

# RBC SERVICES UPDATE

RBC Services  
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## RBC DRIVE: BASIC MAINTENANCE

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Preventive maintenance is the key to longer life for any piece of equipment. Making sure that all RBC drive components are kept in top condition will save you headaches, time and money. This is true whether your RBCs are driven by a chain and sprocket arrangement or a shaft-mount system.

While chain and sprocket is a simple type drive, several problems can occur if not kept in proper alignment.

Although the drive system should be checked once per month, a daily walk-through inspection will provide you the opportunity to listen for any unusual sounds coming from either the drive or the bearings.

### RBC BALANCE

Regardless of the type drive system used on your RBCs, or the RBCs' manufacturer, overall balance of the unit has a direct effect on the drive. While a slight imbalance will correct itself, a unit with a severe imbalance will eventually cause problems with not only the drive, but the media as well. Balance should be checked prior to putting the RBC back on line under power following down-time for service and/or repair.

The speed reducers were designed to be driven in one direction. If the RBC is out of balance, half of the revolution is pulled while the other is pushed. This causes a back-and-forth type of torque to the gears.

### GENERAL DRIVE POINTS:

Anytime there are motors and rotation involved in the operation of equipment, there are harmonic vibrations present which may affect the torque of fasteners over time. There have been occasions when the security of a drive was compromised and the anchor bolts sheared; the drive torque arm pulled out from the concrete or the package swung into the media, causing damage to concrete, the RBC media and/or the fiberglass enclosure.

The security of anchor bolts and nuts should be checked at least once per year. Refer to the manufacturer's O&M Manual for proper torque applications.

### CHAIN DRIVE SPROCKET ALIGNMENT

If not properly aligned, both sprockets and the chain will need replacement prematurely. The alignment can be checked without shutting the unit down by observing the "chain tracking". Looking through the top port of the chain case, you can see the teeth of the large driven sprocket.

While observing for at least one revolution, the teeth should appear to move side to side within the links of the chain. If the teeth appear to remain on one side of the chain or the other, the drive sprocket needs adjustment to achieve proper alignment. Refer to the O&M Manual.

## **CHAIN TENSION:**

If not properly tensioned, the chain can break, cause wear to the sprockets and/or wear a hole in the chain case. To properly check the deflection, the unit should be shut down, the power locked out and the top half of the chain case removed.

At the point on the chain mid-way between contact with the drive and driven sprockets, lift the chain. The distance of lift should be no more than 1 inch and no less than ½ inch. If the chain needs adjustment, refer to the O&M Manual.

## **DRIVE BELTS:**

Any drive belt system will need adjustment from time to time. A squealing or knocking sound will alert you to this. If the belts get loose and are allowed to operate under this condition for an extended period of time, they will wear and need replacement prematurely.

Sheave alignment is also important and should be checked along with the rest of the drive components. Depending on belt tension, the sheave grooves can wear in such a manner as to wear out even a new set of belts prematurely.

With either a chain & sprocket or shaft-mount drive, visually check the reducer for any oil leaks. If a leak is detected, it may be as simple as replacing a seal. On older units, it may be a bearing requiring replacement.

In the corrective measures mentioned above, reference is made to the manufacturer's O&M Manual. In some cases, it may have been lost or misplaced. If you have that problem, give me a call. I'm sure we can talk you through the procedures.

As always, if you ever have any questions about particular problems or your RBC operations in general, please do not hesitate to call.