

**Mechanical Friction Torque Limiter**  
**Morse Taper Input – Ball Bearing Pilot**  
**Installation & Maintenance Manual**



**Product: [T4X2R-STH](#)**

And non-catalog variations  
of this torque limiter design.

CLICK on product number above to obtain  
the product detail sheet which includes  
dimensional data helpful during installation.

**Mach III Technical Support**

Toll Free: 866-291-0849

International: 001-859-291-0849

Email: [engineering@machiii.com](mailto:engineering@machiii.com)

[www.machiii.com](http://www.machiii.com)

Detail sheets and 3D models are available on the Mach III website:

<http://www.machiii.com/Products/Torque-Limiter/Morse-Taper-Input-Torque-Limiter.asp>

Please contact Mach III to obtain assembly and parts list drawings.



This product includes rotating equipment and should be guarded according to OSHA requirements and other federal, state and local regulations. It is the responsibility of the user to provide necessary guarding.

© Mach III Clutch, Inc. All Rights Reserved

## I. Torque Setting

Mach III torque limiters are typically shipped to the customer with the torque value they have specified. (Note: All torque settings are +/- 10%.) If a torque limiter requires setting or re-setting in the field, please refer to section VII of this document.

## II. Torque Limiter Installation

Before inserting Morse taper shaft into the mating Morse taper socket, visually inspect to assure that they are both free of burrs or nicks.

## III. Torque Limiter Operation

This is a manually adjusted torque limiter. Torque is proportional to the amount of spring compression.

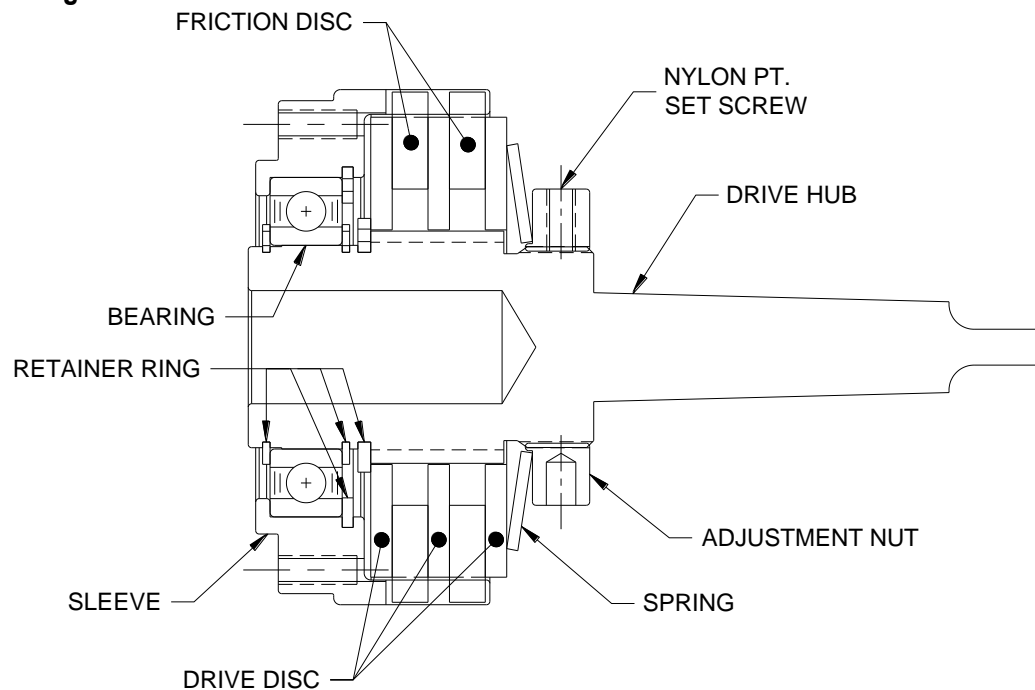
### ***Special Note Regarding Friction Disc Contamination:***

The friction material used in this product will absorb oil, water, chemicals and other contaminants. Depending on the type of contamination, torque limiter may either seize up entirely or lose torque capacity. If friction discs become contaminated, they should be replaced. See repair kit ordering information below.

## IV. Routine Maintenance

When installed and operated according to the preceding guidelines, Mach III Clutch products should require little or no routine maintenance. A repair kit is available which contains all parts subject to typical wear: friction discs and spring.

