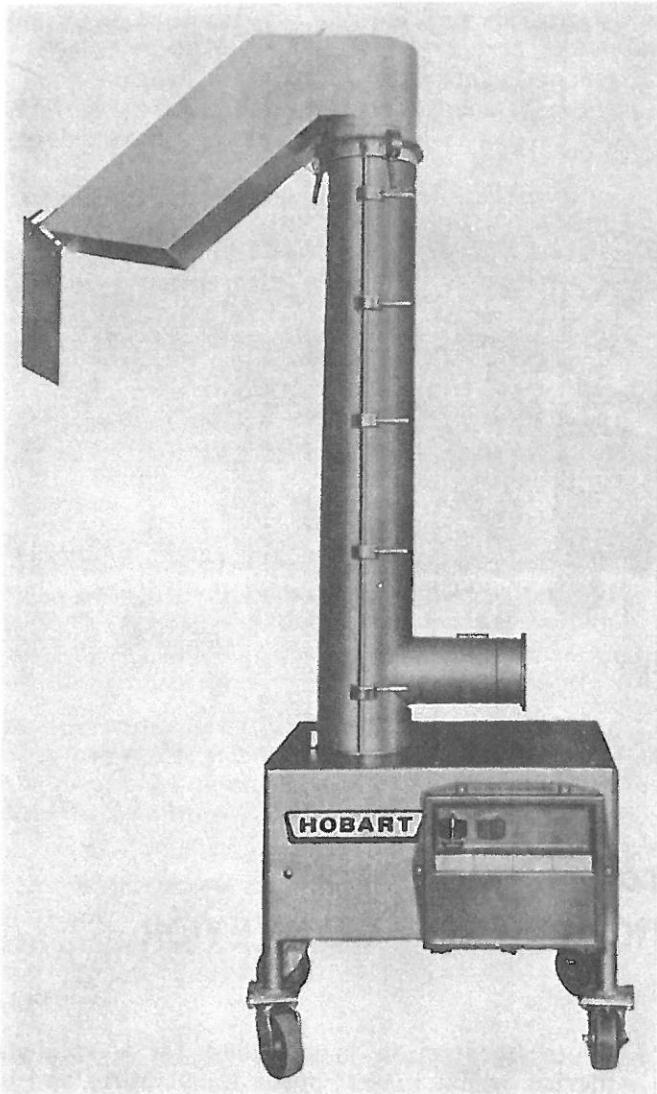




INSTRUCTION MANUAL

... with Replacement Parts



MODEL SC 90-56A VERTICAL SCREW CONVEYOR

ML-19332 (R.H.) L.H. 2/80
ML-19331 (L.H.) R.H. 1/80

ML 19331 - FIRST MACH. PRODUCED 5/26/78
S/N 27-015-885 - P.M. E.C.N. 18949

ML 19332 - FIRST MACH. PRODUCED 3/1/80
S/N 27-025-259 (E.C.N. 17416)

