

# M4.5-001/002 ARC2000

P-1554  
819-0513

## Installation & Operating Instructions



 **Warner**<sup>®</sup>  
Electric

*An Altra Industrial Motion Company*

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**⚠ WARNING** Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

## Handling

Handle and install with care. This is a precision assembled unit with close internal clearances. The magnetic materials used in this product are brittle by nature. Avoid damaging protective housing and subjecting to severe shock loads. Do not drop. Do not use a hammer on any surface of this product.

## Installation

Please refer to included drawing. The upper spring assembly is mounted to the machine spindle by 1 1/4-12 internal thread on end opposite clutch. An upper assembly installation tool has been provided to insert into and tighten the upper assembly to the machine. The clutch assembly is threaded and mounts to the base of the upper assembly with radial spanner wrenches (not provided). The output capper chuck (cap gripper) is secured to the threaded output shaft of the clutch. Please refer to included drawing.

## Adjustment

The top spring force can be adjusted using the instructions provided on page 3.

The torque setting can be adjusted using the instructions provided on page 4.

## Cogging

With magnetic clutches there can be a slight memory effect on the internal magnetic disc when changing from a high torque to a low torque setting. This can result in "magnetic lobes" which are felt as a minor cogging when the magnetic disc is turned. This cogging effect can be avoided by making sure that the input or output shaft is rotating when an adjustment is made from a high torque to a low torque setting. If cogging has already been developed, it can be corrected. To correct, start at the maximum torque setting and then while rotating the shaft at about 25 to 250 RPM, adjust the unit from maximum torque to minimum torque.

## Setting Top Load Spring Force

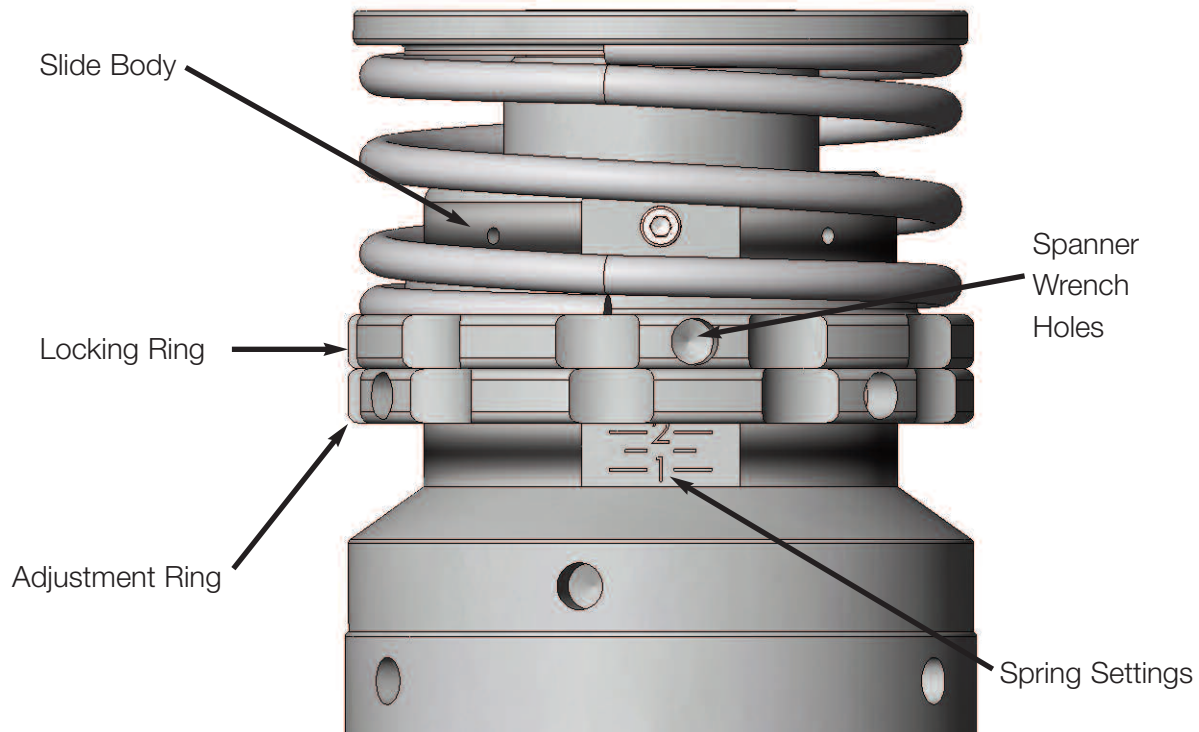
1. Determine initial spring setting from the spring force chart at the right.
2. Rotate the locking ring counter-clock-wise to compress the spring so that the adjusting ring can be rotated to the correct setting on the scale.
3. Align the bottom side of the adjusting ring to the desired setting.
4. Bring the locking ring down and tighten the two rings together with a spanner wrench.

