

425 Mixer

2nd Edition

AMADAS

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*Mixers 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 industry and farming. AMADAS equipment is currently at work throughout the United States and in many other countries. This equipment includes machinery such as Tree Bark and Processing and Packaging Machinery, the Magnum Fource Peanut Combine, Reel Rain Traveler Irrigation System, and the 425 Mixer.

425 Mixers

Congratulations on your purchase of an AMADAS 425 Mixer. AMADAS Mixers are designed for long life as well as efficiency. We are confident you will receive many years of dependable service from your mixer.

Standard Features

Each of our 425 mixers includes the following standard features:

- Bearing supported mixer shaft.
- Three 1 ¼" mixing beams.

Optional Features

The following features are optional for the 425 mixer:

- Bale trough kit.
- 1 HP single-phase motor.

Specifications

Electrical:
1 HP
3.6 AMPS
1735 RPM
230/460 volts
60 HZ
3 phase

Height:
36 inches

Length:
28 inches

Width:
44 inches

NOTES

1 Safety

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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

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.

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 are near these areas. DANGER decals are located at, or as near as possible to, these areas.

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.

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.

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.

Example:

IMPORTANT! Adjust both sides equally so that conveyor tracking is straight.

Safety Guidelines



Many accidents can be prevented by your knowing about safety. Prevent hazards by reading the safety warnings in this manual. 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.

This section provides you with a list of practices you need to follow to ensure your safety and the safety of others. It is essential that you read this section and follow the warnings.

Safety Signs

Carefully read all safety messages in this manual and safety signs on your machine. Keep safety signs on your machine. Keep safety signs in good condition; replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs.

Learn Your Machine

Learn how to properly operate your mixer and how to use the controls correctly. Do NOT let anyone operate the machine without instruction. Anyone who uses this machine should be made aware of all safety information contained in this manual.

Machine Function

It is crucial that you maintain your mixer in proper working condition. Do NOT perform unauthorized modifications to the mixer as these could impair the function and/or safety of the machine and affect machine life.

<p>Operating the Mixer When operating the mixer:</p> <ul style="list-style-type: none"> • Keep hands, feet, and clothing away from moving parts. • Keep the infeed mouth shielded to avoid injury to any person or damage to the machine. • Do NOT operate machine unless all safety shields are in place • Do NOT operate this mixer with damaged or missing parts. • Properly ground all electrical equipment. • Do NOT allow anyone to stand on or reach inside the machine during operation. <p>Servicing the Mixer When servicing the mixer:</p> <ul style="list-style-type: none"> • Disconnect and lock out power before servicing. • Keep all personnel away from all parts of the mixer while maintenance personnel are servicing the machine. 	<p>Lockout/Tag System To lock out and tag the mixer properly:</p> <ol style="list-style-type: none"> 1. Turn off power to the mixer and all associated equipment. 2. Lock out and tag the power disconnect switch. 3. Verify that power is off by performing the following checks. <ol style="list-style-type: none"> a. Turn on power to the mixer, leaving the power disconnect switch locked out. Verify that the mixer does not operate. b. Turn off power to the mixer and lock out and tag all circuit breakers. c. Using a volt meter, verify that incoming power is disconnected from the mixer. <div data-bbox="831 982 1406 1276" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p> DANGER</p> <p><i>Always lock out and tag the mixer power disconnect switch before performing any kind of maintenance. Failure to turn the power off can lead to death or serious personal injury.</i></p> </div>
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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 chain conveyor:

8188 CAUTION Do Not Operate Unless all Safety Shields & Guards in place.

8190 CAUTION 1) Keep all shields in place while Machinery is in Operation. 2) Disengage Power before proceeding to adjust, lubricate, clean, unclog or otherwise work on machine unless specially recommended in the Operator's Manual. 3) Wait for all motion to stop before servicing this machine. 4) Keep Hands, Feet, and Clothing away from moving parts. 5) Keep off Equipment unless seat or platform for operation is provided. 6) Keep all others off. 7) Make certain everyone is clear of machine before starting.

