

LGI G2 Eddy

Current Separator

Operations & Maintenance

Version 2.0



Read this manual in its entirety before attempting to install, maintain, operate or repair this equipment.

This manual must accompany this machine if resold.

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NOTE: For the protection of all personnel, please read these safety instructions before inspecting, installing, maintaining, repairing, or operating the machine. Keep this document for future reference. ALL personnel who will install, inspect, maintain, operate or repair this equipment should read and understand this manual.

LGI Eddy Current Separator

INTRODUCTION

Proper operation, maintenance and service can help increase the life and reliability of this Eddy Current Separator, and the safety of personnel working near it. Personnel working in proximity of this equipment should read this manual in its entirety before attempting to install, operate, maintain, inspect, service, or repair any part of the Eddy Current Separator. Due to the nature of this equipment, the conditions under which it may be operated and the variety of materials that may come in contact with it, its manufacturer, representatives and assignees cannot anticipate all circumstances that might involve or create a potential operational or safety hazard. This manual, without regard to its author's attempts to foresee possible safety hazards, and to cover the machine's operating parameters, cannot substitute for good judgment and common sense in preventing damage and/or accidents. Keep this document for future reference.

NOTE: The information contained in this manual is not intended replace common sense or an awareness of safety, nor does it replace the end users responsibility to provide a safe working environment in compliance with all local, federal, and industry regulations, laws, standards and practices. It is the responsibility of the owner of this machine to ensure that all ANSI and OSHA requirements are met.

All information, specifications and illustrations contained in this manual are based on current information for the models(s) specified at the time of publication.

SAFETY PRECAUTIONS

Safety precautions and warnings are given throughout this manual. Read and understand ALL safety precautions and warnings before operating, inspecting, repairing, maintaining, or servicing the unit.

It is not possible to anticipate every possible situation that might involve a potential hazard. These include, but are not limited to, the variety, size and type of materials that may introduced to the unit, the conditions in which it might be operated, and the competency of its operator(s).

! WARNING: DO NOT ALLOW ANY PERSONNEL TO OPERATE, SERVICE, INSTALL, INSPECT OR REPAIR THIS UNIT WITHOUT DETERMINING THAT EACH SUCH INDIVIDUAL HAS READ AND UNDERSTOOD THIS INSTRUCTION MANUAL.

THE END USER OF THIS MACHINE IS RESPONSIBLE FOR ITS SAFE INSTALLATION AND OPERATION.

IT IS THE END USER'S RESPONSIBILITY TO PROVIDE ALL NECESSARY SAFETY PRECAUTIONS. INCLUDING ANY GUARDS, LOCKOUTS, TRAINING, ETC. AS MAY BE REQUIRED FOR SAFE OPERATION, OR TO COMPLY WITH APPLICABLE REGULATIONS.



DANGER: Rotating machinery can grab loose clothing or body parts. Severe injury or death can result.



DANGER: Lock out/Tag out voltage from all sources before approaching any equipment. Electrical shock will cause severe injury or death. Only competent and authorized electricians should attempt to install, modify or maintain the electrical system.





Operation by untrained or unauthorized personnel may result in severe injury or death.



Failure to inspect and utilize all guards and shields may result in severe injury or death. Additional guarding may be required for each unique application.

! WARNING: Heed and Obey Warning Signs on Machine.

Signs reading DANGER, CAUTION, WARNING and ATTENTION are there for the protection of all personnel and should remain in place and unobstructed. Replace or repair any damaged or unreadable safety signs or labels.

! WARNING: Do Not Operate Equipment While Personnel Are In Close Contact

Never operate separator while personnel are in proximity of the machine or there is any danger of people being harmed by materials being moved by the machine

! WARNING: Before Using Equipment, Conduct a Visual Inspection.

