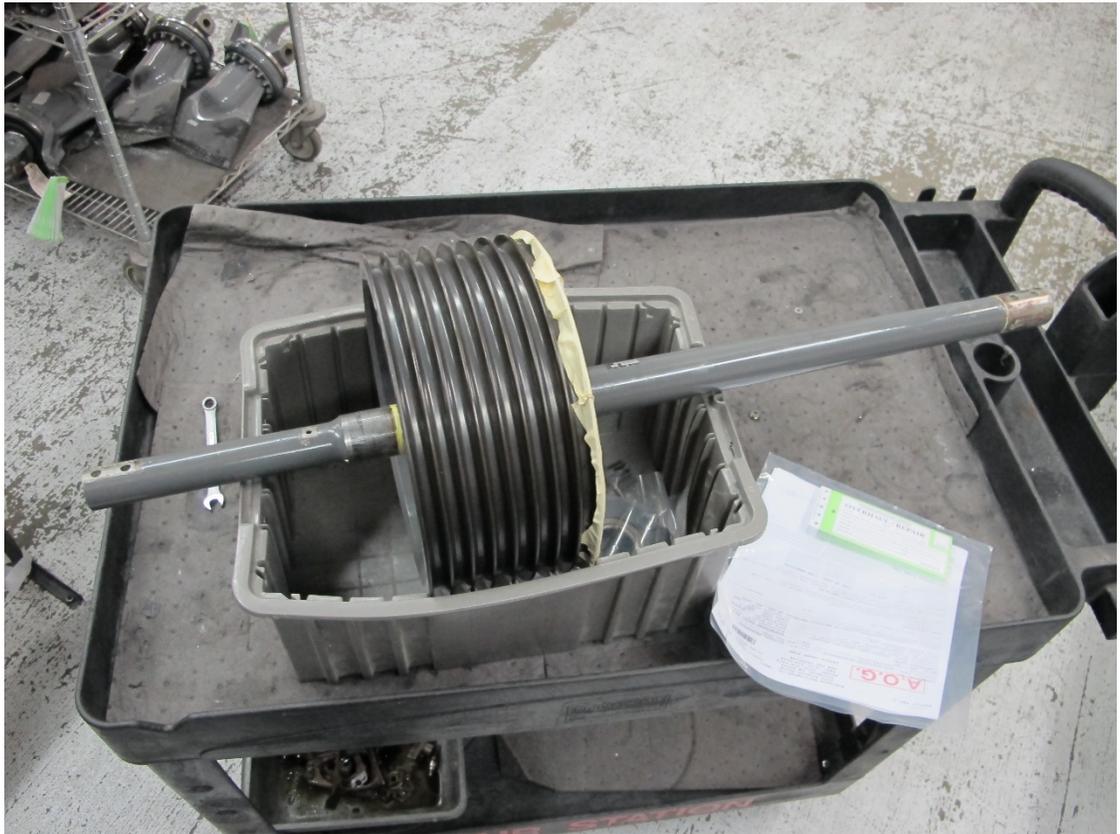
R44 Maintenance Manual requires clutch assemblies to be inspected for metallic flakes every 500 hours.

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Above and below: Clutch assembly after actuator support bearing removed.





Component data plates.





Dirty oil with very fine metallic flakes (wiped on a paper towel).

