Bulk Feeder
Model 858

2nd Edition

AMADAS

MAN066
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Bulk Feeders are manufactured by AMADAS Industries.

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AMADAS

Welcome to Amadas Industries

With origins dating back to 1963, Amadas Industries and its predecessors have a long history of providing high quality, reliable, innovative equipment for the farming industry. Amadas equipment is currently at work throughout the United States and in many other countries. This equipment includes machinery such as the Magnum Fource Peanut Combine, Reel Rain Traveler Irrigation System, Tree Bark Processing and Packaging Machinery, the Soils and Bark Bagger, and Bulk Feeder.

Bulk Feeder

Congratulations on your purchase of a Model 858 Bulk Feeder. Our bulk feeders are designed to provide a controlled output of material for feeding processing and handling equipment. They are also designed to provide a long service life with a minimum of maintenance.

Dimensions

Length:	27’ 9”
Width:	12’ 3”
Height:	12’
Weight:	16,200 lbs.
Minimum discharge Height:	8’
Hopper Incline:	17 degrees
Capacity:	31 cubic yards
Rate:	50 to 200 cubic yards per hour
Electrical:	3 HP 1750 RPM 3 phase 230 / 460 volts 9.3 AMPs 60 HZ

Standard Features

Our bulk feeder includes the following standard features:

- Treated wooden batter boards.
- Four material feed chains with 16” x 3 “ welded flights.
- 3 HP main drive motor with variable speed pulley.
- 1 HP leveler rotor drive motor.

NOTES

1. Safety

Overview

Safety is ***everyone's*** responsibility! Although safety features are incorporated into the machine and dangerous areas are marked, ultimately, careful operation is the best way to prevent an accident. To reduce the risk of accidents, please read thoroughly and follow the safety instructions and messages included in this manual and on the machine.

Safety Symbols Used

Three safety symbols are used on the machine and in this manual.

⚠ DANGER

⚠ WARNING

⚠ CAUTION

Please familiarize yourself with each symbol and its meaning. It is crucial to your safety, and the safety of others, that you follow the safety precautions indicated by these symbols. The section beginning on the next page explains each of these symbols in detail.

Protective Devices

Protective guards and shields have been installed to protect you from hazards.

⚠CAUTION

NEVER remove, tamper with, or modify guards or shields!

NEVER open or take off the shields while the machine is operating!

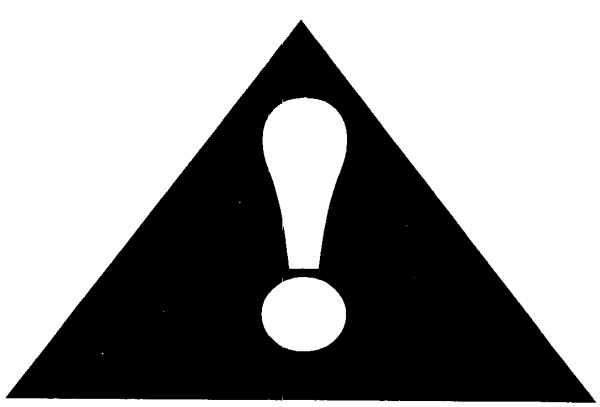
NEVER run the machine if the shields are missing or removed!

Safety Symbols

Danger This symbol indicates an imminently hazardous situation, which if not avoided, will result in death or serious injury. The use of the word DANGER is limited to the most extreme situations. Extreme care should be taken when you near these areas. DANGER decals are located at or as near as possible to these areas.	⚠DANGER
Warning This symbol identifies areas or practices, which if not avoided, could result in serious personal injury. These injuries could range from minor cuts to dismemberment. Warning decals are located at or as near as possible to these areas.	⚠WARNING
Caution This symbol identifies a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices that could cause damage to the machine. Caution decals are located at or as near as possible to these areas.	⚠CAUTION