## V. Parts diagram



<b>Repair Kit:</b>	Part number = Clutch Product Number + “-RPRK” (e.g. T4X2R-STH-RPRK)
<b>Facing Kit:</b>	Part number = Clutch Product Number + “-FCGK” (e.g. T4X2R-STH-FCGK)
<b>Additional Parts:</b>	Contact Mach III to obtain a complete listing of additional parts kits available for your specific clutch. Please reference product number when calling or e-mailing.
<b>Repair services:</b>	Factory repair is available. A return materials authorization (RMA) number must be obtained prior to sending any unit in for repair

## VI. Repair Kit Installation Procedure

<b><i>Tools Required</i></b> Hex Wrench Set Retainer (snap) Ring Pliers Spanner Wrench	<b><i>Compounds Required</i></b> Anti-Seize Lubricant (for re-installation)
---	--

### A. DISASSEMBLY

- (1) Remove torque limiter from shaft and place in vertical position with nut end facing upward.
- (2) Loosen nylon point set screw, set screws and jam nuts (some models) and remove nut. Drive hub will need to be held stationary for this procedure.
- (3) The disc package (consisting of spring, drive discs and friction discs) will now be accessible.

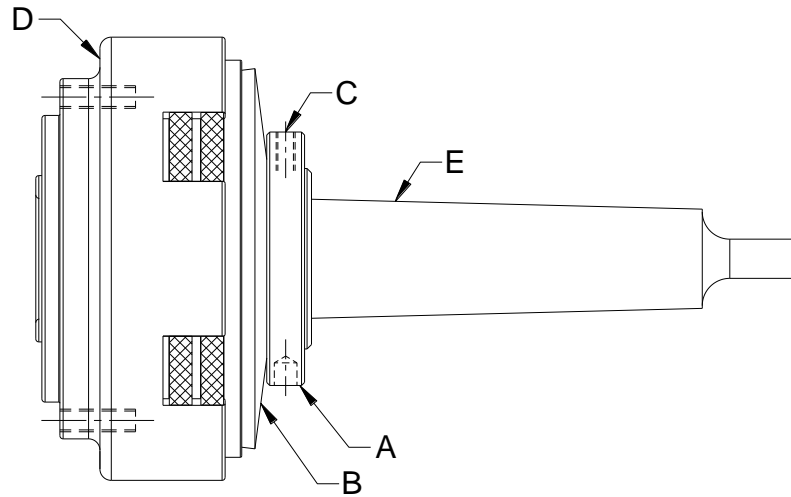
### B. FRICTION DISC & SPRING REPLACEMENT

- (1) Remove the spring, drive discs and friction discs.
- (2) Drive discs should be clean, dry and free of burrs or nicks.
- (3) Reassemble drive & friction disc section according to reference drawing using new spring, drive discs & friction discs as necessary.
- (4) Assure that drive discs move freely on the drive hub and that the lugs of the friction disc discs move freely in the drive slots of the sleeve.

### C. REASSEMBLY

- (1) Lubricate the threads of the nut with Anti-Seize and reinstall.
- (2) Adjust to desired torque.
- (3) Tighten nylon point set screw.
- (4) See “Torque Limiter Installation” portion of these instructions for the proper procedure for reinstalling the clutch.

## VII. Torque Setting Instructions



- (1) Make sure the nylon-tipped set screw (REF. C) in the outside diameter of the adjustment nut (REF. A) is loose.
- (2) Make sure the adjustment nut (REF. A) is snug against the disc spring (REF. B).
- (3) Using a spanner wrench, tighten the adjustment nut (REF. A) against the disc spring
- (4) Check torque value after each 1/4-turn increment of the adjustment nut (REF. A) while holding adapter/sleeve (REF. D) stationary and turning drive hub (REF. E) with a torque wrench.
- (5) Tighten the nylon-tipped set screw (REF. C) in the outside diameter of the adjustment nut (REF. A).

**Technical assistance is available by contacting Mach III Clutch, Inc.**

Mach III Product Warranty

<http://www.machiii.com/Resources/Warranty-Info.asp>



Mach III Clutch, Inc.  
101 Cummings Drive  
Walton, KY 41094, USA  
859-291-0849  
info@machiii.com  
www.machiii.com