

Tips on Telescope Drive Removal, Repair and Reinstallation

- Read this **entire** procedure before starting the process of removing the telescope drive assembly for the Telebelt® TB 105 or 130.
- Photos shown are of a TB 105. Although the TB 130 has a different appearance, the procedure is the same, except where noted.
- Inspect cable, covers, sheaves and skirt rubber. Have new parts and drive assembly parts ready.
- If the unit has no telescope drive cover, consider ordering one (A320832) for reassembly (TB 105 only).
- If the telescope cable has a swaged socket at the drive deadhead, have three extra 9/16" cable clamps (A382023), one extra thimble (A382024) and one extra clevis (A380294) available.
- For the drive unit removal, use a suitable lifting device designed for lifting and holding loads. In the examples on the following pages, a forklift was used.



Set the Telebelt up with its outriggers in their normal operating position.

Unload the feeder to the rear, and position the boom at a 90° angle to the truck. This will allow the forklift to access the base of the boom while keeping the feeder out of the way.

On a TB 105, telescope the boom out until the mid-sections are extended a few feet. Retract the tip section until it stops without pushing the mid-sections back in. This will allow room to work around the telescope drive and tip section sheaves.

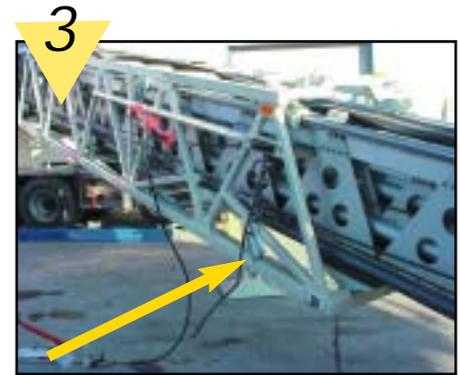
The TB 130 only needs to telescope the aluminum sections out a few feet.



Using the belt tensioning jacks or tensioning chains, remove tension from the main belt.



Note: You must place a bolt in the first hole of the track. This is to keep the take-up from falling out of the slot at the rear of the track (see arrow).



Use the tensioning jack to release the telescope cable tension.

When the tension is completely removed from the cable, disconnect the rod bracket from the cylinder rod end and let the bracket hang freely (see arrow above).

It is not necessary to remove the clevis or cable clamps at the rod bracket.

Disengage the PTO, and turn off the truck engine. Remove the keys from the ignition, and lock the cab door for extra safety.

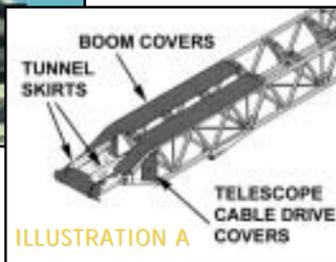


Telebelt® Tricks of the Trade Continued...

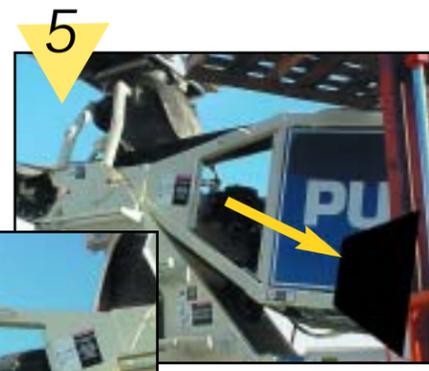
Telescope Drive Removal, Repair and Reinstallation



Remove the tunnel skirts and move the belt to one side, tying it out of the way.



Fold the back of the boom covers forward, allowing clear access to the telescope drive assembly.



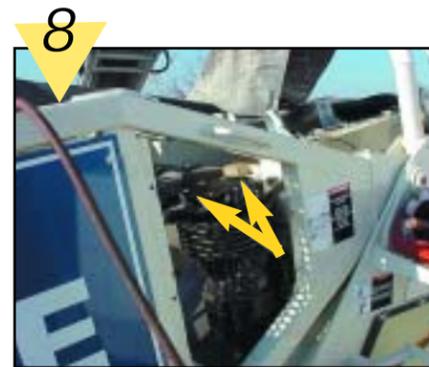
Remove the right and left hand telescope drive covers.



