



3-Pt. Cement Mixer

Owner's Manual



⚠ WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #51465

SAVE THESE INSTRUCTIONS

Thank you very much for choosing a Nortrac™ product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This 3-Pt. Cement Mixer is designed for certain applications only. Northern Tool & Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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Intended Use

The NorTrac 3-Pt. Cement Mixer features a chain-driven drum powered by PTO for use in the field.

Technical Specifications

Property	Specification
Ship Weight	253.0 lbs
Empty Drum Volume (cu. ft.)	5
HP	20 - 25
Drum Opening (in.)	18 5/16
Drum Diameter (in.)	35 7/16
Drum Material Type	Steel

Important Safety Information

⚠ WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the cement mixer is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the cement mixer until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this cement mixer in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the cement mixer. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be safer and do a job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

⚠ WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury. Using the cement mixer in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Do not allow the cement mixer to come into contact with an electrical source. The cement mixer is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the cement mixer. Do not allow children to handle the cement mixer.

- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠ WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the cement mixer. Do not use the cement mixer while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.
- Remove keys or wrenches before connecting the tool to an air supply, power supply, or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may cause personal injury.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

⚠ CAUTION

PRODUCT USE AND CARE

- Do not force the cement mixer. Products are safer and do a better job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the cement mixer will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the cement mixer with a damaged part.
- Store the cement mixer when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your cement mixer. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the cement mixer without the guards in place.

Specific Operation Warnings

⚠ WARNING

To prevent serious injury or death:

- Read and understand this Owner's Manual before operating, servicing, or repairing equipment.
- Wear ANSI Z87.1 compliant goggles while operating.
- Stop the engine, remove the key, and set the brake before dismounting the tractor.
- Operate from the tractor's seat only.
- DO NOT reach into the mixer while the barrel is rotating.
- Turn the PTO off before dumping the mixer.
- DO NOT exceed a dumping angle of 25 degrees at the PTO shaft U-joint.
- Never allow riders on the equipment.
- Never place hands or hand held tools (shovels) into the mixer drum while it is turning.
- Keep bystanders at least 25 feet away while operating.
- DO NOT operate or transport on steep inclines.
- DO NOT use if the implement is damaged. Repair before continuing use.
- Park and store on a hard, level surface.
- Store out of reach of children. Not for use by or around children.
- To prevent injury or death, use a tractor equipped with a Roll-Over Protective System (ROPS). Do not paint over, remove, or deface any safety signs or warning signs on your equipment. Observe all safety signs and practice the instruction on them.
- A heavy load can cause instability in driving a tractor (Figure 1). Make sure the front of the tractor is properly counterbalanced with weights. Always drive slowly – especially around turns. An unstable tractor could steer badly and possibly tip over, causing injury or death.

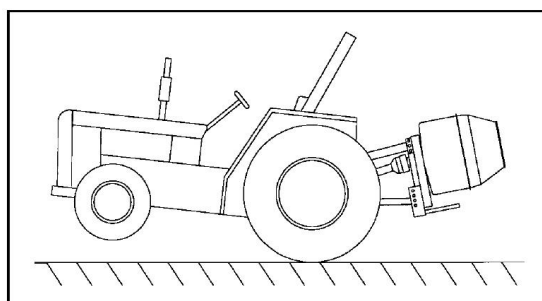


Figure 1. Tractor Stability

- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question, DO NOT TRY IT.
- Do not modify the equipment in any way. Unauthorized modifications may impair the function and/or safety and could affect the life of the equipment.

HIGH PRESSURE HYDRAULIC OIL HAZARD

- Wear ANSI Z87.1 compliant safety goggles and hand protection while operating.
- Check for leaks with cardboard; never use hands.
- Lower load, release pressure, and be sure oil is cool before servicing or adjusting.
- Consult a physician immediately if skin penetration occurs.