~~ML 19332 - FIRST MACH. PRODUCED 5/25/78
S/N 27-015-885~~

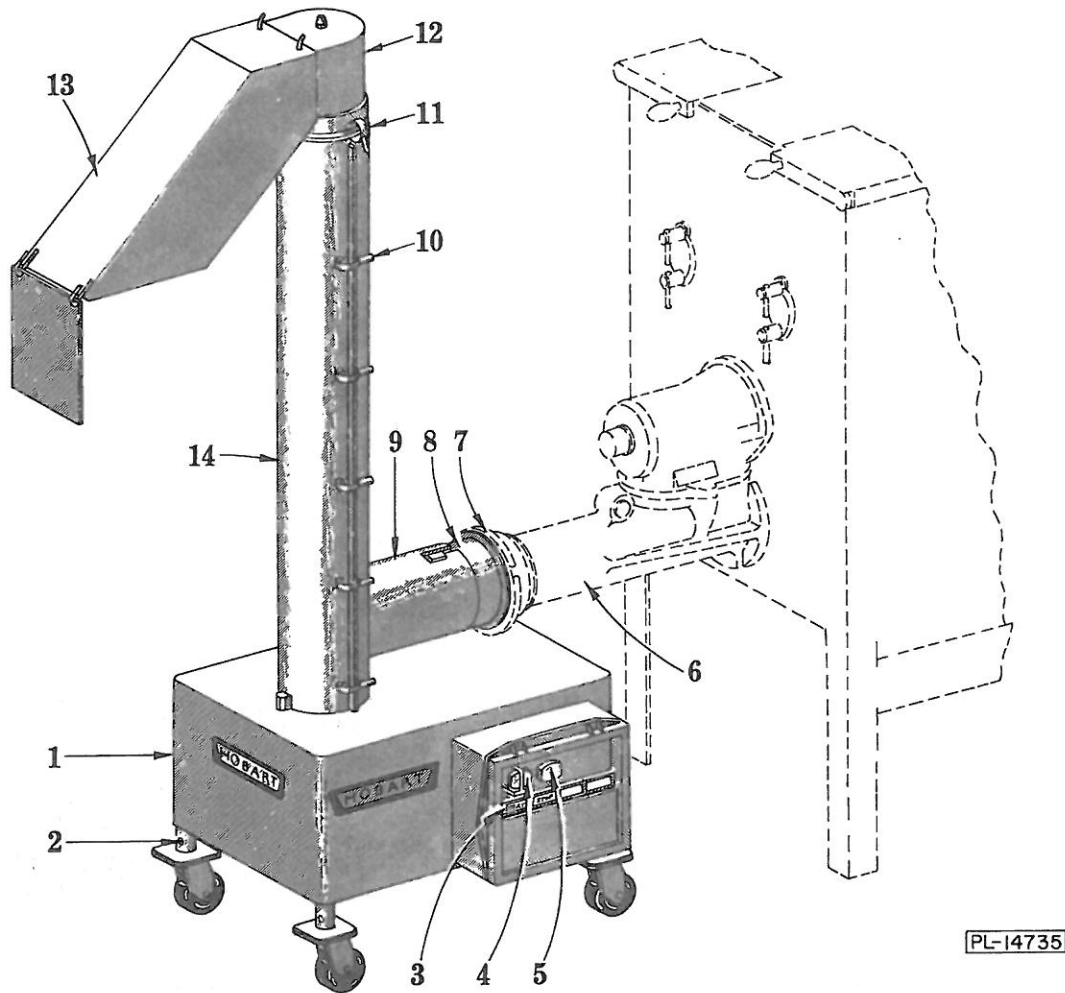


Fig. 1

Installation, Operation and Care of MODEL SC 90-56A VERTICAL SCREW CONVEYOR

GENERAL

The model SC 90-56A Vertical Screw Conveyor has a three H.P. motor enclosed within the base housing (1, Fig. 1).

The control switches for "Starting" and "Stopping" the motor (4 & 5, Fig. 1) are located on the control box cover. They are the magnetically-actuated type with no moving seals and are watertight for long life in wet environments. The controls are mounted within a NEMA 4 enclosure.

Motor protection is provided by a solid-state device which senses motor temperature and will only trip if motor becomes overheated.

The conveyor is furnished with a heavy duty flexible power supply cord having a twistlock grounding type plug. To insure a watertight connection, this type plug requires a four wire Woodhead receptacle or connector.

The SC 90-56A Conveyor has the capacity to handle the output of a 56 grinder with fine grind or breaker plates in the cylinder.

INSTALLATION

Roll the assembled conveyor into its relative position with the companion 56 grinder. Adjust the conveyor leg heights so the tower inlet tube (9, Fig. 1) is in alignment with the grinder cylinder (6, Fig. 1). Lock each leg at the proper height by tightening the set screw (2, Fig. 1).

Push the conveyor adapter (8, Fig. 1) through the grinder adjusting ring (7, Fig. 1). Start the adjusting ring on the grinder cylinder but do not tighten it. Turn the adapter so the tab inserts into bayonet slot on inlet tube. Then tighten grinder adjusting ring when ready to grind product.

Release clamps (11, Fig. 1) and rotate discharge chute (13, Fig. 1) to the desired position. Chute may be rotated a full 360°. Close clamps (11, Fig. 1) locking chute in place.

Connect the power supply cord to the receptacle.

SAFETY

The tower door (14, Fig. 1) is magnetically interlocked. If the door is open the SC 90-56A will not start. Should the door open for any reason while running, the machine will stop.

The inlet tube has "fins" welded on the inside. This is to protect the operator, should he inadvertently insert his hand into the tube while the conveyor is running.

The conveyor screw assembly **MUST** be placed in the tower before the tower cap and discharge chute is assembled. The tower cap and discharge chute could fall, if conveyor screw assembly is not in tower.

OPERATION

With the SC 90-56A Conveyor in position, all clamps closed and discharge chute (13, Fig. 1) in its proper position, press the "START" switch (4, Fig. 1) to start the conveyor. The pilot light (3, Fig. 1) will light and remain lighted until the "STOP" switch (5, Fig. 1) is pressed. Always have the conveyor running **BEFORE** starting the grinder (which feeds into the conveyor).

