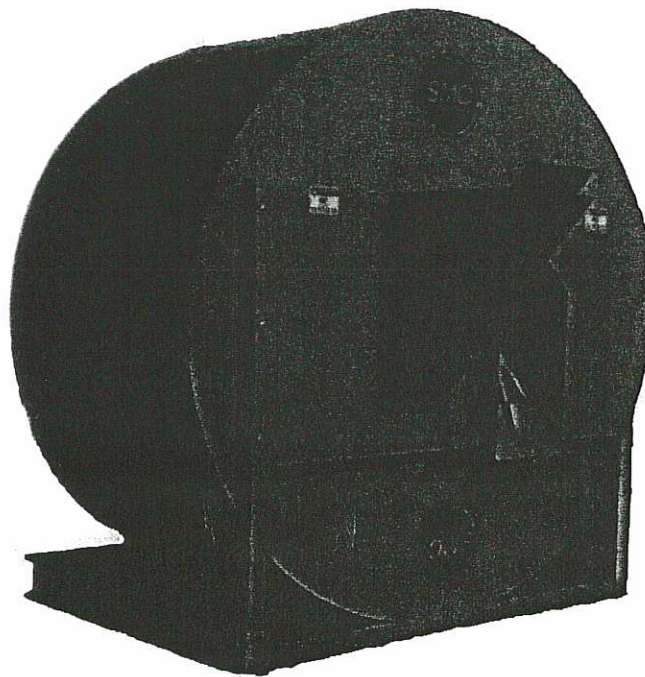




TUMBLE MIXERS



OWNER'S MANUAL
MODELS 400, 690, 1090, 1630, & 1830

BERG EQUIPMENT CORPORATION
2700 W. Veterans Parkway, Marshfield, WI 54449
Toll Free: 1-800-494-1738. FAX: 715-387-6777
E-mail: bergeq@tznet.com Website: www.bergequipment.com.

11/22/02

Mixer serial # 206338

Gear Box model # GR-B-852-25-R



CAUTION

SAFETY INSTRUCTIONS

CAUTION is a safety alert symbol. This equilateral triangle with rounded corners and an exclamation point is a general reminder for good safety practices and should be heeded.

1. KEEP ALL SHIELDS IN PLACE.
2. DISCONNECT POWER SOURCE TO ADJUST AND SERVICE.
3. MAKE SURE EVERYONE IS CLEAR OF EQUIPMENT BEFORE APPLYING POWER.
4. KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER DRIVEN PARTS IN MOTION.

FAILURE TO HEED MAY
RESULT IN INJURY



DANGER

DANGER is also a safety alert symbol but denotes a more serious specific potential hazard.



KEEP HANDS AWAY
FROM CLOSE CLEARANCE AREAS

The purpose of these symbols is to provide a standard which means **ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED.**

Keep all unauthorized people, children and animals away from mixer. Position mixer with safety in mind. Keep all shields in place. Use fence or barricade or elevate mixer above feed area.

Be aware of silage gases (especially odorless gases) during and after filling the mixer. Vent properly before entering.

MAKE ABSOLUTELY SURE no one can turn on power when you are working on the mixer.

Only persons who have read and understand this manual and safety precautions are qualified to operate this mixer.

TO THE OWNER

The purpose of this manual is to assist you in realizing all the benefits anticipated when you purchased your new Berg Sandmark equipment.

The way you operate this product and the care you give it, will have much to do with its successful performance.

This manual has been prepared and illustrated to give you as much information as possible.

It is important that you read the entire manual carefully before operating your new equipment, and keep it handy for future reference. Your Berg Sandmark correspondent will be happy to answer any further questions, or refer them to us at Berg Sandmark Corporation.

DATE OF PURCHASE _____

PURCHASER NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

SUPPLIER NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

MODEL NUMBER _____ SERIAL NUMBER _____

Warranty is VOID unless the above Warranty Registration form is returned to Berg Sandmark Corporation within ten (10) days from the date of purchase.

STATEMENT OF LIMITED WARRANTY

BERG SANDMARK CORPORATION warranties its products to be free of defective material and workmanship for a period of one (1) year of normal operation from the date of delivery to the original owner.

This warranty does not apply to any product that has been altered without the manufacturer's authorization, nor to expendable items.

Berg Sandmark will require the return of all parts claimed defective. Such parts may be returned after written approval from Berg Sandmark "Transportation Prepaid". Berg Sandmark will, at its option, repair or replace the defective part, free of charge, F.O.B. Marshfield, WI.

