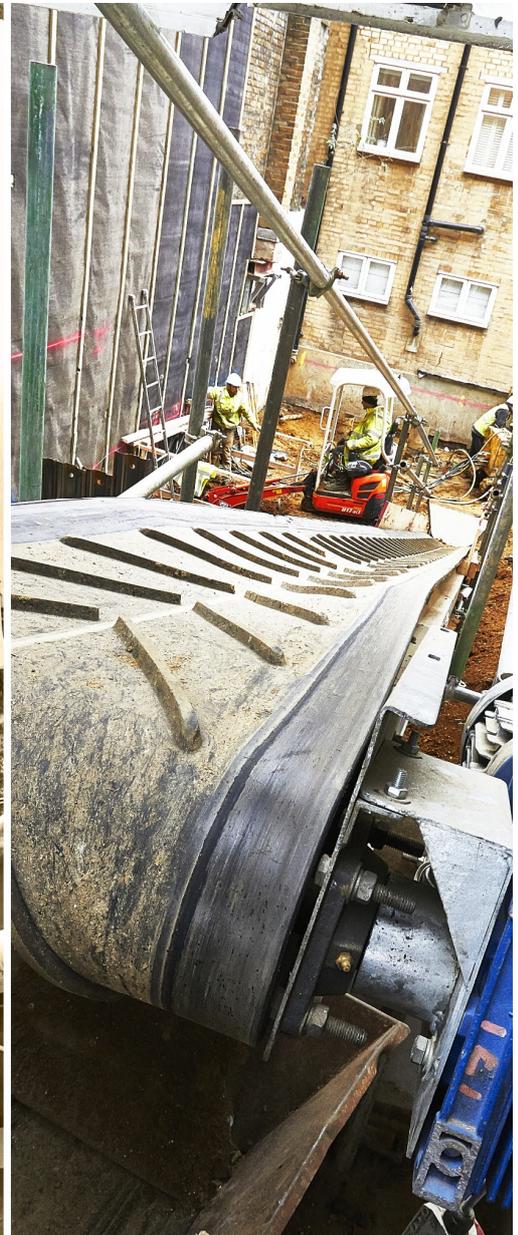




# OPERATOR'S MANUAL EK300 | EK450 | EK600



**COVEYA.CO.UK**



# Danger

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Failure to follow the instructions and safety advice in this manual could result in death or serious injury.

Do not operate the conveyor unless you:

1. Have read and understand the principles of safe machine operation contained in this manual.
2. hazardous situations.
3. Always check the conveyor/s before every use.
4. Inspect the workplace for hazards.
5. Only use the machine for the purpose it is intended.

## Contents

(Polski wersja dostępna na życzenie)  
(Polish version available upon request)

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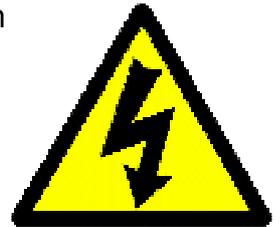
Blank page for Commissioning and Training Check Sheet

# Safety

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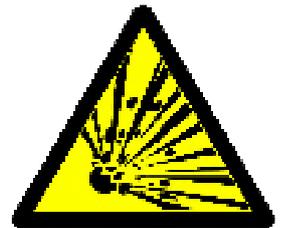
## Electrocution Hazards

- The conveyor is not electrically insulated and will not provide protection from contact with or proximity to electrical current.
- Do not use if cables are damaged.
- Do not operate during lightning or storms.
- Do not use the conveyor as an earth for welding.
- Ensure safe routing of power cables to minimise risk of electrocution.



## Explosions & Fire Hazards

- Do not operate the machine in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.



## Setup Hazards

- Check work area for overhead obstructions and possible hazards such as unstable ground or other work activities taking place.
- Do not use the machine if you are under the influence of alcohol, drugs or prescribed medication that may affect your judgement.
- Ensure the conveyor is adequately supported and is secured at the head section.
- Do not alter or disable the conveyor components that affect its safety or stability - such as supports or guarding.
- Do not replace components that are supporting the conveyor with items of different weight or specification.
- Do not ride on the belt.
- Do not alter or disable the starter box, motor, power leads or plugs without prior consultation with the manufacturer.
- Do not alter or modify the conveyor frame construction, moving parts or belt without prior consultation with the manufacturer.

---

## Fall Hazards

- Do not allow access to the underside of the belt whilst in use, without suitable protection in place – material can drop from the belt and cause injury.
- Do not lean over the machine while the belt is moving.
- Do not ride conveyor.



## Bodily Injury Hazards

- Take care when planning the installation and operating the conveyor.
- Keep hands & limbs away from moving components.
- Always wear correct PPE.



