

OPERATION AND SERVICE MANUAL FOR 250 & 500 NUTRI-BLENDER



WELCOME to the fast-growing family of owners of MIX-MILL equipment.

This booklet contains complete operating instructions and service information on the MIX-MILL NUTRI-BLENDER.

Call your dealer or distributor for parts and service.

If for some reason local service is not available, call or write:

MIX-MILL 713 W LAFEVER ST. OSSIAN, IN 46777

(260) 622-7831 (800) 537-6260

FAX: (260) 622-4798



TO THE NEW OWNER

READ THIS MANUAL. It is the key to the successful and satisfactory installation, operation, and care of your Nutri –Blender. It may prevent a needless, expensive service call and prolong the life of your machine.

READ YOUR WARRANTY CAREFULLY.

For your own protection make sure pre-delivery, installation, and operation procedures are completed and followed correctly.

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WARRANTY CERTIFICATE

Mix-Mill Manufacturing Company warrants each new product of its manufacture when purchased from an authorized representative for a period of one year from the date of delivery to the Purchaser-User. This warranty shall apply to all parts and workmanship (except products or components not manufactured by Mix-Mill®) which shall appear to Mix-Mill® to have been defective in manufacture. Mix-Mill's sole and entire obligation under such warranty shall be satisfied by shipment to the Purchaser-User without charge (except for transportation costs which shall be paid by Purchaser-User), of the part or parts returned for inspection and parts intended to replace those acknowledged by Mix-Mill® to be defective. This warranty shall not apply and shall be void under the following conditions:

- (1) IF THE PRODUCT IS TRANSPORTED FROM ORIGINAL INSTALLATION SITE.
- (2) IF THE PRODUCT IS INSTALLED OR ASSEMBLED BY OTHER THAN FACTORY-TRAINED, AUTHORIZED DISTRIBUTOR SERVICE PERSONNEL.
- (3) IF ANY PART OF THE PRODUCT HAS BEEN ALTERED, MODIFIED, OR CHANGED, EXCEPT AT MIX-MILL'S FACTORY OR IS AUTHORIZED BY MIX-MILL® IN WRITING.
- (4) IF ATTACHMENTS OR DEVICES UNSUITABLE TO THE PRODUCT HAVE BEEN USED ON OR IN CONJUNCTION WITH THE PRODUCT.
- (5) IF THE PRODUCT HAS NOT BEEN INSTALLED, OPERATED, HANDLED, OR SERVICED IN ACCORDANCE WITH THE APPROPRIATE INSTRUCTION MANUAL.

Mix-Mill* reserves the right to make changes in design or improvements in its products without any obligation whatsoever to prior Purchaser-Users of such products.

Mix-Mill* will pass on to a Purchaser-User only such warranty as it shall receive on products or components not of its manufacture from the manufacturer or supplier thereof.

This warranty is expressly in lieu of any other express or implied warranties, including any implied warranty of merchantability of fitness, and of any other obligation on the part of Mix-Mill®, and may not be altered, modified, or changed in any way except by a writing signed by an officer of Mix-Mill®.

Mix-Mill³ shall not be liable for any loss or damage, directly or indirectly, arising from the use of its products or for any special or consequential damages of any nature.

BE A SAFE OPERATOR

AVOID ACCIDENTS

Most accidents, whether they occur in industry, on the farm, at home, or on the highway, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason most accidents can be prevented by recognizing the real cause and doing something about it before the accident occurs.

Regardless of the care used in the design and construction of any type of equipment, there are many conditions that can not be completely safeguarded against without interfering with reasonable accessibility and efficient operation.

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT.

THE COMPLETE OBSERVANCE OF ONE SIMPLE RULE WOULD PREVENT MANY THOUSANDS OF SERIOUS INJURIES EACH YEAR. THAT RULE IS:

NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IT IS IN MOTION!

-NATIONAL SAFETY COUNCIL

Mix-Mill Mfg. Co. has made every effort to provide safe equipment. However, the following precautions should be carefully observed!

- Disconnect main service switch before removing any housing covers or electrical boxes or switches.
- (2) Ground the Nutri-Blender frame to a ground rod.
- (3) Ground any augers to feeders where livestock might contact either augers or feeders.
- (4) Keep all shields and covers in place.

NUTRI-BLENDER FEATURES

Model 911A4 - 250# Model 912A4-500#

- A. MIXING DRUM Cylindrical mixing drum equipped with mixing vanes.
 - (1) Each drum capacity 4.08 cubic feet (2/3 full).
 - (2) @ 62 lbs/cubic feet 250 lbs.
 - (3) Rotating speed 8-1/2 rpm

NOTE: 500# Nutri-Blender consists of two 250# drums connected by drum straps.