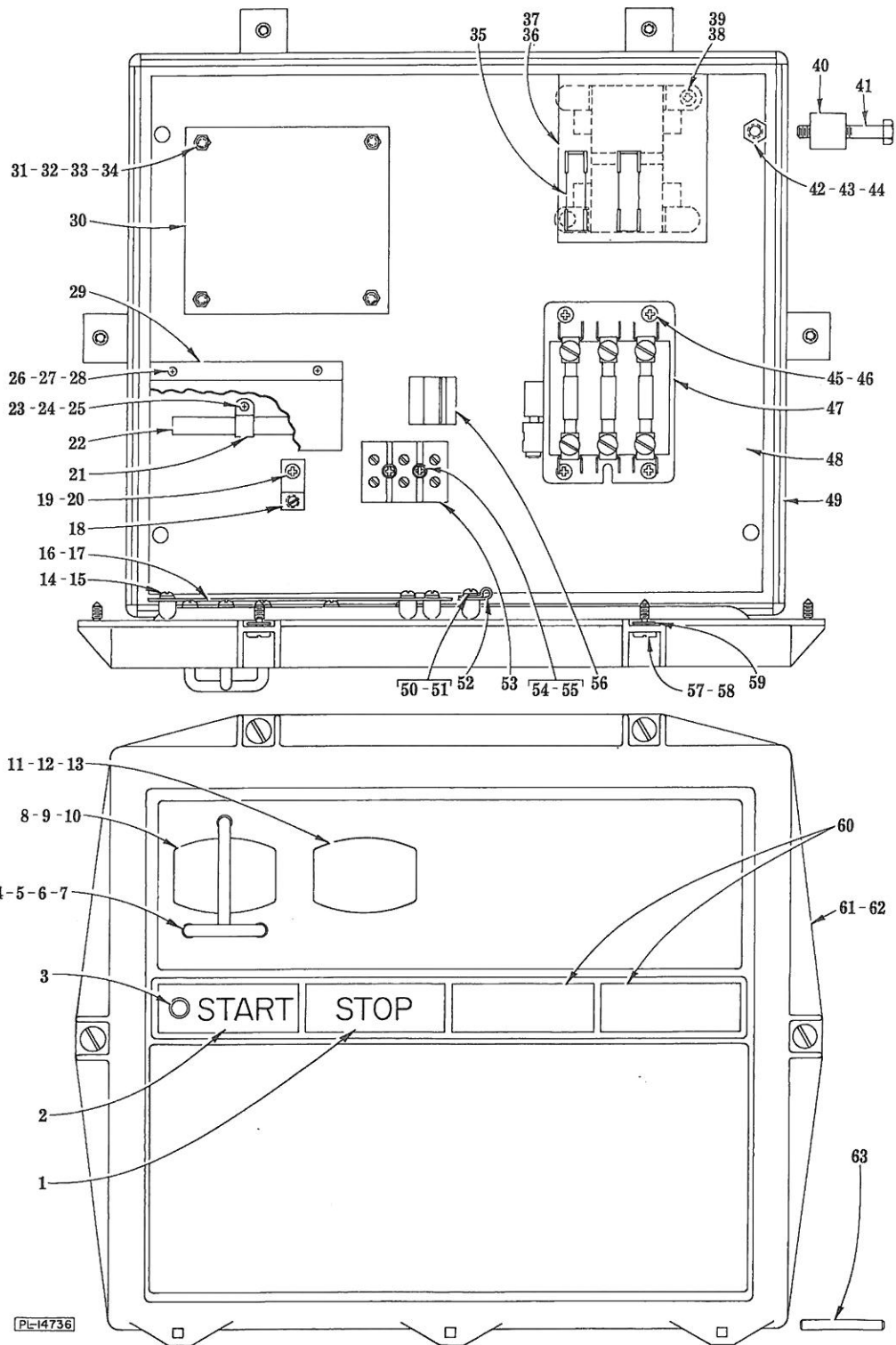
CLEANING

Before cleaning the conveyor, always disconnect machine from the electrical power source.

The model SC 90-56A Conveyor may be easily dismantled for cleaning. No tools are necessary except an adjusting ring wrench must be used to loosen the grinder adjusting ring. Loosen grinder adjusting ring (7, Fig. 1). Turn the adapter to disengage the tab from the bayonet slot. Roll the conveyor away from the grinder. Remove the conveyor adapter and grinder adjusting ring from grinder. Separate the conveyor adapter and the grinder adjusting ring. Lift off discharge chute (13, Fig. 1). Release the three clamps (11, Fig. 1) and lift off the tower cap (12, Fig. 1). Release the five tower clamps (10, Fig. 1), open the removable section of tower (14, Fig. 1) and lift off this section. Lift the conveyor screw assembly from the machine. With these parts disassembled, the conveyor (having a watertight starter box) is now accessible for thorough hosing with hot water. Clean the disassembled parts before reassembly.

MAINTENANCE

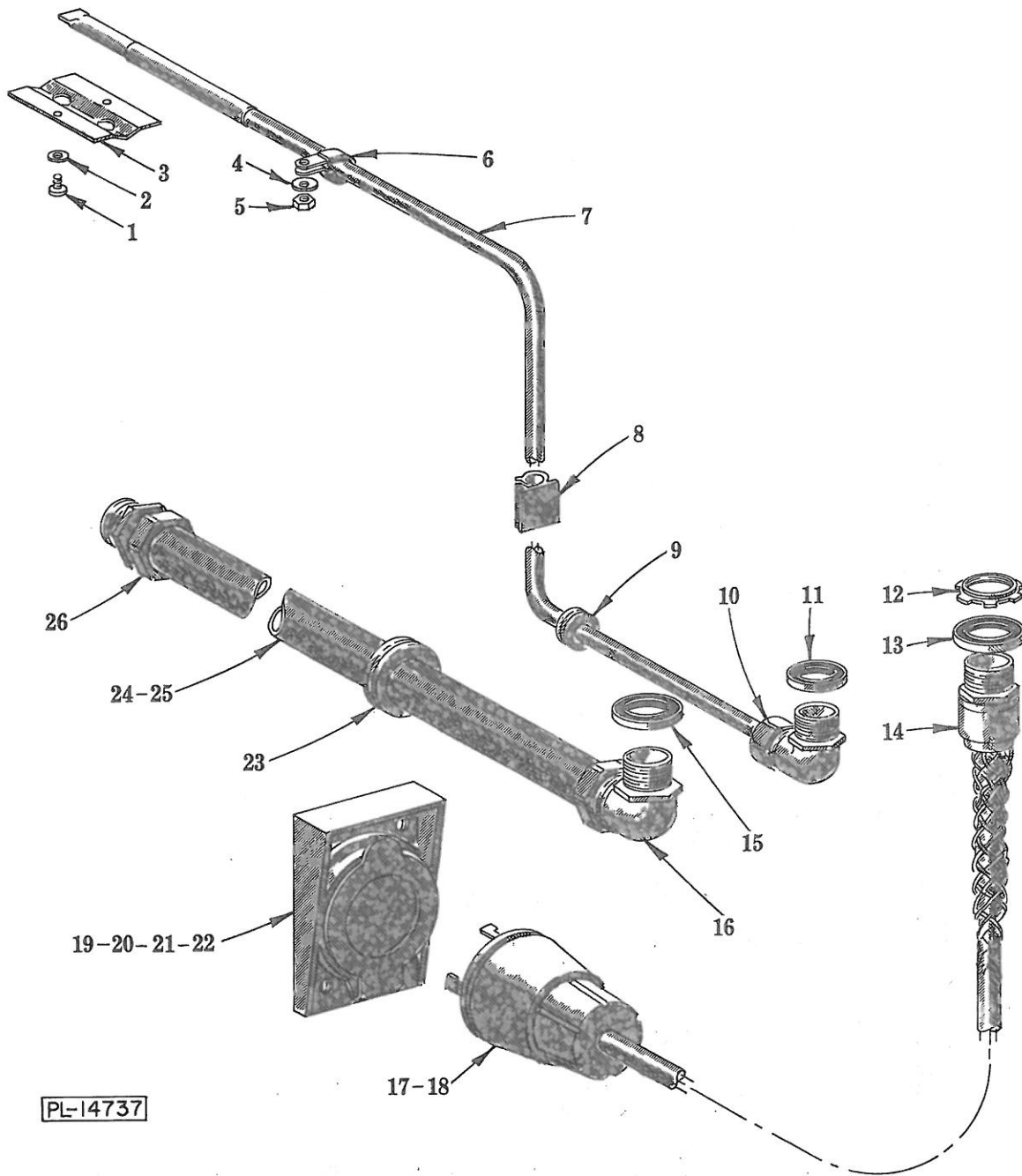
This conveyor is practically maintenance free. No lubrication is required for the motor which has grease packed bearings. The conveyor screw drive has sealed ball bearings which require no lubrication.



