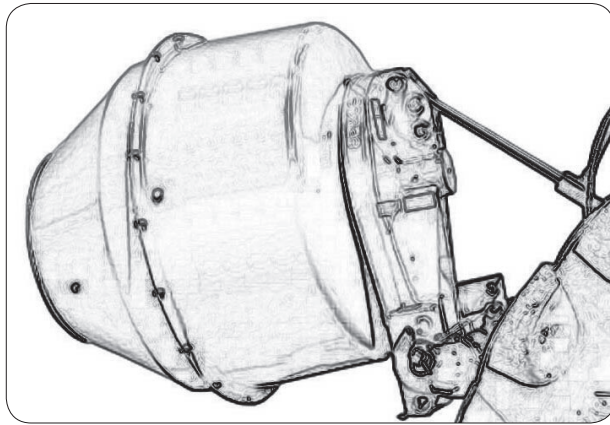




MIXER



Assembly, Operation, & Parts Manual For Model 80-320

March 2011

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1 INTRODUCTION

This manual contains valuable information about your new Gearmore Mixer. Please read the following instructions and refer to them when required.

This manual contains valuable information about your Mixer. It has been carefully prepared to give you helpful suggestions for operating, adjustments, servicing, and ordering repair parts.

Keep this manual in a convenient place for quick and easy reference. Study it carefully. You have purchased a dependable and sturdy mixer, but only by proper care and operation can you expect to receive the service and long life designed and built into it.

Sometime in the future your mixer may need new parts to replace those that are worn or broken. If so, go to your dealer and provide him with the model and part number.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the driver's seat and facing in the direction of travel.

1.1 PURCHASER'S RESPONSIBILITY

It is the responsibility of the purchaser and/or operator to.....

- Read and understand the information contained in this manual.
- Operate, lubricate, assemble and maintain the equipment in accordance with all instructions and safety procedures in this manual.
- Inspect the equipment and replace or repair any parts that are damaged or worn which under continued operation would cause damage, wear to other parts, or cause a safety hazard.
- Return the equipment or parts to the authorized dealer, from where it was purchased, for service or replacement of defective parts that are covered by warranty. (The factory may inspect equipment or parts before warranty claims are honored.)
- Payment of all costs incurred by the dealer for traveling to or transporting the equipment for warranty inspection and or claims.

NAME: _____

PURCHASED FROM: _____

DATE OF PURCHASE: _____

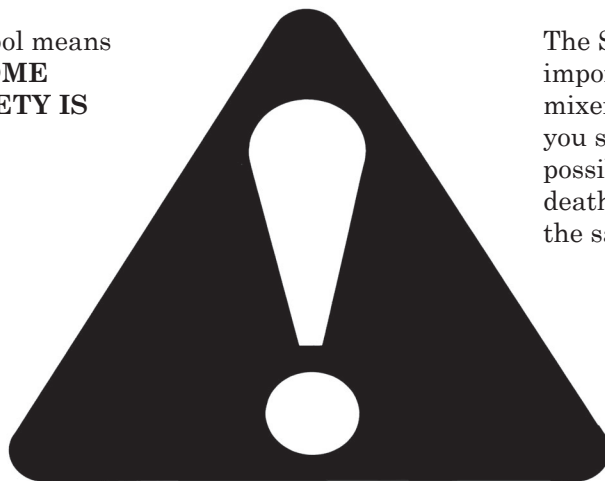
MODEL NUMBER: _____

SERIAL NUMBER: _____

2 SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on the mixer and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill

Accidents Cost

Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

SI NO LEE INGLES, PIDA AYUDA A AIGUIEN QUE SI LO LEA PARA QUE LE TRADUZCA LAS MIDIDAS DE SEGURIDAD.

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer.

2.1 GENERAL SAFETY

YOU are responsible for the **SAFE** operation and maintenance of your mixer. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the mixer be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the mixer.

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Mixer owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually there after per OSHA (Occupational Safety and Health Administration) regulation 1928.57.
- The most important safety feature on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- **DO NOT** modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **Think SAFETY! Work SAFELY!**

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, or adjusting the mixer.



