

# TELEBELT®

## TRICKS of the TRADE

Putzmeister

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### How Do I Replace My Telescope Cable?

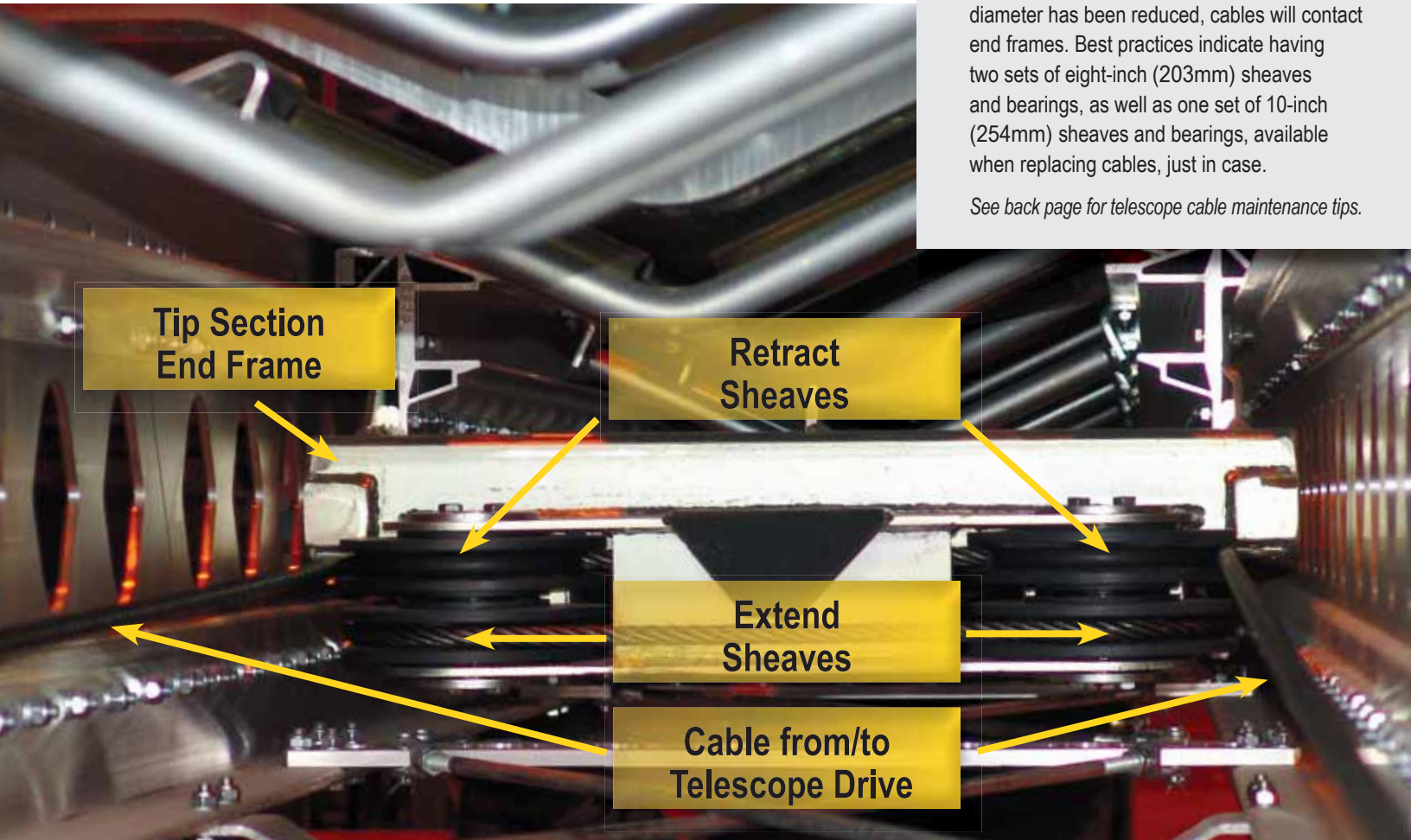
Cables are fairly easy to replace, unless they have broken. For complete instructions on the TB 105 and TB 130 telescope cable, download the Summer 2003 PDF, "Tips on Replacing the Telescopic Drive Cable" (PMA-0010-6 TB) on the downloads page of our web site. Use **ONLY** Putzmeister authorized cables. Some types of cable (i.e., non-rotating) are unsuitable.

When replacing the main cable, inspect all sheaves. The eight-inch (203mm) sheaves mounted horizontally will wear out on their lower edge first, so check your Operator's Manual as some can be turned over before replacement is necessary. If the effective diameter has been reduced, cables will contact end frames. Best practices indicate having two sets of eight-inch (203mm) sheaves and bearings, as well as one set of 10-inch (254mm) sheaves and bearings, available when replacing cables, just in case.

