

## Sweeney Aerospace Torque Multipliers

### 1. DESCRIPTION

- 1.1 The Sweeney Aerospace Torque Multipliers are high ratio; multiple reduction gear mechanisms providing a means for loosening and tightening threaded assemblies that demand very high torque values. Each model is designed with an internal splined drive or square drive that connects to sleeve sockets which are specially designed for each application. Anchor pins are located on the back and/or front surfaces for versatility of anchoring.
- 1.2 Each model is equipped with a primary input drive (for high torque/low speed use) and some include a secondary input drive (for high speed/low torque output) application for convenience (secondary input on front only).
- 1.3 On models 8111 and 8112, an automatic brake system inhibits reverse torque from the multiplier's output being transferred to the multiplier's input drive. (See section 2-1 for comments on brake testing.)

### 2. CAUTIONS AND WARNINGS

- 2.1 On models 8111 and 8112, test the automatic brake system prior to every use. This automatic brake system helps reduce reverse torque from being transferred to the input drive while the multiplier is under load.
- 2.2 To test brakes, torque the primary input to 80 ft-lbs with a torque wrench; then gently release. If the torque wrench remains stationary, the brakes are in good working order. If the wrench rotates back at a moderate to fast rate, the torque multiplier should be returned to a Sweeney authorized repair facility for brake overhaul immediately. **DO NOT OPERATE THE TORQUE MULTIPLIER WITH FAULTY BRAKES OR SERIOUS INJURY MAY RESULT.** This test should be conducted with every use of the tool.
- 2.3 For all multipliers, repair, overhaul and calibration MUST be performed by Sweeney or factory authorized Repair Centers only. DO NOT attempt to disassemble damaged/failed units. Disassembly will affect accuracy and a new certificate will need to be created. Sweeney's factory Repair Center in the USA can be reached by calling 1-800-569-6807 or 1-715-627-5519 or by emailing [repair@hydratight.com](mailto:repair@hydratight.com).

### 3. CALIBRATION

- 3.1 **To ensure accurate operation, multipliers must be overhauled and calibrated annually by a Sweeney authorized Repair Center. Units**

**employed on a continuous or weekly basis, may require overhaul and calibration more frequently.** To determine the proper calibration cycle for your usage, consult your Sweeney Repair Center in the UK at +44 1342 716 600

- 3.2 There are several steps in the calibration process to ensure accurate and reliable service from your Sweeney tool. The factory or authorized Repair Center is the only source that can provide complete service. Included is a certificate of accuracy for both "as found" and "as left" readings, complete teardown and inspection of all components, test and inspection of brake system (8111 & 8112 only), replacement of brake shoes (8111 & 8112 only), refurbishing of gear teeth, re-lube with engineering specified grease, and reassembly and testing. Annual overhauls and calibrations ensure that your Sweeney tool is functioning properly, accurately, and safely.

### 4. MAINTENANCE

- 4.1 Each torque multiplier is adequately lubricated at the factory for normal service between overhauls and/or calibration cycles. No additional lubrication is required between scheduled tool overhaul/calibration cycles, although we recommend rotating the input several times before each use to ensure uniform grease distribution and use of the tool in varying positions.
- 4.2 Care should be exercised when using the tool to protect it from external damage and corrosive environments.
- 4.3 Inspect the torque multiplier and other optional tools at each use for cracks in the housing casings. These parts are subjected to a high degree of stress when in use and no attempt should be made to repair cracks or any damage to the multiplier. Return to factory or authorized Repair Center for part replacement.
- 4.4 To ensure safe operation and torque accuracy a unit in need of repair, overhaul and calibration must be returned to a Sweeney authorized Repair Center.
- 4.5 For Europe, Middle East, India, Russia and Africa, please contact Turbine Tools Ltd, telephone, +44-(0)1342-716-600. Email [sales@turbinetools.co.uk](mailto:sales@turbinetools.co.uk) [www.turbinetools.co.uk](http://www.turbinetools.co.uk)