Intercomp 100058

Intercomp 100058 Valve Spring Tester User Manual

Model: 100058

Introduction

This manual provides instructions for the safe and effective operation of the Intercomp 100058 Valve Spring Tester. This device is designed for accurately measuring the force of valve, clutch, shock, and pressure relief springs up to 2 inches (50mm) in diameter. It features a portable digital force and travel indication with a peak hold function, ensuring precise measurements for various automotive and mechanical applications.

Important Safety Instructions

- Read all instructions thoroughly before operating the device.
- Ensure the device is placed on a stable, level, and secure surface during operation to prevent tipping or movement.
- Do not exceed the maximum capacity of 1,000 lb (500 kg) to avoid damage to the tester and potential injury.
- Keep hands and fingers clear of moving parts, especially the spring compression mechanism, during operation.
- Always use appropriate personal protective equipment (PPE), such as safety glasses, when operating the tester.
- Do not attempt to modify or disassemble the device. Refer all servicing and repairs to qualified personnel.

Setup

Initial Setup Procedures

1. **Unpacking:** Carefully remove the Valve Spring Tester from its packaging. Inspect the unit for any visible signs of damage that may have occurred during shipping.
2. **Battery Installation:** The device operates on a standard 9-volt battery. Locate the battery compartment, typically on the back or side of the unit. Insert a fresh 9-volt battery, ensuring correct polarity.
3. **Placement:** Place the tester on a sturdy, flat, and stable workbench or surface that can support its weight and the forces applied during testing.
4. **Power On:** Press the designated power button to turn on the device. The backlit digital display should illuminate, indicating the unit is ready for use.

Image: The Intercomp 100058 Valve Spring Tester showing its digital display and the spring compression platform. This image illustrates the overall design and key components of the device, including the handle and base.

Operating Instructions

Measuring Spring Force

1. **Zeroing the Display:** Before placing any spring on the tester, ensure the digital display reads zero. If it does not, press the 'ZERO' or 'TARE' button (if available) to reset the reading.
2. **Positioning the Spring:** Carefully place the spring to be tested onto the lower platform of the tester. Ensure it is centered and stable to prevent it from slipping during compression. The tester accommodates springs up to 2 inches (50mm) in diameter.
3. **Compressing the Spring:** Use the compression mechanism (e.g., a hand crank or lever) to slowly and steadily compress the spring. Observe the digital display for the real-time force reading.
4. **Reading Peak Hold:** The Intercomp 100058 features a peak hold function. This function automatically captures and displays the maximum force reading achieved during the compression cycle. This is particularly useful for springs that may be compressed quickly.
5. **Releasing the Spring:** Once the desired measurement is obtained or the spring is fully compressed and released, slowly and carefully release the compression mechanism. Remove the spring from the platform.
6. **Multiple Readings:** For optimal accuracy and consistency, it is recommended to perform several measurements for each spring and calculate an average of the results.

The digital display provides readings in precise 0.2 lb (or equivalent kg) increments, allowing for detailed analysis of spring characteristics.

Maintenance

Care and Storage Guidelines

- **Cleaning:** After each use, wipe the device with a soft, dry, lint-free cloth. Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the finish or internal components.
- **Battery Replacement:** Replace the 9-volt battery promptly when the low battery indicator appears on the display or if the display becomes dim. If the device will not be used for an extended period, remove the battery to prevent potential leakage and corrosion.
- **Storage:** Store the Valve Spring Tester in a clean, dry environment, away from direct sunlight, excessive dust, moisture, and extreme temperatures. Protect it from impacts and vibrations.
- **Calibration:** To ensure continued accuracy and reliability, periodic calibration by an authorized service center or qualified technician is highly recommended, especially with frequent or critical use.

Troubleshooting

Common Issues and Solutions

Problem	Possible Cause	Solution
Device does not power on	Dead or incorrectly installed battery	Check battery polarity; replace with a fresh 9-volt battery.
Inaccurate readings	Device not zeroed; exceeding capacity; needs calibration	Zero the display before each use. Ensure spring force is within the 1,000 lb capacity. Consider professional calibration if issues persist.
Display is dim or flickering	Low battery	Replace the 9-volt battery with a new one.
Spring slips during compression	Improper spring placement; spring diameter too large/small	Ensure the spring is centered and stable on the platform. Verify spring diameter is within the 2-inch (50mm) limit.

Specifications

Technical Data

- **Model:** Intercomp 100058
- **Capacity:** 1,000 lb (500 kg)
- **Accuracy:** ±0.25% of reading
- **Travel:** 4 inches (100 mm)
- **Spring Diameter Compatibility:** Up to 2 inches (50 mm)
- **Readout Increments:** 0.2 lb (or kg equivalent)
- **Power Source:** Standard 9-volt battery
- **Features:** Portable Digital Force & Travel Indication, Peak Hold, Backlit Display

- **Item Weight:** Approximately 11.55 pounds (5.24 kg)
- **Product Dimensions:** Approximately 19.8 x 10.9 x 9.8 inches (50.3 x 27.7 x 24.9 cm)

For detailed specifications or further assistance, please contact Intercomp customer support.