See back page for telescope cable maintenance tips.

## Taking a Closer Look at Your Telescope Cable

The telescope cable on the main belt won't last forever. Two to three years is about it, depending on your cleanliness, maintenance and location (winter chemicals can speed the aging process). Equalizer cables last much longer and do not require the tension a main cable needs to effectively do its job.



Tip Section  
End Frame

Retract  
Sheaves

Extend  
Sheaves

Cable from/to  
Telescope Drive

# CAPACITY, PRESSURE AND YOUR TELEBELT BELT CIRCUIT

The main conveyor and feed conveyor on all Telebelt models (TB 80, TB 105, TB 110, TB 130 and TB 600) operate on two separate hydraulic circuits. Each belt has its own hydraulic pumps and motors and they are hydraulically independent of each other.

Due to differences in belt length, the hydraulic pump sizes and material capacities vary. In addition, Telebelts mounted to Sterling chassis use hydraulic pumps that have capacities that differ from their Mack counterparts.

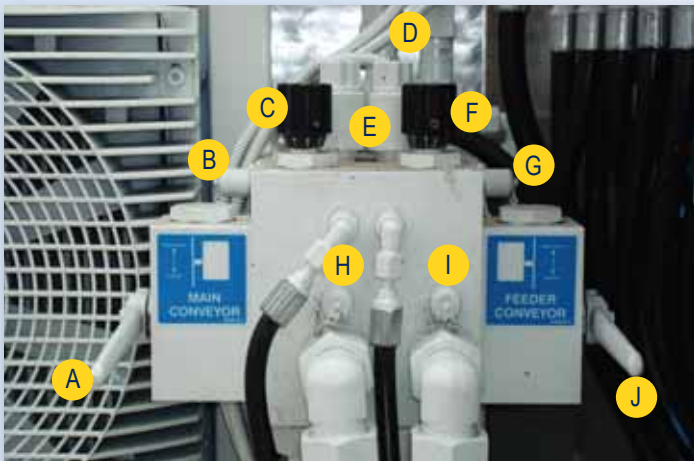
Capacity (flow) determines belt speed. Pressure is the resistance to flow. If the pressures are correct, the hydraulic pumps should deliver the required flow. Pressures are checked with pressure gauges, supplied with new machines. Flow is measured with a flow meter, which is not supplied.

A “working man’s” flow meter is a stopwatch. Test sheets provided with each Telebelt show function speeds when the unit was factory tested. For example, a test sheet might show 65 seconds to slew the main boom 360 degrees to the right. If you obtain the same results, with pressures properly set, you can be sure the circuit is still operating as new.

## TECH NOTES

### How do I check the pressures of my Telebelt hydraulic pump and motor circuits?

- Take all test readings from port M1A for the main conveyor, and port M2A for the feeder. Ports M1B and M2B are load sense ports used by the factory.
- You will need the 60 bar and 400 bar gauges, supplied with your Telebelt, to check the pressure settings. **ALWAYS** connect the 400 bar gauge first, since there could be more than 60 bar in the circuit of a belt that is not moving, depending on how the belt cards are set.
- Gauges can be connected when there is pressure on the circuit. It's not necessary to disengage the PTO's to connect the gauges.
- Pressure adjustments can be made at idle, or just above. It's not necessary to go to full RPM.
- Compensator adjusting screws will have either a lock nut and Allen screw, or an acorn nut that, when removed, exposes a lock nut and Allen screw. Release the lock nuts and turn the screws **IN** (clockwise) to increase pressure, or **OUT** (counter-clockwise) to decrease pressure.
- On Telebelts mounted to Mack chassis, the front pump on the driver's side is the main belt pump. The pump attached to it is the feeder belt pump.
- On Telebelts with a transfer case (TOR, Sterling) the first pump is the main belt and the second is the feeder.



**Figure 1** Above shows the TB 80 and TB 110 controls. (A) Main Conveyor Shut-off Valve (B) Port M1B (C) Main Conveyor Volume Control (D) Feeder Elevate Pressure Switches (E) Load Sense Shut-off Valves (F) Feeder Conveyor Volume Control (G) Port M2B (H) Port M1A (I) Port M2A (J) Feeder Conveyor Shut-off Valve



**Figure 2** Above shows the TB 130 and TB 600 controls. Controls on the TB 130 and TB 600 are “laid down” so the volume control knobs face you. As a result, the TB 130 and TB 600 port M1A and port M2A face downward.

