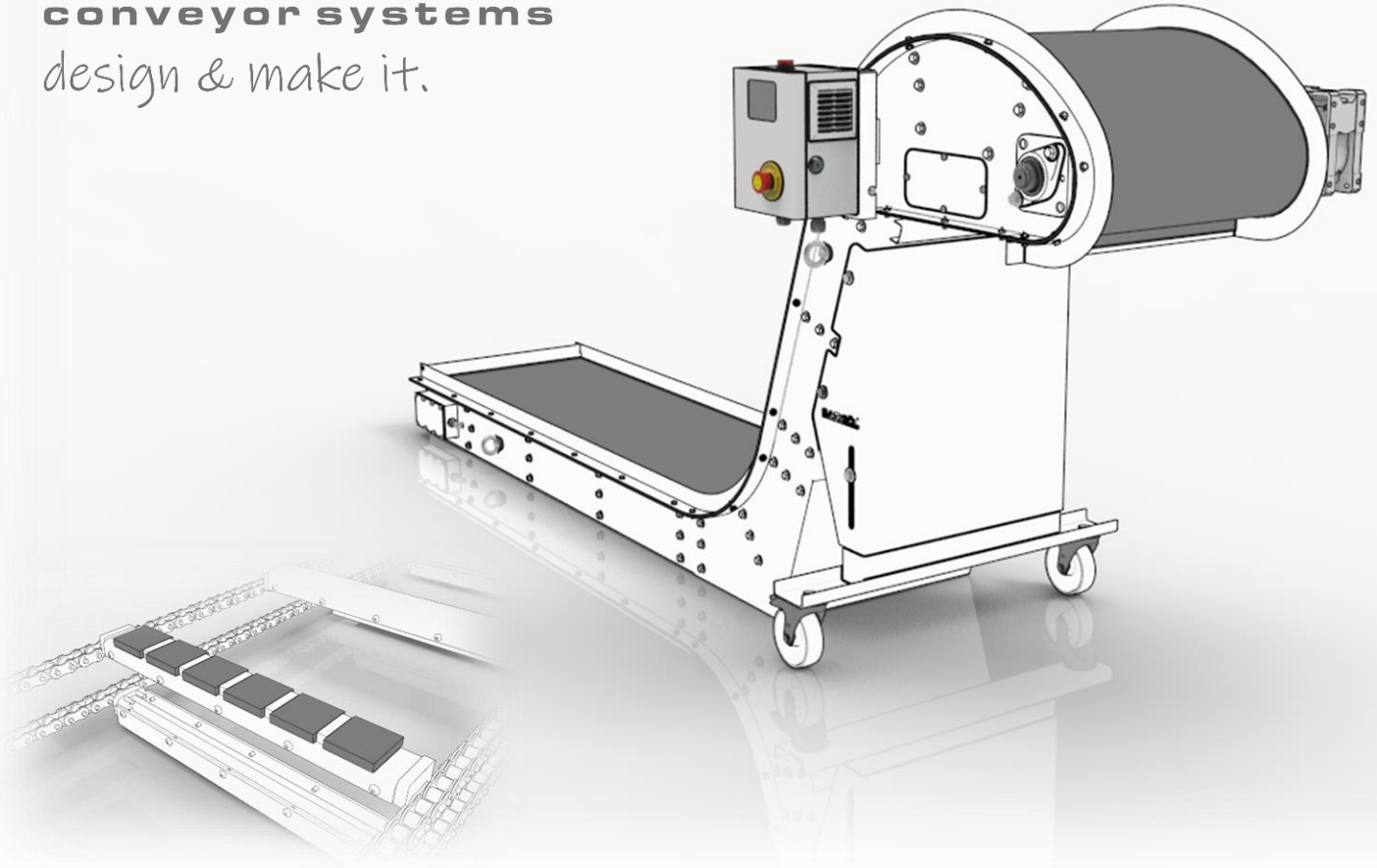


SARIGÖL[®]
conveyor systems
design & make it.



Magnetic Conveyor

User Manual

Health and Safety

This manual contains instructions for the user's daily operation with the equipment.

This manual must be accessible at all times to the person or persons working with the equipment.

It is important to meet the following conditions:

- The manual and other valid documents are retained for the entire service life of the equipment.
- The manual and other relevant documents are included as part of the equipment.
- This manual is forwarded to other users of the equipment.
- This guide is updated whenever any additions or changes are made to the equipment.
- This manual describes the methods used when using the equipment.

Safety Code

Before you start:

- Please read the relevant sections of the instructions before using the equipment and carrying out maintenance or service.
- Assume that all electrical equipment is under voltage
- Assume all hoses and pipelines are under pressure
- When servicing and maintaining equipment/machine, ensure that the electrical supply is turned off.
- The connection is disconnected and the pressure in the pipes and hoses is released in a controlled manner.
- Service and maintenance must be carried out by authorized service and maintenance.
- Staff only.
- Only use spare parts approved by Sarigöl Konveyör Sistemleri.
- Make sure the machine is securely mounted and installed in accordance with the instructions.
- Only use the machine for its intended use.
- In case of abnormal vibration or noise – stop the machine and consult the manual.
- Electrical installation should be done by a qualified electrician.
- Cutting fluids in tanks must be drained before any lifting operations are carried out.

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1 General Description of the Machine and Safety

1.1 Introduction

Please pay close attention to all safety and operational warnings outlined in this manual to reduce the risk of accidents and extend the machine's lifespan. Before assembly, operation, and maintenance of the machine, ensure that this manual has been thoroughly read and understood by the relevant personnel (operators, maintenance staff, etc.). Unauthorized personnel from outside the workplace should not interfere with the equipment, as it poses a risk. Failure to adhere to the directives, procedures, or safety warnings in this manual may result in accidents, damage, and injuries.

1.2 General Warning

The system is protected against electrical leakage and entrapment in various ways. Although the machine is equipped with safety systems, warning, caution, and usage labels have been placed on the machine. It is necessary to pay attention to and comply with these labels.