B. DRUM COVER

- (1) Hinged, secured by container latches.
- (2) Adjustable slides with holes for unloading.
- (3) Neoprene gasket for sealing.
- (4) Adjustment of inner baffle adjusts the flow of premix into the hopper.

C. HOPPER

Material empties from the drum to the hopper bottom where it is taken away via a cross auger.

D. HOPPER COVER

- (1) Protects operator from rotating drum.
- (2) Has interlocking switch which stops drum rotation when cover is opened.
- (3) Support arm keeps hopper cover in open position for filling.

E. AUGER CORNER

- (1) Receives material from cross auger and delivers to the vertical auger.
- (2) Cleanout access hole to facilitate cleaning of augers.

F. NUTRI-BLENDER MOTOR

- (1) Drives drum.
- (2) Drives cross auger.

G. PANEL

Controls Nutri-Blender motor and additional delivery motor.

H. TIMER

Two-hour timer controls the time desired for mixing.

I. SWITCH (Toggle DPDT)

The Nutri-Blender motor is controlled by the "Mix-Off-Unload" toggle switch. When on "Mix," the timer and interlock switch are switched into the circuit. When on "Unload," the timer is switched out and a control hopper can be switched in.

J. DRUM DRIVE

Drum speed reduction is obtained by a three-step reduction.

- (a) 2" to 14" vee-belt drive from motor to auger shaft.
- (b) 10-tooth to 54-tooth roller chain drive from auger shaft to jack shaft.
- (c) 10-tooth to 54-tooth roller chain drive from jack shaft to drum.
- (d) One-way bearing in intermediate drive to prevent rollback during intermittent unloading cycle.

K. TOP STOP SWITCH

Assures drum location for filling.

L. VERTICAL AUGER MOTOR

- (1) Drives 8', 10', 15', and 20' lengths of auger.
- (2) Runs only in unload switch position.

M. DIMENSIONS

- (1) Height: 42"
- (2) Width: 28"
- (3) Length:

250#

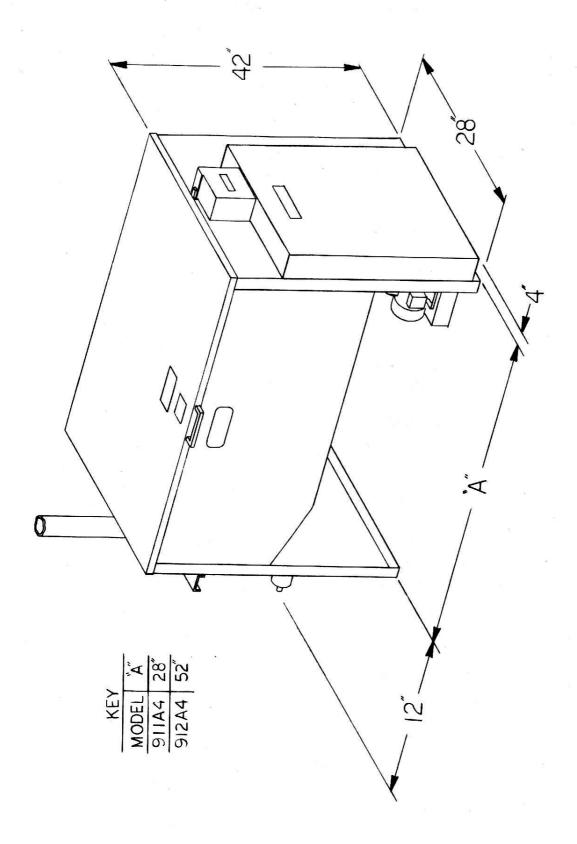
- (a) Hopper and chainguard: 32"
- (b) Hopper, chainguard, and auger corner: 44"

500#

- (a) Hopper and chainguard: 56"
- (b) Hopper, chainguard, and auger corner: 68"
- (4) Top of vertical (8') discharge auger: 9'4"

NOTE: Vertical auger and motor are not included with Nutri-Blender. A drive kit for the vertical auger is supplied.

For installations inside the Farm Feed Factory (20-40 ton), an 8' vertical auger (92000571) is recommended.



NUTRI-BLENDER MAJOR DIMENSIONS

I. LOCATION:

- A. Locate Nutri-Blender where it will not be directly exposed to weather elements.
- B. If located in a Farm Feed Factory, it is recommended that the Nutri-Blender be placed to the left and rear of the CX model Mix-Mill (facing knobs) and to the right and rear of the "D" model Mix-Mill (facing knobs), to facilitate discharging into a control hopper or premix hopper.
- C. The lean-to room is a convenient place for the Nutri-Blender and bags of supplement. Lean-to room or additional building is required with 500# Nutri-Blender.