ENTANGLEMENT HAZARD

To prevent serious injury or death from rotating driveline:

- DO NOT operate without guards in place and in good condition.
- DO NOT operate higher than 540 RPM.
- Keep hands, feet, clothing, and hair away from moving parts.
- DO NOT operate without driveline securely attached at both ends.
- DO NOT operate without driveline shields that turn freely on driveline.

Before servicing:

- Stop the engine, remove the key and set the brake before dismounting the tractor.
- Disengage the PTO.

Assembly Instructions

This unit is shipped almost completely assembled. Carefully follow instructions for the final assembly. Having all the needed parts and equipment readily at hand will speed up the assembly process and will make the job as safe as possible. Before attempting assembly, check the items that follow.

1. Check for fasteners and pins that were shipped with the mixer. All hardware coming from the factory has been installed in the location where it will be used. If a part or fastener is temporarily removed for assembly reasons, remember where it goes. Keep the parts separated.
2. Have a minimum of 2 people at hand during assembly.
3. Refer to the safety information sections of this manual prior to working on the machine.
4. The pull pins must be installed on the outside of the mixer frame.
5. Attach the mixer to the lower lift arms of the tractor. Use two (2) 7/16" lynch pins (not furnished) to lock the pull pins to the lift arms. **Note: Be sure to always use the stabilizer bars to prevent the mixer sides from swaying.** Failure to use the stabilizer bars on the 3 pt. hitch could cause breakage of the hydraulic top link cylinder or the PTO driveline.
6. Install the special, top link hydraulic cylinder to the tractor, using the pin furnished with the tractor. The hydraulic cylinder is a single-acting cylinder.
7. Attach the hose to the rod end of the top link cylinder. Use a good quality thread sealant. **DO NOT USE TEFLON TAPE.** The ports of the hydraulic top link cylinder have 1/4" threading.
8. The tractor end of the hose will connect to a 1/2" – 14 NPT standard hydraulic quick coupler tip.

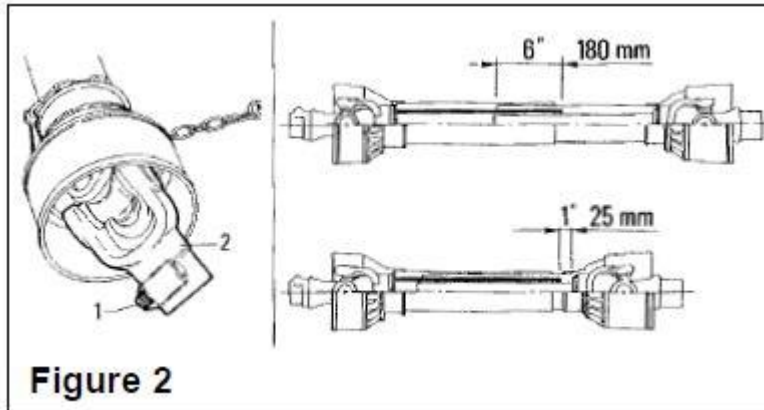
Note: The rod end of the hydraulic cylinder connects to the tractor top link brackets and the cylinder body connects to the adjustable links as shown in the parts view.

Note: The hydraulic top link cylinder is single-acting, it may require adjustment on your tractor valve to operate (check the tractor's Owner's Manual). Use caution when trial dumping the mixer. Allowing the mixer to dump too far may bind the rod end of the hydraulic cylinder and bend the rod. If it appears this will happen, move the hydraulic cylinder to a higher hole position and/or move the lower lift pins to a lower hole position. It is suggested that you start with the center hole positions and work from there.