No labor charges will be accepted for warranty work without specific written approval from Berg Sandmark Corporation.

Vendor items will be warrantied only if found defective by the original manufacturer and will be subject only to the allowance provided by the vendor.

Berg Sandmark reserves the right to make improvements in its material and design without notice and is not obligated to incorporate the same improvements into equipment previously manufactured.

Berg Sandmark will not be liable for delays due to warranty concerns. Berg Sandmark is not obligated under any warranty other than as published above.

OWNERS RESPONSIBILITY

The owner is obligated to operate the equipment in a responsible manner, and is responsible for costs associated with safety and preventive maintenance.

WARRANTY EXCEPTIONS

This warranty does not apply to the following items:

A) Electric motors are warrantied for a period of 12 months and are subject to the terms and conditions set by the motor manufacturer.

B) Electronic scales are warrantied for a period of 12 months and are subject to the terms and conditions set by the scale manufacturer.

FREIGHT CARRIER DAMAGE

Claims for equipment damaged in transit should be referred to the freight carrier. Visible damage should be reported immediately. Concealed damage, as soon as possible in accordance with freight carrier regulations.

INSTALLATION INSTRUCTIONS

1. Choose a site near your feed storage area where the minimum length of conveyor is required.
2. The site must be level across the front and rear of mixer frame to assure there is no twist on the frame. The frame may rub on the drum if the mixer is not level.
3. Conveyors must not touch mixer.
4. Consult your electrician for wiring requirements. Motor is supplied by installer.
5. Grease the two main bearings on the drum shaft.
6. Check for loose bolts, set screws, etc. that may have vibrated loose during transportation.
7. Check drum alignment with respect to the front frame.
8. Check gear box oil level.

TROUBLE SHOOTING

<u>Sympton</u>	<u>Possible Cause</u>	<u>Corrective Measure</u>
1. The mixer will not empty.	a. Wrong drum rotation b. Chutes reversed c. Out-chute plugged d. Drum rotation too slow	a. Correct rotation b. Reverse chutes c. Adjust rubber paddles d. Increase RPM of drum by using large motor pulley
2. Drum rubs on front frame	a. Out of adjustment b. Mixer is not level c. Overfilling	a. Correct front frame adjustment b. Level c. Do not overfill mixer
3. Seal Leaks	a. Seal worn b. Mixer not level c. Overfilling d. Out of adjustment	a. Replace seal b. Level c. Do not overfill mixer d. Correct front frame adjustment
4. Mixer won't start	a. Motor too small b. Defective wiring c. Power outage d. Oil too thick in gear box	a. Replace b. Replace c. Check fuses/breaker d. For temps lower than 15 F use synthetic oil
5. Mixer won't fill	a. Wrong drum rotation b. Chute reversed c. In-chute plugged d. Drum rotation too slow	a. Correct drum rotation b. Reverse chute c. Unplug d. Replace motor pulley with larger size

OPERATING INSTRUCTIONS

1. Start mixer before loading. (Avoid starting mixer under a load).
2. When loading ingredients, always load low volume material first. Example: Salt and trace mineral supplements should be added before silage and haylage.
3. Know the capacity of your mixer and **DO NOT OVERLOAD IT!** Since forage varies in density, the only way to know your mixer's capacity, is through experience. (See the enclosed feed and grain density chart).
4. Allow mixer to mix three (3) minutes after the last ingredient has been loaded.
5. Open the door on the outchute. If forage bridges over the chute and prevents even discharge, the rubber paddles must be adjusted to more aggressively wipe the outchute clean.
6. Continue to run until all material is unloaded. Feed should be tumbled over magnets to collect any possible hardware.

FEEDS AND GRAINS

Table 534-2. Storage requirements of feeds.

<u>MATERIAL</u>	<u>LB/CU FT</u>	<u>CU. FT/TON</u>
Alfalfa meal	15	134
Alfalfa, chopped	12	170
Barley meal	28	72
Beet pulp, dried	15	134
Bran	16	125
Brewers Grains, dry	15	134
Buckwheat bran	15	134
Buckwheat middlings	23	88
Coconut meal	38	53
Concentrates, typical	45	45
Corn meal	38	53
Corn & cob meal, dry	36	56
Cotton seed meal	38	53
Distillers' grains, dry	15	134
Gluten feed	33	61
Gluten meal	46	45
Hominy meal	28	72
Kaffir meal	27	74
Lime	60	33
Linseed meal	23	88
Malt sprouts	15	134
Mixed mill feed (bran & middlings)	15	134
Molasses	78	26
Molasses beet pulp	20	100
Meat scraps	34	59
Oats, ground	18-20	111-100
Pellets, mixed feed	35-40	57-60
Pellets, ground hay	38-45	53-44
Rice bran	20	100
Rice polish	31	65
Rye meal	38	53
Salt, fine	50	40
Soybean meal	42	48
Tankage	32	63
Wheat bran	14	154
Wheat feed, mixed	15	134
Wheat, ground	45	46
Wheat middlings (Std)	20	100
Wheat screenings	27	77

SOURCE: Based primarily on California Agricultural Circular 517.

