OPERATING AND MAINTENANCE MANUAL

EQUIPMENT:

PULLEY'S

CONTR ACT NO:

JOB NO:

CLIENT:

PROJECT:

1. DESCRIPTION

Bosworth pulleys are fabricated from either 300WA, 300WC or stainless steel (for drums), rolled and welded using CO_2 and submerged ARC methods. Shafts are secured by locking elements or shrink fit bosses.

Some pulleys will be lagged with vulcanized rubber as required. The pulley shaft is supported on spherical roller bearings in plumber block housings.

2. MAINTENANCE REQUIREMENTS

The pulley drum and shaft requires no maintenance.

The lagging, where applicable, bearings and locking elements need to be checked periodically as per table below.

MAINTENANCE REQUIREMENT SUMMARY - TABLE 1

ITEM	INTERVAL	ACTION
LAGGING	2 Months	Check thickness remaining with belt awl. Replace if plain lagging is below 3mm, or grooving is worn to below 2mm depth.
BEARINGS	3 Months	Re-lubricate with approximately 100 grams of No. 2 Lithium based grease.
LOCKING ASSEMBLIES	2 Years	Check if bolts are in tact and tight - if not refer back to Bosworth
BEARINGS	2 Years	Check grease contamination level by analysis through a reputable manufacturer. If recommended open and repack bearings in accordance with Bearing Manual.

3. BEARING MOUNTING - SPHERICAL ROLLER

3.1 Use a feeler gauge to measure in dismounted internal clearance of the bearing. Remember to make sure that the rollers are centered, otherwise measure the clearance on both sets of rollers and take the average.

3.2 Protect the shaft and the tapered surface of the sleeve with a few drops of oil or anti fretting paste. Also use Copper compound or similar product to protect the sleeve thread

3.3 Mount the bearing by pushing same up the tapered sleeve until the clearance has been reduced by the required amount (See table in SKF General Catalogue).

(Note: On smaller bearings this may be achieved by using the sleeve nut and a hook spanner. Larger sizes require the use of an impact spanner, or preferably a hydraulic nut).

When the internal clearance has been reduced by the required amount, remove the sleeve nut, fit the lock washer and lock by knocking the tab into a convenient notch in the nut.

3.4 Check the final mounted internal clearance of the bearing and record if necessary. This clearance must exceed the minimum permissible clearance as specified in the table noted in 3.3 above.

4. BEARING - HOUSINGS

When the bearing has been mounted, the housing is easily fitted over the bearing and the cap bolts tightened. Locating rings are supplied and these are usually fitted on the Bearing nearest the coupling or drive. The free or dislocated bearing must be able to piston in its housing to allow for thermal expansion.

5. BEARING - LUBRICATION

Standard bearing housings are primarily intended for grease lubrication. On mounting the bearings, they should be filled with grease and the housing charged to between half and one-third full. On slow running applications the housings can be filled with grease provided it is of Number 2 consistency. The seal area should also be filled with grease.

The lubrication should be checked at regular intervals in service and the lubricant replaced when necessary. If grease nipples are fitted it may be necessary to modify the seal arrangement to allow excess grease to escape without building up dangerous over-pressure within the housing. This is particularly true of the Type TC and TG seals.