In addition to the company label containing conveyor information, various warning and caution labels are present on the conveyor. These labels are intended to help users establish proper behavior while using and maintaining the conveyor, to identify potential risks, and to alert individuals who may be exposed to those risks. Do not remove any labels from the conveyor under any circumstances.

Safety labels ensure the safe and efficient operation of both yourself and the machinery. If any of these labels are removed or become dislodged for any reason, request replacements from the manufacturer. Always adhere to the warnings provided.

1.3 Electricity



The drive enclosure is constructed to the IP 54 protection class. The power connection cables for the drive are protected by a rubber coating and steel spiral. This ensures the system is safeguarded from external factors such as dust and water. The spiral cables protecting the power cables will prevent cutting and damage. Do not use worn or crushed cables; replace them promptly.



While motors or gearmotors are operating, exposed live parts (such as open plugs or terminal boxes), moving, or rotating components pose a risk of serious injury or fatality. Adhere strictly to the documentation.



1.4 Driving System

The machine's drive system, including the motor, reducer, shaft, gears, and chain components, is enclosed in a manner that ensures safety. This prevents external interference with operating parts and protects them from contact with external factors. Additionally, risks associated with rotating components of the machine have been mitigated, and users have been warned with appropriate warning and caution labels.

1.5 Tow Hitch

For domestic shipments, conveyors can be secured using 2 or 4 lifting lugs located on the conveyor (Figure 1.5.1) and lifted with the assistance of a crane, making them suitable for loading and unloading.



During loading and unloading, maintain a safe distance from the load. Do not interfere unless you are an authorized personnel.

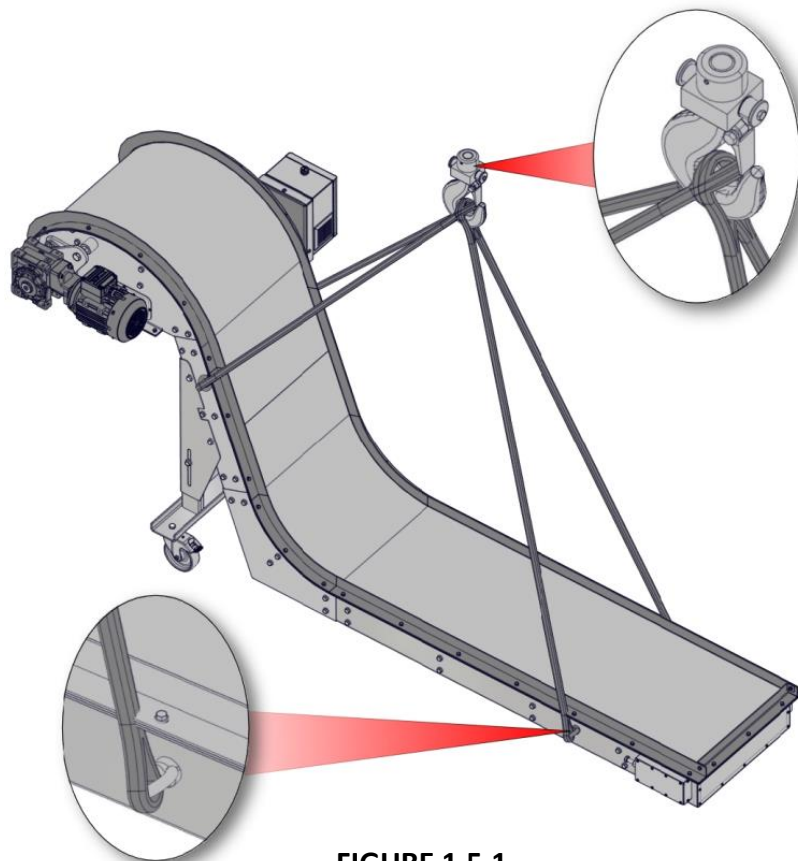























FIGURE 1.5.1

2 Conveyor Description and Components

Magnetic conveyors are used for transporting ferromagnetic materials such as dust, debris, iron shavings, and scrap metal sheets produced after manufacturing processes. Since the magnetic carrier does not come into contact with the product or shavings, there is no risk of damage to the pallet or, especially, the product. The surface on which materials are transported on the conveyor is made of stainless steel. Neodymium magnets are used in the pallet system.


The conveyor chain features carrier attachment points placed at desired intervals, where neodymium magnets are mounted onto the carrier. Magnetic conveyors come in models with or without tanks, depending on the type of parts being transported or the cooling fluid used during production. In tank models, the fluid is filtered with a screen, ensuring the clean fluid collects in the tank.