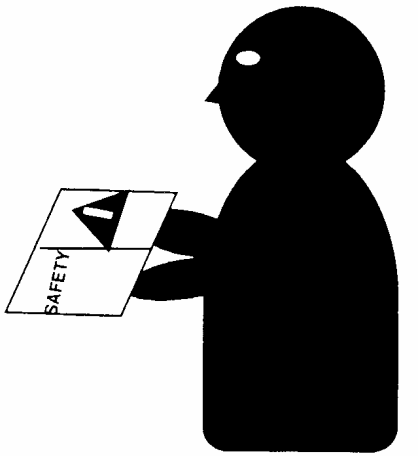
Safety Alert Symbol

This symbol alerts you to possible hazards. Follow the recommended precautions and safe operating procedures. If you have any questions, please contact your dealer or the manufacturer.



Safety Instructions

Safety features have been designed into the machine with hazardous areas marked. Please read and follow the instructions in this manual prior to operating, maintaining, or servicing this machine.

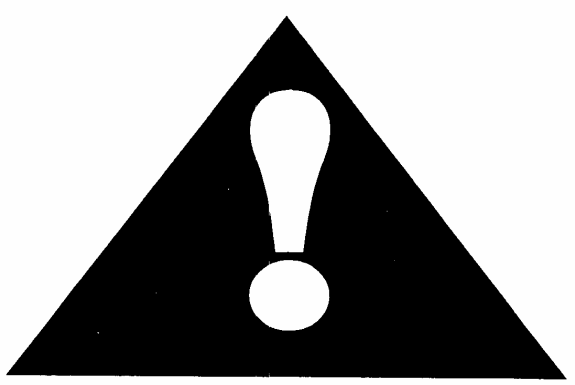


Notes

Throughout the manual, information that needs to be emphasized is set apart with either a "NOTE!" or "IMPORTANT!" heading. Please be sure to carefully read this information, as it usually indicates a situation that could cause machine damage.

NOTE! It is recommended that the sprockets and chains be replaced as a set. New components, when used with old components, wear more quickly than normal.

Safety Guidelines



Many accidents can be prevented by your knowledge of safety. Prevent injuries by reading and following the safety warnings in this manual and on the machinery. Alert others to potential hazards.

Remember all machinery can be dangerous if used incorrectly. Please operate carefully. Safety is only a word until it is put into practice!

When operating the machine:

- Keep hands, feet, and clothing away from moving parts.
- Do NOT operate machine unless all safety shields are in place
- Do NOT operate the bulk feeder with broken or missing rotor parts.
- Properly ground all electrical equipment.
- Do NOT allow anyone to stand on or inside the machine during operation.
- Do NOT walk or crawl underneath the machine while it is in operation.
- If the bulk feeder vibrates excessively or makes abnormal noises, stop the machine immediately and investigate. Do NOT operate the bulk feeder if it is not working properly or it needs immediate maintenance.

When servicing the machine:

- Disconnect and lock out power before servicing.

⚠DANGER

Always lock out and tag the bulk feeder's power disconnect switch before performing any kind of maintenance. Failure to turn the power off can lead to death or serious personal injury.

- Keep personnel away from the bulk feeder while maintenance personnel are servicing the machine.
- Use stable work platforms to reach any point not easily reached from the floor level.

Safety Decals

Safety decals identify specific hazards and general safety. Please note the following about the decals:

- Keep them clean and legible.
- Never remove a safety decal from the machine.
- When you replace a part with a safety decal, also replace that decal.
- For replacement decals, call your AMADAS parts representative.
- Replacement safety decals are available free of charge.

