



Marvel
Manufacturing Company

40 North 2nd Street
Stroudsburg, PA 18360 USA
570-421-6221

Propeller Balance

Dowty Roto Model R352/6-123-F/1

Balance Equipment

Balance Indicator

1 ea	7BAL162	Kit-Balance Indicator
	Alternate	
1 ea	7BAL160	Kit-Balance Indicator

NOTE: Balance Indicator Kits 7BAL152 or 7BAL150 may be used upon procurement of an additional 2998 Backbalance Weight and 2742 Anchor Ring. Parts will store within the Kit Case. Hoist equipment is included in Kits 7BAL160 and 7BAL150.

Propeller Mount

1ea	7A067	Kit-Propeller Balance Adapter
-----	-------	-------------------------------

NOTE: Kit 7A067N1 may be substituted for propellers attaching with nuts, and the 7A067N2 for those attaching with cap screws.

Propeller Support

1ea	3565-3	Stand-Propeller Support
-----	--------	-------------------------

Preparation

1. Provide shop hoist facilities in a draft area of adequate size.
2. Prepare 3015 Balance Indicator Arbor for use. Stand upright and remove rubber seals (2) for damping oil at indicator collar and clean indicator surfaces. Reinstall indicator collar to provide minimum free 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.
3. Position and secure support arms (3) of 3565-3 Propeller Support Stand on a common centerline radius of 5 ½ inches. Select caster or post type leg floor contact option and adjust overall heights to receive propeller.

4. Carefully inspect mount surfaces of propeller and adjust flanges for and stone to remove all raised portions of nicks or other irregularities.

Balance Procedure

1. Position 3565-3 Propeller Support Stand to receive propeller and index flat of rollers upward. Install propeller nose downward, less spinner, to seat hub on roller supports of blade locations.
2. Adjust blade pitch to Dowty Rotol specifications.
3. Attach 2994 Quick Disconnect Cable to 3015 Balance Indicator Arbor and suspend from hoist.
4. Install 2742 Anchor Ring on arbor and temporarily position about mid length. Install 3560 Propeller Balance Adapter, flange downward, on arbor and position against anchor. Secure with set screw.
5. Assemble 3009 Retaining Ring Section pair in arbor groove at the 1-inch scale position and lower adapter to seat on retaining ring. Reposition anchor ring to seat on adapter and tighten clamp screw to secure.
6. Lower balance assembly to seat adapter on propeller flange and index to align attachment bores. Lightly lubricate threads of 2882 Bolts (8) and install symmetrically in alternate bores. Torque evenly in 190-210 inch pounds.
7. Remove quick disconnect cable from arbor and install 3007 Protector. Lightly tighten retaining set screw.
8. Install 2742 Anchor Ring on arbor and position to align upper surface with arbor scale Sensitivity Setting indicated by the Installation Illustration. Tighten clamp screw to secure and install 2998 Backbalance Weights (2) to seat on anchor.
9. Remove protector from arbor and reinstall cable. Hoist propeller to clear support stand and remove stand.
10. Lower propeller to assist view of arbor balance indicator but maintain floor clearance. Stabilize movements and observe balance condition as indicated at black disc in top surface of arbor shaft. Check to insure indications are not affected by air drafts, or movement of nearby personnel.
11. Refer to applicable propeller maintenance manual for balance tolerance, method of correction or other assembly requirement.

Balancer Installation - Propeller
Dowdy Rotol Model R352/6 - 123 - F/1