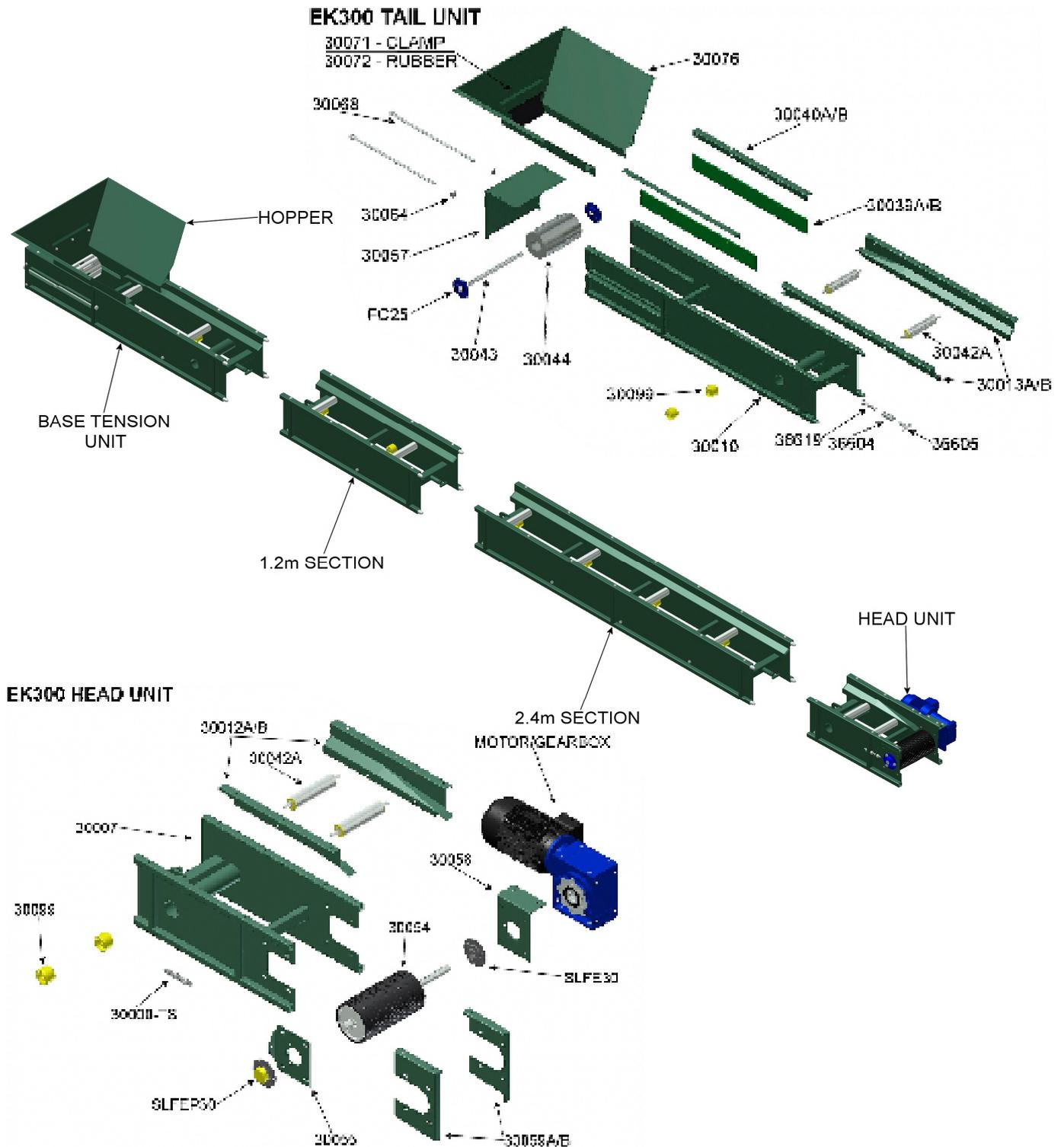
## Fall Hazards

- When using a generator, ensure it is fitted with voltage regulator before use.
- Do not over load the belt. Max. loads as per below:
  - EK300 - 30kg per linear metre
  - EK450 - 30kg per linear metre
  - EK600 - 50kg per linear metre

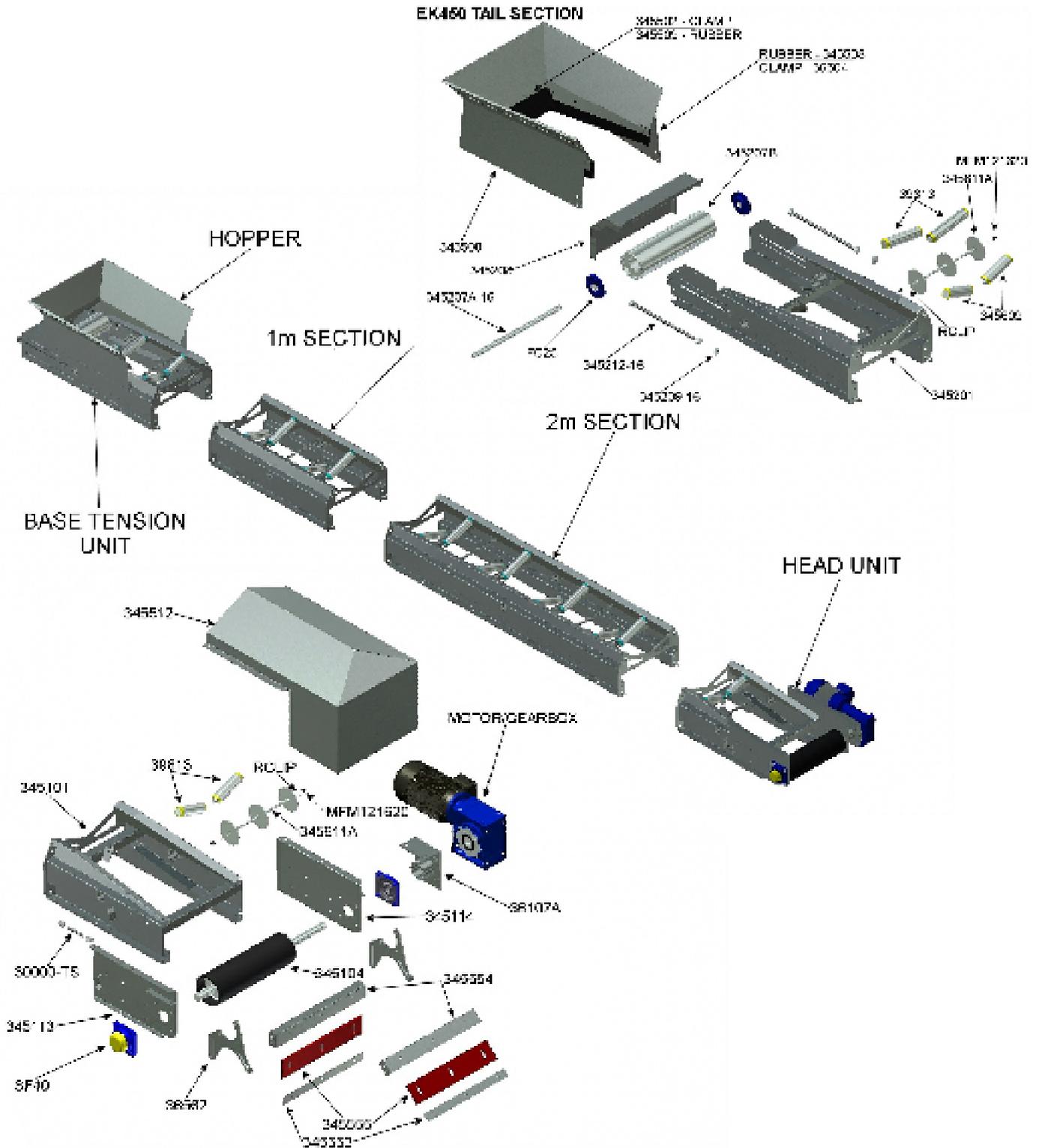
## Damaged Conveyor Hazards

- Do not use a conveyor with a damaged or malfunctioning component.
- Always check over the conveyor before each use. Isolate any conveyor that is damaged or malfunctioning.