2.1 Suitable Chip Types

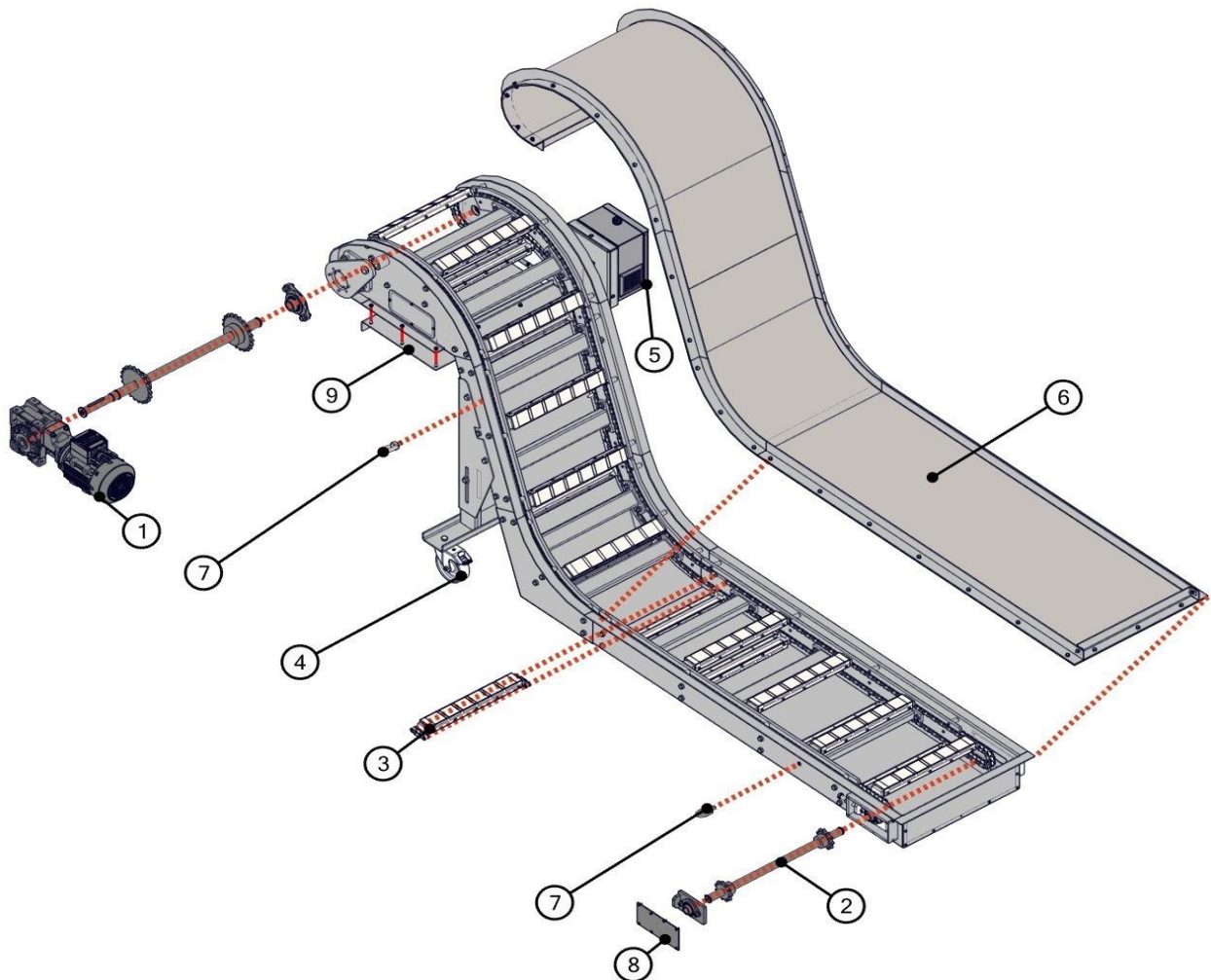
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Do not touch with bare hands!

Use personal protection!

