

ETERRA



HURRICANE CONCRETE MIXERS 100 - 250 - 450 - 600 Operators Manual

www.etterra-usa.com

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INTRODUCTION

Eterra thanks you for purchasing a new Eterra product. This operating manual has been prepared to enable you to operate your equipment in a safe manner and provide proper care & maintenance.

NOTE:

This operating manual should be used in conjunction with the parent machine's operating instructions.

Instruction books should be regarded as part of the machine. They should always be kept safe with the machine for easy and quick reference.

New or extra copies can be obtained from your Eterra dealer or directly from Eterra.

Eterra continually strives to improve and increase their range of products and therefore reserves the right to alter their specifications at any time without notice or obligation. The company accepts no responsibility for discrepancies which may occur between specifications of their machines and descriptions thereof contained in their publications.

Purpose

This Eterra product is intended to be used with skid steer loaders or mini skid steer loaders or excavators in the appropriate weight class. It is intended to be used by operators of all experience levels. To accomplish this feat, a very simple design has been used which is unlike anything else found in the industry.

You must read and understand the theory of operation so that you can operate this attachment safely and so you can maintain the safety of the operators and bystanders.

This product was designed to be sold online and ready to operate out of the box with a minimal amount of assembly.

This Document:

The sole purpose of this manual is to help you train yourself to be a responsible operator and troubleshooter of the operation of the attachment so that you can identify safety issues before anything serious can happen. Failure to follow the directives noted in this document may lead to serious injury or death.

SAFETY NOTES

Protect Yourself

Make sure you wear protective clothing and personal safety items. ***DO NOT*** wear items of loose clothing, jewellery or other items and tie up any long hair which could entangle in the controls or other parts of the machine.

You May Need

- A Hard Hat
- Safety Goggles
- Hearing Protection
- Foul Weather Clothing
- Reflective Clothing
- Protective Gloves
- Safety Boots

Know Your Equipment

Get to know how to operate all controls on the machine and the attachments
IF THERE IS SOMETHING IN THE MANUAL WHICH YOU DO NOT UNDERSTAND, CONTACT THE MACHINE AGENT OR MANUFACTURER AND ASK THEM TO EXPLAIN IT TO YOU.

Danger, Warning And Caution

This symbol below has 3 important meanings when used with the following captions.



DANGER: An IMMEDIATELY HAZARDOUS situation that WILL result in DEATH or VERY SERIOUS INJURY

WARNING: A POTENTIALLY HAZARDOUS situation that COULD result in DEATH or VERY SERIOUS INJURY

CAUTION: A POTENTIALLY HAZARDOUS situation that MAY result in MINOR INJURY

Protective And Safety Devices

Keep all protective devices in place and securely fastened. Make sure all guards, shields and safety signs are properly installed and are in good condition.

Check The Equipment

Before you operate the equipment, take time to check your machine and ensure that all systems are in good operational order.

- Never operate the equipment with worn, damaged or missing parts. Use only genuine replacement parts.
- Always ensure that the parent machine is secure and stable with its engine switched off and hydraulic lines disconnected before carrying out any maintenance work.
- Check for loose, broken, missing or damaged parts. Ensure all items are in good repair and make sure all safety devices are in place.
- Perform all maintenance procedures outlined for the equipment.
- Always protect hands. Select appropriate gloves when handling the equipment during fitting, removing or adjusting
- Always protect feet with safety boots.

Safety Precautions

WARNING: Hydraulic fluid under pressure can penetrate the skin or eyes and cause serious PERSONAL INJURY, BLINDNESS OR DEATH.

Fluid leaks under pressure may not be visible. Use a piece of wood or thick cardboard to find leaks. DO NOT USE YOUR BARE HANDS.



Wear safety goggles for eye protection.

If any fluid is injected into the skin, it MUST be surgically removed.

SEE A DOCTOR IMMEDIATELY

Make sure all hydraulic lines are correctly installed

Before applying pressure to the hydraulic system be sure all connections are tight and that lines, pipes and hoses are not damaged. Before disconnecting hydraulic lines, be sure to relieve all pressure.

ETERRA recommends you receive dealer or factory instruction before operating the unit.

NEVER operate or assemble the equipment without *fully* understanding the operating instructions of both the equipment unit and the parent machine.

NEVER operate the equipment unless you are in good physical condition and mental health.

NEVER operate the equipment under the influence of any substance (including drugs & alcohol) which might impair vision.

NEVER proceed with work before completing a site risk assessment immediately before commencing work. Nominating the safe work exclusion zone radius for persons and animals as part of identifying risks and implementing controls.

NEVER allow minors to operate the equipment.

ALWAYS survey the work area before commencing operations. Check for potential hazards. E.G. Electricity or communication cables etc.

ALWAYS ensure that the parent machine is secure and stable with it's engine switched off before carrying out any maintenance work.

ALWAYS ensure the hydraulic oil supply to the attachment is disconnected by uncoupling the hydraulic hose connectors before fitting, removing or adjusting the equipment

ALWAYS wear head protection and eye protection when working on the unit.

ALWAYS protect hands. Select appropriate attire when handling the equipment during fitting, removing or adjusting the unit.

ALWAYS protect feet. Wear approved safety boots.

ALWAYS follow the parent machine instructions regarding noise protection.

STAY ALERT. Should something break, come loose or fail to operate on your equipment, STOP WORK, lower equipment to the ground, shut off the engine and lock out hydraulic supply, inspect the machine and have repairs or adjustments made before resuming operation.

You, as the owner of an Eterra Cement Mixer are responsible for its safe operation and maintenance. You need to make sure anyone working with, maintaining or working around the Cement Mixer is familiar with the operation and maintenance of the unit. Be alert, know all safety information in this manual and adhere to safety practices at all times.

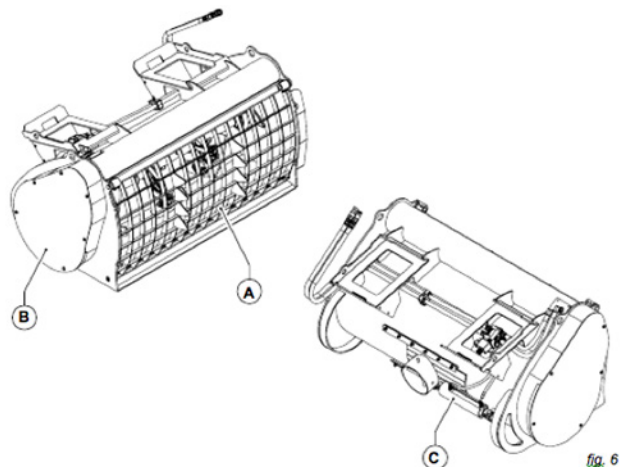
Remember a safe operator is the key to avoiding most accidents. Most accidents can be avoided by – THINKING SAFETY AND WORKING SAFELY.

- Understand all safety symbols before operating or maintaining the MixNGo
- After maintaining or adjusting, make sure all tools and foreign objects are removed
- Stop Skid Steer, set park brake and remove the key from ignition. Make sure all moving parts have been stopped before dismounting your Skid Steer for any reason.
- Make sure all guards and shields are properly installed and secure.
- NEVER leave the Cement Mixer lifted off the ground and stand under it for any reason.
- Never wear ill-fitting, baggy or frayed clothing when working around or on any of the drive system components.
- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
- Stop Skid Steer engine, place hydraulic controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging
- NEVER EVER Climb out of your machine with the boom raised. Serious injury or death can occur.
- Take care when working on steep ground, particularly when turning, and especially with mounted Cement Mixers.
- Review all safety instructions annually.
- Review the Operator's Manual and all related Maintenance. Operatina and SAFETY

The following activities are strictly forbidden:

- Mixing of Asphalt.
- Mixing of material with a diameter greater than 1.25".
- Any kind of grinding activity whatsoever.
- Digging, towing, pulling or tearing using the bucket.
- **Never put hands inside the bucket or slide tools into bucket while operational.**
- Removal of protection grill while operational.

The mixer comes complete with a front grill (Fig A), bolted to the frame, which prevents any contact with the mixing shaft. The drive system, guard (Fig B), bolted to the frame, covers the chain and gears. The handle operating the opening of the discharge hole is protected by the guard (Fig C).



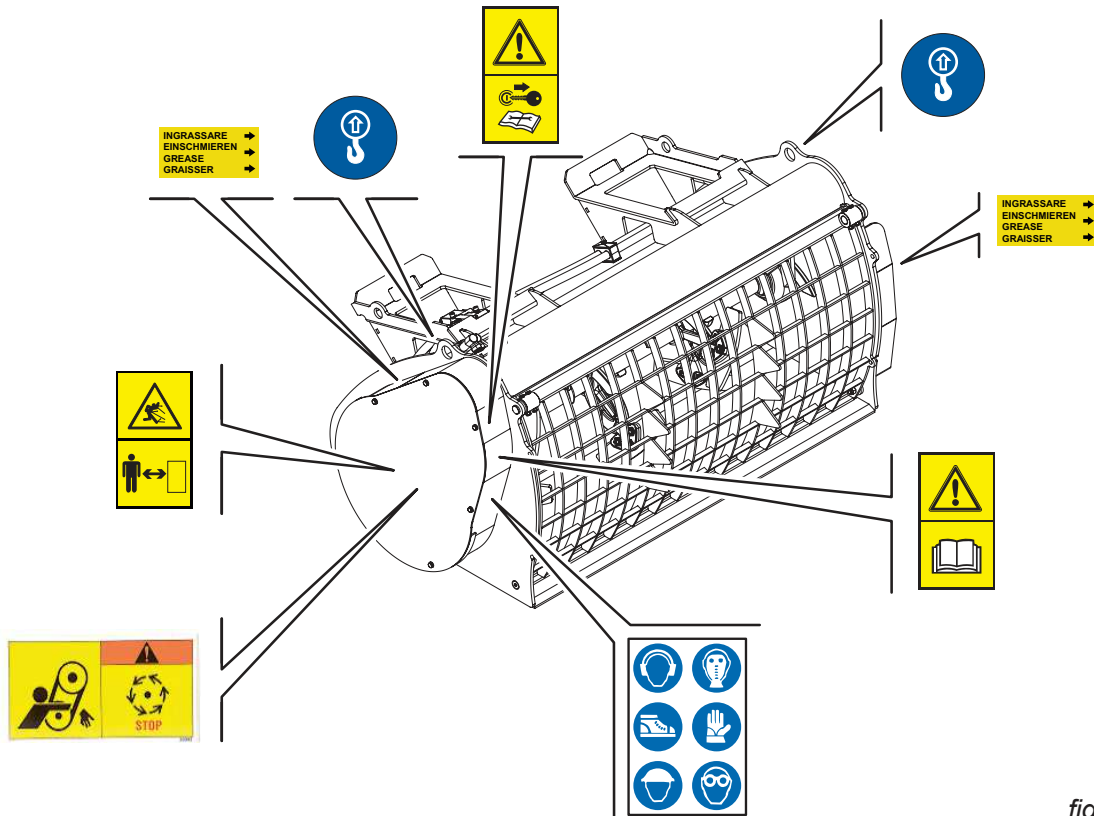






















fig. 10

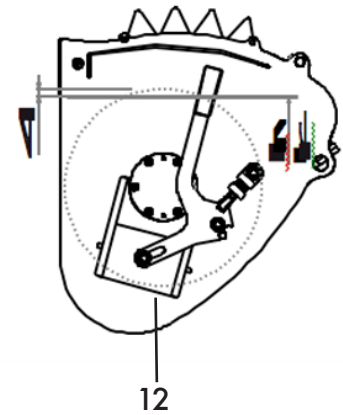
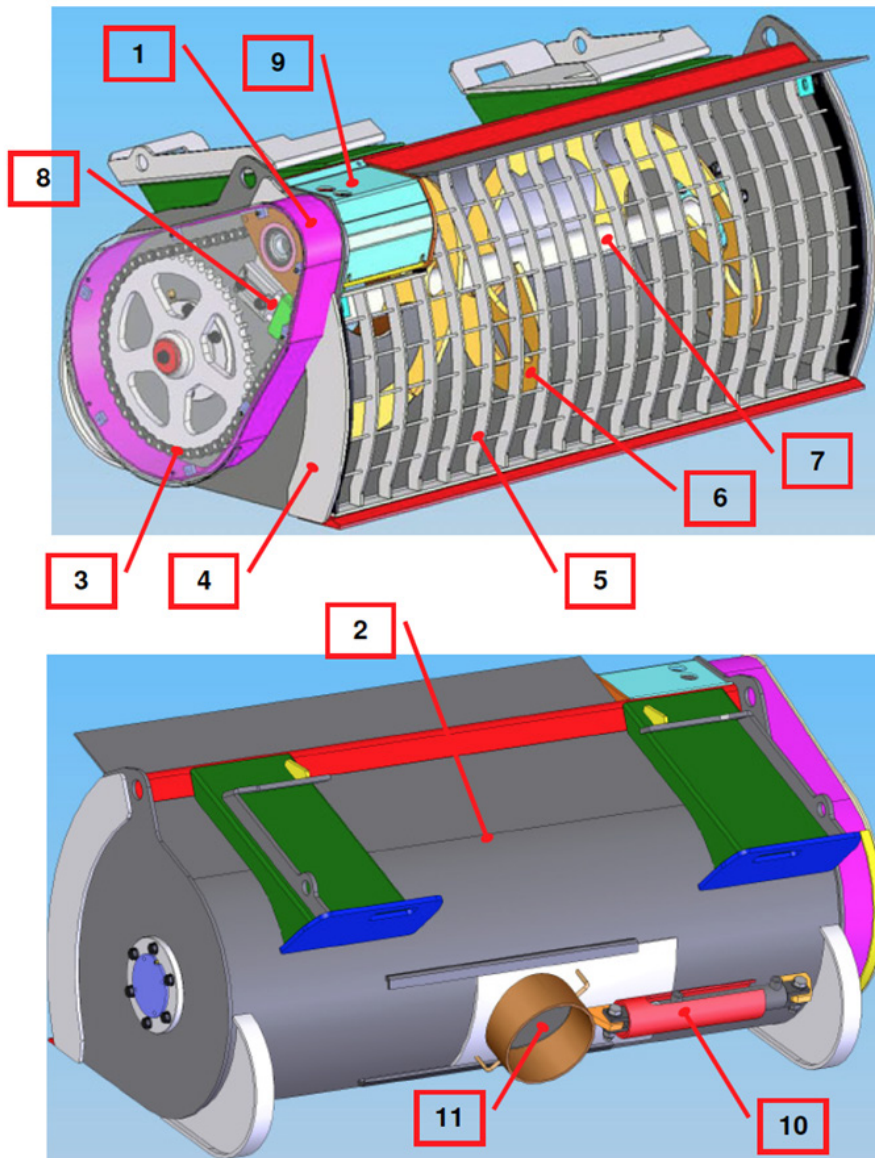
The decals described below are applied to the equipment. Before using the equipment, verify that all safety decals are intact. Read the indications below and understand their meaning.