**Note:** While the machine is running, and caps are being applied, the bottle should not spin. If the bottle does spin, it may be necessary to increase spring pressure.

Spring Setting	Top Load Force @ 0.200 Compression
Min.	27
1.0	30
1.5	33
2.0	38
2.5	41
Max.	44

## Tools Required

- (2) Adjustable head pin style spanner wrench with 1/4" pins.



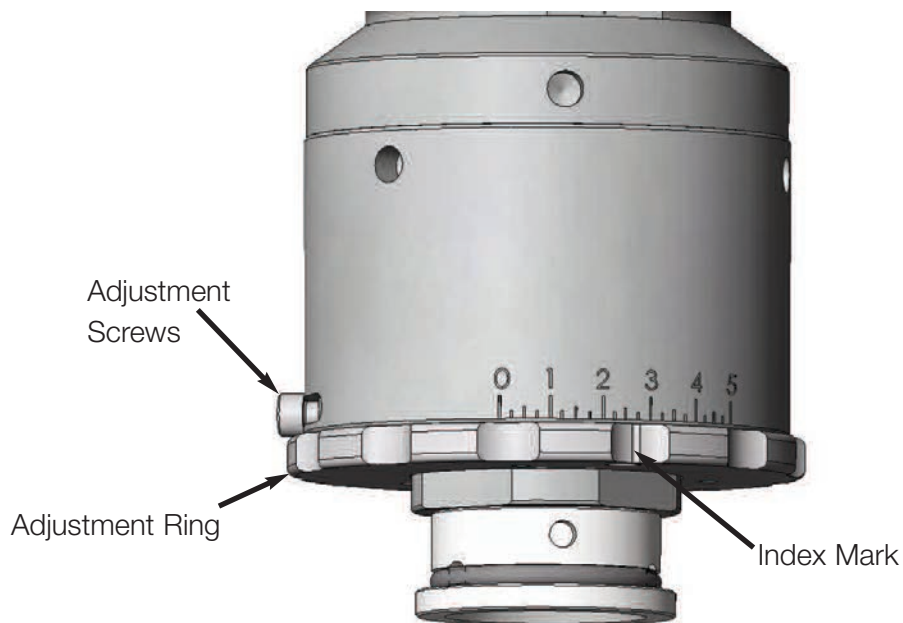
## Setting Application Torque

1. Determine Initial clutch setting from torque chart at the right.
2. Loosen torque adjustment screws. Rotate adjustment ring to desired setting and retighten torque adjustment screws.
3. For optimum results, check setting with a torque wrench.