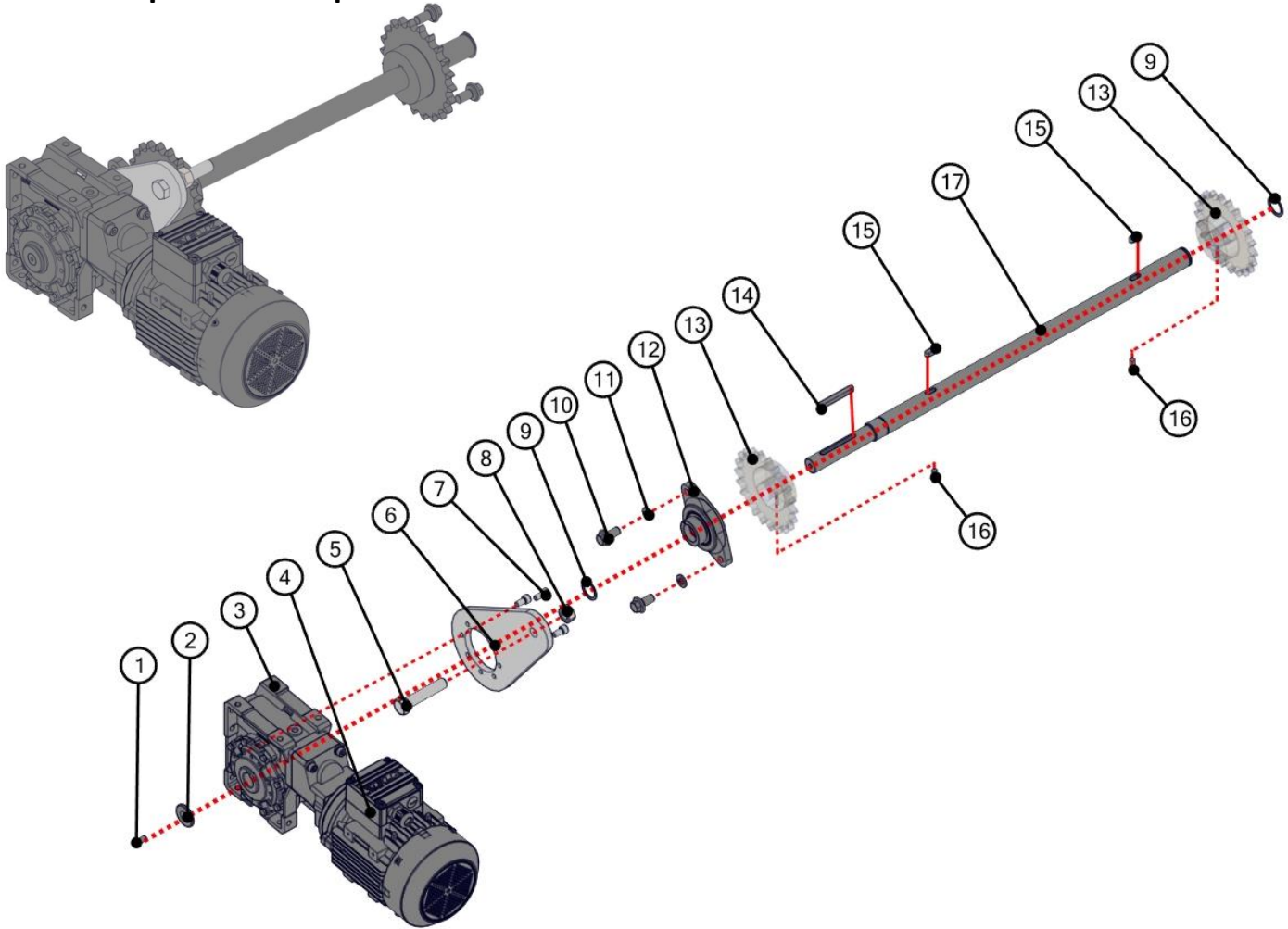


2.2 Conveyor Component Groups



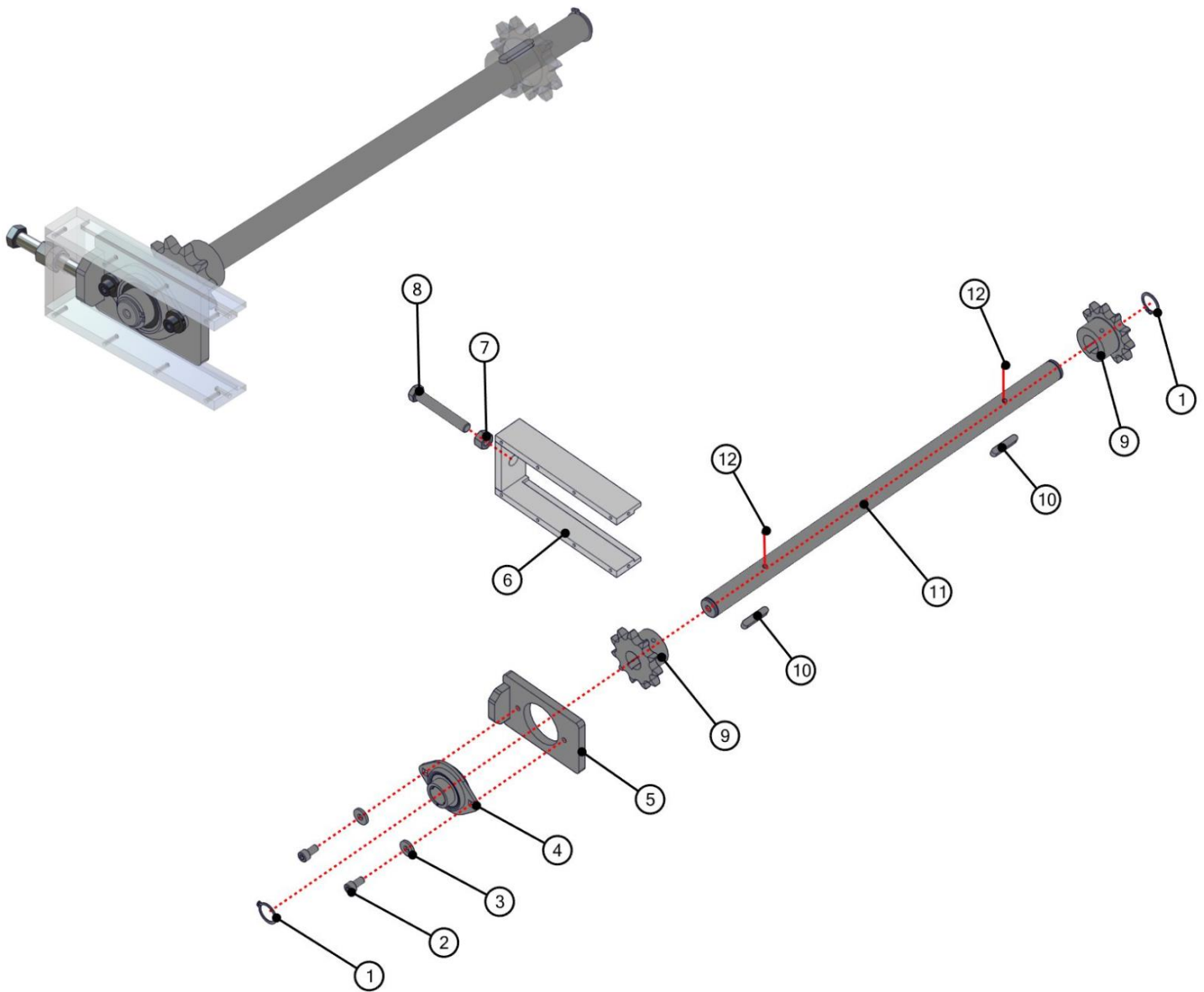
BALLOON NO	GROUPS
1	Drive Group
2	Rear Idler Return Group
3	Magnetic Carrier Group
4	Wheel Mounted Leg Group
5	Electrical Control Group
6	Part Transfer Group
7	Lifting Eye Group
8	Tensioning Cover Group
9	Discharge Cover Group