 	<p>Read User Manual: Before using or servicing the equipment, read and understand the User Manual supplied with it.</p>		<p>Use Lifting Points: Use only lifting points specified by this decal.</p>
 	<p>Do not pass or stand near: During operation, it is forbidden to pass or stand within the working range of the machine. Keep at least 10 yards away from the equipment minimum.</p>		<p>Wear Safety Gloves: Wear approved protective gloves when operating and servicing equipment.</p>
  	<p>Remove Ignition Key: Before servicing the equipment, stop the machine and remove the key from the ignition switch.</p>		<p>Wear helmet: Wear an approved helmet in good condition when operating and servicing equipment.</p>
 	<p>Stop Equipment Rotation: Before working on the bucket, stop the machine and ensure the rotation of the mixing shaft has stopped</p>		<p>Wear Safety Shoes: Wear approved protective safety shoes when operating and servicing equipment.</p>
 			<p>Hearing Protection: Wear approved hearing protection when operating equipment.</p>
			<p>Eye Protection: Wear approved hearing protection when operating and servicing equipment.</p>
			<p>Respiratory Equipment: It may be necessary to wear protective respiratory equipment when operating.</p>
		  INGRASSARE → EINSCHMIEREN → GREASE → GRAISSER →	<p>Greasing Point: Grease these at indicated intervals.</p>

COMPONENT IDENTIFICATION

MixNGo 250-450-600

1. Chain Case
2. Skid Steer Mounting Plate
3. Drive Chain
4. Bucket Body
5. Protection Grill
6. Mixing Auger
7. Auger Shaft
8. Chain Tensioner
9. Motor
10. Hydraulic Chute Actuator
11. Bottom Hydraulic Chute
12. Side Chute



MOUNTING

SAFETY FIRST



ALWAYS Always check the weight of the attachment and ensure you have the correct equipment for handling it.



ALWAYS check parent machine:

- Is in correct working order
- Is parked correctly on flat ground
- Has its hand brake ON, its hydraulic circuit locked out and its engine switched OFF.

Attaching to Skid Steer

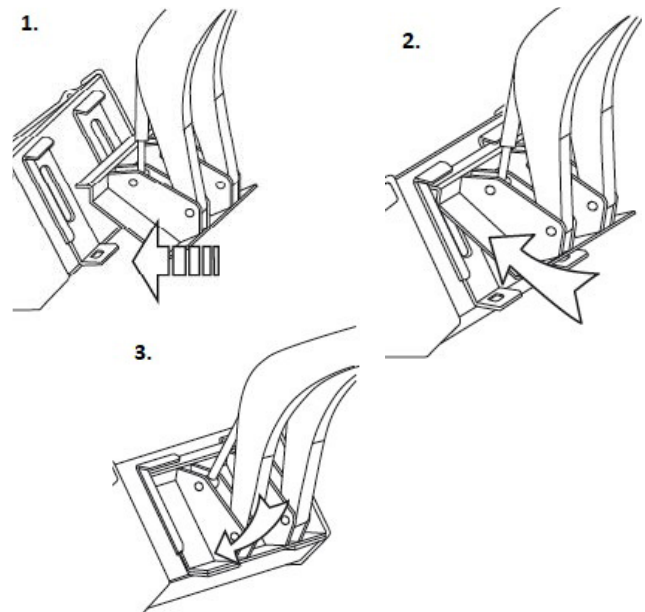
Check that the skid steer mounting plate fits properly and allows the locking pins to be engaged. You **MUST** engage your locking pins before operation to prevent the mixer from coming off. If your locking pins do not stay locked down they may need to be adjusted or repaired before continuing.

1. Slowly position your skid steer loader towards the rear of the mounting plate.

2. Slowly insert the top edge of your quick attach into the top rail of the backhoe from underneath.

3. As the top of the quick attach aligns into the mounting plate, slowly roll your quick attach back towards the machine until the entire quick attach locks into the mount.

4. Using either your power attach or manual levers, lock the mounting plate in place and check for proper pin engagement.



HYDRAULIC CONNECTIONS

WARNING:



Hydraulic fluid under pressure can penetrate the skin or eyes and cause serious personal injury, blindness or death. Fluid leaks under pressure may not be visible. Use a piece of card or wood to find leaks. **DO NOT** use your bare hands. Wear safety goggles to protect your eyes. If any fluid is injected into the skin, it **MUST** be surgically removed. Seek immediate medical attention.

Standard Flat Face Couplers required for connection to the parent machine, are included for all attachments. Non-standard couplers are not supplied with the unit. These should be sourced locally and should be compatible with the auxiliary hydraulic Quick Release Couplers on the parent machine. The parent machine auxiliary hydraulic connections are normally located near the end of the loader arms, excavator dipper or truck crane booms.

Hose Routing

You should check the best hose routing for your machine prior to use and adjust accordingly. Damage to hydraulic hoses due to improper length or routing is not covered under warranty.

Flat Face Coupler Connections

Attach all lines supplied from the mixer by pushing the flat face couplers on the lines to the ones on your machine. If connection is difficult, you may need to release pressure from the couplers on your machine side. See your machine user manual for how to do this.



When the flat face couplers are attached, spin the collar away from the ball detent in order to “lock” the coupler in place. This will prevent a line from accidentally getting pulled off by brush/debris. If a line becomes detached during operation, you will damage the hydraulic motor, so take care to ensure your hydraulic connections are secure before operating.

Most manufacturers use the male connector on their machine as the output. This means on the attachment, the female coupler will correspond to the pressure/input line. If you have a Bobcat brand machine, they are the opposite, and they use the female on the machine as the output.

OPERATION

Pre-Operation Checklist

- The Eterra Cement Mixer is designed to ensure years of trouble free use. A poorly maintained machine is an invitation to expenses and trouble. We recommend that before operation that this checklist be followed to ensure trouble free operation.
- Give the machine a “once-over” for any loose bolts, worn parts, cracked welds, hydraulic leaks, frayed hoses etc. and make necessary repairs. Double check the Cement Mixer coupler as well as mounts to insure nothing has come loose as you risk the Cement Mixer head falling off if not properly inspected.
- Check for excessive wear as well as cracks in the mixing auger. Replace as needed.
- Be sure that there are no tools lying on or in the machine.
- Lubricate the main bearings daily or after each 8 hours of use.
- Clear any dried cement or gravel prior to each use or severe auger damage may occur.
- Make sure all hoses are clear of cuts, abrasions, worn spots and pinch points before operating. Check that hoses do not get caught in the pinch areas of your skid steer boom.
- Check the tire pressure and make sure they are inflated to their recommended pressures. Connect to Skid Steer and check mechanical Skid Steer connection point for wear that could cause MixNGo to fall off. Repair any damage as needed.
- Connect hydraulic lines to skid steer and if equipped, electrical solenoid wire connection.
- It is important that you check and recheck your hose routing each time you connect the attachment to your Skid Steer. Each machine is different so you need to make sure that you have routed the hoses away from any potential pinch points. Check that there are no pinch points around the main skid steer pivot. Average hose lengths are shipped at no-charge with each Cement Mixer. Try to route the hoses towards the front bottom of the mount and away from the back pinch zone.
- **It is the customers' responsibility to modify these hose lengths locally as required for your specific machine. Hose lengths can be varied by using or not using a 45 or 90 degree fitting. There is no warranty either expressed or implied with regards to hose damage due to improper routing or length.**

First Time Use Guide

Step One:

- After you have connected your hoses to your machine, you will want to start the skid steer, and turn on your auxiliary hydraulics. Run the Cement Mixer up for just a few seconds and turn off the skid steer. Check for leaks at all hose fittings. Tighten as needed and test again.
- Run the machine and familiarize your self with the Cement Mixer and how it handles different types of material. Stop and check for leaks. Check the auger to insure nothing has come loose.
- The bucket (mixing shaft rotation) can only be operated from the machine. Start the engine of the machine and let it run at idle for a few minutes with the hydraulic circuit open so that oil can reach the recommended temperature gradually and any air trapped in the circuit can be expelled. Use the machine controls to operate the mixing auger. On machines equipped with four hydraulic lines, it is possible to operate the mixing shaft rotation and to open/close the discharge hole at the same time. On machines with two hydraulic lines it is only possible to control the mixing shaft rotation and the discharge hole opening/closing alternately.
- Do not wear loose fitting clothing or jewellery. Hearing and eye protection are highly recommended even if you are inside an enclosed cab. Wear heavy gloves whenever you are handling the wheel.
- Before leaving the skid steer, make sure that the hydraulic power has been turned off and the mixer has come to a complete stop. THINK before you walk anywhere near the front of the Cement Mixer if any covers have been removed or damaged.
- If there is any kind of excess vibration, stop using the Hurricane Mixer at once until this has been remedied. Replace damaged parts immediately.
- To prevent tipping or control losses, reduce your speed when making turns or transitioning onto or off of slopes.
- Cement Mixers can be extremely dangerous due to excessive weight. Always carry material in the lowest possible position so that you minimize your tipping potential.

The following activities are strictly forbidden:

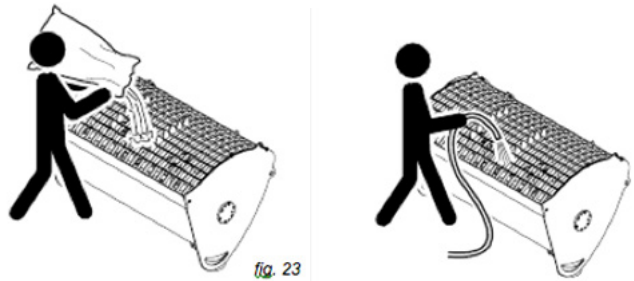
- Mixing of Asphalt.
- Mixing of material with a diameter greater than 1.25".
- Any kind of grinding activity whatsoever.
- Digging, towing, pulling or tearing using the bucket.
- **Never put hands inside the bucket or slide tools into bucket while operational.**
- Removal of protection grill while operational.

General Use Guide

Loading the Bucket - Manually

Move the bucket near the material to be loaded. Rest the bottom edge of the bucket on the ground and parallel to it. Slowly move forward with the machine and load the material. Once the material has been loaded, move the bucket backward and slightly raise it off the ground. Move the material by rotating the mixing auger some turns "FORWARD". Slowly go to the site where you wish to prepare the mix being careful to keep the bucket as close as possible to the ground. Once the mixing site has been reached, start the mixing auger rotation and proceed as explained in next paragraph.

Operator on the Ground: Pour the proper amount of cement into the bucket. Pour the proper amount of water based on the consistency of the mix you wish to obtain. Pour water gradually into the bucket.



Machine Operator: Operate the control and start rotating the auger "FORWARD" (mixing direction) keeping the engine running at 50% of the maximum speed. Ensure the bucket is not overloaded. For proper mixing, it is advisable to leave at least 2" of the external blades free from inert material.

Especially at the beginning of the mixing phase, the compact material could heap up and come out of the bucket. It may also occur that the auger stops if stones get stuck between the bucket bottom and the mixing paddles. In these cases, stop rotation and reverse the rotation direction for a few turns to level or move the material. Reverse once again the rotation direction ("FORWARD") and ensure that the material is mixed freely. For some types of materials which, for their properties, shall be mixed in the "semi-dry" state, it may be necessary to reverse the rotation direction several times by observing the above precautions.



WARNING - Never reverse the rotation direction abruptly!

Move the hydraulic control to neutral and leave it in this position for a few seconds. This will protect the motor from the simultaneous overpressure in both delivery and return lines and the consequent failure of the oil seals.



WARNING Once the material (concrete) has been mixed, the operator shall move with the machine up to the unloading site keeping the bucket a few inches off the ground to prevent dangerous oscillations.

Never let the auger rotate "BACKWARD" for more than two turns as this operation pushes the material to the sides of the bucket and result in two critical situations:

- 1) The excessive pressure of the material tends to slightly deform the sides causing the mechanical seals to detach and contaminated material to flow through the bearings.
- 2) The resistance opposite to rotation causes the operating pressure to increase up to the calibration value of the machine pressure relief valve. Such a pressure value can cause serious damages to the orbital motor of the bucket and the breakage of the rotor.