CONTROL UNIT

CONTROL UNIT

ILLUS. PL-14736	PART NO.	NAME OF PART	AMT.
1	C-121635	Plate - Identification (STOP) -----	1
2	C-121632	Plate - Identification (START) -----	1
3	B-111936	Solid State Pilot Light Assy. -----	1
4	C-117362-1	Switch Guard Sub-Assy. -----	1
5	WS-23-21	Washer -----	6
6	SC-18-64	Mach. Screw - #6-32 x 3/8" Phil. Pan Hd. -----	3
7	WL-14-3	Lock Washer - #6 Ext. Shakeproof -----	3
8	D-120872-2	Switch Assy. (Start) -----	1
9	SD-32-3	Self-Tapping Screw - #6-19 x 3/8" Phil. Pan Hd. "Plastite" -----	2
10	WL-7-2	Lock Washer - #6 Ext. Shakeproof -----	2
11	D-120872-4	Switch Assy. (Stop) -----	1
12	SD-32-3	Self-Tapping Screw - #6-19 x 3/8" Phil. Pan Hd. "Plastite" -----	2
13	WL-7-2	Lock Washer - #6 Ext. Shakeproof -----	2
14	SD-12-4	Self-Tapping Screw - #8-32 x 3/8" Phil. Truss Hd., Type 23 -----	4
15	WL-14-5	Lock Washer - #8 Ext. Shakeproof -----	4
16	D-111940-2	Reed Mounting Board Assy. (Incls. item #17) -----	1
17	C-111964	Switch - Reed -----	2
18	C-118544-1	Lug - Solderless -----	1
19	SD-9-43	Self-Tapping Screw - #10-32 x 3/8" Phil. Pan Hd., Type F -----	1
20	WL-14-7	Lock Washer - #10 Ext. Shakeproof -----	1
21	C-108199-1	Clamp - Air Heater -----	1
22	B-108202-5	Heater & Terminals Assy. -----	1
23	SD-9-39	Self-Tapping Screw - #8-32 x 3/8" Phil. Pan Hd., Type F -----	1
24	WS-23-44	Washer -----	1
25	WL-6-1	Lock Washer - #8 x .047" x .031" -----	1
26	SD-9-39	Self-Tapping Screw - #8-32 x 3/8" Phil. Pan Hd., Type F -----	2
27	WS-23-44	Washer -----	2
28	WL-6-1	Lock Washer - #8 x .047" x .031" -----	2
29	C-115071	Shield - Heater -----	1
30	E-119990	Motor Protector Board Assy. -----	1
31	B-119994	Spacer -----	4
32	SD-29-11	Self-Tapping Screw - #6-32 x 1" Phil. Pan Hd., Type F -----	4
33	WL-6-42	Lock Washer - #6 x .047" x .031" -----	4
34	NS-9-8	Mach. Nut - #6-32 Hex -----	8
35	FE-19-48	Fuse - Fiber Tube (.8 Amp. BBS-8) -----	2
36	C-117034	Power Input Board Assy. (60 Hz.) -----	1
37	C-117033	Power Input Board Assy. (50 Hz.) -----	1
38	SD-9-43	Self-Tapping Screw - #10-32 x 3/8" Phil. Pan Hd., Type F -----	2
39	WL-14-7	Lock Washer - #10 Ext. Shakeproof -----	2
40	B-115233	Spacer - Control Box -----	4
41	SC-37-69	Fin. Bolt - 5/16"-18 x 1-3/4" Hex Hd. -----	4
42	WS-17-16	Washer -----	8
43	WL-3-47	Lock Washer - 5/16" x .125" x .078" -----	4
44	NS-13-14	Full Nut - 5/16"-18 Hex Fin. -----	4
45	SD-9-43	Self-Tapping Screw - #10-32 x 3/8" Phil. Pan Hd., Type F -----	4
46	WL-14-7	Lock Washer - #10 Ext. Shakeproof -----	4
47	D-87713-43-2	Contact - Magnetic (3 Ph.) -----	1
48	E-121486	Panel - Control Mounting -----	1
49	C-121993	Box - Control -----	1
50	SD-12-4	Self-Tapping Screw - #8-32 x 3/8" Phil. Truss Hd., Type 23 -----	1
51	WL-14-5	Lock Washer - #8 Ext. Shakeproof -----	1
52	M-78752-9	Clamp - Cable -----	1
53	C-111995	Block - Terminal -----	1
54	SD-9-44	Self-Tapping Screw - #8-32 x 1-1/4" Phil. Rd. Hd., Type F -----	2
55	WL-6-1	Lock Washer - #8 x .047" x .031" -----	2
56	B-106825-1	Clip - Wiring -----	2
57	B-112129	Screw - Captive -----	4
58	B-112169	Spacer - Lid -----	4
59	B-112016	Retainer - Captive Screw -----	4
60	C-112034	Plate - Identification (Blank) -----	2
61	D-121401	Lid - Control Box -----	1
62	C-112068	Gasket - Lid -----	1
63	B-112022	Pin - Control Box & Lid -----	3