2.2.1 Propulsion Group



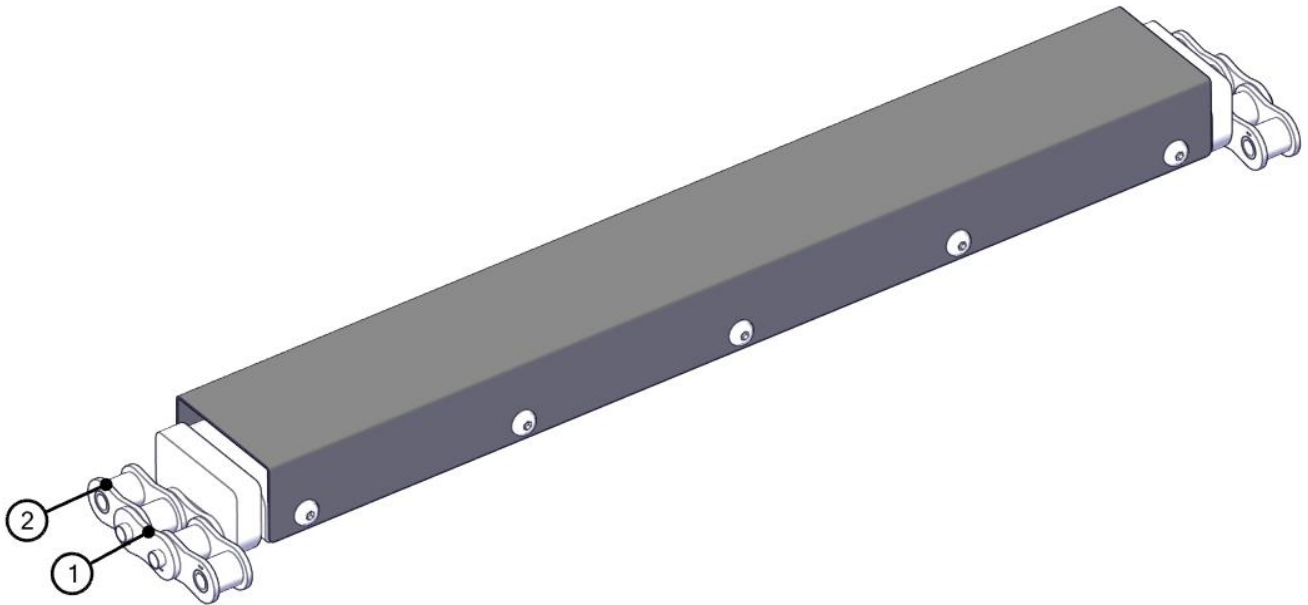
BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-0078	SOCKET HEAD CAP SCREW, BLACK, DIN 7991 (M8X16)	1
2	150-01-0327	SPECIAL WASHER (OUTER DIAMETER: 38MM, INNER DIAMETER: 8MM, THICKNESS: 5MM)	1
3	150-01-1856	GEARBOX (PQ63 BODY WITH INTERMEDIATE GEARS, I:45+4.44 (7D/D), B14 HYDRO-MEC)	1
4	150-01-0125	ELECTRIC MOTOR (0.55KW, 1400 RPM, 71/B14, FOOTLESS)	1
5	150-01-2120	HEX HEAD BOLT, BLACK, DIN 933 (M16X80)	1
6	150-01-3091	GEARBOX MOUNTING FOOT	1
7	150-01-0069	SOCKET HEAD CAP SCREW, BLACK, DIN 912 (M8X16)	4
8	150-01-0380	NUT, WHITE, DIN 934-6, QUALITY (M16)	1
9	150-01-0107	EXTERNAL SNAP RING (DIN 471/30)	2
10	150-01-0046	FLANGED HEX HEAD BOLT, WHITE, DIN 6921 (M12X25)	2
11	150-01-1030	METRIC SPRING WASHER, WHITE, DIN 127 (M12)	2
12	150-01-0341	BEARING WITH HOUSING (UCFL 206)	1
13	150-01-3918	CHAIN SPROCKET (12B-1, 19.05 PITCH, Z:22, 30 TEETH)	2
14	150-01-0114	FLAT KEY, DIN 6885 (8X7X70)	1
15	150-01-3254	FLAT KEY, DIN 6885 A TYPE (8X7X20 MM)	2
16	150-01-2083	SET SCREW, DIN 916 (M8X25)	2
17	150-01-0264	DRIVE SHAFT	1

2.2.2 Rear Idler Return Group



BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-0106	EXTERNAL SNAP RING (DIN 471/25)	2
2	150-01-0069	SOCKET HEAD CAP SCREW, BLACK, DIN 912 (M8X16)	2
3	150-01-0581	INCH FLAT WASHER, THICK WHITE (5/16")	2
4	150-01-1261	SHEET METAL BEARING (SBPFL 2015)	1
5	150-01-3091-1	CHAIN TENSIONING SLIDE	1
6	150-01-3091	CHAIN TENSIONING ASSEMBLY	1
7	150-01-0378	NUT, WHITE, DIN 934-6, QUALITY (M12)	1
8	150-01-0035	HEX HEAD BOLT, WHITE, DIN 933 (M12X80)	1
9	150-01-3919	CHAIN SPROCKET IDLER (12B-1, 19.05 PITCH, Z:11, 25 TEETH)	2
10	150-01-0113	FLAT KEY, DIN 6885 (8X7X40)	2
11	150-01-0265	REAR IDLER ROTATION SHAFT	1
12	150-01-1360	POINTED SET SCREW, DIN 914 (M6X12)	2

2.2.3 Magnetic Carrier Group



BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-4288	CHAIN LOCK FOR MAGNETIC (12B-1, 3/4", 19.05 PITCH)	2
2	150-03-0079	CHAIN LINK (12B-1, 3/4", 19.05 PITCH, WITH PIN)	4

3. INSTALLATION AND ASSEMBLY

3.1 Conveyor Installation and Connections

The conveyor can be transported to the installation site using the transport wheels included in the packaging (see Figure 3.1.1). Next, the chip conveyor should be moved into the channel of the machine, workbench, or press where it will be used, and/or the chip discharge section of the machine. The chip conveyor placed under the machine should be leveled using a level.

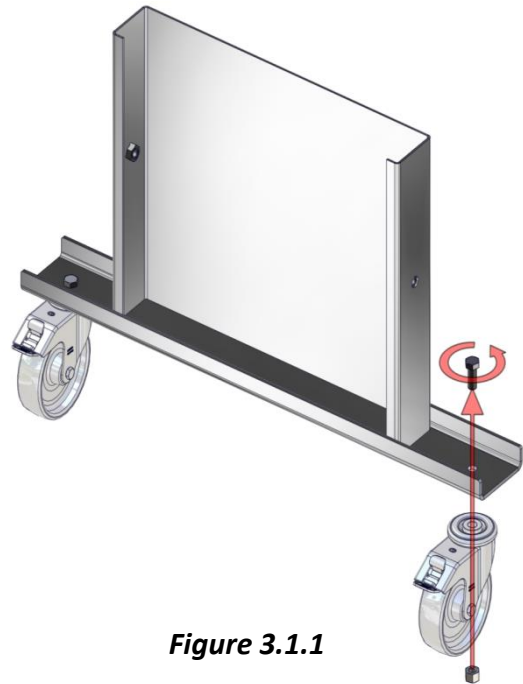


Figure 3.1.1

After leveling, the conveyor should be fixed in place using the conveyor fixing bolts to prevent movement while in operation.

After installation, connect the electrical supply to the control switch or the panel terminal, and provide electrical energy. Before operating the chip conveyor with the workbench, the parts that do not come into contact with the coolant should be greased and run empty for 5 minutes.