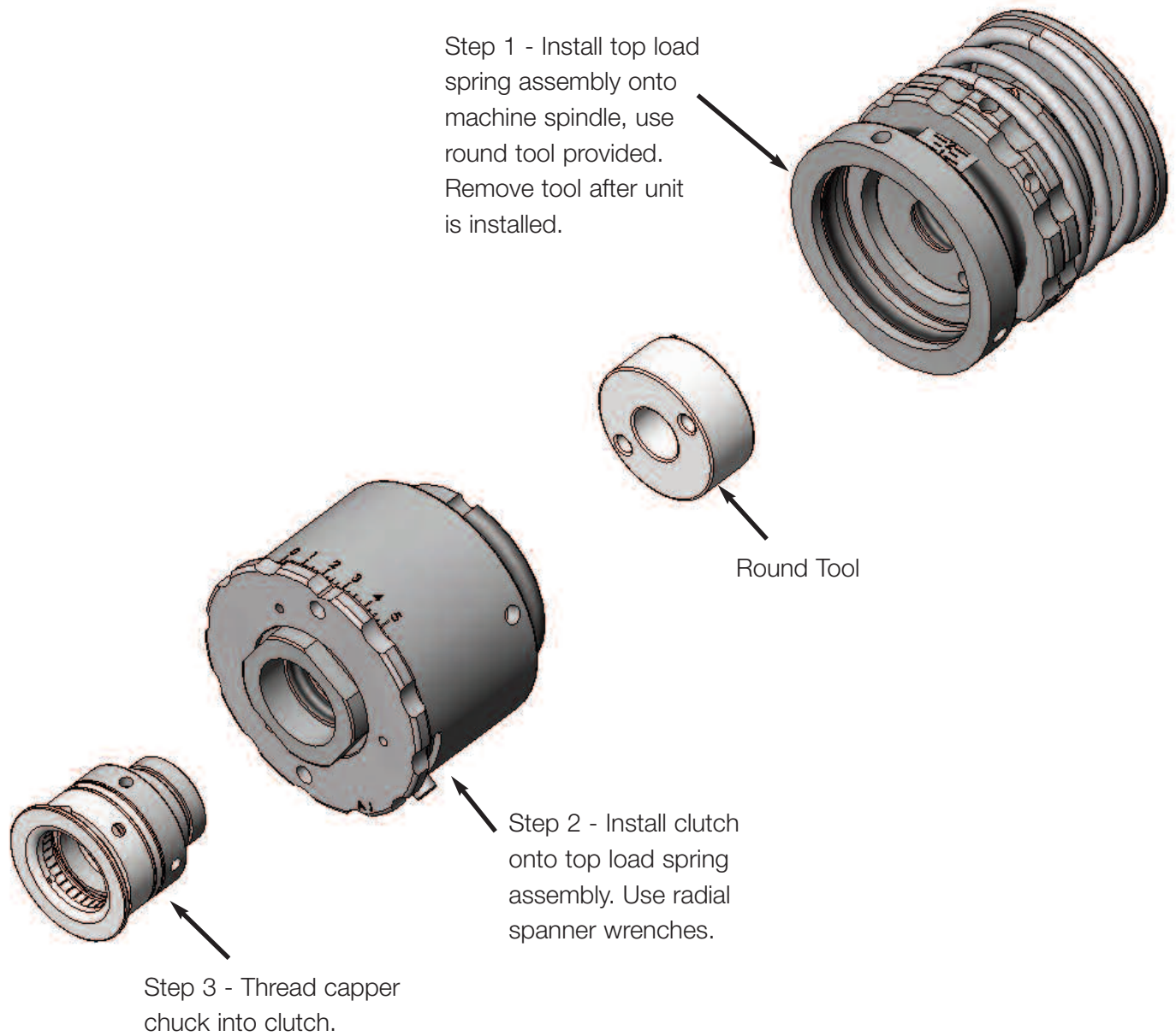
## Tools Required

- 5/32 Hex key wrench
- Torque wrench with adapter (optional)

Clutch Setting	Application Torque (lb.in.)
0.00	3.00
0.25	3.00
0.50	3.00
0.75	3.50
1.00	4.00
1.25	5.00
1.50	6.50
1.75	8.00
2.00	9.50
2.25	11.50
2.50	13.50
2.75	15.00
3.00	17.00
3.25	18.50
3.50	20.00
3.75	21.50
4.00	22.50
4.25	23.50
4.50	24.00
4.75	25.00
5.00	25.50