II. INSTALLATION:

- A. Position the auger tube so that the discharge is in the desired location and tighten tube clamp.
- B. Clamp vertical auger to side of Nutri-Blender with half clamp. A 9/16" diameter hole may have to be drilled in auger support channel if existing holes do not give desired angle.
 - CAUTION: The vertical auger should not be operated when tipped toward rear of machine. The elbow may be operated vertically or tipped forward. If required, the auger corner can be disassembled and turned end for end to accommodate tipping vertical auger towards rear of machine.

WARNING: Before making any type of incoming power connections with Nutri-Blender, latch down drum door(s).

D. Wiring

- (1) Wire according to wiring diagrams, using appropriate size of wire per local codes.
- (2) Connect only to circuit that is protected by circuit breakers or fuses rated at local code recommendations.

III. OPERATING INSTRUCTIONS:

- A. Mixing Cycle
 - (1) Open Nutri-Blender hood, supporting the hood in open position with the rod which is attached to the underside of the hood. Make sure drum doors are latched. Then move selector switch to "Mix." This rotates the drum until it is in a desirable position for filling. Now unlatch and open the drum door.
 - (2) In order to insure proper mixing, the drum should not be filled more than two-thirds full. The method of loading is not important as the mixing baffles insure the complete movement of the ingredients. After the Nutri-Blender is filled, be sure to latch door securely (latches are adjustable).
 - (3) Close unloading slide(s) and hood.
 - (4) The Nutri-Blender is now ready to operate. Time required for mixing is dependent upon flowability of material and percentage of drum fill. When using a basic premix consisting primarily of ground limestone, dicalcium phosphate and salt, the following mixing time schedule may be followed:

9

mining time seriodate in	any be removed.	
Weight/Single Drum	Time	
200 lbs	10 minutes	
250 lbs	15 minutes	
300 lbs	20 minutes	
350 lbs	25 minutes	

Make appropriate mixing-time adjustments for other materials used in the premix formula. Be sure drum is never filled more than two-thirds full.

B. Unload Cycle

- (1) After proper mix has been obtained, open unload slide(s) so that holes in slide and door are in line. A less-than-full opening may be appropriate for free-flowing materials.
- (2) Close hood and move selector switch to "Unload."

NOTE: During the "unload" cycle, the Nutri-Blender will run only when mill is operating. Therefore, on the first batch that is mixed (or if the control hopper has run completely empty) the load knob on the mill should be set to "0" and the mill and Nutri-Blender allowed to run until premix material begins flowing into the mill proportioner hopper.

(3) The Nutri-Blender drum will rotate and unload as material is required by the control hopper.

CAUTION: Before mixing a different type of premix, clean out vertical auger and auger corner by lifting cleanout slide valve in auger corner and running the vertical auger.

IV. SERVICE INSTRUCTIONS:

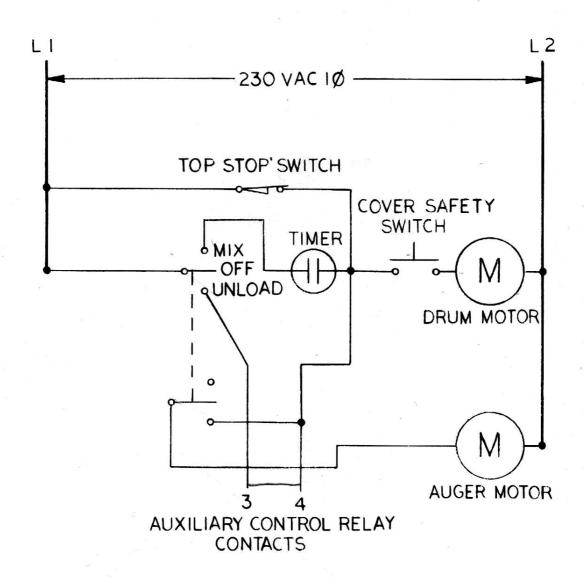
- A. Oil Apply clean motor oil on two drive chains every 40 hours of operation.
- B. Drive Chain
 Adjustment
 Check drive chain adjustment every 40 hours of operation. Tighten if necessary. If adjustment is required, move the idler bracket assembly diagonally to assure equal tension on both chains.
- C. Belt Tension Check belt tension on drum motor and vertical auger motor every 40 hours of operation.
- D. Replacement of One-Way Bearing on 911A4 and 912A4 Loosen mounting bolts on idler bracket and disassemble chains. Loosen set screw and slide jack shaft out.

NOTE: If jack shaft cannot be removed from idler bracket assembly, then remove the bracket from the side of the premixer. However, care should be taken not to allow the bolts to fall into the bottom of the premixer.