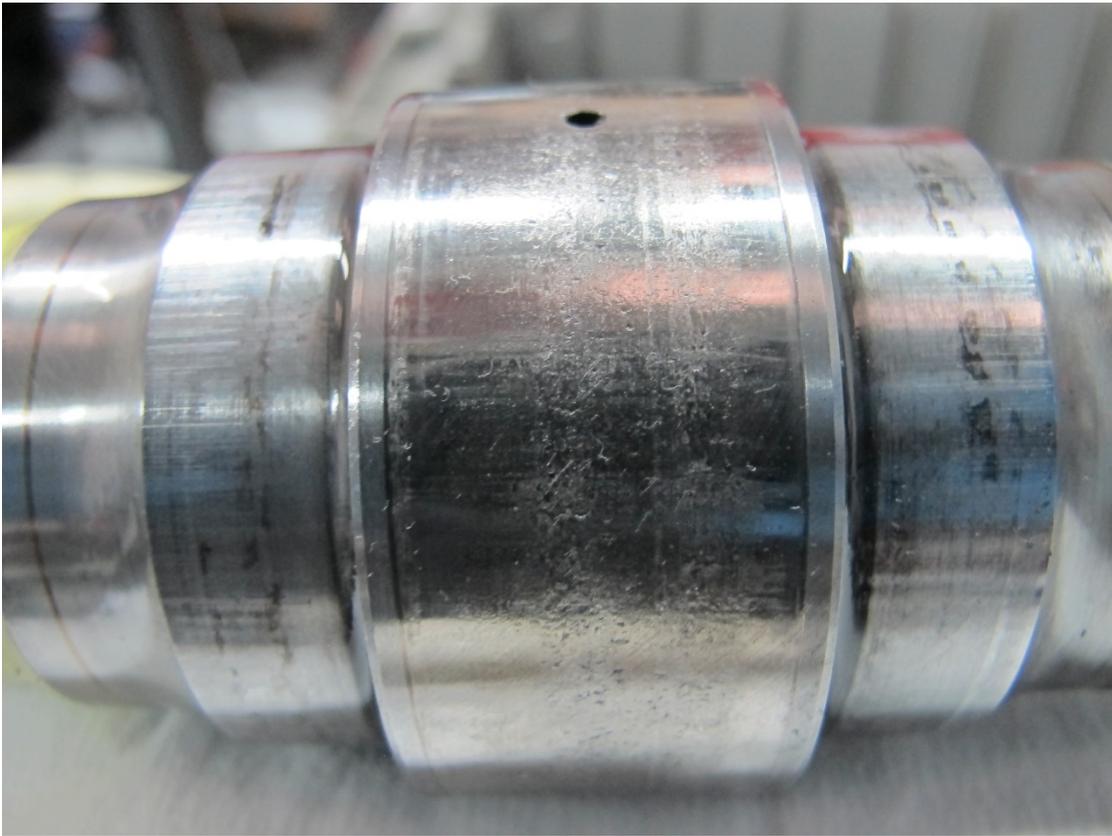


Sprag bearing as removed.

