



# TECH TIPS

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## HOW TO PRESERVE THE LIFE OF AN ELEVATOR BELT

An elevator belt which has been correctly installed and maintained will give long years of satisfactory service. However, something can go wrong to cause premature failure. The following information can help to alert the operator to the cause of potential problems and recommendations to rectify them.

Condition	Cause	Recommendations
Premature belt wear	Belt slipping on head pulley	Check the belt tension is adequate. Check boot is not being overfed, thereby putting extra drive load on the head pulley. Check the head pulley surface condition to see if needs relagging. Check there isn't a build-up of "hardened" product in the boot.
	Belt quality not adequate for application.	Consult an experienced bucket elevator manufacturer.
	Abrasive wear caused by excess product in boot.	Control flow of product into boot. If product is abrasive, feed on up leg ONLY.
Buckets pull loose from belt	Obstruction in boot	Check and clean out residual material in boot.
	Bucket bolts not tight	Check bucket bolt tightness at regular intervals. Ensure nuts have some locking mechanism.
	Load on bucket in excess of belt's capabilities.	Consult an experienced bucket elevator manufacturer. Check that the elevator is not handling product with different density and flow characteristics from when originally designed.

*Disclaimer: Downfields Engineering Pty Ltd accepts no responsibility for the interpretation or use of this information.*

<b>Condition</b>	<b>Cause</b>	<b>Recommendations</b>
Belt "comes apart"	Belt going around too small diameter pulley causing delamination	Consult an experienced bucket elevator manufacturer
	Excessive oils, fats, chemicals, moisture or temperature in product.	Incorrect belt for application.
Belt tears at bolt hole locations	Belt type unsuitable for application	Consult experienced bucket elevator manufacturer
	Operating tension too high for existing belt.	Check belt tension and confirm elevator is operating within its rated capacity.
	Belt hardening and cracking across bolt line	Belt incorrect for application. Consult an experienced bucket elevator manufacturer.
Belt running off-centre	Product build up on pulleys	Scrape pulleys and belt clean. If boot pulley is a plain drum type, change for slatted cone type. Check that product isn't falling back from incorrect discharging at head.
	Poor belt joint	Whatever belt joining system is used, the joint must be square. Rejoin according to bucket elevator manufacturer's recommendation.
	Belt not tracking around head pulley	"Jack" bearing/s as required and shim to hold in place. To track belt, RAISE the bearing on the side the belt is running towards.
	Belt not tracking around boot pulley	Adjust takeup and lock into position. To track belt, LOWER the bearing on the side the belt is running

## **CLEARING A CHOKED ELEVATOR BOOT**

Rule 1: **Never jog a choked elevator**

Rule 2: Follow a recommended procedure

- Shut off grain flow to boot inlet
- Switch off elevator and lock out controls
- Open the boot cleanout slides and clean out all accumulated grain
- Check for the cause of the choked boot
- Rectify cause
- Restart and check to prevent re-occurrence