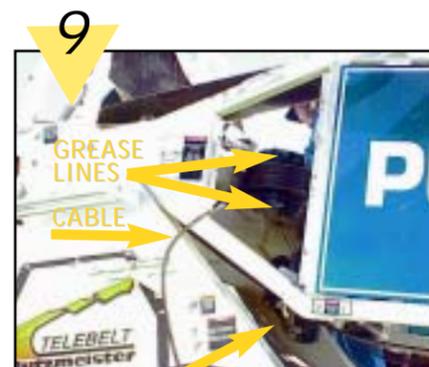
Remove the clevis that attaches the cable to the deadhead of the telescope drive assembly (TB 105) or the space tensioner (TB 130). If the cable has a swaged socket end, remove the socket pin.



Remove the cable clamps and thimble from the end of the cable. If the cable has a swaged socket, cut the socket off. Be sure to melt the cable strands together at the cut to prevent the cable from unraveling (see above).



Remove the telescope drive cover if one is attached. On TB 105 factory installations, four bolts (arrows show location of two on drive side) are used to secure the cover. On the TB 130, leave the telescope drive cover in place until the unit is removed.



Disconnect the four grease lines. Label, disconnect and cap the telescope drive hydraulic hoses. Some units may have a third (case drain) hose. Note the orientation of the motor fittings. They need to be replaced the same way to keep the fittings from rubbing the belt or hitting the upper structure when the boom is lowered.

The cable that was connected to the deadhead runs to the head section retract sheaves and back. Pull it out of the head section sheaves.

Now pull the cable wraps from the drive assembly using the drive cover openings for clearance.

MOTOR HOSES

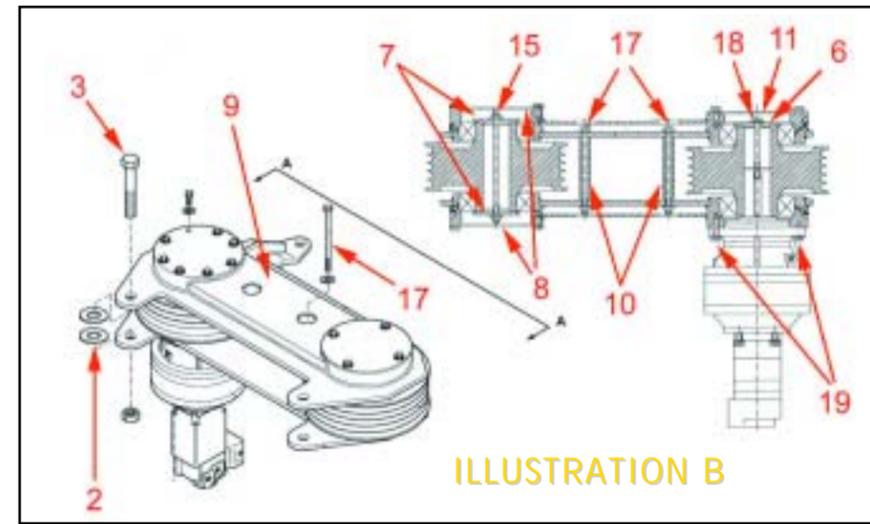


ILLUSTRATION B

This diagram illustrates an early version of the TB 105. For clarity, the telescope drive cover is not shown. The red reference numbers refer to the text listed here and are NOT the reference numbers in the machine manuals.

The TB 130 is very similar to this illustration after the drive chain and sprockets are removed. Drive sheaves and bearings are the same part number for both units. Refer to the machine's manual for the correct part numbers of the assembly components.