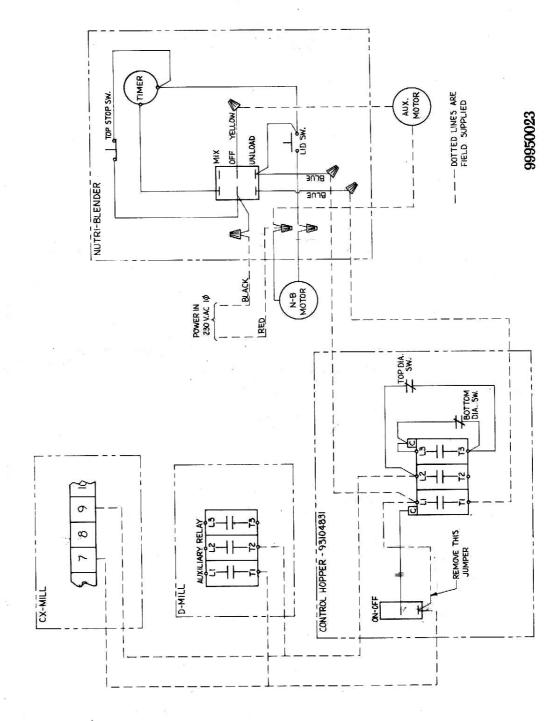
Remove sprocket from assembly and punch out old bearing from sprocket assembly. Then position the bearing so that the bearing-lock printing on the side of the bearing can be read from the large sprocket side.

When the bearing is pressed into the welded sprocket assembly, equal force on the circumference of the bearing is required because the bearing is very fragile. After bearing is pressed in, position sprocket in the bracket and slide the jack shaft into the idler bracket assembly. Tighten down set screw onto flat of jack shaft. Finally, assemble both chains, adjust chain tension, and then tighten nuts down securely.