2. Have a first-aid kit available for use should the need arise and know how to use it.

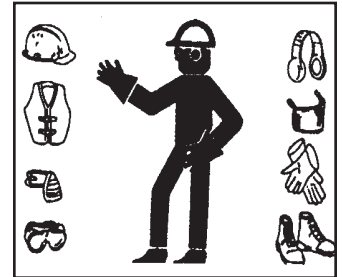


3. Have a fire extinguisher available for use should the need arise and know how to use it.



4. Wear appropriate protective gear. This list includes but is not limited to:

- A hard hat
- Protective shoes with slip resistant soles
- Protective goggles, glasses or face shield
- Heavy gloves
- Protective clothing



5. Install and secure all guards before starting.

6. **DO NOT** allow riders.

7. Wear suitable ear protection for prolonged exposure to excessive noise.



8. Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.


9. Clear the area of people, especially small children, before starting.


10. Review safety related items annually with all personnel who will be operating or maintaining the mixer.

2.2 OPERATIONAL SAFETY GUIDELINES

Safety of the operator and bystanders is one of the main concerns in designing and developing a mixer. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you, follow them.

- In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should **never** be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
- Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
- **NEVER** use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works. Review the safety instructions with all users annually.**

 **WARNING**



Before operating your machine, stop and read this owners manual. Do not attempt to operate the unit until you fully understand the material covered in this manual. Without the knowledge contained in this manual, injury or death can result.

- This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with farm machinery and trained in this equipment's operations. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.
- Always operate tractor PTO at engine idle. Disengage tractor PTO and shift into neutral before attempting to start engine.
- Read and observe all safety decals on the tractor and mixer.
- **NEVER** allow anyone, other than the operator, within 25 feet of machine while it is in operation.
- **DO NOT** stop or start suddenly when going uphill or downhill. Avoid operation on steep slopes. Be alert for holes in terrain and other hidden hazards. Always drive slowly over rough ground. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Be careful when changing directions on slopes.
- **NEVER** exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Take all possible precautions when leaving tractor unattended. Disengage PTO, lower mixer, shift into neutral and set parking brake, stop engine and remove key from ignition.
- Front tractor weights or front tire ballast should be used to enhance front end stability on small tractors.
- **NEVER** put hands or hand held tools in mixer while PTO is engaged and tube is turning. Failure to follow warning can result in personal injury or damage to the mixer.

Think SAFETY! Work SAFELY!

2.3 SAFETY TRAINING

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.

It has been said, "***The best safety feature is an informed, careful operator.***" We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.



Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembly or operating, to acquaint yourself with the machines. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to operating:

- a. Reads and understands the operator's manuals.
- b. Is instructed in safe and proper use.

Should ownership of the equipment be transferred, this manual must also be transferred.

Know your controls and how to stop tractor, engine and machine quickly in an emergency. Read this manual and the one provided with your tractor.

Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will operate the machinery. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

For any part of this manual that you do not understand, contact your dealer or Gearmore, Inc.

2.4 SAFETY SIGNS

1. Your mixer comes equipped with all safety decals in place. They were designed to help you safely operate your implement. Read and follow their directions.
2. Keep all safety decals clean and legible at all times.
3. Replace all damaged or missing decals. To order new decals go to your Gearmore dealer and refer to the parts section "*Safety Decals*" for the proper decal part numbers.
4. Replaced parts that displayed a safety sign should also display the current sign.

How To Install Safety Signs:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50° F (10° C).
- Determine exact position before you remove the backing paper. (*See Decal Placement Section*)
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

2.5 TRANSPORT SAFETY

1. Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
2. The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
3. At all times, when driving the tractor and equipment on the road or highway under 20 mph (32 kph) use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
4. Plan your route to avoid heavy traffic.
5. Always install transport locks, pins, or brackets before transporting.
6. Do not drink and drive.
7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
8. Turn into curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces.
9. Use extreme care and maintain minimum ground when operating close to ditches or fences. Be careful when turning sharp corners.
10. Never allow riders on either tractor or mixer.

