

SERVICE BULLETIN

AA-SB-27-005

Link Rod Wear – Inspection & Maintenance

1. PLANNING INFORMATION

1.1. EFFECTIVITY

All Alpha and Robin R2000 and HR200 series aircraft older than 10 years or with more than 2000 airframe hours.

1.2. CONCURRENT REQUIREMENTS

Nil

1.3. REASON

A maintenance organization has reported an instance where a nose gear steering link rod P/N 47.23.01.010 snapped while installing and tensioning new rudder cables. The cause for the failure was found to be due to excessive wear of the link rods over an extended period in service.

As a safety precaution it is recommended to carry out the checks and inspection detailed in 1.5 below.

1.4. DESCRIPTION

After some time in service, the nose gear steering link rods may be excessively worn, failure of which may cause loss of steering and potential landing gear collapse on landing.



1.5. COMPLIANCE

On receipt of this SB inspect aircraft for compliance within the next 5 hours of operation.

- Remove P/N 47.23.01.000 Guide, link rod, LH and RH, with P/N 47.23.01.010 Link rod, pedals to front wheel, LH and RH.
- Inspect steering linkage components for excessive wear.
- Any components with excessive wear should be replaced.
- In the case of the link rod, any diameter measurement (in any direction) more than 0.032" below nominal diameter is not acceptable to return to service.
- Clean and Lubricate with Aeroshell 6 or equivalent grease before re-assembly.
- Repeat this inspection every 2000 hrs in service or every 10 years whichever occurs first.

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Make a log book entry stating compliance with this Service Bulletin. The entry shall identify the action taken to satisfy this Service Bulletin.

1.6. APPROVAL

Alpha Aviation Design Organization DO65180

1.7. WEIGHT AND BALANCE

Nil affect on weight or balance

1.8. REFERENCES

R2000 and HR200 Service Manual.

1.9. OTHER PUBLICATIONS AFFECTED

Nil

2. ACCOMPLISHMENT INSTRUCTIONS

Remove Engine Cowls Refer to R2000 Service Manual Section 5.8 (or applicable HR200 Service Manual) 'Rudder Bar Assembly' and remove the Steering Link Rod Assemblies.

Clean and Inspect all components of the steering rod assembly for wear and damage. Replace worn and damaged parts. Maximum permissible wear for return to service of the steering link rod is 0.032" (0.8mm) reduction in diameter in any position or direction.

Lubricate steering link rod assemblies with Aeroshell Grease 6 (or equivalent) and reinstall following guidance of section 5.8.2 in the R2000 Service Manual.

This inspection is required every 2000 hrs in service or every 10 years, whichever occurs first.

3. FEED BACK

Maintenance organisations are requested to provide feedback on the results of the inspection. Please use Alpha form DES 22 (Design Feedback Form) for this purpose. A copy of the form and mailing details can be found in the Service Manual.

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