

TRICKS of the TRADE

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Slewing Gear Reducers
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What is a Gear Reducer Anyway?

Gear reducers are transmissions that convert high speed/low torque motor power to low speed/high torque power. The TB 80 has main and feed conveyor slewing reducer/brake assemblies, while the TB 110 and TB 130 have these assemblies and a telescope gear reducer assembly (without a brake).

The Care and Feeding of Gear Reducers

Like all other components and wear parts on your Telebelt®, the main and feed conveyor slewing



Feeder Slewing Reducer

gear reducers need maintenance to ensure optimal performance. Simple periodic checks between jobs can prevent delays and downtime.

All new units should have reducer/brake assemblies serviced after the first 50 to 100 hours, as noted on the in-service hand-over form. Subsequent change intervals are shown in the maintenance schedule of the manuals.

Neglecting maintenance can result in seal and/or bearing failure which can cause lockup or broken cases.

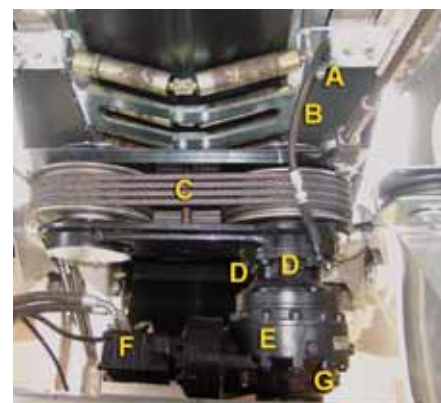
Know Your Gear Reducers

The feed conveyor slewing gear reducer is located on the underside of the feeder base assembly (feeder turntable bearing) on the driver's side of the Telebelt, while the main conveyor gear reducer is located under the main slewing gear.

The telescope gear reducer mounts shaft up and is fixed through the output bearing. The motor on the telescope gear reducer sits vertically on the TB 130 and horizontally on the TB 110.

On older units, the telescope drive breathers sometimes spit oil when the reducer is full and the unit is boomed down.

Current production has a breather extension hose (shown on the TB 110 below) that raises this breather higher into the boom base. This extension can be added to older units. Please consult Putzmeister for parts and installation instructions.



Telescope Gear Reducer (TB 110 shown)



Main Slewing Reducer

Feeder Slewing Reducer and Brake:

- A - Brake Drain
- B - Brake Fill Level
- C - Brake Release Connection
- D - Reducer Drain
- E - Reducer Fill Level
- F - Gear Reducer Breather

Main Slewing Reducer and Brake:

- A - Reducer
- B - Reducer Oil Drain Plugs
- C - Brake Oil Drain Plugs
- D - Screw Plug for Checking Oil Level
- E - Brake Oil Breather

Telescope Gear Reducer:

- A - Breather
- B - Breather Extension
- C - Cable Drive
- D - Oil Level Plug
- E - Gear Reducer
- F - Motor
- G - Drain Plug

Performance and Maintenance Tips from the Field

Changing the Gear Reducer Oil

Many owners think that gear reducers are only filled half way. This would be true if they were mounted horizontally. However, all Telebelt gear reducers mount with the output shaft up and, therefore, must be filled all the way to the output shaft bearing or right to the top.

The best way to fill the gear reducers is through the drain ports, via gravity feed, with the filler reservoir higher than the desired oil level. We recommend avoiding pressurized filling equipment as it can push the seals out of place and create leaks.

Mounting bolts should be kept tight. Check bolted connections on a regular basis per the maintenance schedule.

TECH NOTE

Perform the full oil change with the machine at operating temperature. This allows the reducer oil to flow more easily.

Flush the reducer with a small amount of oil to ensure removal of wear particles and contaminants.

Oil Specs at a Glance

- All gear reducers fill with 90 wt gear oil
- The main slewing brake fills with 90 wt gear oil
- The feeder slewing brake fills with hydraulic oil
- The telescope drive has no brake, so it has only one reservoir

Telebelts: Perfect for Tilt-Up

Tilt-up is a perfect application for a Telebelt. Across the country, Telebelt's have been used for placing bedding sand, placing gravel and grouting it as well as placing the concrete. The conveyor is capable of doing everything but standing up the panels.



Telebelts can do it all — including Tilt-Up.

Troubleshooting

Problem:

"Diluted gear oil is leaking out of my Telebelt's gear reducer breather."

Solution:

This indicates a malfunctioning seal. On the telescope drive it is the motor shaft seal. On reducer/brake units, it could be the brake seal or the motor shaft seal. To identify which seal is the culprit, ensure that the main or feeder is in the rest position. Remove the motor, leaving the motor hoses connected. Operate the circuit to see if the oil is coming from the motor shaft seal or the brake seal. Replace the necessary seal immediately.

The information provided in this issue of the Tricks is to supplement the Operators & Safety Manual and the Parts Catalog for your Telebelt. Please refer to these for specific details on procedures for changing and refilling the gear reducer oil and brake housing oil on the main and feed conveyors.

Should you have questions about maintaining gear reducers or any other part of your Telebelt, please contact Putzmeister's Customer Support Department at 800-890-0269.

Check it Out

Check the oil level on the main conveyor gear reducer once a week when your Telebelt is off, the reducer is idle and the machine is level. The oil should not be below the lower edge of the inspection glass.



More on Telebelt Care

If you have further questions, refer to your Operators Manual and the Telebelt QuickStart Series DVD or feel free to contact Putzmeister's Customer Support Department at 800-890-0269.



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