2.8 STORAGE SAFETY

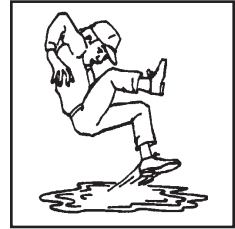
1. Following operation, or when unhooking the mixer, stop the tractor, set the brakes, disengage the PTO, shut off the engine and remove the ignition keys.
2. Store the unit in an area away from human activity.
3. Do not park equipment where it can be exposed to direct contact to livestock for long periods of time. Damage and livestock injury could result.
4. Make sure all parked machines are on a hard, level surface and engage all safety devices.

2.6 MAINTENANCE SAFETY

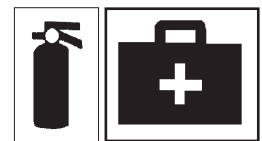
1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

2. Follow good shop practices.

- Keep service area clean and dry.
- Be sure electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.



3. Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
4. Before working on this machine, disengage PTO, shut off the engine, set the brakes, and remove the ignition key. Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
5. Use personal protection devices such as eye, hand, and hearing protectors, when performing any service or maintenance work.
6. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts **must** be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
7. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment



8. When completing a maintenance or service function, be sure all tools, parts, and service equipment are removed from mixer, and make sure all safety shields and devices are installed before placing unit in service.

3 SAFETY DECALS

The types of safety signs and their part numbers are shown in the illustrations below. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS. Should any decal become damaged or lost, it is the responsibility of the owner to replace it. Additional decals may be obtained from your dealer or Gearmore, Inc.



308.192



308.191



308.201



308.206



308.206

IMPORTANT - NOTICE

ATTENZIONE

- 1 - Ingrassare prima dell'uso.
- 2 - Controllare la chiusura di tutte le viti.
- 3 - Verificare la corretta lunghezza del cardano, assicurarsi che abbia un accoppiamento di tubi di almeno 12 cm e che l'angolo di lavoro non superi i 35.
- 4 - Verificare periodicamente la corretta tensione della catena.

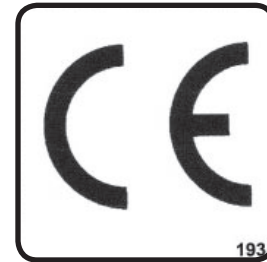
WARNING

- 1 - Grease before using.
- 2 - Verify the fastening of all the screws.
- 3 - Check the correct length of the PTO, ensuring that the insert length between the two halves of the shaft is not less than 4.73" and also that the PTO doesn't operate with angulations over 35.
- 4 - Periodically verify the correct strain of the chain.

Made in Italy by Cosmo s.r.l.

