Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference. 17h

PITTSBURGH® AUTOMOTIVE

63656

DIAL INDICATOR
with Flex Stand and Clamp



Visit our website at: http://www.harborfreight.com
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

Specifications

Overall Plier Dimensions	7 3/16″ x 1 3/4″ H x 1/2″ W
Capacity	0″ - 1″
Revolution	1″ per revolution
Scale Readout	0.001″ (outside dial), 0-1.0″ (inside dial)
Accuracy	+/-0.001

IMPORTANT SAFETY INFORMATION

Assembly Precautions

1. Assemble only according to these instructions. Improper assembly can create hazards.
2. Wear ANSI-approved safety goggles and heavy-duty work gloves during assembly.
3. Keep assembly area clean and well lit.
4. Keep bystanders out of the area during assembly.
5. Do not assemble when tired or when under the influence of alcohol, drugs or medication.
6. Weight capacity and other product capabilities apply to properly and completely assembled product only.

Use Precautions

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Keep work area well lighted.
3. **Store idle equipment**. When not in use, the Dial Indicator must be stored in a dry location. Always lock up products and keep out of reach of children.
4. **Use the right product for the job**. There are certain applications for which the Dial Indicator was designed. Do not modify the Dial Indicator and do not use the Dial Indicator for a purpose for which it was not intended.
5. **Check for damaged parts.** Before using any product, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for any broken or damaged parts and any other conditions that may affect its operation. Replace or repair damaged or worn parts immediately.
6. **Replacement parts and accessories**. When servicing, use only identical replacement parts. Use of any other parts will void the warranty.
7. Do not allow children to play with the Dial Indicator.

Assembly Instructions

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this document including all text under subheadings therein before set up or use of this product.

Note: Because of the unique Flexible Stand, your Dial Indicator can by mounted to many different locations for different apllications. When mounting the Dial Indicator, take into account the location of the test material, the length of the Dial Indicator, and the design of the test fixture.

1. Secure pliers to any location.
2. Loosen Caliper Clamp (4) and insert the Dial Caliper (1) into the opening. See Parts Diagram. Tighten the knob into place to secure the Dial Caliper.
3. Turn the Cam Lock (5) to lock the cable in place. If the Cam Lock does not tighten down properly, adjust the fine-tuning mechanism located near the Dial.
4. Establish a base line. Turn the Bezel on the Dial so that the needle points to zero.

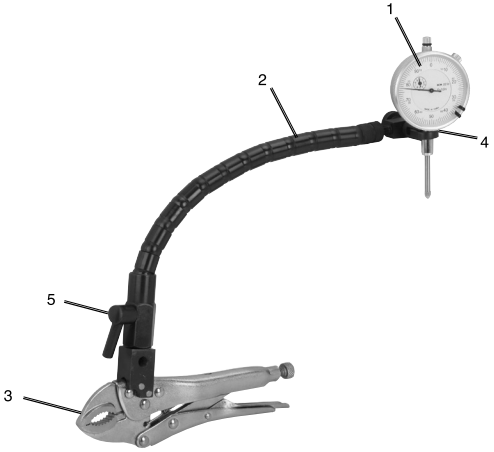
Note: There are many applications for the Dial Indicator with Flex Stand and Clamp. Following is one example of how the Dial Indicator can be used: Testing brake rotors for warp.

5. Following Steps 1 through 4, set the Pin of the Dial lightly against a rotor to establish a base line. You do not want the needle too tight against the object being measured. There must be room for the needle to move in and out while under pressure.
6. Spin the rotor to see if it is true. As the rotor spins, the needle will move in and out. The dial will indicate the degrees of difference in true, defined as the measurements which are above and below the base line established at the beginning.

Note: Dial Indicators are highly versatile tools used in many applications in machine shops and precision fabricating and testing facilities. The above example is only one of many possible uses for this measuring tool.

Parts List and Diagram

Part	Description	Qty
1	Dial Caliper	1
2	Locking Cable	1
3	Pliers	1
4	Caliper Clamp	1
5	Cam Lock	1



PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS DOCUMENT AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Limited 90 Day Warranty

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To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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