

### **BALANCING MACHINE PERFORMANCE TESTING:**

The Society of Automotive Engineers has established Aerospace Recommended Practices for balancing. Balancing machines involved in the production or overhaul of jet engine rotors for flight service should be subjected to periodic balancing machine performance tests in accordance with SAE ARP 4048, SAE ARP 4050, and SAE ARP 5323. Any balancing machine that fails to pass a balancing machine performance test should be immediately removed from service, and corrective action should be initiated.



Balancing fixture for a 50-pound Class 100 / Class 300 SAE Proving Rotor. Related balancing tooling such as this fixture also requires periodic inspection and recertification.

Typically, SchenckTrebel recommends a balancing machine performance test be conducted for each balancing machine on an annual basis, assuming the balancing machine is used one shift (eight hours) per day. For machines in use during two shifts per day, the balancing machine performance test should be conducted every six months. For machines in use three shifts per day, the balancing machine performance test should be conducted every four months.

Any balancing machine that is relocated should be recalibrated and subjected to a balancing machine performance test prior to returning to service.

### **TOOLING AUDIT AND CONTROL:**

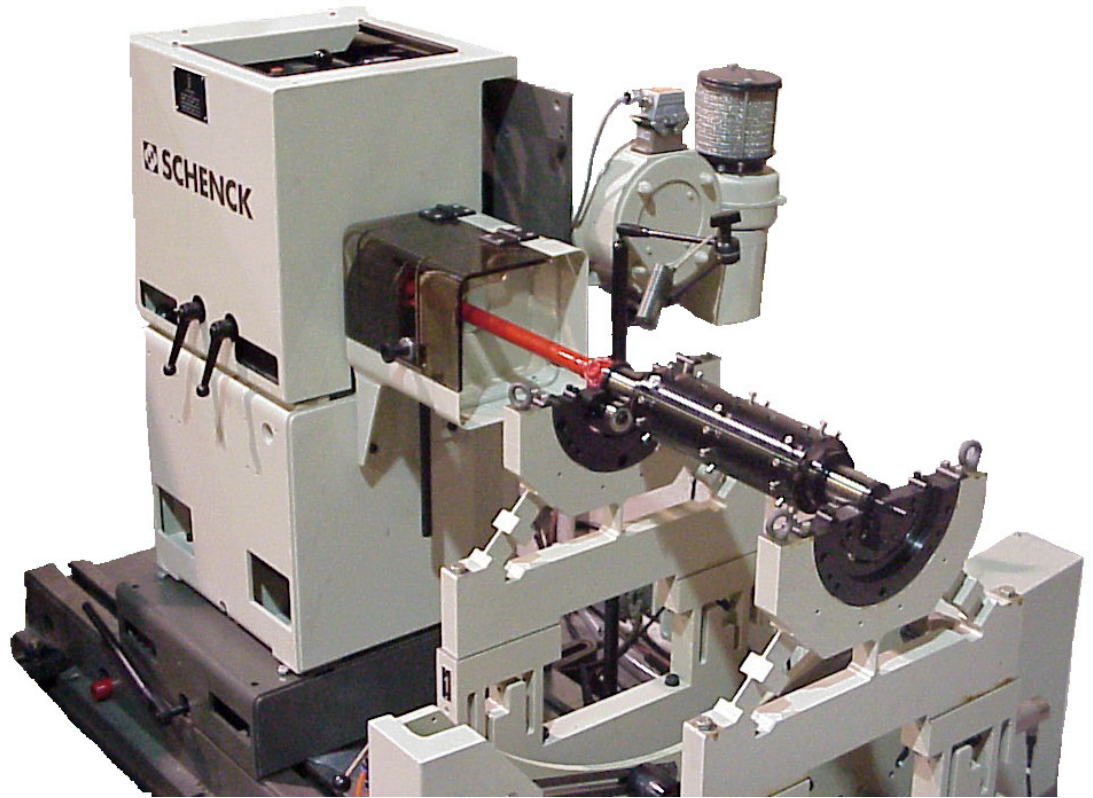
SAE ARP 4162, Revision A is a control document that ensures uniformity in the manufacture and preventive maintenance of proving rotors. SAE Proving Rotors serve as a gage standard for use during balancing machine performance testing according to the above Aerospace Recommended Practices (ARPs).

Therefore, proving rotors and related balancing tooling should be subjected to periodic inspections for critical dimensions including weights and measurements, in accordance with manufacturer specifications. Inspections should be logged and deficiency reports should be issued to all cognizant Process Planners to ensure corrective action is taken in a timely fashion.

Serious deficiencies should warrant cessation of use until corrective action is completed. Inspection intervals are to be determined by the Process Planner in conjunction with recommendations by the manufacturer of the SAE proving rotor(s).

As the manufacturer of SAE proving rotors, Schenck is uniquely qualified to perform periodic inspections and certifications to ensure the validity of your SAE rotor(s) as a viable gage standard.

For information regarding periodic inspection and certification of your SAE proving rotors, please contact Schenck at (631) 242-4010 or via our website at [www.schenck-usa.com](http://www.schenck-usa.com) and reference proving rotor recertification in your communication.



**TABLE 2.**  
**SAE ARP 4162 Proving Rotors**  
**for Horizontal and Vertical Balancing Machines\***

Machine Type	Rotor	Machine Class	Schenck Equivalent Machine
<b>Horizontal</b>	11 lbs	30	HL1
	50 lbs	100	HL2
	50 lbs	300	HF3, HF4, HL4
	150 lbs	1000	H40, HF5, HL5
	500 lbs	3000	HF50, HL50, HL6
<b>Vertical</b>	8 lbs	25	V1L
	25 lbs	50	V2L
	25 lbs	100	V3L
	80 lbs	250	V4L
	250 lbs	500	V40L
	250 lbs	1000	V5L

\*SAE Proving Rotors available upon request. Contact our [Parts Department](#) for more information.