## Step-by-step instructions for setting pressures on your main and feeder belt circuits

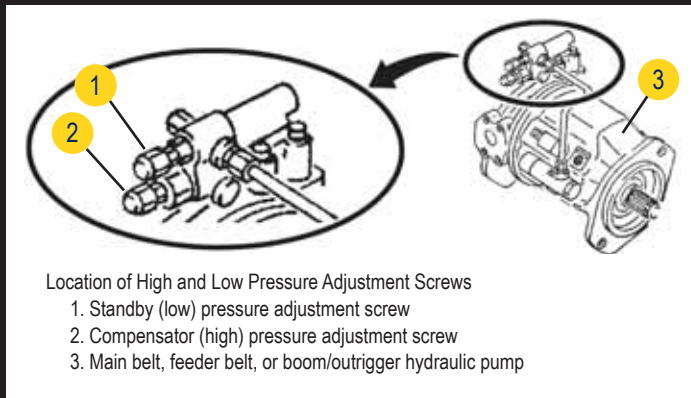


Figure 3 There are two pressure settings for each pump. They are the low pressure (standby) and high pressure (compensator) settings.

### MAIN BELT High Pressure:

In order to check high pressure, you have to cause the function to go to relief. In other words, you have to stall the belt motors or block the flow to the motors. To do this you can cap the hoses to both motors, or reverse the lines to one of the motors. This will cause them to turn against each other.

1. Let the air pressure off the hydraulic tank (TB 105 and TB 110 only).
2. Reverse the hoses to one of the main belt motors.
3. Re-pressurize the hydraulic tank (TB 105 and TB 110 only).
4. Connect 400 bar gauge to port M1A.
5. Start your Telebelt and engage the PTOs.
6. Reset the e-stop.
7. Turn the main conveyor on.
8. Gauge reading should be 280 bar. Adjust as necessary.
9. Shut off the Telebelt and de-pressurize the hydraulic tank (TB 105 and TB 110 only).
10. Return motor hoses to their original position.
11. Re-pressurize the hydraulic tank (TB 105 and TB 110 only).
12. Remove 400 bar gauge.
13. Main belt high pressure is now set.

### MAIN BELT Low Pressure:

1. Start your Telebelt and engage the PTOs. DO NOT reset the e-stop.
2. Connect 400 bar gauge to port M1A and make sure pressure is below 60 bar.
3. Switch to the 60 bar gauge on port M1A and read the pressure. Compare this to the original reading on the test sheet in the front of the operator's manual. It will probably call for 20 bar. If the correct pressure is not read, adjust the low pressure setting screw.
4. Remove the 60 bar gauge.
5. Main belt low pressure is now set.

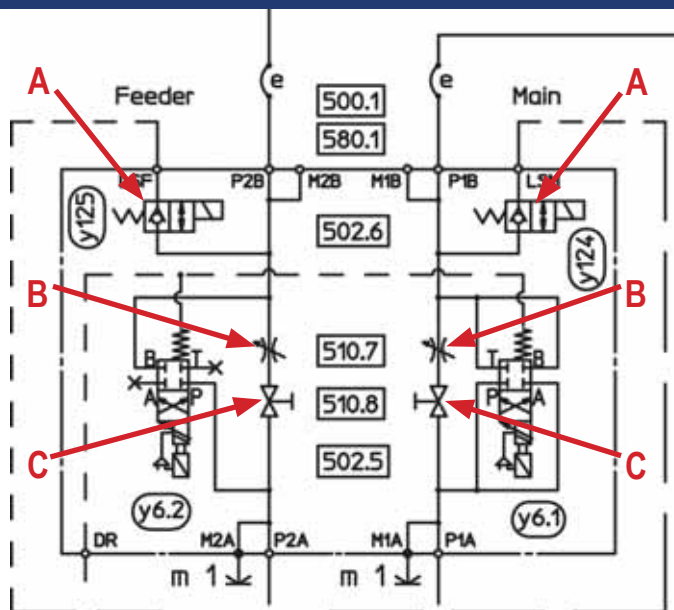
### FEEDER BELT High Pressure:

For setting high pressure on the feeder belt, use the same procedure as for the main belt, except testing at port M2A. To block flow in the circuit, cap the pressure line going into the feeder motor. This is the line that **DOES NOT** have a "T" in line.

### FEEDER BELT Low Pressure:

For setting low pressure on the feeder belt, use the same procedure as listed for the main belt, except testing at port M2A.

## Detail of TB 110 Controls



- A = Load Sense Shut-offs
- B = Volume Controls
- C = Shut-off Valves

\* Please refer to your Operator's Manual for additional control information.