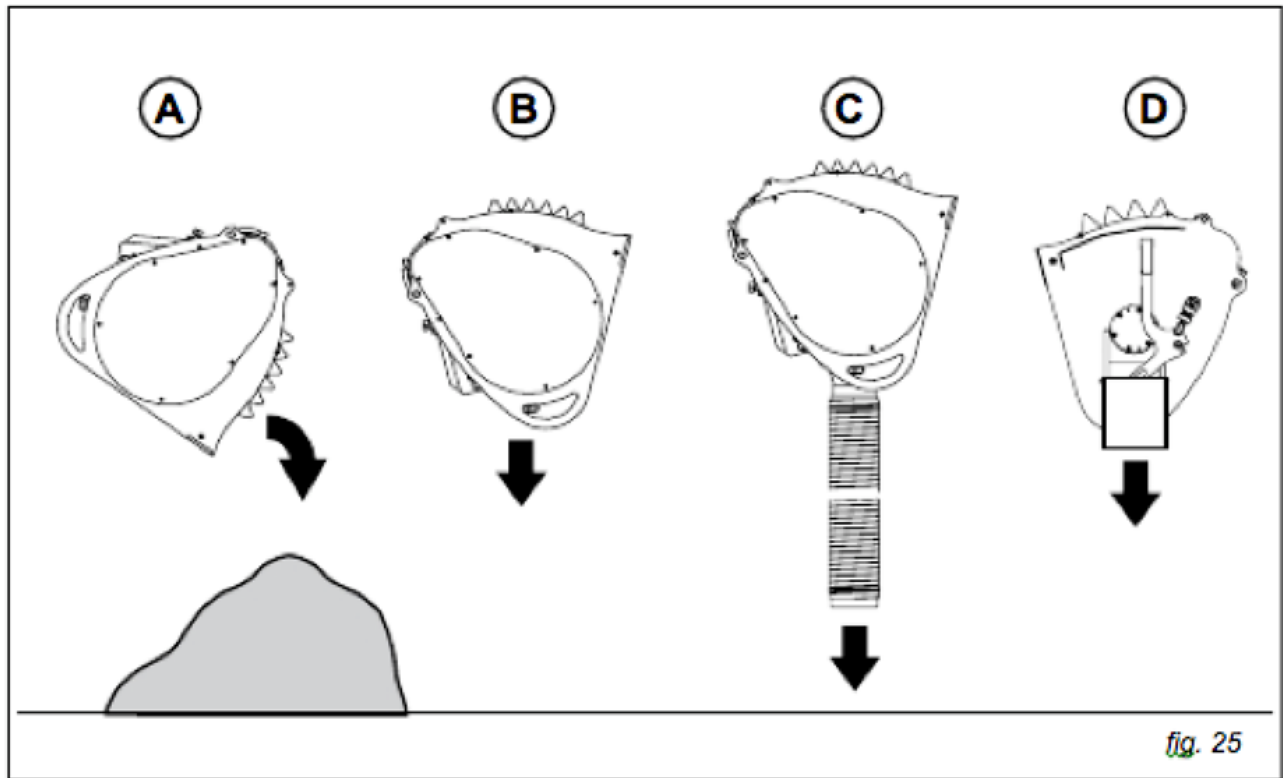
Unloading the Bucket

DANGER

Always drive with the bucket lowered when it is full with material. If you shall discharge the concrete from the height, stop on a flat ground, engage the parking brake and ensure nobody stands under the bucket.

The mixed material can be discharged (fig. 25)

- A) By dumping the bucket forward
- B) Through the lower discharge hole without flexible pipe
- C) Through the lower discharge hole with flexible pipe
- D) Through the discharge spout of the side discharge hole



A) Unloading by dumping the bucket

Roll the bucket forward and allow the material to flow out of the loading mouth. You should run the auger first to be sure the concrete is thoroughly mixed, otherwise the water could have settled to the top and pour out first.

B) Unloading through the lower discharge hole without flexible pipe

- With the bucket in the unloading position (bucket opening facing upwards as shown in the previous diagram), operate the discharge chute cylinder to open the chute.

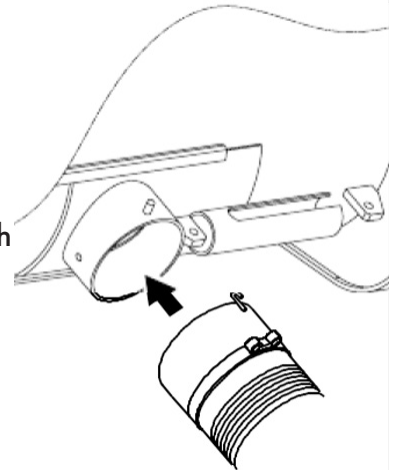
IMPORTANT: To operate the chute, you must hold down the correct button/switch depending on your electrical installation while you operate the hydraulics at the same time to move the chute. As soon as you let go of the button/switch, the hydraulics will go back to operating the main auger.

- Once the chute is open, resume auger rotation to help discharge the material.

C) Unloading through the lower discharge hole with flexible pipe

DANGER - Before connecting the flexible pipe, make sure the machine is parked in a stable position and no one can operate the controls. The discharge pipe shall be connected by a second operator who shall keep at a safe distance and start connection only once the machine has been parked and the parking brake or other parking device has been engaged. To install the discharge pipe, obey the following instructions:

- Machine Operator: Raise the bucket 4 feet above the ground with the mouth parallel to the ground.
- Stop the engine and ensure no one can operate the machine controls.
- Operator on the ground: If the load is suspended, place two supports to the sides of the bucket or install the flexible pipe with the bucket resting on some supports on the ground.
- Connect the 2 hooks at the top of the pipe to the special pins located on the equipment, near the discharge hole.
- With the bucket in the unloading position (bucket opening facing upwards as shown in the previous diagram), operate the discharge chute cylinder to open the chute.



IMPORTANT: To operate the chute, you must hold down the correct button/switch depending on your electrical installation while you operate the hydraulics at the same time to move the chute. As soon as you let go of the button/switch, the hydraulics will go back to operating the main auger.

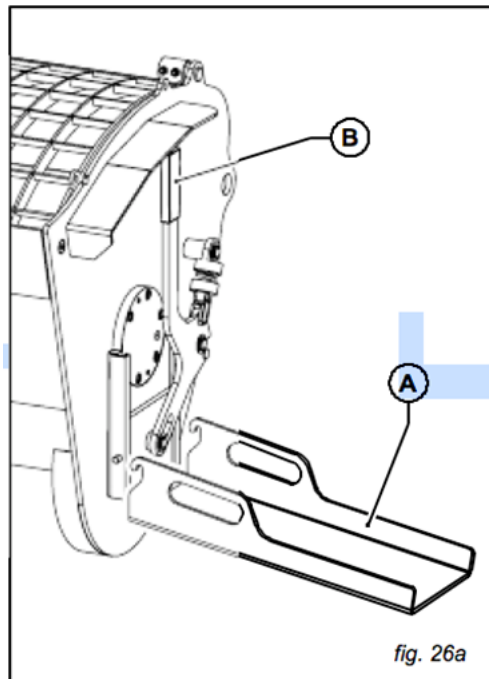
- Once the chute is open, resume auger rotation to help discharge the material.

D) Unloading through the discharge spout of the lateral discharge hole

DANGER - Before connecting the spout, make sure the machine is parked in a stable position and no one can operate the controls.

DANGER - The discharge spout shall be connected by a second operator who shall keep at a safe distance and start connection only once the machine has been parked and the parking brake or other parking device has been engaged.

- After following the above safety protocol, from a safe position, attach the side chute (A) via the two hooks on the side of the mixer.
- Once the chute is attached, use the handle (B) to open the discharge gate. When the bucket is new, the thickness of paint can sometimes interfere with gate operation. Do not hit the gate or lever with a hammer. This will compound the problem. The paint will wear down through normal operation shortly. If needed you may scrape manually for clearance if desired.
- Use the mixers auger to help discharge the mix.
DANGER - DO NOT UNDER ANY CIRCUMSTANCES PUT ANY APPENDAGES OR TOOLS INTO THE OPENING OF THE MIXER. DOING SO MAY RESULT IN SERIOUS INJURY OR DEATH
- When finished discharging, use water to clean all surfaces of mix. Any mix left on the openings or gate WILL cause issues with gate operation that are not covered under



Operational Positions

Shown below are different positions of operation for the mixers, and when they are used.



Scooping/Loading Material



Mixing Position



Center Unloading - No Chute



Center Unloading w/Chute

Warning: As shown, assistant is to keep clear of mixer and is not to be under the load



Side Chute Unloading

TRANSPORTATION & STORAGE

Transportation Within The Job Site

Whether the bucket is empty, or loaded with material, the operator must move safely within the job site.

When moving across the job site, the operator shall move with the bucket opening facing upwards, and keep the bucket only a few inches off the ground.

This ensures visibility when navigating the job site, and when loaded it prevents dangerous oscillations of the mix, as well as spillage.



Storage

Storage of all MixNGo cement mixers should be done in the following manner.

If storing when attached to the parent machine, then the arms should be lowered all the way down to where the mixer is resting on the ground. Ensure that the mixer is rotated so that it is resting on it's support legs.



When storing un-attached to the parent machine, the mixer can be stored in two different positions.

It can be stored in the scooping position as shown to the right. When disconnecting make sure to detach the hoses and electrical and stow them away in a protected manner where they will not get run over or damaged.



You can also store the mixers in the upright position. When storing this way make sure that the mixer is rotated all the way back onto the mounting plate. As above, ensure that the hoses and electrical cable are stored in a protected manner where they will not get run over or damaged.



MAINTENANCE & LUBRICATION

Safety at all times



Ensure environmentally safe disposal of waste oil:

Do not pour down drain!



Avoid Fire or Explosion:



Do not smoke near, or expose lubricants to, any possible sources of ignition (e.g. fire, electrical sparks or heat sources.)



All lubricants are toxic and potentially carcinogenic (cancer causing).



Avoid contact with skin and eyes:

Wear suitable protective clothing and gloves.



Always use a suitable barrier cream in case of skin contact.



Always wear eye protection:

In the event of skin contact wash with soap and water.



In the event of eye contact wash with water and seek medical advice.

Do not ingest:

If swallowed seek medical advice immediately.

Lubrication

The main bearing grease Zerks located in each end of the bucket is used to apply grease pressure to the main seals. It is not for lubricating the bearings.

The bearings are sealed and permanently greased. Because of this, you only need to apply enough grease to the seal to maintain sealing pressure to protect the main seals of the bearings from cement intrusion. In this case over-greasing can actually be detrimental to the mixer.

If you use this mixer for 4 hours per day for 5 days per week, 2 pumps of grease is all that is necessary to maintain sealing pressure. If you use this mixer for 8 hours per days for 5 days per week, 4 pumps is all that is required. If you use too much grease, the excess will be pushed into the internal chamber of the mixer or into the mixing chamber, which can damage your batch.

Be careful with high speed, high pressure grease guns as they can apply too much grease, too fast and damage the seals.

Grease Diagram on Next Page

Cleaning

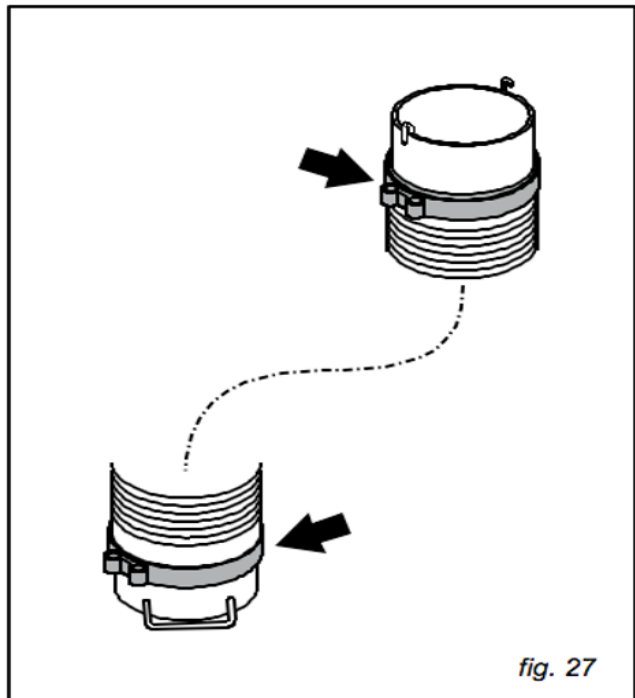
Wash the equipment after each use being careful to remove material deposits, especially near the bearings of the mixing shaft, the hydraulic and electrical connections. It is advisable to coat diesel or fuel oil inside the bucket to prevent material from adhering to the walls. Clean the equipment with a jet of water at pressure, but be careful around bearings and bearing seals as to not dislodge or damage the seals.