8191 CAUTION Do Not Operate this machine until you have read and understand the operators manual. If you do not have a copy of the operators manual contact your dealer or our factory Immediately.

8343 AMADAS American Made

NOTE! The basic safety decals used by AMADAS are listed. Your particular machine may include additional safety decals.

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Before Installing

Before you install the mixer, please read the following:

- Carefully read over the installation instructions and familiarize yourself with the installation procedure.
- Determine where the mixer will be located. Design and fabricate any necessary supports for the conveyor in accordance with OSHA standards and relevant local standards.
- Perform the pre-installation inspection indicated on the checklist.

Inspection Checklist

- √ Remove all packing materials.
- √ Carefully inspect the conveyor and all associated parts and equipment.
- √ If there is any evidence of damage from shipment or handling, report it immediately to your AMADAS representative.

Infeed Chute

Because the mixer is used with many different sized infeed conveyors that would require many different infeed chutes to be supplied with machine, the mixer is supplied without an infeed chute over the infeed mouth. It is recommended that a proper chute, built to the size requirement of your conveyor, be fabricated and installed prior to use. The infeed chute should guard the mouth of the mixer in accordance with all applicable standards.

If you are unable to fabricate an infeed chute due to lack of equipment or materials, please contact your AMADAS representative.

CAUTION

Do NOT operate the mixer until an infeed chute covering the mixer infeed mouth has been installed.

Installation

1. Install any necessary supports for the mixer in accordance with all relevant OSHA standards.
2. If equipped, bolt the bale trough kit in place.
3. Bolt or weld the mixer to the necessary supports.
4. Position the mixer in the desired location. If used with an infeed conveyor, position the mixer so that it will rotate in the opposite direction that the infeed conveyor rotates.

NOTE! There are rotation signs on both sides of the mixer to help in placement. By rotating the mixer in the opposite direction the infeed conveyor rotates, a more complete mixing results.

5. Adjust the mixer until it is level and bolt in place.
6. Properly size and install the electrical circuit(s) to the mixer in accordance with the electric motor nameplate, the National Electrical Code, and all relevant local codes.

CAUTION

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

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

IMPORTANT! It is highly recommended that a lockout power disconnect switch be installed at the mixer for the protection of the maintenance personnel. Also, this will allow the machine to be shut off in the event of an emergency.

NOTE! If your mixer is equipped with a bale trough kit, skip Steps 8-11.

8. Turn on the power to the mixer and verify that the mixer is rotating in the proper direction. If the mixer is rotating in the wrong direction, turn off power to the mixer and rewire the circuitry.
9. Turn off power to the mixer, lockout, and tag the disconnect switch.

DANGER

ALWAYS lock out and tag the power disconnect switch prior to working around the machine. Failure to turn the power off could result in death or personal injury.

10. Determine the size requirements for the infeed chute and fabricate the chute out of good quality steel. The infeed chute should meet all applicable standards.
11. Bolt the infeed chute in place on top of the mixer.

Before Operating

Before starting the mixer, verify that it is ready for operation by performing the checks on the inspection checklist.



CAUTION

Do NOT operate the mixer without an infeed chute covering the infeed mouth. Personal injury or damage to the machine could result.

Inspection Checklist

- √ Check the mixer for obstructions that could interfere with the operation of the machine.
- √ Check all shields. Do NOT operate without all shields in place.
- √ Check that the mixer infeed chute is in place.
- √ Verify that all associated equipment used with the mixer is ready to operate.
- √ Verify that everyone is clear of the mixer.

Operation

CAUTION

In case of an emergency, IMMEDIATELY turn the power disconnect switch OFF to stop the mixer.

1. Turn the power ON to the mixer and all associated equipment. The mixer should start operating.
2. Verify that the mixer and all associated equipment are operating properly.
3. Make any necessary adjustments to keep the operation running smoothly.

CAUTION

Shut power OFF before making any adjustments. If power is required to make an adjustment be careful to avoid contact with moving parts.