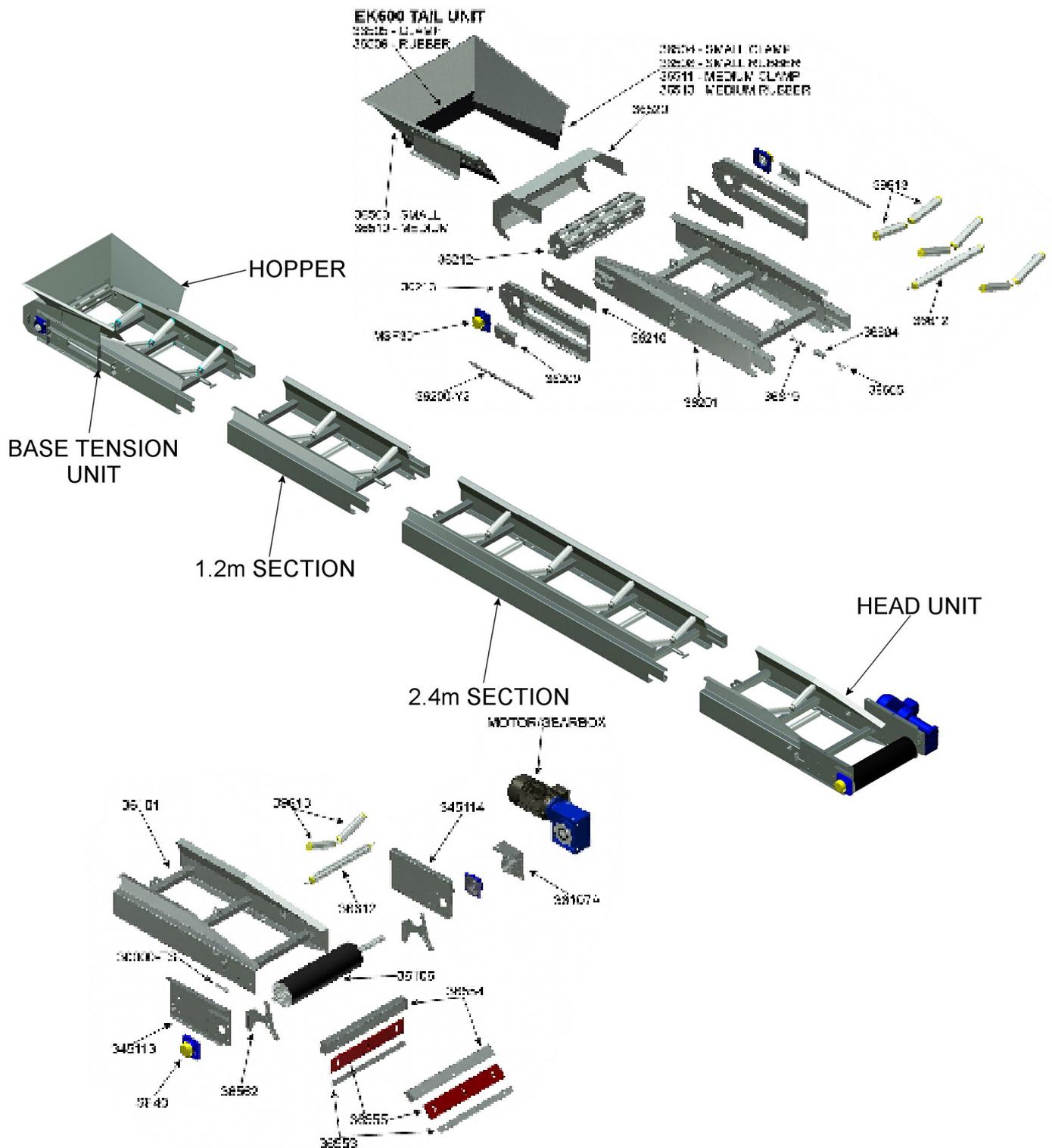
## EK300



# EK450



## EK600



# Conditions Of Use

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## Range Of Intended Environmental Conditions

Do not use the conveyor outside the following environmental conditions:

- Ambient temperature: -10°c – +40°c
- Wind Speeds: 0 – 50MPH

## Prohibited Applications

Do not use the conveyor if any part is:

- Submerged in water.
- In an explosive atmosphere.
- In a corrosive atmosphere or environment.

## Prohibited Materials

- Solely Liquids.
- Reinforcing bar or metal rod.
- Items longer than 600mm.
- Lumps weighing greater than 30kg or measuring greater than 300mm x 200mm x 200mm.
- Heated materials above 60°c.
- Substances corrosive to rubber or metal.
- Materials likely to puncture the belt.
- Polymers or lubricating substances.
- Asphalt or adhesive substances likely to stick to the conveyor following use.

## Conveyor Sound Levels

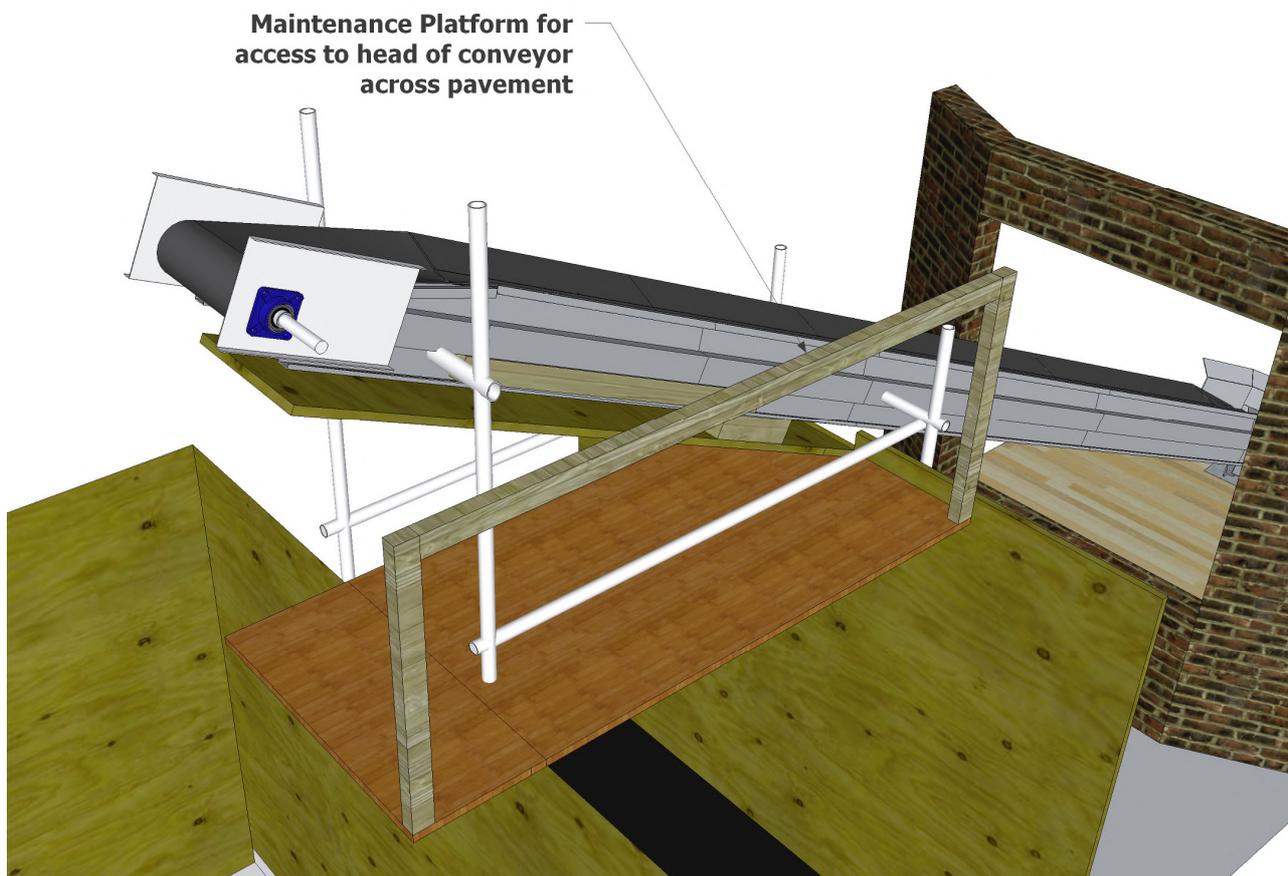
- Decibel Rating 60-65db

# Conveyor Installation

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The conveyor needs to be accessible for maintenance, especially the head and tail sections as they require the most attention. To be able to complete your daily checks of the conveyor when the conveyor is installed across a pavement, and to ensure safe access for our maintenance engineers, we recommend you build a deck across the pavement with handrails as per the below diagram.

**Fig.1**



## Boarding/Hoarding around the conveyor over pavement

When a conveyor crosses the public highway all councils will require this to be boarded in, to protect the public from falling debris. This is the responsibility of the customer.