Attach a suitable lifting device and rigging to the telescope drive. It is more practical to take the unit out through the top. Rigging from the bottom using blocks and pallets can be done, but it is more difficult to work around obstacles.



See Illustration B. Items #3 are two bolts that hold the telescope drive in place (see arrows). Items #2 are flat washers used as shims, if needed. The washers are utilized to keep the top and bottom plates of the drive assembly parallel. If there are washers, note their location for reassembly.



Lift the drive unit out through the top of the boom truss.



On the TB 105, remove the top and bottom cover plates (items #8 and #11 in Illustration B).

Remove the drive-side bearing retainer (item #6) by removing the bolt (item #18) from the gear shaft.

Remove the two bearing retainers (item #7) from the drive-side sheaves by removing the bolt (item #15).

The TB 130 has chain drive sprockets and spacers in the top of the drive assembly, in place of the cover plates on the TB 105. Once the drive cover, chain, sprockets and spacers are removed, the remaining assembly is just like the TB 105. Refer to the TB 130 manual for the telescope drive parts layout.



Mark the gear reducer housing and drive plate for alignment. Remove the bolts (item #19) from the gear reducer and separate the gear reducer and motor from the drive sheave plates. It is not necessary to separate the motor from the reducer.



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(See arrows)
Remove the two spacers (item #10 in Illustration B) by removing the bolts and nuts (item #17). Lift

the top plate (item #9). The bearings are not a tight fit, but a puller is handy. The bearings have spherical rollers, so it is not necessary to pull both sides “exactly” equal.

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Shown is the top plate removed. The bearings are still inside (under) the top mount. The sheaves can now be removed, one at a time. Small pry bars will usually accomplish this quite effectively.

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Reassemble by following the above steps in reverse. Replace bearings as needed. They are not a tight fit but must go in straight. After the unit is reassembled and the plate spacers (item #10 in Illustration B) are bolted in, check that the sheaves can be turned by hand. Make sure bolts (items #15 and #18) are also not overtightened. If the above steps have been followed and they still do not turn easily by hand, one spacer

may be shorter than the other so slipping a flat washer shim under the spacer should help.

A. When installing the drive motor and reducer, use the index marks you made during disassembly. The hose fittings must be at a 45° angle to the belt. If they are pointing directly toward the belt, they will rub against the belt; and if they are pointing toward the turret, they will contact the turret when the boom is lowered all the way.

B. When the drive unit is mounted on the boom, make sure the top and bottom sheave mounts are parallel. Use washers as shims, if needed. Refer to item #2 in Illustration B.

C. Take the cable from the outer sheave of the driver's side boom base (left side of boom when cradled) and pass it around the bottom groove of the drive sheaves from the driver's side to the passenger's side.

D. Continue passing the cable around the sheaves, working your way up to the top sheave.

E. When the cable leaves the top sheave on the passenger's (right) side, run it to the retract sheaves on the base of the tip section.

F. Go around the retract sheaves and return to the deadhead at the drive assembly (TB 105) or the spring tensioner (TB 130).

G. When installing thimbles and cable clamps, note that cable clamps are directional. Always install the saddle of the clamp on the “live” (load) part of the cable. Install the U-bolts on the “dead” (cut) end of the cable. This is because the U-bolts distort the cable and can break strands.

H. Use three cable clamps on each end, 4" on center, and tighten them alternately and uniformly. Torque to 95 ft./lbs.

I. Cut off any excess cable 3 inches beyond the third cable clamp. Do not trim the 5-ft. (1.5 meter) “tail” from the tension cylinder end, as it could be needed for maintenance.

J. Before tensioning the cable, check to make sure the cable did not slip out of any of the sheaves.

K. Tension the cable to 2,500 psi.

L. When the project is finished, check the tension again.

M. Monitor cable tension, as outlined in the Telebelt Operator's Manual.



Questions? Call the Putzmeister
Customer Support Center.
1-800-890-0269