

Conveyor Pulley Manual

These instructions must be read thoroughly before installing or operating this product. This instruction manual was accurate at the time of printing. Please see www.dodge-pt.com for updated instruction manuals.

WARNING: To ensure that drive is not unexpectedly started, turn off and lock out power source before proceeding. Failure to observe these precautions could result in bodily injury.

WARNING: Conveyors should not be cleaned during operation. It is extremely dangerous to be near the nip point when the pulley is in operation.

WARNING: Conveyors should not be operated without the necessary protective guards.

WARNING: Hands and feet should never come in contact with any conveyor component while the conveyor is in operation. Poking at or prodding material on the belt or any component should be prohibited. Any work on conveyors or components must occur only with the equipment unloaded and stopped with the electrical equipment 'locked out'.

WARNING: Do not rely on backstop or brakes to prevent a loaded conveyor to rotate / move while stopped. Treat a stopped conveyor with load as a conveyor in motion.

CAUTION: Always observe the basic rules of safety when working around any conveyor or mechanical systems. Training and familiarity of the equipment is essential for safe operation. Read all manufacturer's manuals before working on any mechanical component.

PURPOSE

This procedure provides general direction and guidelines for the installation, operation, inspection, and storage of conveyor pulleys and pulley assemblies.

WARNING: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

INSTALLING AND OPERATING INSTRUCTIONS

1. Pulleys should be moved about by placing nylon straps around the pulley. Do not lift the pulley assembly by any lifting eye bolts on the bearing. Lifting hardware on the bearing is only for the bearing housing and not designed to support the weight from the pulley assembly.

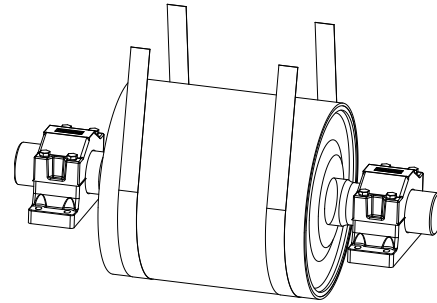


Figure 1 - Lifting diagram for pulley assemblies

2. If the pulley assembly cannot be lifted by placing the nylon straps around the pulley, the straps can be placed around the shaft. The straps must be placed as close as possible to the pulley. Refer to figure 2.

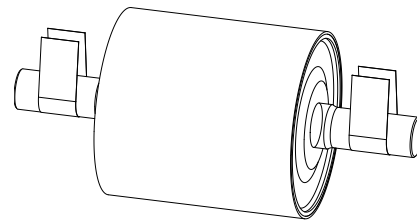


Figure 2 - Alternate lifting diagram for pulley assemblies

3. Pulley assemblies that are on skids or cradles shall be lifted with fork trucks. The 'forks' shall extend through the skid or cradle. Do NOT lift pulley assembly by the shaft, as this may cause damage to the pulley assembly.
4. Pulleys should be inspected periodically to ensure tightness on the shafts. If bushing bolts are found to come loose during operation, it may be due to overloading of the pulley. Excessive shaft deflection can cause bolt retention problems. If bolts are re-tightened, torque to recommended values per the locking device instructions. Do NOT over torque the bolts.
5. Pulley lagging should be inspected for wear, cracks, and adhesion to the rim.
6. Pulley end discs should be inspected for cracks or other signs of stress fatigue. The pulley should NOT be operated if a crack is observed. Pulley end discs should NOT be modified by drilling, welding, or by other means as this may cause a stress riser that can lead to cracking and pulley failure. Consult pulley manufacturer for proper methods for attaching accessories.

