



Torque Limiters Installation & Maintenance Instructions for models 13 and 20

Power Transmission Solutions

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FORM

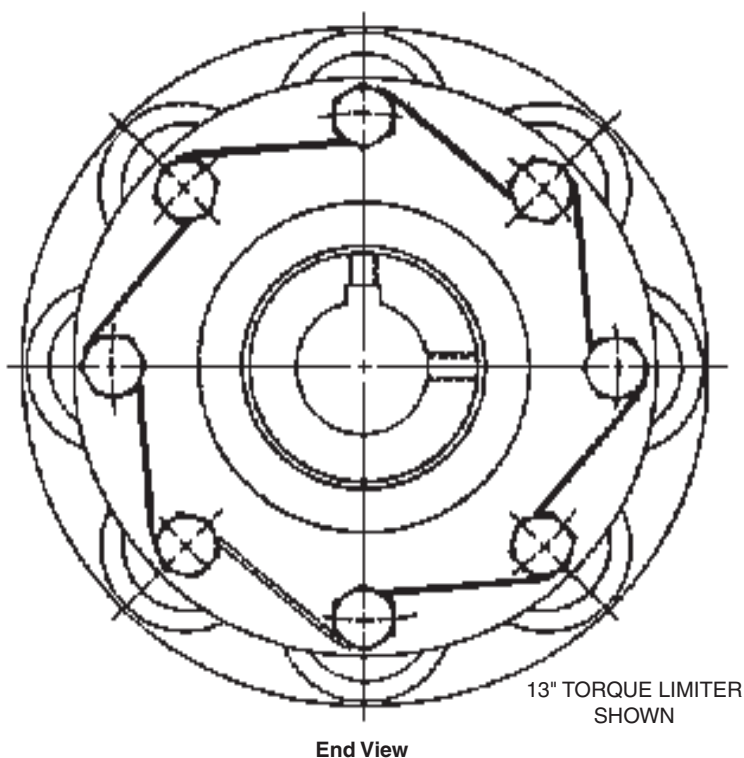
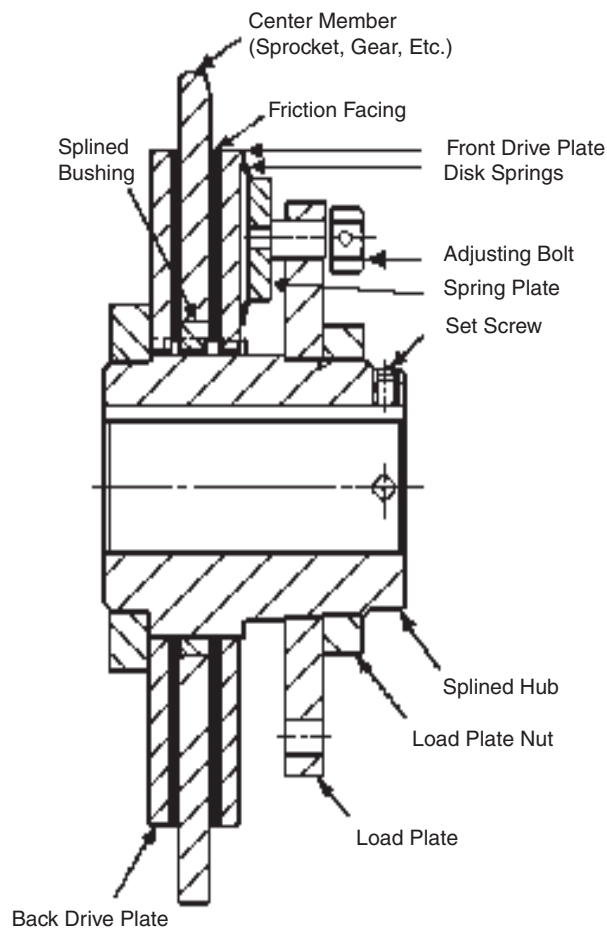
4446-003E
Revised
July 2015

⚠ WARNING

- Disconnect and lock-out power before installation and maintenance. Working on or near energized equipment can result in severe injury or death.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.
- Read and follow all instructions carefully.

⚠ CAUTION

- Periodic inspections should be performed. Failure to perform proper maintenance can result in premature product failure and personal injury.
- All electrical work should be performed by qualified personnel and compliant with local and national electrical codes.



1. Before assembly, the drive plates and center member should be free of oil, grease, dirt, and rust. The center member (sprocket, sheave, or plate) should have a 63 micro-inch finish to obtain maximum rated capacity and optimum life of Torque Limiter.
2. Mount the Torque Limiter hub on a shaft or mandrel. Refer to sketch and assemble as follows on the hub:
(1) back drive plate with finished side toward center
(2) friction facing (3) center member with bushing (4) second friction facing (5) front drive plate with finished side toward friction facing (6) load plate (7) load plate nut, locked in place with setscrew.

Thread adjustment bolts into tapped holes in load plate; mount spring plate on the adjusting bolt as the bolt protrudes through the load plate with spring plate shoulder toward center member. Slip disk spring over spring plate shoulder and tighten adjusting bolt until spring is held in place against front drive plate.

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3. Torque Limiter should be run-in for most consistent results. Wrap the center member (if sprocket) with a chain and load chain with weights to produce 10% of maximum rated torque capacity; if the center member is a plate, attach a chain or cable to the center member. Amount of weight required is determined by radius of center member (see example below.) Tighten adjusting bolts equally around load plate until Torque Limiter holds load without slipping. After this adjustment is made, add weight until center member slips. To run-in, slip center member for one to two minutes at 50 rpm.

Example for 13-16 Torque Limiter

Run-in torque - 230 lb.-ft.

Center member radius - 9" or 3/4 ft.

Required weight $230/3/4 = 307$ lbs.

4. After run-in, adjust the Torque Limiter to carry the required torque by tightening the adjusting bolts equally in small increments. Do not completely flatten the disk springs. Capacity of Model 13 and 20 may be varied by varying the number of load springs. On the Model 13 standard unit, each spring station has a maximum of 3 springs. On the Model 20 standard unit, each station has a maximum of 2 springs. Torque setting may be varied by varying spring combinations. When setting the unit for required torque, the spring stations should be loaded as nearly equal as possible to get an even distribution of load.

5. To check the Torque Limiter for the required slip torque, load the center member in the manner described in Step 3 above and add weights until the center member rotates. The breakaway torque will be equal to the radius of the center member in feet times the weight in pounds on the chain. The breakaway torque should be slightly higher (5% to 10%) than the required slip torque.
6. If the slip torque is too high or too low, the Torque Limiter must be readjusted by loosening or tightening the adjustment bolts in small increments. After adjustment, check the breakaway torque in the manner outlined in Step 5 above.
7. After final adjustment, lace the adjusting bolts together with the soft steel wire which is supplied with the Torque Limiter.

WARNING! The operating characteristics and capacity of Torque Limiters are affected by atmospheric conditions, moisture, lubricants, and surface corrosion. To illustrate, the life of the friction disks may be greatly reduced by rust on the center plate. The Torque Limiters' ratings are based on average conditions. For best results, the Torque Limiter should be adjusted under conditions similar to those in which it will be used.

8. **Maintenance:** At periodic intervals, or if desired torque is not being maintained, inspect Torque Limiter for presence of soil, grease, moisture, or corrosion on the driving surfaces and for proper setting of spring load. Clean and adjust as required. (Friction facings and bushings are replaceable parts.)