



# AIRWORTHINESS BULLETIN

AWB 01-036 Issue 1 - 31 August 2018

Suspected Unapproved Parts - McCauley Propeller Governor,  
Idle Gear Bearings

## 1. Effectivity

All McCauley Propeller Governors.

Direct Population - Any McCauley Propeller Governor with an Idle Gear Bearing P/N A-20028 marked "BA-59".

## 2. Purpose

To alert owners, operators, maintainers and parts distributors that suspected unapproved parts have been supplied which may not conform to the approved design.

## 3. Background

CASA has been made aware of an airworthiness concern related to partial or complete failure of McCauley Governor Idle Gear Bearing P/No: A-20028. Initial investigations have raised concerns about material non-conformity, (hardness and alloy) as well as dimensional compliance of the bearings.

This airworthiness concern is isolated to those bearings marked "BA-59".



Example Bearing showing "BA-59" marking



The bearing is installed within the oil pump idler gear of the governor to boost engine oil pressure to facilitate propeller blade control. Bearing galling or degradation will cause the clearance to increase with a consequential internal leak in the oil transfer system causing the governor to lose some or all control.

In a single-engine aircraft, this will show as the RPM being too high with an inability of the governor to keep the RPM down.

Conversely, in twin-engine aircraft this will show itself, with RPM too low with an inability to bring the RPM up to the set speed or may result in the propeller going into uncommanded feather.

Bearing deterioration or failure may also cause metal contamination within the engine oil system with consequential wear and damage to internal rotational and reciprocating assemblies requiring engine bulk-strip for repair.

#### **4. Recommendations**

CASA recommends that aircraft owners, operators, maintainers and parts distributors review the latest and any subsequent revision of McCauley Service Bulletin SB271 Title: A-20028 IDLER GOVERNOR GEAR BEARING INSPECTION and inspect their aircraft records and parts inventory for the identified suspected unapproved parts.

If any of these suspect parts are found in existing stock, it is recommended the suspected parts are segregated to prevent inadvertent installation.

For affected assemblies in operation, if the installation of bearing variant i.e. BA-59 cannot be confirmed, pay special attention to the warning signs of bearing deterioration, such as:

- an inability of the governor to hold selected RPM
- the propeller surges or hunts an RPM
- is airspeed-sensitive
- propeller is unable to hit high-pitch/low RPM - in a single engine aircraft
- propeller is unable to hit low-pitch/high RPM - In a twin-engine aircraft

Special attention should also be given during the engine oil change and oil filter inspection for signs of metal residue or particles which may be indicative of bearing breakup.

Failure to look for metal in the filter or ignoring adverse indications or unusual behaviour of the engine or propeller, can lead to catastrophic engine failure.

Note: This AWB is for information only and will not be updated with future revisions to McCauley SB271.



## 5. References

McCauley Service Bulletin SB271 Title: A-20028 IDLER GOVERNOR GEAR BEARING INSPECTION (latest revision)

## 6. Reporting

If a suspected unapproved part is identified, report the finding to CASA via selecting the 'Suspected Unapproved Parts' box in the DRS Online reporting page or complete CASA Form 1058-Suspected Unapproved Parts, links have been provided below.

DRS Online <https://www.casa.gov.au/aircraft/standard-page/defect-report-service>  
[CASA Form 1058 - Suspected Unapproved Parts](#)

## 7. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link email address:

[AirworthinessBulletin@casa.gov.au](mailto:AirworthinessBulletin@casa.gov.au)

or in writing, to:

Airworthiness & Engineering Branch  
Aviation Group  
Civil Aviation Safety Authority  
GPO Box 2005, Canberra, ACT, 2601