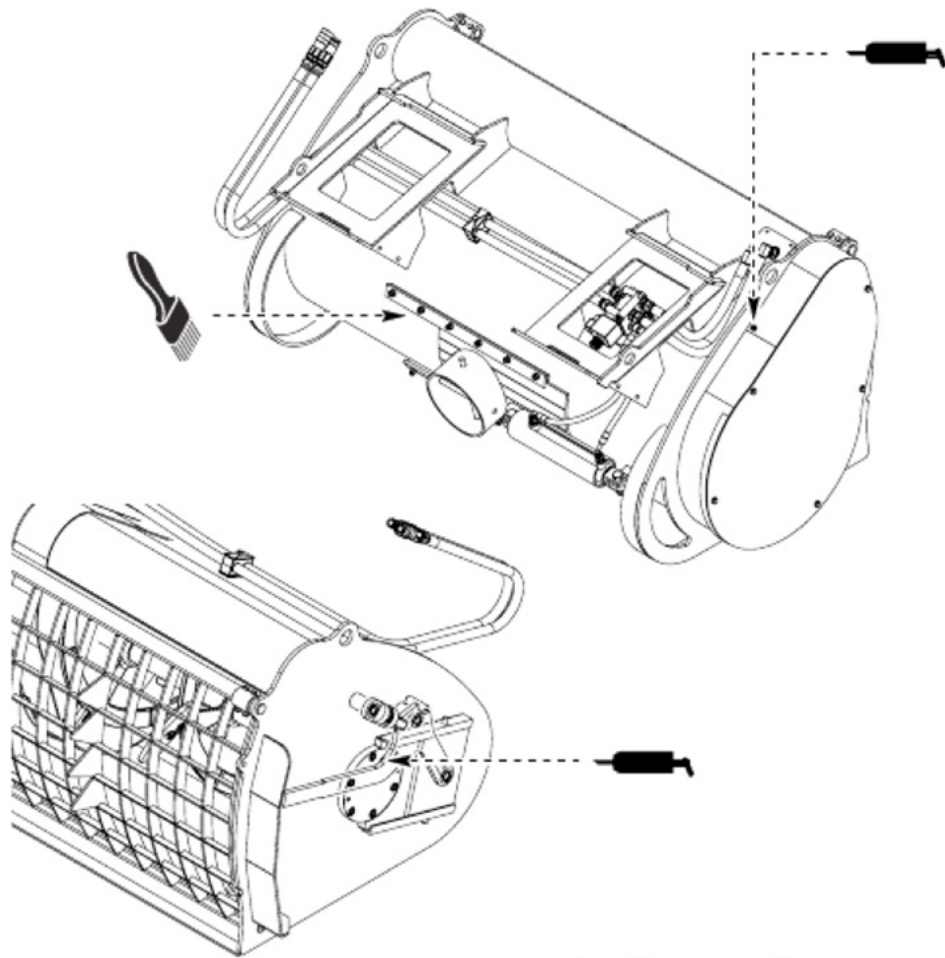
Scheduled Maintenance Table

	Operation	See par.	Personnel charged of maintenance
Every 2 hours	Bearing lubrication		Operator
Every 8 hours	Lubrication		Operator
Every 8 hours	Equipment cleaning		Operator
Every 8 hours	Flexible hoses inspection		Operator
Every 8 hours	Discharge pipe clamps inspection		Operator
Every 200 hours	General structure inspection		Operator
Every 200 hours	Bolt tightness inspection		Operator
Every 200 hours	Chain greasing		Operator

At each use check the condition of the discharge pipe clamps shown in Figure 27

Checking bolt tightness:
Check the tightening of all bolts. Retighten any loose connection using approved spanners in good condition. Never use your hands for this operation.





Greasing the Chain Drive

Grease the drive chain every 200 operating hours according to the following instructions:

- Loosen the bolts and remove the drive chain.
- Brush the chain with grease covering its entire length.

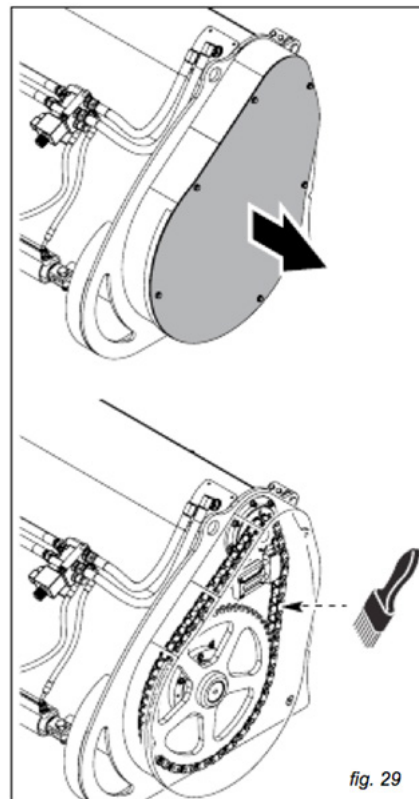


fig. 29

TROUBLESHOOTING

IF IN DOUBT ASK! - Seek Eterra / parent machine dealer for advice & repair.

BE SAFE - only use genuine Eterra / parent machine spare parts.

		Oil Leak Around Transmission Sump	
POSSIBLE CAUSE	ACTION	POSSIBLE CAUSE	ACTION
Pipe disconnected from fitting	Re-connect or replace pipe	Motor Oil Seals have failed	Have authorized workshop replace motor seals with new seal kit.
Grease ports clogged	Remove and clean or replace fitting.		
POSSIBLE CAUSE	ACTION	POSSIBLE CAUSE	ACTION
Loose Fittings	Tighten Fittings	Fittings Damaged	Replace Fittings
Hoses Damaged	Replace Hoses	Cylinder seals have failed	Have authorized workshop replace cylinder seals/cylinder
POSSIBLE CAUSE	ACTION	POSSIBLE CAUSE	ACTION
Rotation pins seized	Clean and grease pins	Valve not energized	Check electrical system
Cylinder valve stuck	Press manual override on valve (button in center of	Operating hydraulics in wrong direction	Reverse direction of hydraulics operation

If your electrical cable to the valve is broken, or for some reason the valve is not functioning and you need to manually open or close the bottom chute, follow these instructions.

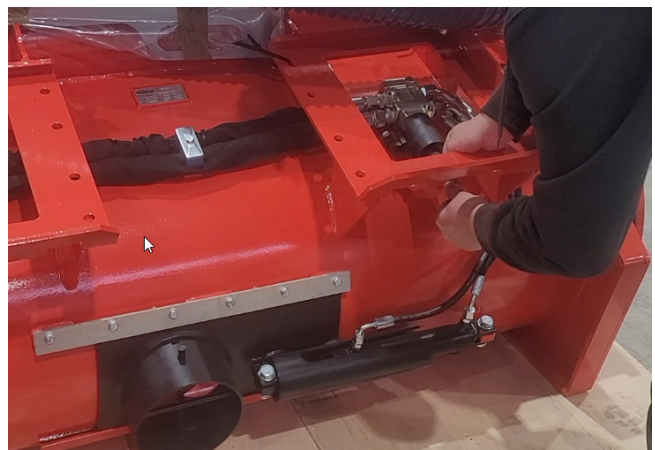
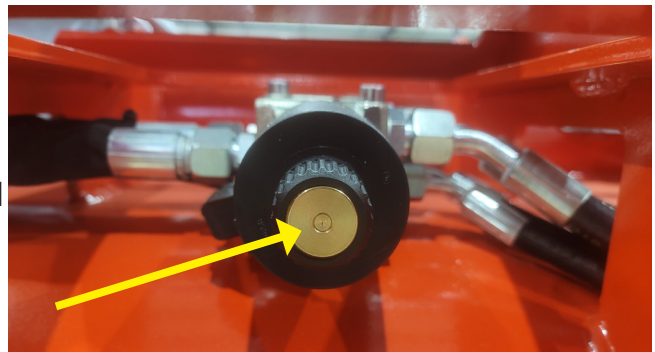
Begin by hooking up your machine to the hydraulic hoses as shown to the right, but off to the side of the mixer while the mixer is placed down in the position shown.

This is so that you can safely access the valves manual override. **DO NOT ATTEMPT TO DO THIS WHILE HOOKED UP TO THE QUICK ATTACH PLATE.**

Have two people available for this, with one in the cab to operate the machine, and the second person to operate the manual override. Locate the manual override button shown to the right, in the center of the valve "knob".

Using a small screwdriver or tool, have the assistant press and hold in the manual override button on the valve.

While the the assistant is pressing and holding the valves manual override button down, the operator in the skid steer should operate their hydraulics with the paddle switch to momentarily actuate them in one direction. If the direction you pick does not move the chute, try the other direction as one way will open, and the other way will close the chute.



PARTS DIAGRAMS

MixNGo 100 Parts Diagrams

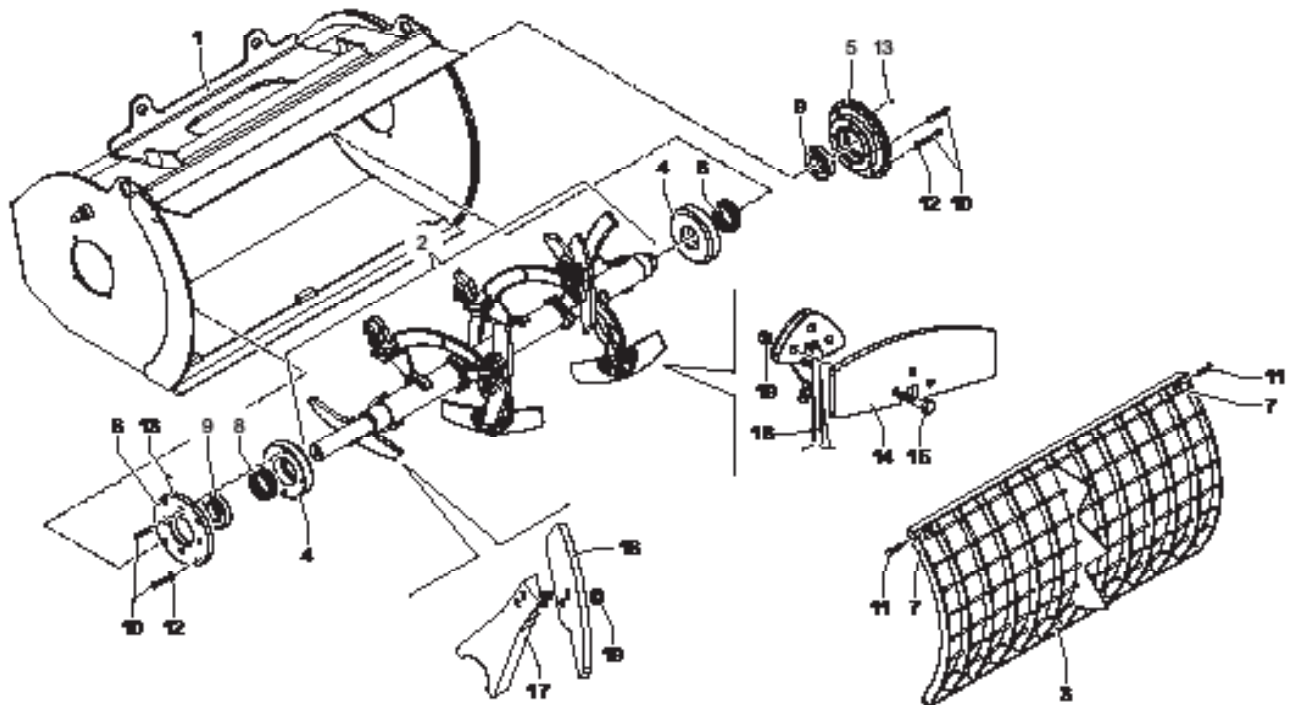


Diagram	Part Number	Qty	Description
1	D102.000	1	BUCKET FRAME
2	D100.005	1	MIXING SHAFT
3	D100.174	1	PROTECTION GRATE
4	D100.112	2	SEAL HOUSING FLANGE
5	D100.118	1	NON-DRIVE-SIDE FLANGE
8	O100.111	1	DRIVE-SIDE FLANGE
7	8007.088	2	TORQUE NUT M8
8	8007.049	4	DUST SEAL
9	0001.137	2	ROLLER BEARING
10	8007.238	12	SOCKET HEAD CAP SCREW M8x30
11	8007.289	2	HEX SCREW M5x30
12	8007.105	8	WASHER M8
13	0001.119	1	GREASING NIPPLE
14	5001.013	7	WEARPROOF PAD
15	8007.085	21	HEX SCREW M10x40
16	5001.014	1	LAST PAD
17	5001.023	1	LAST BLADE SUPPORT
18	5001.008	7	CASTING BLADE
19	8007.058	23	TORQUE NUT M8

MixNGo 100 Parts Diagram

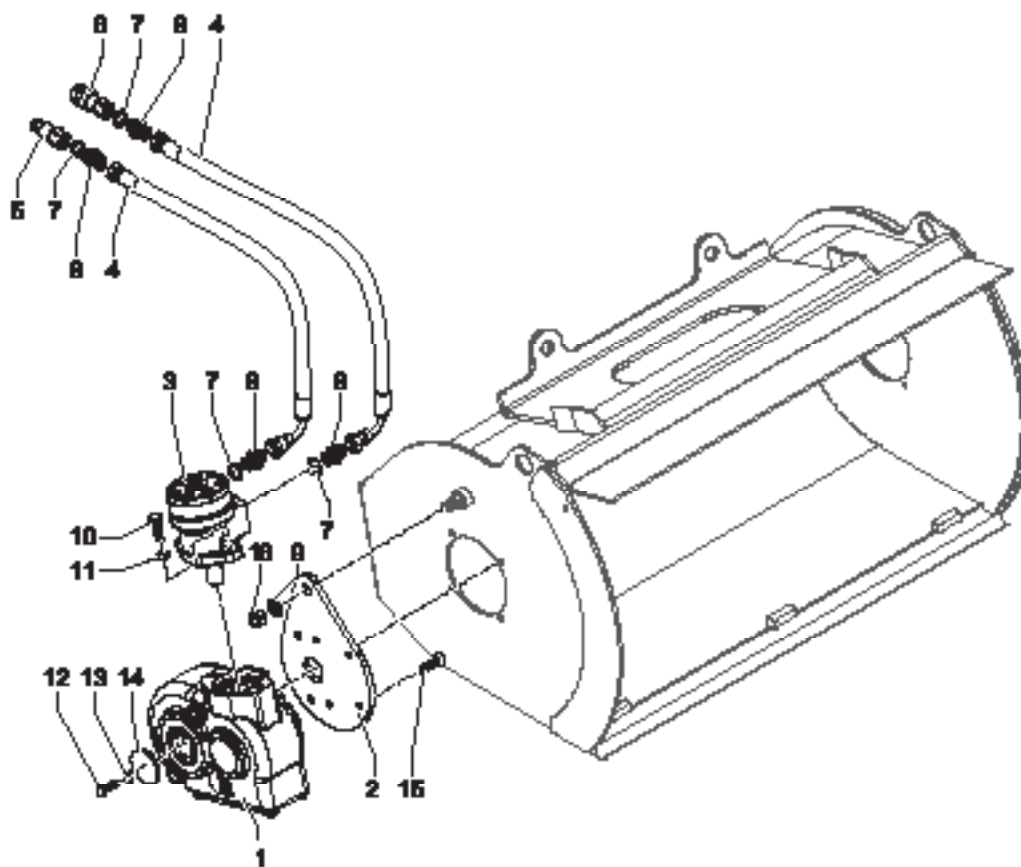


Diagram	Part Number	Qty	Description
1	0100L047	1	GEAR BOX
2	0100L130	1	GEAR BOX MOUNTING PLATE
3	1,380	1	HYDRAULIC MOTOR
4	9001.011	2	FEEDING PIPE
5	9004.004	1	FEMALE QUICK CONNECTOR
6	9004.003	1	MALE QUICK CONNECTOR
7	9003.008	2	BONDED WASHER
8	9000L003	4	PIPE NIPPLE
9	9007.137	1	WASHER M20
10	9007.088	2	HEX SCREW M12X40
11	9007.057	2	WASHER M12
12	9007.063	1	HEX SCREW M10X30
13	9007.060	1	WASHER M10
14	0100L131	1	SHAFT RETAINER
15	9007.270	6	SOCKET COUNTERSUNK HEAD SCREW M10X40
16	9007.137	1	TORQUE NUT M20