# Conveyor Installation (Continued)

When fitting boarding to the underside of the conveyor please allow an additional 100mm under the conveyor to allow for build-up of material, (see diagram below). If the boarding in is fixed straight to the underside of the conveyor, the material will quickly build up and damage the belt. Ensure the motor and gearbox driving the conveyor is accessible for maintenance. If the motor and gearbox does need to be exchanged, we will require sufficient space (shown below) to remove the gearbox from the drive shaft. **It is necessary to build the hoarding with an opening of at least 500mm width to suit this.**

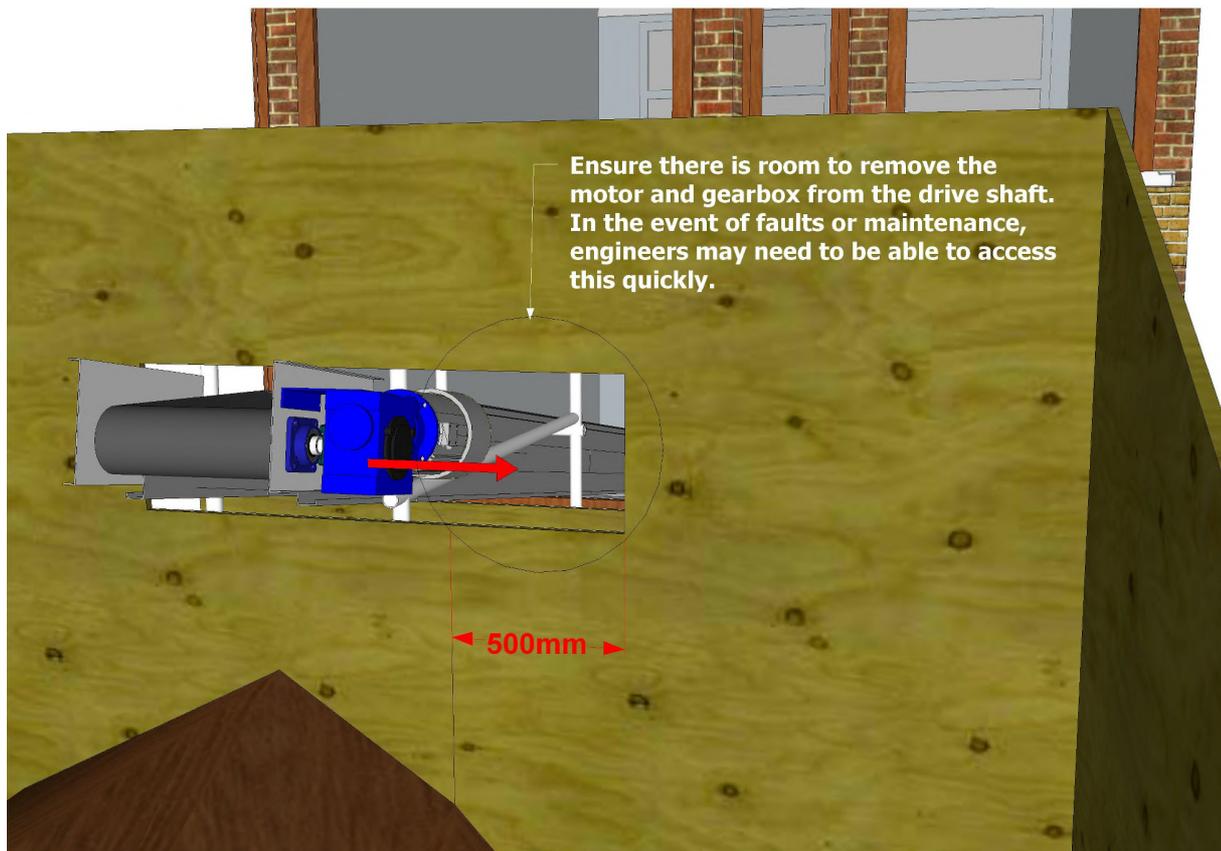


Fig. 2

The boxed in area under the conveyor should be checked each day.

**✂ Engineer's Tip**— *To tell if the boxing in is full of material try tapping underneath the box or applying light pressure. If it sounds hollow, or gives slightly you are likely to be fine! If it doesn't you probably need to clean it.*

## Conveyor Installation (Continued)

### Plyboard side guides fitted on site

Boarding is often fitted to the sides of the conveyor to retain material, or to safe guard personnel from any risks. See methods (Fig 2, 3, & 4) of fitting the timber sides to the conveyor. If the material is very fine, Coveya will supply a strip of rubber which can be screwed down the length of the sides to keep material on the belt.

Fig. 3

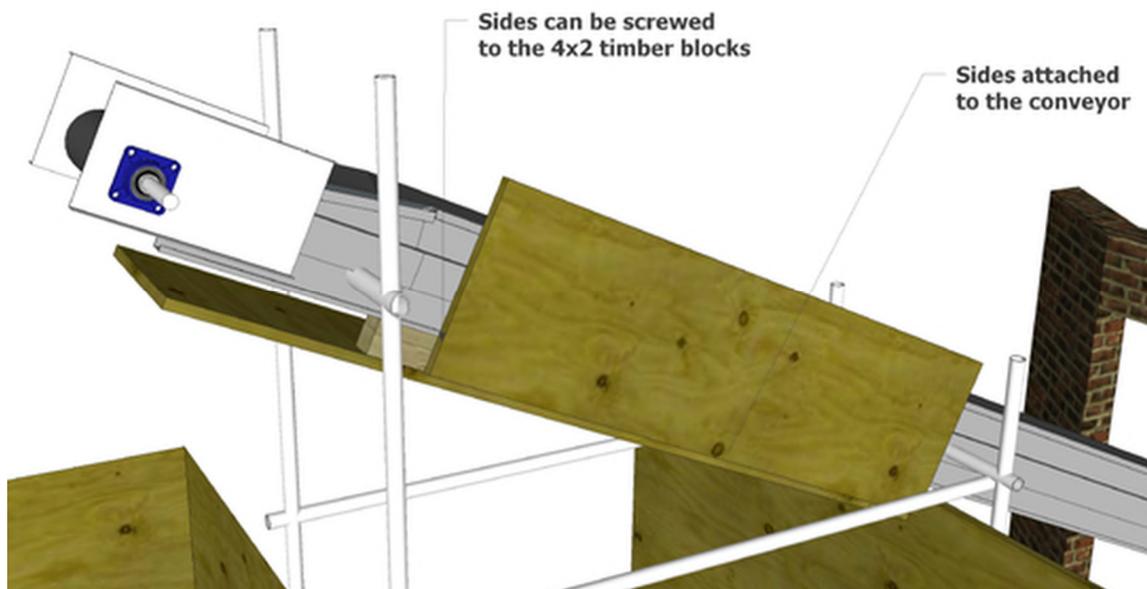
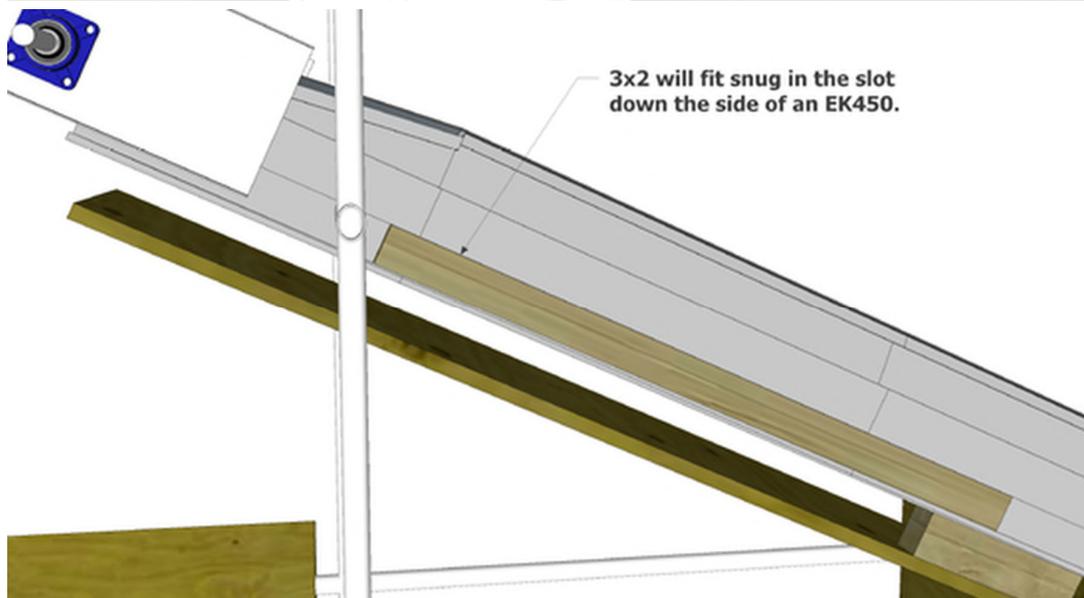