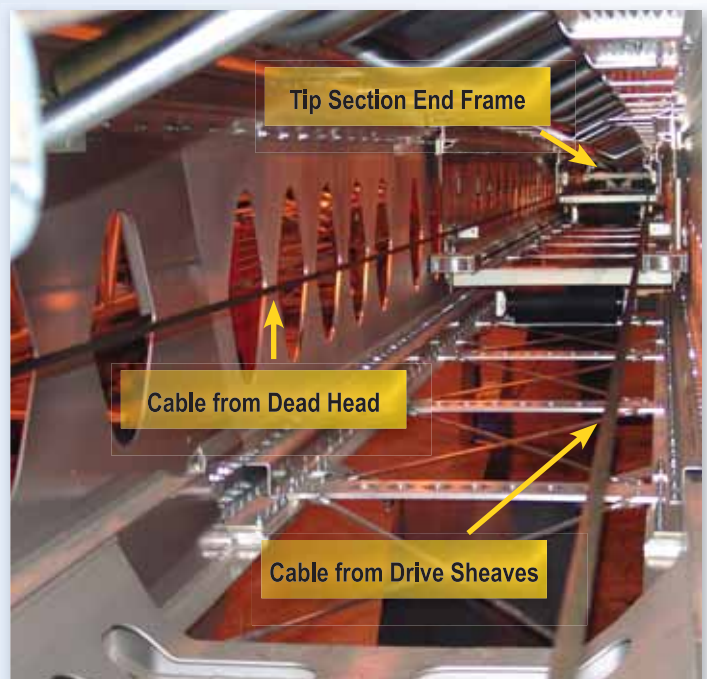
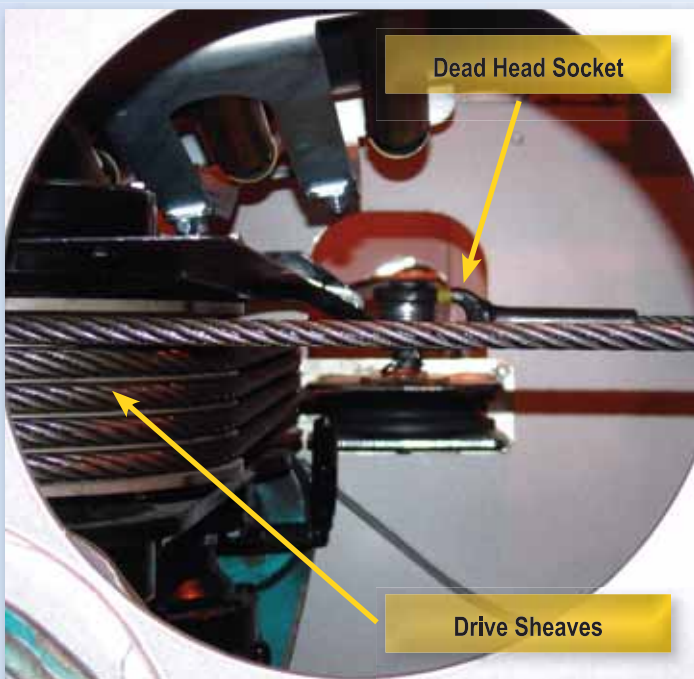


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# TECH TIPS - TELESCOPE CABLE MAINTENANCE

## TB 105, TB 110, TB 130, TB 600

- **Visually inspect** cables as part of your daily operational routine. First, fully extend the boom. Then, lock out the machine and walk along under the cables.
- **Lubricate** the cables with a penetrating chain and cable lube. The cable has a wire rope core, and penetration is critical. DO NOT use any products with graphite, as it softens plastic slides on the boom.
- **Assess** the wraps on the telescope drive with care. Also check the cable running from the anchor point (Dead Head) of the telescope drive, out to the tip section end frame and back to the drive sheaves.
- **Maintain** telescope cables at 2,500 psi (172 bar) with the tensioning jacks. If you are between holes at 2,500 psi (172 bar), go to the next higher hole.
- **Watch** for signs of a loose main cable during operation. This could mean that there is too much sag in a fully extended cable, or drive sheaves spinning in the cable wraps. Spinning drives create heat, which shortens the life of the cables.
- **Replace** the cable as soon as possible if ANY broken strands are observed. Cable failure occurs shortly after broken strands are observed.



## More on Telebelt Care

If you are experiencing problems with speed, be sure to check each of these before calling for service:

- Low throttle setting
- Pump wear
- Motor wear
- Filter conditions

For other problems or further questions, refer to your Operator's Manual, the Telebelt QuickStart Series DVD or feel free to contact Putzmeister's Customer Support Department at 800-890-0269.

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