Decals

The following decals are included on the bulk feeder:

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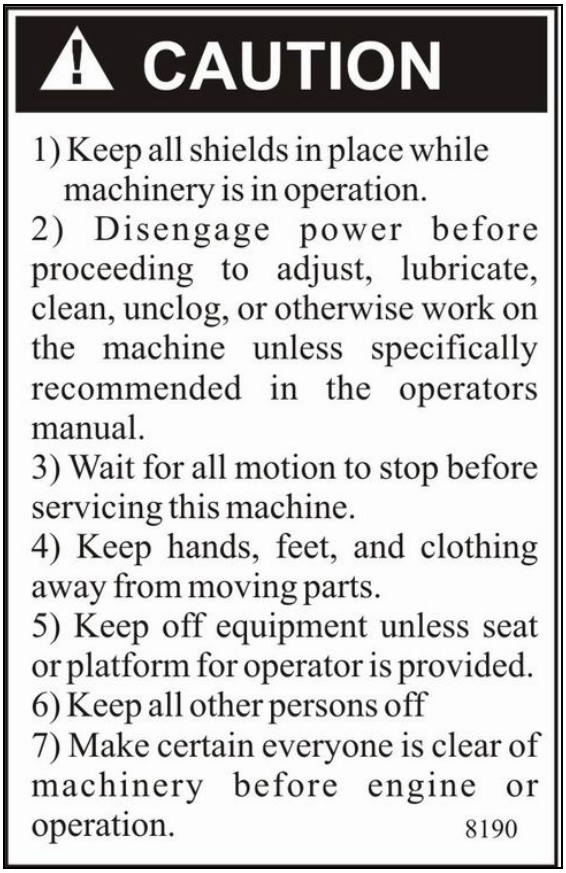
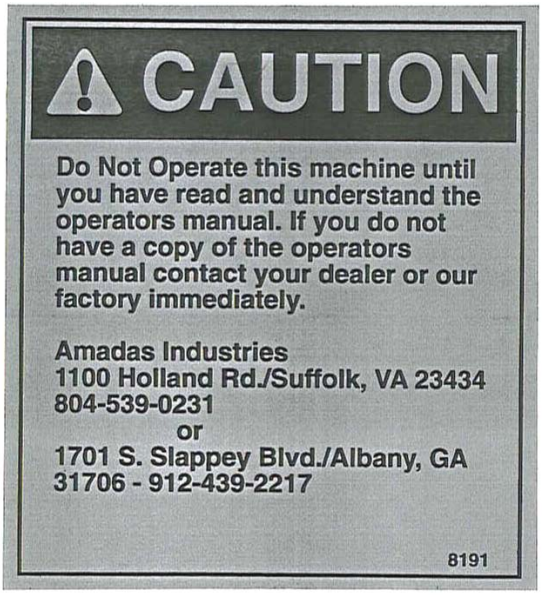


8190



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2. Installation

Before Installing

Before you install the bulk feeder, please read the following:

- Carefully read over the installation instructions and familiarize yourself with the installation procedure.
- Be aware that the bulk feeder is heavy. You will need a crane with a minimum lifting capacity of 9 tons at the distance the crane will be from the center of the bulk feeder.
- Determine where the bulk feeder will be located. It is necessary to have a concrete pad at that location.
- Perform the pre-installation inspection indicated on the checklist below.

Inspection Checklist

√ Remove all packing materials.

√ Carefully inspect the bulk feeder and all associated parts and equipment.

√ If there is any evidence of damage from shipment or handling, report it immediately to your Amadas representative.

Installation Instructions

⚠CAUTION

Do NOT attempt to lift the bulk feeder without a crane. The crane must have a minimum capacity of nine tons at the distance the crane is from the center of the bulk feeder.

1. If you haven't already done so, determine where the bulk feeder is to be located. Pour a concrete pad, if needed. (Refer to the *Appendix* at the end of this manual for guidelines for the concrete pad.)

2. Using a crane with the proper lifting capacity, lift the bulk feeder by the eye holes on the hopper.

3. Bolt the leg extensions to the stand.

4. Position the bulk feeder on the concrete support pad. Using shims, adjust the bulk feeder until it is level.

5. Bolt the bulk feeder to the concrete support pad.

6. Bolt the left and right batter board assemblies on top of the hopper and bolt the hopper in place.

7. Bolt the left and right gusset panels to the frame and the batter board assemblies.

8. Install the four deflector panels and bolt them in place.

⚠CAUTION

The electrical circuit to the bulk feeder should be installed by a qualified, certified electrician familiar with machinery installation.