308.229

308.229

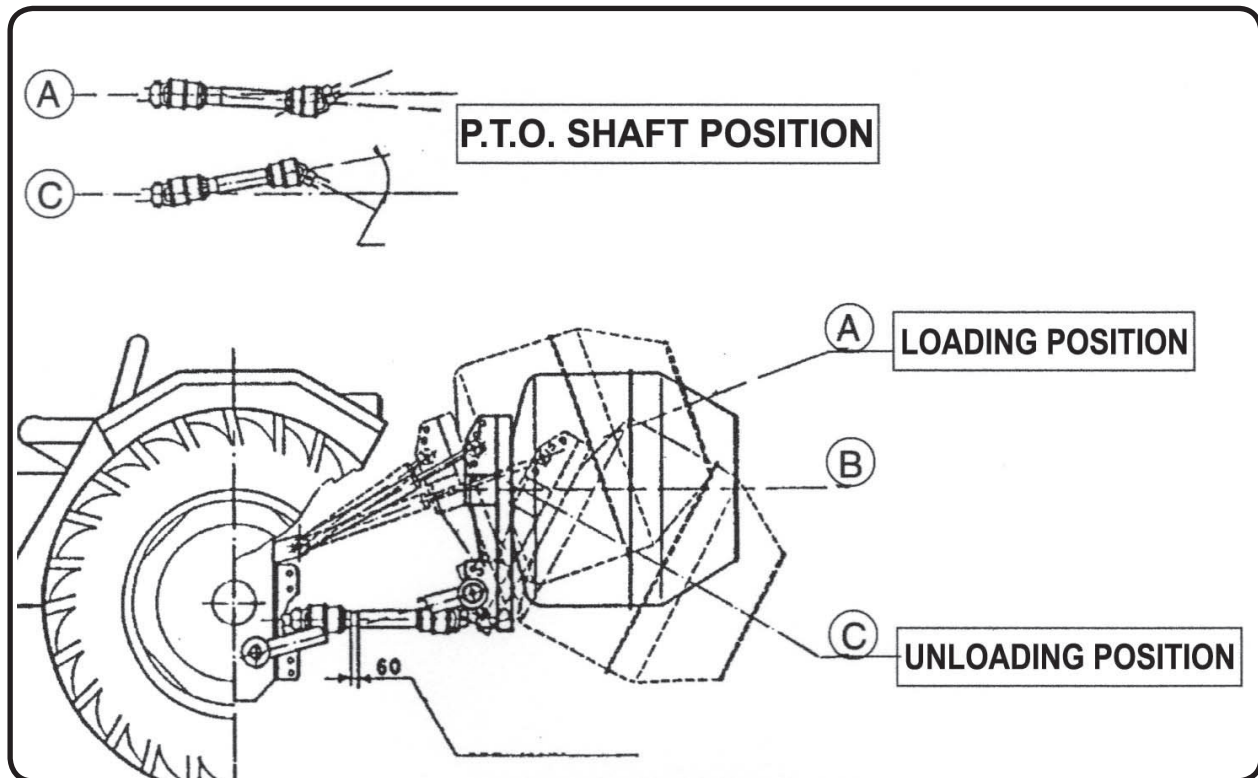


308.193

PART NO.	DECAL DESCRIPTION
308.036	Mixer Label
308.229	Notice Label
308.192	Rotation Care Label
308.201	Working Care Label
308.193	CE Label
308.206	Tractor Side Label
308.206	Mixer Side Label

REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer.

4 TECHNICAL DATA



Avoid absolutely operation at an angle of the PTO shaft greater than the maximum of 35° indicated on the decals.

Attachment to transmission shaft:	30 mm with split pin
Attachment flexible hydraulic tube:	M18 x 1.5
Hydraulic pressure for operation:	Maximum 140/Min 50 BARS
<i>(Note: The BAR is almost equal to 1 atmosphere = 14lbs/sq. ins.)</i>	
Transmission shaft rotation velocity:	Minimum 250 Max 300 r.p.m.
Transmission ratio:	10/1
Capacity of mix - tub:	84.5 gallons (320 litres)
Quantity of cement:	1/2 Sack
Diameter of loading mouth:	1.45 feet (440 mm)
Overall dimensions -	
Width:	2.82 feet (860 mm)
Length:	3.05 feet (930 mm)
Height:	3.12 feet (950 mm)
Weight (empty):	230 lbs. (87 kg)

4.1 SIZING PTO SHAFT

STEP 1:

Cutting the PTO shaft to length.

NOTE: Be sure to cut equal lengths of each PTO shaft section. Clamp end of PTO shaft in a vice and cut off shield where marked. (*Figure 1-A and 1-B*).

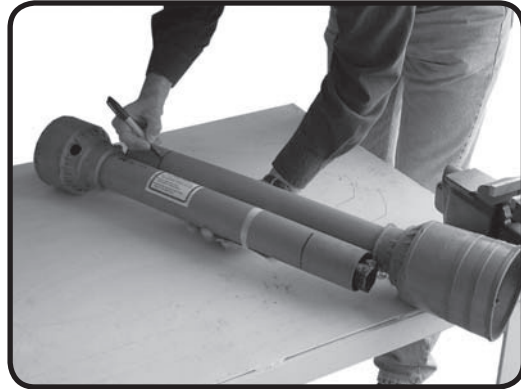


Figure 1-A

STEP 2:

Using cut section of the shield as a guide cut shaft off the same amount. (*Figure 2*)

STEP 3:

Repeat steps 1 and 2 for other PTO shaft section.