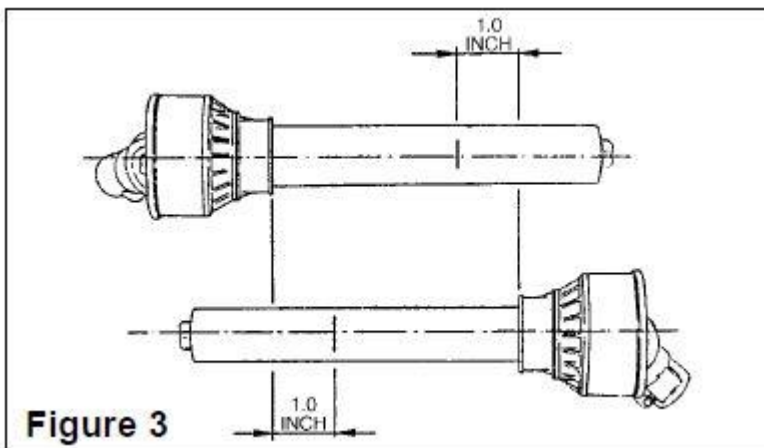
PTO Installation

In some cases it will be necessary to shorten the PTO assembly to match your particular tractor. The following procedure should be used:

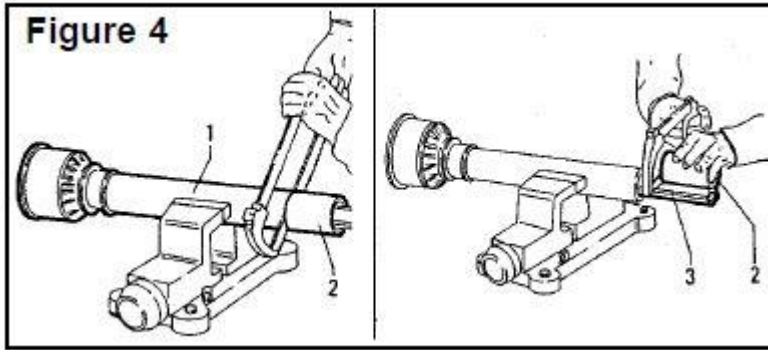
1. Check that the driveline is the correct length (Figure 2). The minimum coupling length (overlap) must be no less than 180 mm (6 inches) in each work position. The driveline travel must still be about 25 mm (1 inch) in the maximum coupling (overlap) position (Figure 2).



2. Always couple the two end yokes of the driveline, check that they are locked in place. To achieve this condition, completely insert the latch pin (Ref. #1, Figure 2) into the groove in the PTO shaft on the tractor. Install the bolt through the yoke and input the shaft on the mixer. An unlocked shaft will slip out of position, causing notable mechanical damage and serious injury to anyone nearby. If the driveline is too long, it should be shortened in the following way:
- Set the machine PTO input shaft at a minimum distance from the tractor PTO stub shaft, then set the tractor brakes, and switch the engine off.
 - Separate the two halves of the driveline. Install the female part into the tractor PTO and the male part on the machine PTO, checking that the position is correct by means of the latch pin.



- Place the two halves of the driveline together, keeping them parallel (Figure 3). Using a felt-tip pen, mark the place where the two halves must be shortened, measuring 1.0 inch from the beginning of each half, as shown in Figure 3. Double check before making any cuts. Cut PTO drivelines cannot be returned.
- Raise and lower the mixer to determine the position with the greatest distance between the PTO shaft and mixer input shaft. Shut the tractor off, leaving the mixer in the position of greatest distance between shafts. **SECURELY BLOCK THE MIXER IN POSITION.**
- Hold the driveline sections parallel to each other and check for a minimum of 6" (15cm) overlap. If the driveline has been marked for cutting, the overlap will be the distance between the two marks. If the driveline has less than the minimum overlap, do not use it. Contact an authorized dealer.



- If the driveline must be cut to a shorter length, clamp it in a well-padded vise to prevent damage to the shield. Cut off the shield where it's marked. Using the removed sections of the shield as a guide, cut off the same amount from the shaft (Figure 4).
- Repeat the procedure on the other driveline half. Remove all burrs and cuttings.
- Apply multi-purpose grease to the inside of the outer (female) driveline section. Assemble the driveline and install on the tractor and the mixer. Pull on each driveline section to be sure the yokes lock into place. Make certain the driveline shielding is in place and in good condition.