9. Properly size and install the electrical circuit to the bulk feeder in accordance with the electric motor nameplate, the National Electrical Code, and all relevant local codes.

10. Install a power disconnect switch that can be locked in the open (OFF) position at the bulk feeder in accordance with the National Electrical Code.

IMPORTANT! It is recommended that a lockout power disconnect switch be installed at the bulk feeder for the protection of the maintenance personnel. The power disconnect switch also allows the machine to be shut off in the event of an emergency. Additionally, local and/or OSHA codes may require an emergency stop device be installed on or near the machine that can be used to stop the machine in case of an emergency.

11. Install the electrical junction box cover and bolt into place.

NOTES

3. Operation

Pre-Operation Checklist

Before using the bulk feeder, perform the checklist below to make sure that the machine is ready to be used.

Pre-Operation Checklist

- √ Turn the power disconnect switch OFF. Lock out and tag all circuit breakers.
- √ Check the bulk feeder for any obstructions that could interfere with the operation of the machine.
- √ Check that all equipment associated with the bulk feeder is ready to operate.
- √ Check all shields. ***DO NOT OPERATE UNLESS ALL SHIELDS ARE IN PLACE!***
- √ Make sure that everyone is clear of the bulk feeder.
- √ Turn the power disconnect switch to ON.
- √ The exact starting procedure for your bulk feeder may vary somewhat according to your particular system.

⚠DANGER

Always lock out and tag the bulk feeder power disconnect switch before performing checks. Failure to turn the power off can lead to death or serious personal injury.

How to Use the Bulk Feeder

Follow the steps below to use the bulk feeder:

NOTE! The procedure for starting your machine may vary for your particular system, depending on its setup.

1. Verify the bulk feeder is ready for use by completing the Pre-Operation Checklist on the previous page.

2. Turn on the power to the bulk feeder and all associated equipment. The bulk feeder should start operating.

NOTE! If case of an emergency, turn the power disconnect switch or emergency stop to OFF to stop the bulk feeder.

3. Load the bulk feeder with the feed material.

⚠CAUTION

If the bulk feeder vibrates excessively or makes abnormal noises, stop the machine immediately and investigate. Do NOT operate the bulk feeder if it is not working properly or it needs immediate maintenance.

4. Check the bulk feeder output and adjust, if necessary.

5. Verify that the bulk feeder and all associated equipment are operating properly. Make any adjustments necessary to keep the operation running smoothly.

⚠CAUTION

Shut off power before making any adjustments. If power is required to make an adjustment, use extreme caution to avoid contact with moving parts.

6. Add feed material to the bulk feeder as required.

How to Stop the Bulk Feeder

1. Turn off the power to the bulk feeder and all associated equipment.

NOTE! The procedure for shutting down your machine may vary for your particular system, depending on its setup.

2. Verify that the bulk feeder stops.

3. If the machinery is to be left unattended for any length of time, lock out and tag the power disconnect switch and all circuit breakers.

⚠CAUTION

Do NOT leave the bulk feeder unattended without locking out and tagging the power disconnect switch and all circuit breakers. Failure to disconnect the power could result in serious personal injury.

NOTES

4. Maintenance

Regular Maintenance

We strongly recommend that you perform regular maintenance on your bulk feeder to help ensure efficient and safe operation. This section describes the maintenance that needs to be performed according to the Maintenance Chart on the following page.

A Maintenance Log is included in the **Appendix**. Please copy this log and use it to maintain records of maintenance performed on the bulk feeder.

Powering Down the Machine

IMPORTANT! Before any kind of maintenance is performed on the bulk feeder, it must be powered down. Follow the steps below to make sure the bulk feeder is shut down completely.