A ground connection must be present in the conveyor's operating area; do not power the conveyor without grounding. Remember that grounding faults can cause accidents and injuries. Do not use any other color cables except yellow-green (standard) for the grounding cable.

The chip conveyor should be operated along with the workbench. It is advisable to run it for a certain period (minimum 5 minutes) after the workbench stops before shutting it down. If this process cannot be done automatically from the workbench, it can be done manually from the driver/control panel on the chip conveyor. This will help extend the life of the chip conveyor and save energy by avoiding unnecessary running.

As mentioned in the installation section, certain precautions must be observed before the machine is first put into operation. These precautions are listed below:

Check the balance of the machine while it is in operating position. Do not interfere with moving parts or components.

Lubricate surfaces that do not come into contact with the coolant with grease.

Inspect the electrical connections and motor currents. Loose connections are hazardous.

Verify the direction of machine operation.

3.2 Electrical Panel

Our conveyor models requiring control are operated with inverters (AC speed control devices) specially designed and manufactured to meet Sarigöl standards (see Figure 3.2.1 and Figure 3.2.2).

Note: This applies only to products with panels!

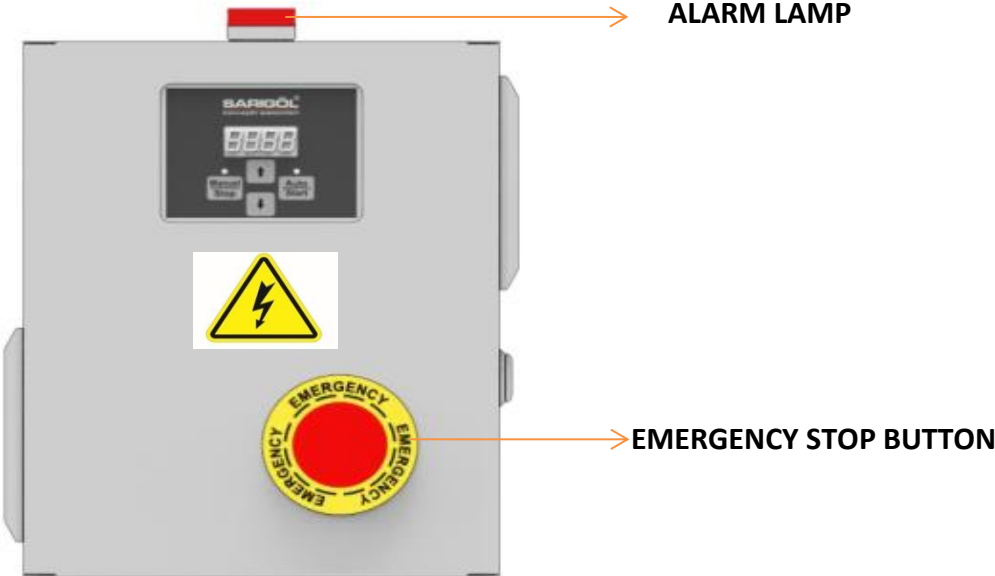


Figure 3.2.1



Figure 3.2.2

The drivers are initially programmed and delivered with values tailored to the customer's operation. In cases where conditions change, the driver user manual can be accessed electronically via our website or upon request from our company, allowing for parameter adjustments as per customer requirements.



- **Driver control cannot be performed or tampered with by anyone other than authorized personnel in the work environment.**
- **Operations that do not meet the requirements may lead to serious financial loss or personal injury.**
- **Operations that do not meet the requirements may result in minor injuries or financial loss.**
- **Ensure that the instructions in the safety and precautions section of the manual are followed during installation, commissioning, or maintenance.**
- **Do not use a damaged or incomplete speed control device, as this may pose a risk of injury.**
- **Keep it away from flammable materials, as it may cause a fire.**
- **Do not drop cable fragments or screws inside the device; this could damage the equipment.**
- **Ensure that the power supply is off before making any connections; otherwise, there is a risk of electric shock.**
- **Before powering on, ensure the cover is securely closed; otherwise, there is a risk of electric shock.**
- **Ensure that external connection components are properly connected; otherwise, malfunctions may occur.**
- **Do not open the cover of the speed control device after power is supplied, as this may result in an electric shock hazard.**
- **Do not touch the speed control device or its surrounding circuits with wet hands, as this may result in an electric shock hazard.**

- **Do not touch the device's terminals, including control terminals, as this may result in an electric shock hazard.**

Temperature, humidity, dust, and vibration in the environment can accelerate the aging of components inside the speed control device. This may lead to device failure or shorten its lifespan. Therefore, routine and periodic maintenance of the device is necessary.

Maintenance should be performed in the following cases:

- If there is an abnormal change in the motor's operating sound
- If there is vibration during motor operation
- If there are changes in the environmental conditions where the speed control device is installed
- If the speed control device is overheating

Routine Cleaning

- The speed control device should always be kept clean.
- Dust on the speed control device must be cleaned, with special care to prevent metal dust from entering the device.
- Any oil stains on the speed control device should be removed.

Periodic Control

- Check and keep the ventilation channels clean.
- Check for any missing screws.
- Inspect the speed control device for rust.
- Check for any arcing in the cable connections.
- Perform an insulation test on the main board.

4. Operating

4.1 General

A driver and/or control panel, containing the necessary equipment to operate the conveyor and easily monitor its operation, has been installed.

4.2 While Operating



In manual mode (Figure 3.2.2), the start/stop buttons on the keypad are functionally active and suitable for manual operation. To start the conveyor in the working direction, simply press the start button once. The conveyor's pallet speed is pre-programmed by the manufacturer to meet the customer's required capacity and will automatically reach the desired value after starting.

Using the up/down buttons in Figure 3.2.2, the pallet can be moved forward or backward manually in the event of a fault or alarm. The pallet will stop as soon as the button is released. If the pallet becomes jammed and cannot be operated, the system will return to alarm mode, and no further operation can be performed using the forward/backward buttons. In such cases, the conveyor should not be forced with repeated attempts, and technical support should be requested from the manufacturer immediately.