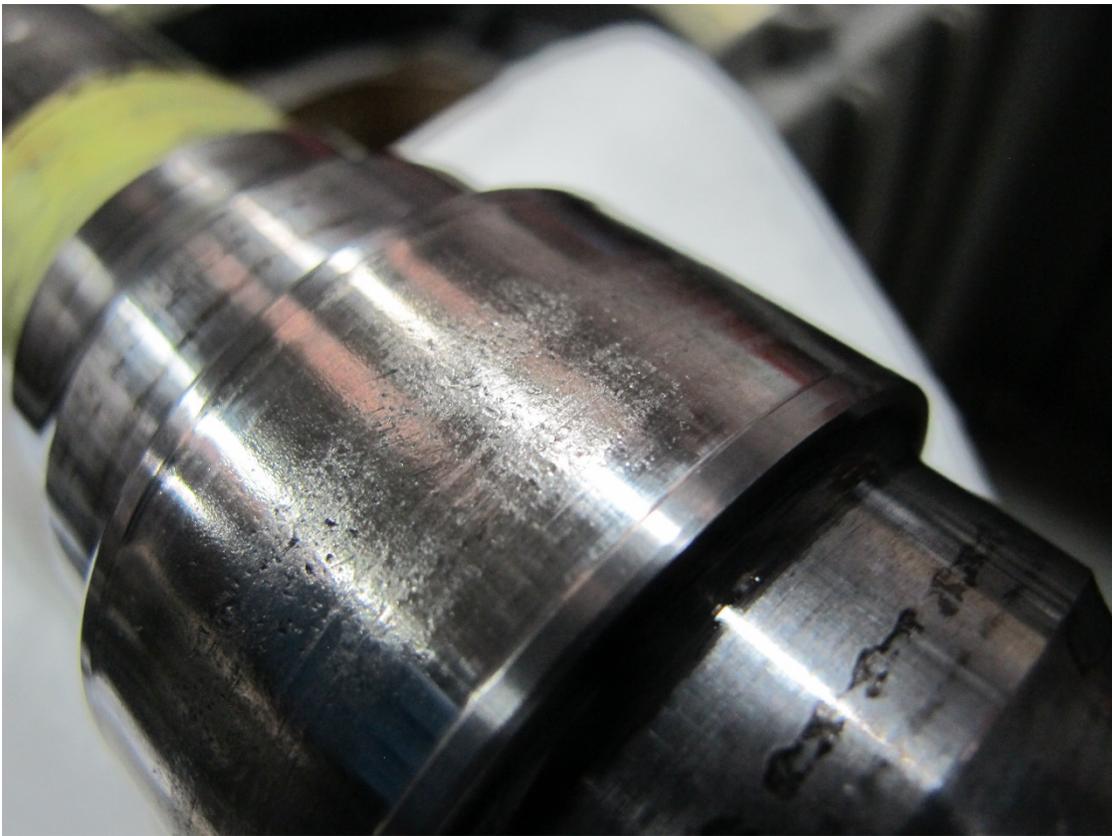


Above and below: Galling on internal contact surface of sprags.



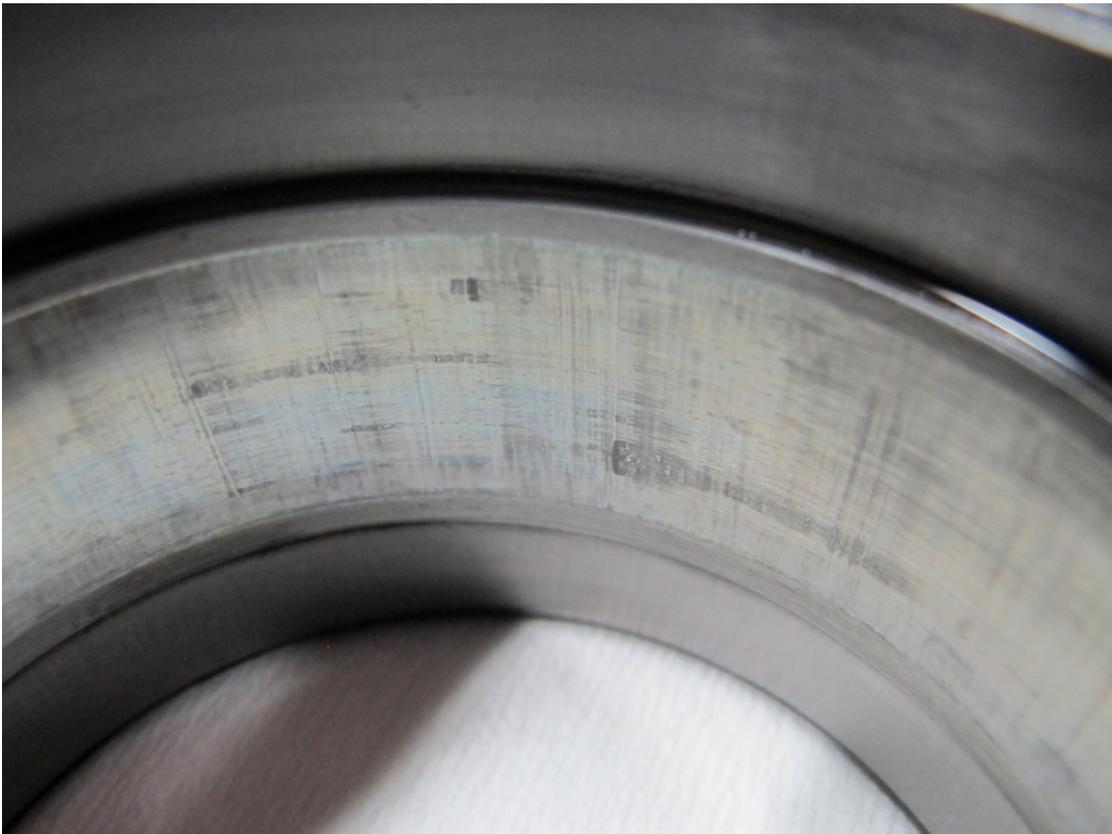


Above and below: Galling on sprag surface of clutch shaft.





Galling on external contact surface of sprags.



Galling on sprag contact surface of hub.