Lock out/Tag out all power to separator then visually inspect the unit, and all associated equipment to

ensure that there are no loose or missing bolts or electrical connections or other unsafe equipment. Verify that there are no tools, unsafe materials or personnel nearby. Warn all nearby personnel before starting machine. Failure to inspect equipment before start up may result in unsafe operation which may cause severe injury or death.

! WARNING: Debris Danger.

Materials can shift or eject from the conveyor while it is moving. Keep clear of separator and its material while in operation. Stay clear while scrap is being conveyed or released.

CAUTION: Wear Protective Clothing.

Wear safety glasses, hearing protection, gloves, hard hat, and steel toe protective shoes, while operating or in proximity to the Separator. Do not wear loose clothing which may become entangled with the conveyor.

CAUTION: Heavy Components.

This machine is too heavy for a single person to lift. When servicing, use approved lifting devices and/or obtain assistance from other individuals when needed.

CAUTION: Machine Damage

Do not allow lifting equipment, tools or personnel to damage electrical equipment. If machine is damaged by impact or other accident DO NOT USE without an inspection by a professional electrician or repair specialist. Do not allow unauthorized personnel on machine.

CAUTION: Machine Damage

Do not use this machine for any purpose other than separating non-ferrous scrap materials as specified in this manual. Misuse of this machine may result in damage rendering the unit unsafe.

IMPORTANT SAFEGUARDS

Installation must be performed by a certified electrician in accordance with local electrical codes. The motor “START/STOP” buttons must be protected against accidental/inadvertent operation; and the “START” button must never be continuously pressed to bypass safe start-up. Failure to adhere to proper installation practices for electrical devices could result in injury or death. **Maintenance, Service, Inspection and Repair Must Be Performed by Qualified Personnel.**

NOTE: LOCK OUT/TAG OUT POWER FROM ALL SOURCES BEFORE ATTEMPTING ANY MAINTENANCE OR SERVICE PROCEDURE. VERIFY THERE IS NO POWER TO THIS EDDY CURRENT SEPARATOR OR RESIDUAL CURRENT BEFORE PERFORMING ANY INSPECTION, MAINTENANCE, INSTALLATION OR REPAIRS.

Do not attempt to install this machinery outdoors. Do not leave machinery in standing water and/or snow or ice. Completely shut down this equipment and perform Lock Out/Tag Out procedures before making repairs.

If Eddy Current Separator appears or sounds damaged or out-of-balance DO NOT USE. Call your distributor immediately for support.

Seller mandates the use of safety guards, shut-offs and other such equipment to protect users of this equipment. End-user acknowledges this equipment may entail certain unavoidable risks during use, operation or maintenance,

which may cause injury to the user, operator or individuals having contact with the equipment. Buyer/End-User assumes all responsibility for necessary training, instructions and warnings to ensure those coming in contact with this equipment are aware of any and all risks and take appropriate action for their protection.

It is the buyer’s responsibility to communicate these safeguards to whoever may acquire this equipment from buyer through purchase or other disposition in the future.

Inspection

1. Immediately upon arrival carefully inspect all items received and ensure that there is no damage or missing items. If any damage or loss is detected, contact the shipping carrier and seller to file a claim and discuss subsequent steps.
2. The unit is shipped in at least two pieces. The control panel has been removed for transport and should be connected by a certified local electrician.
3. Ensure all bolts and fasteners are intact and tightly inserted. Bolts may come loose from inspection, assembly or shipping.

Setup

1. Place Eddy Current Separator in its operating location. For this operation, a fork truck operated by a trained and qualified driver must be used. The Eddy Current Separator should be lifted using the lifting eyes for proper distribution of its weight to prevent any damage to the machine.

2. Once in place, the Eddy Current Separator must be securely bolted to the floor or pad it will operate on.
3. After securing the Eddy Current Separator, the control panel may be connected to the Separator. A certified and licensed electrician must perform this installation.