In this mode (Figure 3.2.2), the start button also serves to activate automatic operation. After all checks are completed, pressing the start button once is sufficient to start the conveyor and control it from the workstation. The start button also functions to advance the conveyor to assist in diagnosing any issues during a fault condition.

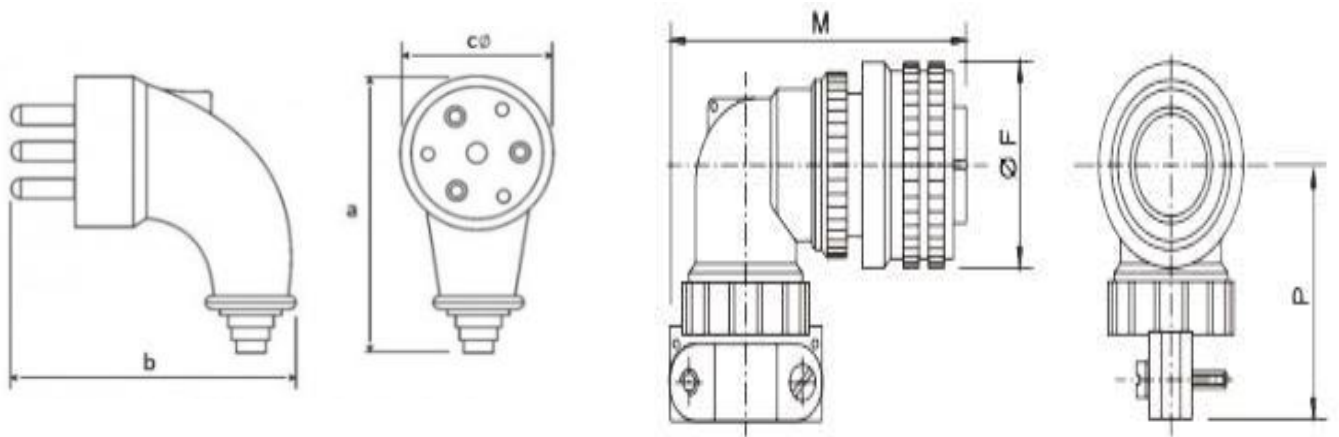
The stop button allows the conveyor to be operated manually after it has been stopped from the workstation. It also has a manual reverse function to help diagnose any faults. To operate the conveyor in reverse, simply press the stop button once. Once the fault is resolved, pressing the start button once will automatically resume conveyor operation from the workstation. In conveyors controlled from the workstation, the conveyor will enter fault mode in the event of a malfunction. If the problem cannot be resolved after initial attempts, the conveyor will stop completely, requiring intervention. To diagnose the issue, authorized personnel should inspect all system components such as the pallet, chain, motor, gearbox, bearings, etc. The conveyor can be operated manually using the start and stop buttons to assist in troubleshooting. After resolving the issue, pressing the start button will return the system to automatic mode, allowing control from the workstation. If the conveyor still does not function despite all interventions, maintenance, and cleaning, no further actions should be taken, and the conveyor should not be forced with repeated attempts. Technical support from the manufacturer should be requested immediately.



- It is crucial for safety reasons that no one other than authorized operators and/or electricians is allowed to intervene with the conveyor panel.

Depending on the usage requirements and customer specifications, the driver for the conveyor will be supplied with either a three-phase plug or a military socket pre-installed by the manufacturer.

Note: This applies only to products with a military socket.



5. MAINTENANCE

5.1 Weekly Maintenance

The maintenance cover located at the bottom of the conveyor should be opened, and the neodymium magnets should be visually inspected to ensure they are functioning properly.

If the conveyor is equipped with screens, they must be thoroughly cleaned of debris.

The coolant mixture ratio should be checked and topped up if necessary. The electrical connections and bolts of the electric motor should be inspected. After opening the lower maintenance cover, check the chain tension and adjust if necessary. For a simple tension check, push the chain upward by hand; if the gap is 10 mm (approximately 10 Nm), the tension is correct (Figure 5.1.1). The X distance should be measured from both sides and must be the same.

The chain tension is adjusted via the slide plates connected to the bearings at the rear of the conveyor. When adjusting the tension, ensure that it is evenly applied on both sides.

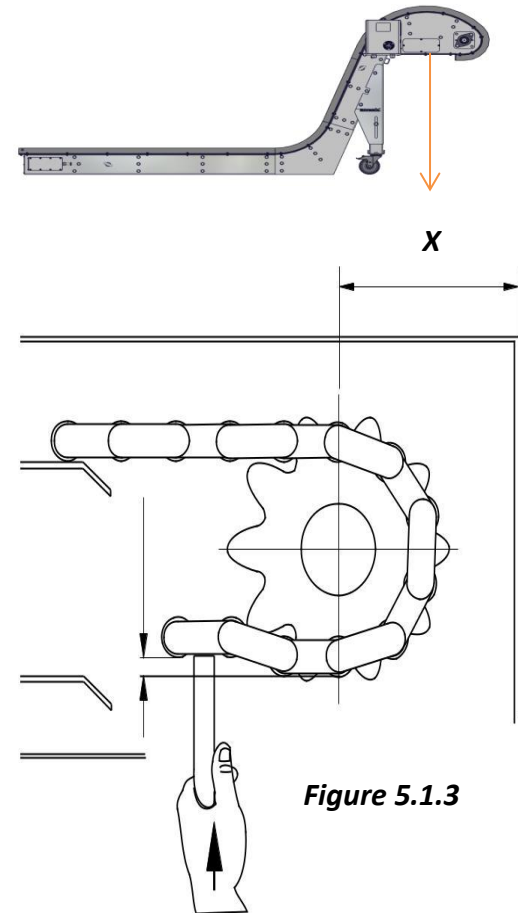
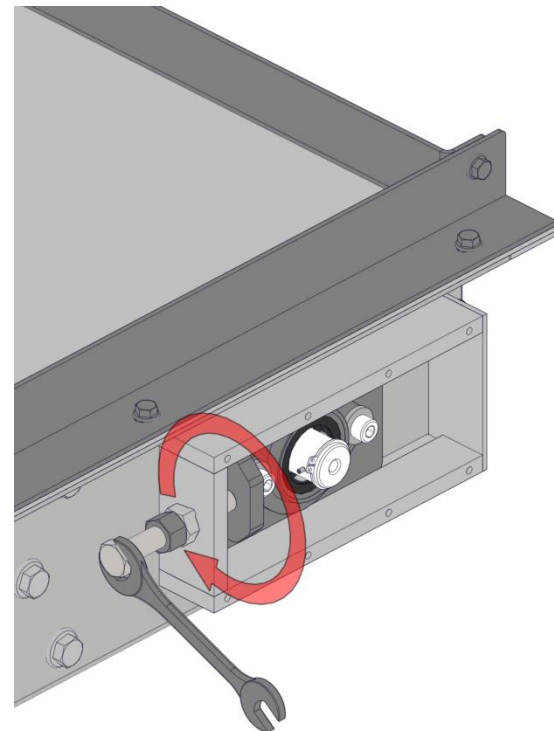