⚠ WARNING

When attaching the PTO yoke to the tractor PTO shaft, it is important that spring-activated locking pins or balls operate freely and are seated in the groove on the PTO shaft. A loose shaft could slip off and result in personal injury or damage to equipment.

- Carefully raise and lower the mixer and check to be sure the PTO assembly does not jam. If it does, cut equal amounts from each half of the PTO assembly. If the PTO driveline assembly contacts the swinging drawbar, damage will occur to the driveshaft shield and possibly the driveshaft itself (NOT covered under warranty).
- Check the swinging drawbar of the tractor and make sure the PTO driveline assembly will not contact. The swinging drawbar can be moved forward on some tractors or it can be removed.

Note: This type of damage is **NOT** covered under warranty, as it is totally under the control and the responsibility of the operator.

Before Each Use

Pre-Operation Checklist

- ___ Review and follow the safety rules and safety signs.
- ___ Check that the mixer is properly and securely and attached to the tractor.
- ___ Make sure the driveline spring-activated locking pin or locking balls operate freely and are seated firmly in the tractor's PTO spline groove.
- ___ Lubricate all grease fitting locations. Make sure the PTO shaft slip joint is lubricated.
- ___ Check that all hardware is properly installed.

- ___ Check that all shields and guards are properly installed and in good condition.
- ___ Place the tractor's PTO and transmission in neutral before starting the engine.
- ___ Set the tractor's PTO gear select lever for 540 RPM operation.
- ___ Check that no one enters the area of machine operation. Always work at a safe distance from people, pets, and livestock.
- ___ Know your controls and how to stop the tractor, the engine and the PTO quickly in an emergency. READ THIS MANUAL AND THE ONE PROVIDED WITH YOUR TRACTOR.
- ___ To avoid accident or injury, do not allow anyone to operate this equipment without proper instructions. Any person who operates this equipment must be instructed in and be capable of the safe operation of the tractor, implement, and all controls.
- ___ Check that the PTO driveline shields are securely locked and clear the swinging drawbar.

Operating Instructions

▲ WARNING

Before servicing:

- Stop the engine, remove the key and set the brake before dismounting the tractor.
- Disengage the PTO.

For best mixing, the drum should be inclined upward 10° to 15°. (See Figure 5 on the following page.) Add some water before any cement, sand, or aggregate is put in the drum.

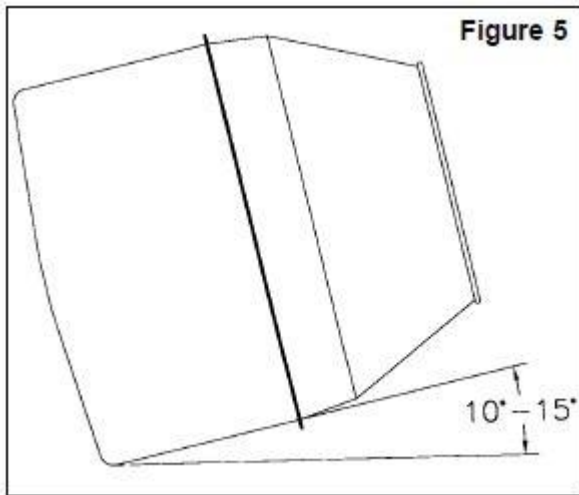
Note: ONLY LOAD THE MIXER WHILE THE DRUM IS TURNING.

The amount of water used per sack of cement is the key to quality concrete. Use 5, 6, or 7 gallons of water per sack of cement with dry sand and dry aggregate, depending on the strength of the concrete required. The less water you use, the stronger the concrete will be, and we suggest that you deduct approximately 1 gallon if the material is wet and approximately 1^{1/2} gallons if it's very wet.

We suggest mixing a trial batch to determine the exact proportions you will want to use. If it's too wet, add more sand and aggregate. If it's too stiff, reduce the amount of sand and aggregate in the next batch, but **never** add more water to a batch once you have established the correct proportions to use.