Fig. 4



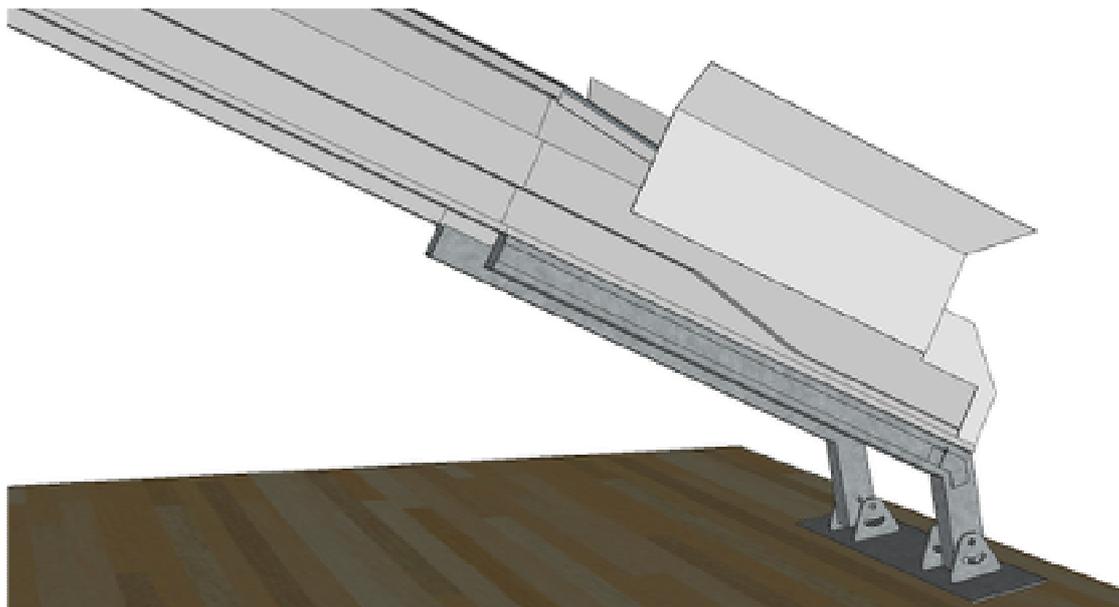
# Conveyor Installation (Continued)

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## Conveyor Feet

Conveyor feet are fitted as standard to every conveyor. They have proved to greatly reduce the risk of breakdowns and helps guarantee you a trouble free operation. Refusal of the installation of these feet or the removal of them may result in the breakdowns becoming chargeable. The diagram below shows the conveyor feet in position.

Fig. 5



## Removing Guarding For Maintenance

The guarding of the conveyor is to protect users from harm. Guards can be removed for maintenance purposes, but the power must always be isolated prior to removal. Once the conveyor is cleaned, all guards must be refitted before the power is switched back on.

## Starter Box

Ensure the starter box is positioned off the ground, in a dry place.

## Operator Training

During installation the installation team will provide training of operations and ensure that each operator understands the vital safety aspects of the equipment. Only these trained personnel should operate the conveyor at all times.

# Pre-Start Checks & Inspection

---

It is the responsibility of the operator to visually check the conveyor and surrounding area before starting the conveyor. This should be carried out before each work shift. A damaged or modified conveyor should never be used. If any damage or modification is found, the conveyor should be disconnected from the power, tagged and removed from service. The following components or areas should be inspected for damage, modifications and improperly installed or missing parts:

1. Electrical Components.
2. Wiring.
3. Power sockets.
4. Motor & gearbox.
5. Conveyor frame joints (between modular components).
6. Conveyor frame & hopper.
7. Belt condition & clip joints.
8. Hopper rubber condition.
9. Any hoarding to protect public areas.
10. Conveyor supports.

**The following components should be checked for operational functionality:**

1. Belt tension & tracking.
2. If a belt scraper is fitted, check it is making adequate contact with the belt.
3. Emergency Stops are operating.

**The following areas should be checked for cleanliness:**

1. Material jammed between belt & conveyor frame.
2. Build up on rollers.
3. Area under & adjacent to the loading/tail section.
4. If the conveyor is on a scaffold – ensure the area underneath the conveyor is clear of any debris.

# Operating Instructions

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Do not operate the conveyor unless you have read and understood the instructions.

The operating instructions section provides instructions for the safe use of the conveyor. It is the responsibility of the operator to follow all the safety rules and instruction provided in this manual.

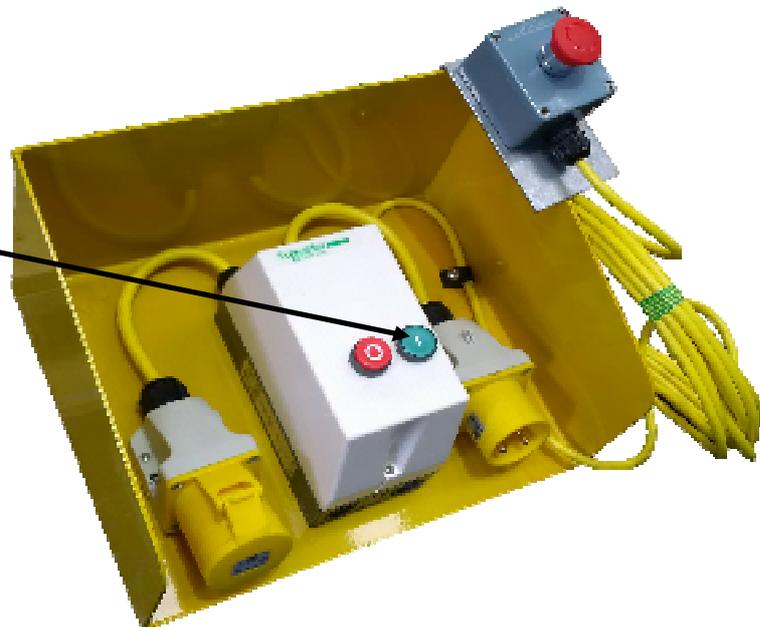
Only trained personnel should use the conveyor.

## Start Up Procedure

1. Connect power lead to starter box.
2. Switch on power supply.
3. Check that the discharge area is clear.
4. Ensure nothing is leaning on the conveyor or likely to interfere with the belt running.
5. Give audible warning and press the green button on the starter panel.
6. Test emergency stop button or grab wire (where fitted) by pressing/pulling it and checking belt stops. Release button and begin operation.

Fig. 1 (110v Starter Box)

Green Start Button



## Operating Instructions (Continued)

---

### Loading Methods

The conveyor must only be loaded at the hopper or at designated loading points.

Loading must only commence once conveyor has been started.