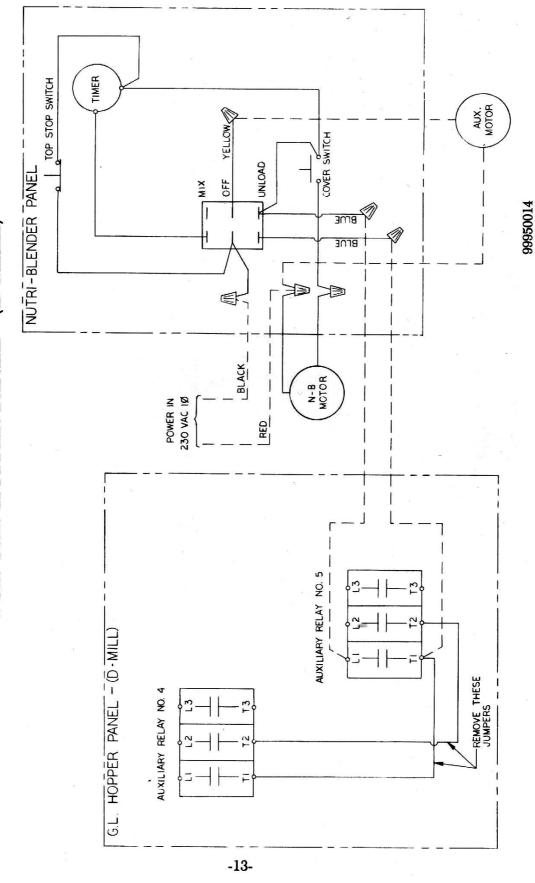
SCHEMATIC DIAGRAM NUTRI-BLENDER



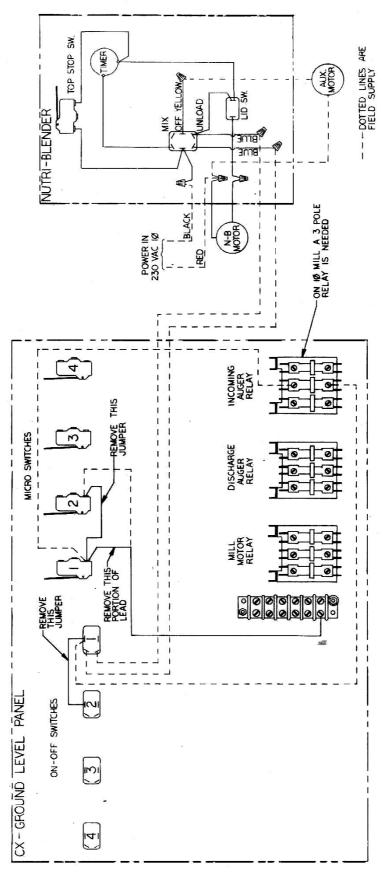
NUTRI-BLENDER WIRING DIAGRAM FOR GRAVITY MILLS & DBL. DIA. CONTROL HOPPER

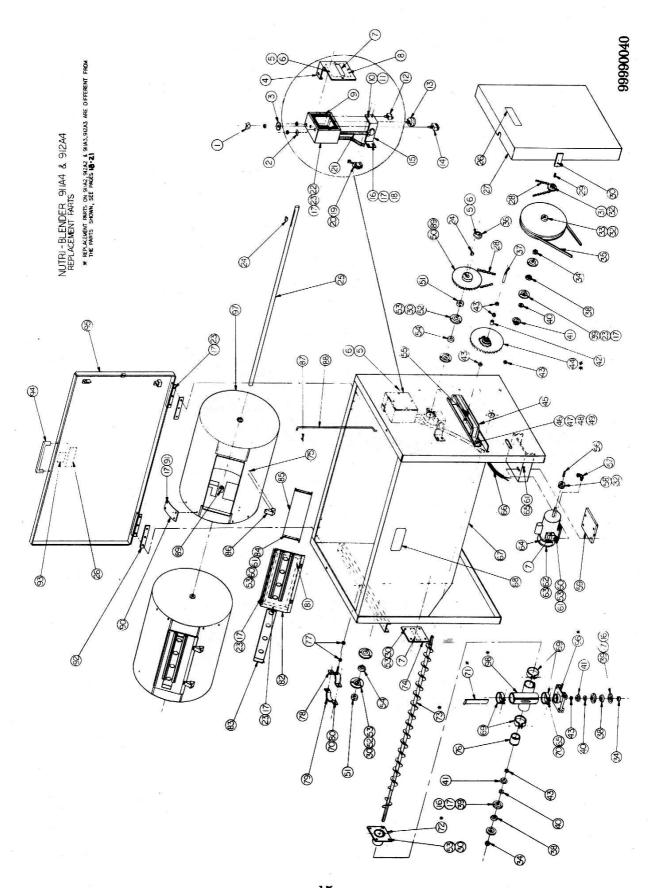


NUTRI-BLENDER WIRING DIAGRAM FOR G.L. HOPPER PANEL - (D-MILL)



NUTRI-BLENDER WIRING DIAGRAM FOR CX-GROUND LEVEL MILL





NUTRI-BLENDER 911A4 & 912A4

REPLACEMENT PARTS

D99990040 PG. 1 **MODEL 911A4 MODEL 912A4 ITEM** DESCRIPTION QTY. PART NUMBER QTY. PART NUMBER Knob - Timer Switch - Plate Dial - Timer Cover - Switch Box Mach. Screw - Hex Hd. S.T. (#8 - 32 x 1/2") Lock Washer (#8) Label - Warning Decal - Schematic Polyeurathane Tape 28' Slot Pan Hd. M.S.T.C. (#6 - 32 x 1") Flat Washer (#8) Switch - Push Button Timer - 2 Hr. Swtich - Toggle D.P.D.T. Switch Bracket Slotted Hex Hd. M.S.T.C. (1/4"-20 x 3/4") Lock Washer (1/4") Flat Washer (1/4") Micro Swtich - Roller Type Insulation - Switch Wire Harness - Micro Switch Switch Box 23 Slotted Hex Hd. M.S.T.C. (1/4"-20 x 1/2") Key - Woodruff 26 Shaft - Drum Chain Guard Chain #40 - 1/2" Pitch Key - 3/16" Sq. 2" Lg. Hex Hd. M.S.T.C. (5/16" - 18 x 3/4") 29 Sprocket - 10 Tooth 5/8" Bore Set Screw (1/4" - 20 x 1/4") Sheave (14" O.D. x 5/8" Bore) Lock Collar 5/8" Bore V-Belt "A" Sec. 48" Outside Length Disk - Switch Actuator 38 **Jack Shaft - Modified** Bearing Cartridge 5/8" Bore Stamping - 5/8" Bearing Bearing Seal Seal Retaining Cup Clutch Bearing Thrust Washer Sprocket Assembly - Welded Idler Bracket Assembly •44 Carriage Bolt (3/8" - 16 x 3/4") Hex Nut (3/8" - 16) Hex Nut (3/8" - 16) Flat Washer (3/8") Lock Washer (3/8") Sprocket - 54 Tooth with Hub Lock Collar 1" Bore Stamping - 1" Bearing Lock Washer (5/16") Bearing Cartridge (1") Set Screw #10 - 32 x 1/4") Key - 3/16" Sq. 1 3/8" Long 3/8" Liquid Tight 90° Connector 57 Sheave (2" O.D. x 5/8" Bore) Adjustment Plate Assembly
Cap Screw Hex Hd. (5/16" - 18 x 3/4") Flat Washer (5/16") 1/3 H.P. Motor 3/4 H.P. Motor Label - Motor

Cap Screw Hex Hd. (5/16" - 18 x 2 1/2")