1. Turn off power to the bulk feeder and all associated equipment.

2. Lock out and tag the bulk feeder power disconnect switch.

3. Verify that power is off by performing the following checks.

    a. Turn on power to the bulk feeder, leaving the power disconnect switch locked out. Verify that the bulk feeder does not operate.

    b. Turn off power to the bulk feeder and lock out and tag all circuit breakers.

    c. Using a volt meter, verify that incoming power is disconnected from the bulk feeder.

⚠DANGER

Always lock out and tag the bulk feeder power disconnect switch before performing any maintenance. Failure to turn the power off can lead to death or serious personal injury.

After Servicing the Machine

Once maintenance has been completed and all safety checks are performed, restart the bulk feeder for operation as follows:

1. Check all shields. ***DO NOT OPERATE UNLESS ALL SHIELDS ARE IN PLACE!***

2. Make sure that everyone is clear of the bulk feeder.

3. Turn the power disconnect switch ON.

NOTE! The procedure for turning your machine back on may vary for your specialized system setup.

4. Turn on the power to the bulk feeder and all associated equipment. The bulk feeder should start operating.

NOTE! In case of an emergency, turn the power disconnect switch off to stop the bulk feeder.

5. Load the bulk feeder with the feed material.

⚠CAUTION

If the bulk feeder vibrates excessively or makes abnormal noises, stop the machine immediately and investigate. Do NOT operate the bulk feeder if it is not working properly or needs immediate maintenance.

Maintenance Schedule

Item	Action	Interval			
		Weekly	Monthly	Every 6 Months	Yearly
Bearings	Lubricate			X	
Chains	Inspect		X		
Drive belt	Inspect		X		
Gearbox	Change oil				X
Motors	Clean	X			
Wooden boards	Inspect				X

⚠DANGER

Always lock out and tag the bulk feeder power disconnect switch before performing any maintenance. Failure to turn the power off can lead to death or serious personal injury.

Bearings

Bearings should be greased every six months.

1. Power down the machine according to the instructions on page 16.

2. Using a hand-operated grease gun, add a single pump of NLGI no. 2 multi-purpose ball bearing grease to each bearing.

NOTE! Keep grease fittings clean by wiping clean with a rag prior to greasing the bearings. Cleaning the fittings helps prevent dirt from entering and damaging the bearings.

Chains

Chains should be inspected every month. Regular inspection can increase the life of each chain and prevent unnecessary stops in machine operation.

Drive Chains

1. Power down the machine according to the instructions on page 16.

2. Unbolt and remove the safety shield covering the drive chains.

3. Clean the chains with a rag. Regular cleaning will help prevent grime build up and help the chains last longer.

4. Inspect the chain idler wheel and replace if damaged or excessively worn.

5. Inspect the sprockets for damage or excessive wear. If worn or damaged, replace the sprockets and drive chains as a set.

NOTE! We recommend that you always replace sprockets and chains as a set, since new components used with old components will wear out faster than normal.

6. Adjust the chain tension by moving the chain idler wheel. The chain should be tight enough so that it can be displaced by hand approximately 1” midway between the sprockets.

7. Replace the safety shield and bolt in place.

⚠CAUTION

Do NOT operate the bulk feeder without the safety shields in place. Doing so can cause serious personal injury.

Material Feed Chains

1. Power down the machine according to the instructions on page 16.

2. Inspect the feed chains for damaged or missing flights.

3. If the flights are damaged or missing and chain is not damaged, weld new flights to the chain. If the chain is damaged, replace the entire chain.

NOTE! Do NOT weld the flights to the link pins. The pins must be free to rotate as the chain moves.

4. Inspect the sprockets for damage, wear, or missing teeth. If damaged or excessively worn, replace the sprockets and chains as a set.

NOTE! We recommend that you always replace sprockets and chains as a set, since new components used with old components will wear out faster than normal.