MixNGo 100 Parts Diagrams

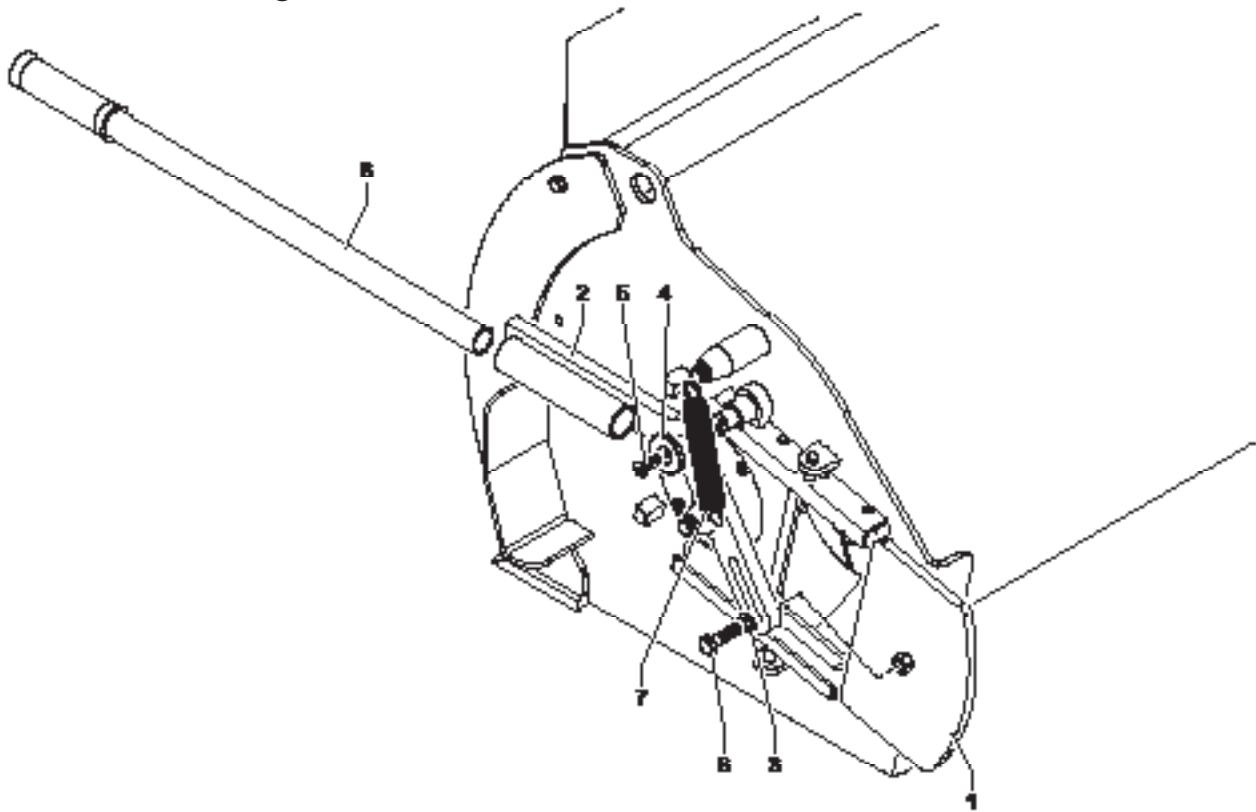


Diagram	Part Number	Qty	Description
1	0100.141	1	SIDE DOOR
2	0100.280	1	LEVER
3	8007.080	1	WASHER M10
4	0100.148	1	HANDLE RETAINER
5	8007.201	1	SOCKET COUNTERSUNK HEAD SCREW M8X25
6	8007.088	1	HEX SCREW M10X35
7	3200.048	1	SPRING
8	8007.038	1	HANDLE

MixNGo 250/450 Parts Diagrams

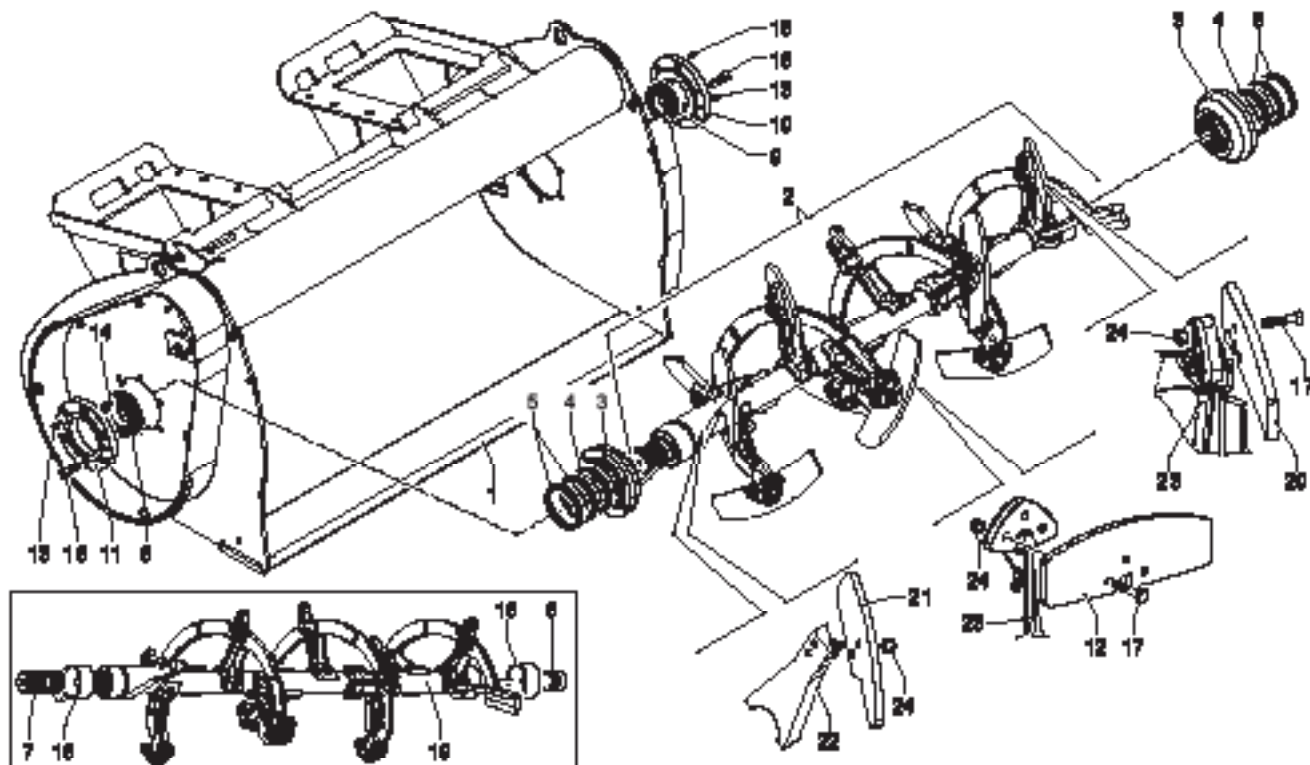


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	5025.002	5040.002	1	1	BUCKET FRAME
2	5025.005	5040.005	1	1	COMPLETE MIXING SHAFT
3	5000.416	5000.416	2	2	SEAL HOUSING FLANGE
4	5000.426	5000.426	2	2	HALLITE DUST SEAL
5	5000.425	5000.425	4	4	LIP SEAL
6	5000.411	5000.411	1	1	END CAP, NON DRIVE SIDE
7	5000.412	5000.412	1	1	END CAP, DRIVE SIDE
8	0700.171	0700.171	1	1	ROLLER BEARING
9	0001.170	0001.170	1	1	ROLLER BEARING
10	5000.418	5000.418	1	1	NON-DRIVE-SIDE FLANGE
11	5000.417	5000.417	1	1	DRIVE-SIDE FLANGE
12	5002.013	5002.013	8	11	WEARPROOF PAD
13	9007.274	9007.274	4	4	DOWEL M10x12
14	9000.034	9000.034	1	1	NIPPLE M-M 1/8"
15	0001.119	0001.119	1	1	GREASER M8
16	9007.275	9007.275	12	12	SOCKET HEAD CAP SCREW M12x35
17	9007.009	1503.4017	30	38	HEX SCREW M10x45
18	5000.442	5000.442	2	2	HARDENED BUSHING
19	5025.012	5040.012	1	1	SHAFT WITH BUSHINGS AND END CAPS
20	5002.021	5002.021	1	1	FIRST PAD
21	5002.014	5002.014	1	1	LAST PAD
22	5002.023	5002.023	1	1	LAST PAD SUPPORT
23	5002.008	5002.008	10	12	CASTING BLADE
24	9007.058	9007.058	32	38	TORQUE NUT M10

MixNGo 250/450 Parts Diagrams 1

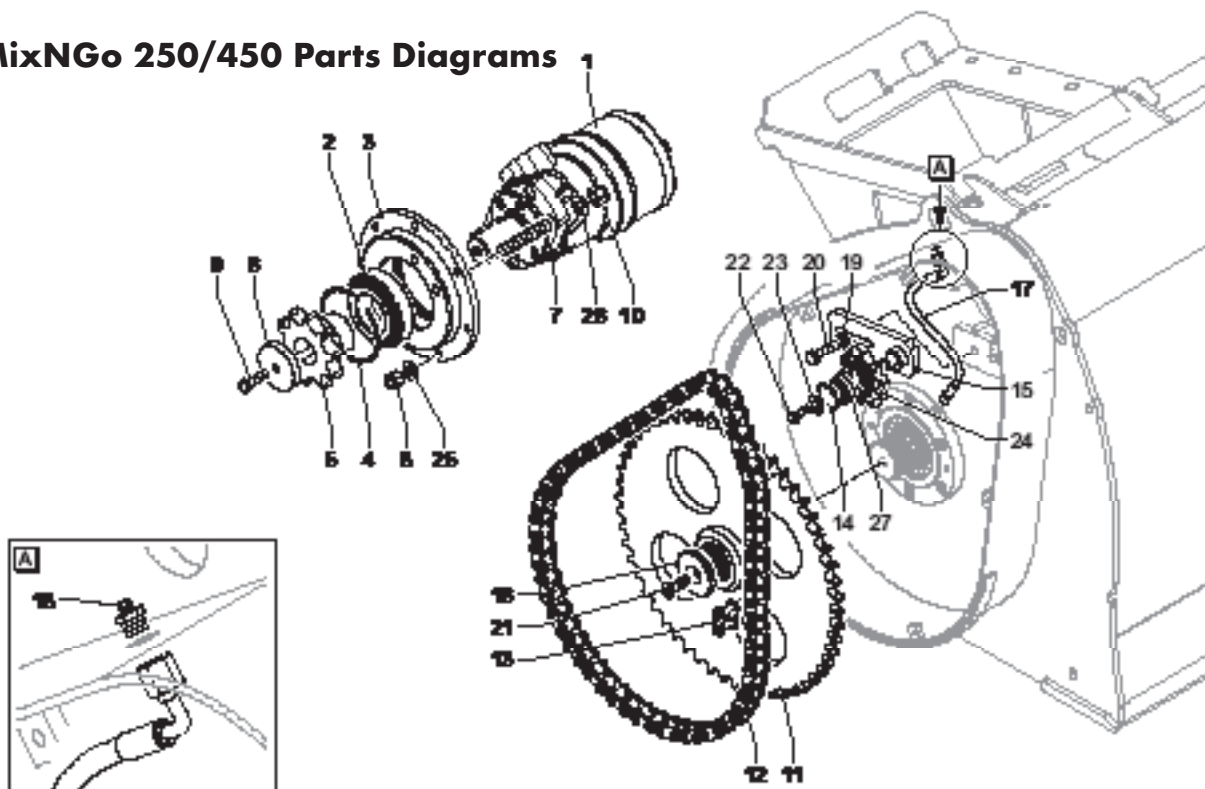


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	0001.355	0001.175	1	1	HYDRAULIC MOTOR
2	0001.388	0001.388	1	1	BALL BEARING
3	5001.419	5001.419	1	1	MOTOR PLATE
4	0001.005	0001.005	1	1	SPRING RING
5	5001.421	5001.421	1	1	SPROCKET
6	5002.034	5002.034	1	1	SPROCKET RETAINER
7	9007.271	9007.271	4	4	STUD M12X70
8	9007.088	9007.088	7	7	TORQUE NUT M8
9	9007.209	9007.209	1	1	HEX HEAD SCREW
10	9007.052	9007.052	4	4	TORQUE NUT M12
11	5028.053	5028.053	1	1	PLATE WHEEL
12	6001.033	6001.033	1	1	1" CHAIN
13	0001.104	0001.104	1	1	1" JOINING LINK
14					CIRCLIP
15					CHAIN TENSIONER
16	0001.085	0001.085	1	1	PLATE WHEEL RETAINER
17	0001.202	0001.202	1	1	GREASING PIPE
18	0001.118	0001.118	1	1	GREASER
19	9007.057	9007.057	2	2	PLAIN WASHER
20	9007.172	9007.172	2	2	HEX SCREW M12x25
21	9007.088	9007.088	1	1	HEX SCREW M12x40
22					HEX SCREW M10x30
23					WASHER
24					SPROCKET
25	9007.105	9007.105	7	7	PLAIN WASHER M8
26	9007.079	9007.079	4	4	SPRING LOCK WASHER D12
WWW.MIXNGO.COM	6001.040	6001.040	1	1	CHAIN TENSIONER COMPLETE