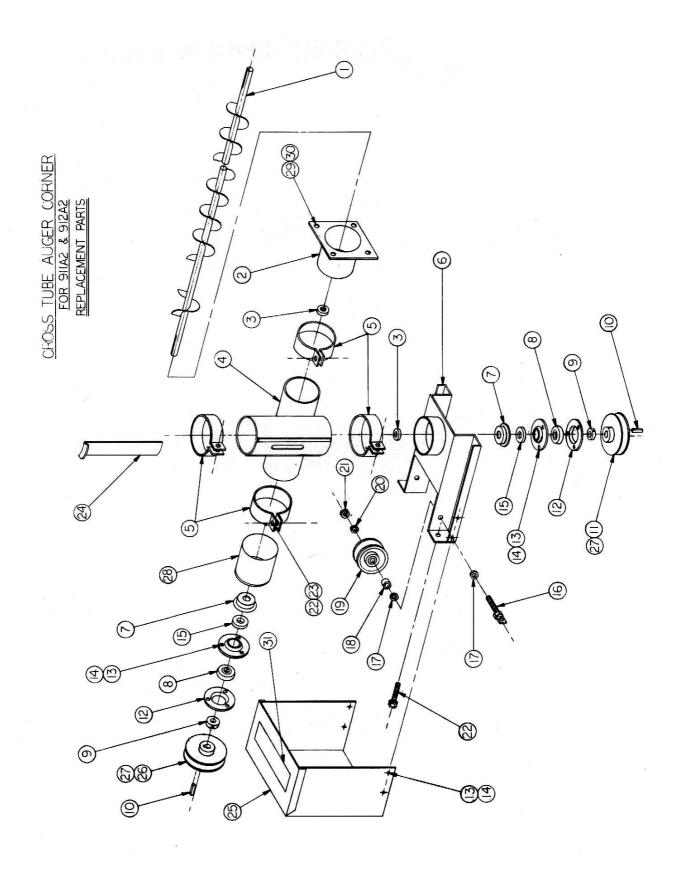
Wire Harness - Motor

^{*}Replacement parts on models 911A2, 912A2, 911A3, 912A3 are different from parts shown: see pages 18-21.
**When ordering item 44 on a 911A2, 912A2, 911A3 and 912A3, a Sprocket Assy Replacement Kit 92000591 will have to be ordered instead.