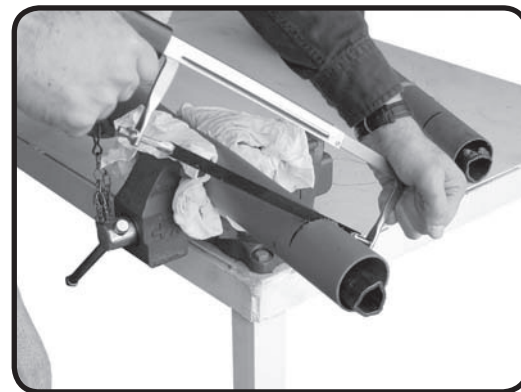


Figure 1-B

STEP 4:

Use a file to deburr PTO shafts. Clean up all chips, burrs, and filings from both ends of the PTO shaft.

NOTE: If you shear the bolt that attaches the PTO shaft to the gearbox; replace with a grade 2 bolt only. Replacement with another grade of bolt will void your warranty and may cause terminal damage to the PTO shaft, gearbox, or tractor.



Figure 2

5 TRAINING



To avoid accidents 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 unit, its attachments and all controls.

DO NOT allow children to operate machine, or adults to operate it without proper instructions.

Read this operator's manual and the manual provided with your tractor carefully and follow all directions and procedures.

Know your controls. Learn how to stop the tractor engine and mixer quickly in case of an emergency.

5.1 BEFORE OPERATING THE MIXER

1. Inspect for damage and loose or missing parts. Make sure all fittings and drive components are secure.
2. Lubrication - *See Lubrication Section*
3. Check drum for any foreign objects.
4. Operate only in daylight or good artificial light.
5. Ensure implements are properly mounted, adjusted and in good operating condition.
6. Ensure all PTO and other safety shielding is properly installed and in good condition.
7. Read and observe *all safety decals* on the tractor and implements.



WARNING

ALWAYS wear relatively tight and belted clothing when operating implement. Loose clothing should not be worn, as it could get caught in the moving parts or controls. Wear sturdy, rough soled work shoes and protective equipment for eyes, hands, hearing, and head. **Never** operate tractor or implements in bare feet, sandals, or sneakers.

Never permit any person other than the operator to ride on board the tractor at any time.

DO NOT allow riders on implement at any time.

6 ASSEMBLY & OPERATION

The only assembly required is bolting the two drum halves together and installing mixing paddles.

6.1 MOUNT MIXER

1. Attach the mixer to the tractor lower lift arms. Raise the 3-point hitch until the tractor PTO shaft and the mixer input shaft are horizontal.
2. Attach the hydraulic cylinder to the tractor top link bracket.
3. Place the mixer in the dump position and attach the hydraulic cylinder to the mixer.
4. After attaching the hydraulic cylinder, retract it so the mixer is in the load position.
5. Measure the PTO shaft, as it may be necessary to cut it to the correct length and then connect to the mixer and tractor. (*See Page 9*)
6. Take up any side movement with your check chains and your mixer is ready for use.

IMPORTANT NOTE:

When operating the mixer, use the hydraulic cylinder for loading and dumping functions. The 3-point hitch should always be left at the position where the driveshaft is in a horizontal position. The driveshaft must not be operated at angles of more than 35°.

When making concrete, for the best mix we advise introducing material in the following order:

1. Water
2. Concrete
3. Gravel

6.2 OPERATION



WARNING: Never operate mixer without gloves and eye protection. Always wear relatively tight fitting clothing.

1. Make sure the mixer is properly assembled and secure to 3-point hitch.
2. Make sure there are no loose or missing parts.
3. If possible, lower mixer to the ground for better stability.
NOTE: Make sure the driveline is at no more than a 35° angle.
4. Engage tractor PTO at engine idle.
5. Place material to be mixed in tub.
NOTE: When making concrete, for best mix, we advise introducing material in the following order - water, concrete and then gravel.
6. When mixture is ready, disengage PTO and use hydraulic cylinder to dump.

7 MAINTENANCE

7.1 LUBRICATION

DRIVESHAFT -

The driveshaft must be lubricated before the mixer is put into use. After that, grease *every 8 hours*. It is also necessary from time to time to untelescope the driveshaft to clean and re-grease tubings.