MAINTENANCE INSTRUCTIONS

Daily:

Visually check for preventive maintenance and safety.
Correct or replace items of concern.

Monthly:

Grease bearing (Do Not Overgrease). Using a multi-purpose grease.

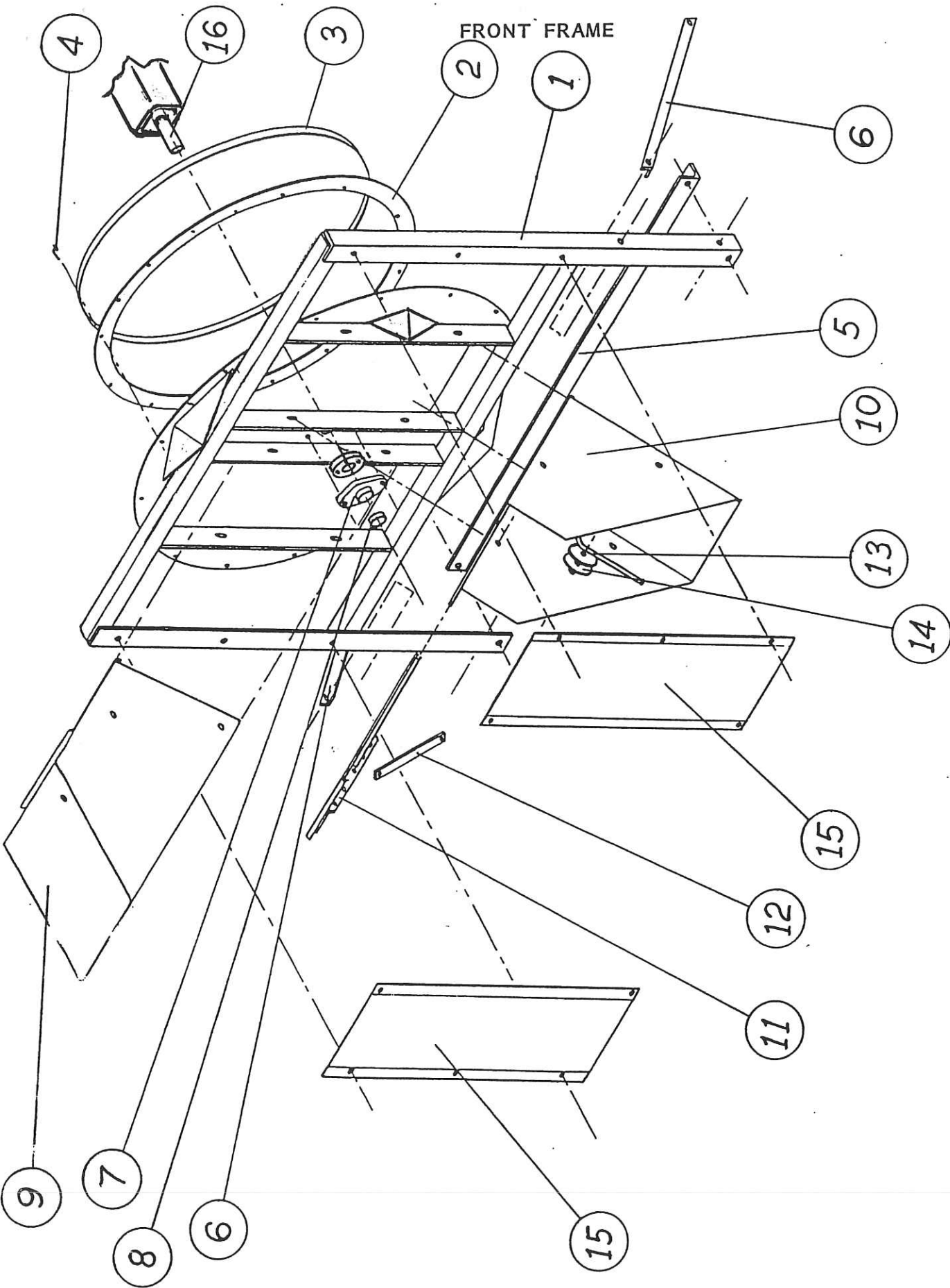
Check roller chains, lube with roller chain lube or #30 oil, as needed.