Initial Operating Sequence

1. Check for proper incoming voltage (480v unless otherwise specified on the machine).
2. Ensure unit is wired correctly and rotation of conveyor and drum is correct.
3. Verify all personnel are safely clear of the machinery and that the unit is free of obstructions and debris.
4. Activate the start button.
5. Wait for rotor to reach speed. This can take several minutes.
6. Listen and watch for excessive vibration once rotor reaches target speed and cease operation if the unit sounds out-of-balance.
7. Activate the stop button.
8. Allow the Eddy Current rotor and belt to slow to a complete stop (approx two minutes).
9. Repeat steps 3 through 6.
10. Activate the emergency stop button.
11. Check that all power has been terminated to the motors.
12. Check that the rubber belt has stopped.

Standard Operating Procedures

Startup

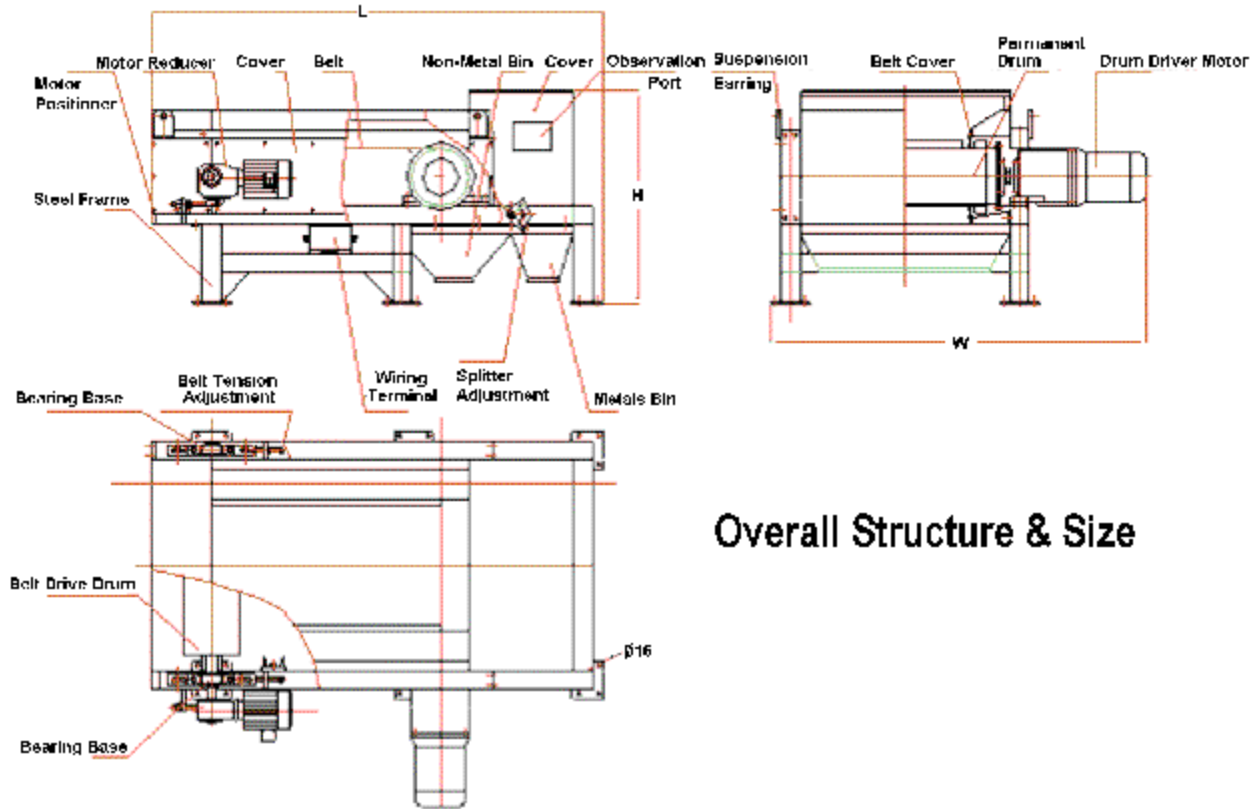
1. Ensure that entire Eddy Current Separator is secured to the floor or pad and that the control panel is securely in place.
2. Ensure that the Eddy Current Separator is wired properly.
3. Verify the machine is free of debris and press and hold the start button to engage the master control relay
4. Once powered on, Press the Belt Start button.
5. Wait until the conveyor is up to speed to press button labeled “Roller Start” to activate the rotor. This can take several minutes.
6. Check for excessive vibration once rotor reaches target speed and stop operation if noise is excessive.
7. When the rotor reaches desired speed the Eddy Current Separator is ready to begin processing material. Some adjustment to belt and drum/roller speed may be required to achieve optimal performance.
8. This Eddy Current Separator is designed to process “light” non-granular (+3/4”) materials that do not exceed 1lb. in maximum weight.