The conveyor must be loaded evenly and smoothly.

### NOTICE

OVERLOADING WILL CAUSE JAMMING AND BREAKDOWNS.



Remember you are feeding a moving belt, so feed accordingly and the conveyor will work well.

Ineffective loading or overloading can cause material to spill off the sides of the conveyor and build up around the conveyor. This can in turn get into the conveyor frame and jam the conveyor or damage the bearings.

When loading steeper conveyors some rollback will occur. Care must be taken to ensure injury cannot be caused to the operator or others by large lumps coming back down the belt. One way to reduce this risk is to fit baffles above the belt to break the fall of rolling back lumps.

Please ensure you have the right bucket if you are using a machine to load. See chart below:

Conveyor	Max Bucket Width
EK300	450mm
EK450	450mm
EK600	600mm
GP600	800mm
EK900	800mm

 **Engineer's Tip**— *The conveyor likes to be loaded little and often. On the EK600 or GP600 you will get better throughput to load 2 smaller machines than one big one.*

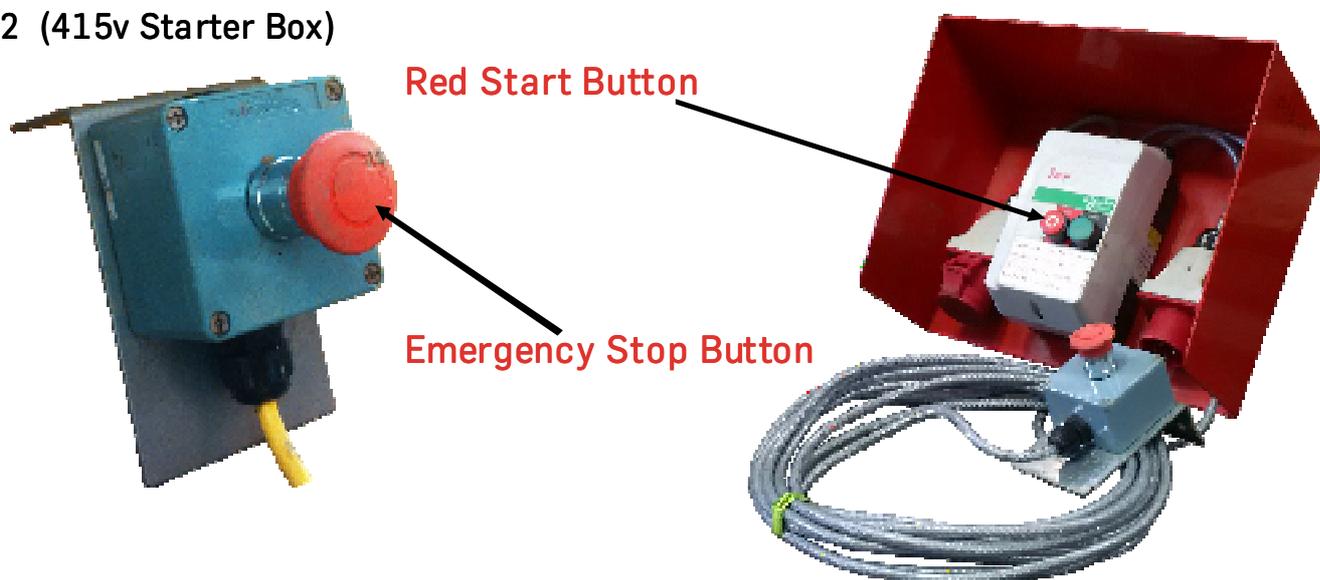
## Operating Instructions (Continued)

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### Stopping Procedure

1. Ensure belt is emptied, except in emergency stop conditions.
2. Press the red stop button.
3. Power down the starter box and remove the power lead.

Fig. 2 (415v Starter Box)



## Your Standard Maintenance Toolbox

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24mm Spanner	Socket Ratchet 1/2"	Mole Grip Locking Pliers
10mm Spanner	Socket Ratchet 13mm	Adjustable Spanner 250mm
13mm Spanner	Socket Ratchet 13mm 3/8 deep	Allen Key Metric Set
17mm Spanner	Socket Ratchet 17mm	5m Tape Measure
19mm Spanner	Socket Ratchet 19mm	Grease Gun
30mm Spanner	Socket Ratchet 19mm deep	
	Socket Ratchet 24mm	
	Socket Ratchet 30mm	

# Daily Maintenance Checks

---

(DEPENDING ON CONVEYOR USAGE & SITE THIS MAY NEED TO BE DONE MORE FREQUENTLY THAN DAILY - i.e. BETWEEN LOADS)

## 1. Tail section:

Check tail section of conveyor for build-up of material and debris each day.

## 2. Hopper section:

Check the build-up around the hopper is clear and the belt is running free.

## 3. Checking belt tension and tracking:

- Maintaining the proper belt tension is essential to good machine performance and service life.
- Operating the machine with the incorrect belt tension can damage machine components.
- Check belt tension and adjust if necessary by evenly tightening adjusting nuts situated either side of the conveyor tail section. (see fig 1 on page 22)
- The correct tension is the minimum required to maintain drive to the belt.

## 4. Boarding (if applicable):

- If the conveyor has under guarding or is boarded in, check no material has built up and clear out if necessary.

## 5. Gearbox:

- Lubricated for life; check oil seals on output shaft for leaks.
- If the gearbox starts leaking please contact our service department immediately.

## 6. Checking roller condition:

Ensuring no muck or debris is built up around the rollers is essential.

### 1. Isolate power

2. Lift belt at base and top of machine.
3. Inspect the condition of rollers.
4. Move along the machine checking the rollers are free moving and free of debris or build up.
5. If a roller is seized, apply lubricant. If the roller is still seized please contact our service department.

Week	Date	Name	Days						Defect report (✓/✗)
			1	2	3	4	5	6	
1	21-02-19	JOHN SMITH	✓	✓	✓	✓	✓		✗
2									
3									
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# Weekly Maintenance Checks

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- 1) Feed boot bolts – physically check tightness.
- 2) Head guard bolts (if applicable) – physically check tightness.
- 3) Return roller bolts (if applicable) – physically check tightness.
- 4) Electric leads – physically check for damage to cable.
- 5) Electric plugs & sockets – physically check cable entry and for any damage.
- 6) Motor – check for and damage to casing & cables etc...
- 7) Gearbox – check for any damage or leaking oil.
- 8) Run conveyor and check rollers are turning.
- 9) Plus all daily checks.

## Maintenance Information

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### Observe and Obey

Only routine maintenance items specified in this manual shall be performed by the operator.

Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer's specifications.

It is the responsibility of the user to keep the conveyor clean, particularly under and around the loading section. The frequency of cleaning depends on the material and weather conditions.

Cleaning can help ensure you have a trouble free operation.

### Scheduled Maintenance

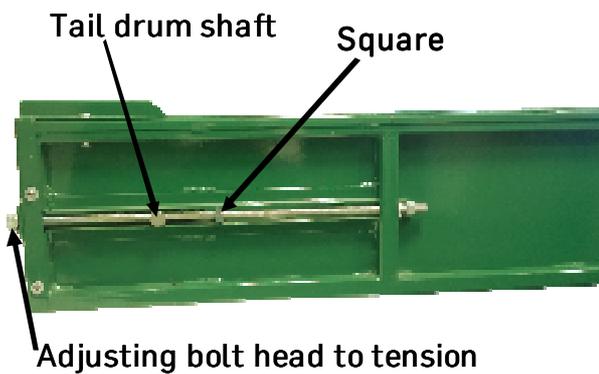
Maintenance performed monthly must be completed by a person trained and qualified to perform maintenance on this machine.