After the concrete is poured, it is screeded or struck off with a straight edge, like a 2 x 4, and it should then be floated to smooth it. Further troweling or finishing should be delayed until the water sheen has disappeared from the surface. The concrete should be cured at least five days.

To prevent evaporation of mixing water, cover with burlap or straw and keep it damp or cover it with a vapor sealing material to seal in the water and prevent evaporation.



⚠WARNING

Never place hands or hand held tools (like a shovel) into the mixer drum while it is turning. It could catch on the mixer paddles and whip around, possibly injuring the operator.

Dumping

Disengage the PTO before dumping. **Never attempt to dump the mixer with the mixer running – PTO damage will result.** Always dump the mixer slowly to avoid splashing the mixture. Be careful not to let the mixer dump too far and bind the hydraulic cylinder. Use a shovel to remove the last of the mixture.

Transporting

When traveling on public roads, whether at night or during the day, use accessory light and devices for adequate warnings to operators of other vehicles. Comply with all federal, state and local laws.

- Be sure to reduce tractor ground speed when turning; and, leave enough clearance so the mixer does not contact obstacles such as buildings, trees or fences.
- Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
- When traveling over rough or hilly terrain, slow down and use extra care.
- Read all the safety warnings in the front of the manual.

After Each Use

1. At the end of the working season or when the mixer will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated on any of the moving parts.
2. Store the mixer in a dry location. If the mixer must be stored outside, place the drum so that the mouth of the drum is down to prevent water from accumulating in the drum.
3. Make sure the hydraulic top link cylinder has the rod end fully retracted into the cylinder body and that the breather hole on the cylinder body is positioned where water cannot enter. (It is recommended that the hydraulic top link cylinder be stored inside.)
4. Inspect the mixer for loose, damaged, or worn parts and adjust or replace them, if needed.

5. Clean the fittings prior to lubrication. Lubricate grease fittings for every 8 hours of operation. In most cases, one pump of a good grade, multi-purpose grease should be a sufficient amount. (Harsh or dry conditions may require more frequent lubrication.) Do not let excessive grease build up around lubrication points.
6. Collapse the driveshaft as far as possible and store it to prevent ground contact. Place blocks under mixer skids.
7. Sand areas where any paint is chipped or worn and repaint to prevent rust.
8. Always store in a safe place away from children or livestock.

Maintenance

⚠ WARNING

Before servicing the machine, disengage the PTO, engage the parking brake or place the transmission in park, shut off the tractor, and remove the key. Keep clear of rotating parts; stay on the tractor seat until all motion has stopped. Do not get under the machine to make adjustments without securely blocking the implement first.

If work is required while the mixer is attached to the tractor, the mixer must be blocked securely. NEVER trust the tractors' hydraulic system. After mixing concrete, or any material that clings to the side of the drum, be sure to clean thoroughly when finished. When mixing concrete, if there are lapses between batches, it is a good idea to add some water and rinse so that the concrete will not set in the drum. Thoroughly clean the grease zerks before servicing. Dirt mixed with lubricant will rapidly wear parts and destroy bearings. Check the drive chain and if necessary, adjust with the tightener. Carefully check and replace any worn or damaged parts.

Troubleshooting

Problem: Mixer Dumps and Won't Return to Load Position

Possible Scenarios & Solutions:

- The hydraulic hose from the cylinder is not connected to the tractor's hydraulic remote outlet. Connect it.
- The hydraulic top link cylinder on the mixer is single-acting and is incompatible with the tractor's remote outlet valve. Check the manual and tractor dealer to see if a different valve is available.
- There is low oil in the tractor reservoir. Add oil.
- The front of the tractor is headed downhill and the oil level in the reservoir is low. Add oil.

