



MAINTENANCE INSTRUCTIONS OF CONVEYORS

For optimum performance of Sempertrans conveyor belts, maintain the following common components regularly:

- Belting
- Drives, motors and reducers
- Take-up systems
- Pulleys and bearings
- Idlers
- Impact-loading equipment
- Chutes and skirting
- Belt scrapers
- Equipment guards
- Control equipment
- Covers
- Walkways
- Frame
- Transfer stations

CONVEYOR MAINTENANCE CHECKLIST

While the conveyor system is operating, this list must be checked, following all relevant safety warnings and information.

Only trained and qualified personnel may operate the conveyor system. The end user bears full responsibility for training their personnel.

Any conveyor found to be unsafe for operation must not be operated until the necessary repairs are made.

- Check the condition on both sides of the conveyor system. Look for unusual behaviour in all moving and rotating parts
- Pay attention to areas of material build-up
- Check if the belt is properly aligned and tracked. The belt must not touch the structure
- Check for irregular noises, frozen idlers, moving guiding rollers, a smell of rubber or small piles of worn rubber. Idlers showing irregularities must be replaced
- Material must be fed to the centre of the belt
- All scrapers must be maintained and adjusted according to the manufacturers' manual
- Measure drive amperage and compare to previous measurements for similar loads and conditions

Important: An increase in amperage levels compared to previous measurements may be a sign of increased drag within the system, probably due to failed or unlubricated bearings, misaligned belt/idlers or scrapers/skirts fastened too tightly to the belt. Stop the system and lock it out electrically to investigate in detail.

While the system is not operating and electrically locked out, do the following:

- Check if the components are properly aligned. Adjust if needed
- Inspect non-functional components and take corrective action (i.e. if rollers are not rotating freely, lubricate again or replace them)
- Inspect all safety systems
- Examine the control equipment
- Look for belt wear — especially at belt edges and splices — and belt stringing
- Check there is no damage or wear at feeding and transfer points
- Examine clearances at chute and skirting areas



INSPECTION CHECKLISTS

The following procedures call for the highest level of mechanical and electrical skill. Maintenance is categorized into daily, weekly, monthly, quarterly and semi-annual intervals. Safety first! Make sure that the work to be carried out is safe and personnel stick to the relevant safety rules for inspections and wear correct PPE.

Daily

- Depending on how adhesive the conveyed material is, check the scrapers and chutes and clean them if necessary
- Avoid dust and/or dirt build-up on the conveyor surfaces and remove any accumulation of debris. Only do this while the conveyor system is stopped. Never touch a moving belt or rotating parts such as rollers, pulleys, etc.
- Check that the belt is being tracked properly

Weekly

- Clean the conveyor. Lock it out then remove any accumulated debris around the surfaces of the conveyor
- Restore the conveyor to its original condition. Inspection equipment must be removed from the work area. Start repair work orders as needed and inform the maintenance supervisor of any serious deficiencies

Monthly

- Checking pulleys and bearings – While the conveyor system is still running, pay attention to unusual noises coming from pulleys or bearings. Lubrication must be done following the manufacturer's instructions. Tighten screws if needed. Never touch a rotating part. Use proper tools to check for any excessive bearing noise
- Checking Belt – While the conveyor system is still running, check if the belt or the cords are damaged. Remove pieces of rubber at the edges or cord that might catch on pulley systems. Also examine the cords and if there is physical damage, repair or replace as needed. Never perform any work on the belt while it is working. When repairing, only use materials and repair instructions approved by the manufacturer
- Check the return rollers for abnormal bearing noise. Remove window covers for access to the roller shafts. Never perform this operation when the belt is running. Once done, replace all covers. Never reach under the machine when the conveyor is working
- Check that the mounting bolts of all drive motors are tight. Also examine the hold-down bolts to ensure that the conveyor will not come loose from floor hold-down structures

Quarterly

- Lubrication and adjustment of cam rollers – Lubricate the cam support blocks following the supplier's instructions. Check all cam rollers for proper adjustment. The conveyor system should be locked out for this task

Semi-annually

- Change the fluid in the gearboxes following the supplier's instructions. Electrical lock-out is required
- Check the master control complies with the supplier's instructions
- Examine the drive section – While the conveyor system is working, carefully touch the motor and reducer housing with a metal rod to detect abnormal vibration from bearings or gears. Listen if there is evidence of wear or damage to internal parts. Take care not to touch rotating or moving parts
- Clean the boom roller chains – Stop and lock out the conveyor. Then wipe any dirt from chains and sprockets. Lubricate the chain following the supplier's instructions
- Inspection and lubrication of wheel bearings – If the conveyor system is a traversing unit, look for wear on each wheel bearing. Also check proper alignment, and tightness in the wheel mount. All wheel bearings should be lubricated following the supplier's instructions. Electrical lock-out is needed
- Track clean-out – If the conveyor system is a traversing unit with a floor-mounted section, look for build-up of dirt and debris on the rear track. This should not be allowed to build up until it interferes with the movement of conveyor wheels. There are clean-out slots at each end of the track to remove debris

For the maintenance of non-Sempertrans products, always refer and stick to the maintenance and operating manual of the respective supplier.