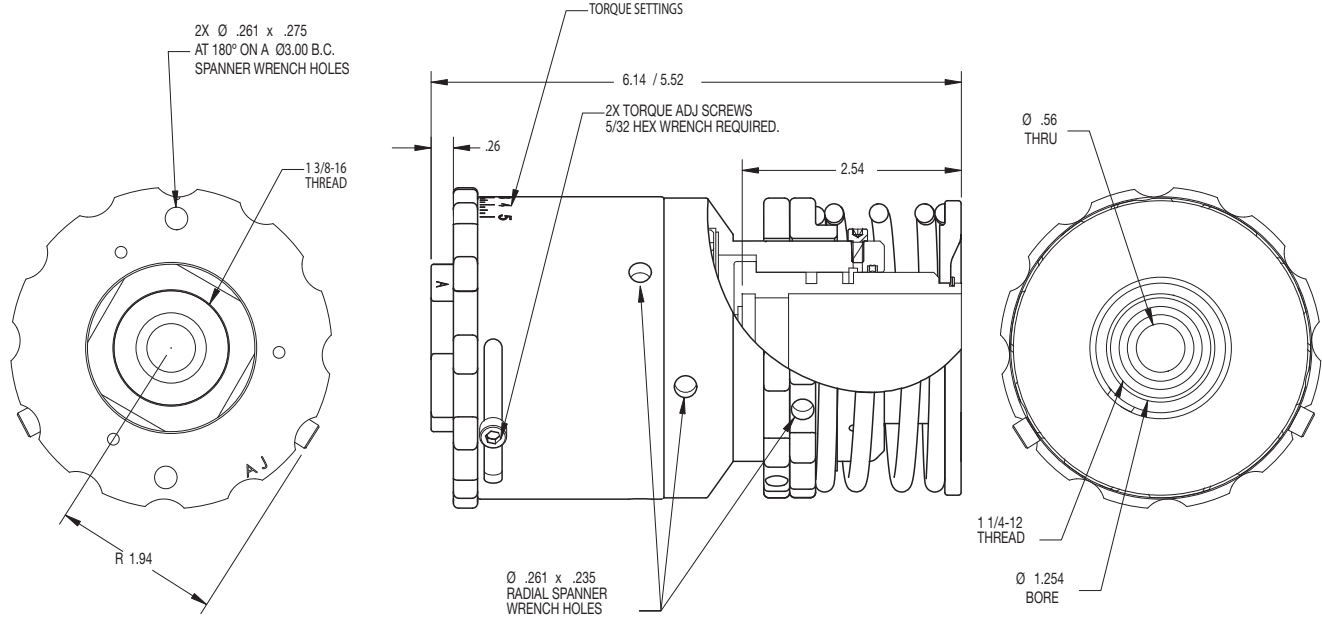


## M4.5



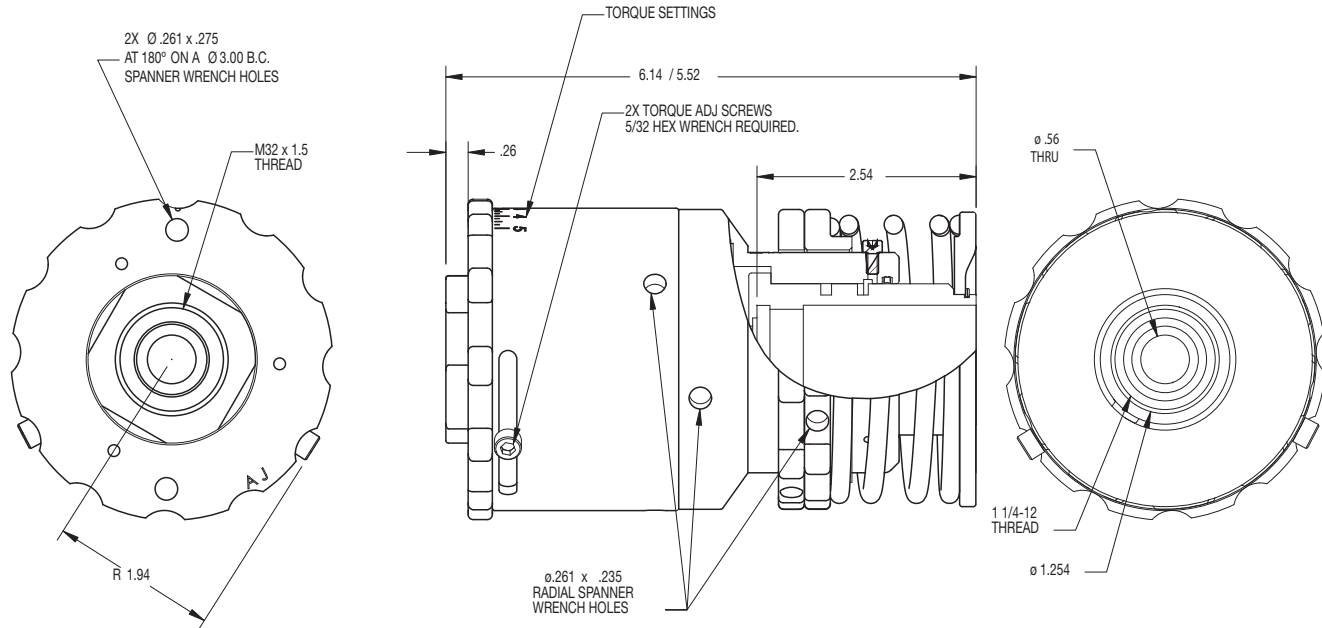
# M4.5-001

TORQUE RANGE: 2 - 25 LB-IN  
 OUTPUT INERTIA: 1.4013 LBS SQ IN



# M4.5-002

TORQUE RANGE: 2 - 25 LB-IN  
 OUTPUT INERTIA: 1.4013 LBS SQ IN





# Warranty

Warner Electric LLC warrants that it will repair or replace (whichever it deems advisable) any product manufactured and sold by it which proves to be defective in material or workmanship within a period of one (1) year from the date of original purchase for consumer, commercial or industrial use.

This warranty extends only to the original purchaser and is not transferable or assignable without Warner Electric LLC's prior consent.

Warranty service can be obtained in the U.S.A. by returning any defective product, transportation charges prepaid, to the appropriate Warner Electric LLC factory. Additional warranty information may be obtained by writing the Customer Satisfaction Department, Warner Electric LLC, 449 Gardner Street, South Beloit, Illinois 61080, or by calling 815-389-3771.

A purchase receipt or other proof of original purchase will be required before warranty service is rendered. If found defective under the terms of this warranty, repair or replacement will be made, without charge, together with a refund for transportation costs. If found not to be defective, you will be notified and, with your consent, the item will be repaired or replaced and returned to you at your expense.

This warranty covers normal use and does not cover damage or defect which results from alteration, accident, neglect, or improper installation, operation, or maintenance.

Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Warner Electric LLC's obligation under this warranty is limited to the repair or replacement of the defective product and in no event shall Warner Electric LLC be liable for consequential, indirect, or incidental damages of any kind incurred by reason of the manufacture, sale or use of any defective product. Warner Electric LLC neither assumes nor authorizes any other person to give any other warranty or to assume any other obligation or liability on its behalf.

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## **Changes in Dimensions and Specifications**

All dimensions and specifications shown in Warner Electric catalogs are subject to change without notice. Weights do not include weight of boxing for shipment. Certified prints will be furnished without charge on request to Warner Electric.



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