

INSTALLATION

Drive (read “Safety First” section on next page before working on equipment)

1. **IMPORTANT!** Be sure that the motor shaft conforms to the NEMA standard tolerances. (If the motor shaft is undersized, non-uniform in diameter across the length, or has excessive run-out, this can be problematic to the performance, installation or removal of the drive). See “**Motor Shaft Tolerance Table**” in this manual.
2. Inspect the inside bore of the drive and the motor shaft to be sure they are clean and smooth. Remove any scratches or burrs with sandpaper if necessary so that all surfaces are smooth.
3. Once both surfaces are very clean, spray white lithium grease on both the inside of the drive bore and onto the entire motor shaft. (The objective here is to provide a light film onto the mating surfaces. This will help prevent galling or scratching the motor shaft when positioning the drive on the motor shaft). Carefully wipe off any excess grease on the motor shaft area where the shrink disc will be tightening the drive hub to the motor shaft.
4. Place the shrink-disc on the drive hub with the bolts facing towards the motor. **(NEVER TIGHTEN THE SHRINK-DISC LOCKING BOLTS BEFORE MOUNTING ON THE MOTOR, SINCE THE HUB BORE OF THE DRIVE CAN BE PERMANENTLY CONTRACTED, THUS PREVENTING THE DRIVE FROM FITTING PROPERLY ON THE MOTOR SHAFT).**
5. Lift the drive via the eyebolt and align the Hub Location Mark (Orange Dot) with the center of the motor's shaft keyway slot. Guide the drive onto the motor shaft while keeping the hub mark in alignment with the keyway slot to insure best balance. With the drive properly prepared, the drive should slide onto the shaft smoothly.
DO NOT FORCE THE DRIVE ON THE MOTOR SHAFT AND NEVER HAMMER ON THE DRIVE OR ALUMINUM FAN.
6. If the fit seems tight or if there is difficulty sliding the drive on the motor shaft, repeat steps 2 through 5.
7. Mount the drive all of the way on the motor shaft, as close to the motor face as possible for optimal balance and to minimize overhung load. With the shrink-disc positioned all the way onto the drive hub, tighten the shrink-disc bolts per the following instructions:
 - A. Alternately hand-tighten the shrink-disc locking bolts, making sure that the two collars of the shrink-disc are maintained in an even (parallel) position.
 - B. Now tighten all of the bolts one after another with an open-end metric wrench in sequence by approximately ½ turns even if at the beginning some of the bolts require very little effort. Use an 8MM wrench for drive frame sizes Pup and Jr, a 10MM wrench for drive frame sizes 1, 2, 3 & 4, a 13MM for drive frame sizes 5, 6 & 7, and a 17MM wrench for drive frame sizes 8 & 9.
 - C. Continue tightening until all of the bolts on the shrink-disc are tight. Since in this application, use of a torque wrench is not practical, Coyote recommends that all shrink-disc bolts be tightened very thoroughly before starting the motor. This is always required to prevent any possibility of slippage between the motor shaft and the drive hub, which could cause galling of the shaft or hub, making removal of the drive from the motor shaft difficult.
8. Once the drive is mounted correctly, align the driven pulley to precisely line up with the drive's sheaves.
9. Install the belts. Be sure to remove the lift eyebolt (if used) from the drum.

Electrical Cable Connections

1. Attach the motor mounted CSA (Cable Support Arm assembly) to the motor.
2. Connect the supplied cable with the **female** plug terminals to the RPCU-2 (rotary power coupling unit) **male** plug terminals. Feed the cable through the pipe of the CSA assembly and make the wire connections to the wires from the controller in the CSA junction box. The purpose of the CSA assembly is for holding the cable wires securely, preventing any rotation of the wires and at the same time not causing any undue pressure on the rotary power coupling. The terminal cable wires may be routed and secured to the rotary power coupling from any direction as long as it does not interfere or come into contact with any of the drive system's rotating parts.
3. Additionally, the optional speed sensor and plastic clamp (if used) can be installed on the same CSA ½" pipe and aligned with the holes/notches on the drum outer diameter. (Follow the appropriate speed sensor mounting instructions and wire connections). The cable can now “float” with the motor to accommodate belt tensioning or belt replacement without damaging the wires or affecting the gap distance between the speed sensor and the speed sensing holes on the drum.
4. The belt guards should be made to clear the drive by 3 to 4 inches with adequate provision for air flow. Additionally, all guards should be constructed with a solid top to prevent any debris from falling onto the drive.
***For safety, the belt guards should always be installed before turning on the motor.**

SAFETY FIRST

WHEN SERVICING, INSTALLING, OR REMOVING THE DRIVE:

- **ALL SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.**
- **ALWAYS TURN OFF (LOCKOUT/TAG-OUT) ALL POWER TO THE MOTOR AND CONTROLS.**
- **BE AWARE OF THE DRIVE'S WEIGHT AND USE PROPER LIFTING EQUIPMENT AND PROCEDURES TO AVOID INJURY. (REFER TO THE SECTION TITLED "EASY PAYBACK® TECHNICAL DATA" IN THIS MANUAL TO DETERMINE THE WEIGHT OF THE SPECIFIC DRIVE MODEL).**
- **OBSERVE ALL SAFETY PRECAUTIONS FOR THIS VARIABLE SPEED DRIVE AS YOU WOULD FOR ALL MOTORS AND OTHER ROTATING EQUIPMENT.**

DRIVE REMOVAL

Drive (read “Safety First” section on previous page before working on equipment)

Alternately loosen each shrink-disc locking bolt by ½ turn at a time until all three elements of the shrink disc are loose on the hub and the drive can be removed from the motor shaft. It is not necessary to remove the locking bolts completely.

Slide the drive off of the motor shaft. In most instances, the drive will easily separate from the motor shaft. However, **in the event the drive is seized on the motor shaft even after the shrink-disc is loose on the hub, Coyote recommends the following method for correct removal:**

1. Unplug the cable wires to the rotary coupling located on the center of the fan.
2. Remove the main fan mounting bolts (6 each).
3. Carefully remove the fan from the drive and then unplug the internal wires that connect the drive coil to the rotary electrical coupling. (Set the Fan aside).
4. After the fan is removed from the drive, the drive's hub mounting bolts will be accessible and you can see the end of the motor shaft down the center of the drive hub bore.
5. Remove two of the hub mounting bolts, install a BAR PULLER** using the same bolts or longer bolts if necessary to secure the puller to the hub. **CAUTION!!! If longer bolts are required, be sure to first carefully check that the longer bolts DO NOT BOTTOM OUT AGAINST THE BEARING on the inside of the drive to avoid damage of the bearing shields.** (The bolts selected to use with the puller should be just long enough to adequately thread into the hub the same distance as the original bolts).
6. Adjust the center adjustment bolt of the puller against the end of the motor shaft until the drive is removed from the motor. (You may also insert a short steel spacer into the hub opening that is slightly smaller in diameter of the hub bore / motor shaft diameter to prevent wear on the end of the motor shaft face when pushing off with the puller bolt. This is recommended if removal is more difficult than normal).

** (Alternatively, a custom puller plate can be fabricated with a welded nut and adjustment bolt instead of using a bar type puller. Coyote recommends using a grade 8 nut and bolt as a minimum requirement).

DO NOT use a puller type that wraps around the drum, and DO NOT apply excess pressure to, or strike the drive drum as the drum can be distorted. Only attach the puller to the center hub or the spider assembly and push off against the end of the motor shaft after completely loosening the shrink disc.