Drive Belt

Inspect the drive belt every month. Regular inspection can prevent unnecessary stops in machine operation.

Prior to inspecting the belt, power down the machine according to the instructions on page 16. If the belt is cracked or torn, replace it as follows:

1. Support the gearbox and unscrew the turnbuckle.

2. Rotate the gearbox to remove the belt from the pulleys.

3. Install a new belt on the pulleys.

4. Rotate the gearbox and reconnect the turnbuckle.

5. Screw the turnbuckle until the belt is in the groove of both pulleys.

Gearboxes

Drain and replace the gearbox oil after the first 250 hours (approximately one month) of operation. Drain and replace the oil gearbox additionally at every 2500 hours (approximately one year) of operation.

Power down the machine according to the instructions on page 16 before you service the bulk feeder. The bulk feeder has two gearboxes: a square gearbox for the leveler motor and a round gearbox for the main drive motor. Refill each gearbox to the level of the plug halfway up from the bottom of the gearbox.

For the square leveler motor gearbox, use Mobil SCH 634 Synthetic oil or a similar substitute. For the main drive gearbox, use the oil recommended in the chart below:

Recommended Lubricants for Enclosed Helical Gear Drives

Ambient (Room) Temp. Range	Boston Gear Lubricant	I.S.O Visc Grade #	Viscosity ccSt @ 40 degrees C	AGMA Lub No.
-20 to 25 F	R&O Gear Oil-68 HD Gear Oil-68	68	61.2 to 74.8	2 or 2 EP
15 to 60 F	R&O Gear Oil-100 HD Gear Oil-100	100	90 to 110	3 or 3 EP
0 to 125 F	R&O Gear Oil-150 HD Gear Oil-150	150	135 to 165	4 o4 EP

Motors

Clean the motor every week, or as often as necessary to keep the motor clean. A clean motor will run cooler and last longer.

1. Power down the machine according to the instructions on page 16.

2. Using compressed air, blow dust and dirt off of the motor.

3. Wipe any grease or oil off of the motor with a rag.

4. Make sure all drain holes and ventilation openings are clear of debris.

General Maintenance

Inspect the machine every year. A general inspection each year will increase the service life of the bulk feeder.

1. Power down the machine according to the instructions on page 16.

2. Check the wooden boards and replace if damaged or missing.

3. Check the frame for rust or corrosion. Repaint if necessary.

4. Check the safety shields and decals. Replace if missing or damaged.

Rate Adjustment

The bulk feeder is equipped with an automatic variable speed drive pulley. The variable speed drive pulley allows the output rate of the bulk feeder to be adjusted. Adjust as follows:

⚠CAUTION

Keep clear of the bulk feeder discharge and all moving parts. If safe access to the turnbuckle is not possible because of the equipment associated with the bulk feeder, turn power off to all equipment prior to adjusting the output rate.

To increase the output rate:

Unscrew the turnbuckle. If the belt runs out of the pulley groove, screw the turnbuckle back in until the belt is running in the pulley groove again.

To decrease the output rate:

Screw the turnbuckle in further. If the belt runs on the motor shaft, unscrew the turnbuckle until the belt is no longer touching the motor shaft.

Troubleshooting

Problem	Cause	Remedy	See Page
Bulk feeder does not operate	Power is off.	Make sure power has been fully restored to machine.	16
	Drive belt is broken.	Replace the drive belt.	19
	Drive chains broken or derailed.	Repair or replace chains as required.	18
	Material is blocking machine.	Power down machine and remove blockage.	16
Rate of output is not consistent	Missing flights on the feed chains.	Replace flights as needed.	18
	Material is blocking machine.	Power down machine and remove blockage.	16
	Bulk feeder is low in material.	Add more material.	
Excessive noise or vibration during operation	Gearbox is low on oil.	Check and add more oil.	20
	Bearings worn out or need lubrication.	Lubricate bearings or replace if worn.	18