CHAIN DRIVE -

Put heavy coating of grease on chain drive to reduce wear and noise.

7.2 CLEANING AND STORAGE

1. Wash drum with water after each use.
2. **NEVER** let hardened concrete build up on paddles and in the drum.
3. Check mixer for needed repairs before using again.
4. Following operation, or when unhooking the mixer, stop the tractor, set the brakes, disengage the PTO, shut off the engine and remove the ignition keys.
5. Store the unit in an area away from human activity.
6. Do not park equipment where it can be exposed to direct contact to livestock for long periods of time. Damage and livestock injury could result.
7. Make sure all parked machines are on a hard, level surface and engage all safety devices.

7.3 SAFETY TIPS

Always wear relatively tight and belted clothing when operating mixer, Loose clothing should not be worn, as it could get caught in the moving parts or controls of mixer.

Mixer should be operated only by qualified personnel.

When starting mixer, always maintain a safe distance from moving parts.

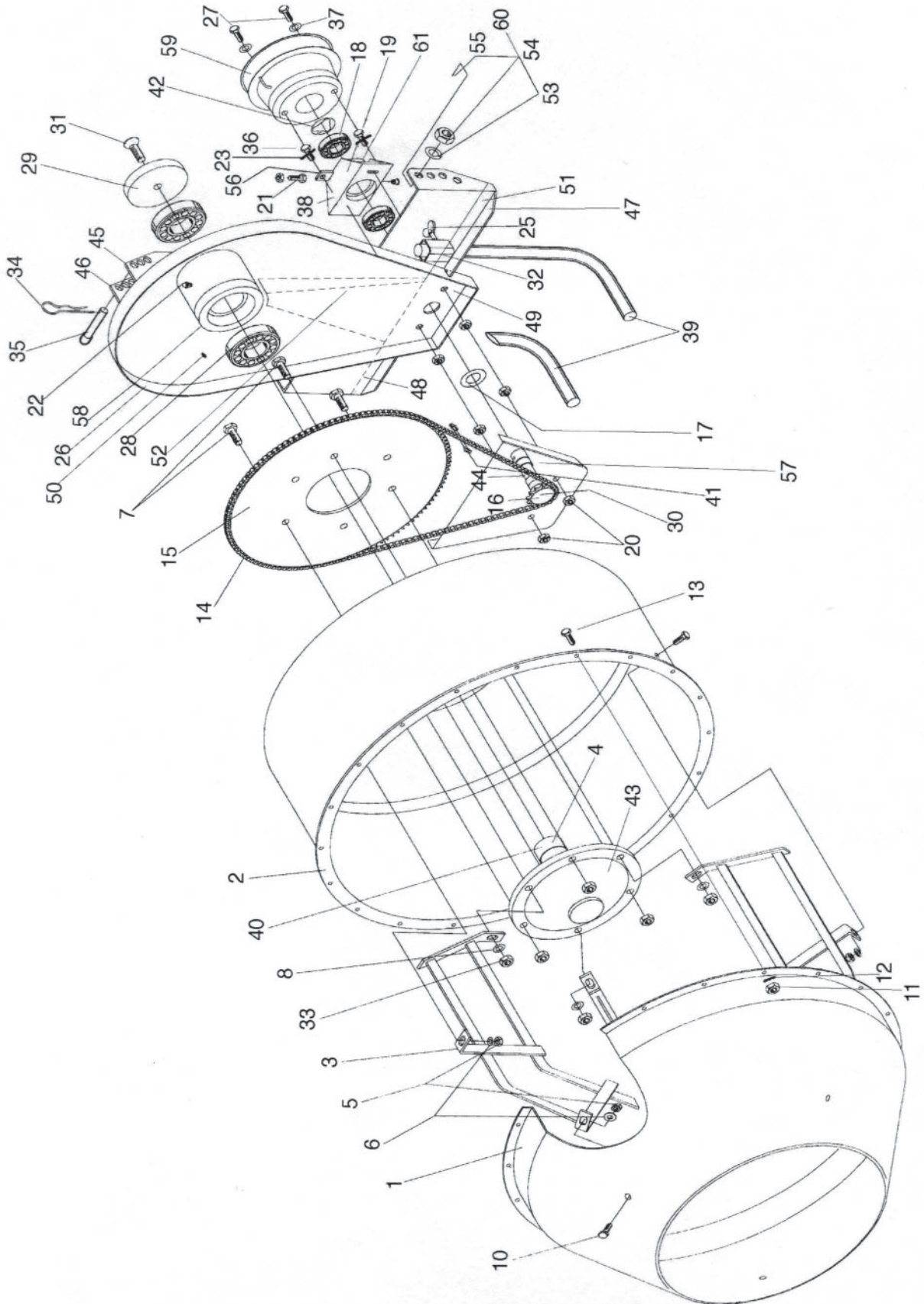
Never leave mixer unattended while it is running.