MixNGo 250/450 Parts Diagrams

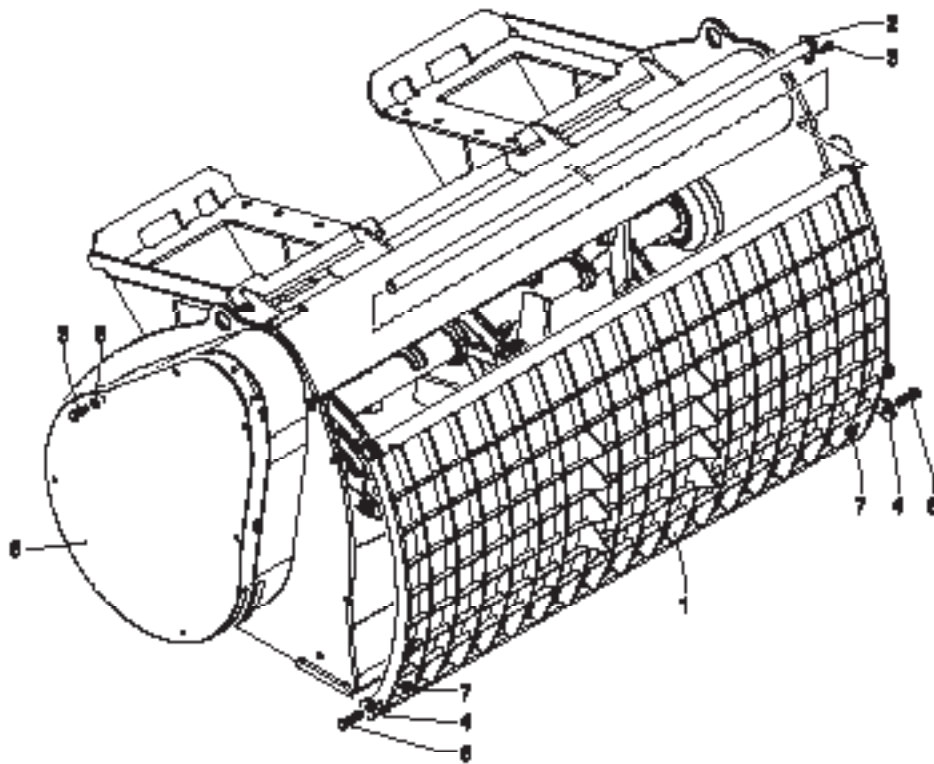


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	5025.174	5040.174	1	1	PROTECTION GRATE
2	5025.004	5040.004	1	1	PIN
3	9007.056	9007.056	7	7	HEX SCREW M8x25
4	9007.057	9007.057	4	2	PLAIN WASHER M12
5	9007.103	9007.103	8	8	PLAIN LARGE WASHER M8
6	9007.062	9007.062	2	2	HEX SCREW M12x50
7	9007.052	9007.052	2	2	TORQUE NUT M12
8	5002.101	5002.101	1	1	COVER

MixNGo 250/450 Parts Diagrams

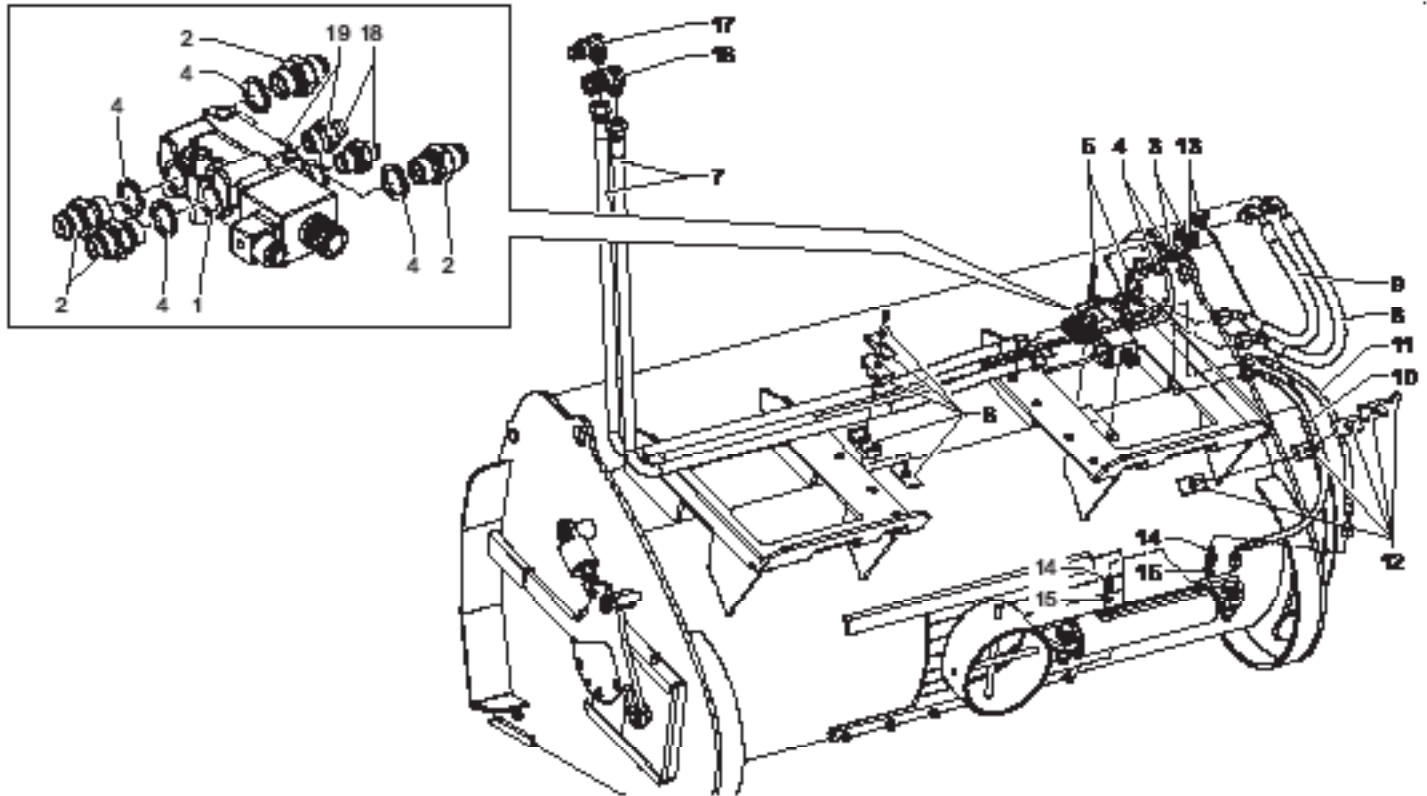


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	9007.014	9007.014	1	1	SOX-WAY VALVE
2	9000.028	9000.028	4	4	1/2" BSP - 7/8" JIC PIPE NIPPLE
3	9000.017	9000.017	2	2	JOINT M 1/2" - F 3/8" BSP
4	9003.008	9003.008	6	6	BONDED WASHER 1/2
5	9007.070	9007.070	2	2	SOCKET HEAD CAP SCREW M6X05
6	9005.004	9005.004	1	1	DOUBLE COLLAR FOR 1/2" PIPE
7	9006.084	9006.084	2	2	FEEDING PIPE
8	9006.088	9006.088	1	1	FRONT MOTOR PIPE
9	9006.085	9006.085	1	1	REAR MOTOR PIPE
10	9006.088	9006.088	1	1	REAR DISCHARGE PIPE
11	9006.087	9006.087	1	1	FRONT DISCHARGE PIPE
12	9005.002	9005.002	1	1	DOUBLE COLLAR FOR 1/4" PIPE
13	9000.023	9000.023	2	2	M 3/8" BSP - F 9/16" JIC PIPE NIPPLE
14	9000.027	9000.027	2	2	1/4" BSP - 9/16" JIC PIPE NIPPLE
15	9003.011	9003.011	2	2	1/4" COPPER WASHER
16	9004.012	9004.012	1	1	FEMALE QUICK CONNECTOR
17	9004.011	9004.011	1	1	MALE QUICK CONNECTOR
18	9000.029	9000.029	2	2	M 3/8" BSP - F 9/16" JIC PIPE NIPPLE
19	9003.007	9003.007	2	2	BONDED WASHER 3/8"

MixNGo 250/450 Parts Diagrams

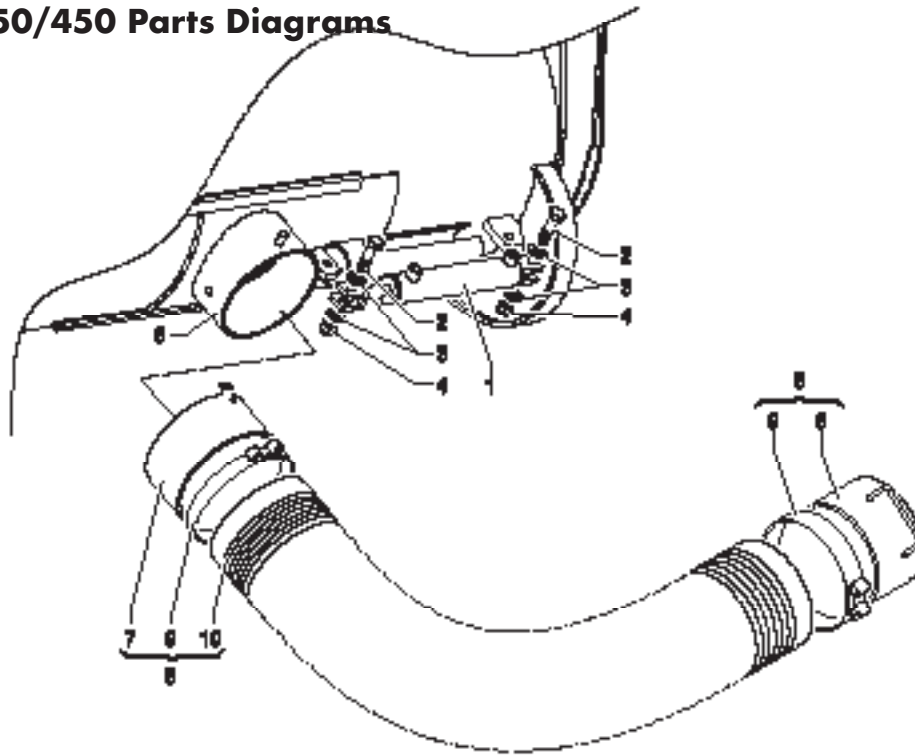


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	0001.114	0001.114	1	1	HYDRAULIC CYLINDER
2	9007.072	9007.072	2	2	HEX SCREW M16X70
3	9007.085	9007.085	4	4	PLAIN WASHER M16
4	9007.073	9007.073	2	2	TORQUE NUT M16
5	0001.125	0001.125	1	1	DISCHARGE PIPE ASSEMBLY
6	5026.048	5026.048	1	1	DISCHARGE GATE
7	0001.254	0001.254	1	1	PIPE CONNECTING SIDE
8	0001.258	0001.258	1	1	PIPE SIDE WITH HANDLE
9	0001.129	0001.129	2	2	COLLAR
10	0001.128	0001.128	1	1	PIPE