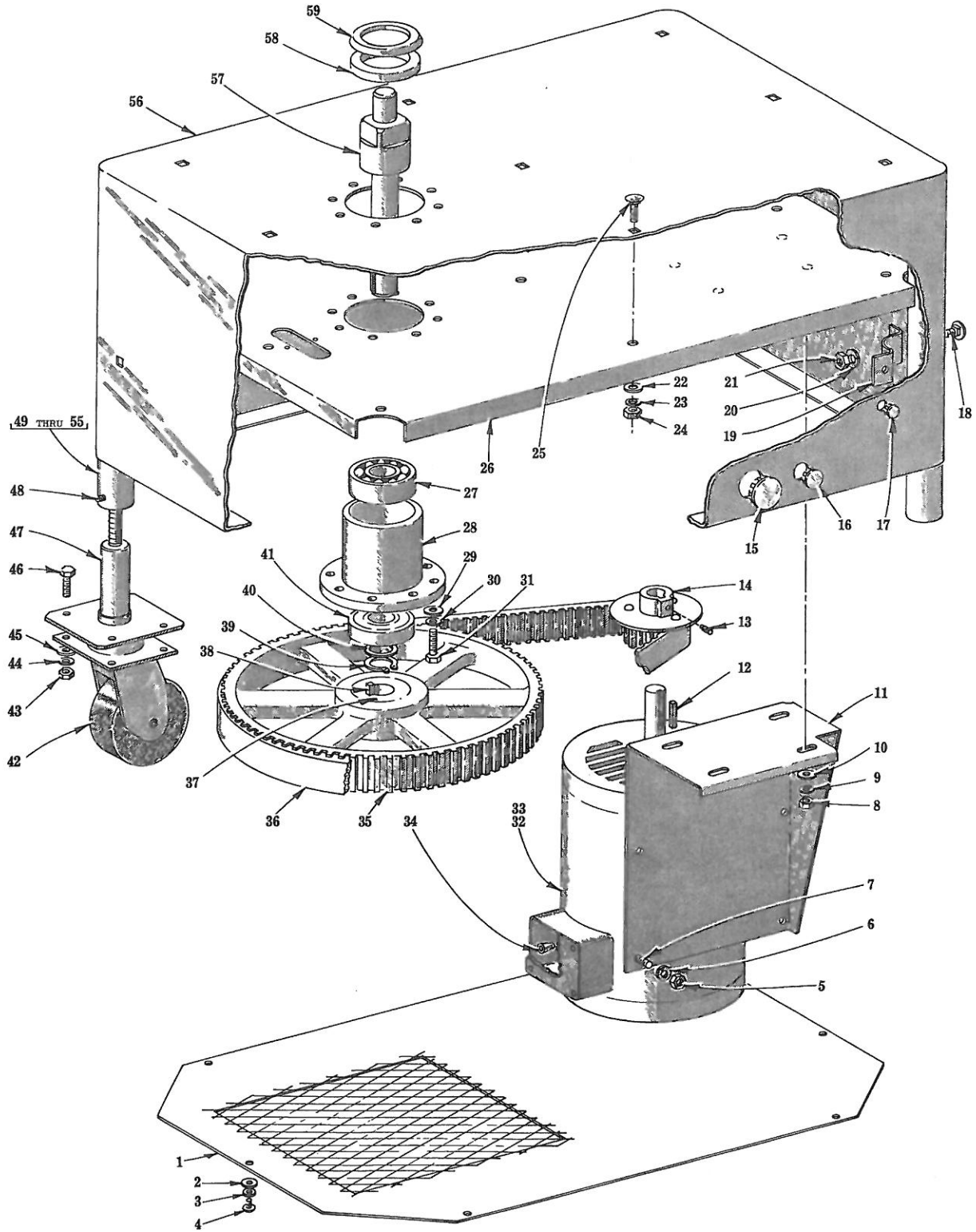


PL-14737

SWITCH AND CONDUIT

SWITCH AND CONDUIT

ILLUS. PL-14737	PART NO.	NAME OF PART	AMT.
1	SC-21-6	Mach. Screw - #6-32 x 3/16" Rd. Hd. -----	2
2	WL-6-42	Lock Washer - #6 x .047" x .031" -----	2
3	C-121883	Retainer - Switch -----	1
4	WL-6-7	Lock Washer - #10 x .062" x .047" -----	1
5	NS-9-22	Mach. Nut - #10-24 Hex -----	1
6	B-112108	Clamp -----	1
7	C-121935	Switch & Cord Assy. -----	1
8	B-106825-1	Clip - Wiring -----	3
9	M-102257	Grommet -----	1
10	FE-15-10	Connector - 90° Strain Relief (1/2") -----	1
11	FE-8-10	1/2" Gasket Assy. -----	1
12	FE-6-6	Lock Nut - 3/4" (Cnd.) -----	1
13	FE-8-11	3/4" Gasket Assy. -----	1
14	FE-11-10	Cord Grip (3/4" Male Thd.) -----	1
15	FE-8-11	3/4" Gasket Assy. -----	1
16	FE-8-25	Connector - 90° "Sealtite" (3/4" Male Thd. x 3/4" Flex. Cnd.) -----	1
17	C-117612-1	Cord & Plug Assy. (200/230 V., 60 Hz., 3 Ph.; W/Pilot Circuit) (220/240 V., 50 Hz., 3 Ph.; W/Pilot Circuit) -----	1
18	C-117612-2	Cord & Plug Assy. (460 V., 60 Hz., 3 Ph.) (415/380 V., 50 Hz., 3 Ph.) -----	1
19	C-117631-3	Receptacle (200/230 V., 60 Hz., 3 Ph.; W/Pilot Circuit) (220/240 V., 50 Hz., 3 Ph.; W/Pilot Circuit) -----	1
20	C-117631-2	Receptacle (460 V., 60 Hz., 3 Ph.) (415/380 V., 50 Hz., 3 Ph.) -----	1
21	C-117625-3	Connector - Pendent (200/230 V., 60 Hz., 3 Ph.; W/Pilot Circuit) (220/240 V., 50 Hz., 3 Ph.; W/Pilot Circuit) (Not Shown) -----	1
22	C-117625-2	Connector - Pendent (460 V., 60 Hz., 3 Ph.) (415/380 V., 50 Hz., 3 Ph.) (Not Shown) -----	1
23	M-69180	Grommet - Rubber -----	1
24	P-77657-27	Conduit - 3/4" x 25-7/8" (Waterproof) (R.H. Controls) -----	1
25	P-77657-34	Conduit - 3/4" x 9-1/2" (Waterproof) (L.H. Controls) -----	1
26	FE-8-23	Connector - Straight "Sealtite" (3/4" Male Thd. x 3/4" Flex. Cnd.) -----	1