Figure 5.1.3

5.2 Monthly Maintenance

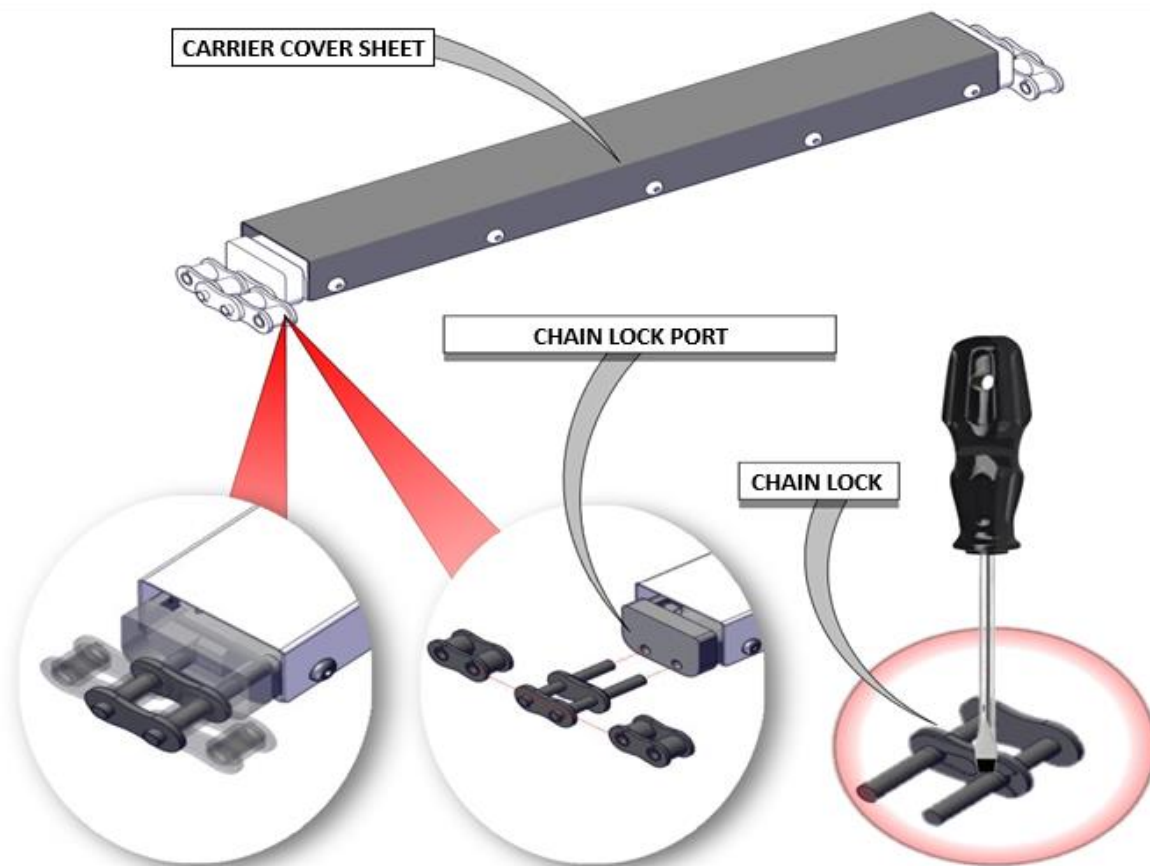
Remove the conveyor from under the workstation and open the top chrome cover. Inspect the neodymium magnets and clean any accumulated iron dust with a cloth. Check the screens if present. Perform a tension check and inspect the chain, chain sprockets, shafts, and carriers. Report any wear, breakage, or damage to the manufacturer. When reinstalling the conveyor under the workstation, ensure it is properly balanced. Add coolant to prepare the machine for operation.



5.3 Belt Maintenance

Clean any metal dust accumulated on the magnets on the conveyor using a cloth. If a carrier needs replacement, disconnect it at the chain pin connection point. For magnet replacements, remove the stainless steel carrier cover to access and change them.

Ensure that these tasks are not performed with bare hands.



To remove the chain and carrier, refer to Figure 1-1. Press the split section of the chain lock with a flat-head screwdriver to rotate the lock piece clockwise and remove it from the pin. In Figure 1-2, sequentially remove and replace the chain links.

If there are any issues with the carriers that significantly affect the conveyor's operation, please contact our authorized service provider to request service or technical support.

6 About Malfunctions

6.1 General Explanations

The information in this booklet is based on service work and experiences gained from tests conducted at the factory. Symptoms and causes of malfunctions are discussed based on reports from service companies and the results encountered by service technicians.

A thorough visual inspection is essential for identifying problems effectively. Proper monitoring of the malfunction helps prevent unwanted damage during repairs.

First, check:

- Electrical connections for any looseness.
- Parts that might be affected by short circuits or heat.

If problems persist despite trying the solutions outlined in this booklet, please contact our company. For the best results and safety, it is advisable to have all repairs, maintenance, and troubleshooting carried out by our company. Improper handling without proper knowledge can lead to incorrect outcomes, unnecessary downtime, or costly damage to your equipment and operations.



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