



**Marvel**  
Manufacturing Company

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# **Propeller Balance Dowty Rotol #4.5 Shaft Mount**

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## **Balance Equipment**

### **Balance Indicator**

**1 ea 7BAL050**

**Kit-Balance Indicator**

### **Propeller Mount**

**1 ea 2671**

**Cone-Front**

**1 ea 2672**

**Cone-Rear**

### **Propeller Support**

**4 ea 3031**

**Stand-Propeller**

## **Preparation**

1. Select a draft area of adequate size. Hoist equipment must be available.
2. Adjust height of 3031 Stands, if necessary, to provide floor clearance for propeller when supported from blade in nose upward position. Place stands or substitutes under hoist in approximate position to contact blades.
3. Position propeller nose upward and install on stands.
4. Clean cone surfaces in propeller hub and inspect for raised nicks or pick up. Remove, if present in accordance with propeller maintenance instructions.
5. Prepare 2259 Balance Indicator Arbor for use. Stand upright and remove rubber seal rings (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. Reinstall after use if arbor is to be stored horizontally.

## **Balance Procedure**

1. Attach 2994 Quick Disconnect Cable 2259 Arbor and suspend from hoist.
2. Install 2671 Cone, hub upward, on arbor and position top surface at arbor scale setting specified for the propeller model. Secure with set screw.
3. Install arbor, with cone, into propeller hub and seat on cone surfaces.
4. Install 2672 Cone, hub downward, over lower end of arbor and seat cone surfaces.
5. Install Spacers, 2201, 2202, 2203, or 2204 as necessary on lower end of arbor to extend from cone to beyond arbor a maximum of 1 ¼”.
6. Engage 2215 handwheel thread with that of arbor and tighten to clamp cones firmly into seats of hub.
7. Hoist assembly to clear propeller support stands and adjust blade pitch to balance position specified by the manufacturer.
8. Stabilize swing and rotational movements of the propeller and observe balance indicated by exposure of black disc in top surface of arbor shaft. Check to insure indications are not affected by interferences from the stands, air drafts or movement of nearby personnel.
9. Correct propeller balance to visually centralize indicator within exposed black disc. Refer to applicable propeller maintenance manual for balance tolerances and method for correction.

## **Sensitivity Setting**

Propeller Models	Setting
R209, R245, R259	8 ¾”

**Note:** Raise position of 2671 Cone to increase sensitivity, lower to decrease. Change of propeller weight due to blade type or installation of deicer equipment will cause a variation in balance indication sensitivity. This sensitivity, or movement distance of the indicator for a given amount of unbalance, will decrease as the propeller weight decreases. Restore sensitivity to the desired value by repositioning the 2671 Cone. Retighten handwheel to seat cones.