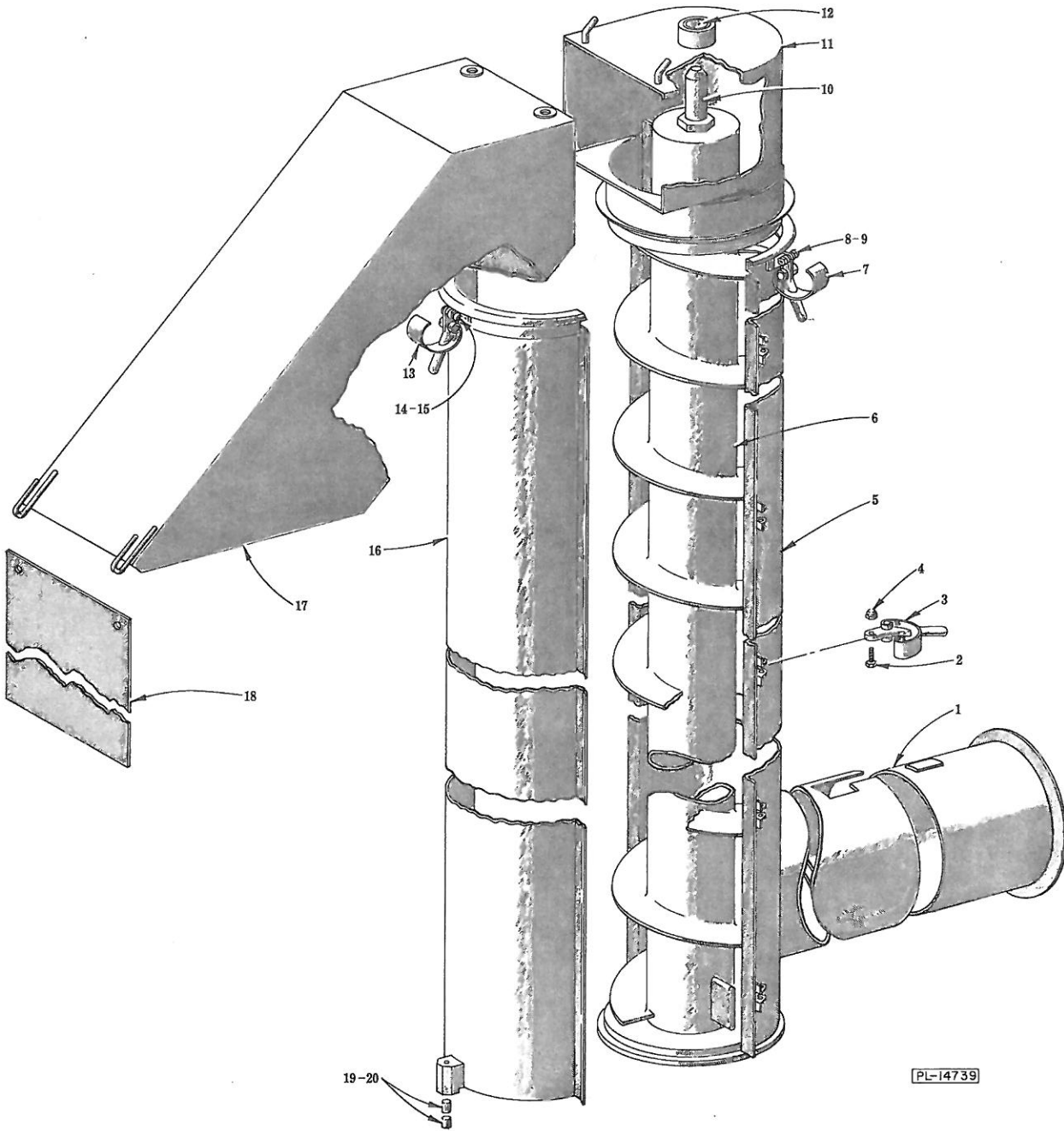


PL-14738

BASE HOUSING AND DRIVE UNIT

BASE HOUSING AND DRIVE UNIT

ILLUS. PL-14738	PART NO.	NAME OF PART	AMT.
1	S-87098	Housing Bottom Cover & Screen Assy.	1
2	WS-19-6	Washer	6
3	WL-6-7	Lock Washer - #10 x .062" x .047"	6
4	SC-53-5	Mach. Screw - #10-24 x 3/8" Truss Hd.	6
5	NS-13-25	Full Nut - 3/8"-16 Hex Fin.	4
6	WL-4-4	Lock Washer - 3/8" x .136" x .070"	4
7	SC-37-73	Fin. Bolt - 3/8"-16 x 1" Hex Hd.	4
8	NS-13-14	Full Nut - 5/16"-18 Hex Fin.	4
9	WL-3-47	Lock Washer - 5/16" x .125" x .078"	4
10	WS-5-42	Washer	4
11	E-117614	Bracket - Motor Mounting	1
12	R-12430-67	Key	1
13	SC-47-12	Set Screw - 1/4"-20 x 3/8" Soc. Hdls., Kn. Cup Pt.	1
14	B-117622	Pulley & Flange Assy. (19T)	1
15	PB-2-27	Plug Button (1-3/8" Dia. Hole)	1
16	PB-2-28	Plug Button (5/8" Dia. Hole)	1
17	PB-3-5	Plug Button (11/32" Dia. Hole)	4
18	SC-82-38	Carriage Bolt - 3/8"-16 x 1"	8
19	P-86367	Clamp - Leg	4
20	WL-4-4	Lock Washer - 3/8" x .136" x .070"	8
21	NS-13-25	Full Nut - 3/8"-16 Hex Fin.	8
22	WS-18-14	Washer	9
23	WL-4-4	Lock Washer - 3/8" x .136" x .070"	9
24	NS-13-25	Full Nut - 3/8"-16 Hex Fin.	9
25	SC-82-38	Carriage Bolt - 3/8"-16 x 1"	9
26	D-121338	Plate - Reinforcement	1
27	BB-21-1	Ball Bearing - Fafnir #5306W	1
28	D-121349	Carrier - Bearing	1
29	WS-6-44	Washer	8
30	WL-6-28	Lock Washer - 3/8" x .141" x .094"	8
31	SC-41-31	Fin. Bolt - 3/8"-16 x 1-1/4" Hex Hd.	8
32	D-122136-1	Motor (460 V., 60 Hz., 3 Ph.) (230/200 V., 60 Hz., 3 Ph.; W/Pilot Circuit) (Incls. item #12)	1
33	D-122136-2	Motor (415/380 V., 50 Hz., 3 Ph.) (240/220 V., 50 Hz., 3 Ph.; W/Pilot Circuit) (Incls. item #12)	1
34	FE-6-17	Connector - Wire	4
35	A-121372	Pulley (84T)	1
36	B-117623	Belt - Drive	1
37	B-118830-5	Bushing - Taperlock	1
38	R-12430-163	Key	1
39	RR-7-2	Retaining Ring	1
40	B-121347	Spacer	1
41	BB-6-36	Ball Bearing - MRC-306SZZ	1
42	A-121335	Caster	4
43	NS-13-25	Full Nut - 3/8"-16 Hex Fin.	16
44	WL-6-27	Lock Washer - 3/8" x .136" x .070"	16
45	WS-6-44	Washer	16
46	SC-41-30	Fin. Bolt - 3/8"-16 x 1" Hex Hd.	16
47	B-121350	Mount - Caster Adjusting	4
48	SC-46-4	Set Screw - #8-32 x 3/16" Hdls., Cup Pt.	4
49	P-86366-1	Leg Assy. (14-1/2" Lg.)	4
50	P-86366-2	Leg Assy. (17-1/2" Lg.) (Standard)	4
51	P-86366-3	Leg Assy. (20-1/2" Lg.)	4
52	P-86366-4	Leg Assy. (23-1/2" Lg.)	4
53	P-86366-5	Leg Assy. (26-1/2" Lg.)	4
54	P-86366-6	Leg Assy. (29-1/2" Lg.)	4
55	P-86366-7	Leg Assy. (32-1/2" Lg.)	4
56	B-122127	Base Housing & Logo Assy.	1
57	D-121348	Shaft - Drive	1
58	A-121369	Seal	1
59	A-121370	Slinger	1
	D-121346	Vertical Drive Assy. (Incls. items #27, 28, 39, 40, 41, 57, 58 & 59)	1
	B-122143	Pulley (84T) and Bushing Assy. (Incls. items #35 & 37)	1