NOTES

Appendix

Concrete Support Pad

The concrete support pad provides a safe, stable platform for the bulk feeder. The pad may be part of a larger structure, such as a plant floor, but it must meet the following requirements:

- The concrete support pad must be flat and level within 1 degree of horizontal (1" rise for 5' run).
- The concrete support pad must be made from at least 3000 PSI concrete.
- The concrete support pad must be at least the following dimensions.
    - 15 feet long
    - 36 feet wide
    - 12 inches thick.
- These specifications are only general guidelines. Please refer to your local building codes for the specifications in your area.

Maintenance Log

A Maintenance Log for the bulk feeder should be filled out and kept up to date. By recording all maintenance performed on the machine, it can be verified that the routine maintenance has been performed as scheduled. An accurate maintenance log will also help identify any abnormal or untimely repairs made to the machine.

A log has been included in this Appendix. We recommend that you photocopy this log and use it to record maintenance.

BULK FEEDER 858 MAINTENANCE LOG

Interval	Item	Action	Date Service Performed													Notes
Weekly	Electric motor	Clean														
Monthly	Drive Belt	Inspect														
	Chains	Inspect														
Every 6 months	Bearings	Lubricate														
Yearly	Wooden Boards	Inspect														
	Gearbox	Change Oil														

WARRANTY
For AMADAS INDUSTRIES Industrial Machinery

A. General Provisions

AMADAS INDUSTRIES ("Company") warrants that each machine manufactured by it and sold under its trademark shall be free from defects in material and workmanship. The company's sole obligation under this warranty shall be limited to making good, F.O.B. Company factory, any part of its product which under normal and proper use and maintenance proves defective in material and workmanship within six months after delivery to the Buyer provided that notice of such defect and satisfactory proof thereof is promptly given by the Buyer to the Company, with transportation charges prepaid, and Company's examination proves such part to have been defective.

This warranty does not apply in respect to damage to any product or accessory or attachment thereof caused by overloading or other misuse, neglect or accident nor does this warranty apply to any product, or accessory or attachment thereof which shall have been repaired or altered by other than the Company which, in the sole judgement of the Company affects the performance, stability or purpose for which it was manufactured.

With respect to tires, engines, or other trade accessories, the Company makes no warranty whatsoever and the buyer shall rely solely upon the existing warranties, if any, of the respective manufacturers thereof.

B. Unapproved Service or Modification

All obligations of AMADAS INDUSTRIES under this warranty are terminated if the machinery is modified or altered in ways not approved by AMADAS INDUSTRIES

C. Owner's Responsibilities

a. Read the operator's manual before operating the machinery.
b. Perform all necessary maintenance as described in the operators's manual.
c. Contact AMADAS INDUSTRIES promptly on any warranty claim.
d. Sign the AMADAS INDUSTRIES machine delivery form and return promptly as thisvalidates the warranty.

D. Disclaimer

There are no warranties that extend beyond the description here. ***ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED AS ARE ALL OTHER REPRESENTATIONS TO THE PURCHASER.*** AMADAS INDUSTRIES specifically excludes any liability on behalf of the Company for any incidental or consequential damages including, but not limited to loss of profits, rental of substitute equipment, or other commercial losses. AMADAS INDUSTRIES shall not be responsible for expenses or inconvenience that you might incur or experience with respect to any AMADAS INDUSTRIES Industrial Machinery, nor shall AMADAS INDUSTRIES be liable for defects, damage, or failure caused by improper storage, unreasonable use, or abuse, or accident, including the failure to provide reasonable and specified maintenance. This warranty applies only to the original purchaser of the machinery. Because some states do not allow the exclusion of limitation of incidental or consequential damages, the above limitation may not apply to you. This warranty gives you specific legal rights. You may also have other rights, which vary from state to state. Where there is a conflict between a provision of this warranty and the provision of any state, the state legislation prevails.

AMADAS