NUTRI-BLENDER 911A4 & 912A4 REPLACEMENT PARTS

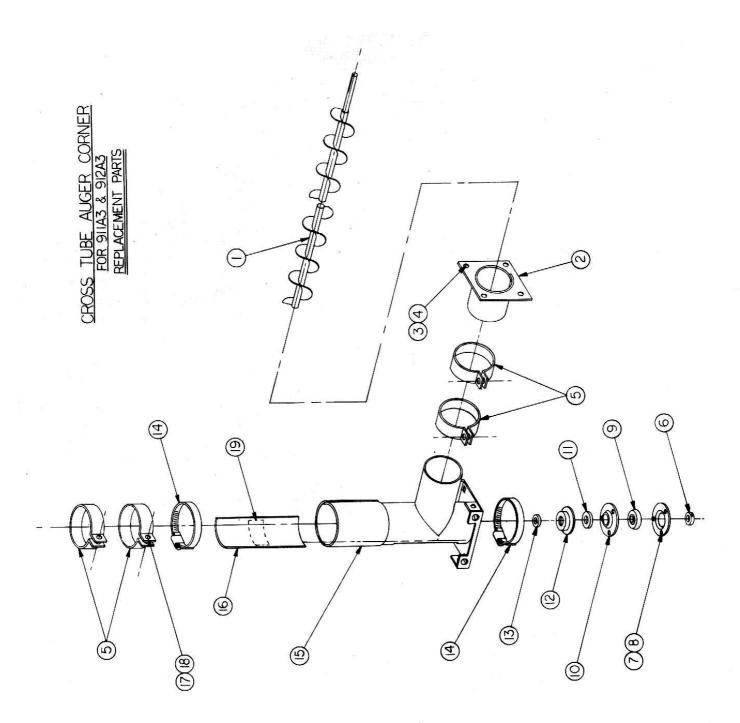
D	99990	040 P	G. 2	

		M	ODEL 911A4	M	ODEL 912A4
TEM	DESCRIPTION	QTY.	PART NUMBER	QTY.	PART NUMBER
67	Hopper Assembly Welded Decal - Mix-Mill Clamp Ring	1	93103492	1	93103491
68		1	80003502	1	80003502
69		4	10322902	4	10322902
70	Serrated Washer Hex Nut (5/16" - 18)	6	66783800	6	66783800
*71	Slide - Tee	1	11132900	1	11132900
*72	Tube And Plate Assembly	1	90002002	1	90002002
73	Oversized Cross Auger	1	90000397	1	90000398
74	Square Plate	1	10148301	1	10148301
75	Pop Rivet	4	70007001	8	70007001
76	Tube adapter assembly - welded	1	93103070	1	93103070
77	Hex Nut (1/2" - 13)	1	66085200	1	66085200
78	Clamp Ring Assembly	1	93103750	1	93103750
79	Half Clamp 3 1/2" Cap Screw Hex Hd. (5/16" - 18 x 1 1/4") Sponge Rubber	1	10215901	1	10215901
80		2	62583826	2	62583826
81		52"	80014003	104"	80014003
82	Door Welded Assy	1	93105450	2	93105450
83	Slide - Door	1	11054100	2	11054100
84	Hex Nut (5 1/6" - 18)	4	66083800	8	66083800
85	Baffle - Door	1	11038202	2	11038202
86	Latch - Door	2	10627700	4	10627700
87	Cotter Pin	1	70002006	1	70002006
88 89 90	Support Arm Hopper Cover Set Screw (5/16" - 18 x 3/8") Banding Strap - Drum	1 3 -	11037200 61663808	1 4 4	11037200 61663808 11134700
91 92 93	Self Drilling Hex Hd. M.S. (1/4" x 20) Spacer - Hinge Label - Drum Latch	2	11040100 80006522	16 2 1	70010506 11040100 80006522
94	Handle w/Screws Cover Assy Head Plate Assy	1	70003001	1	70003001
95		1	93105470	1	93103670
•96		1	90000396	1	90000396
97	Drum Welded Assy Elbow Assy NUTRI BLENDER DOOR ASSEMBLY	1	93105430	2	93105430
*98		1	93103020	1	93103020
9 9		1	93105481	2	93105481



CROSS TUBE AUGER CORNER FOR 911A2 & 912A2 REPLACEMENT PARTS C 93113370 PG. 2

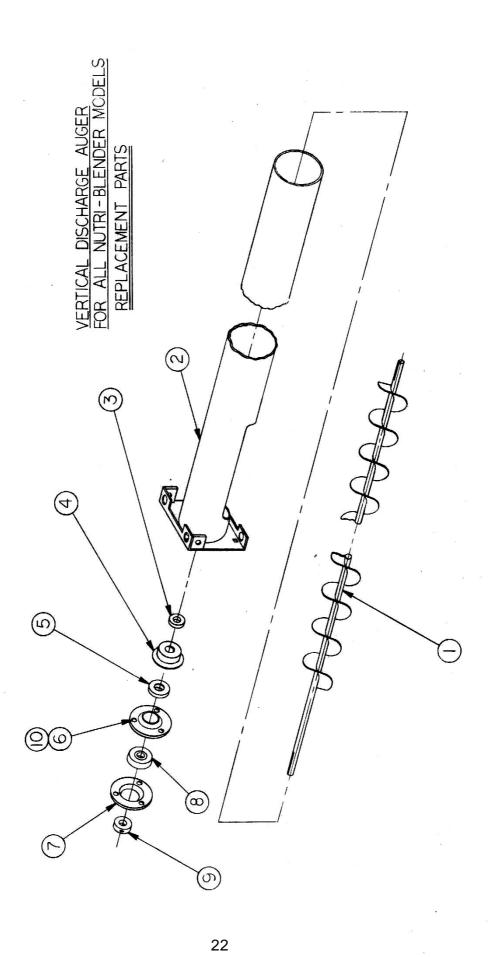
		M	ODEL 911A2	M	ODEL 912A2
ITEM	DESCRIPTION	QTY.	PART NUMBER	QTY.	PART NUMBER
1	Flight & shaft - cross auger	1	93104882	2	93104881
2	Tube & plate assembly	1	90002002	1	90002002
3	Thrust washer	2	80014502	2	80014502
4	Elbow assembly - welded	1	93103020	1	93103020
5	Clamp ring	4	10322902	4	10322902
6	Idler bracket assembly	1	93103152	1	93103152
7	Seal retaining cup Bearing cartridge, 5/8" bore Lock collar, 5/8" bore	2	80011507	2	80011507
8		2	40000017	2	40000017
9		2	40000018	2	40000018
10	Key, 3/16" sq., 2" long	2	49000432	2	49000432
11	Sheave (3" Q.D. x 5/8" bore)	1	41301304	1	41301304
12	Stamping, 5/8" bearing	4	40000016	4	40000016
13	Slotted hex hd. M.S.T.C. (1/4" - 20 x 3/4")	10	65483317	10	65483317
14	Lock washer (1/4")	10	66443300	10	66443300
15	Bearing seal	2	80011506	2	80011506
16	Bolt assembly - welded	2	93103080	2	93103080
17	Flat washer (3/8")	4	66404400	4	66404400
18	Spacer - split tube	2	80013507	2	80013507
19	Idler pulley (3" Q.D. x 3/8" bore)	2	40005001	2	40005001
20	Lock washer (3/8")	2	66444400	2	66444400
21	Hex nut (3/8" - 16)	2	66084400	2	66084400
22	Cap screw hex hd. (5/16" - 18 x 2 1/2")	6	66903837	6	66903837
23	Serrated washer hex nut (5/16" - 18)	4	66783800	4	66783800
24	Slide	1	11132900	1	11132900
25	Beltguard assembly Sheave (4 1/2" Q.D. x 5/8" bore) Set screw (1/4 - 20 - 1/4")	1	92000199	1	92000199
26		1	42104104	1	42104104
27		2	61663305	2	61663305
28	Tube adapter assembly - welded	1	93103070	1	93103070
29	Hex hd. M.S.T.C. (5/16" - 18 x 3/4")	4	65403817	4	65403817
30	Lock washer (5/16")	4	66443800	4	66443800
31	Label - "Danger"	1	80006509	1	80006509