CONVEYOR SCREW AND TOWER UNIT

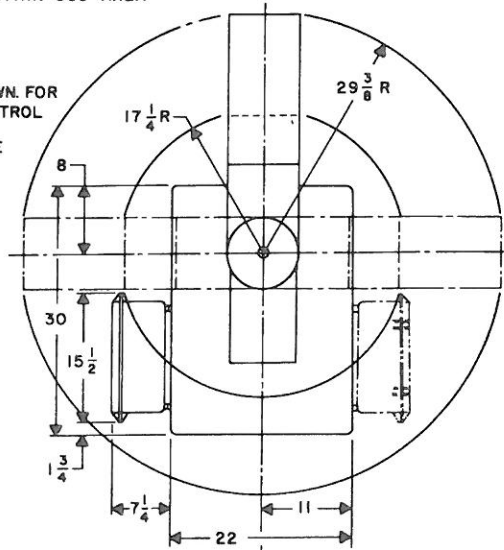
CONVEYOR SCREW AND TOWER UNIT

ILLUS. PL-14739	PART NO.	NAME OF PART	AMT.
1	C-121333-2	Adaptor - Conveyor -----	1
2	SC-67-11	Mach. Screw - #10-32 x 3/4" Hex Hd. -----	5
3	P-101606-1	Clamp Sub-Assy. -----	5
4	NS-31-49	Stop Nut - #10-32 "Elastic" -----	5
5	B-122126-1	Stationary Tower & Label Assy. (Incls. items #2, 3, 4, 7, 8 & 9) -----	1
6	E-121357-2	Conveyor Screw Assy. -----	1
7	P-101606-2	Clamp Sub-Assy. -----	2
8	SC-67-11	Mach. Screw - #10-32 x 3/4" Hex Hd. -----	2
9	NS-31-49	Stop Nut - #10-32 "Elastic" -----	2
10	B-121324	Pin - Bearing Shaft -----	1
11	M-88916	Tower Cap & Decal Sub-Assy. (Incls. item #12) -----	1
12	A-105236	Bushing & Loctite Sub-Assy. -----	1
13	P-101606-2	Clamp Sub-Assy. -----	1
14	SC-67-11	Mach. Screw - #10-32 x 3/4" Hex Hd. -----	1
15	NS-31-49	Stop Nut - #10-32 "Elastic" -----	1
16	E-121602	Tower (Removable) Sub-Assy. (Incls. items #13, 14 & 15) -----	1
17	D-121355	Discharge Chute Assy. -----	1
18	D-121327	Deflector -----	1
19	C-121668	Magnet -----	2
20	513886	Sealer (Clear) (Retains Magnet) -----	As Reqd.

THE DISCHARGE CHUTE MAY BE USED ANYWHERE WITHIN 360° AREA

DIM A	DIM B	DIM C	DIM D	DIM E
28-3/4	14-1/2	7-1/4	85-1/2	94-1/2
31-3/4	17-1/2	10-1/4	88-1/2	97-1/2
34-3/4	20-1/2	13-1/4	91-1/2	100-1/2
37-3/4	23-1/2	16-1/4	94-1/2	103-1/2
40-3/4	26-1/2	19-1/4	97-1/2	106-1/2
43-3/4	29-1/2	22-1/4	100-1/2	109-1/2
46-3/4	32-1/2	25-1/4	103-1/2	112-1/2

R. H. MACHINE SHOWN FOR L. H. MACHINE, CONTROL BOX LOCATED ON OPPOSITE SIDE

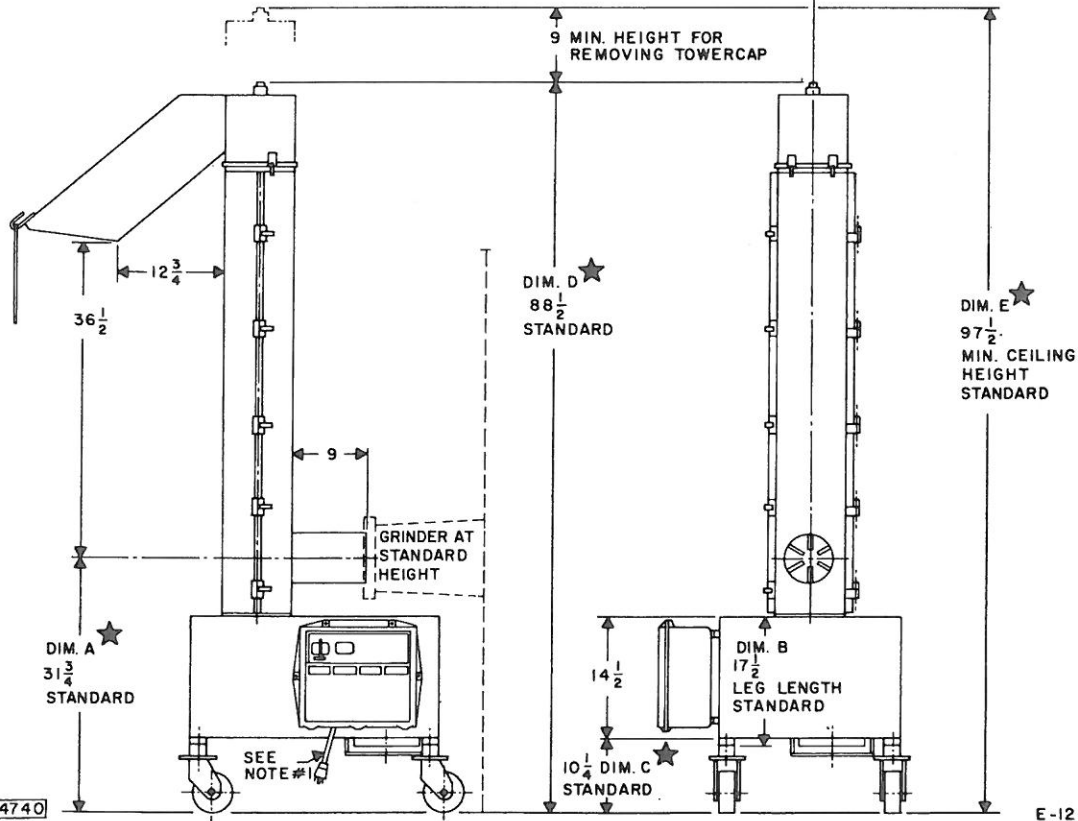


★ THESE DIMENSIONS MAY INCREASE 2-5/8" DEPENDING ON LEG ADJUSTMENT

NOTE #1

LINE CORD - APPROX 9-1/2' LONG, REQUIRES A WATER-TIGHT 4 WIRE RECEPTACLE OR CONNECTOR. (SELECT BY VOLTAGE - SEE CHART) RECEPTACLE SHALL BE INSTALLED IN A TYPE FD CONDUIT BOX

VOLTAGE	DANIEL WOODHEAD TYPE	
	RECEPTACLE	CONNECTOR
LOW	67 W 75	27 W 75
HIGH	67 W 76	27 W 76



PL-14740

E-122109

INSTALLATION DIAGRAM