MixNGo 250/450 Parts Diagrams

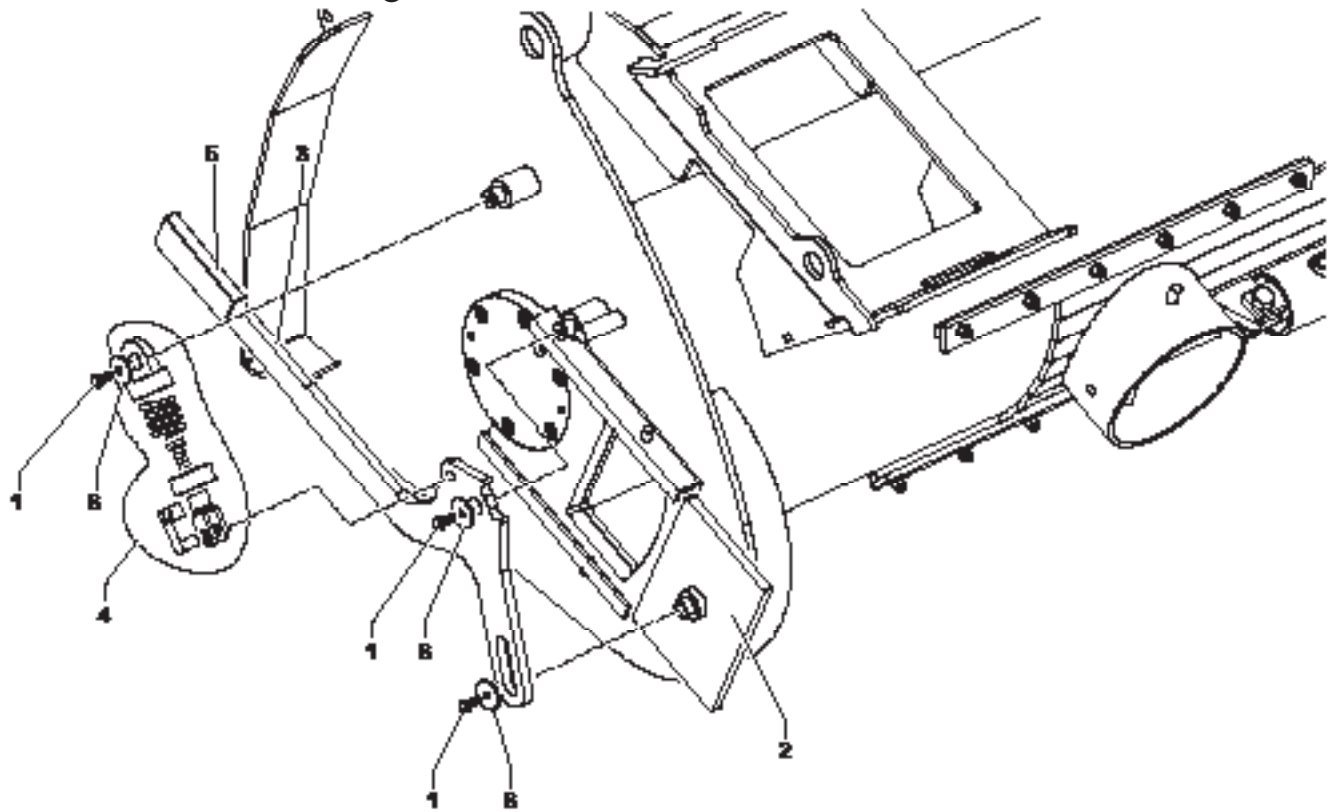


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	9007.1B1	9007.1B1	3	3	HEX SCREW M8X20
2	5026.1I21	5026.1I21	1	1	SIDE DOOR ASSEMBLY
3	5026.1I27	5026.1I27	1	1	OPENING HANDLE
4	5026.1I22	5026.1I22	1	1	SPRING UNIT
5	5026.1I30	5026.1I30	1	1	PVC HANDLE
6	9007.272	9007.272	3	3	LARGE PLAIN WASHER M8

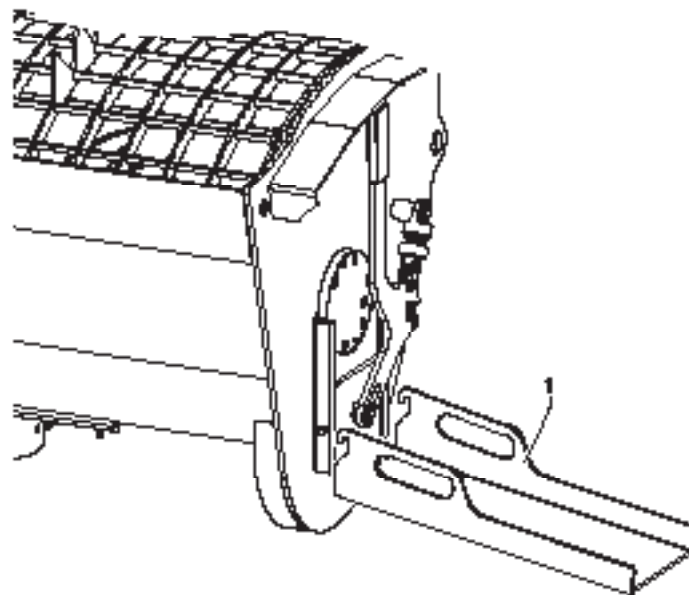


Diagram	250 Part Number	450 Part Number	250 Qty	450 Qty	Description
1	5026.1I28	5026.1I28	1	1	DISCHARGE SPOUT

MixNGo 600 Parts Diagrams

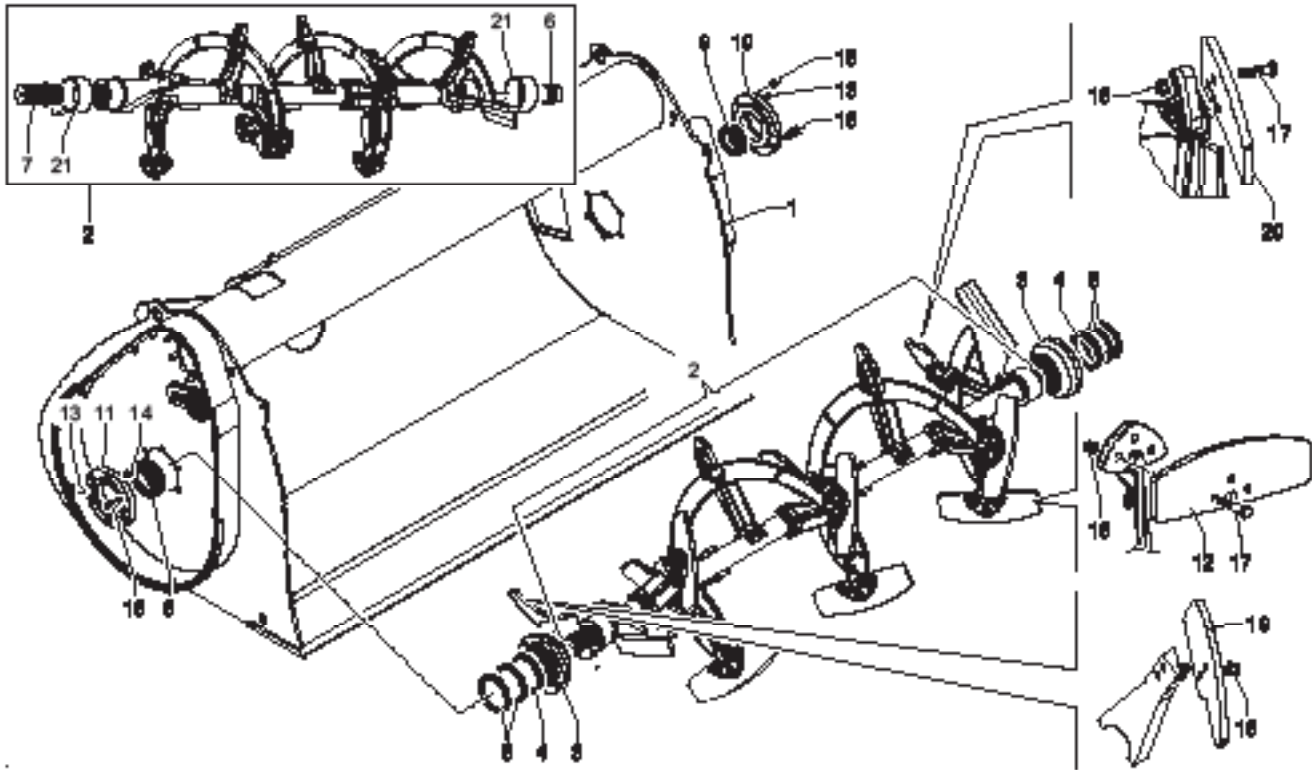


Diagram	Part Number	Qty	Description
1	5081.002	1	BUCKET FRAME
2	5080.005	1	MIXING SHAFT
3	5000.416	2	SEAL HOUSING FLANGE
4	5000.426	2	HALLITE DUST SEAL
5	5000.425	4	LIP SEAL
6	5000.411	1	END CAP
7	5000.412	1	END CAP MOTOR SIDE
8	0700.171	1	BEARING
9	0001.170	1	BEARING
10	5000.418	1	NEUTRAL SIDE FLANGE
11	5000.417	1	MOTOR SIDE FLANGE
12	5003.013	10	WEARPROOF PAD
13	9007.274	4	SOCKET SET SCREW FLAT POINT M10X12
14	9000.034	1	ADAPTER 1/8" FOR GREASER HOSE
15	0001.012	1	GREASER
16	9007.275	12	SOCKET HEAD CAP SCREW M12X35
17	9007.050	33	HEX SCREW M12X45
18	9007.052	35	TORQUE NUT
19	5003.014	1	WEARPROOF PAD
20	5003.021	1	WEARPROOF PAD
21	5000.442	1	BUSHING

MixNGo 600 Parts Diagrams

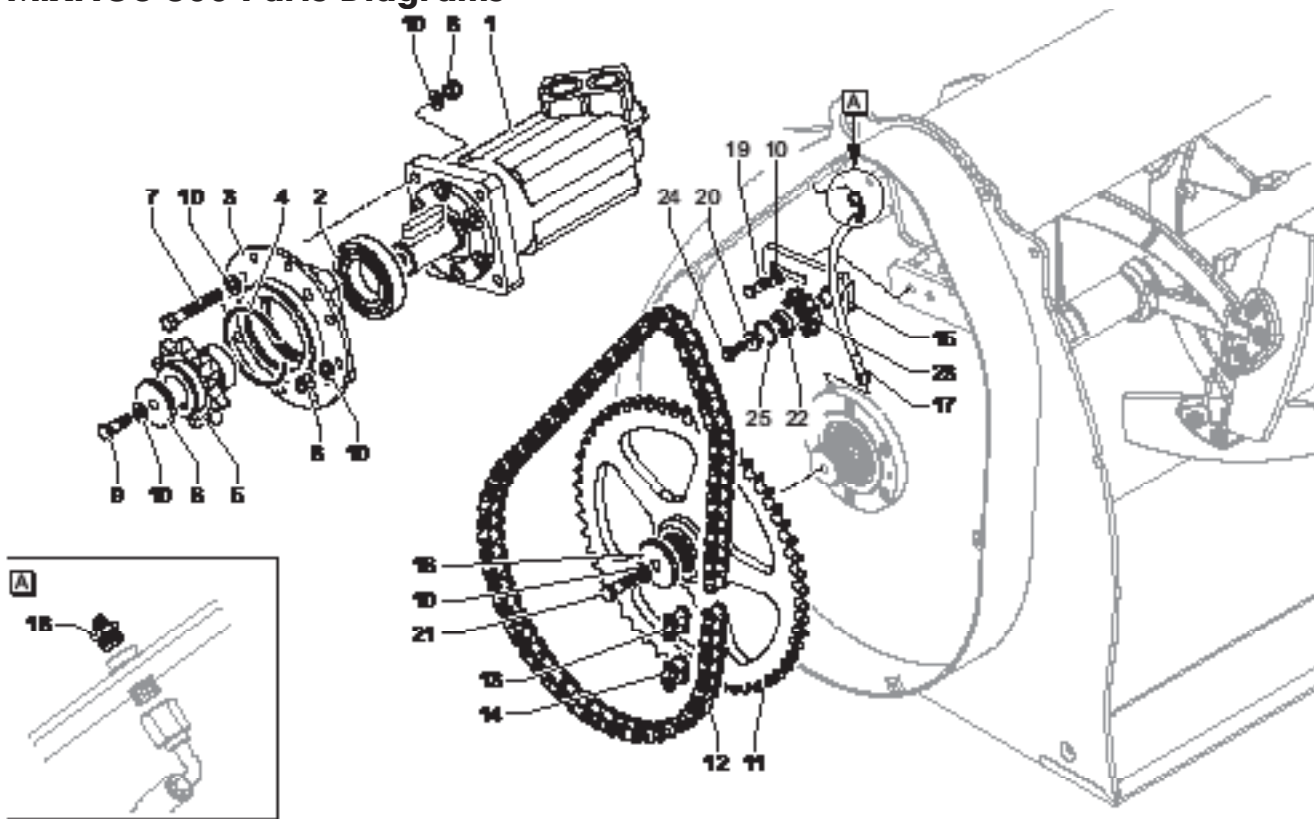


Diagram	Part Number	Qty	Description
1	0001.142	1	ORBITAL MOTOR 400CC.
2	0001.304	1	BEARING
3	5000.446	1	MOTOR FLANGE
4	0001.007	1	SNAP RING RB1 100
5	5000.422	1	SPROCKET
6	5003.034	1	SPROCKET STOPPER
7	9007.233	4	HEX SCREW M12X80
8	9007.052	12	TORQUE NUT M12
9	9007.098	1	HEX SCREW M12X40
10	9007.057	20	WASHER M12
11	5003.063	1	CHAIN WHEEL
12	5000.424	1	CHAIN
13	0001.104	1	JOINING LINK
14	0001.110	1	SPLIT LINK
15			CHAIN TENSIONER SLIDING PLATE
16	0001.065	1	PLATE WHEEL STOPPER
17	0001.202	1	GREASER PIPE 1/8"
18	0001.116	1	GREASER M10X1
19	9007.172	2	HEX SCREW M12X25
20			SPROCKET STOPPER
21	9007.276	1	HEX SCREW M12X30
22			BEARING
23			SPROCKET
24			HEX SCREW M10X30 - M12X35
25	6000.040		CHAIN TENSIONER - COMPLETE

