

Gleason No. 6

Gleason No. 6 Angular Hypoid Tester Machine Operator's Instruction Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and efficient operation, installation, and maintenance of the Gleason No. 6 Angular Hypoid Tester Machine. It is essential to read and understand all instructions before attempting to operate or service the machine to ensure operator safety and optimal machine performance.

The Gleason No. 6 Angular Hypoid Tester Machine is designed for precision testing of hypoid gears, ensuring proper tooth contact and quiet operation. This document covers models with serial numbers 17684 and higher.

2. SAFETY INFORMATION

Always observe standard industrial safety practices when operating or maintaining the Gleason No. 6 machine. Wear appropriate personal protective equipment (PPE) including safety glasses, gloves, and hearing protection. Ensure all guards are in place before operation. Disconnect power before performing any maintenance or adjustments.

3. SETUP AND INSTALLATION

3.1 Machine Placement and Leveling

Position the machine on a stable, level surface capable of supporting its weight. Use leveling feet to ensure the machine is perfectly horizontal to prevent operational inaccuracies.

3.2 Arbors Installation

Carefully install the appropriate arbors for the gears to be tested. Ensure they are clean, free of burrs, and securely seated in their respective spindles. Refer to the machine's arbor specifications for correct selection and mounting procedures.

3.3 Drive Head Height Adjustment

Adjust the drive head height to align with the center of the gear being tested. Use the provided adjustment mechanism and locking bolts to secure the head at the desired height. Verify alignment with a precision indicator.

3.4 Angular Adjustment

Set the angular position of the gear spindles according to the specific hypoid gear design parameters. Utilize the angular adjustment scales and locking clamps to achieve the precise angle required for accurate testing.

3.5 Horizontal Settings

Adjust the horizontal position of the gear spindles to achieve the correct offset and mesh. Follow the gear manufacturer's specifications for horizontal settings and secure all adjustments before proceeding.

3.6 Mount and Position Gears

Mount the hypoid gears onto the installed arbors. Ensure the gears are properly seated and secured. Carefully position the gears to achieve initial tooth contact without binding.

4. OPERATING PROCEDURES

4.1 Belt Tension Check

Before starting the machine, verify that the drive belts have the correct tension. Improper tension can lead to slippage or excessive wear. Adjust as necessary according to the machine's specifications.

4.2 Running Gears

Initiate the machine's drive system. Observe the meshing of the gears under load. Listen for unusual noises and visually inspect the tooth contact pattern. Adjust settings incrementally to optimize contact.

4.3 Brake Operation

The machine is equipped with a brake system for controlled stopping of the gear rotation. Familiarize yourself with its operation and use it to safely halt the testing process when required.

4.4 Taper Gibs Adjustment

Adjust the taper gibs to eliminate any play in the sliding components, ensuring precise and stable movement during testing. Adjustments should be made carefully to avoid overtightening.

4.5 Special Spring Mechanism

Utilize the special spring mechanism for applying controlled pressure or backlash during specific testing procedures. Refer to the machine's detailed schematics for its exact function and adjustment.

5. MAINTENANCE

5.1 Lubrication

Regular lubrication is crucial for the longevity and performance of the Gleason No. 6 machine. Refer to the lubrication chart (if available on the machine) for types of lubricants and frequency of application. Pay particular attention to spindles, slides, and gearboxes. Use only recommended lubricants.

5.2 Cleaning

Keep the machine clean and free of debris, especially around moving parts and electrical components. Use appropriate cleaning agents that will not damage painted surfaces or seals.

5.3 Inspection

Periodically inspect all components for wear, damage, or loose fasteners. Replace worn parts promptly to prevent further damage or operational issues.

6. TROUBLESHOOTING

- **Machine Not Starting:** Check power supply, emergency stop button, and safety interlocks.
- **Unusual Noise During Operation:** Inspect gear mesh, lubrication levels, and bearing condition. Adjust belt tension.
- **Inaccurate Test Results:** Verify machine leveling, arbor concentricity, and calibration of angular/horizontal settings.
- **Excessive Vibration:** Check for loose components, worn bearings, or unbalanced arbors/gears.

For issues not covered here, contact Gleason technical support.

7. SPECIFICATIONS

Specific technical data for the Gleason No. 6 Angular Hypoid Tester Machine can be found on the machine's nameplate or in supplementary documentation. Key specifications typically include:

- Model: No. 6
- Serial Numbers Covered: 17684 and Higher
- Power Requirements: (Refer to machine nameplate)
- Dimensions: (Refer to machine nameplate)
- Weight: (Refer to machine nameplate)
- Gear Diameter Capacity: (Refer to machine nameplate)

8. WARRANTY AND SUPPORT

For warranty information, technical assistance, or to order replacement parts, please contact Gleason customer service. Provide your machine's model and serial number when requesting support.

Contact Information:

Manufacturer: Gleason

Website: www.gleason.com (Example link, actual link may vary)

Phone: (Refer to official Gleason website or documentation)