CROSS TUBE AUGER CORNER FOR 911A3 & 912A3 REPLACEMENT PARTS

C 99990041 PG. 2

		M	ODEL 911A3	M	ODEL 912A3
ITEM	DESCRIPTION	QTY.	PART NUMBER	QTY.	PART NUMBER
1	Oversized Cross Auger	1 1 4	90000190	1	90000191
2	Auger Tee Mount		90000192	1	90000192
3	Hex Hd. M.S.T.C. (5/16" - 18 x 3/4")		65403817	4	65403817
4	Lock Washer (5/16")	4 4 1	66443800	4	66443800
5	Clamp Ring		10322902	4	10322902
6	Lock Collar 5/8" Bore		40000018	1	4000018
7	Slotted Hex Hd. M.S.T.C. (1/4# - 20 x 3/4")	3	65483317	3	65483317
8	Lock Washer (1/4")	3	66443300	3	66443300
9	Bearing Cartridge 5/8" Bore	1	40000017	1	4000017
10	Stamping 5/8" Bearing	2	40000016	2	40000016
11	Bearing Seal	1	80011506	1	80011506
12	Seal Retaining Cap	1	80011507	1	80011507
13	Thrust Washer	1	80014502	1	80014502
14	Hose Clamp	2	70001002	2	70001002
15	Tee Welded Assembly	1	90000193	1	90000193
16	Cleanout Door Cap Screw Hex Hd. (5/16" - 18 x 2 1/2") Serrated Washer Hex Nut (5/16" - 18)	1	11205110	1	11205110
17		4	66903837	4	66903837
18		4	66783800	4	66783800
19	Label - Warning	1	80006506	1	80006506



VERTICAL DISCHARGE AUGER FOR 911A2 & 912A2 REPLACEMENT PARTS 99990041 PG. 2

			.8.9	∞	10,	15′	20,
ITEM	DESCRIPTION	QTY.	PART NUMBER	PART NUMBER	PART NUMBER PART NUMBER PART NUMBER PART NUMBER PART NUMBEF	PART NUMBER	PART NUMBER
- ରା ମ	Shaft & Flight Welded Assy Tube & Head Plate Welded Assy Thrust Washer		93004675 93004632 80014502	93004674 93004633 80014502	93034043 93004631 80014502	93034042 93004691 80014502	93034041 93004651 80014502
4 72 @	Seal Retaining Cup Bearing Seal Slotted Hex Hd, M.S.T.C. (1/4" - 20 x 3/4")	3 - 1	80011507 80011506 65483317	80011507 80011506 65483317	80011507 80011506 65483317	80011507 80011506 65483317	80011507 80011506 65483317
≻∞ 6	Stamping - 5/8" Bearing Bearing Cartridge - 5/8" Bore Lock Collar - 5/8" Bore	877	40000016 40000017 40000018	40000016 40000017 40000018	40000016 40000017 40000018	40000016 40000017 40000018	40000016 40000017 40000018
01	Lock Washer (1/4")	3	66443300	66443300	66443300	66443300	66443300

FOR 911A3, 912A3, 911A4 & 912A4 REPLACEMENT PARTS VERTICAL DISCHARGE AUGER

QTY. PART NUMBER PART NUMBER PART NUMBER PART NUMBER 90000189 93004651 80014502 80011507 80011506 65483317 40000016 40000017 40000018 90000188 93004641 80014502 80011507 80011506 65483317 40000016 40000017 40000018 90000187 93004631 80014502 80011507 80011506 65483317 40000016 40000017 90000186 93004633 80014502 80011507 80011506 65483317 40000016 40000017 40000018 Seal Retaining Cup
Bearing Seal
Slotted Hex Hd. M.S.T.C. (1/4" - 20 x 3/4") Oversized Shaft & Flight Welded Assy Tube & Head Plate Welded Assy Thrust Washer Stamping - 5/8" Bearing
Bearing Cartridge - 5/8" Bore
Lock Collar - 5/8" Bore DESCRIPTION