! WARNING: REMOVE FERROUS METALS FROM YOUR FEEDSTOCK. FERROUS METALS CAN CAUSE “BURN-THROUGH.” RESULTING IN DAMAGE TO THE UNIT.

Shutdown

1. For general shutdown first press Roller Stop button.
2. Once the rotor has come to a full and complete stop, press the Belt Stop button.
3. Once belt has come to a full and complete stop, press the Emergency Stop button.
IN THE EVENT OF AN EMERGENCY, PRESS THE EMERGENCY STOP BUTTON IMMEDIATELY SKIPPING STEPS 1 AND 2.
4. Lock Out/Tag Out power from all sources and clean unit after each use. Special emphasis should be placed on cleaning the bearings and belt areas.

Dimensions



Overall Structure & Size

Model	Outline Dimensions	Weight	Drive Motor	Belt Speed	Rotor Diam.
35"	94"(L) 71"(W) 46"(H)	2800lbs	7.5HP	0-1.5 m/s	11"
48"	94"(L) 92"(W) 46"(H)	3400lbs	10HP	0-1.5 m/s	9"
60"	94"(L) 103"(W) 46"(H)	4100lbs	15HP	0-1.5 m/s	8"

Specifications are approximate. Manufacturer reserves the right to change any of the information at any time without prior notice

Additional Operating Procedures

Be sure to allow the Eddy Current rotor and belt to reach the configured speed before feeding material for separation.

Ensure that material sizes are uniform and material to be separated is fed evenly, at low velocity, and thinly across the feed end of the rubber belt.

Adjust splitter box baffle, belt speed and rotor speed for maximum separation. From time-to-time these variables may require adjustment.

Inspect your Eddy Current Separator belt for wear.

Listen for unusual noises, and watch for excessive vibration at start-up. If you suspect damage or misalignment to the Eddy Current rotor shut the unit down and call your distributor for support. Do not attempt to repair yourself.

Allow the Eddy Current rotor and belt to slow to a complete stop after shutdown, before approaching the machinery for maintenance, repair, inspection, etc.

Ensure the Eddy Current Separator is mounted on a straight and level surface and firmly and securely bolted to the floor using fasteners strong enough to withstand the unit's weight and the anticipated vibration.

Keep the Eddy Current Separator turned off unless processing material.

DO NOT adjust Eddy Current or belt speed using the interior control panel controls unless the power is off and locked-out.

DO NOT use or allow an unqualified operator to use any Eddy Current Separator without reading and understanding the instruction manual.

DO NOT allow operation of Eddy Current Separator while operator or any other personnel in the area are not wearing proper safety equipment, or are wearing jewelry, or loose fitting clothing that they may become caught by the machinery.