If equipped with a bale trough kit:

4. Place a bale on the trough.
5. Break up the bale by hand and push the broken parts into the hood.
6. Continue breaking up bales and feeding them to the mixer.

Stopping the Mixer

1. Turn power OFF to the mixer and all associated equipment.
2. Verify that the mixer 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 mixer 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.

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Please Read

Regular maintenance is strongly recommended for safe and efficient operation of the mixer. The following maintenance should be performed as noted in the Maintenance Chart.

A Maintenance Log is provided in the Appendix. When you perform maintenance on the mixer, record the date on the Maintenance Log. Keeping a record makes it easy to verify that maintenance is being performed at proper intervals.

Power Down the Machine

To protect the safety of the maintenance personnel, the machine should be powered down prior to anyone performing maintenance. To power down the mixer:

1. Turn OFF power to the mixer and all associated equipment.
2. Lock out and tag the mixer power disconnect switch.
3. Verify that power is turned off by turning the mixer on, leaving the power disconnect switch OFF.
4. After you verified that the mixer does not operate, turn OFF power to the mixer.
5. Lock out and tag all circuit breakers.

DANGER

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

Components

Electric Motor

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

1. Turn OFF power to the mixer, lock out, and tag the power disconnect switch; verify power is OFF.
2. Using compressed air, blow dirt and dust off the electric motor.
3. Using a rag, wipe any grease or oil off the motor.
4. Check that all ventilation openings and drain holes are clear of debris.

Bearings

The bearings should be greased every six months.

1. Power down machine, locking out and tagging power and circuit breaker before beginning maintenance.
2. Using a hand-operated grease gun, add a single pump of NLGI no. 2 multi-purpose ball bearing grease to each bearing.

NOTE! If the grease fitting is dirty, wipe clean with a rag before greasing the bearings. Cleaning the grease fitting will help prevent dirt from entering and damaging the bearings.

Gearbox

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

1. Power down the machine, locking out and tagging power and circuit breaker before beginning maintenance.
2. Unbolt the motor and gearbox from the mixer frame to drain the oil.
3. Turn the gearbox so that the fill plug is on top.
4. Use Mobil SCH 634 Synthetic Oil or a similar substitute and refill the gearbox to the level of the plug located halfway up from the bottom of gearbox.

NOTE! If dirty, clean the gearbox and the area around it before changing the oil. Cleaning the gearbox will help prevent dirt from entering and damaging the gears.

Other Maintenance

Inspect the mixer yearly. Regular inspection and repair increase the service life of the mixer.

1. Turn OFF the power switch to mixer, lock out and tag the power disconnect switch. Verify that the power is OFF.



DANGER

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

2. Check the frame for rust or corrosion; repaint if necessary.

3. Inspect the infeed chute for damage or missing bolts. Replace or repair as required.



CAUTION

Do NOT operate the mixer without the infeed chute in place. Operating without the infeed chute in place can cause serious personal injury.

4. Inspect the mixing beams for damage; replace if necessary.

Troubleshooting

Problem	Cause	Remedy
Mixer does not operate	Power is off.	Turn power on.
	Material jamming mixing beams.	Turn power off, inspect and remove material.
Inconsistent mixing of material.	Mixing beams missing.	Replace.
	Inconsistent infeed of material.	Adjust.
Excessive noise or vibration.	Gearbox low on oil.	Check and fill.
	Mixer not bolted down securely.	Tighten mounting bolts.
	Bearings worn out or needing lubricating.	Grease bearings; replace if worn.

Maintenance Log

Print copies of the Maintenance Log as needed. Keep it fill out and up-to-date to help verify that maintenance has been performed as scheduled. This will also help to identify any abnormal repairs the machine requires.

A printable copy of the Maintenance Log is on the next page.

425 Mixer Maintenance Log

Date:

Interval	Item	Action	Date Service Performed	Notes
Every Week	Electric Motor	Clean		
Every 6 Months	Bearings	Grease		
Every Year	Gearbox	Change Oil		
	Mixing Beams	Inspect		
	Paint	Inspect		