



Marvel
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Tail Rotor Hub & Blade Assembly Balance Bell Helicopter Model 214ST 214-011-801 Typical

Balance Equipment

Balance Indicator and Rotor Mount

1 7HEL093 Kit – Tail Rotor Balance

Note: The 7HEL093 Kit supplies all balance equipment required for this rotor. Due to multipurpose application, balance equipment for other model helicopters may include one or more of its individual parts. Refer to the Installation Illustration for identification.

Preparation

- 1. Select a draft free area. Provide a flat top bench and hoist equipment or other means of suspension.**
- 2. Provide two standard 2" x 4" wood blocks approximately 6" long. Place on edge approximately 3 ½" apart on bench top.**
- 3. Clean rotor trunnion bore and adjacent face surfaces.**
- 4. Remove 3165 Arbor from kit case and disassemble stored adapters from its shaft. Stand upright in bore of case block.**
- 5. Clean oil from indicator area, if present, and depress indicator collar to release internal oil seal. Position collar for minimum free clearance, approximately .005", with arbor end and secure lightly with set screw.**

Note: Prior to storing arbor in kit case after use, release set screw to allow oil seal to move upward and seat. Do not retighten set screw.

Balance Procedure

1. Place 3152 Base, hub extension upward, central across blocks.
2. Adjust index plug section of each 3572 Post to dimension indicated by the Installation Illustration and secure with its internal set screw. Install posts in threaded bores at opposite ends of base.
3. Place 3570 Adapter, large end downward, over hub extension of base. Rotate to align set screws with those of base.
4. Position tail rotor assembly to locate fork section of pitch horns upward and rotate to align horn ends with posts. Engage trunnion bore with pilot diameter of adapter and seat. Install plug section of posts into end bore of pitch horns.
5. Install 3295 Yoke, legs downward, over lower end of 3165 Arbor and position to align its top surface at arbor scale Sensitivity Setting indicated by the Installation Illustration. Secure with both set screws.
6. Install 3300 Cone, knurled end upward, over lower end of arbor and position against yoke. Temporarily secure with set screw.
7. Insert arbor downward thru trunnion, adapter and hub of base. Index to position legs of yoke to contact flat of rotor hub between trunnion bearing bosses and secure with set screw in both adapter and base.
8. Reposition cone to seat firmly in trunnion bore and secure with both set screws.
9. Suspend assembly to clear work support approximately ¼". Stabilize movements and observe balance condition as indicated by exposure of black disc in top surface of arbor shaft. Check to insure indications are not affected by interferences, air drafts or movement of nearby personnel.
10. Refer to applicable helicopter maintenance manual for balance tolerance, method of correction or assembly requirements.

Balancer Installation - Tail Rotor
214 - 011 - 801 Typical
Bell Model 214ST