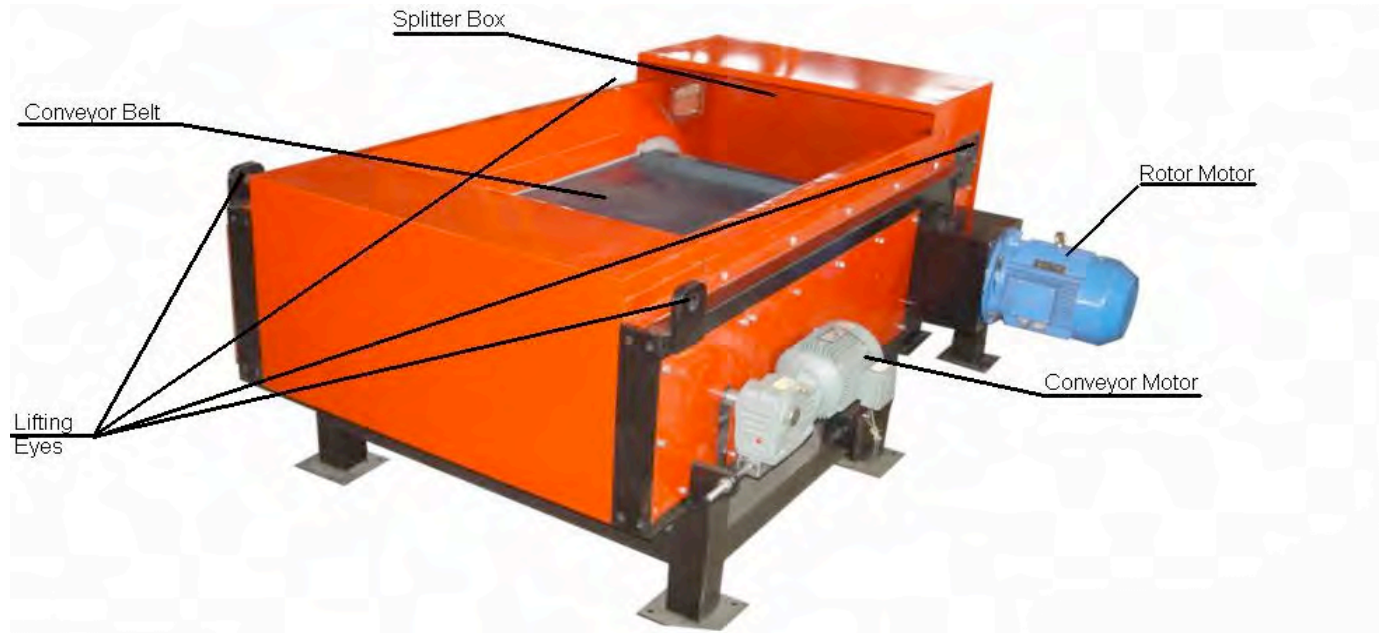
DO NOT attempt to install this Eddy Current Separator or leave it standing in water and/or rain/snow

DO NOT install or service this Eddy Current Separator unless power is off, disconnected and locked out. Verify there is no power to the Eddy Current Separator or residual current using the appropriate measurement tool.

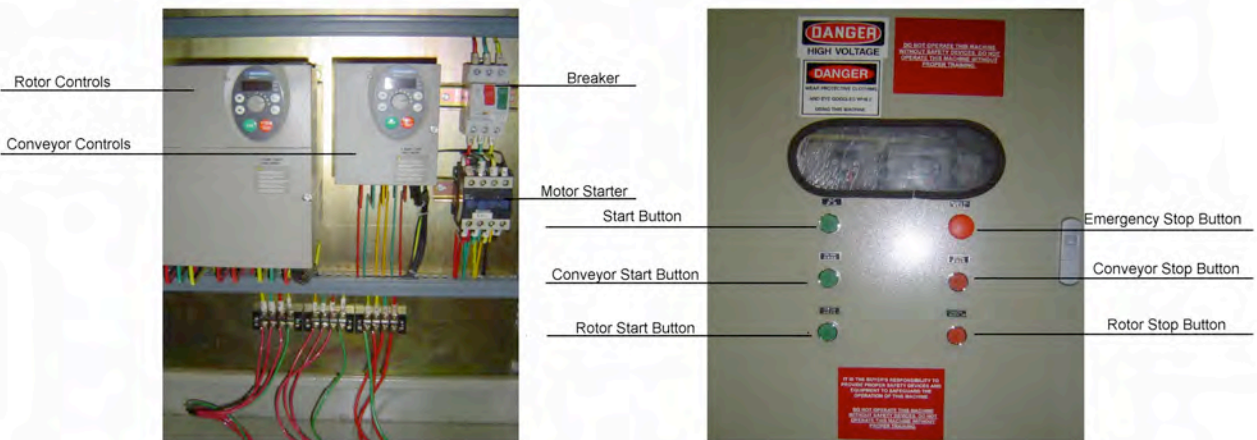
DO NOT run the rotor faster than its factory rated speed of 3250RPMs.