Machines that have been out of service for more than six months must receive a service inspection before they are used.

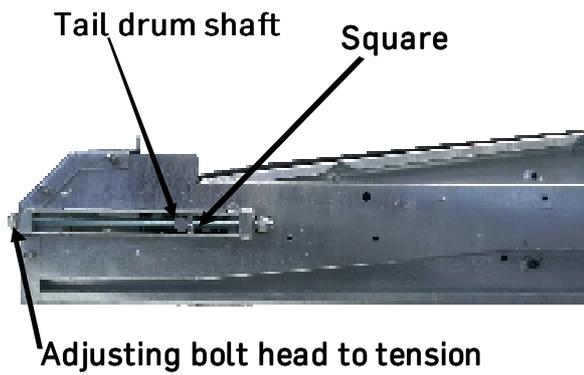
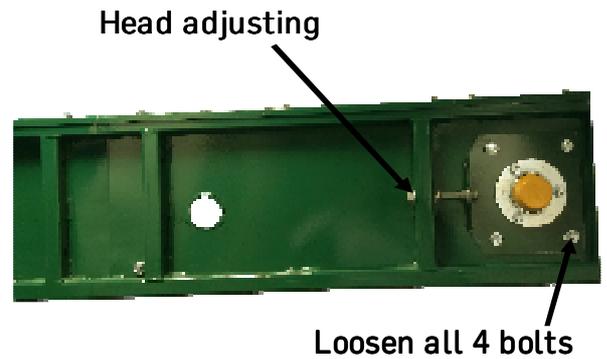
Week	Date	Name	Checked Item (✓/✗)									Defect report
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# Tensioning & Tracking Points

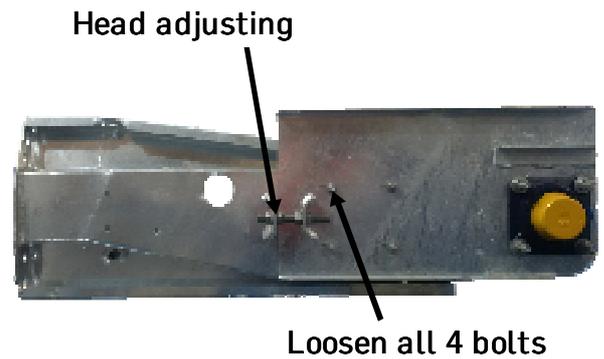
Fig. 1



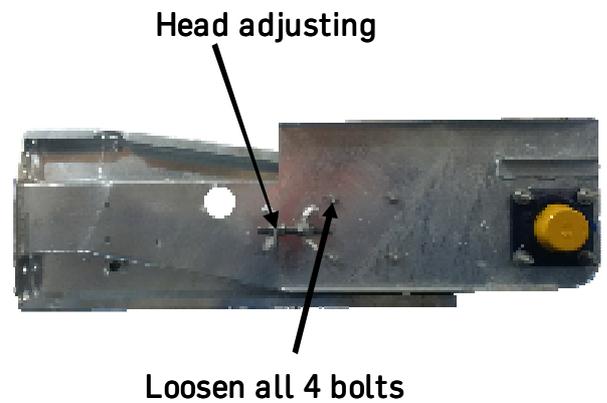
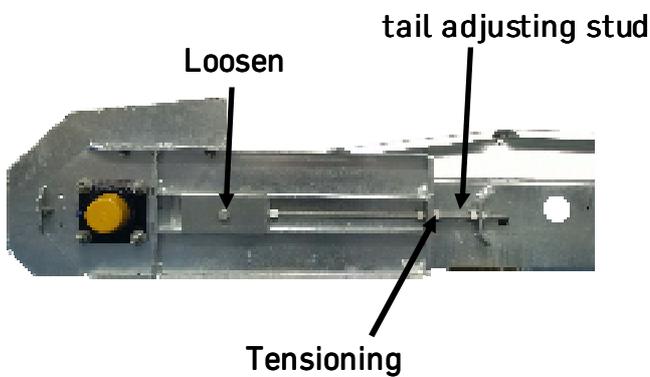
**EK300**



**EK450**

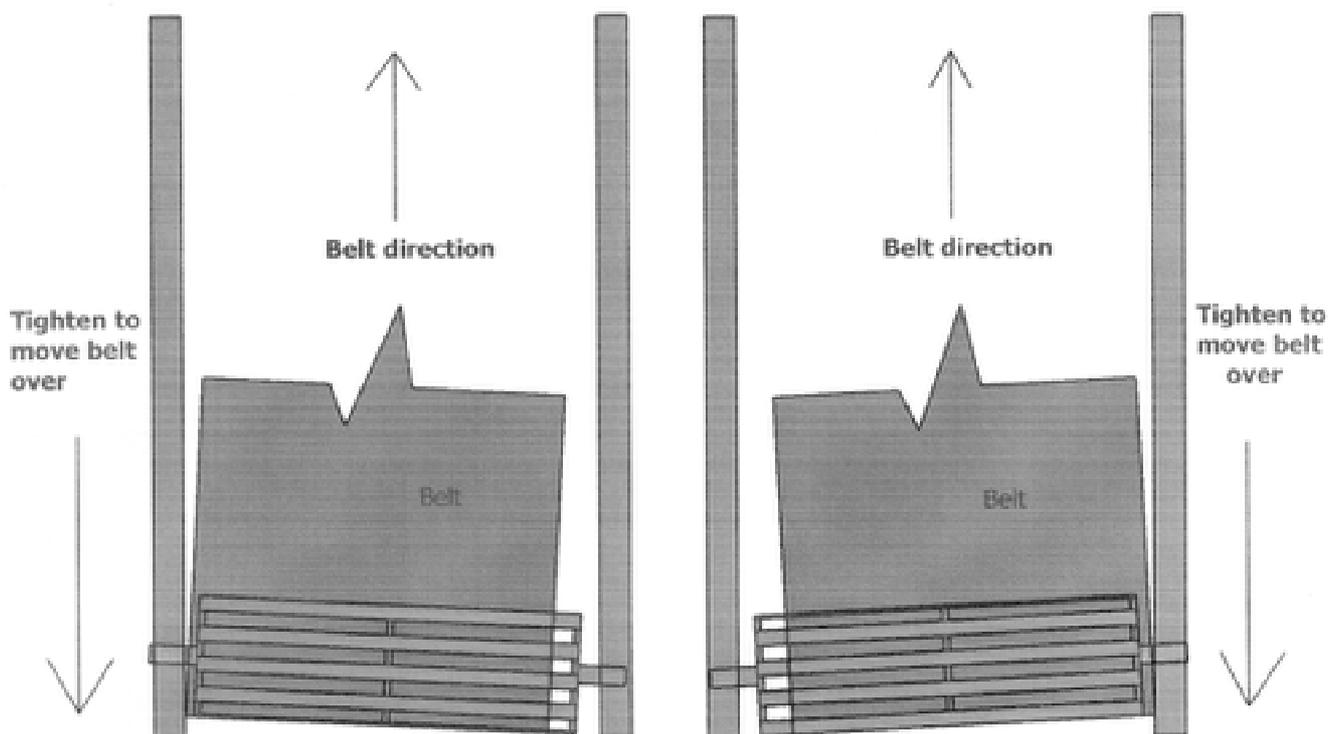


**EK600**



# Trouble Shooting

Belt tracking over to one side at the tail section



**Stop** the conveyor and **Isolate power supply**. Remove the feed boot, release the tension off of the belt (see fig 1 page 22) and ensure there is no build up around the tail drum or any stones trapped between the drum and framework, then test to ensure the drum runs freely.