Check gear box oil level. Synthetic gear lube oil.

N O T I C E

BERG SANDMARK CORPORATION recommends that you check for loose bolts, set screws and alignment THAT MAY HAVE VIBRATED loose during transportation.

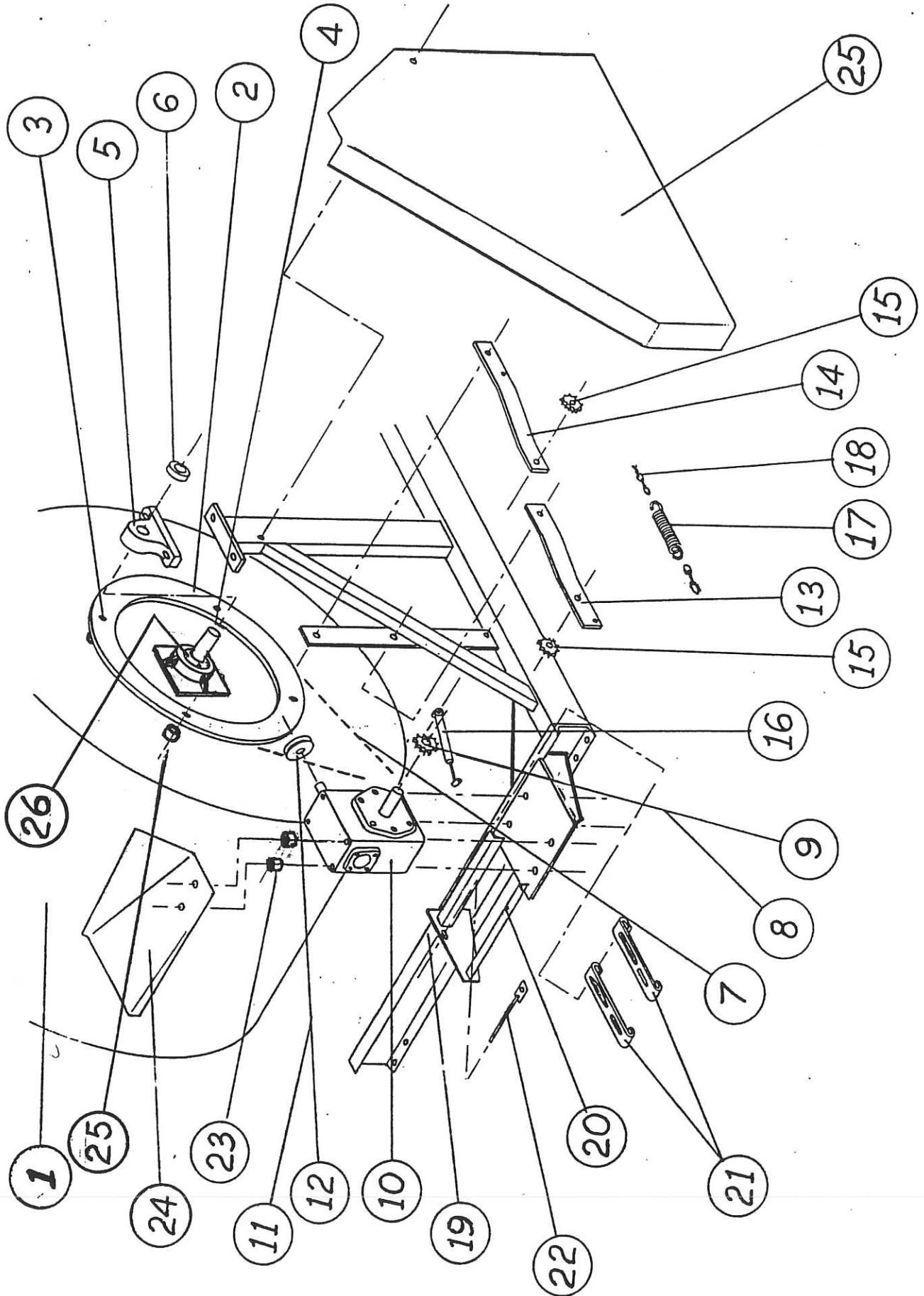
Be sure to check these regularly during your preventive maintenance program.