MixNGo 600 Parts Diagrams

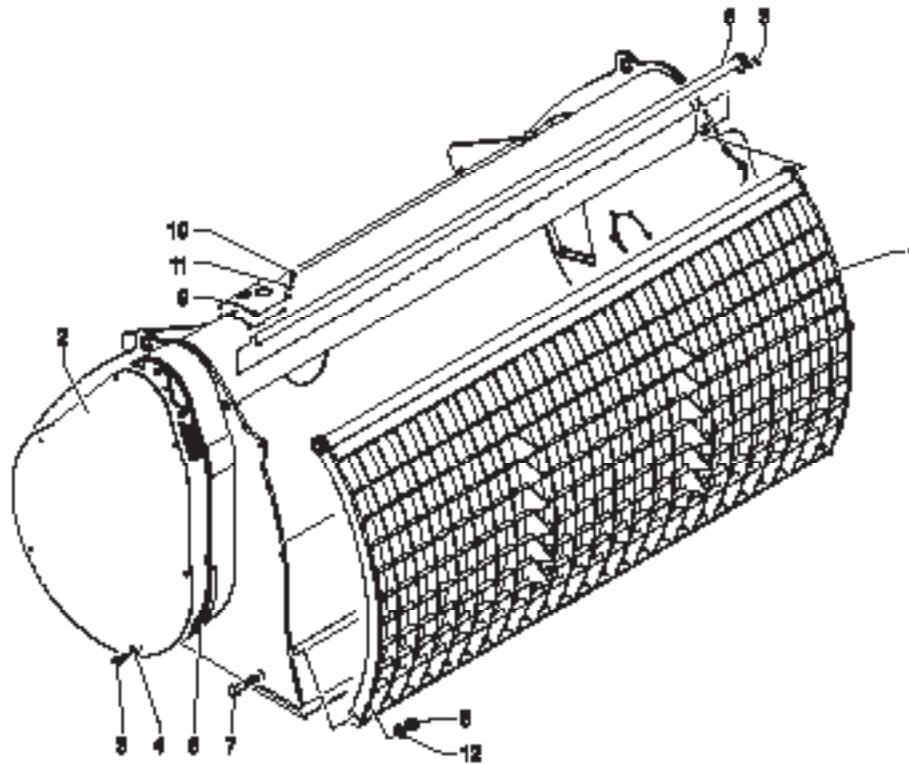


Diagram	Part Number	Qty	Description
1	5060.174	1	GRATE
2	5003.101	1	CHAIN COVER
3	8007.081	7	HEX SCREW M8X20
4	8007.103	8	LARGE PLAIN WASHER M8
5	8007.052	2	TORQUE NUT M12
6	5003.175	1	RUBBER GASKET
7	8007.082	2	HEX SCREW M12X50
8	5060.004	1	PIN
9	5003.204	1	MOTOR COVER
10	8007.121	4	HEX SCREW M8X20
11	8007.122	4	WASHER M8
12	8007.057	2	WASHER M12

MixNGo 600 Parts Diagrams

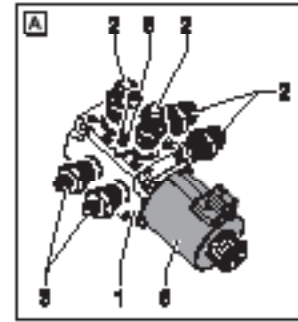
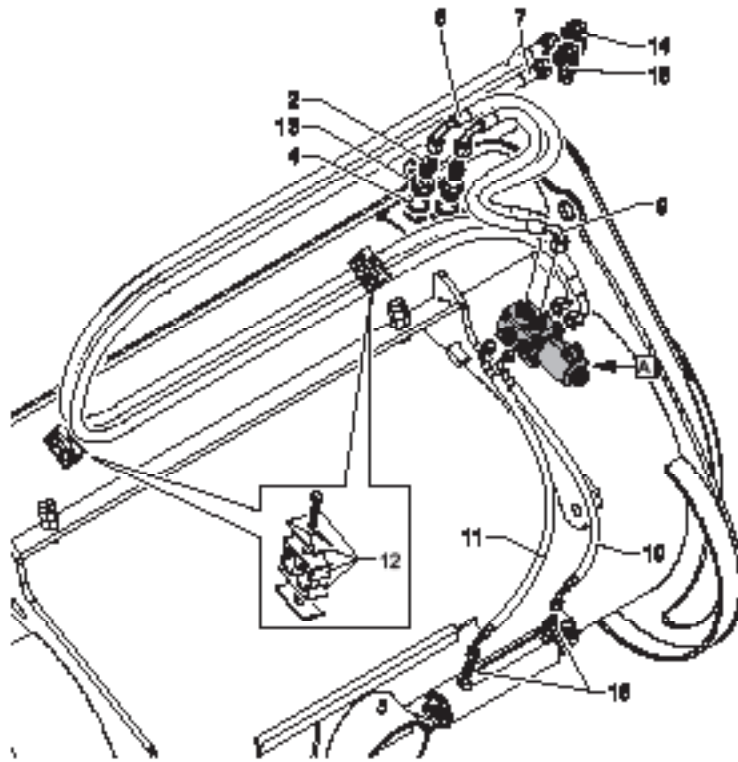


Diagram	Part Number	Qty	Description
1	9007.002	1	SIX WAYS DIVERTER
2	9000.028	8	CONNECTOR 1/2 BSP-7/8 JIC
3	9000.038	2	CONNECTOR 1/2 BSP-3/16 JIC
4	9003.010	2	BONDED SEAL 1"
5	9007.072	2	SOCKET HEAD CAP SCREW M 8X85
6	9007.157	1	SOLENOID 12V DC
7	9008.149	2	FEEDING HOSE 1/2"
8	9008.150	1	MOTOR HOSE 1/2"
9	9008.151	1	MOTOR HOSE 1/2"
10	9008.152	1	UNLOADING HOSE 1/4"
11	9008.153	1	UNLOADING HOSE 1/4"
12	9005.004	2	HOSE DOUBLE COLLAR
13	9000.083	2	ADAPTER M 1"-F 1/2"
14	9004.012	1	FEMALE COUPLER
15	9004.011	1	MALE COUPLER
16	9000.027	2	CONNECTOR 1/4 BSP-3/16 JIC

MixNGo 600 Parts Diagrams

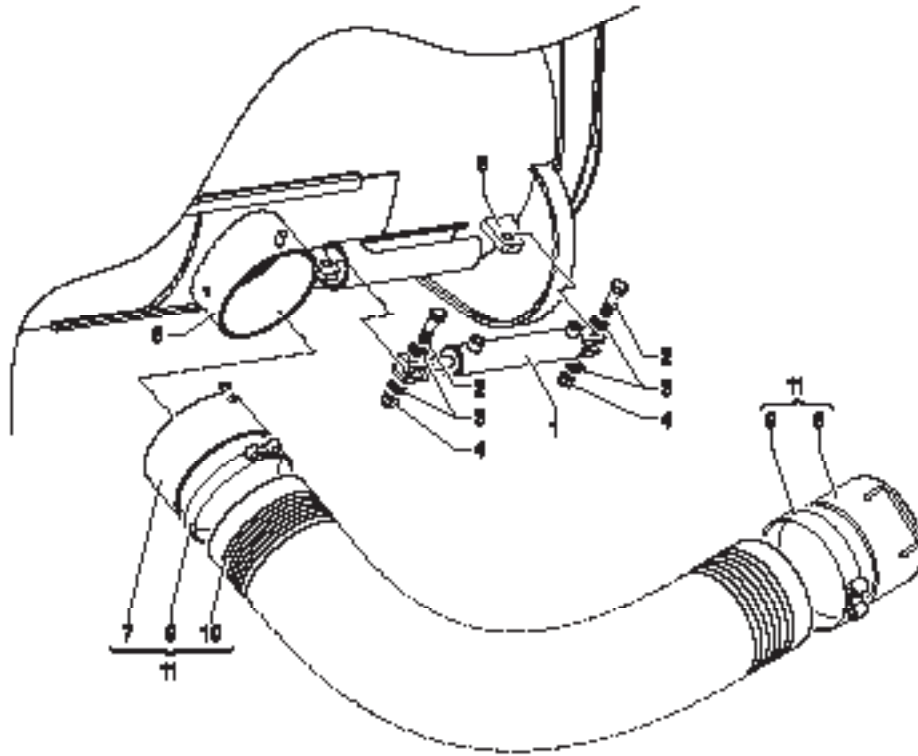


Diagram	Part Number	Qty	Description
1	0000.114	1	HYDRAULIC CYLINDER
2	9007.072	2	HEX SCREW M16X85
3	9007.085	4	WASHER M16
4	9007.073	2	TORQUE NUT M16
5	0000.125	1	PIPE ASSEMBLY
6	5051.048	1	DISCHARGE GATE
7	0001.254	1	PIPE CONNECTING SIDE
8	0001.258	1	PIPE HANDLING SIDE
9	0000.129	2	GOLLAR
10	0000.128	1	PLASTIC PIPE
11	0000.125	1	PIPE ASSEMBLY

MixNGo 600 Parts Diagrams

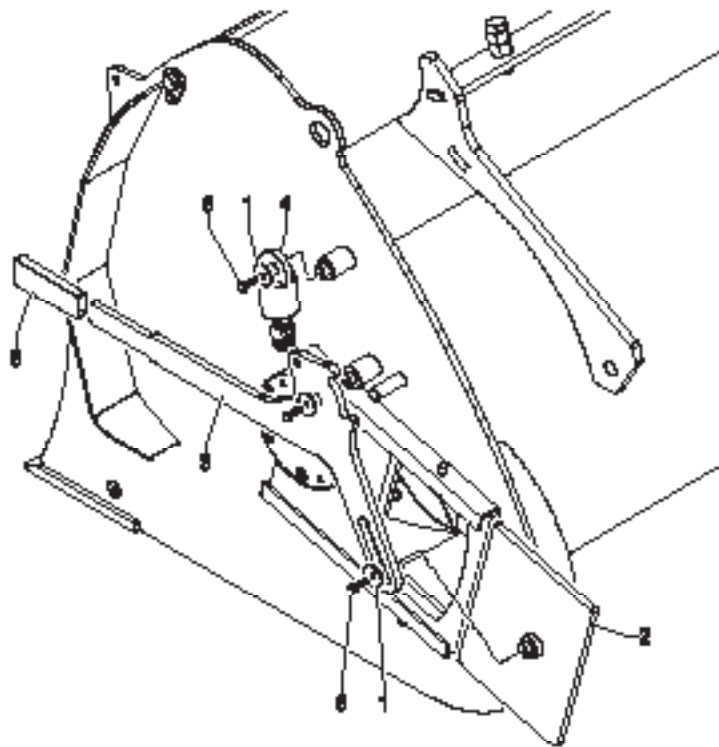


Diagram	Part Number	Qty	Description
1	8007.103	3	LARGE PLAIN WASHER M8
2	5051.021	1	SIDE GATE ASSEMBLY
3	5051.027	1	OPENING LEVER
4	5026.022	1	SPRING UNIT
5	5026.038	1	PVC HANDLE
6	8007.058	3	HEX SCREW M8X25

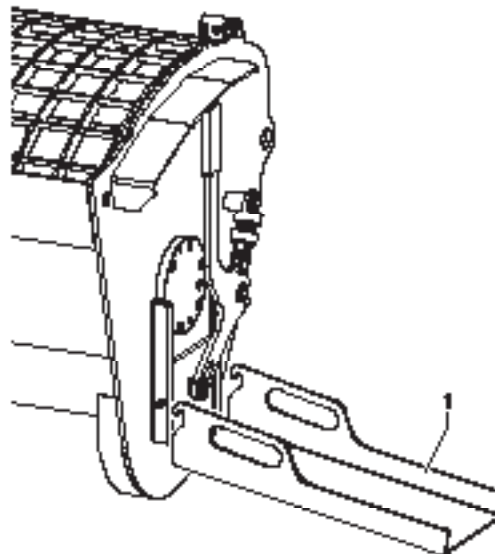


Diagram	Part Number	Qty	Description
1	5051.028	1	DISCHARGE SPOUT

ETERRA WARRANTY STATEMENT

LIMITED PRODUCT WARRANTY

If you find physical defects in the materials or the workmanship used in making the product described in this document; Eterra will repair, or at its option, replace, the product at no charge to you, provided it is returned (freight prepaid, with proof of your purchase from the original reseller) within 1 year of the date of original purchase. Some Eterra products may have longer, partial, or more specific additional warranties, please contact your dealer for more information.

RMA REPLACEMENT PRODUCT WARRANTY

If you find physical defects in the materials or the workmanship used in the refurbishment of an RMA (Return Merchandise Authorization) product replacement; Eterra will repair, or at our option replace the product at no charge to you for a period of 90-days from the date the RMA was created, or until the end of your original warranty period (whichever is greater).

REFURBISHED PRODUCT WARRANTY

If you find physical defects in the materials or the workmanship used in a product sold as a refurbished unit; Eterra will repair, or at our option replace, the product at no charge to you for a period of 90-days from the original date of purchase.

LEGAL TERMS

Eterra warrants that the equipment delivered by seller will be of the kind and quality described in the order or contract and will be free from defects in workmanship or material. Should any failure to conform with this warranty occur, and the buyer having given written notice to seller within 180 days from the date of purchase, the manufacturer shall correct such nonconformity at its option by either repairing the defective part(s) or making available F.O.B. at sellers locations.

This warranty is in lieu of all warranties of merchantability, fitness for particular purpose or any other warranties, express or implied. Correction and nonconformities in the manner and for the period of time provided above, shall constitute fulfilment of all liabilities of seller to buyer, whether based on contract, negligence or otherwise respect to or arising out of such goods.

Neither party shall be liable for special, indirect, or consequential damages. The remedy set forth in this instrument are exclusive, and the liability of seller with respect to any contract or sale of anything done in connection with the same, whether in contract, in tort, under warranty, or otherwise, shall not exceed the price of the goods or part upon which such liability is allegedly based.

All exclusions and limitations of this warranty are made only to the extent permitted by applicable law and shall be of no effect to the extent of conflict with the express requirements of applicable Washington State law.

Notes

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YOUR DEALER IS

Eterra
2316 East Bakerview Rd.
Bellingham,
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