6. LUBRICANTS

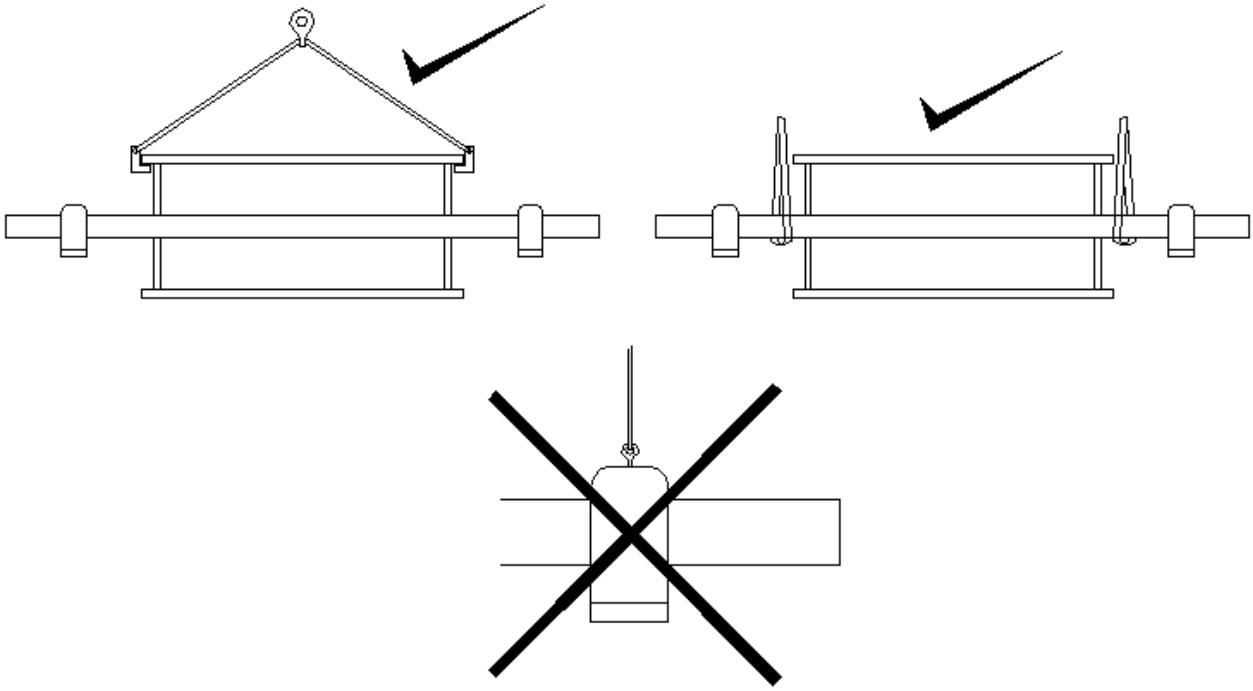
For most conveyor applications, SKF recommend a Lithium base grease of Number 2 consistency with or without an extreme pressure additive.

1. HANDLING

Conveyor pulleys can be lifted using a double chain sling hooked onto the inside lip of the shell.

If webbing type slings are available these could be fixed around the shaft between the pulley drum and bearing.

Under **NO** circumstances are the pulleys to be lifted using the eyebolts on the bearing housings.



2. STORAGE

The most ideal method of storage is on a soft bed of sand, undercover - if stored for an extended period of time.

If this is not available, storage under some cover i.e. out of direct sunlight / weather for long periods is advisable.

However, during manufacture the bearing housings in particular are completely filled with grease to try and prevent moisture ingress during storage from internal condensation.

If no facilities are available the pulleys are adequately protected for periods of up to 4 months. Should the pulleys have been stored for periods greater than 4 months it is Bosworths recommendation that the bearing housings be split and internal inspection be made to ensure that there has been no moisture ingress. This should be carried out by a qualified fitter.

Pulleys that have been transported via sea freight are prone to moisture accumulation in the housings caused by condensation from constant heating and cooling of pulleys in containers in humid conditions. The bearing housing should split before pulley installation by a qualified fitter and any moisture removed along with any contaminated grease.

3. WARRANTY DISCLAIMER

Bosworth will not be held responsible for any damage to the equipment if the manual is not read properly.

4. INSTALLATION

The bearing / bearing housing alignment to the pulley and conveyor centre line is the most important factor to ensure no problems during startup.

The housing must be aligned in both directions – (see sketch below) and this should be checked by running a feeler gauge between the bearing housing and the steel TS collar seal.

ALIGNMENT SKETCH