



Marvel

Manufacturing Company

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Stroudsburg, PA 18360 USA
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Propeller Balance

Dowty Rotol Model 354/4-123-F/ - Typical

Balance Equipment

Balance Indicator

1 ea	7BAL152	Kit – Balance Indicator
	Alternate	
1 ea	7BAL162	Kit – Balance Indicator
1 ea	7BAL150	Kit – Balance Indicator
1 ea	7BAL160	Kit – Balance Indicator

Propeller Mount

1 ea	7A066N2	Kit – Propeller Balance Adapter
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Propeller Support

1 ea	3565-4	Stand – Propeller Support
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Preparation

1. Provide shop hoist facilities in a draft free area of adequate size.
2. Position and secure support arms (4) of 3565-4 Propeller Support Stand to contact blade shanks adjacent to hub. Adjust height of support arms to provide clearance for the hub dome and secure. Select caster or post type leg floor contact option and adjust to desired overall height.
3. Carefully inspect mount surfaces of propeller and adapter flanges for and stone to remove all raised portions of nicks or other irregularities.
4. Prepare 3015 Balance Indicator Arbor for use. Stand upright and remove rubber seals (2) at indicator collar for internal damping oil and clean indicator surfaces. Reinstall indicator collar to provide minimum clearance, approximately .005” with end of arbor and secure. Maintain arbor in upright position after removal of seals and replace after use if arbor is to be stored horizontally.

Balance Procedure

- 1. Locate propeller support stand under hoist and install propeller assembly, less spinner dome, in a nose down position.**
- 2. Attach 2994 Quick Disconnect Cable to 3015 Arbor and suspend from hoist.**
- 3. Install 3520 Propeller Balance Adapter, flange downward on arbor and temporarily position about mid-length. Secure with set screw.**
- 4. Assemble 3009 Retaining Ring Section pair in lower groove of arbor and lower adapter to set on retaining ring. Install additional retaining ring pair in arbor groove exposed at upper end of adapter.**
- 5. Lower arbor to seat adapter on propeller flange surface and rotate to align dowel bores. Lightly lubricate threads of 2882 Bolts (8) and install in symmetrical pattern. Evenly tighten to approximately 200 inch pound torque.**
- 6. Remove quick disconnect cable from arbor and install 3007 Protector. Lightly tighten retaining set screw.**
- 7. Install 2742 Anchor Ring on arbor and position to align upper surface with arbor scale 13 ¼" Sensitivity Setting. Tighten clamp screw to secure and install 3020 Backbalance Weight to seat on anchor.**
- 8. Install 2742 Anchor Ring on arbor and position to align upper surface with arbor scale 25 ¼" Sensitivity Setting. Tighten clamp screw to secure and install 2998 Backbalance Weight to seat on anchor.**
- 9. Remove protector and reinstall cable.**
- 10. Position blade pitch to Dowty specification. Refer to applicable propeller maintenance manual for pitch settings, balance tolerance, method of correction or other specific requirement.**
- 11. Remove propeller support stand and lower assembly to assist view of balance indication but maintain floor clearance. 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 air drafts or movement of nearby personnel and install correction.**