Carry out visual check on bearing condition (any play or noise) and if you find there is a problem contact our service department who will arrange for a visit. If no problem is found, tension the belt and connect the power and switch on. Whilst the belt is running check the tracking and adjust as necessary to centralize the belt (see diagram above). Switch off conveyor and refit the feed boot.

## Drive turning, but the belt is stopped

**Isolate power supply**. Check moving parts are free from obstruction. Tension the belt by adjusting the tension bolts evenly on the tail section. (see fig 1 on page 22)

Restore the power and institute the start-up, check belt tracking and adjust as necessary.

# Trouble Shooting (Continued)

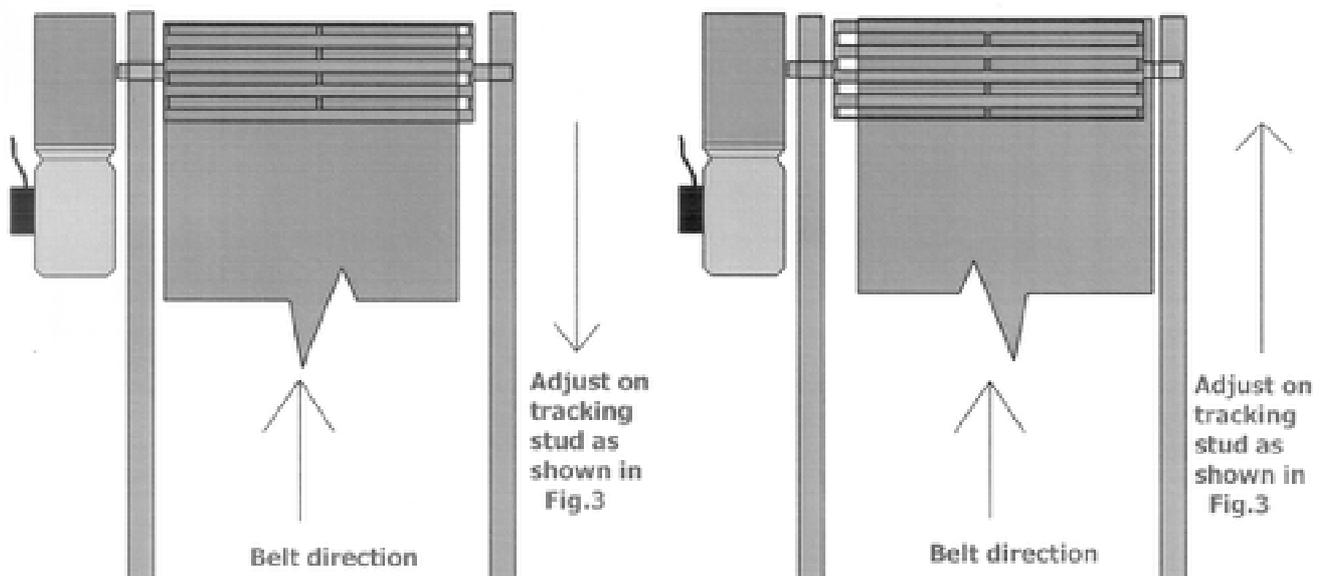
## Motor cuts out

**Isolate power supply.** Check that nothing has jammed any moving parts, particularly behind loading back guard. Contact our service department immediately.

**UNDER NO CIRCUMSTANCE SHOULD YOU REPEATEDLY TRY TO START THE CONVEYOR, AS THIS WILL CAUSE SERIOUS MOTOR DAMAGE!**

## Belt tracks over at the head section

Fig. 2



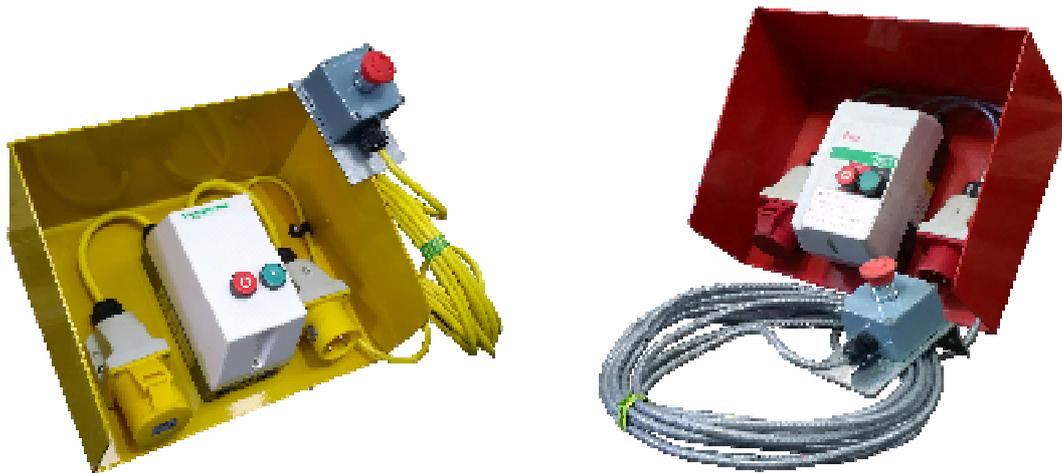
**Stop** the conveyor and **isolate power supply.** Check the head unit for any build up around the head drum or rollers and clear if found. Loosen the four locating bolts (see fig 1 on page 22), do not completely undo the nuts) and make the necessary adjustments to centralize the belt (see diagram above), start the conveyor and check the position of the belt and make any final adjustments, retighten the four locating bolts and lock off the adjusting stud.

# Trouble Shooting (Continued)

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## Started Does Not Work

Fig. 3



**Isolate power supply.** Check that the main fuse has not tripped. Check the power lead to ensure that no damage has occurred. Check the power source is adequate.

Unplug the lead from the power socket, a competent electrician could check for loose or

**✂ Engineer's Tip**— *If the transformer has other tools plugged in, this could result in the voltage dropping below the conveyors requirements*

Disconnected wires within the plugs and sockets. If after this has been done and you have reconnected the power it still fails to work, contact our service department for assistance.

## Started Click But Does Not Work

**Isolate power supply.** Check the plug from starter to motor for any loose wires, check the wire for any damage. If damage has occurred or there is no apparent damage, contact our service department for assistance.

## Material jammed in conveyor under the receiving boot?

**Isolate power supply** to the conveyor. If the item cannot be removed easily contact our service department for assistance.

# Trouble Shooting (Continued)

---

## Noise?

If the conveyor starts to make any form of noise other than the normal operational noise, **stop and isolate** the conveyor and check for something jamming the conveyor. If you find anything, remove it, if the noise persists, contact our service department for assistance.

## What to do if the belt is fully loaded and stops:

Isolate the power and clear the belt of all material. Continuing to force the conveyor to start could cause damage to the motor. Once the belt is clear, check for any material block or similar that could have caused the belt to stop. Attempt to restart the belt.

If the belt does restart, attempt a small load and progressively increase this until the belt is running at full capacity.

***✘ Engineer's Tip— There is always a reason for the belt to stop. It will usually be something jammed in the tail section, or an additional tool has been plugged into the transformer causing the machine to cut out.***

# Notes

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# COVEYA

WE KEEP YOU MOVING

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