7. Take-up pulleys and other belt tensioning devices should be inspected to ensure proper function and movement during operation. Improper belt tensions can cause component failure or excessive slip resulting in belt and pulley wear.
 8. Bearing alignment is essential to achieve maximum bearing life. The alignment must be within the manufacturer's limits. Alignment must be checked in both elevation and squareness to the shaft. This can be accomplished by using a dial indicator attached to the shaft and indicating to a machined surface on the bearing.
 9. Bearings should be checked for excessive movement during operation. This may be an indication that the bearing is not properly secured to the shaft or that excessive wear has taken place on the bearing components.
 10. Bearings should be monitored for heat. A rise in its operating temperature may be an indication of failure. Re-lubricate bearing and monitor bearing operation.
 11. Re-lubricate bearings and couplings as stated in their respective instruction manuals. When re-lubricating bearings, lubricant should be added until clean grease is purged from the seals, as this is normal with seals designed to be purged.
4. Read and follow manufacturer's instructions for the shaft locking devices. Install the locking device onto the shaft and into the hubs of the pulley. Place tightening hardware loosely into holes of the bushing and tighten hardware slightly to seat the locking device. Ensure shaft is in the proper position. Do NOT apply lubricant to the hardware when installing the locking devices as this will affect the holding capability and could lead to premature failures.
 5. Refer to bushing instruction manual for tightening instructions. Follow manufacturer's directions on the procedure and torque requirements of the locking hardware. It is important to use calibrated torque wrenches to accurately torque the locking hardware.
 6. Tightening of the locking hardware may affect the axial position of the pulley. Confirm that the pulley is still properly aligned and positioned.
 7. Read and follow manufacturer's instruction manual for installation of the bearings. Place bearing to the desired location on the shaft. Secure the bearings to the shaft. Tighten the fixed or non-expansion bearing first, then the floating/expansion bearing.
 8. Coupling hubs, if required. Read and follow manufacturer's installation manual. For interference fit, the hub will need to be heated in an oven, or submerged in heated oil to expand the bore in order to position onto the shaft. Depending on the type or style of coupling used, make sure that the appropriate sleeves, seals, seal rings, etc. are placed onto the shaft before placement of the coupling hub.
 9. Attach any other components as required.

GENERAL OPERATION INSTRUCTIONS

1. For best practice, bushing bolts should be re-torqued weekly for the first month of operation.
2. No modifications, repair, or other work should be performed on the conveyor pulley assembly without prior written consent of Baldor Electric Company.
3. Do NOT allow material to be trapped between the belt and pulley face.
4. Do NOT allow material to built up on the pulley face.
5. Do NOT allow the edge of the conveyor belt to wander past the edge of the rim.
6. Do NOT skew the pulley in an attempt to track the conveyor belt.

ASSEMBLY PROCEDURE

1. Prepare and identify all components to be assembled. Refer to assembly drawings or sketches to ensure direction of pulley lagging, location of pulley, bearings and coupling hubs on the shaft, and any other particular assembly instruction/component requirements.
2. Place and secure pulley on a secure assembly platform or bench. Make sure that the bore of the hub is free of dirt and contamination.
3. Place and position shaft through pulley. Be careful not to damage the shaft surfaces during the installation process. Remove any protective coating that may be on the shaft surfaces.

LONG TERM STORAGE

1. Block the pulley to keep the face from touching the ground.
2. Inside storage is recommended. If stored outside, protect the pulley, bearing, and other components from the harsh elements.
3. Lagged pulleys should be stored in a cool, dark area where the pulley will not be exposed to direct sunlight, extreme temperatures, or humidity variations. Areas of high ozone concentrations such as with electric motors or other electrical producing machinery should NOT be used for storage. Do NOT allow oil, grease, kerosene, solvents, or other chemicals to contact the lagging.
4. Bearings should be filled 100% with lubricant, purging from the seals, and then wiped clean before placing in storage. Periodically rotate the bearings.
5. Add rust preventatives to all exposed shaft surfaces.
6. Coupling components must be secured to the shaft and protected from the elements.
7. Before installation, clean the assembly of all debris and rust preventative coatings.
8. Check bushing bolt torque prior to installation.

Dodge product installation manuals

These can be found on the Dodge website using the following address: http://www.baldor.com/support/product_manuals.asp



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