Keep hands, feet and clothing away from all moving parts.

DO NOT operate this equipment unless all guards and safety devices are attached and in place.

8 REPLACEMENT PARTS

8.1 MIXER ASSEMBLY



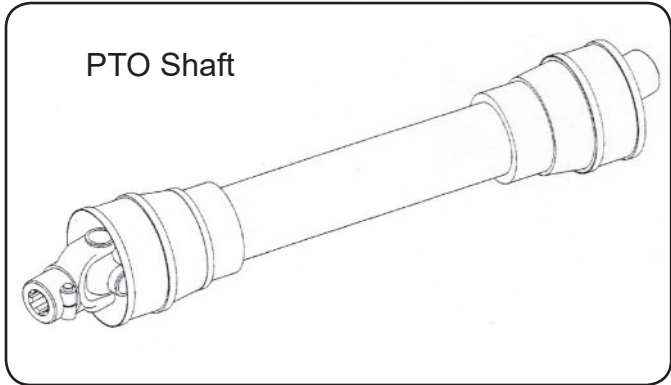
8.1 MIXER ASSEMBLY (Continued)

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	609.001	Forward Spout
2	1	609.002	Tub Base
3	3	619.001	Agitator
4	1	633.016	Central Driveshaft
5	6	301.010	Nut M10 UNI 5588
6	12	303.015	Washer 10 UNI 6592
7	6	300.008	Screw 14 x 40 UNI 5739
8	9	303.010	Washer 15 UNI 6592
10	6	300.003	Screw 10 x 25 UNI 5739
11	18	301.012	Nut M8 UNI 5588
12	36	303.007	Washer 8 x 17 UNI 6592
13	18	300.028	Screw 8 x 16 UNI 5739
14	1	333.002	Drive Chain 1/2"
15	1	333.001	Crown Gear 1/2" Teeth 114
16	1	316.001	Pinion Gear 1/2" Teeth 13
17	1	313.009	Clip Ring E30 UNI 3653
18	2	310.004	Ball Bearing 6006
19	1	606.040	Overall Chain Support
20	7	301.002	Nut M12 UNI 5588
21	1	300.024	Screw 12 x 35 UNI 5739
22	2	306.002	Grease Nipple M8
23	2	303.026	Washer 13 x 25 UNI 6592
25	2	302.003	Block Knob
26	1	639.004	Main Frame
27	2	300.026	Screw 6 x 16 UNI 5739
28	2	310.005	Ball Bearing 6209
29	1	614.001	Cover
30	1	316.002	Overall Pinion Gear Z13 1/2" Complete w/Shaft
31	1	300.041	Screw 16 x 30 UNI 5933
32	2	606.042	Square Support 40 x 40 x 4 For Support Leg Tube
33	9	301.003	Nut M14 UNI 5588
34	1	307.001	Grip Clip 4.5 mm
35	1	633.014	Lift Pin - Third Point
36	2	300.009	Screw 12 x 70 UNI 5739
37	2	303.016	Washer 6 x 18 UNI 6593
38	1	606.030	Bushing Support for Input Shaft
39	2	606.041	Support Leg
40	1	633.005	Overall Central Driveshaft Complete w/Disc
41	1	333.003	Chain Junction Link 1/2"
42	1	313.008	Clip Ring d25
43	1	606.029	Back Support
44	1	323.007	Input Shaft