Problem: Mixer Will Not Dump

Possible Scenarios & Solutions:

- The hydraulic top link is not connected properly to the tractor's hydraulic outlet. Connect it.
- The tractor's hydraulic valve is not working properly. Check the tractor's manual.
- There is a low oil level in the tractor's hydraulic reservoir. Check the oil level.
- See the *Mixer Will Not Tilt Enough When Dumping* section and the *Mixer Dumps and Won't Return to Load Position* section.

Problem: Drive Chain Breaks

Possible Scenarios & Solutions:

- Operator is loading the mixer while the drum is stationary, trying to get a loaded drum to turn. Always load into a turning mixer.
- Operator is using a tractor without a live PTO and having to stop/start the mixer drum when shifting the tractor gears. Use another tractor or mix less material for less of a load.
- There is too much load for the mixer. Reduce the amount of material.
- The drive chain is not properly tightened. Tighten it.
- The drive chain is rusted from outdoor weather. Replace the chain and lubricate it regularly.
- The tractor engine's RPM is too high when engaging the PTO. Always slow the engine's RPM when engaging or disengaging the PTO.

Problem: Mixer Will Not Tilt Enough When Dumping

Possible Scenarios & Solutions:

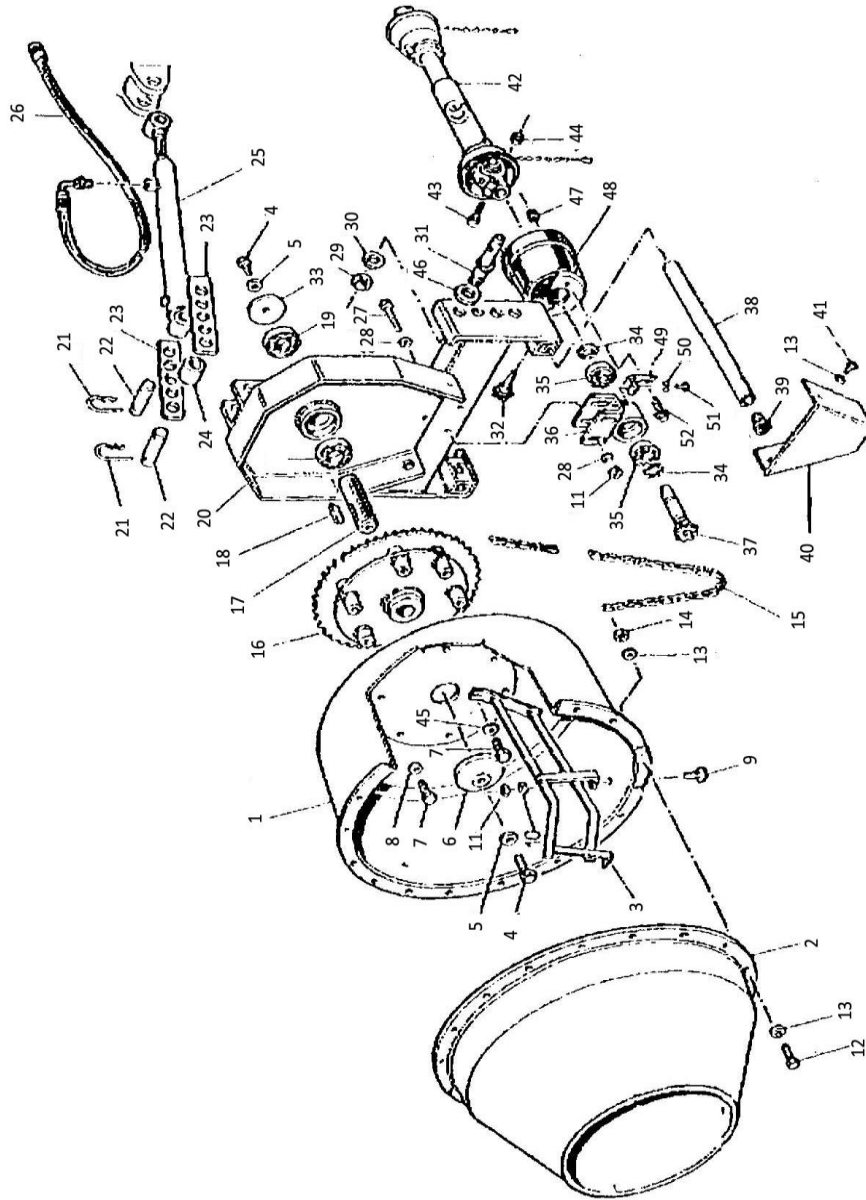
- The location of the pull pin and the top link is not correct. Change the location of the top link connection to the mixer and the location of the pull pins.
- A low profile tractor is being used. Use a different tractor.
- The tractor's front end is positioned downhill at the dumping site. Dump the mix on level ground into a wheelbarrow and transport it to an actual dump site.

Problem: Mixer Shakes Excessively

Possible Scenarios & Solutions:

- The stabilizer straps are not attached to the tractor's 3-point hitch lift arms. Install a stabilizer.
- The mix is too dry and has formed a clump. Add water.
- The material has large chunks. Break up the material before putting it in the mixing drum.
- The tractor's engine is idling too slowly. Increase the engine's RPM slightly.
- The PTO driveline is operating at a severe angle. Raise or lower the 3-point hitch so the driveline is operating with a minimum angle.

Parts Diagram



Parts List

Reference Number	Description	Qty	Reference Number	Description	Qty
1	Drum, Main	1	27	Bolt, M10x90 Gr.8.8 Hex Head	2
2	Drum, Cone	1	28	Washer, M10x30	4
3	Paddle, Mixing	3	29	Nut, M24 Hex	2
4	Bolt, M14x30 Gr.8.8 Hex Head	2	30	Washer, M24 Spring lock	2
5	Washer, M14 External Star	2	31	Pin, Pull	2
6	Washer, Inner	1	32	Knob, M8x20	2
7	Bolt, M12x25 Gr.8.8 Hex Head	6	33	Washer, Drum Shaft Retainer	1
8	Flat Washer, M12	3	34	Snap Ring, E D 30	2
9	Bolt, M12x25 Gr.8.8 Hex Head	6	35	Bearing, Ball 6200-2RS	2
10	Flat Washer, M12	6	36	Support, Drive Shaft	1
11	Nut, M12 Hex	8	37	Shaft, Drive w/ Sprocket	1
12	Bolt, M8x16 Gr.8.8 Hex Head	18	38	Tube, Stand	2
13	Flat Washer, M8	36	39	Plug, Stand Tube	2
14	Nut, M8 Hex	18	40	Guard, Drive Shaft	1
15	Chain, #40 (142 Pitches)	1	41	Bolt, M8x16 Gr.8.8 Hex Head	2
16	Sprocket Assembly, Drum	1	42	PTO Shaft 'CE' Standard	1
17	Key, 14x9x50mm	1	43	Bolt, M10x50 Socket Head	1
18	Shaft, Drum	1	44	Nut, M10 Hex Nylock	1
19	Bearing, Ball 6209-2RS	2	45	Flat Washer, M12x30	3
20	Frame	1	46	Flat Washer, M24	2
21	Cotter Pin	4	47	Nut, M8 Whiz Flange Hex	2
22	Pin, Cylinder	2	48	Guard, PTO	1
23	Bar, Cylinder Attachment	2	49	Support, PTO Guard	2
24	Bushing, Cylinder	1	50	Flat Washer, M8	2
25	Cylinder, Hydraulic Top Link	1	51	Bolt, M8x16 Gr.8.8 Hex Head	2
26	Hose, Hydraulic	1	52	Bolt, M8x20 Gr.8.8 Hex Head	2

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and or improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the NorTrac product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of one year from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.



Distributed by:

Northern Tool & Equipment Company, Inc.

Burnsville, Minnesota 55306

www.northerntool.com

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