MIXER FRONT FRAME PARTS

<u>REF.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	Front Frame Assembly.....	1
1A	Bolt.....	2
1B	Washer, Flat.....	2
1C	Washer, Lock.....	2
1D	Nut.....	2
2	Seal Ring, Urethane.....	1
3	Seal Ring Clamp.....	1
4	"J" Bolts.....	20
4A	Nut 1/4".....	20
5	Support Angle.....	1
5A	Bolt.....	2
5B	Washer, Flat.....	2
5C	Washer, Lock.....	2
5D	Nut.....	2
6	Brace.....	2
6A	Bolt.....	4
6B	Washer, Flat.....	2
6C	Washer, Lock.....	4
6D	Nut.....	4
7	Flange Bearing.....	1
7A	Bolt.....	2
7B	Washer, Flat.....	2
7C	Washer, Lock.....	2
7D	Nut.....	2
8	Set Collar.....	2
9	In Chute.....	1
9A	Bolt.....	4
9B	Washer, Flat.....	8
9C	Washer, Lock.....	4
9D	Nut.....	4
10	Out Chute.....	1
10A	Bolt.....	4
10B	Washer, Flat.....	8
10C	Washer, Lock.....	4
10D	Nut.....	4
11	Out Chute Door.....	1
12	Door Link.....	1
12A	Bolt.....	2
12B	Washer, Flat.....	4
12C	Nut.....	4
13	Door Handle.....	1
13A	Bolt.....	1
13B	Washer, Flat.....	2
13C	Nut.....	2
14	Friction Disk.....	1
15	Front Frame Shield.....	2
15A	Bolt, Self-Tapping.....	As Req'd
16	Drum Shaft w/stop.....	1

MAIN FRAME



MIXER MAIN FRAME, DRUM & DRIVE

<u>REF.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	Drum Assembly.....	1
1A	Grain Paddles.....	4
1B	Bolts.....	16
1C	Washers, Flat.....	16
1D	Washers, Lock.....	16
1E	Nuts.....	16
1F	Forage Paddles.....	4
1G	Retainer.....	4
1H	"U" Bolts.....	8
1I	Washer, Lock.....	16
1J	Nuts.....	16
2	Sprocket Driven.....	1
3	Bolt.....	As Req'd
3A	Spacers.....	As Req'd
3B	Washers, Lock.....	As Req'd
3C	Washers, Flat.....	As Req'd
3D	Nuts.....	As Req'd
4	Drum Shaft.....	1
5	Pillow Block Bearing.....	1
6	Set Collar.....	1
7	Chain.....	1
8	Drive Sprocket.....	1
9	Tapered Bushing.....	1
10	Gear Box.....	1
10A	Bolts.....	4
10B	Washers, Lock.....	4
10C	Washers, Flat.....	4
11	Pulley.....	1
12	Tapered Bushing.....	1
13	Idler Arm Lower.....	1
13A	Bolts.....	1
13B	Washer, Flat.....	2
13C	Nuts.....	2
14	Idler Arm Upper.....	1
14A	Bolts.....	1
14B	Washer, Flat.....	2
14C	Nuts.....	2
15	Idler Sprocket w/bearing.....	2
15A	Bolts.....	2
15B	Washer, Flat.....	As Req'd
15C	Washer, Lock.....	2
15D	Nuts.....	2
16	Stabilizer.....	1
16A	Bolts.....	2
16B	Washer, Flat.....	4
16C	Washer, Lock.....	2
16D	Nuts.....	2

MIXER FRAME, DRUM & DRIVE (continued)

<u>REF.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
17	Spring.....	1
18	Spring Links.....	As Req'd
18A	Bolts.....	2
18B	Washer, Flat.....	As Req'd
18C	Washer, Lock.....	2
18D	Nuts.....	2
19	Main Frame Assembly.....	1
20	Motor Mount Assembly.....	1
21	Motor Mount Slides.....	1
22	Belt Tightner.....	2
22A	Washers, Flat.....	2
22B	Washers, Lock.....	2
22C	Nuts.....	2
23	Belt Shield Spacer.....	1
24	Belt Shield.....	1
24A	Bolts.....	2
24B	Washers, Flat.....	2
24C	Washers, Lock.....	2
25	Chain Shield.....	1
25A	Bolts, Self-Tapping.....	As Req'd
25B	Washers, Flat.....	As Req'd

NOT ILLUSTRATED

26	Motor Pulley.....	1
27	Motor Belt.....	1
28	Tapered Bushing.....	1
29	Motor (supplied by installer.....	1