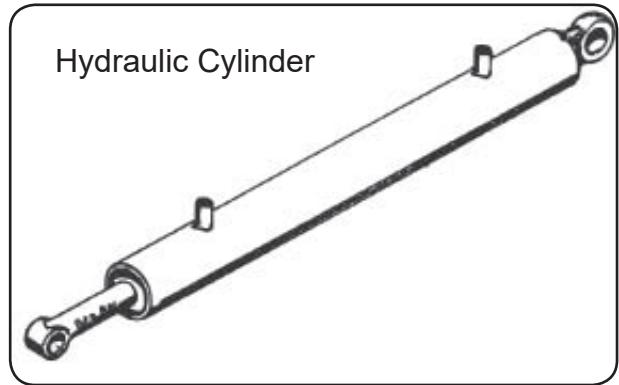
8.1 MIXER ASSEMBLY (Continued)

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
45	1	606.034	Left Third Point Plate
46	1	606.035	Right Third Point Plate
47	1	606.032	Left Lift Plate
48	1	606.033	Right Lift Plate
49	1	606.031	Support Plate Input Shaft
50	1	613.010	Overall Frame
51	1	606.043	Back Crossbar 40 x 40 x 4
52	1	606.036	Support Plate Third Point
53	2	303.006	Glover Washer Lift Pin
54	2	301.020	Nut Lift Pin
55	2	633.015	Lift Pin
56	2	606.039	Bracket Support CE Shield
57	1	639.006	Small Protective Plate
58	1	325.019	Bearings Bushing Shaft Crown
59	1	304.006	CE Shield
60	2	633.008	Overall Complete Lift Pin
61	1	325.020	Bushing For Input Shaft

8.2 PTO SHAFT & HYDRAULIC CYLINDER



Part No. 311.002



Part No. 623.004

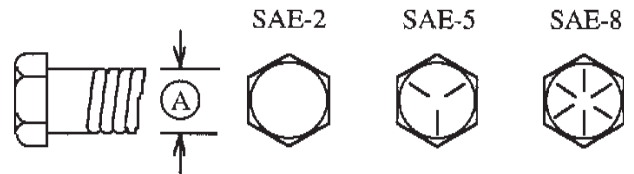
8.3 TORQUE SPECIFICATIONS

CHECKING BOLT TORQUE

The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque *					
	SAE 2		SAE 5		SAE 8	
	N.m	(lb-ft)	N.m	(lb-ft)	N.m	(lb-ft)
1/4"	8	(6)	12	(9)	17	(12)
5/16"	13	(10)	25	(19)	36	(27)
3/8"	27	(20)	45	(33)	63	(45)
7/16"	41	(30)	72	(53)	100	(75)
1/2"	61	(45)	110	(80)	155	(115)
9/16"	95	(70)	155	(115)	220	(165)
5/8"	128	(95)	215	(160)	305	(220)
3/4"	225	(165)	390	(290)	540	(400)
7/8"	230	(170)	570	(420)	880	(650)
1"	345	(225)	850	(630)	1320	(970)



Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and capscrews are identified by their head markings.

9 LIMITED WARRANTY



GEARMORE, INC., warrants each new Gearmore product to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase to the original purchaser. This warranty shall not apply to implements or parts that have been subject to misuse, negligence, accident, or that have been altered in any way.

Our obligation shall be limited to repairing or replacement of any part, provided that such part is returned within thirty (30) days from date of failure to Gearmore through the dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting or any other expenses, for any other reasons.

Gearmore in no way warrants engines, tires, or other trade accessories, since these items are warranted separately by these respective manufacturers.

Gearmore reserves the right to make improvements in design or changes in specification at any time, without incurring any obligations to owners or units previously sold.

Please be advised that all warranty work done by your dealer must be approved by Gearmore before work begins.

GEARMORE, INC.
13477 Benson Ave.
Chino, CA 91710

Always refer to and heed machine operating warning decals on machine.

The serial number of this product is stored in our computer database, thus submitting a warranty registration card is not required.