NOTE: DISCONNECT AND LOCK OUT/TAG OUT POWER TO THE EDDY CURRENT SEPARATOR THEN VERIFY THERE IS NO VOLTAGE BEFORE ATTEMPTING TO INSPECT, MAINTAIN, OR REPAIR THE UNIT

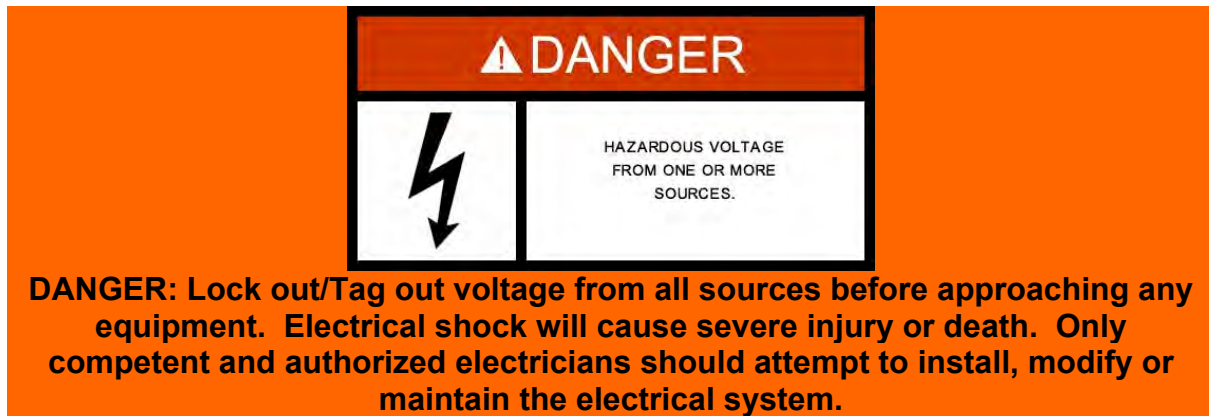
Eddy Current Separator Description



Control Panel Description



General Maintenance



DANGER: Lock out/Tag out voltage from all sources before approaching any equipment. Electrical shock will cause severe injury or death. Only competent and authorized electricians should attempt to install, modify or maintain the electrical system.

NOTE: Build up of material/debris is a common cause of wear for this type of machinery. Depending on the type and volume of material processed the following maintenance guidelines may need to be performed more frequently.

Daily Maintenance:

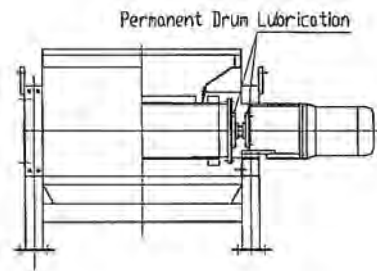
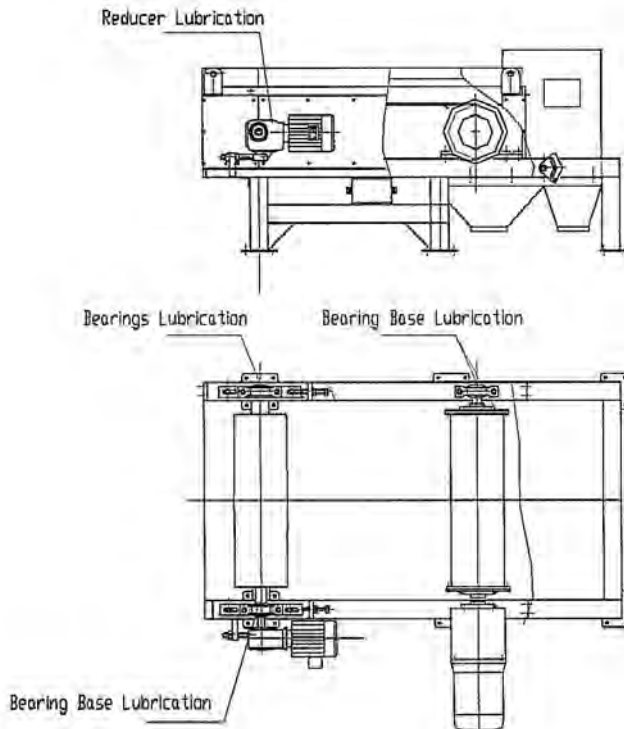
1. Lock out/Tag out voltage from all sources.
2. Inspect machinery for debris near and underneath conveyor, bearings, and splitter box.
3. Carefully clean machinery of debris, removing access panels and guards, if necessary.
4. Replace access panels, guards, and fasteners. Be careful to not over torque fasteners.
5. Inspect for ferrous contaminants at the drum and remove.

Monthly Maintenance:

1. Lock out/Tag out voltage from all sources.
2. Inspect and lubricate moving parts at least once per month (see diagram on next page).
Select a lubricant that is appropriate for the peak temperature and air-quality environment this machinery will be operated in.
3. Inspect and tighten all fastening bolts and nuts with special attention to not over-tighten.
4. Inspect the rubber belt each day for wear and proper tension. Tighten as necessary.

Failure to regularly clear the machine of debris as described above will result in an imbalance and potentially damaging vibration in the unit.

Lubrication Indication



The two side cover plates must be removed whilst the bearing base is lubricated.

Lubrication Indication

Troubleshooting

Problem	Possible Cause	Possible Solution
Insufficient Electrical Power	<ol style="list-style-type: none"> 1. Broken, shorted, or bad wiring. 2. Circuit breaker has blown fuse. 3. Emergency start button is engaged 4. Unit is not being supplied with 440v power 	Contact a certified and licensed electrician to troubleshoot problem and make repairs as necessary
Jamming Or Tripping Of Fuses	<ol style="list-style-type: none"> 1. Electrical short 2. Material jam 	With power off and locked out , inspect machine for any jams. Contact certified and licensed electrician.
Insufficient Separation	<ol style="list-style-type: none"> 1. Too large a batch of material to be separated. 2. Splitter is incorrectly set for material 3. Material is improperly sized (to small or large). 4. Material does not contain sufficient aluminum or copper. 5. Ferrous content of material is too high. 	Adjust splitter. Modify material prior to feeding
Excessive Vibration	<ol style="list-style-type: none"> 1. Machine is not securely bolted to ground. 2. Material has built up at sorting drum. 3. Rotor is out of alignment or bearings are damaged. 	Ensure unit is securely fastened to ground. Clear unit of debris. Contact supplier to arrange return of unit for inspection and repair.

*****IF PROBLEM IS STILL NOT RESOLVED, PLEASE CONTACT DISTRIBUTOR FOR FURTHER INSTRUCTIONS*****

Addendum 1

This information is not a substitute for reading the operations and maintenance manual in its entirety. Only a certified local electrician should access, modify or otherwise interact with the electrical controls of this machinery. Some modification may be required to comply with local electrical safety codes. This information is subject to change without notice. Lock-out/tag-out procedures are required when working with this machinery.

Table 1:

