

MAINTENANCE

OF

EURODRIVE REDUCER

Installation and maintenance of gear reducers

General

Please read and follow these instructions carefully to obtain maximum performance while maintaining warranty rights on the equipment received.

Every EURODRIVE product is factory tested and properly packaged before it leaves our company. Please report any transport damage to the agent of the forwarding carrier.

Storage

If the reducers are to be stored before installation, the storage area should be dry and well ventilated. Prolonged storage and/or storage in areas of high humidity, requires special precautions. Instructions for long term storage can be obtained from EURODRIVE.

If storage is done in an area of extreme and rapid temperature changes, the ventilation plug should be installed for the period of storage (See "Lubrication").

Mounting

The reducers must be mounted on a firm, rigid, plane base, preferably with a machined surface. The support must not flex under load, and the unit has to run vibration free at all times.

Careful alignment with the driven machinery is essential. In applications that exert side loads onto the shaft, mechanical side stops, adjustable if possible, should be installed onto the mounting surface.

To maintain the warranty, the reducer shall not be modified or other equipment attached to it.

Installation of Driven Members

The shafts are protected against corrosion with a vinyl strippable coating, which can be easily removed without using chemicals. If chemicals are used for shaft cleaning, avoid contact with the shaft seals to protect seal and bearing lubrication.

EURODRIVE shafts are machined with tolerances as shown on the dimension sheets in our catalogues.

Driven members, sprockets, pulleys, and sheaves should be heated to 80 degr. C (180 degr. F), and pushed over the slightly greased shaft. Metric shafts are provided with centrebores which can be used for attachment of mounting tools.

Reducers with keyless hollow shafts (Ringfeder or Stueve taper-locks) require special attention. See instructions on the next page.

Never force driven members with hammer strokes onto the shaft. Doing so will greatly decrease bearing life.

Belts, chains, etc., should be mounted as close as possible to the casting of the reducer to reduce overhung loads on the shaft. Values for maximum permissible overhung loads are published in EURODRIVE catalogues, or can be obtained from our offices.

Lubrication

EURODRIVE reducers are shipped with the proper oil level according to the mounting position specified on the original order.

The reducer is provided with: a red-painted level plug, a drain plug located on its lowest

spot, and a blue-painted plug indicating the location for the breather plug. The breather plug is shipped in a plastic bag attached to the reducer. Breather plugs for gearmotors are shipped inside the motor terminal box. Some reducers (i.e., R/RP30 and S/SF30) do not require ventilation.

When the installation of the drive is completed, the blue plug should be located on the highest spot on the reducer. The location of the level plug and the ventilation plug must be checked according to the mounting position data contained in this book, pages 21 to 26.

In certain mounting positions, slight oil loss through the breather plug--due to foaming of oil, or due to internal agitation--might occur. In these cases, the ventilation plug can be substituted with a solid plug, since our reducers are safe to be run sealed.

For washdown applications, specially protected ventilation plugs are available to prevent water from being sucked into the gearcase enclosure.

Some gear reducers, specifically types R/RP30 and S/SF30, do not need any maintenance. They can be mounted in any position and therefore, do not have a level plug. For refills, see page 27 for type and quantity of oil to be used.

Before starting the unit, the proper oil level has to be checked at the red-painted level plug. If lubricant is missing, fill to the proper level with the oil suggested on page 27. Mixing different types of oils should be avoided. Using types of oils other than those shown on page 27 may void the warranty. Oil quantities needed for complete refills are shown on page 28.

After the initial start up, the oil level should be checked periodically, and the area surrounding the reducer should be inspected for evidence of leaking oil.

We suggest changing the reducer oil every 10,000 hours of operation, or every 2 years, whichever is shorter. With the use of synthetic lubricants, 20,000 hours or 4 years of operation can be obtained. Adverse environments, high humidity, aggressive media, and high temperature will shorten the useful life of the lubricant.

CAUTION: Synthetic lubricants must not be mixed with other types, or brands, under any circumstances.

Bearings

Antifriction bearings are either lubricated by the gear oil, or are provided with sealed grease packings. EURODRIVE does not prefer to provide field re-greasable bearings (Zerk fittings) since today's high quality greases will likely outlast the bearing. If downtime, due to bearing failure must be avoided under any circumstances, periodical cleaning, checking and re-greasing with specified grease is recommended. As option, the input covers of helical gear units can be provided with re-greasing facilities, or oil bath lubrication on larger units.

Dismantling Reducers

Please refer to page 5 of this manual.

Mounting and Dismounting Hollow Shaft Reducers

Keved Hollow Shaft Units

EURODRIVE's keyed hollow shaft units are symmetrical. The driven shaft can be inserted from either side.

If the reducer has been delivered with the fasteners on the improper side, bolts, washers, circlip and the safety cover should be removed and mounted opposite of the driven shaft. See Fig.1. Note that some reducer styles have a plastic plug instead of the safety cover.

To avoid fretting corrosion, the inserted mating shaft must be undercut and finished with tolerances shown on page 4. Corrosion retarding greases such as Molykote J21R (or equivalent) must also be applied before slipping the reducer over the driven shaft. See table Fig.5 for other recommended lubricants.

The Removal

Removing hollow shaft reducers can be accomplished with the use of simple tools. One simple method is shown in Fig.2. To make this method practical, we suggest inserting a modified thrust washer into the hollow shaft before mounting the reducer onto the driven shaft. The washer may be inserted afterwards if there is sufficient space between the shaft-end and the circlip.

The modified washer is not included with the unit. It can be easily manufactured on-site with dimensions shown on page 4 of this booklet.

Hollow Shafts Without Keyways

This reducer uses the Stueve or Ringfeder-shrink fit to hold the reducer onto the driven shaft. These reducers are not symmetrical. The shrink-fit assembly is always located opposite the output shaft. A change of the output side requires disassembly of the reducer. See page 5 of this manual for instructions.

To install these reducers, first remove the protective cover and make sure that the locking screws are loose. Next, clean the hollow shaft bore and the driven shaft, and then slip the reducer over the shaft. See Fig.3. A thin coat of Molykote can be applied to the shaft, at the location indicated in Fig.3.

Slightly tighten any three screws which form the points of an equilateral triangle (screws 1, 5 and 9 in Fig.4), until locking collars lose all their play, but still can be turned.

CAUTION: Heavy tightening of the screws at this time can cause permanent deformation of the inner ring. Measure the gap between both locking collars at various points to ensure equal spacing.

After measuring, tighten all locking screws gradually and in the sequence shown in Fig.4. Several passes are required until all screws are tightened to the specific torque which is embossed on one of the collars. A torque wrench must be used.

Removal

Removal of these units is similar to the installation procedure. Gradually loosen the screws in the order shown in Fig.4.

Do not remove the screws or the locking collars completely. The locking collar assembly should only be removed if the assembly is rusty or dirty. If it is to be removed, it must be cleaned and lubricated on the sliding surfaces with one of the lubricants shown in table Fig.5.

The locking screws should be lubricated with multi-purpose grease.

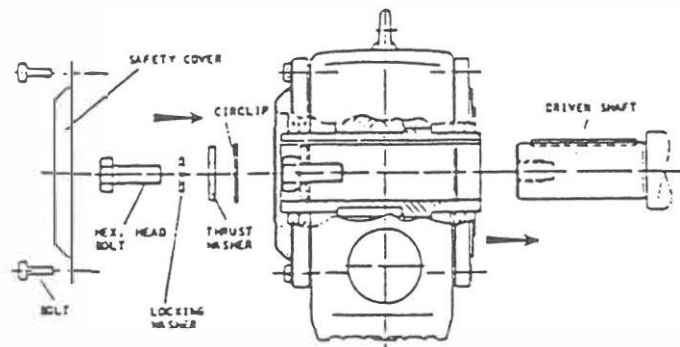


Fig.1: Mounting of Keved Hollow Shaft Units

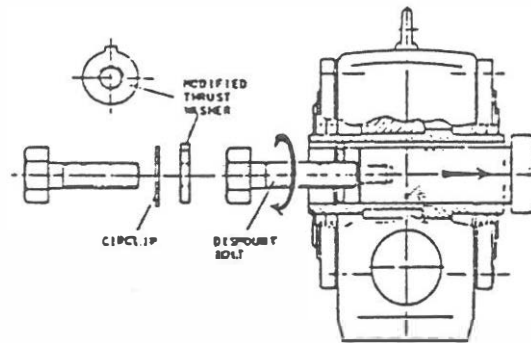


Fig.2: Dismounting of Keved Hollow Shaft Units

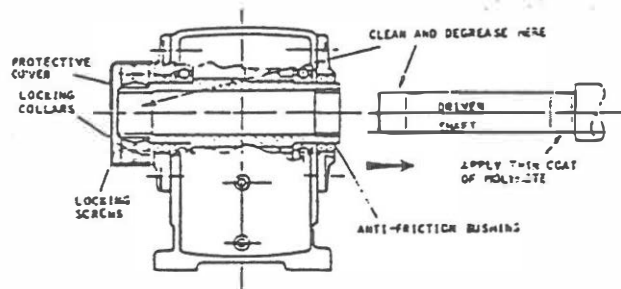


Fig.3: Mounting of Shrink-Fit Hollow Shaft Units

LUBRICANT (Mo S2)	TYPE
MOLYKOTE J21 R (LUBE COAT)	SPRAY
MOLYKOTE SPRAY (POWDER SPRAY)	SPRAY
MOLYKOTE G RAPID (AEMASOL MO 19P)	SPRAY OR PASTE
DIO-SETRAL 57 N (LUBE COAT)	SPRAY OR PASTE

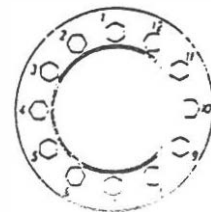


Fig.5: Lubricants for Shrink-Fit Collars

Fig.4: Tightening Sequence

Disassembling Gear Reducers

General

The following information is a general guideline for the disassembly of a typical EURODRIVE reducer. If additional information is needed, call our office and have the information contained on the reducer's nameplate available.

On the reducer's nameplate, under "Type", a code of several digits will be embossed. The first digit (either an R, S, K, or F) establishes the type of reducer.

Typical cross sections of the four EURODRIVE reducer types are shown on page 20.

Some types and sizes are quite different than the ones shown on page 20. For this reason, a Spare Part List should be obtained for proper identification of parts prior to disassembly.

The Spare Part Lists do not bear any part numbers for the gears, since these will vary for different ratios. EURODRIVE gears have embossed numbers for positive identification. When ordering replacement gears, please have this number ready.

Certain reducer parts will be destroyed during the disassembling process. Replacement parts should be on hand before starting the disassembly. These items generally include: gaskets, seal rings, bearing caps, nilos rings and oil slingers. A set of shims is needed if gears are to be replaced.

Bearings used are standard sizes, their international code is shown on our Spare Parts Lists.

Helical Reducers Type "R...", "F..."

Drain oil and remove input and output cover assemblies. "RX.." and "FA.." type reducers do not have any output covers. The "FA.." reducer has a square coverplate instead.

All shafts, gears and bearings can be removed from the main body of the reducer after the circlips are removed.

Some shafts have to be pressed out of the gearhubs. To do so, on some gears supports have to be placed between the gears and the casting, to keep the gears aligned in a horizontal position during the pressing action.

Assemble the reducer in reverse order, placing shims between bearings and circlips to eliminate endplay.

If the input pinion has been removed from its shaft (motor shaft or input shaft) the shaft and the pinion have to be cleaned of any grease. Apply a few drops of "Loctite RC/609" on the shaft before remounting the pre-heated pinion gear.

On the assembled reducer, with the cover(s) removed, the embossed identification numbers should be visible on the gears.

Gaskets should be set in liquid seal (Permatex) to ensure tightness. Reducers of the latest design (R..2.3, K...6) have no gaskets on the output housings or bearing flanges. Loctite 574 has to be applied in all areas.

Worm Gear Reducers Type "S..."

Proceed as with type "R.." and "F.." reducers, with following additional considerations:

On "S.." type reducers, footmounted style, the output shaft must be removed to enable the

removal of the remaining gears.

Removal of the output shaft:

After the seals, circlips, shims and bearing caps are removed, the gearbox must be placed under a press, with the output shaft pointing downwards. Place keystack of appropriate dimensions inside the reducer, below the wormwheel, to keep the shaft/wormwheel assembly in the centre of the reducer, while the shaft is being pressed out. Failure to support the worm wheel may damage the worm gear.

On flange-mounted and hollow shaft reducers type "SP.." and "SA..." these procedures are not needed, since the output shaft can be taken out of the housing together with the worm wheel.

Worm gear adjustment:

The worm wheel has to be centred on top of the worm gear, when assembling the drive in order to ensure proper lubrication, and achievement of full nominal service life of the gears.

For this purpose, shims are provided on both sides of the worm wheel bearings.

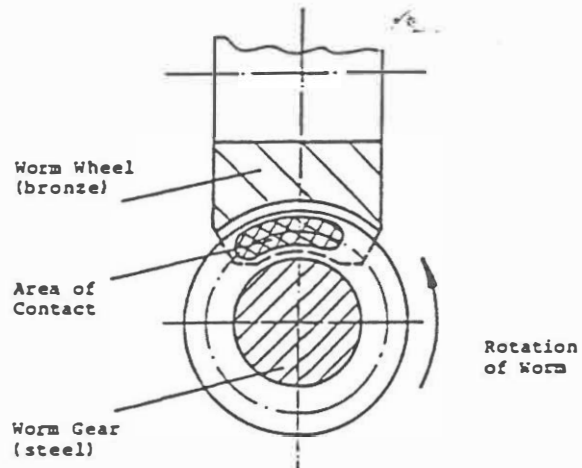


Fig.7: The location of the contact area between worm gear and worm wheel.

Proper shimming can be checked by applying a thin coat of dark grease (Molykote) onto the worm wheel and running the greased portion several times through the gear mesh. The gear contact will leave an imprint on the grease film. This imprint should be centred at the middle of the worm wheel, or slightly offset in the direction of the worm gears rotation. See Fig.7. This offset will ensure better oil penetration into the gear mesh.

Bevel Gear Reducers Type "K..."

There are special instructions available for the disassembly and assembly of these reducers. Please call our office for more information.

Quantities of Lubricants required

Quantities shown below are in litres.

Helical Gear Units^{*)} approx. quantity (l) per mounting position

Size	Mounting positions IM...										
	B3/B35 [†]	B5 [†]	B5 II	B6/B45	B7/B75	B8/B45	V1	V3	V5	V6	
R, RF302/32	Grease		0.3 kg								
R, RF40	0.3	0.3	-	0.6	0.7	0.6	1	1	1	1	
R, RF42/43	0.3	0.3	-	0.6	0.6	0.5	1	0.9	1.1	0.9	
R, RF, R0F62/63	0.6	0.5	-	1.2	1.3	1.1	2	1.8	2.2	1.9	
R, RF60	0.6	0.6	-	1.6	1.5	1.1	2	2	2	2.1	
RX, RXF61	0.8	0.4	0.7	0.7	0.7	0.7	0.6	0.5	0.9	0.9	
R, RF702/703	1.3	1.2	-	2.1	2.3	2	3.6	3.4	3.6	3.5	
R, RF, R0F72/73	1.3	1.2	-	2.1	2.3	2	3.6	3.4	3.6	3.5	
RX, RXF71	1.7	1	1.4	1	0.9	1.5	1.3	1.2	2.1	1.3	
R, RF802/803	2.6	2.5	-	4	4.8	4	7.5	7	7.3	7.3	
R, RF, R0F82/83	2.6	2.5	-	4	4.8	4	7.5	7	7.3	7.3	
RX, RXF81	2.6	1.4	2.7	1.5	1.8	2.9	2.2	1.5	3.7	2.3	
R, RF902/903	4.8	4.3	-	7.3	8	7.3	12.3	11.3	12.5	12	
R, RF, R0F92/93	4.8	4.3	-	7.3	8	7.3	12.3	11.3	12.5	12	
R, RF, R0F102/103	6.3	5.8	-	11	12	11.5	19.6	18.3	20.2	19	
RX, RXF101	6.1	3.5	6.0	4.2	3.8	7.3	5.2	4.5	9	5.6	
R, RF, R0F132/133	10	9.8	-	18.5	20	19	31.5	32.5	32	32	
R, RF, R0F142/143	15	14	-	27.5	30.5	28.5	50	50	49	49	
R, RF, R0F152	17.5	16	-	38	40	37	60	60	59	61	
R, RF, R0F163	21	16	-	45	44	43	73	71	74	75	

Shaft Mounted Helical Gear Units approx. quantity (l) per mounting position

Size	Mounting positions			Positions de montage		
	H1	H2	H3	H4	H5	H6
FA, FAF40	1.5	1.1	1.7	1.4	1.7	1.7
FA, FAF60	2.8	2.5	3.8	3.4	4.1	4
FA, FAF70	6.5	4.2	6.6	5.7	8.1	7.1
FA, FAF80	10.8	6.8	11.5	9.4	12.7	11.4
FA, FAF90	19.4	11.5	22.3	17.5	24.7	23.2
FA, FAF100	33.6	20	33.5	29.6	45.5	41

Helical-Bevel Gear Units approx. quantity (l) per mounting position

Size	Mounting positions IM...						Positions de Montage IM...							
	B3, H1 B5 I	B3 I B6 II	B5	B5 II	B5 III	B6	B8	V1 V1 I	V5	V6	H2	H3	H4	H5, H6
K, KF, KA46	on request													
K, KF, KA66	0.9	3.4	2.4	3.4	3	2.4	3	3.1	3.3	3.3	2.9	3.3	2.3	3.2
K, KF, KA76	1.7	8.2	5	6.4	5.9	4.9	5.7	8.2	8.8	6.6	5.5	6	4.7	6.4
K, KF, KA86	2.5	9.5	6	9.9	9.5	7.8	9.1	10.4	10	10	8.6	9	7.3	9.5
K, KF, KA96	4.8	16	13.8	16.8	16.8	13.5	16	19.6	19	19	15.5	17.5	13	16.5
K, KF, KA106	8	32	24.5	33	29	24	28	33	32	32	27	31	23	31
K, KF, KA126	14	60	45	56	54	44	52	64	62	62	50	58	42	60
K, KF, KA156	27	102	74	106	92	72	88	109	105	105	86	100	70	103
K, KH166	28	120	-	120	-	-	-	95	-	-	-	-	-	-
K, KH186	52	195	-	195	-	-	-	160	-	-	-	-	-	-

Helical-Worm Gear Units approx. quantity (l) per mounting position

Size	Mounting positions IM...												H1	H2	H3	H4	H5 H6
	B3 B6 I	B3 I B6 II	B5	B5 I	B5 II	B5 III	B6 B6 I	B8	V1 _a V1 _b	V1 _e V1 _h	V5 V5 I	V6					
S, SF, SA31	0.25	0.25	0.35	0.35	0.35	0.35	0.25	0.25	0.35	0.35	0.25	0.25	0.25	0.25	0.25	0.25	
S, SF, SA42	0.2	1	0.8	0.4	1.2	0.8	1.1	0.6	0.8	0.8	0.6	0.4	0.8	1.1	0.75	0.7	
S, SF, SA52	0.3	1.5	1	0.45	1.7	1.2	1.8	1.1	1.1	0.6	0.9	0.45	1.1	1.5	1	0.9	
S, SF, SA62	0.6	2.8	2.3	0.9	4	2.3	2.5	1.6	2.3	2.1	1.6	0.9	2.3	3.5	2.1	2	
S, SF, SA72	1.1	5	4	1.5	7.4	4.3	5.3	3.3	4.4	4	3.1	1.5	4	5.1	3.5	3.6	
S, SF, SA82	2.1	10	8.3	3.3	10.8	6	10.8	6	6.8	5.7	5.6	3.3	5.7	10.2	6	6.1	
S, SF, SA92	3.8	19.5	12.5	5.5	22.5	13.8	20.5	11	11.7	10.5	10.5	5.5	12.5	20.3	11.6	12.2	

^{*)} On multi-stage gear units having mounting positions B3, B5 or B35 the larger gear unit is to be provided with the oil fitting for B7.

Quantities shown below are in litres.

Helical Gear Units

Size	Mounting positions IM..									
	B3 B35	B5	B5I	B6 B65	B7 B75	B8 B85	V1	V3	V5	V6
R,RF 30	synthetic oil - 1									
R,RF 40	0.3	0.3	-	0.6	0.7	0.6	1.0	1.0	1.0	1.0
R,RF,RUF* 60/66	0.6	0.6	-	1.4	1.5	1.1	2.6	2.0	2.0	2.1
RX,RXF 61	0.8	0.4	0.7	0.7	0.7	0.7	0.5	0.4	0.8	0.8
R,RF,RUF* 70/76	1.4	1.2	-	2.3	2.5	2.3	4.0	3.8	3.8	3.9
RX,RXF 71	1.7	1.0	1.4	1.0	0.9	1.5	1.1	1.0	1.9	1.1
R,RF,RUF* 80/86	2.8	2.8	-	4.3	4.5	4.3	7.5	7.5	8.0	8.0
RX,RXF 81	2.5	1.4	2.7	1.5	1.8	2.9	2.0	1.3	3.4	2.0
R,RF,RUF* 90/96	4.8	4.6	-	7.5	8.0	7.5	12.5	11.3	12.5	12.5
R,RF,RUF* 100/106	4.9	4.7	-	12.0	13.0	12.0	20.7	19.0	21.0	20.3
RX,RXF 101	6.1	3.5	6.0	4.2	3.8	7.3	4.6	3.9	8.3	4.9
R,RF 120	6.9	6.6	-	18.7	20.2	18.7	29.0	32.0	31.0	31.0
R,RF,RUF 130	6.7	6.0	-	17.7	20.0	16.6	30.0	29.0	31.0	31.0
R,RF,RUF 140	10.5	10.0	-	25.0	26.0	25.0	42.6	43.0	45.0	45.0
R,RF,RUF 150	16.0	14.0	-	37.0	40.0	37.0	60.0	62.0	60.0	62.0
R,RF,RUF 160	21.0	16.8	-	44.0	44.0	44.0	72.0	71.0	73.0	74.0

Shaft Mounted Helical Gear Units

Size	Mounting positions					
	H1	H2	H3	H4	H5	H6
FA,FAF 40	1.5	1.1	1.7	1.4	1.7	1.7
FA,FAF 60	2.8	2.5	3.8	3.4	4.1	4.0
FA,FAF 70	6.5	4.2	6.6	5.7	8.1	7.1
FA,FAF 80	10.8	6.8	11.5	9.4	12.7	11.4
FA,FAF 90	19.4	11.5	22.3	17.5	24.7	23.2
FA,FAF 100	33.6	20.0	33.5	29.6	45.5	41.0

Helical-Bevel Gear Units

Size	Mounting positions IM..													
	B3,H1 B5I	B3I B6II	B5	B5I	B5II	B6	B8	V1 V1I	V5	V6	H2	H3	H4	H5,H6
K,KF,KA 60	0.9	3.4	2.4	3.4	3.0	2.4	3.0	3.1	3.3	3.3	2.9	3.3	2.3	3.2
K,KF,KA 70	1.7	6.2	5.0	6.4	5.9	4.9	5.7	6.2	6.6	6.6	5.5	6.0	4.7	6.4
K,KF,KA 80	2.5	9.5	8.0	9.9	9.5	7.8	9.1	10.4	10.0	10.0	8.6	9.0	7.3	9.5
K,KF,KA 90	4.8	18.0	13.8	18.6	16.6	13.5	16.0	19.6	19.0	19.0	15.5	17.5	13.0	18.5
K,KF,KA 100	8.0	32.0	24.5	33.0	29.0	24.0	28.0	33.0	32.0	32.0	27.0	31.0	23.0	31.0
K,KF,KA 120	14.0	60.0	45.0	62.0	54.0	44.0	52.0	64.0	62.0	62.0	50.0	58.0	42.0	60.0
K,KF,KA 150	27.0	102.0	74.0	106.0	92.0	72.0	88.0	109.0	105.0	105.0	86.0	100.0	70.0	103.0
K 160	28.0	120.0	-	120.0	-	-	-	95.0	-	-	-	-	-	-
K 180	52.0	195.0	-	195.0	-	-	-	160.0	-	-	-	-	-	-

Helical-Worm Gear Units







Size	Mounting positions IM..															
	B3 B6I	B3I B6II	B5	B5I	B5II	B5III	B6 B8I	B8	V1A	V1B	V5 V5I	H1	H2	H3	H4	H5 H6
S,SF 30	0.25	0.25	0.35	0.35	0.35	0.35	0.25	0.25	0.35	0.35	0.25	-	-	-	-	-
S,SF,SA 40	0.2	1	1.2	0.35	1.3	0.8	1.1	0.6	0.8	0.6	0.6	0.35	0.8	1.2	1.25	0.7
S,SF,SA 50	0.3	1.5	1.4	0.4	1.7	1.2	1.6	1.1	1.1	0.8	0.9	0.4	1.1	1.5	1.5	0.9
S,SF,SA 60	0.6	2.8	3.6	0.8	4	2.3	2.5	1.6	2.3	2.1	1.6	0.8	2.3	3.5	3.3	2
S,SF,SA 70	1.1	5	6.8	1.3	7.3	4.8	5.3	3.3	4.3	3.9	3.1	1.3	4	6	5.6	3.5
S,SF,SA 80	2.1	10	11	3	10.6	6	10.8	6	6.7	5.6	5.6	3	5.7	10	10.4	6
S,SF,SA 90	3.8	19.5	21.7	5	22	13.6	20.5	11	11.5	10.2	10.5	5	12.5	20	20	12
S,SF,SA 100	8	40	43	9	43	26	41.5	23	26	23	23	9	23	42	42	22

Refer to the appropriate page for recommended lubricants.

* RUF gear units not available as RUF 66, 76, 85, 95 and 106.

1) On multi-stage gear units having mounting positions B3, B5 or B35 the larger gear unit is to be provided with the oil filling for B7.

Recommended Lubricants

LUBRICATION SCHEDULE FOR EURODRIVE GEAR UNITS									
Gear Type	Type of Lubricant	Ambient Temperature °C	kin. viscosity at 40°C cST (mm ² /s)						
Helical & Bevel Reducers (R, FA & K-Type)	Oil	+ 40 to 0	242 to 198	Deqol 8G 220	BP Energol GR-XP 220	Soartan EP 220	Mobilgear 630	Omala 220	Meropa 220
		+25 to -15	165 to 90	Deqol 8G 100	BP Energol GR-XP 100	Soartan EP 150	Mobilgear 629	Omala 100	Meropa 150
		+ 10 to -30	74.8 to 13.5	Deqol 8G 46	BP Energol GR-XP 68	Esso Automatic Transmission Fluid	Mobil D.T.E. 15	Tellus T37 or Tellus oil 32	Meropa 68
		- 20 to -50	16.5 to 13.5		BP Energol THB 22	UNIVIS J 13	Mobil D.T.E. 11	Aero Shell Fluid 4	Aircraft HO 15
	Grease	+ 40 to -15		Aralub FDPOO	BP Energrease FG-00-EP	FIBRAX EP 370	Mobilolex 44	Avansa EPRO	Multifak EPO

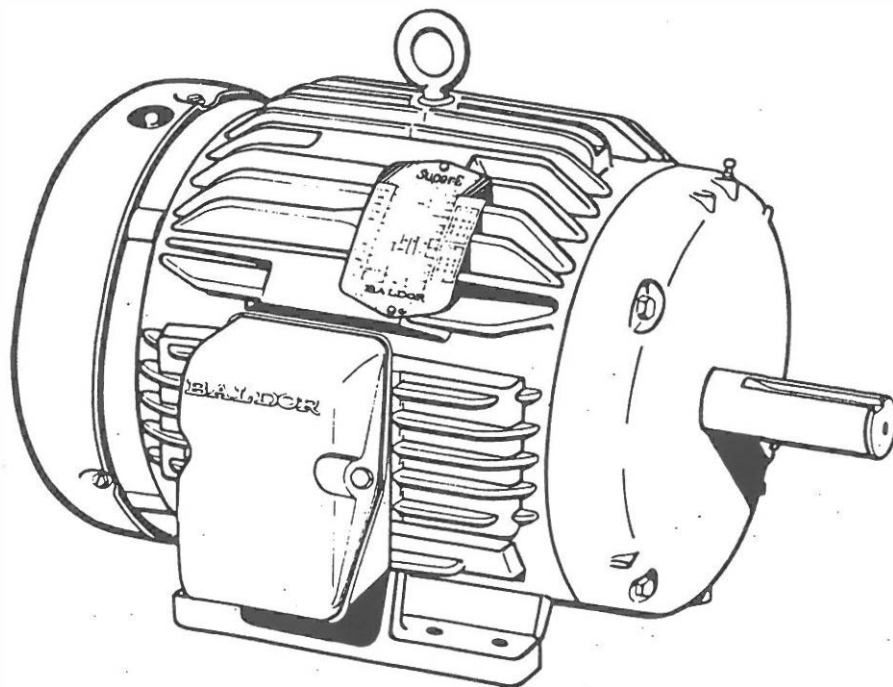
- ** EURODRIVE uses SHELL CL-1221-362 as synthetic lubricant.
- * Only for intermittent duty, otherwise use synthetic grease.
- ▼ Lubricant used by Canadian assembly plants.

BALDOR[®]

MOTORS AND DRIVES

**BALDOR ELECTRIC COMPANY
INSTRUCTION, OPERATION AND
MAINTENANCE MANUAL**

**INTEGRAL HORSEPOWER
AC INDUCTION MOTORS
TEFC ENCLOSURE**



SERVICE POLICY AND AUTHORIZED SERVICE CENTERS

SERVICE POLICY AND LIMITED WARRANTY

- 1) Baldor electric motors are warranted for a period of one (1) year, from date of shipment from the factory or factory warehouse against defects in material and workmanship. To allow for stocking and/or fabrication period and, also, one year of actual service, the warranty period will be extended for an additional period of six months, or a total of eighteen (18) months after date of shipment from factory or factory warehouse stock. In no case will the warranty be extended for a longer period. Baldor extends this limited warranty to each buyer of the electric motor for the purpose of resale and to the original purchaser for use.
- 2) Baldor will, at its option, repair or replace a motor which fails due to defects in material or workmanship during the warranty period if:
 - (a) the purchaser presents the defective motor at, or ships it prepaid to, the Baldor plant in Fort Smith, Arkansas or one of the Baldor Authorized Service Centers, which are listed below; and
 - (b) the purchaser gives written notification concerning the motor and the claimed defect including the date purchased, the task performed by the Baldor electric motor, and the problem encountered.
- 3) Baldor will not absorb the cost of removal of any electric motors from any equipment, the cost of delivery to Fort Smith, Arkansas or a Baldor Authorized Service Center, or the cost of any incidental or consequential damages resulting from the claimed defects. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.) Any implied warranty given by laws shall be limited to the duration of the warranty period hereunder. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)
- 4) Baldor Authorized Service Centers, when convinced to their satisfaction that a Baldor motor developed defects in material or workmanship within the warranty period, are authorized to proceed with the required repairs to fulfill Baldor's warranty when the cost of such repairs to be absorbed by Baldor does not exceed Baldor's warranty repair allowance. Baldor will not absorb overtime or premium repair charges without prior authorization.
- 5) The cost of warranty repairs made by other than Baldor Authorized Service Centers WILL NOT be absorbed unless first authorized by Baldor.
- 6) Claims of a purchaser that a motor is defective even when a failure results within an hour or less after being placed in service are not always justified. Therefore, Baldor Authorized Service Centers must determine from the condition of the motor as delivered to the Center whether or not the motor is defective, if, in the opinion of a Baldor Authorized Service Center, a motor did not fail as a result of defects in material or workmanship, the Center is to proceed with repairs only if the owner agrees to pay for them. If the decision is in dispute, the owner should still pay for the repairs and submit the paid invoice and the Authorized Service Center's signed service report to Baldor for further consideration. The matter will then be handled direct by Baldor with the owner or those who present the claim for adjustment.
- 7) This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

CENTRES DE SERVICE AUTORISES AU CANADA NOTRE GARANTIE

- 1) Les moteurs électriques Baldor sont garantis pour une période d'un (1) an, à partir de leur date d'expédition de la manufacture ou de l'entrepôt de la manufacture contre tous défauts de matériel et de main d'oeuvre. Allouant pour la marchandise en main et-ou la période de fabrication et, aussi, pour un an actuellement en service, cette garantie sera étendue d'une période additionnelle de six mois ou, un total de dix-huit (18) mois à partir de la date d'expédition de notre manufacture ou entrepôt de notre manufacture. Cette garantie ne sera d'aucune façon prolongée pour une plus longue période.
- 2) A sa discrétion, Baldor réparera ou remplacera, F.O.B. Fort Smith, Arkansas, ou du plus proche Centre de Service Autorisé Baldor, à ses dépens, tout moteur défectueux pour cause de matériel ou de main d'oeuvre durant la durée de cette garantie.
- 3) Baldor ne sera pas responsable pour le coût d'enlèvement de ses moteurs de l'équipement qu'ils font tourner, ni du coût de livraison de ses moteurs à ou de Fort Smith, ou du Centre de Service Autorisé Baldor, ni du coût des dommages consécutifs résultant de défauts de ces moteurs.
- 4) Lorsqu'un Centre de Service Autorisé de Baldor sera convaincu à sa satisfaction qu'un moteur a développé un défaut en dedans de la période de garantie, il sera autorisé à procéder aux réparations requises pour remplir notre garantie quand le coût de ces réparations n'excédera pas le montant de réparation alloué par Baldor. Cependant dans les situations d'urgence, nous pourrions si on le juge nécessaire autoriser les travaux de réparation.
- 5) Le coût réparation alloué par d'autres que les Centres de Service Autorisés de Baldor ne sera pas absorbé par nous à moins d'avoir d'abord obtenu notre autorisation.
- 6) Les réclamations d'un propriétaire de ces moteurs, devenus défectueux même en dedans d'une heure de leur mise en service ne sont pas toujours justifiables. Conséquemment les Centres de Service Autorisés Baldor doivent déterminer par la condition du moteur au moment qu'il leur est livré, si oui ou non ce moteur est défectueux. Si, dans l'opinion du Centre de Service Autorisé Baldor, le défaut de moteur n'est pas dû à un défaut de matériel ou de main d'oeuvre, il ne devra procéder à la réparation seulement si le propriétaire s'engage à en payer le coût. S'il y a dispute, le propriétaire devra quand même en payer le coût et ensuite soumettre la facture et le rapport du Centre de Service Autorisé Baldor à Baldor pour considération. Le problème sera alors résolu, avec le propriétaire ou la partie qui présentera la réclamation pour ajustement, directement par Baldor.

BALDOR MOTORS AND DRIVES

DISTRICT OFFICES



UNITED STATES

ARIZONA

PHOENIX
401 N. 37TH DRIVE, SUITE 101
PHOENIX, AZ 85009
PHONE (602) 484-7499
FAX (602) 484-0228

CALIFORNIA

LOS ANGELES
6480 FLOTILLA
CITY OF COMMERCE, CA 90040
PHONE (213) 724-6771
FAX (213) 721-5859

SAN LEANDRO
1821 ALVARADO, CA 94577
PHONE (510) 352-9900
FAX (510) 352-9927

COLORADO

DENVER
2820 W. BARBERRY PLACE
DENVER, CO 80204
PHONE (303) 623-0127
FAX (303) 694-3772

CONNECTICUT

WALLINGFORD
68 SOUTH TURNPIKE ROAD
WALLINGFORD, CT 06492
PHONE (203) 269-1354
FAX (203) 269-6485

FLORIDA

TAMPA
3906 E. 11TH AVE.
TAMPA, FL 33606
PHONE (813) 248-6078
FAX (813) 247-2984

GEOORGIA

ATLANTA
1305 MOUNTAIN RD. BLVD.
P.O. BOX 1990
TUCKER, GA 30085-1290
PHONE (404) 839-1234
FAX (404) 834-8294

ILLINOIS

CHICAGO
1500 PORTLAND AVENUE
CHICAGO, IL 60614
PHONE (708) 893-4900
FAX (708) 893-4911

INDIANA

INDIANAPOLIS
1712-C SPRING GARDEN ST.
INDIANAPOLIS, IN 46203
PHONE (317) 272-6104
FAX (317) 273-6628

KANSAS

KANSAS CITY
1712-C SPRING GARDEN ST.
KANSAS CITY, MO 64110
PHONE (816) 587-0272
FAX (816) 587-3735

KENTUCKY

LOUISVILLE
1712-C SPRING GARDEN ST.
LOUISVILLE, KY 40203
PHONE (502) 272-6104
FAX (502) 273-6628

LOUISIANA

MEMPHIS
1712-C SPRING GARDEN ST.
MEMPHIS, TN 38118
PHONE (901) 365-2020
FAX (901) 365-3914

MICHIGAN

DETROIT
55 OAKMAN BLVD.
HIGHLAND PARK, MI 48203
PHONE (313) 883-5700
FAX (313) 883-6116

MINNESOTA

MINNEAPOLIS
15605 32ND AVENUE N.
PLYMOUTH, MN 55447
PHONE (612) 559-2345
FAX (612) 553-1571

MISSOURI

ST. LOUIS
141 CHESTERFIELD INDUSTRIAL BLVD.
P.O. BOX 304
CHESTERFIELD, MO 63006
PHONE (314) 532-0880
FAX (314) 523-8449

KANSAS CITY
915 N.W. PLATTE VALLEY DRIVE
KANSAS CITY, MO 64150
PHONE (816) 587-0272
FAX (816) 587-3735

NEW JERSEY

PHILADELPHIA
100 W. NARBERTH TERRACE
P.O. BOX 597
COLLINGSWOOD, NJ 08108
PHONE (609) 854-5533
FAX (609) 854-1856

NEW YORK CITY METRO
1114 GOFFLE ROAD
HAWTHORNE, NJ 07506
PHONE (201) 423-3333
FAX (201) 423-3322

NEW YORK

AUBURN
1 GOULDS DRIVE
AUBURN, NY 13021
PHONE (315) 255-3403
FAX (315) 253-9923

NORTH CAROLINA

GREENSBORO
P.O. BOX 5543
1712-C SPRING GARDEN ST.
GREENSBORO, NC 27403
PHONE (919) 272-6104
FAX (919) 273-6628

NORTH DAKOTA

GRAND FORK
1712-C SPRING GARDEN ST.
GRAND FORK, ND 58503
PHONE (701) 784-5940
FAX (701) 784-1215

OHIO

CINCINNATI
3580 HAUCK ROAD
CINCINNATI, OH 45241
PHONE (513) 554-1065
FAX (513) 554-0050

OHIO

CINCINNATI
3580 HAUCK ROAD
CINCINNATI, OH 45241
PHONE (513) 554-1065
FAX (513) 554-0050

CLEVELAND
4562 EAST 71ST STREET
CUYAHOGA HEIGHTS, OH 44105
PHONE (216) 883-9800
FAX (216) 883-3837

OREGON

PORTLAND
2444 NORTHWEST 24TH AVENUE
PORTLAND, OR 97210
PHONE (503) 225-0755
FAX (503) 225-0139

TENNESSEE

MEMPHIS
400 WINCHESTER ROAD
MEMPHIS, TN 38118
PHONE (901) 365-2020
FAX (901) 365-3914

TEXAS

HOUSTON
4802 CAMPBELL ROAD
HOUSTON, TX 77041
PHONE (713) 895-7062
FAX (713) 690-4540

DALLAS
P.O. BOX 561048, 3020 QUEBEC
DALLAS, TX 75247
PHONE (214) 634-7271
FAX (214) 634-8874

ODESSA
6968 EAST COMMERCE
ODESSA, TX 79762
PHONE (915) 367-2707
FAX (915) 367-9877

WISCONSIN

MILWAUKEE
2855 S. 163RD STREET
NEW BERLIN, WI 53151
PHONE (414) 784-5940
FAX (414) 784-1215

CANADA:

ALBERTA

EDMONTON
9816 - 45 AVENUE
EDMONTON, ALBERTA T6E5C5
PHONE (403) 434-4900
FAX (403) 438-2600

BRITISH COLUMBIA

VANCOUVER
4157 MCCONNELL DRIVE
BURNABY, BRITISH COLUMBIA V5A3J7
PHONE (604) 421-2822
FAX (604) 421-3113

QUEBEC

MONTREAL
1844 WILLIAM STREET
MONTREAL, QUEBEC H3J1R5
PHONE (514) 933-2711
FAX (514) 933-8639

MANITOBA

WINNIPEG
54 PRINCESS STREET
WINNIPEG, MANITOBA R3B1K2
PHONE (204) 942-5205
FAX (204) 956-4251

NOVA SCOTIA

DARTMOUTH
P.O. BOX 3295
DARTMOUTH, NOVA SCOTIA B2W5G3
PHONE (902) 452-9095
FAX (902) 468-3157

ONTARIO

MISSISSAUGA
522 MENTON COURT
MISSISSAUGA, ONTARIO L5R2Z6
PHONE (800) 521-4346
FAX (315) 253-9923

PUERTO RICO:

FLORIDA

TAMPA
3906 E. 11TH AVENUE
TAMPA, FL 33605
PHONE (813) 248-5078
FAX (813) 247-2984

INTERNATIONAL:

INTERNATIONAL SALES

FORT SMITH, AR.
BALDOR ELECTRIC COMPANY
FORT SMITH, AR 72902
PHONE (501) 646-4711
FAX (501) 648-5895

AUSTRALIA

FAX 2-674-2495

GERMANY

FAX 89-9034697

MEXICO

FAX 52-5-6119903

SINGAPORE:

FAX 74-71708

SWITZERLAND

FAX 53-292394

UNITED KINGDOM

342-328930

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

- | | | | |
|----------------|--------------------|---------------------|---------------|
| 1. U.L. Listed | 2. AC up to 200 HP | 4. DC up to 10 K.W. | 6. Gearmotors |
| 1A. CSA Listed | 3. AC over 200 HP | 5. DC over 10 K.W. | |

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
ALABAMA	Albertville	Hood Electric Co.	1001 Hwy 431 N	205-878-2461	(2, 4, 6)
	Alexander City	Nelson's Electric Mtr. Serv.	Rt. #1 Radio Rd	205-234-3000	(2, 4, 6)
	Birmingham	B & D Electric Mtr. Co.	2320 4th Ave. S	205-251-6241	(2, 4, 6)
	Birmingham	Brannon Electric	3022 6th Ave. S	205-322-0495	(2, 4, 6)
	Birmingham	Electric Motor Serv. Inc.	602 S 32nd St.	—	(2, 4, 6)
	Birmingham	Electrical Apparatus Serv. Inc.	2828 4th Ave. S	205-956-6248	(3)
	Birmingham	Electrical Repair Serv. Co.	3300 6th Ave. S	800-492-0594	(2, 4, 5, 6)
	Birmingham	United Electric Mtr. Serv.	1512 2nd Ave. S	205-879-1891	(2, 4, 6)
	Cullman	The Electric Mtr. Co.	1416 Sportsman Lake Rd.	205-734-9490	(2, 4, 6)
	Decatur	Bellline Electric Mtr. Rpr.	Rt. #1 Box 183	205-353-1412	(2, 4, 6)
	Decatur	EMI Power & Automation	Hwy 20 W	205-355-3243	(2, 4, 6)
	Dothan	Alabama Electric Co.	1512 Headland Ave.	205-792-5164	(3, 6)
	Dothan	Higgins Electric Co., Inc.	206 N Appletree St.	205-793-4859	(2, 4, 6)
	Huntsville	Huntsville Armature Works	1122 Putman Dr.	—	(2, 4, 6)
	Mobile	Hancock Electric Mtr. Serv.	1912 Duvall St.	205-471-4354	(1, 2, 4, 6)
	Montevallo	Montevallo Electric & Machine	Hwy 25 S	205-665-1291	
	Montgomery	Midstate Electric Mtr. Serv.	1514 S Decatur St.	205-262-2941	(2, 4, 6)
	Montgomery	Waites Electric Mtr. Serv.	2800 SW St.	205-281-6530	(2, 4, 6)
	Opelika	Mid-State Electric Mtr. Serv.	1801 Market	205-745-6838	(2, 4, 6)
	Saraland	Smith Services Inc.	701 Bill Myers Dr. W	205-675-0855	(3)
Sheffield	Alabama Electric Mtr. Serv.	1714 Wall St.	205-383-1490	(2, 3, 4, 5, 6)	
Sylacauga	Mid-State Electric Mtr. Serv.	604 E 3rd St.	—	(2, 4, 6)	
Tuscaloosa	Freeman's Electric Co.	1616 25th Ave.	205-759-4241	(2, 4, 5, 6)	
ALASKA	Anchorage	Hayden Electric Mtrs.	4109 Seward Hwy	907-561-1073	(1, 2, 3, 4, 5, 6)
ARIZONA	Chandler	Foster Electric	336 S Washington	602-963-5416	(2, 4, 6)
	Glendale	Hemco Electric	5124 N 51st Ave.	602-881-1108	(2, 4, 6)
	Lake Havasu City	Bob's Electric Mtrs.	1600 W Acoma, Unit #64	213-771-3250	(2, 4, 6)
	Phoenix	A-1 Electric	3502 N 24th St.	602-956-9730	(2, 4, 6)
	Phoenix	Electric Rewind	2906 Grand Ave.	602-258-4581	(2, 4, 5, 6)
	Phoenix	Precision Electric	1822 East Jackson	602-252-2821	(2, 4, 6)
	Tucson	Bestway Electric	145 S Olson	602-884-9141	(2, 4, 6)
	Tucson	Hemco Inc.	3938 E Pima	602-881-1108	(2, 4, 6)
Tucson	Magnetek	1815 W Gardner Ln.	602-887-0900	(3, 5)	
ARKANSAS	Batesville	Swafford Electric Repair Shop	1555 N Central	501-793-5742	(2, 4, 6)
	Blytheville	Blytheville Electric Mtr. Repair	977C East Main	501-763-0887	(2, 4, 6)
	Blytheville	Medlin & Lane Electric Co.	410 S Second St.	501-762-2180	(2, 4, 6)
	El Dorado	Freeman Motor & Armature	500 NW Ave.	501-863-5368	(2, 4, 6)
	Forrest City	Bob's Electric	1526 W Broadway	501-633-6141	(2, 4, 6)
	Fort Smith	Electric Motor Center	1231 S 11th St.	501-785-2536	(2, 4, 6)
	Fort Smith	Evans Electric	4300 Planters Rd.	501-648-1500	(1, 2, 3, 4, 6)
	Fort Smith	Interstate Electric	S 5th & E St.	501-782-9139	(2, 4, 6)
	Helena	Helena Electric Co.	601 Phillips	501-338-7413	(2, 4, 6)
	Hope	Barwick Electric Co.	204 Mockingbird Ln.	501-777-3341	(2, 4, 6)
	Hot Springs	Balance Electric	228 Castleberry	501-623-6631	(2, 4, 6)
	Hot Springs	Dawson Electric	1116 Malvern Ave.	501-624-2152	(2, 4, 6)
	Jacksonville	Jacksonville Armature Works	138 Industrial Dr.	—	(2, 4, 6)
	Jonesboro	Davis Electric	102 Miller St.	501-935-0556	(2, 4, 6)
	Jonesboro	Shelco	1025 W Johnson St.	501-935-9362	(2, 4, 6)
	Jonesboro	Southern Industrial Motors	2704 E Highland	501-935-0909	(2, 4, 6)
	Little Rock	Cleveland Electric	3401 W 65th St.	501-565-7561	(2, 4, 6)
	Little Rock	Electric Motor Service	1701 E 15th	501-372-4019	(2, 4, 6)
	North Little Rock	Hi-Speed Electric	710 N Maple St.	501-375-9178	(2, 4, 6)
	North Little Rock	Twin City Electric Co.	1201 N Orange	501-375-7787	(2, 4, 6)
	Pine Bluff	Jefferson Electric	2703 Persimmon	501-879-5180	(2, 4, 6)
	Pine Bluff	Reed & McClain Electric	3018 Midland Park Dr.	501-536-5500	(2, 4, 6)
	Pine Bluff	T & N Electric	2000 Blake	501-534-8161	(2, 4, 6)
	Rogers	Evans Electric	2001 N 13th St.	501-636-0721	(1, 2, 4, 6)
	Rogers	Sallee Electric	2701 N Dixieland	501-636-1261	(2, 4, 6)
	Russellville	Electric Motor Center	Hwy. 7T	501-968-2532	(2, 4, 6)
	Russellville	Lewis Electric	1210 S Arkansas Ave.	501-968-4502	(2, 4, 6)
	Springdale	Electric Motor Center	804 N Jefferson	501-756-8040	(2, 4, 6)
	Springdale	WestArk Electric Co.	705 N Old Missouri Rd.	501-751-7051	(2, 4, 6)
	Van Buren	Allied Electric & Power	2320 Industrial Park Rd.	501-474-5271	(2, 4, 6)
Van Buren	Delta Electric	3012 Industrial Park Rd.	501-474-7019	(2, 4, 6)	

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

- | | | | |
|----------------|--------------------|---------------------|---------------|
| 1. U.L. Listed | 2. AC up to 200 HP | 4. DC up to 10 K.W. | 6. Gearmotors |
| 1A. CSA Listed | 3. AC over 200 HP | 5. DC over 10 K.W. | |

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
CALIFORNIA	Alhambra	Commercial Electric Motors	1101 Meridian Ave.	818-570-0575	(1, 2, 4, 6)
	Anaheim	Sabina Electric	1440 Burton Pl.	714-956-0480	(2, 4, 5, 6)
	Anderson	Industrial Electric Service	2180 Ox Yoke St.	916-365-3381	(2, 4, 6)
	Apple Valley	Standard Electric	2200 Hwy 18	619-247-8909	(2, 4, 6)
	Arcata	Industrial Electric Service	1601 Samoa	707-822-2485	(2, 4, 5, 6)
	Bakersfield	Electric Motor Works, Inc.	803 Inyo St.	805-327-4271	(2, 4, 6)
	Baldwin Park	Power Electric	1477 Virginia Ave.	805-337-1011	(2, 4, 6)
	Bellflower	Zamboni Industrial Electric, Inc.	9054 E Artesia Blvd.	213-634-3500	(2, 4, 6)
	Bishop	Rowes Electric	156 E Pine St.	619-872-1770	(2, 4, 6)
	Burbank	Wrights Electric	1525 W Magnolia	213-849-6045	(2, 4, 6)
	Callexico	Electric Motor Repair	548 Grant Ave.	—	(2, 4, 6)
	Canoga Park	All Safe Electric, Inc.	7057 Canoga Ave.	818-340-0974	(2, 4, 5, 6)
	Carson	Shunt Electric	21016 S Alameda St.	213-830-2599	(2, 4, 6)
	Chico	Golden State Electric	3130 Hwy 32	916-342-3750	(2, 4, 6)
	Colton	Brithinee Electric	620 S Rancho Ave.	714-825-7971	(2, 3, 4, 5, 6)
	Commerce	Caudill Electric	5270 E Washington	213-269-0348	(2, 4, 6)
	Corona	Corona Electric Motors	1865 Sampson Ave.	714-735-0483	(2, 4, 6)
	Crescent City	Industrial Electric Service	520 Wilson	707-464-4123	(2, 4, 6)
	Culver City	Dicks Electric	4521 Inglewood Blvd.	213-391-4910	(2, 4, 6)
	El Centro	West 80 Electric	547 W Evan-Hews Hwy	—	(2, 4, 6)
	Escondido	Inga Electric	541 W Grand	619-745-5276	(2, 4, 6)
	Fresno	Allied Electric	4690 E Jensen Ave.	209-486-4222	(1, 2, 4, 5, 6)
	Fresno	Arrow Electric Mtr. Serv.	645 Broadway	209-266-0104	(2, 4, 6)
	Fresno	Electric Motor Shop	253 Fulton St.	209-233-1153	(1, 2, 4, 6)
	Garden Grove	Cordova & Son	13901 Nautilus Ave.	714-265-9411	(2, 4, 6)
	Gonzales	Valley Electric Mtr. Serv.	30925 S Alta St.	408-675-3770	(2, 4, 6)
	Lancaster	Bowen Electric	318 W New Grove St.	805-942-4011	(2, 4, 6)
	Los Angeles	Al Johnson Electric	5015 Pacific Blvd.	213-583-9943	(1, 2, 4, 6)
	Los Angeles	Gory Electric	2015 Pacific Blvd.	213-221-3169	(1, 2, 4, 6)
	Los Angeles	Littlejohn-Reuland Corp.	4575 Pacific Blvd.	213-587-5255	(2, 4, 5, 6)
	Los Angeles	R. A. Reed Electric	5503 S Boyle Ave.	213-587-2284	(1, 2, 3, 4, 6)
	Los Angeles	Standard Electric	6829 Avalon Blvd.	213-753-1593	(2, 3, 4, 6)
	Los Angeles	Stump Electric	3414 E 14th St.	213-262-4858	(2, 4, 6)
	Lynwood	Magnetek-National Coil	11510 S Alameda	213-636-3271	(1, 2, 4, 6)
	Merced	All Phase Electric	2250 Cooper Ave.	209-384-0777	(2, 4, 6)
	Merced	Dom's Electric Mtr. Shop	551 S Hwy 59	209-383-1980	(2, 4, 6)
	Mission Hills	Mission Electric	10718 Sepulveda Blvd.	818-361-7812	(2, 4, 6)
	Modesto	Industrial Electric Co.	1417 Coldwell Ave.	209-527-2800	(1, 2, 4, 6)
	Oakland	California Electric Co.	3015 Adeline St.	415-655-6100	(1, 2, 4, 6)
	Oakland	Pacific Electric	1009 66th Ave.	415-569-7621	(2, 4, 6)
	Oakland	United Electric Mtr. Co.	1225 10th Ave.	510-834-9126	(2, 4, 6)
	Ontario	Ontario Electric Motors	1304 W Holt Blvd.	714-984-5810	(2, 4, 6)
	Orland	Scotty's Electric Mtr. Repair	240 6th St.	916-865-3737	(2, 4, 6)
	Oxnard	Electric Motor Service	200 E 5th St.	805-483-4233	(2, 4, 6)
	Oxnard	Industrial Electrical Motors, Inc.	811 Mercantile St.	305-483-0767	(1, 2, 4, 6)
	Palm Springs	Electric Motor Service	541 Industrial Pl.	—	(2, 4, 6)
	Petaluma	Electrical Equipment Co.	300 E D St.	707-762-2883	(2, 4, 6)
	Pomona	G. P. Electric	1020 Price St.	714-865-2291	(2, 3, 4, 6)
	Redding	Nor-Cal Rewinding	4773 Mountain Lake Blvd.	916-241-7145	(2, 4, 6)
	Sacramento	Benkiser Electric	2319 Lexington St.	916-648-0400	(2, 4, 6)
	Sacramento	Herold & Mielenz	3531 51st Ave.	916-422-7493	(2, 4, 6)
	Sacramento	Industrial Electrical	6325 Elvas Ave.	916-452-2828	(2, 4, 6)
	Salinas	Salinas Armature & Mtr. Works	899 Vertin Ave.	408-424-3741	(2, 4, 6)
	San Diego	Arnhart Electric	3520 Main St.	619-232-7985	(2, 4, 5, 6)
San Diego	Chicks Electric Mtr. Serv.	3592 Main St.	619-232-2162	(2, 4, 6)	
San Diego	Sloan Electric	2905 Commercial	619-239-5174	(2, 4, 6)	
San Francisco	Buzzell Electric	130 8th St.	415-431-5526	(1, 2, 4, 6)	
San Jose	Nelson Industrial Electric	75 Phelan Ave. #3	408-292-2213	(2, 4, 6)	
San Leandro	Benkiser Electric Motors	590 Whitney	415-638-8262	(1, 2, 4, 5, 6)	
Santa Ana	A & W Electric	2337 S Broadway	714-540-3060	(2, 4, 6)	
Santa Ana	Santa Ana Electric Mtrs.	2225 W 2nd St.	714-543-9401	(2, 4, 6)	
Santa Barbara	Craviotto Electric Service	520 E Haley St.	805-965-0514	(2, 4, 6)	
Santa Fe Springs	Bruno's Industries	10910 S Norwalk Blvd.	213-944-0221	(2, 4, 6)	
Santa Maria	Lahr Electric Motors	119 W Mill St.	805-922-8326	(2, 4, 6)	
Santa Maria	Perry's Electric Motors	414 S Western Ave.	805-925-8761	(2, 4, 6)	

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
CALIFORNIA	Seaside	Hamilton's Electric Mtr. Serv.	684 Ponderosa Ave.	408-394-6411	(2, 4, 6)
	South El Monte	Walton Winding Service	1843 Floradale Ave.	213-686-1889	(3, 6)
	Stockton	Stanley Electric	1520 E Miner Ave.	209-464-7321	(1, 2, 4, 5, 6)
	Stockton	Stockton Armature Works	646 S California St.	—	(2, 4, 6)
	Torrance	M & W Electric Motors	529 Van Ness Ave.	213-320-9700	(2, 4, 6)
	Tulare	Boyd's Electric	532 S M St.	209-686-3301	(2, 4, 6)
	Tulare	Turnupseed Electric	1580 S K Street	209-686-1541	(2, 4, 6)
	Ukiah	Industrial Electric Service	3500 N State St.	707-468-5400	(2, 4, 6)
	Van Nuys	Ball/Clark Electric	7902 Woodley Ave.	818-781-1089	(2, 4, 6)
	Ventura	Oilfield Electric Co.	1801 N Ventura Ave.	805-648-3131	(2, 4, 6)
	Westlake Village	Conejo Electric Motor	31200 LaBaya Or.	805-495-0556	(2, 4, 6)
Yuba City	Kinney Electric	720 Bridge St.	916-673-3450	(2, 4, 6)	
COLORADO	Alamosa	Electric Motor & Machine	6697 Malouff Rd.	719-589-4820	(2, 4, 6)
	Boulder	Boulder Electric Motor Co.	3867 Walnut St.	303-443-1331	(2, 4, 6)
	Colorado Springs	Colorado Electric Motor	316 Juanita St.	719-473-7744	(2, 4, 6)
	Denver	Bob's Electric	1221 S Bannock	303-744-3297	(2, 4, 6)
	Denver	Consolidated Electric	1220 30th St.	303-296-9792	(2, 4, 6)
	Denver	Denver Electric Motor Sales	1300 E 58th Ave.	303-292-9133	(2, 4, 6)
	Denver	Wazee Electric Co.	2020 W Barberrry Pl.	303-623-8658	(1, 2, 4, 5, 6)
	Durango	Puckett Electric	73 Jameson Dr.	303-247-5195	(2, 4, 6)
	Fort Collins	Larimer Electric	1808 E Lincoln	303-484-8411	(2, 4)
	Fort Morgan	M & S Electric Mtr. Serv.	17192 2nd St.	303-867-3322	(2, 4, 6)
	Grand Junction	Robert's Electric Mtr. Serv.	819 Pitkin Ave.	303-242-9980	(2, 4, 6)
	Greeley	Greeley Electric Service	2509 8th Ave.	303-352-1961	(2, 4, 6)
	Lamar	Sutphin Electric	7575 Hwy 50	303-336-4931	(2, 4, 6)
	Pueblo	Johnson Electric Co.	324 S Union Ave.	719-543-1746	(2, 4, 5, 6)
CONNECTICUT	Ansonia	B & J Electric Mtr. Repair Co.	30 Maple St.	203-734-1695	(1, 2, 3, 4, 6)
	Bloomfield	Leppert-Nutmeg	113 Dudley Town Rd. W	203-243-1737	(2, 3, 4, 5, 6)
	Bridgeport	Electric Maintenance Eng.	143 Bennett St.	203-333-6163	(2, 3, 4, 6)
	Danbury	Walker Industrial	17 Jansen St.	203-744-4771	(2, 4, 6)
	Glenbrook	A. C. Electric Motor	23 Poplar St.	203-323-3944	(2, 4, 6)
	Groton	Electric Motor Repair	124 N St.	203-445-0118	(2, 4, 6)
	Hamden	Bar Craft Electric Co., Inc.	12 Alstrum St.	203-624-9815	(2, 4, 6)
	Hartford	Reliable Electric Motors	285 Murphy Rd.	203-522-2257	(2, 4, 6)
	Middletown	G. W. Ludwig, Inc.	1002 Newfield St.	203-349-0440	(2, 4, 6)
	New Britain	Aparo's Electric Mtr. Serv.	352 Allen St.	203-223-0688	(1, 2, 4, 6)
	New Haven	Schultz Electric	30 Gando Dr.	203-562-5811	(2, 3, 4, 5, 6)
	North Haven	AC U WIND Electric Motors	111 Quinipiac Ave.	203-787-9697	(2, 4, 6)
	Norwalk	Norwalk Electric Motor Co.	41 Commerce St.	203-853-7235	(2, 4, 6)
	Norwich	Joseph Piela Electric Co.	Hallville Mill Rd.	203-889-8476	(2, 3, 4, 6)
	Southington	Eddy's Electric Motor Co.	115 Water St.	203-621-7335	(2, 3, 4, 5, 6)
	South Norwalk	Phillip's Electric Motor Repair	123 Water St.	203-866-9863	(1, 2, 4, 6)
	Stratford	Electric Enterprise	1410 Stratford Ave.	203-378-7311	(2, 4, 6)
	Stamford	Palmer Electric Motor Repair	44 Garden St.	203-348-7378	(2, 4, 6)
	Wallingford	Magna-Wind	130 S Turnpike Rd.	203-265-2304	(2, 4, 5, 6)
	Waterbury	Traver Electric	151 Homer St.	203-753-5103	(2, 3, 4, 5, 6)
Wolcott	Electro-Power Sales	Venus Dr.	203-879-2573	(2, 3, 4, 5, 6)	
DELAWARE	Cheswold	Roy's Electrical Service	Main St. Rt. #42	302-674-3199	(1, 2, 4, 6)
	Dover	Independence Electric	1506 E Lebanon Rd.	302-697-3099	(1, 2, 4, 6)
	Dover	Square One Electric Serv., Co.	County Rt. #153	302-678-0400	(1, 2, 4, 6)
	Wilmington	McHugh Electric Co.	14 Hadco Rd.	302-995-2271	(1, 2, 3, 4, 5, 6)
DISTRICT OF COLUMBIA	Washington	A.B.C. Electric Mtr. Serv.	115 L St. SE	202-488-7152	(2, 4, 6)
	Washington	Central Armature Works, Inc.	625 D St. NW	202-628-3660	(2, 4, 6)
	Washington	Quick Electric Mtr. Serv. Co., Inc.	1807 14th St. NW	202-232-2371	(2, 4, 6)
FLORIDA	Augusta	Electrical Equipment Co.	1441 Greene St.	404-722-6685	(2, 3, 5, 6)
	Belle Glade	Belle Glade Electric Mtr. Serv.	908 NW 13th St.	407-996-6739	(2, 4, 5, 6)
	Brandon	Electric Motor Rebuilding Co.	914 N. Parsons	813-689-2385	(2, 4, 6)
	Brooksville	Buds Electric Mtr. Serv.	17367 Lake Lindsey Rd.	904-799-0040	(2, 4, 6)
	Clearwater	Bud's Electric Mtr. Serv.	405 S Missouri Ave.	813-446-3130	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

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FLORIDA	Cross City	Cross Electric Mtr. Repair	U.S. 19 N	904-498-3884	(1, 2, 4, 6)
	Crystal River	Crems Ind. Sales & Serv., Inc.	139 NE 9th St.	904-795-2230	(2, 4, 6)
	Daytona Beach	KBZ Electric, Inc.	138 S Martin Luther King	904-252-3573	(2, 4, 6)
	East Palatka	Dave's Electric Mtr. Rpr.	Hwy 207	904-328-3234	(2, 4, 6)
	Ft. Lauderdale	AAA Electric Mtr. Serv.	1131 NE 45th St.	305-772-7501	(2, 4, 6)
	Ft. Lauderdale	Electra-Tronics, Inc.	3201 SW 2nd Ave.	305-522-6733	(2, 4)
	Ft. Lauderdale	Peninsular Armature Works	3056 NE 12th Terrace	305-563-5627	(2, 4, 6)
	Ft. Lauderdale	Rice Pump & Motor Rpr.	5790 NW Powerline Rd.	305-776-6049	(2, 4, 6)
	Ft. Myers	Bob Dean Supply Co.	2624 Hanson St.	813-332-1131	(2, 4, 6)
	Ft. Myers	Metro Electric	12581 Metro Pky.	813-768-2700	(2, 4, 6)
	Ft. Pierce	Indian River Armature	3800 Oleander Ave.	407-464-0455	(2, 4, 6)
	Gainesville	Electric Motor Repair Co.	2816 NW 6th St.	904-382-8318	(2, 4, 6)
	Hialeah	Condo Electric & Ind. Supply	3615 E 10th Ct.	305-691-5400	(2, 4, 6)
	Jacksonville	Electra-Tronics, Inc.	4768 Highway Ave.	904-387-5501	(2, 4, 6)
	Jacksonville	Florida Electric Motor Works	333 E 8th St.	904-369-0211	(2, 4, 5, 6)
	Jacksonville	M.I.T. Marine Electric Corp.	9410 Florida Mining Blvd.	904-262-3300	(1, 2, 4, 6)
	Jacksonville	Turner Electric Works	10520 Busch Or.	904-757-7790	(1, 2, 4, 6)
	Kissimmee	Kissimmee Electric-Mechanical	2469 Old Dixie Hwy.	407-827-6666	(2, 4, 6)
	Lake City	Turner Electric Works	N U.S. Hwy. 41	904-755-2600	(1, 2, 4, 6)
	Lakeland	Burnett Electric Mtr. Rpr.	912 E Rose St.	813-686-1309	(2, 4, 6)
	Lakeland	Cox Electric Corp.	2610 Mine & Mill Rd.	813-666-2778	(2, 4, 6)
	Largo	P & S Electric Mtr. Serv.	11520 67th St.	813-545-3032	(2, 4, 6)
	Melbourne	Cypress Exchange, Inc.	1420 Cypress Ave.	813-254-3595	(2, 4, 6)
	Miami	King Electric Mtr. Rpr.	280 NW 54th St.	305-754-3482	(2, 4, 6)
	Miami	Manolo Garcia Electric Mtr. Co.	9930 NW 89th Ave.	305-884-1717	(1, 2, 4, 5, 6)
	Mulberry	Cox Electric Corp.	1300 S Hwy. 37	813-425-3046	(1, 2, 4, 5, 6)
	Naples	Naples Armature Works	1101 5th Ave. S	813-262-4554	(2, 4, 6)
	New Smyrna Beach	Paul's Pump & Electric	1306 W Canal St.	904-427-6012	(2, 4, 6)
	North Miami Beach	J C Electric Mtr. Rpr.	1409 NE 130th St.	305-891-0832	(2, 4, 6)
	Ocala	Green's Electric Mtr. Rpr.	2265 N Magnolia Ave.	904-622-7531	(2, 4, 6)
	Ocala	Links Electric Mtr. Serv.	1921 A SW 7th Ave.	904-629-2478	(2, 4, 6)
	Ocala	Marion Electric Motor, Inc.	216 NE 14th St.	904-732-6605	(2, 4, 6)
	Orlando	Electric Motor Repair Co.	15 S Parramore	407-425-0577	(2, 4, 6)
	Orlando	Electric Motor Service	4108 N Orange Blossom Trl.	407-295-7304	(2, 4, 6)
	Orlando	Florida Electric Mtr. Serv.	1128 Atlanta Ave.	407-425-8160	(2, 4, 5, 6)
	Orlando	Magna-Tek / National Electric Coil	625 W Pine	407-423-0555	(1, 2, 4, 6)
	Orlando	Star-Delta Electric Motor., Inc.	1604 W Smith St.	407-843-0146	(2, 4, 6)
	Orlando	Stewart's Electric Motor Works	9269 Palm Avenue	407-859-1837	(2, 4, 6)
	Panama City	Ropers Electric	2338 Industrial Dr.	904-769-6643	(2, 4, 6)
	Pensacola	Electric Motor Service Co.	3810 Hopkins Rd.	904-433-5492	(2, 4, 6)
	Port Richie	Richway Gulf Motors & Pumps	8012 Congress St.	813-842-4243	(2, 4, 6)
	St. Augustine	St. Augustine Electric Mtr. Works	14 Center St.	904-829-8211	(2, 4, 6)
	St. Petersburg	B & B Electric	1920 15th Ave. N	813-896-4217	(2, 4, 6)
	St. Petersburg	Gulf Electric Mtr. Serv.	5582 66th St. N	813-546-0094	(2, 4, 5, 6)
	Sarasota	East Side Pump & Supply	7900 Fruitville Rd.	813-371-5383	(2, 4, 6)
	Sarasota	Electra-Tronics, Inc.	2053 13th St.	813-957-1604	(2, 4, 6)
	Sarasota	Mader Electric Mtr. Serv.	2400 N Washington Blvd.	813-366-8298	(2, 4, 6)
	Sebastian	Tripp Electric Motor Serv., Inc.	Cor. U.S. Hwy #1 & S.R. #512	407-589-8445	(2, 4, 6)
	Stuart	Myles Electric Mtr. Rpr.	2201 SE Indian St.	407-283-1633	(2, 4, 6)
	Tallahassee	Donaldson Electric Mtr. Rpr.	1235 Airport Rd.	904-576-2161	(1, 2, 4, 6)
Tampa	Bay Armature & Supply, Inc.	1631 N Franklin St.	813-229-8388	(2, 4, 6)	
Tampa	EME Engineering Ltd.	5128 S 36th Ave.	813-247-3478	(2, 4, 6)	
Tampa	Gulf Electric Mtr. Serv.	2718 N 40th St.	813-626-1401	(2, 4)	
Tampa	Suncoast Electric Mtr. Serv., Inc.	1606 N 25th St.	813-247-4104	(2, 4, 6)	
Tampa	Tampa Armature Works	440 S 78th St.	813-621-5661	1, 2, 4, 6)	
Tampa	United Electric Motor Co.	4725 N Nebraska Ave.	813-238-7872	(2, 4, 6)	
Tarpon Springs	Electric Motor Rebuilders	801 US Hwy 19 N	813-938-4069	(2, 4, 6)	
Venice	Venice Pumps & Motors	306 Warfield South	813-484-2587	(2, 4, 6)	
Vero Beach	Jacobs Electric Mtr. Rpr.	1120 S Dixie Hwy.	407-567-7181	(2, 4, 6)	
West Palm Beach	Electric Mtrs. of Palm Bch., Inc.	729 Belvedere Rd.	407-832-0233	(2, 4, 6)	
West Palm Beach	Florida Electric Motors	801 27th St.	407-833-0850	(2, 4, 6)	
Winter Haven	McNabb's Electric Mtr. Serv.	3104 Havendale Blvd.	813-967-0381	(2, 4, 6)	

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GEORGIA	Albany	B & L Electric	2220 W Town Rd.	912-435-0791	(2, 4, 6)
	Albany	Smith-Gray Electric Co.	2204 Newton Rd.	912-435-1376	(2, 4, 6)
	Athens	Electric Motor Co.	Hwy. 29 N	404-549-6556	(2, 4, 6)
	Atlanta	Cleveland Electric Co.	3795 Wendell Dr. SW	404-696-4550	(1, 2, 3, 4, 6)
	Atlanta	Cole Electric	1669 Westview Dr. SW	404-752-7885	(2, 3, 4, 5, 6)
	Atlanta	McCoultough Electric	521 Edgewood Ave.	404-688-5251	(2, 3, 4, 6)
	Augusta	Electric Equipment	1441 Greene St.	404-722-6685	(2, 3, 4, 5, 6)
	Bainbridge	Flint River Electric Co., Inc.	210 Newton Rd.	912-246-0867	(1, 2, 4, 6)
	Baxley	L.H. Bass & Son's Elec. & Mill Sup.	503 S Main St.	912-367-2136	(2, 4, 6)
	Brunswick	Southern Tri-State Electric	1900 2nd St.	912-264-9379	(2, 4, 5, 6)
	Carrollton	Johnson Electric	213 Avenue C	404-834-7722	(2, 4, 6)
	Columbus	Hunter Electric Mtr. Serv.	628 S Oakview	404-322-0648	(2, 4, 6)
	Columbus	Smith-Gray Electric	1508 Cussetta Rd.	404-322-2569	(2, 4, 6)
	Cordele	Cook Industrial Electric Co.	316 6th N	912-273-1516	(2, 4, 6)
	Dalton	Whitfield Electric	926 E Morris St.	404-226-6943	(2, 4, 6)
	Decatur	Chapman Electric	3003 N Decatur Rd.	404-296-1048	(2, 3, 4, 6)
	Douglas	Vincent Electric Co.	Bowens Mill Rd.	912-384-7819	(2, 4, 5, 6)
	Macon	Ingleside Electric	1950 Canton St.	912-743-5827	(2, 3, 4, 6)
	Macon	Reliable Electric Motor	423 Astor St.	912-745-3396	(2, 4, 6)
	Macon	Spires Electric Inc.	4022 I-475 Industrial Blvd.	912-474-9545	(3)
	Macon	Wilson Electric	557 Pine St.	912-746-5654	(2, 4, 5, 6)
	Rome	Rome Electric Co.	36 Westside Ind. Blvd.	404-232-4483	(2, 3, 4, 5, 6)
	Savannah	Commercial Electric	2217 W Bay St.	912-232-7151	(2, 4, 6)
	Savannah	Electric Motor Service	1801 W Bay St.	912-236-0635	(2, 4, 6)
	Thomasville	B & B Electric	817 N Madison St.	912-226-1373	(2, 4, 6)
	Thomasville	Smith Electric	336 Campbell St.	912-228-0670	(2, 4, 6)
Tifton	T & S Electric	120 E 9th St.	912-386-2929	(2, 4, 6)	
Valdosta	Valdosta Armature Works	606 W Hill Ave.	912-242-4090	(2, 4, 6)	
HAWAII	Hilo	Electric Motors	494-C Kalanikoa St.	808-961-6767	(2, 4, 6)
	Honolulu	H.S.I. Electric	2234 Hoonhee Pl.	808-848-6400	(2, 4, 5, 6)
IDAHO	American Falls	Electric Motor Rewinding	130 Harrison	208-226-2226	(2, 4, 6)
	Boise	Missman Electric Co.	7910 Overland	208-344-6539	(2, 4, 6)
	Caldwell	Priest Electric Service Co., Inc.	412 Simplet Blvd.	208-459-6351	(2, 3, 4, 5, 6)
	Idaho Falls	Electric Motor Service Co., Inc.	527 S Utah Ave.	208-522-4256	(2, 3, 4, 6)
	Lewiston	Smith's Electric	410 Miller St.	208-743-2021	(2, 4, 6)
	Meridan	Associated Coil	722 W Franklin Rd.	208-888-6922	(2, 4, 6)
	Rexburg	Upper Valley Electric	1450 N Salem Rd.	208-356-4424	(2, 4, 6)
Twin Falls	Waite Electric	255 2nd Ave. E	208-733-1901	(2, 4, 6)	
ILLINOIS	Alton	Industrial Motor Repair	3326 E Broadway	618-463-0333	(2, 4, 5, 6)
	Bartonville	Melton Electric	5807 S Washington	309-697-1422	(2, 4, 6)
	Belleville	Kopf Electric Mtr. Serv.	1218 W Main St.	618-233-4424	(2, 4, 6)
	Berwyn	Richard's Electric Co.	2715 S Ridgeland Ave.	708-788-5250	(2, 4, 6)
	Bloomington	The Struck Co.	1106 E Bell St.	309-827-4691	(2, 4, 6)
	Bradley	Arthur Motor Works	359 S Kinzie Ave.	815-933-6683	(1, 2, 3, 4, 6)
	Calumet City	The Fiolo Corp.	1593 Valencia	708-730-0682	(2, 3, 4, 6)
	Centralia	Klein Armature Works	1439 N Elm St.	618-532-1951	(2, 4, 6)
	Champagne	Floyd's Electric Mtr. Serv.	133 W Kenyon	217-352-0571	(2, 4, 6)
	Chicago	Bemar Electric Mtr. Serv.	1624 W 35th St.	312-247-5190	(2, 4, 6)
	Chicago	Electric Motor Corp.	3865 N Milwaukee	312-725-1050	(1, 2, 3, 4, 6)
	Chicago	Excel Electric Serv. Co.	2415 W 19th St.	312-421-7220	(1, 2, 3, 4, 6)
	Chicago	Inland Industrial Electric	2321 S Halsted St.	708-482-3050	(2, 4, 6)
	Chicago	Northwest Electric Motor Co.	5858 W Irving Park Rd.	312-685-8000	(2, 4)
	Chicago	Wayne Electric	3162 N Elston	312-267-5400	(2, 4, 6)
	Chicago Heights	H. J. Service Co.	1245 Halsted	708-756-2123	(1, 2, 4, 6)
	Danville	Koemer Electric Co.	#19 Withner	217-431-2800	(1, 2, 4, 6)
	Decatur	Decatur Industrial Electric, Inc.	1515 N 22nd St.	—	(2, 4, 6)
	DeKalb	Gem Electric Mtr. Serv., Inc.	1400 E Lincoln Hwy.	815-756-5317	(2, 4, 6)
	East St. Louis	Bradford Electric	925 Missouri Ave.	618-874-1015	(2, 4, 6)
	Effingham	Lang Electric	912 E Fayette	217-347-7626	(2, 4, 6)
	Effingham	Probst Refrigeration	410 W Fayette St.	217-342-2898	(2, 4, 6)

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ILLINOIS	Forest Park	Sievert Electric Service & Sales	1230 S Hannah St.	708-771-1600	(3)
	Franklin Park	The Flolo Corp.	11920 Franklin Ave.	708-595-1010	(1, 2, 3, 4, 6)
	Franklin Park	Rainbow Electric Co.	2910 Birch	708-455-4605	(2, 4, 6)
	Freeport	Koym Electric Motors	417 S Locust Ave.	815-233-0611	(2, 4, 6)
	Galesburg	Midland Electric Works	932 Monmouth Blvd.	309-342-4125	(2, 4, 6)
	Glendale Heights	Goding Electric	686 E Fullerton	708-858-7700	(2, 3, 4, 5, 6)
	Gurnee	The Flolo Corp.	1401 Delany Rd.	708-249-0880	(2, 3, 4, 6)
	Joliet	Pohlert Industrial Electric	508 Ruby	815-726-5919	(2, 3, 4, 6)
	LaSalle	Inman Electric Co.	Civic Industrial Park	815-223-2288	(2, 3, 4, 6)
	Lawrenceville	M & L Electric	1308 Jefferson	618-943-3922	(2, 4, 6)
	Marion	Flanders Electric	701 W Stockton	618-993-2681	(2, 4)
	Martinville	Keller Electric & Machine Co.	12 S York	217-382-4521	(2, 4, 6)
	McHenry	McHenry Electric Co.	4012 W Main	815-385-5530	(1, 2, 3, 4, 5, 6)
	Montgomery	Industrial Motor Service Co.	2000 Albright Rd.	708-892-9133	(2, 4, 6)
	Mt. Vernon	Mt. Vernon Electric	1313 Harlan Rd.	618-244-1066	(2, 4, 6)
	Peru	Complete Industrial Enter., Inc.	3349 Becker Dr.	815-224-1510	(2, 3, 4, 5, 6)
	Pontiac	Frank's Electric Mtr. Serv.	705 N Ladd St.	815-844-7181	(2, 4, 6)
	Quincy	Richards Electric Motor Co.	517 S 5th St.	217-222-7154	(2, 4, 5, 6)
	Rock Falls	Hill's Electric Mtr. Serv.	305 1st Ave.	815-625-0305	(2, 4, 6)
	Rockford	Imperial Motor & Armature	2027 23rd Ave.	815-398-2313	(2, 4, 6)
	Rockford	Rockford Electric	2010 Harrison Ave.	815-398-4096	(2, 4, 6)
	Rockford	Rockford Power Machine	2401 11th St.	815-962-8841	(2, 3, 4, 6)
	Rock Island	Rock Island Electric Mtr. Rpr.	211 31st Ave.	309-788-9517	(2, 3, 4, 6)
	Schiller Park	Major Service Electric	3917 25th Ave.	708-671-1305	(2, 4, 6)
	Skokie	Schiffmann-Electrotek	8208 McCormick Blvd.	708-675-0607	(2, 3, 4, 5, 6)
	South Elgin	Flolo Electric	510 Stevenson Dr.	708-695-4734	(2, 3, 4, 6)
	Springfield	J & J Electric Mtr. Rpr.	2800 S 11th St.	217-529-0015	(2, 4, 6)
	Springfield	Modern Electric Motor Co.	1112 E Edwards St.	217-523-2362	(2, 4, 6)
	Stone Park	Lee Foss Electric Motor Serv.	3418 North Ave.	708-681-5335	(2, 4, 6)
	Urbaña	Cox Electric Mtr. Serv.	602 W Anthony Dr.	217-344-2458	(2, 4, 6)
	Vandalia	Vandalia Electric Mtr. Serv.	Rt. 185 W	618-283-0068	(2, 4, 6)
	West Frankfort	Sandner Electric	903 E St. Louis St.	618-932-2179	(2, 4, 6)
Zion	Butler Electric	11787 W Russell Rd.	708-872-7640	(2, 4, 6)	
INDIANA	Anderson	Kirby-Risk Electric Motors, Inc.	544 Broadway	317-643-3384	(2, 4, 5, 6)
	Bloomington	Owens Electric Co.	116 S Madison St.	812-336-4351	(2, 3, 4, 5, 6)
	Booneville	Mohler Arm & Electric	Eby Rd.	812-897-2900	(1, 2, 4, 5, 6)
	Columbus	Daniel Hayden Electric Co.	1400 Grand Ave.	812-372-2596	(2, 3, 4, 5, 6)
	Crown Point	Ploog Eng. Co.	814 N Indiana Ave.	219-663-2854	(2, 4, 6)
	Evansville	Flanders Electric Mtr. Serv.	8101 Baungart Rd.	812-867-7421	(1, 2, 3, 4, 5, 6)
	Evansville	Swanson Nun	400 SE 8th St.	812-464-3732	(2, 3, 4, 6)
	Ft. Wayne	Fishers Electric	2025 Wayne Haven Ave.	219-493-0521	(1, 2, 3, 4, 5, 6)
	Ft. Wayne	Wagner Electric Co.	3610 N Clinton	219-484-5532	(2, 3, 4, 6)
	Ft. Wayne	Wayne Electric Co.	416 W 4th St.	219-422-7471	(2, 4, 5, 6)
	Goshen	East Side Electric	928 E Lincoln	219-533-2643	(2, 4, 6)
	Hammond	Mills Electric	4828 Calumet Ave.	219-931-3114	(2, 4, 6)
	Huntington	Christman Motor Repair	1544 N Jefferson Ave.	219-356-2128	(2, 4, 6)
	Indianapolis	Brehob Electric Equip. Co., Inc.	1334 S Meridian St.	317-632-4451	(1, 2, 3, 4, 5, 6)
	Indianapolis	Frakes Electric	1345 W 16th St.	317-638-1594	(2, 4, 6)
	Indianapolis	Horner Electric	1521 E Washington St.	317-639-4261	(1, 2, 4, 6)
	Indianapolis	McBroom Electric Co., Inc.	800 W 16th St.	317-926-3451	(1, 2, 3, 4, 5, 6)
	Indianapolis	Moran Electric Service Inc.	1401 E 20th St.	317-632-5551	(2, 4, 5, 6)
	Indianapolis	Scherer Electric Co.	940 S West St.	317-231-2363	(1, 2, 3, 4, 5, 6)
	Jasper	Jasper Electric Motors	Hwy. 231 S & Division	812-482-1660	(2, 4, 6)
	Kokomo	H & M Electric	1124 S Washington	317-457-3291	(2, 4, 6)
	Lafayette	Keen Electric	740 Navco Dr.	317-447-7651	(2, 4, 6)
	Lafayette	Kirby-Risk Electric Motors, Inc.	1st & Smith St.	317-423-4205	(1, 2, 3, 4, 6)
	LaPorte	S & W Electric	106 Washington St.	219-362-4581	(2, 4, 6)
	Lebanon	L & R Electric Motor Serv.	401 W Noble	317-482-4720	(2, 4, 6)
	Logansport	Tweedle Electric Mtr. Serv.	110 Burlington St.	219-753-3597	(2, 4, 6)
	Marion	Kirby-Risk Electric Motors, Inc.	1216 S. Branson	317-664-5185	(2, 4)
	Michigan City	Harrison Electric, Inc.	201 E Harrison	219-879-0444	(2, 3, 4, 5, 6)
	Mishawaka	Aletrico	55800 Currant Rd.	219-259-5711	(1, 2, 4, 5, 6)
	Monroe	Parrish Electric	Rt. 1, 273 N Van Buren St.		(2, 4, 6)
	Mount Vernon	Mount Vernon Electric	1114 W 4th St.	812-838-5641	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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| 1A. CSA Listed | 3. AC over 200 HP | 5. DC over 10 K.W. | |

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
INDIANA	Muncie	Kirby-Risk Electric Motors, Inc.	1619 S Walnut St.	317-282-2225	(2, 4, 5, 6)
	Muncie	Superior Electric Co.	1117 S Mulberry St.	317-282-2851	(2, 4, 6)
	New Castle	Porter Electric	720 Spring St.	317-529-0916	(2, 4, 6)
	Peru	Douglas Electric	368 Jefferson Ave.	317-472-1286	(2, 4, 6)
	Princeton	Princeton Electric Mtr. Serv.	314 N Main St.	812-385-2561	(2, 4, 6)
	Richmond	McNeil Electric	17 Richmond Ave.	317-935-1385	(2, 3, 4, 6)
	Richmond	Remsco, Inc.	1541 S 9th St.	317-962-0816	(2, 4, 6)
	South Bend	Delta Star	1125 S Walnut St.	219-234-8131	(2, 3, 4, 5, 6)
	South Bend	Northern Electric Co., Inc.	116 N Hill St.	219-289-7791	(1, 2, 3, 4, 5, 6)
	Sullivan	Davidson Electric & Mach. Wks.	601 S Main St.	812-268-5737	(2, 4, 6)
	Terre Haute	Quality Electric	3651 N Fruitridge, T134	800-288-5281	(1, 2, 4, 5, 6)
	Terre Haute	Scherer Industrial Group	Ft. Harrison Industrial Pk.	812-466-5281	(3)
	Terre Haute	Walker Electric	323 Walnut	812-234-3311	(1, 2, 4, 6)
	Warsaw	Reed Electric	710 S McClellan St.	219-267-6631	(2, 4, 6)
IOWA	Algona	Trupke Electric Mtr. Serv.	606 Diagonal	515-295-5242	(2, 4, 6)
	Ames	Reese Electric Motor Co.	202 East Ave.	515-232-5081	(2, 4, 6)
	Burlington	Industrial Electric Mtrs. Corp.	1511 Mt. Pleasant St.	319-752-4917	(2, 4, 6)
	Carroll	Electric Motor Service	215 E 3rd	712-792-3255	(2, 4, 6)
	Cedar Falls	Modern Electric Motors	2419 Main St.	319-277-6178	(2, 4, 6)
	Cedar Rapids	Janda Electric Mtr. Serv.	1716 Blairs Ferry Rd.	319-393-1230	(2, 4, 5, 6)
	Cedar Rapids	Superior Motor Winding	850 3rd Ave. SW	319-368-1037	(2, 4, 6)
	Cedar Rapids	Torrance Electric	700 16th St. NE	319-365-4662	(2, 4, 6)
	Charles City	Hollar Electric Mtr. Rpr.	100 St. Marys St.	515-228-1731	(2, 4, 6)
	Cherokee	Beals Motor Rewind	600 W Beech	712-225-6173	(2, 4, 6)
	Clear Lake	Knorr Electric	310 S 20th St.	515-357-3614	(2, 4, 6)
	Clinton	Clinton Electric Motors	2020 Lincolnway	319-243-2623	(2, 4, 5, 6)
	Council Bluffs	Woody's Electric Motor Service	725 16th Ave.	712-303-0800	(2, 4)
	Creston	Central Plains Electric	Hwy 34 W & Smith St.	—	(2, 4, 6)
	Dakota City	Rathke Electric	508 Main St.	515-332-4195	(2, 4, 6)
	Davenport	Electric Motor Service	1113 W 4th St.	319-323-1823	(2, 4, 6)
	Davenport	Industrial Engineering Equip.	1958 W River Dr.	319-323-9721	(2, 4, 5, 6)
	Decorah	Bartlett Electric Co.	911 Mechanic Street	319-382-5264	(2, 4, 6)
	Denison	Verbik Electric Motors	218 S 7th St.	712-263-2746	(2, 4, 6)
	Des Moines	Electric Engineering & Equip. Co.	1808 Delaware St.	515-266-8890	(1, 2, 4, 5, 6)
	Des Moines	Electric Motor Corp.	509 SE 6th St.	515-243-3824	(2, 4, 6)
	Des Moines	Electric Pump & Tool	4280 NE 14th	515-265-2222	(2, 4, 6)
	Dubuque	Dubuque Electric Mtr. Serv., Inc.	1160 E. 12th	319-583-2442	(2, 4, 6)
	Emmettsburg	Ellis Electric	3102 12th St.	712-852-4022	(2, 4, 6)
	Fairfield	Hellyer Electric Mtr. Serv.	2007 W Burlington	515-472-8680	(2, 4, 6)
	Ft. Dodge	Larsen Electric Mtr. Serv.	1229 1st Ave. S	515-573-7331	(2, 4, 6)
	Harland	Peterson Electric Motors	1122 6th St.	712-755-5773	(2, 4, 6)
	Iowa City	Electric Motor Corp.	1518 Hwy One W	319-354-4040	(2, 4, 6)
	Iowa Falls	Smith Electric Mtr. Serv.	2108 W Washington	515-648-9108	(2, 4, 6)
	Keokuk	Industrial Engineering Equip. Co.	14th & Main	319-524-3923	(2, 4, 6)
	Keokuk	Quality Electric	RR #3	319-463-7688	(2, 4, 6)
	Kesley	Kesley Electric	303 Main St.	319-347-2462	(2, 4, 6)
	Lake City	Lake City Electric	113 Main St.	712-464-3230	(2, 4, 6)
	Maquoketa	Maquoketa Electric	701 E Platt St.	319-652-3364	(2, 4, 6)
	Marshalltown	Blink Electric	Rear 116 N 1st Ave.	515-752-3036	(2, 4, 6)
	Marshalltown	Egleston Electric Co.	1208-10 E Main St.	515-752-4678	(2, 4, 6)
	Mason City	Peterson Electric Mtr. Serv.	207 6th St.	515-424-2055	(2, 4, 6)
	New Hampton	Mohawk Electric Co.	925 N Lynn	515-394-3318	(2, 4, 6)
	Newton	Bates Electric Co.	217 W 2nd St.	515-792-7756	(2, 4, 6)
	Newton	Jacobs Electric	1324 S 5th Ave. E	515-792-6650	(2, 4, 6)
	Oelwein	Thomas Electric Mtr. Serv.	1223 S Frederick	319-283-1331	(2, 4, 6)
	Oskaloosa	Electric Motor Service	804 S Market	515-673-6539	(2, 4, 6)
	Ottumwa	Hellyer Electric	402 S Iowa Ave.	515-684-7769	(2, 4, 6)
	Rock Valley	P & M Electric Mtr. Serv.	RR#2 Box 301-C	712-476-2305	(2, 4, 6)
	Sac City	Midtown Electric Motors	1314 S 14th St.	712-662-4031	(2, 4, 6)
	Sheldon	Wolbrink Electric	1311 2nd Ave.	712-324-3435	(2, 4, 6)
	Shenandoah	McElroy Electric Service	1109 W Sheridan	712-246-2200	(2, 4, 6)
	Sioux City	Mid-City Electric	507 Iowa St.	712-255-1836	(2, 4, 6)
	Sioux City	Thorp Electric	1024 5th St.	712-258-5515	(2, 4, 5, 6)
	Spencer	Pixler Electric of Spencer, Inc.	2601 Highway Blvd.	712-262-1550	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

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IOWA	Storm Lake	Botine Electric	1207 N Lake	712-732-2332	(2, 4, 6)
	Sumner	Chapman Electric Mtr. Serv.	201 W First St.	319-578-5640	(2, 4, 6)
	Tipton	Tipton Electric Motors	107 W 2nd St.	319-886-3131	(2, 4, 6)
	Waterloo	Motor Winding Service	1819 Falls Ave.	319-232-0662	(2, 4, 6)
	Waterloo	Torney's Electric	1401 Jefferson	319-234-8579	(2, 4, 6)
	Waverly	Bluhm Electric	115 4th SE	—	(2, 4, 6)
	Webster City	Phelps Electric Mtr. Serv.	805 West Ave.	515-832-2746	(2, 4, 6)
KANSAS	Chanute	Zimmerman Electric Serv., Inc.	1201 W Beech	316-431-2260	(2, 4, 6)
	Clay Center	Griggs Electric	611 Bridge St.	913-632-2823	(2, 4, 6)
	Coffeyville	Moon Hill Electric	1514 Spruce	316-251-4420	(2, 4, 6)
	Coffeyville	O. K. Electric Works	10 E North St.	316-251-2271	(2, 4, 6)
	Dodge City	Dalton Brothers	1110 S 14th St.	316-227-2793	(2, 4, 6)
	Emporia	Emporia Electric Co.	312 Commercial St.	316-342-2965	(2, 4, 6)
	Garden City	Naab Electric	W Hwy. 50	316-276-8101	(2, 4, 6)
	Great Bend	Glen's Electric Repair	Hwy. 281 S	316-793-6076	(2, 4, 6)
	Great Bend	Johnson Electric, Inc.	2212 10th St.	316-792-3597	(2, 4, 6)
	Hutchinson	Central Electric Motor Rpr., Inc.	125 W. F. Ave.	316-663-9114	(2, 4, 6)
	Kansas City	Klomp Electric	739 Central Ave.	913-371-4330	(2, 4, 6)
	Kansas City	Kornfeld-Thorp Electric Co.	100 Greystone Ave.	913-321-7070	(2, 4, 5, 6)
	Lawrence	Patchen Electric	102 E 9th St.	913-843-4522	(2, 4, 6)
	Liberal	Electric Motor Service	334 S Virginia	316-624-1132	(2, 4, 6)
	McPherson	Gibson Ind. Controls	525 N Baer	316-241-3551	(2, 4, 6)
	Pittsburg	Atkinson Armature Works	1801 E 27th Terr.	316-231-6900	(2, 4, 6)
	Salina	Central Kansas Electric	912 W North St.	913-825-9521	(2, 4, 6)
	Topeka	Independent Electric	505 Van Buren	913-233-4282	(2, 4, 6)
	Wichita	B & B Electric Co.	332 Lulu	316-267-1238	(2, 4, 6)
	Wichita	Richmond Electric	911 Maple	316-264-2344	(2, 4, 6)
KENTUCKY	Alexandria	Miner Electric Service	309 Parkview Dr.	606-635-4440	(2, 4, 6)
	Corbin	Poynter Brothers Electric	304 N Lynn	606-528-5995	(2, 4, 6)
	Covington	A-1 Electric	662 Pike	606-291-1351	(2, 4, 6)
	Franklin	Adams Electric Motor Rpr.	108 Commerce	—	(2, 4, 6)
	Henderson	Electric Motors, Inc.	2204 N U.S. Hwy. 41	502-826-4867	(2, 3, 4, 6)
	Hopkinsville	Hopkinsville Electric Mtr. Serv.	704 W 15th St.	502-886-7585	(2, 4, 6)
	Lebanon	Lebanon Power & Apparatus Co.	451 E Main St.	502-692-6091	(1, 2, 3, 4, 5, 6)
	Lexington	City Electric	631 Kennedy Rd.	606-254-5581	(2, 4, 6)
	Lexington	Lexington Industrial Service	1151 Floyd Dr.	608-255-0818	(2, 4, 5, 6)
	Louisville	Electric Motor Repair	411 E Barbee St.	502-635-2927	(2, 4, 6)
	Louisville	Krauth Electric Co.	4742 Allmond Ave.	502-361-1311	(1, 2, 3, 4, 5, 6)
	Louisville	Ruf Supply	1419 Sellinda Dr.	502-451-1220	(2, 4, 6)
	Madisonville	Hibbs Electric	640 E Center	502-821-5216	(2, 4, 6)
	Maysville	Sunier Machine Shop	1308 Forest	606-564-5017	(2, 4, 6)
	Middlesboro	Kentucky Armature Works	209 Winchester	606-248-2930	(2, 4, 6)
	Owensboro	Owensboro Armature Works	609 E 14th St.	502-683-9855	(1, 2, 3, 4, 6)
	Paducah	Warden Electric	604 N 7th St.	502-443-4622	(2, 4, 6)
Park Hills	A-1 Electric Mtr. Serv.	1461 Dixie Hwy.	606-291-1351	(2, 4, 6)	
Russellville	Southern Electric	183 E 4th Ave.	502-726-4045	(2, 4, 6)	
LOUISIANA	Alexandria	A & B Armature	1215 Baratario Blvd.	504-868-4484	(2, 4, 6)
	Alexandria	Alexandria Armature Service	3412 Broadway	318-443-0447	(2, 4, 6)
	Alexandria	Electric Motor Service, Inc.	1123 Washington	318-442-5645	(2, 4, 6)
	Baton Rouge	Ace Armature	2143 Plank Rd.	504-356-6175	(2, 4, 6)
	Baton Rouge	Industrial Electric Mtr. Serv.	13930 Airline Hwy.	504-756-2229	(2, 4, 6)
	Baton Rouge	James Electric	10471 Mammoth Ave.	504-356-1829	(2, 4, 6)
	Belle Chasse	Scott Armature	2805 Engineers Rd.	504-394-6903	(2, 4, 6)
	Berwick	Marine Electric Service	Hwy. 182 W	504-395-9341	(2, 4, 6)
	Bogalusa	Haire Electric Motor Co.	1610 Davenport	504-735-8700	(2, 4, 6)
	Hammond	Industrial Electric Co.	6204 Old Baton Rouge Hwy.	504-567-2172	(2, 4, 6)
	Harvey	West Side Electric Co.	412 Peters Rd.	504-366-5364	(2, 4, 6)
	Kenner	Delta Electric Co.	2500-A Lexington Ave.	504-469-3337	(2, 4, 6)
	Lafayette	Jeffer Electric	225 Bellot St.	318-232-8601	(2, 4, 6)
	Lafayette	Judice Electric Co.	222 Landry Rd.	318-234-6323	(2, 4, 6)
	Lawtell	ThiBodeaux Electric	Hwy. 190 W	318-543-2362	(2, 4, 6)
	Monroe	Simmons Electric	296A Horseshoe Lake Rd.	318-387-6868	(2, 4, 5, 6)
	New Orleans	G & M Electric Co. Service	417-19 N Claiborne	504-586-8100	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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LOUISIANA	Oil City	Driskell Electric Service	Caddo Belcher Rd.	318-955-6926	(2, 4, 6)
	St. Gabriel	ABB Service Co.	Hwy. 74	504-389-9785	(1, 2, 4, 6)
	Shreveport	Carl Pons Electric	3400 Manfield Rd.	318-221-7193	(2, 3, 4, 6)
	Shreveport	Etheredge Electric	7747 Woolworth Rd.	318-688-5351	(3)
	Sulphur	Eagle Electric Machinery	115 Production Dr.	318-625-2070	(2, 3, 4, 6)
	West Monroe	Electric & Mech. Serv.	128 N Violet	318-387-9037	(2, 4, 6)
	West Monroe	Ouachita Electric Inc.	212 Haynes St.	318-323-2525	(2, 4, 5, 6)
LOUISIANA	Wisner	Arnold Service Center	Hwy. 562 W	318-724-7625	(2, 4, 6)
MAINE	Auburn	A. C. Electric Corp.	Merrow Rd.	207-784-7341	(2, 4, 5, 6)
	Bangor	AC Electric	40 Target industrial Cir.	207-945-9487	(2, 3, 4, 5, 6)
	Lewiston	Motor Power, Inc.	1505 Lisbon St.	207-782-7017	(2, 4, 6)
	Skowhegan	Skowhegan Electric Motors	#2 Alden St.	207-474-2412	(2, 4, 6)
MAINE	Westbrook	Stultz Electric Works, Inc.	25 Bridge St.	207-854-2501	(2, 3, 4, 6)
MARYLAND	Baltimore	Electric Motor Repair Co.	700 E 25th St.	301-467-8080	(2, 4, 5, 6)
	Baltimore	Industrial Electric Co., Inc.	707 S Central Ave.	301-327-1150	(2, 4, 5, 6)
	Baltimore	Kauffman Electric Co., Inc.	Boston & Highland Ave.	301-276-4000	(1, 2, 4, 6)
	Baltimore	Keystone Electric Co.	2807 Annapolis Rd.	301-539-1730	(1, 2, 4, 6)
	Baltimore	Lange Electric	3005 Greenmount Ave.	301-243-3445	(1, 2, 4, 6)
	Baltimore	Lee's Electric Motor Serv.	9500 Pulaski Hwy.	301-391-5800	(1, 2, 4, 5, 6)
	Baltimore	The Wm. C. O'Brien Co.	3004 Wilkens Ave.	301-233-6900	(2, 4, 5, 6)
	Baltimore	Wisner Electric Co.	2701 Frederick Ave.	301-233-5262	(1, 2, 4, 5, 6)
	Bladensburg	Energy Ltd.	4714 Upshur St.	301-699-1144	(2, 4, 6)
	Cambridge	Hills Motor Service, Inc.	Rt. 2, Poplar Dr.	301-228-4447	(2, 4, 6)
	Cumberland	Queen City Electric Co.	219 S Walnut Pl.	301-777-1133	(2, 4, 6)
	Frederick	M & M Motor Repair	205 Bucheimer Rd.	301-663-1100	(2, 4, 6)
	Frederick	Roberts Electric Motors, Inc.	5833-B Urbana Pike	301-663-5757	(2, 4, 6)
	Hagerstown	Hagerstown Equipment Co.	Maryland Ave. & Memorial Blvd.	301-733-7600	(2, 4, 6)
	Hagerstown	M & L Electric	90 W Lee St.	301-739-8285	(2, 4, 6)
	Hammond	Industrial Electric	6204 Old Baton Rouge Hwy.	504-567-2172	(2, 4, 6)
	Rockville	Bethesda Armature Co.	12348 Wilkins Ave.	301-881-2251	(2, 4, 6)
	Salisbury	Demco Electric	111 Gordy Rd.	301-749-1377	(1, 2, 3, 4, 5, 6)
	Salisbury	Meilhammer Electro	Rt. 11, Box 114	301-749-0243	(2, 4, 6)
	Takoma Park	Turner Electric Co.	201 Ethan Allen Ave.	301-270-6800	(2, 4, 6)
	W. Hyattsville	Eesco	2426 Chillum Rd.	—	(2, 4, 6)
	Westminster	B & M Electric Mtr. Rpr., Inc.	77 John St.	410-848-8277	(2, 4, 6)
	MASSACHUSETTS	Allston	Northeastern Electric Co.	144 Western Ave.	617-783-5200
Attleboro		Holander Electric Inc.	36 Walton St.	508-226-1060	(2, 4, 6)
Auburn		A. L. Brown	105 Washington St., Rt. 20	508-754-5382	(2, 3, 4, 6)
Braintree		Sandman Electric Co., Inc.	530 West St.	617-848-2111	(2, 3, 4, 6)
Brockton		Brockton Industrial Elec. Co.	456 N Main St.	508-583-8736	(2, 4, 6)
Chelsea		New England Electric Mtr., Inc.	214 Arlington St.	617-884-9200	(1, 2, 3, 4, 5, 6)
Fall River		Cotter Electric Co., Inc.	753 Davol St.	508-672-0811	(2, 3, 4, 5, 6)
Fitchburg		Shepard & Parker, Inc.	18 Lincoln St.	508-343-3907	(2, 4, 6)
Framingham		E. L. Wheat Co.	10 Aaron St.	508-872-3232	(2, 4, 6)
Greenfield		Applied Dynamics	33 Buttemut St.	413-774-7268	(3)
Holyoke		McKenney Electric Co., Inc.	Rt. 5 Mt. Tom	413-536-5551	(2, 4, 6)
Holyoke		Reliance Electric Serv. Co., Inc.	573 Canal St.	413-533-3557	(2, 4, 6)
Hudson		Electric Motor Service	215-A Maple St.	508-562-9977	(2, 4, 6)
Hyannis		Osterville Electric	24 Warehouse Rd.	617-778-5019	(2, 4, 6)
Lenoxdale		Berkshire Electric Motors, Inc.	Crystal St.	413-637-1840	(2, 4, 6)
New Bedford		Arco, Inc.	48-52 Wamsutta St.	508-993-1100	(2, 4, 6)
New Bedford		Delta Electric	82 Cove St.	508-997-0582	(2, 3, 4, 6)
Quincy		Hancock Electric	231 Willard St.	617-472-5789	(2, 4, 6)
Springfield		Associated Electro Mechanics	185 Rowland St.	413-781-4276	(2, 3, 4, 5, 6)
Springfield		Superior Electric Co.	Shaws Ln.	413-739-3823	(2, 4, 6)
Westfield		Carbone Technologies	275 N Elm St.	413-568-2311	(2, 3, 4)
Whitman		Blanchard Electric	21 Vernon St.	617-447-5122	(2, 4, 6)
Woburn		Motors Electronics & Controls	73 Olympia Ave.	617-935-7945	(1, 2, 3, 4, 5, 6)
Worcester	George W. Ruby Elec. Co., Inc.	77 E Worcester St.	508-799-6165	(2, 4, 6)	
Wrentham	Lynch Electric	19 Eagle Ln.	508-384-2590	(2, 4, 6)	
MICHIGAN	Adrian	J & D Electric Co.	833 Treat St.	517-265-1364	(2, 4, 6)
	Albion	Complete Electric Mtr. Serv.	1670 E Michigan Ave.	517-629-9267	(2, 4, 6)
	Allegan	Rapa Electric Co.	1173 Lincoln Rd.	618-673-3157	(1, 2, 3, 4, 5, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
MICHIGAN	Alpena	Alpena Electric Mtr. Serv.	M-32	517-354-8780	(2, 4, 6)
	Ann Arbor	Turner Electric Service	6800 Jackson Rd.	313-426-5657	(2, 4, 6)
	Attica	Fords Motor Shop	3909 Imlay City Rd.	313-664-8961	(2, 4, 6)
	Bay City	Bay United Motors, Inc.	4353 E Wilder Rd.	517-684-3972	(1, 2, 3, 4, 5, 6)
	Cadillac	A & K Electric	1463 Filmore	616-775-4311	(2, 4, 6)
	Charlotte	Charlotte Electric Motors, Inc.	126 W Lincoln St.	517-543-4080	(2, 4, 6)
	Cheboygan	D & D Motor Sales & Service	524 E State St.	616-627-2523	(2, 4, 6)
	Coldwater	Coldwater Electric Service	178 W Garfield Rd.	517-278-2611	(2, 4, 6)
	Dearborn	Commonwealth Serv. Sales Corp.	5455 Oakman Blvd.	315-581-8050	(2, 4, 6)
	Dearborn Heights	Werner Electric Co.	20520 Van Born Rd.	313-561-0854	(2, 4, 6)
	Decatur	Decatur Electric Mtr. Serv.	82237 M 51 Hwy.	616-423-4051	(2, 4, 6)
	Detroit	B & H Machine	9339 W Fort St.	313-843-6720	(2, 4, 6)
	Detroit	Fife-Pearce Electric Co.	17141 Ryan Rd.	313-369-2560	(1, 2, 4, 5, 6)
	Detroit	Re-Nu Electric Co.	20163 John R. St.	313-366-1570	(2, 4, 6)
	Farmington Hills	Universal Electric Prod. Co.	28928 Grand River Ave.	313-476-9500	(2, 4, 6)
	Flint	Electric Motor Serv. & Supply Co.	2906 Longway Rd.	313-235-3248	(2, 4, 6)
	Flint	Reliance Electric Machinery	1527 Industrial Ave.	313-232-3355	(2, 4, 6)
	Garden City	Dynamic Power Systems	32606 Industrial Rd.	313-261-9511	(2, 3, 4, 6)
	Grand Rapids	Weeks Electric	1057 Cottage Grove SE	616-243-8866	(2, 4, 5, 6)
	Grand Rapids	Whittaker Electric Co.	1336 Front Street NW	616-458-1253	(2, 4, 5, 6)
	Grandville	Rivercity Electronic	2980 44th St.	616-538-2060	(3)
	Hastings	Electric Motor Service	1569 Bedford Rd.	616-945-5113	(2, 4, 6)
	Holland	Holland Electric Service	11269 E Lakewood Blvd	616-342-1115	(2, 4, 6)
	Hudson	Hudson Electrical Co.	115 Lane St.	517-440-5191	(2, 4, 6)
	Iron Mountain	DMS Electric Apparatus	606 Gibson	616-382-5307	(2, 4, 5, 6)
	Iron Mountain	Z & R Electric Service	619 Industrial Park Dr.	906-774-0468	(2, 3, 4, 5, 6)
	Jackson	Kent Motors Inc.	204 Homewild	517-789-8131	(2, 4, 6)
	Kalamazoo	Hatfield Electric	3509 S Burdick St.	616-381-7200	(2, 4, 6)
	Kalamazoo	Rowan & Blair Electric Co.	2513 N Burdick St.	616-381-3050	(2, 4, 6)
	Lansing	Lansing Electric Motors	1905 S Washington Ave.	517-487-6400	(1, 2, 4, 5, 6)
	Ludington	Carrier Electric	5608 W 6th St.	616-845-5097	(2, 4, 6)
	Marquette	Superior Electric	1740 Presque Isle Ave.	906-226-9051	(2, 4, 6)
	Melvindale	Core Electric Co., Inc.	25125 Outer Dr.	313-382-7140	(2, 4, 5, 6)
	Michigan Center	P & B Motors	300 Napoleon Rd.	517-764-1001	(2, 4, 6)
	Monroe	Monroe Electric Motor Co.	317 Harbor	313-241-5811	(2, 4, 6)
	Mt. Clemons	A & C Electric Co.	41225 Irwin Rd.	313-469-0710	(2, 4, 6)
	Mt. Pleasant	Stu's Electric Mtr. Serv.	611 W Pickard	517-773-5575	(2, 4, 6)
	Petosky	Petosky Electric Motors	Hwy. 131 S	616-347-8777	(2, 3, 4, 6)
	Pigeon	Dietzel Electric	7176 Nile St.	517-453-2721	(2, 4, 6)
	Pontiac	Pontiac Electric Motor Works	224 W Sheffield	313-332-4622	(2, 4, 6)
	Port Huron	Port Huron Electric	321 Court St.	313-985-7197	(2, 4, 6)
	Riverside	Riverside Electric Co.	3864 Riverside Rd.	616-849-1222	(2, 4, 6)
	Romulus	Birclar Electric & Machine, Inc.	12600 Wayne Rd.	313-941-7400	(2, 3, 4, 5, 6)
	Roseville	J. C. Electric Motor Repair	30121 Groesbeck Hwy.	313-779-4663	(2, 3, 4, 5, 6)
	Saginaw	Lange & Leaman Electric	300 West Bristol St.	517-754-5266	(2, 4, 6)
Saginaw	Saginaw Electric Motors, Inc.	1716 S Jefferson Ave.	517-754-1421	(2, 4, 5, 6)	
Traverse City	Davis Electric Inc.	1131 Hastings St.	616-947-9860	(2, 4, 6)	
Troy	Universal Electrical Prod. Co.	895 Owendale	313-689-1200	(2, 4, 6)	
Warren	Koontz-Wagner Electric	24776 Gibson Dr.	313-755-0440	(3)	
Warren	Spina Electric Co.	26801 Groesbeck Hwy.	313-771-8080	(2, 4, 6)	
MINNESOTA	Arlington	Sickman Electric Motor Service	RR 2 Box 163	612-964-5555	(2, 4, 6)
	Austin	Powerite Electric Motor Co.	513 E Oakland Ave.	507-437-4311	(2, 4, 6)
	Bemidji	Swenson Electric Co.	Rt. 4 Box 268	218-751-4315	(2, 4, 6)
	Bird Island	Electric Motor Co.	451 Hwy Ave.	612-365-4800	(2, 4, 6)
	Blue Earth	Rick's Electric	Hwy. 254 & Ct. Rd. 16 Jet	507-526-5335	(2, 4, 6)
	Brainerd	Benson Motor Electric	613 Maple St.	218-829-3828	(2, 4, 6)
	Clinton	Herb's Electric	124 Clinton St.	612-325-5126	(2, 4, 6)
	Crookston	Crookston Welding	Hwy. 75 S	218-281-6911	(2, 4, 6)
	Detroit Lakes	D & L Electric	920 8th St.	218-847-6625	(2, 4, 6)
	Duluth	Mielke Electric Works	2606 W Michigan	218-727-7411	(2, 3, 4, 5, 6)
	Fairmont	Pritts Electric Motor Co.	221 N State St.	507-238-2061	(2, 4, 6)
	Fairbgault	Minnesota Maintenance Co.	930 E Hwy. 60	507-334-4418	(2, 4, 6)
	Granite Falls	Electric Motor Co.	1135 15th St.	218-564-3360	(2, 4, 6)
	Grand Rapids	Itasca Electric	1520 McKinney Lake Rd.	218-326-5315	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

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MINNESOTA	Grand Rapids	The Motor Shop	17 County Rd. 63	612-326-5315	(2, 4, 6)
	Lake City	Dans Electric Motor & Lock	118 W Center St.	612-345-2418	(2, 4, 6)
	Lismore	Electric Motor Service Center	1401 S Main	507-472-8551	(2, 4, 6)
	Litchfield	Rooney Electric	1201 W Hwy. 12	612-693-6050	(2, 4, 6)
	Little Falls	Opatz Electric Motor	113 NW 1st St.	612-632-6324	(2, 4, 6)
	Luverne	Luverne Electric	404 S Kniss	507-283-2759	(2, 4, 6)
	Mankato	Motor Shop of Mankato	Rt. 1 Box 106B	507-345-4682	(1, 2, 4, 6)
	Marshall	Ness Electric Mtr. Serv.	212 W College Dr.	507-532-2400	(2, 4, 6)
	Minneapolis	Boustead Electric & Mfg. Co.	7135 Madison Ave. W	612-544-9131	(1, 2, 3, 4, 5, 6)
	Minneapolis	Comelex Corp.	905 N 5th St.	612-332-7706	(2, 4, 6)
	Minneapolis	Electric Motor Repair	2010 N 4th St.	612-588-4693	(1, 2, 3, 4, 5, 6)
	Monticello	Olson & Sons Electric	240 W Oakwood Dr.	612-295-2690	(2, 4, 6)
	Moorhead	L & L Electric	119 4th St. S	218-233-2911	(2, 4, 6)
	Morris	Larson Electric	26 E 8th St.	612-589-1334	(2, 4, 6)
	New Benson	Electric Motor Repair	1910 Atlantic Ave.	612-842-7681	(2, 4, 6)
	Parkers' Prairie	Fortwengler Electric	Otter Ave. S	612-789-8831	(2, 4, 6)
	Paynesville	Electric Motor Service	521 Minnie St.	612-243-3695	(2, 4, 6)
	Pipestone	Sturdevant Auto Electric	619 E Main	507-825-3396	(2, 4, 6)
	Red Wing	TEC Industrial	1615 W Main St.	612-388-2894	(2, 4, 6)
	Redwood Falls	Electric Motor Co.	1102 S Mill	507-637-2727	(2, 4, 6)
	Rochester	TEC Industrial	1701 3rd Ave. SE	507-288-9133	(2, 4, 6)
	Rockford	Tri-State Electric Mtr. Sales	109 Commerce St.	612-477-4146	(2, 4, 6)
	Slayton	Siebe's Electric Mtr. Rpr.	2506 Broadway Ave.	507-836-6156	(2, 4, 6)
	St. Cloud	Electric Motor Service	2020 Division St.	612-251-8691	(2, 4, 5, 6)
	St. Cloud	Fruth Electric Mtr. Serv.	615 Fifth Ave. SE	612-251-8223	(2, 4, 6)
	St. Paul	Accurate Electric	845 Payne Ave.	612-771-0112	(2, 4, 6)
	St. Paul	Electrical Mechanical Serv. Inc.	998 E Berwood Ave.	612-484-5533	(1, 2, 3, 4, 5, 6)
	Sauk Centre	Meyer Electric	508 2nd St.	612-352-2437	(2, 4, 6)
	Virginia	Malton Electric	1505 W Chestnut St.	218-741-8252	(2, 3, 4, 5, 6)
	Willmar	Tri-Mor	Hwy. 71 S	612-235-6343	(2, 4, 6)
Winona	Lackore Electric	108 W 2nd St.	507-452-3103	(2, 4, 6)	
MISSISSIPPI	Brookhaven	Montgomery Electric	1074 Union St.	601-833-1461	(2, 4, 6)
	Cleveland	Cleveland Electric	711 N Christian	601-843-8030	(2, 4, 6)
	Columbus	Burford Electric Service	Hwy. 69	601-328-5679	(2, 3, 4, 6)
	Corinth	Tri-State Armature	1605 Sawyer Rd.	601-287-2451	(2, 4, 6)
	Greenville	Mid South Electric	Hwy. 82 W	601-332-3512	(2, 4, 6)
	Grenada	Central Electric	1040 S Franklin	601-226-0375	(2, 4, 6)
	Hattiesburg	Cameron Electric	115 W Red St.	601-544-5512	(2, 4, 6)
	Hattiesburg	Speed Electric	511 North St.	601-583-0388	(2, 4, 6)
	Jackson	Electrical Control Service	4868 I-55	601-372-4770	(2, 4, 6)
	Jackson	Flannigan Electric Co.	1820 SW St. Ext.	601-354-2756	(2, 4, 6)
	Laurel	Garick Electric Mtr. Serv.	316 E Kingston St.	601-649-1422	(2, 4, 6)
	Long Beach	Bay Motor Winding	125 N Ocean Wave Ave.	601-863-0666	(2, 4, 6)
	McComb	Forrest Electric Co.	711 Edgar St.	601-684-4143	(2, 4, 6)
	Meridan	Industrial Electric Motor Works	708 45th Ave.	601-483-4341	(2, 3, 4, 5, 6)
	Natchez	Natchez Electric	190 D'Evereau Dr.	601-442-2711	(2, 4, 6)
	Pascagoula	Gibson Electric Mtr. Sls. & Serv.	3320 Old Mobile Hwy.	601-762-4923	(2, 4, 6)
	Pascagoula	Newby Electric	5615 Telephone Rd.	601-762-3691	(2, 4, 6)
Tupelo	Jesco Inc.	637 Carnation St.	601-842-5582	(2, 4, 6)	
MISSOURI	Brookfield	Guys Electric Mtr. Serv.	418 E Brooks St.	816-258-3426	(2, 4, 6)
	Camdenton	Bowling Electro		314-346-7553	(2, 4, 6)
	Cape Girardeau	Kagmo Electric	2351 Rust Ave.	314-335-2562	(2, 4, 6)
	Desioige	Edmonds Electric Co.	102 N Lincoln	314-431-3945	(2, 4, 6)
	Eureka	Lewis Electric Mtr. Serv.	320 W 4th St.	314-938-5464	(2, 4, 6)
	Jefferson City	Pic Supply Co.	2533 W Main	314-634-4002	(2, 4, 6)
	Joplin	Covert Electric Machinery Co.	1122 E 4th St.	417-623-4827	(2, 4, 6)
	Kansas City	Dynamic Electric	2130 Jefferson	816-471-4584	(2, 4, 6)
	Kansas City	Electric Service	1720 Kansas	816-231-2663	(2, 4, 5)
	Kansas City	Independent Electric	300 SW Blvd.	816-471-2610	(2, 4, 6)
	Lexington	Goodman Electric	300 Broadway	816-259-4231	(2, 4, 6)
	Mexico	S & S Electric Mtr. Serv.	1120 Omar	314-581-7667	(2, 4, 5, 6)
	Moberly	Industrial Electric Co.	RR 3 & Gillian Rd.	816-263-5050	(2, 4, 6)

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MISSOURI	Sedalia	Sedalia Electric	321 W 2nd	816-827-5300	(2, 4, 6)
	Springfield	Springfield Electric	1640 E Trafficway	417-865-1626	(2, 4, 5, 6)
	St. Joseph	Electric Service Co.	901 S 8th	816-364-3409	(2, 4, 6)
	St. Joseph	Independent Electric	611 Patee	816-232-2404	(2, 4, 6)
	St. Louis	Acme Electric Co.	1520 N Broadway	314-241-7775	(2, 4, 6)
	St. Louis	Missouri Electric Mtr. Serv.	3001 Delmar	314-535-6800	(2, 4, 6)
	St. Louis	Zeller Electric	4250 Hoffmeister Ave.	314-638-9641	(2, 4, 6)
	Trenton West Plains	R & R Electric West Plains Electric	3227 Oklahoma Ave. Hwy. 63 N	816-359-3959 417-256-8749	(2, 4, 6) (2, 4, 6)
MONTANA	Billings	Clark Electric	348 Nall Ave.	406-259-9532	(2, 4, 6)
	Billings	Jims Electric	515 S Moore Ln.	406-245-5683	(2, 4, 6)
	Helena	Helena Motor Repair	1513 National Ave.	406-442-1232	(2, 4, 6)
	Kalispell	Diversified Electric	67 8th Ave. WN	406-257-8090	(2, 4, 6)
NEBRASKA	Alliance	Nelson Electric	817 E 3rd St.	308-762-1148	(2, 4, 6)
	Beatrice	Genex Corp.	1400 N 7th	402-228-3363	(2, 4, 6)
	Columbus	Northwest Electric Mtr. Serv.	2070 E 11th St.	402-564-9437	(2, 4, 6)
	Columbus	Overturf's Electric Mtr. Serv.	2319 11th St.	402-564-3413	(2, 4, 6)
	Fremont	P & H Electric Co.	1210 E 17th St.	402-721-7044	(2, 4, 6)
	Grand Island	Motor Engineering Works	612 Webb Rd.	308-384-2547	(2, 4, 6)
	Hastings	Hatten Electric	130 S Hastings Ave.	402-463-4596	(2, 4, 6)
	Kearney	Northwest Electric	1712 Central	308-234-3771	(2, 4, 6)
	Lincoln	Colin Electric Mtr. Serv.	520 W "O" St.	402-476-2121	(1, 2, 4, 6)
	Lincoln	Northwest Electric	1820 Cornhusker Hwy.	402-466-1114	(1, 2, 4, 6)
	Norfolk	Northwest Electric Mtr. Serv.	609 Omaha St.	402-371-3192	(2, 4, 6)
	North Platte	Knapp Electric	1900 E 4th St.	308-532-4840	(2, 4, 6)
	Ogallala	Quick Electric	1501 W 4th St.	308-284-2105	(2, 4, 6)
	Omaha	Electric Machinery Sis. & Serv.	1903 S 13th St.	402-342-6002	(2, 4, 6)
	Omaha	Industrial Electric Motor	1824 California	402-342-1191	(1, 2, 4, 6)
	O'Neil	Midwest Electric Mtr. Serv.	W Hwy. 20	402-336-3660	(2, 4, 6)
	Scottsbluff	H. M. Brown Electric Co.	706 S Broadway	308-635-2622	(2, 4, 6)
York	Murphey Electric	411 Platte Ave.	402-362-3245	(2, 4, 6)	
NEVADA	Henderson	Henderson Electric	1414 Athol St.	702-564-5575	(2, 4, 5, 6)
	Las Vegas	Carlson Electric Mtr. Serv.	709 N Main St.	702-384-8246	(2, 4, 6)
	Reno	Brown Milberry, Inc.	180 Gentry Way	702-825-5757	(2, 4, 6)
	Sparks	Priest Electric of Nevada	1560 Industrial Way	702-331-8300	(2, 3, 4, 5, 6)
	Sparks	Stanley Electric of Nevada	2239 Greg St.	702-355-0115	(2, 4, 5, 6)
NEW HAMPSHIRE	Dover	Electric Motor Servicenter	29 Industrial Park Dr.	603-742-6802	(2, 4, 5, 6)
	Dover	EMS, Inc.	Littleworth Rd.	603-742-6802	(2, 3, 4, 5, 6)
	Exeter	Raymond Electric	Rt. 125	603-642-3208	(2, 4, 6)
	Hudson	Nashua Electric	13 Commercial St.	603-882-5241	(2, 3, 4, 6)
	Keene	Frederick A. Farrar Inc.	15 Avon St.	603-352-4316	(2, 3, 4, 6)
	Keene	G & R Electric Motor Co.	453 Winchester St.	603-352-3422	(2, 4, 6)
	Laconia Manchester	New Hampshire Electric Mtrs. Fay Electric Motors	Rt. 107 48 Huse Rd.	603-524-3729 603-668-3811	(2, 3, 4, 6) (2, 4, 6)
NEW JERSEY	Bloomfield	Arrow Electric Motor Co.	187 Bloomfield Ave.	201-743-0600	(2, 4, 6)
	Bridgeton	H. M. Davis & Sons, Inc.	R. D. #3, Rt. #49	609-451-6464	(1, 2, 3, 4, 5, 6)
	Camden	Jarvis Electric, Inc.	3710 Federal St.	609-365-0513	(2, 4, 6)
	East Brunswick	Quality Electric Mtr. Serv.	396 Hwy. 18	201-257-6655	(1, 2, 4, 6)
	Fair Lawn	Bergen County Motor & Tool Co.	17-16 River Rd.	201-796-3006	(2, 4, 6)
	Freehold	Best Electric Co.	E Freehold Rd., Rt. #33	201-462-7683	(2, 4, 6)
	Gibbsboro	Willier Electric Mtr. Rpr., Inc.	1 Linden Ave.	609-627-3535	(1, 2, 3, 4, 6)
	Hawthorne	Industrial Electric Serv. Co., Inc.	259-263 Goffle Rd.	201-423-1212	(2, 3, 4, 6)
	Howell	Lakewood Electric Motor Sales	2038 Rt. #9	201-363-2865	(2, 4, 6)
	Keritworth	George J. Bender, Inc.	132 Market St.	908-241-8980	(2, 4, 6)
	Linden	Goodwin-Prey	625 Pennsylvania Ave.	908-925-2900	(1, 2, 4, 6)
	Little Falls	Story Electric Co.	20 Francisco Ave.	201-256-1636	(2, 4, 6)
	Lodi	Universal Electric Mtr. Serv.	126 Essex St.	201-845-6555	(2, 4, 6)
	Middlesex	Link Bros. Electric Mtr. Serv.	111 Mountainside Ave.	908-356-1106	(2, 4, 6)
	Morris Plains	J. R. Longo & Sons	1775 Rt. #10	201-539-4141	(1, 2, 3, 4, 6)
	Newark	Reich Electric Motor, Inc.	100 Polk St.	201-589-0128	(2, 4, 6)
New Brunswick	Bishop Electric Motor	318 Commercial Ave.	201-545-6446	(2, 3, 4, 6)	

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NEW JERSEY	Newton	Newton Electric Mtr. Serv.	Swartzwood Rd.	201-383-3730	(2, 4, 6)	
	Passaic	National Electric Mtr. Rpr.	296 Broadway	201-473-8743	(1, 2, 4, 6)	
	Paterson	Reliable Electric	19-21 California Ave.	201-278-8122	(1, 2, 3, 4, 5, 6)	
	Patterson	Electric Equipment Repair	445 E 16th St.	201-742-8383	(2, 4, 6)	
	Pennsauken	Eisenhardt Electric Mtr. Serv.	6001 Cresent Blvd.	609-964-6944	(2, 3, 4, 5, 6)	
	Trenton	Electrical Motor Repair Co.	809 E State St.	609-392-6149	(1, 2, 3, 4, 6)	
	Trenton	Lockwood's Electric Mtr. Serv.	2239 Nottingham Way	609-587-2333	(1, 2, 3, 4, 5, 6)	
	Union City	Eiffler Electric Co.	2901 New York Ave.	201-867-6674	(1, 2, 3, 4, 6)	
	Vineland	Advance Electric Motor Co.	409 N 7th St.	609-692-3751	(2, 4, 6)	
	Vineland	D Electric Motor Sales & Serv.	94 W Sherman	609-696-5959	(2, 3, 4, 6)	
NEW MEXICO	Albuquerque	Electric Motor Co., Inc.	3433 Stanford NE	505-881-4077	(2, 4, 6)	
	Albuquerque	Telco Electric, Inc.	2906 4th St. NW	505-345-2426	(2, 3, 4, 6)	
	Carlsbad	Industrial Electric Service	838 S Canyon	505-887-1121	(2, 4, 6)	
	Clovis	Crown Electric	120 Oak	505-763-5597	(2, 4, 6)	
	Farmington	A. B. Lane Electric Mtr. Serv.	607 E Animas St.	505-327-9442	(2, 4, 6)	
	Hobbs	K & S Electric Co.	1901 N Grimes St.	505-393-3114	(2, 4, 6)	
	Las Cruces	Turner's Electric Mtr. Serv.	1301 W Picacho	505-526-5721	(2, 4, 6)	
Portales	Valley Electric	700 E 2nd St.	505-356-8372	(2, 4, 6)		
NEW YORK	Albany	Klahr Electric Co.	1846 Central Ave.	518-456-8510	(2, 4, 6)	
	Albertson	Pump & Motor Shop	801 Willis Ave.	516-747-8338	(2, 4, 6)	
	Andes	Cole Equipment	16 S Main St.	914-676-4658	(2, 4, 6)	
	Auburn	Archie's Industrial Motor Serv.	112 Clark St.	315-252-7294	(2, 4, 6)	
	Auburn	Auburn Armature Inc.	48 Canoga St.	315-253-9721	(1, 2, 3, 4, 5, 6)	
	Batavia	D. R. Elec. Mtr. & Equip., Inc.	4988 E Main St. Rd.	716-343-7721	(2, 4, 6)	
	Batavia	Deluxe Electric Co.	8825 Alexander Rd., Rt. 98 S	716-343-2284	(2, 4, 6)	
	Binghamton	Gleason & Sons	330 Water St.	607-722-3312	(2, 4, 6)	
	Bohemia	D. P. Electric Mtr. Serv.	160 Wilbur Pl.	516-567-8342	(2, 4, 6)	
	Buffalo	Armor Electric Mtr. Rpr. Co.	224 Elk St.	716-825-0190	(2, 4, 6)	
	Buffalo	Buffalo Electric Co., Inc.	74 W Mohawk	716-849-7444	(2, 4, 5, 6)	
	Buffalo	EMSCO Electric Mtr. Serv. Corp.	80 Skillen St.	716-875-9053	(1, 2, 4, 6)	
	Buffalo	S-S Electric Repair Shop, Inc.	2470 Seneca St.	716-823-1232	(2, 4, 6)	
	Buffalo	Volland Electric Equip. Corp.	1511 Niagara St.	716-884-2713	(2, 3, 4, 6)	
	Cortland	Munro Motor Shop	181 Main St.	607-753-3403	(2, 4, 6)	
	Dunkirk	Dunkirk Electric Mtr. Rpr.	20 W Courtney St.	716-366-4353	(2, 4, 6)	
	Elmira	Superior Electric	121 S Kinyon St.	607-734-9583	(2, 4, 6)	
	Elmsford	Westchester Elec. Mtrs. & Pumps	50 Vernon Ln.	914-592-1484	(2, 4, 6)	
	Farmingdale	Viola Electric Motors, Inc.	66 Rome St.	516-293-9371	(2, 4, 5, 6)	
	Fulton	Hall's Electric Motors	RR 9 Rt. 176	315-598-1324	(2, 4, 6)	
	Glen Cove	Cavalieri Motor Service, Inc.	112 Glen Cove Ave.	516-676-0100	(2, 4, 6)	
	Glen Falls	Moore Electrical Mtr. Sis. & Serv.	49 Park St.	518-792-5031	(2, 4, 6)	
	Glen Falls	Northeastern Electric Motors	Corinth Rd.	518-793-5939	(2, 4, 6)	
	Goshen	Empire State Electric Motors	Rt. 17M	914-294-7440	(2, 4, 6)	
	Herkimer	Stark Electric Motor, Inc.	RD #1, Folts Rd.	315-866-3319	(2, 4, 6)	
	Ithaca	Salino Electric Works	630 Elmira Rd.	607-273-0537	(2, 4, 6)	
	Jamaica	General Electric Spity.	181-04 Jamaica Ave.	718-658-2440	(2, 4, 6)	
	Jamaica	Queens Industrial Electric Corp.	94-12 150th St.	718-526-7198	(1, 2, 3, 4, 5, 6)	
	Jamestown	Westburgh Electric, Inc.	16 Scott St.	716-488-1172	(2, 4, 6)	
	Kingston	P. J. Gallagher & Sons	404 E Chester St.	914-338-3817	(2, 4, 6)	
	Middletown	Middletown Electric Mtr. Serv.	8 John St.	914-343-4171	(2, 3, 4, 6)	
	Munnsville	Fisher Electric	Route 46	315-495-2451	(2, 4, 6)	
	New York City:					
	Bronx	Electric Motor Service & Parts	2231 Westchester Ave.	—	(2, 4, 6)	
	Bronx	Hunts Point Motor Sales	1320 Oak Point Ave.	212-328-3600	(2, 4, 6)	
	Bronx	W & S Electric Motor Co.	300-4 East 149th St.	212-585-6500	(2, 4, 6)	
	Maspeth	Babco, Inc.	60-10 Maurice Ave.	718-446-5120	(2, 4, 6)	
	Newburgh	F & G Electric Motors	593 Rt. 9W	914-561-1313	(2, 4, 6)	
	Niagara Falls	Barker Electric Motor Service	8635 Packard Rd.	716-297-8484	(2, 3, 4, 5, 6)	
	North Tonawanda	Industrial Motor Service	207 Vandervoort St.	716-692-7272	(2, 4, 6)	
	Olean	Sader Electric Corp.	N Union St. Ext.	716-372-9191	(2, 4, 6)	
	Patchogue	Patchogue Electric Motors, Inc.	75 Sycamore St.	516-475-0117	(2, 4, 6)	
Peekskill	Peekskill Electric Motor	13 S Broadstreet	914-737-4141	(2, 4, 6)		
Plattsburg	Manion Electric Mtr. Serv.	7 Riley Ave.	518-561-4580	(2, 4, 6)		
Pottsdam	Tennant Electric	142 Maple	315-265-5740	(2, 4, 6)		

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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| 1. U.L. Listed | 2. AC up to 200 HP | 4. DC up to 10 K.W. | 6. Gearmotors |
| 1A. CSA Listed | 3. AC over 200 HP | 5. DC over 10 K.W. | |

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
NEW YORK	Poughkeepsie	Anderson Bros.	237 Dutchess Turnpike	914-471-0411	(2, 4, 6)
	Poughkeepsie	H. A. Schreck, Inc.	32 Van Wagner Rd.	914-454-3560	(1, 2, 4)
	Rochester	Berger Electric Corp.	295 Mt. Read Blvd.	716-235-4070	(2, 4, 5, 6)
	Rochester	Greene Electric	235 Metro Pk.	716-424-3800	(2, 4, 5, 6)
	Rochester	Vanderlinde Electric Corp.	100 Charlotte St.	716-232-1494	(1, 2, 4, 6)
	Rockville Centre	Centre Electric	142 S Long Beach Rd.	516-766-0017	(2, 4, 6)
	Rome	Ace Electric Mtr. Rpr.	119 Ridge St.	315-336-2590	(2, 4, 6)
	Rome	Mohawk, Ltd.	1149 Erie Blvd. W	315-337-4550	(2, 4, 6)
	Schenectady	Barrett Electric Service, Inc.	112 Henry St.	518-374-4416	(2, 4, 6)
	Schenectady	Gray Electric Co.	2011 Hamburg St.	518-346-0111	(2, 4, 6)
	Syracuse	Salmon Electric Mtr. Rpr.	110 Falso Dr.	315-455-7924	(2, 4, 6)
	Syracuse	Syracuse Armature Co.	1622 Burnett Ave.	315-476-2576	(2, 4, 6)
	Syracuse	Team Service Corp.	4030 New Court Rd.	315-432-1682	(2, 4, 6)
	Ulster Park	P. T. Electric Mtr. Serv., Inc.	R.D. #1, Box 191	914-331-8272	(2, 4, 6)
	Utica	Del-Monte-Bremiller	1125 Stark St.	315-735-6191	(2, 5, 6)
	Utica	E. Del Monte & Son, Inc.	1714 Bleecker St.	315-793-0283	(2, 4, 6)
	Vestal	Cascade Electric, Inc.	416 Commerce Rd.	607-729-5278	(2, 4, 6)
	Wantagh	K & G Electric	2225 Wantagh Ave.	516-221-1171	(2, 3, 4, 6)
	Watertown	Dexelectrics, Inc.	882 W Main St.	315-788-1980	(2, 4, 6)
	Watertown	Lewis & Clinch, Inc.	321 Howk St.	315-782-5584	(2, 4, 6)
Watertown	Pearson Timmerman, Inc.	914 Water St.	315-782-6080	(2, 4, 6)	
Watervilet	Troy Belting & Supply	Cohoes Rd. at Elm St.	518-272-4942	(1, 2, 3, 4, 5)	
NORTH CAROLINA	Ahoskie	Electric Motor Service	Hwy. 13 S	919-332-4364	(2, 4, 6)
	Asheboro	Piedmont Electric Motors	1011 N Fayetteville St.	919-625-5210	(2, 4, 6)
	Asheville	Hayes & Lunsford	226 Hilliard St.	704-252-4785	(1, 2, 4, 5, 6)
	Charlotte	Dixie Electric Mtr. Serv.	2115 Freedom Dr.	704-372-4832	(2, 3, 4, 5, 6)
	Dallas	Carolina Electric Mtr. Serv.	504 S Gaston St.	704-922-5261	(2, 4, 6)
	Dunn	Mclamb Electric	Rt. 2 Hwy. 29 N	919-892-7398	(2, 4, 6)
	Durham	Triangle Electric Motor Co.	1750 Lawson St.	919-596-1333	(2, 4, 6)
	Eden	Rex Electric Co.	625 Irving Ave.	919-627-1282	(2, 4, 6)
	Elizabeth City	Electric Motor Rewinding	407 N Poindexter St.	919-338-8856	(2, 4, 6)
	Fayetteville	Electrotek, Inc.	455 Hillsboro St.	919-483-2581	(2, 4, 6)
	Gastonia	Gaston Electric Co.	1204 N Chester St.	704-867-7264	(2, 4, 6)
	Goldsboro	Live Wire Electric Co.	1007 S John St.	919-735-1117	(2, 4, 6)
	Greensboro	General Motor Repair	2206 Westbrook St.	919-292-1715	(2, 4, 6)
	Greenville	Electric Motor Sales & Service	1400 W 14th St.	919-752-3170	(2, 4, 6)
	Henderson	Holland's Supply Co.	518 W Montgomery St.	919-492-7541	(2, 4, 6)
	Hickory	Canipe & Lynn Armature Co.	1909 First Ave. SW	704-322-9052	(2, 4, 6)
	Laurinburg	Averitt's Electric Mtr. Rpr.	Bus. Hwy. 74 E	919-276-1294	(1, 2, 4, 5, 6)
	Laurinburg	Electrical Equipment Co.	401 By-Pass at King St.	919-276-2141	(2, 4, 5, 6)
	Lenoir	Mullinax Electric Repair, Inc.	428 Virginia St. NW	704-758-1380	(2, 4, 6)
	Lumberton	City Electric Mtr. Serv.	1907 E 5th St.	919-739-9766	(2, 4, 6)
	Marshville	Union Electric Service	Hwy. 74 E	704-624-2130	(2, 4, 6)
	Monroe	Randall Supply Co.	2409 Walkup Ave.	704-289-6479	(1, 2, 4, 6)
	North Wilkesboro	Wilkes Electric Armature Co.	1518 W "D" St.	919-838-8209	(2, 4, 6)
	Plymouth	Industrial Electric Sales & Serv.	Morattock Rd.	919-793-3103	(2, 4, 6)
	Raleigh	Electrical Equipment Co.	1440 Diggs Dr.	919-828-5411	(1, 2, 4, 5, 6)
	Rockingham	Elektran G & S Elec. Mtr. Serv.	220 River Rd.	919-997-5061	(2, 4, 6)
	Rocky Mount	Industrial Electric Sales & Serv.	Hwy. 97 W	919-442-1101	(1, 2, 4, 5, 6)
	Rocky Mount	Rocky Mount Electric Serv.	1215 S Church St.	—	(2, 4, 6)
	Salisbury	Lingle Electric Repair Shop	600 N Main	704-636-5591	(2, 4, 5, 6)
	Sanford	Central Carolina Supply Co.	422 Fields Dr.	919-774-8550	(2, 4, 6)
	Shelby	Southern Elec. Serv. Co. of SC	421 E Marion St.	704-482-3808	(2, 3, 4, 5, 6)
	Thomasville	Electric Drives	16 Carolina Ave.	919-476-6751	(2, 4, 6)
	Wake Forest	Electric Motor Shop	502 S White	919-556-3229	(1, 2, 4, 6)
Whiteville	Vernon's Electric	150 Caidis St.	919-642-6836	(2, 4, 6)	
Wilmington	Industrial Electric Sales & Serv.	Hwy. 74 W (Leland)	919-763-5126	(2, 4, 6)	
Winston-Salem	Snow Electric Co.	428 Brookstown Ave.	919-723-2092	(2, 4, 5, 6)	
Winston-Salem	West Electric Repair Co.	906 N Liberty St.	919-723-1780	(2, 4, 6)	
NORTH DAKOTA	Bismarck	Acme Electric Co.	1009 Basin Ave.	701-258-1267	(2, 4, 6)
	Bismarck	Eggers Electric	108 N. Mandan St.	701-223-6500	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
NORTH DAKOTA	Grand Forks	Acme Electric Motor Co.	1705 13th Ave. N	701-746-6481	(2, 4, 6)
	Minot	P & C Electric	2031 3rd St. NW	701-839-5618	(2, 4, 6)
	Wapeton	Big Woods Electric	875 8th Ave. S	701-642-3145	(2, 4, 6)
	Williston	Triangle Electric	Hwy. 2 N	701-572-6783	(2, 4, 6)
OHIO	Akron	Hunnell Electric Mtr. Rpr. Co.	950 Grant St.	216-773-8278	(2, 3, 4, 6)
	Akron	National Electric Coil	1100 Home Ave.	216-762-9301	(2, 3, 4, 6)
	Alliance	Frank's Electric	11424 Beach St. NE	216-821-5457	(2, 4, 6)
	Ashland	KBZ Electric	1250 Middle Rowsburg Rd.	419-281-7671	(2, 4, 6)
	Athens	Pallini Industries Inc.	6395 Baker Rd.	614-593-3325	(2, 4, 5, 6)
	Bedford	Al's Electric Mtr. Serv.	135 Northfield Rd.	216-232-7090	(1, 2, 3, 4, 6)
	Bellefontaine	Tudor Electric Supply, Inc.	308 W Columbus St.	513-592-5856	(2, 4, 6)
	Blacklick	Sytek, Inc.	1089 Claycraft Rd.	614-864-9205	(2, 4, 6)
	Bryan	REMS, Inc.	527 S Union St.	419-636-3438	(2, 4, 6)
	Cambridge	Bradley-Barker Electric	723 S 8th St.	614-432-3212	(2, 4, 6)
	Canton	ABB Jackson Bayley	825 Navarre Rd. SW	216-455-7032	(2, 3, 4, 5, 6)
	Canton	Ragon Electric Service Supply	1240 Dueber Ave. SW	216-453-0181	(1, 2, 4, 6)
	Canton	Hannon Electric	1605 Waynesburg Dr. SE	216-456-4728	(1, 2, 3, 4, 6)
	Chillicothe	Duffy Electric	15 S Rennick	614-773-2206	(2, 4, 6)
	Cincinnati	Cincinnati Armature Works, Inc.	6516 Wiehe Rd.	513-631-3020	(1, 2, 4, 5, 6)
	Cincinnati	Cincinnati Electric	16 East 72nd St.	513-761-6105	(1, 2, 4, 5, 6)
	Cincinnati	Sullivan Electric Co.	838 Reedy St.	513-241-5413	(2, 4, 5, 6)
	Cincinnati	Sytek, Inc.	5100 Duff Dr.	513-874-5840	(2, 4, 6)
	Cincinnati	Wheatley Electric Service	2088 Ross Ave.	513-531-4951	(2, 4, 6)
	Cleveland	Baumgardner & Sons, Inc.	1380 E 170th	216-531-2800	(2, 4, 6)
	Cleveland	Burke Electric	1250 Marquette Ave.	216-431-9300	(2, 4, 6)
	Cleveland	Electric Motor Rpr. Co.	17616 S Waterloo Rd.	216-531-5995	(2, 4, 6)
	Cleveland	Hennings Quality Service	13921 Triskett Rd.	216-941-9490	(1, 2, 4, 6)
	Cleveland	United Electric Motor Rpr.	2117 Superior Ave.	216-621-4380	(2, 4, 6)
	Columbus	Columbus Electrical Works Co.	777 N 4th St.	614-294-4651	(2, 3, 4, 6)
	Columbus	Mid Ohio Electric Co.	1170 McKinley Ave.	614-274-8000	(2, 3, 4, 5, 6)
	Columbus	Shoemaker Electric	831 Bonham Ave.	614-294-5626	(2, 3, 4, 6)
	Coshocton	Electric Motor Repair	322 N 10th St.	614-622-6004	(2, 4, 6)
	Dayton	M & R Electric Serv.	1516 E 5th St.	513-222-6282	(2, 4, 6)
	Dayton	Sytek, Inc.	5131 Webster St.	513-278-7355	(2, 4, 6)
	Defiance	Industrial Sales & Service	1714 Baltimore	419-782-7728	(2, 4, 6)
	Elyria	EM Service	600 Lowell St.	216-323-3260	(2, 3, 4, 6)
	Grafton	Fildes Electric Motor Co.	1014 Cleveland	216-926-2641	(2, 4, 6)
	Greenville	Voile Motor Repair	930 Front St.	513-548-8213	(2, 4, 6)
	Jackson	A E Ruston Electric	121 N David Ave.	614-286-3022	(2, 4, 6)
	Lancaster	Bud & Russ Electric	507 E Chestnut St.	614-654-4870	(2, 4, 6)
	Lebanon	Lebanon Electric Mtr. Serv.	126 E High St.	513-241-9664	(2, 4, 6)
	Lima	Lima Armature Works Co.	143 E Pearl St.	419-222-4010	(2, 3, 4, 6)
	Lima	Rems/Koontz Wagner	1864 N McCullough St.	419-228-1325	(3)
	Mansfield	KBZ Electric Inc.	725 Longview	419-526-3800	(2, 4, 5)
	Mansfield	Shoemaker Electric	225 Central Ave.	—	(2, 3, 4, 6)
	Marietta	Eastern Electric	116 Industry Rd.	614-374-9440	(2, 4, 6)
	Marion	Marion Electric Mtr. Serv.	400 Barnhart St.	614-382-4117	(2, 3, 4, 6)
	Massillon	Klenze Electric Co.	222 N Erie St.	216-832-3861	(2, 4, 6)
	Medina	Hackworth Electric Motors	817 Lafayette Rd.	216-722-4631	(2, 4, 6)
	Mentor	MON Electric	7455 Tyler Blvd.	216-951-5111	(2, 4, 6)
	Middletown	Marconi Electric Service	2504 Atco Ave.	513-422-6388	(2, 4, 6)
	New Philadelphia	Fenton Bros. Electric Co.	235 Ray Ave. NE	216-343-8858	(2, 3, 4, 6)
	Norwalk	Bennett Electric Co.	211 Republic St.	419-668-6136	(1, 2, 4, 6)
	Norwalk	Moto Electric Inc.	127 Cleveland Rd. Rt. #20 E	419-668-7894	(3)
	Painesville	Hannon Electric Co.	11321 Concord-Hambden Rd.	216-352-7954	(2, 4, 6)
	Piqua	Electric Motor Service Co.	8270 N Dixie Dr.	513-773-0426	(2, 4, 6)
Ravenna	Shaw & Mercer	448 S Sycamore St.	216-673-8707	(2, 4, 6)	
Sandusky	Bay Electric Mtr. Serv., Inc.	2612 Columbus Ave.	419-625-1046	(2, 4, 6)	
Springfield	Mader Electric Mtr. Serv.	315 E Columbia St.	513-325-5576	(2, 4, 6)	
Springfield	Scherer Industrial Group	5330 Prosperity Dr.	513-390-6667	(2, 3, 4, 5, 6)	
St. Mary's	Irish Electric Mtr. Serv.	1600 Celina Rd.	419-394-3284	(2, 3, 4, 6)	
Toledo	Kiemie-Hanklins Co.	Willis Day Ind. Park	419-666-0660	(2, 3, 4, 6)	

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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OHIO	Toledo	Rems/Koontz-Wagner	1000 Post St.	419-241-6101	(3)
	Toledo	River East Electrical	135 Oak St.	419-693-0387	(2, 4, 6)
	Warren	Quality Electric Serv. Co.	1431 Buena Vista NE	216-372-5132	(2, 4, 5, 6)
	Wash. Courthouse	Roberts Electric Motors	226 Jonesboro Rd.	614-335-9474	(2, 4, 6)
	Wooster	Hackworth Electric Motors	4952 Cleveland Rd.	216-345-6049	(2, 4, 6)
	Wooster	Schavey-Uher Electric	510 W Henry St.	216-262-0906	(2, 4, 6)
	Xania	Kelble Electric	819 U.S. 68 S	513-372-5081	(2, 4, 6)
	Youngstown	Phoenix Electric Co.	1623 Wilson Ave.	216-744-8441	(2, 3, 4, 5, 6)
	Youngstown	Winkle Electric Co.	1900 Hubbard Rd.	216-744-5303	(2, 3, 4, 6)
Youngstown	Youngstown Electric Service	948 Poland Ave.	216-743-1128	(2, 3, 4, 5, 6)	
Zanesville	Electric Motor & Service Co.	218 Adams St.	614-453-0527	(2, 3, 4, 6)	
OKLAHOMA	Ada	Luton Electric Service	322 E 12th St.	405-332-2147	(2, 4, 6)
	Altus	Kay Electric	1101 W Broadway	405-482-1757	(2, 4, 6)
	Ardmore	Southwest Electric Co. So. Div.	508 S Washington	405-226-0210	(2, 4, 6)
	Bartlesville	Ward Electric Mtr. Serv.	502 Comanche St.	918-336-3566	(2, 4, 6)
	Ciaremore	Phil Coe Electric	3/4 Miles E on Hwy. 20	918-341-0137	(2, 4, 6)
	Duncan	Joe's Electric	503 E Ridley Rd.	405-255-1933	(2, 4, 6)
	Duncan	Quality Electric	103 Boise Dr. KRC	405-252-8001	(2, 4, 6)
	Enid	A-1 Electric	516 N Grand	405-237-2268	(1, 2, 4, 6)
	Enid	Enid Electric Mtr. Serv.	1406 N 4th St.	405-234-8622	(2, 4, 6)
	Lawton	J & W Electric	19 SE "F" St.	405-357-7504	(2, 4, 6)
	Miami	Miami Armature Works	1925 N Main	918-542-2443	(2, 4, 6)
	Muskogee	Geheb Electric Co.	206-208 S Cherokee	918-682-5561	(2, 4, 6)
	Oklahoma City	Evans Electric Mtr. Rpr.	1536 S Western	405-631-1344	(1, 2, 4, 5, 6)
	Oklahoma City	Southwest Electric Co.	2617 S Agnew	405-634-4445	(1, 2, 4, 6)
	Ponca City	Southwest Electric	418 S "S"	405-762-6344	(2, 4, 6)
	Pryor	B & H Electric Motors	2100 Hwy. 20 E	918-825-1235	(2, 4, 6)
	Stillwater	Ewing Electric	1023 S Perkins	405-372-2078	(2, 4, 6)
	Tulsa	B & B Electric	501 N Trenton	918-583-6274	(2, 4, 6)
Tulsa	Evans Electric Mtr. Rpr.	2002 SW Blvd.	918-587-1566	(1, 2, 4, 5, 6)	
Woodward	Kay Electric	810 48th St.	405-256-3254	(2, 4, 6)	
OREGON	Albany	RPM Fishers Electric	1400 Timber Rd. SE	503-926-7763	(2, 4, 6)
	Albany	Schoen Motors, Inc.	2400 Pacific Blvd. SW	503-926-0054	(2, 4, 6)
	Bend	Electrical Mechanics	63352 Nels Anderson Rd.	503-382-6830	(2, 4, 6)
	Bend	Waddell Electric	375 NE Burnside	503-382-2068	(2, 4, 6)
	Coos Bay	Bob's Motor Shop	1135 S Broadway	503-267-3821	(2, 4, 6)
	Corvallis	Rugh Electric	2440 SW 3rd Ave.	503-753-6812	(2, 4, 6)
	Eugene	Alexander Electric	1212 Ocean	503-343-2050	(2, 4, 6)
	Eugene	Kalen Electric & Machinery Co.	175 Almaden	503-345-1579	(2, 3, 4, 5, 6)
	Eugene	Wheeler Electric Co.	820 W 1st St.	503-687-2121	(2, 4, 6)
	Hermiston	Wilde Electric Motor Supply	Hermiston/McNary Hwy.	503-567-7538	(2, 4, 5, 6)
	Klamath Falls	Nu-Coils Services	805 Plum Ave.	503-883-1684	(2, 4, 6)
	Klamath Falls	Winema Electric Co.	735 Commercial St.	503-884-7796	(2, 4, 6)
	Lebanon	Star Electric	1760 S Main	503-258-3298	(2, 4, 6)
	McMinnville	S & W Electric Works	2960 N LaFayette	503-472-7808	(2, 4, 6)
	Medford	Cascade Electric	1225 N Court St.	503-773-4517	(2, 3, 4, 6)
	Milton-Freewater	Widner Electric	New Walla Walla Hwy.	503-938-5518	(2, 4, 6)
	Pendleton	Cole Electric	1200 Airport Rd.	503-276-7761	(2, 4, 6)
	Portland	Advance Electric	1612 SW Brooklyn	503-238-3944	(2, 4, 6)
	Portland	Atlas Electric Mtr. Serv.	2143 SE Lafayette St.	503-234-2202	(2, 4, 6)
	Portland	Central Electric Mtr. & Serv. Co.	400 NW 17th Ave.	503-226-2726	(2, 4, 6)
	Portland	Conrey's Electrical Mtr. Rpr.	1911 SE 7th Ave.	503-232-9392	(2, 3, 4, 6)
	Portland	Reed Electric Co.	2539 NW Vaughn St.	503-223-8191	(1, 2, 3, 4, 5, 6)
	Roseburg	H.P.S. Electric Service	3801 NW Stewart Pky.	503-673-3162	(2, 4, 6)
	Salem	Electric Mtr. & Cont. Serv. Corp.	1005 12th St.	503-363-3919	(2, 4, 6)
Salem	Mike's Electric Mtr. Serv., Inc.	275 Division St.	503-362-8525	(2, 4, 6)	
The Dalles	Shorty's Electric	1102 W 2nd St.	503-296-6400	(2, 4, 6)	
PENNSYLVANIA	Allentown	Crowder, Jr., Co.	1818 Vultee St.	215-791-1551	(2, 4, 6)
	Altoona	Electric Motor Supply	1000 50th St.	814-946-0401	(2, 3, 4, 6)
	Altoona	Force Electric Supply Co.	868 19th St.	814-944-3588	(2, 4, 6)
	Athens	Horton Electric Mtr. Serv.	108-1/2 S Main St.	717-888-2421	(2, 4, 6)
	Bellwood	Central Blair Electric	526-528 N Fourth St.	814-946-3570	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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| 1. U.L. Listed | 2. AC up to 200 HP | 4. DC up to 10 K.W. | 6. Gearmotors |
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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
PENNSYLVANIA	Bethlehem	Albarell Electric, Inc.	901 W Lehigh St.	215-691-7030	(2, 4, 5, 6)
	Bethlehem	Crowder, Jr. Co.	1107 Eaton Ave.	215-866-8081	(1, 2, 3, 4, 6)
	Bradford	Bovaird Co.	181 Main St.	814-368-7141	(2, 3, 4, 5, 6)
	Butler	Dumbaugh Electric Repair	E Butler Rd.	412-287-1719	(2, 3, 4, 6)
	Carlisle	Estep Electric Service Co.	501 E Louther St.	717-249-2698	(2, 4, 6)
	Chadds Ford	B & H Electric Mtr. Serv.	Baltimore Pike	215-444-6995	(2, 4, 6)
	Chambersburg	S & S Electric	125 Falling Springs Rd.	717-263-1919	(2, 3, 4, 6)
	East Petersburg	Electric Motor & Supply	5120 Manheim Pike	717-569-8534	(2, 3, 4, 6)
	Easton	Crowder, Jr., Co.	624 Lehigh Dr.	215-258-9191	(2, 4, 6)
	Emigsville	RAM Motors & Controls	York Co. Industrial Park	717-767-6664	(2, 4, 6)
	Erie	Ace Viking Electric Motor	703 E 33rd St.	814-456-3131	(2, 4, 6)
	Erie	Horwath Electric	1720 W 20th St.	814-452-4993	(2, 3, 4, 6)
	Erie	Sytek Penn Electric Coil	2227 E 33rd St.	814-898-1555	(2, 3, 4, 6)
	Frackville	Silicon Power Controls	334 N 2nd St.	717-874-0662	(2, 4, 5, 6)
	Franklin	Eclipse Electric	508 Buffalo St.	814-432-3519	(2, 4, 6)
	Hanover	Swam Electric Co.	490 High	717-637-3821	(2, 3, 4, 5, 6)
	Harrisburg	Edwin L. Helm Co.	1900 Greenwood St.	717-233-8611	(1, 2, 3, 4, 5, 6)
	Huntingdon	Huntingdon Electric Mtr. Serv.	7th & Penn St.	—	(2, 3, 4, 6)
	Indiana	Electro-Mechanical	4470 Lucerene Rd.	412-479-9066	(2, 3, 4, 6)
	Johnstown	Universal Electric & Mfg. Co.	629 Elder St.	814-535-2566	(2, 3, 4, 6)
	Kimberton	Valley Forge Electric Supply Co.	E Seven Stars Rd.	215-933-2758	(2, 4, 6)
	Lancaster	RAM Motors & Controls	78 Pitney Rd.	717-392-2128	(2, 4, 6)
	Lebanon	Keener Electric Motors, Inc.	705 State Dr.	717-272-7686	(2, 4, 6)
	Lock Haven	Lock Haven Electric Rpr. Co.	15 N Vester St.	717-748-7922	(2, 4, 6)
	New Castle	A Servedio Electric Motor	634 E Washington	412-658-8041	(2, 3, 4, 6)
	Petersburg	Electric Motor and Supply	5120 Manheim Pike	717-293-1753	(2, 4, 5, 6)
	Philadelphia	Ace Electric Service	2747 N 2nd St.	215-739-5548	(2, 4, 6)
	Philadelphia	A. J. LaCourse, Inc.	275 Leverington Ave.	215-482-9100	(2, 3, 4, 5, 6)
	Philadelphia	Eastern Elec. Appar. Rpr. Co.	126 S 30th St. Lower Level	215-382-6262	(2, 4, 5, 6)
	Philadelphia	Wm M. Hendrickson, Inc.	7700 Holstein Ave.	215-329-3000	(1, 2, 4, 6)
	Philadelphia	Penn Electric Motor Co., Inc.	3080 Emerald St.	215-426-9920	(2, 4, 6)
	Philadelphia	R. Scheinert & Sons	10092 Sandmeyer Lane	215-673-9800	(1, 2, 3, 4, 5, 6)
	Philadelphia	Somerset Electrical Co., Inc.	5609 Tulip St.	215-288-5568	(2, 4, 6)
	Pine Grove	Heinbach, Inc.	Sweet Arrow Lk. Rd., RD #2	717-345-8134	(2, 4, 6)
	Pittsburgh	Braunlich-Roessie Co.	3131 Penn Ave.	412-471-6995	(2, 3, 4, 6)
	Pittsburgh	Globe Electric Repair Co.	23rd St. & Penn RR	412-781-2677	(2, 3, 4, 5, 6)
	Pittsburgh	United Electric Mtrs.	921 Saw Mill Run Rd.	412-481-3300	(1, 2, 4, 6)
	Reading	RAM Motors & Controls	Morgantown Rd.	215-376-7102	(1, 2, 4)
	Reading	Reading Electric Mtr. Serv.	4029 Pottsville Pike	215-929-5777	(2, 4, 6)
	Reading	Standard Electric Service Corp.	811 William Ln.	215-921-0617	(2, 4, 6)
	Scranton	North End Electric Serv.	1700 N Keyser Ave.	717-342-6740	(2, 4, 6)
	Sharon	J. W. Winkle Co.	129 Franklin	412-346-6454	(2, 4, 6)
	Stevens	Witmer Motor Service	187 E Church St.	215-267-2949	(2, 4, 6)
	Stroudsburg	Stroudsburg Electric Mtr. Serv.	756 Phillips St.	717-421-8909	(2, 4, 6)
	Tullytown	A.M.E. Company	Fox Dr. Bldg. 6	215-945-1005	(2, 4, 6)
	Washington	Dynlectric Corp.	195 Museum Rd.	412-225-1507	(2, 4, 6)
	Washington	Rice Electric Co.	102 Rosewood Ave.	412-225-4180	(2, 3, 4, 6)
	West Wyoming	Yates Electric Mtr. Serv.	481 Shoemaker Ave.	717-693-3330	(2, 3, 4, 6)
	Wilkes Barre	Eastern Electric	210 New Commerce Blvd.	717-825-7341	(2, 4, 6)
	Williamsport	G. I. Electric Co.	944 Sheridan St. (Rear)	717-323-6147	(2, 3, 4, 6)
	Yeadon	Marc Electric	418 Church Lane	215-284-1048	(2, 4, 6)
	York	Industrial Electric of York	116 E Gas Ave.	717-854-1539	(2, 4, 6)
	York	Motor Technology, Inc.	3 Interchange Pl.	717-767-6495	(2, 3, 4, 5, 6)
	York	RAM Motor & Controls	York County Ind. Park	717-767-6664	(2, 4, 6)
RHODE ISLAND	Providence	East Bay Electro - Power	303 Eddy St.	401-272-8350	(2, 4, 6)
	Providence	J & H Electric	200 Richmond St.	401-421-7840	(2, 3, 4, 6)
	Providence	Walco Electric Co.	303 Allens Ave.	401-467-6500	(1, 2, 3, 4, 5, 6)
	Warwick	Electric Motor Service, Inc.	3070 Post Rd.	401-737-2534	2, 4, 6)
SOUTH CAROLINA	Anderson	Darby Electric Co., Inc.	Hwy. 29 By-Pass N	803-224-2131	(1, 2, 3, 4, 5, 6)
	Charleston	Atlas Industrial Repair	7288 Spa Rd.	803-572-4207	(2, 4, 6)
	Charleston	Rewind Specialties	1205 Meeting St.	803-577-5670	(2, 4, 6)
	Columbia	Electric Motor & Repair Co.	195 Huckabee St.	—	(2, 3, 4, 6)
	Columbia	Hobgood Electric	Hwy. 215, 10 MI. N of I-20	803-754-8700	(2, 4, 6)
Duncan	Southern Electric Co.	104 Commerce Dr.	803-439-5079	(2, 4, 5, 6)	

AUTHORIZED SERVICE CENTERS

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3. AC over 200 HP

4. DC up to 10 K.W.
5. DC over 10 K.W.

6. Gearmotors

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
SOUTH CAROLINA	Florence	Central Electric & Rewinding	1926 Irby St.	803-662-4034	(2, 4, 6)
	Florence	Florence Electric Rewind	209 W Dejonghe St.	803-669-6654	(2, 4, 6)
	Gaffney	Porters Electric	1302 N Limestone St.	803-487-7551	(2, 4, 6)
	Georgetown	Georgetown Electric Motors	210 Hawkins St.	803-546-9700	(2, 4, 6)
	Greer	Crimson Electric	Lee Joyal Rd.	803-877-3357	(2, 4, 6)
	Lake City	Lake City Elect. Mtr. Rpr.	140 Acline	803-394-5469	(2, 4, 6)
	Sumter	Industrial Electric Rewinding	Maysville Rd.	803-773-9366	(2, 4, 6)
	Sumter	Sumter Electric Rewinding	303 S Main St. at Oakland	803-773-5591	(2, 4, 5, 6)
	West Columbia	Electric Mtr. & Repair Inc.	125 Huckabee Rd.	803-791-9000	(2, 4, 5, 6)
SOUTH DAKOTA	Aberdeen	Nelson Auto Electric Co.	601 Auto Plaza Dr.	605-225-8010	(2, 4, 6)
	Armour	Armour Electric	RR 2	605-724-2877	(2, 4, 6)
	Bellevue	Turbville Electric	511 5th Ave.	605-892-3976	(2, 4, 6)
	Huron	Freddies Electric	124 2nd St. SE	605-352-6941	(2, 4, 6)
	Ipswich	Pembrook Hutterian Electric	RR 1 Box 30	605-426-6518	(2, 4, 6)
	Miller	Labor Electric	119 N Broadway	605-853-3367	(2, 4, 6)
	Rapid City	Turbville Electric	1089 Rand Rd.	605-342-5949	(2, 4, 6)
	Rapid City	Industrial Electric & Supply	1130 W Omaha	605-342-1017	(2, 4, 6)
	Sioux Falls	J.S.I./Shakstad	1400 Industrial Ave.	605-336-3090	(2, 4, 6)
	Sioux Falls	Electric Motor Repair	927 E 8th St.	605-336-3020	(2, 4, 6)
TENNESSEE	Chattanooga	Chattanooga Armature Works	1209 E 23rd St.	615-267-8063	(2, 3, 4, 5, 6)
	Chattanooga	Dixie Industrial Service	2108 E Main St.	615-698-8063	(2, 4, 6)
	Cleveland	Jerry's Electric Motor	460 Broad St. SW	615-472-5959	(2, 4, 6)
	Columbia	Middle Tennessee Arm. Wks.	1202 S Garden St.	615-388-3672	(2, 4, 6)
	Dyersburg	Electric Motor Service	Hwy. 51 N Bypass	901-285-6241	(2, 4, 6)
	Franklin	Cothorn Electric	136 Reynolds Dr.	615-794-4312	(2, 4, 6)
	Humboldt	W & K Electric	Warren Rd.	901-784-5540	(2, 4, 6)
	Jackson	Electric Motor Rebuilders	2054 S Highland	901-427-9691	(2, 4, 6)
	Jackson	Townsend Supply	111-A Gordon St.	901-424-4300	(1, 2, 4, 6)
	Knoxville	Tennessee Armature & Electric	308 W Jackson Ave.	615-524-3681	(2, 3, 4, 5, 6)
	Laverne	Industrial Maint. & Engrg.	1531 JP Hennessey Dr.	615-793-9474	(2, 4, 6)
	McMinnville	C & W Armature	404 Beersheba St.	615-473-2346	(2, 3, 4, 6)
	Memphis	American Electric Motor, Inc.	721 Scott St.	901-323-6268	(1, 2, 4, 6)
	Memphis	Pearce Armature	1930 Lynnbrook	901-345-6385	(2, 4, 6)
	Memphis	Southern Electric Co.	812 Porter St.	901-774-4651	(2, 4, 6)
	Memphis	Tri-State Armature	330 E Calhoun St.	901-527-8412	(2, 4, 5, 6)
	Murfreesboro	Fox Bros. Electric Co.	861 W College	615-893-0542	(2, 4, 6)
	Nashville	Electric Motor Rewind	1401 Poplar Ln.	615-256-2522	(2, 4, 6)
	Nashville	Electric Service Inc.	301 5th Ave. S	615-244-4950	(2, 4, 6)
	Nashville	Industrial Services of Nashville	1319 51st Ave. N	615-385-2240	(3)
	Nashville	Power Electric	1227 3rd Ave. N	615-255-0307	(2, 4, 6)
	Nashville	Tennessee Electric Motor Co.	408 6th Ave. S	615-255-7331	(2, 4, 6)
	Shelbyville	Reed Electric	513 N Hillcrest	615-684-5041	(2, 4, 6)
Union City	Vaughn Electric Co.	313 E Florida	901-885-3701	(2, 4, 6)	
TEXAS	Abilene	National Electric Mfg. Co.	4034 E Hwy. 80	915-673-3726	(2, 4, 6)
	Abilene	Texas Oil Electric	1590 E Hwy 80	915-673-4162	(2, 4, 6)
	Amarillo	G. E. Jones Electric Co.	208-212 N Polk St.	806-372-5505	(2, 3, 4, 6)
	Amarillo	Service & Supply	1301 W 6th	—	(2, 4, 6)
	Andrews	Fitts Electric	NW Butane Rt.	915-523-5172	(2, 4, 6)
	Austin	Austin Armature	3909 S Congress	512-442-7869	(2, 4, 6)
	Austin	Hamilton Electric	3800 Airport Blvd.	512-472-2428	(2, 3, 4, 6)
	Bay City	Coastal Electric Mtrs.	1300 Avenue	409-245-2058	(1, 2, 4, 6)
	Baytown	Coastal Armature Works	910 W Main St.	713-422-9870	(2, 3, 4, 6)
	Beaumont	Smith Belting & Electric Supply	2350 S 4th St.	409-833-7872	(2, 3, 4, 6)
	Big Lake	Big Lake Electric	95 W 2nd	915-884-5772	(2, 4, 6)
	Big Spring	Bradley Supply	I-20 E	915-263-7832	(2, 4, 6)
	Borger	G. E. Jones Electric Co.	910 N Florida	806-273-6445	(2, 4, 6)
	Brenham	Brenham Electric	800 S Horton	409-836-2882	(2, 4, 6)
	Brownsville	Imperial Electric Mtr. Serv.	905 E Tyler St.	512-546-4523	(2, 4, 6)
	Brownwood	Brownwood Electric Mtr. Serv.	3501 Milam	915-643-2611	(2, 4, 6)
	Bryan	Frank's Electric Service	2600 Maloney St.	409-822-2024	(2, 4, 6)
	Cleburne	Hermon Gatewood Electric	1118 N Main	—	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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TEXAS	Conroe	Industrial Armature Works	1009 S 1st	409-756-5445	(3)
	Corpus Christi	Bradley's Motor & Arm. Works	1920 N Port Ave.	512-882-4381	(2, 3, 4, 5, 6)
	Corpus Christi	C D Electric Motors	617 High Starr	512-888-4133	(2, 4, 5, 6)
	Corrigan	Danny's Electric	N Home St.	409-398-4518	(2, 4, 6)
	Corsicana	Noblett Electric Motor	1319 S 7th	214-872-6567	(2, 3, 4, 6)
	Dallas	AAA Electric Motors	2405 S Harwood	214-823-1823	(2, 3, 4, 6)
	Dallas	All Star Electric	10707 Shady Trail	214-350-0657	(2, 4, 6)
	Dallas	Capital Electric	9109 Sovereign Row	214-630-8487	(2, 4, 6)
	Dallas	Della Electric Mtr. Serv.	1013 Dalworth, Mesquite	214-288-5500	(2, 4, 5, 6)
	Dallas	Gray Electric Co.	3404 Jane Ln.	214-631-1188	(2, 3, 4, 6)
	Dallas	Henry's Motor Shop	3231 Grand Ave.	214-421-9494	(2, 4, 6)
	Dallas	Shermco	2815 Congressman	214-358-4271	(2, 3, 4, 6)
	Dallas	W. M. Smith Electric Co.	3200 Grand Ave.	214-428-4605	(2, 4, 6)
	Dallas	Southwest Electric Mtr. Serv.	3008 Canton	214-742-8211	(2, 4, 6)
	Dallas	Story Electric Co.	2625 S Central Exp.	214-421-7381	(2, 4, 6)
	Dallas	Texas Electric Motors	4060 Shilling Way	214-330-4791	(2, 3, 4, 6)
	Denton	Fry's Electric	801 Woodrow Ln.	817-387-9911	(2, 4, 6)
	Denton	Triangle Electric	811 E Oak	817-565-1761	(2, 4, 6)
	Denver City	Electric Motor Repair	723 N Main	806-592-2454	(2, 4, 6)
	El Paso	B & M Machinery	7200 Alameda	915-772-9007	(2, 4, 6)
	El Paso	Industrial Motor & Control	850 Kastrin	915-590-6060	(2, 3, 4, 6)
	Ennis	Mc's Quality Electric	2004 Jack McKay Blvd.	214-875-9912	(2, 4, 6)
	Fort Worth	Aaron Distributing	601 N Beach	817-834-7306	(2, 4, 6)
	Fort Worth	A-1 Electric Motor Serv.	2008 E Rosedale	817-536-6145	(2, 4, 6)
	Fort Worth	Central Electric Co.	712 N Main St.	817-335-1368	(2, 4, 6)
	Fort Worth	Frisbee Electric	201 Page St.	817-927-5321	(2, 4, 6)
	Fort Worth	Warriner Electric	5940 Eden Dr.	817-838-6766	(2, 4, 6)
	Garland	Tolbert Electric	3822 Dividend Dr.	214-272-6541	(2, 3, 4, 6)
	Grand Prairie	American Industrial Motor	509 Jessee	214-647-0053	(2, 4, 6)
	Greenville	Johnson Electric Co.	4117 O'Neal St.	903-455-1562	(2, 4, 6)
	Harlingen	Lewis Electric Mtr. Serv.	3300 Spur 54	512-423-4273	(2, 3, 4, 6)
	Hereford	Owens Electric	809 E 2nd	—	(2, 4, 6)
	Hereford	P & H Electric	120 Schley	806-364-6061	(2, 4, 6)
	Houston	Electric Motors, Inc.	11831 Aidine-Westfield	713-449-0238	(2, 3, 4, 5, 6)
	Houston	Hydro-Dyne Electric, Inc.	4301 Laura Koppe Rd.	713-631-0770	(2, 3, 4, 6)
	Houston	Lewis Electric	1714 Broadway	713-923-6688	(2, 4, 5, 6)
	Houston	Oliver Armature Works	612 Live Oak	713-222-9272	(2, 3, 4, 5, 6)
	Houston	Southwest Industrial Mtr. Sales	5430 E Hampton	713-987-8972	(1, 2, 3, 4, 6)
	Houston	Williams Electric Works	6415 McGrew St.	713-649-1088	(2, 3, 4, 6)
	Kermit	Brown Electric	422 W Austin	915-586-2518	(2, 4, 6)
	Knox City	Lynn Electric	1101 E Main	817-658-3511	(2, 4, 6)
	Lamesa	Automated Controls	NE 14th Industrial Rd.	806-872-8341	(2, 3, 4, 6)
	La Porte	Teeco Inc.	9401 Hwy. 225	713-479-6086	(1, 2, 3, 4, 5, 6)
	Longview	Dailey Electric	700 S Eastman	214-753-2732	(2, 3, 4, 6)
	Longview	Longview Electric	319 E Cotton	214-758-2776	(2, 4, 6)
	Lubbock	Brandon & Clark	3623 Avenue H	806-747-3861	(2, 3, 4, 6)
	Lubbock	Lubbock Electric Co.	1108 34th St.	806-744-2336	(2, 3, 4)
	Lufkin	Lufkin Electric Co.	1307 E Denman	409-639-2377	(2, 4, 6)
	Mabank	Tri County Electric	Hwy. 175 W	214-887-2009	(2, 4, 6)
	Marshall	Bell Electric Motor Co.	1505 E End Blvd. S	214-935-5282	(2, 4, 6)
Mesquite	Delta Electric	1013 Dalworth	214-288-5500	(2, 3, 4, 5, 6)	
Midland	B. J. Electric	4300 Garden City Hwy.	915-687-1941	(2, 3, 4, 6)	
Monahans	Bobby's Electric	W I-20 Service Rd.	915-943-2559	(2, 4, 6)	
Mt. Pleasant	A-1 Electric Mtr. Serv.	1506 N Washington	214-572-0422	(2, 3, 4, 6)	
Nacogdoches	Industrial Electric Motor	2016 Butt St.	409-560-4825	(2, 4, 6)	
Odessa	Brandon & Clark	930 W County Rd. S	915-332-0163	(2, 3, 4, 6)	
Odessa	Roundhouse Electric	2224 Cities Service Rd.	915-333-3923	(2, 4, 6)	
Palestine	Cox Electric Co.	1001 W DeBard	214-723-6121	(2, 4, 6)	
Pampa	Electric Motor & Equipment Co.	805 S Price Rd.	806-669-7996	(2, 4, 6)	
Paris	City Electric Motor Service	1480 NW 19th	214-784-7671	(2, 4, 6)	
Pasadena	Grayson Armature Works	1203 Center St.	—	(2, 3, 4, 6)	
San Angelo	Industrial Electric Co.	65 E Ave. K	915-653-4255	(2, 4, 6)	
San Antonio	Loyd Armature Works, Inc.	1953 Probandt St.	512-532-3287	(2, 3, 4, 6)	
San Antonio	Massengale Armature Works	1031 Basse Rd.	512-732-5168	(2, 3, 4, 5, 6)	
San Antonio	San Antonio Armature Works	1015 N Colorado St.	512-227-0291	(2, 3, 4, 6)	

AUTHORIZED SERVICE CENTERS

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TEXAS	Sherman	H & R Electric	3000 Old Hwy. 75 S	214-868-9494	(2, 3, 4, 6)
	Snyder	Southern Electric Co.	900 College St.	915-573-4903	(2, 4, 6)
	Sweetwater	Stanley Electric	1217 E Broadway	915-235-3444	(2, 4, 6)
	Sweetwater	Sweetwater Electric Co.	2311 E Broadway	915-235-3456	(2, 4, 6)
	Temple	Goldman Electric Co.	501 E Adams	817-778-2626	(2, 4, 6)
	Texarkana	Ray's Electric	922 Bowie	903-792-7031	(2, 4, 6)
	Tyler	Electric Motor Shop	Route 11	903-592-1772	(2, 4, 6)
	Tyler	Turner Armature Works	1422 W Front	—	(2, 4, 6)
	Victoria	Hoffman Electric Co.	209 W Convent	512-573-6365	(2, 3, 4, 6)
	Vidor	Electro Motors, Inc.	465 S Main St.	409-769-5402	(1, 2, 3, 4, 6)
	Wichita Falls	Evans Electric Motor Center	2707 Central Expy. E	817-723-7466	(1, 2, 3, 4, 6)
	Wichita Falls	Savage Electric Co.	522 6th St.	817-322-7859	(2, 4, 6)
	Waco	Caldwell Electric Shop	201 S Industrial Dr.	817-722-4710	(2, 3, 4, 5, 6)
	Waco	Industrial Electric	212 Otis	817-772-1899	(2, 4, 6)
	White Oak	Advance Electric	401 Old Hwy. 80	214-759-9439	(2, 3, 4, 6)
	Winnsboro	A & B Electric	1209 E Coke Rd.	214-342-5671	(2, 4, 6)
UTAH	Aurora	Industrial Electric	350 S Main	801-529-7875	(2, 4, 6)
	Logan	Glenn's Electric Motors, Inc.	501 N Main St.	801-752-4178	(2, 4, 6)
	Meadow	Bill's Electric Motor Repair	—	801-842-7151	(2, 4, 6)
	Ogden	Christensen Electric Motors	2645 Lincoln Ave.	801-392-5309	(2, 4, 6)
	Orangeville	Industrial Electric	225 W 500 S	801-748-2828	(2, 4, 6)
	Price	Tram Electric	2956 S Hwy 10	801-637-7291	(2, 4, 6)
	Provo	Provo Electric Mtr. Serv.	1700 N State Plz.	801-373-0270	(2, 4, 6)
	Salt Lake City	Diamond Electric	1465 S 300 W	801-484-4325	(2, 4, 6)
	Salt Lake City	C. W. Silver	535 W 700 S	801-531-8888	(2, 3, 4, 6)
	VERMONT	Bennington	Pioneer Electric	108 Rt. 7A	802-442-2003
Burlington		Queen City Electric	140 Riverside Dr.	802-864-5321	(2, 3, 4, 5, 6)
Newport		Binette Electric	Coventry St.	802-334-5981	(2, 3, 4, 6)
Rutland		Rutland Electric Motor	25 Curtis Ave.	802-775-5280	(2, 4, 6)
White River Jct.		T & L Electric	35 N Main St.	802-295-3114	(2, 3, 4, 5, 6)
VIRGINIA	Alexandria	Alexandria Armature Works	3024 Colvin St.	703-370-3500	(2, 4, 6)
	Arlington	Cowherd Electric Motors	2706 S Oakland St.	703-671-3000	(2, 4, 6)
	Bassett	Blue Ridge Hardware & Supply	Main St.	703-629-2551	(2, 4, 6)
	Bristol	Electric Motor Repair & Sales	1 Goodson St.	703-669-9428	(2, 4, 5, 6)
	Chesapeake	Electric Motor & Contracting	3703 Cook Blvd.	804-487-2121	(1, 2, 4, 5, 6)
	Culpeper	Culpeper Motor Repair	1350 Orange Rd.	703-825-8381	(2, 4, 6)
	Danville	Parrish-Johnson Electric	110 Lansdale St.	804-792-4711	(2, 4, 6)
	Galax	Fielder Electric Mtr. Rpr.	104 Popular Knob	702-236-7125	(2, 4, 6)
	Grundy	B & M Electric Shop	Rt. 5 Box 269	703-935-4655	(2, 4, 6)
	Manassas	Manassas Electric Mtr. Serv.	7519 Centreville Rd.	703-368-2321	(2, 4, 5, 6)
	Norfolk	Caddell Electric Co.	1250 Bolton St.	804-625-4261	(2, 4, 6)
	Richmond	Electric & Mtr. Rpr.	4640 International Trade	804-644-0788	(2, 4, 6)
	Richmond	Electrical Equipment Co.	1807 Blvd. W	804-353-7841	(2, 4, 5, 6)
	Richmond	Roy's Electric Mtr. Serv.	3201 Norfolk St.	804-355-5713	(2, 4, 6)
	Roanoke	Lloyd Electric Co., Inc.	605 3rd St. NE	703-982-0135	(1, 2, 3, 4, 5, 6)
	Salem	Mahoy Electric Serv. Co., Inc.	2144 Salem Industrial Dr.	703-387-1129	(2, 4, 6)
	Staunton	Staunton Electric Co.	26 S Jefferson St.	703-886-4161	(2, 4, 6)
	Timberville	Price's Electric Mtr. Serv.	Co-op Blvd.	703-896-9451	(2, 4, 6)
Winchester	Blue Ridge Electric Serv.	1604 S Loudoun	703-662-8463	(2, 4, 6)	
WASHINGTON	Aberdeen	Electrical Apparatus Serv. Co.	621 W State St.	206-533-4164	(2, 4, 6)
	Aberdeen	Industrial Electric Service	2100 Industrial Rd.	206-533-2792	(2, 4, 6)
	Bellingham	Mac & Mac Electric	1410 Iowa St.	206-734-6530	(2, 4, 6)
	Bremerton	Red's Electric Motors	2300 6th St.	206-377-3903	(2, 4, 6)
	Centralia	C & R Electric Motor Serv.	820 N Tower	206-736-2521	(2, 4, 6)
	Everett	Industrial Electric Service	2701 Hewitt Ave.	206-259-3124	(1, 2, 4, 6)
	Moses Lake	Hockstatters Electric	547 S Interlake Rd.	509-765-0254	(2, 4, 6)
	Moses Lake	K & N Electric	109 W Kinder	509-765-3399	(2, 4, 6)
	Mt. Vernon	Industrial Electric	1120 W Division	206-424-3239	(2, 4, 6)
	Pasco	Industrial Electric Mtr. & Mach.	1716 West A St.	509-547-8403	(2, 4, 6)
	Port Townsend	NW Electrical Appr. Serv. Shop	71 Eisenbels St.	206-383-5453	(2, 4, 6)
	Puyallup	All Electric	5507 Milwaukee Ave. E	206-845-1938	(2, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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|----------------|--------------------|---------------------|---------------|
| 1. U.L. Listed | 2. AC up to 200 HP | 4. DC up to 10 K.W. | 6. Gearmotors |
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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
WASHINGTON	Renton	John Julian Co.	340 Sunset Blvd. N	206-255-6148	(2, 4, 6)
	Seattle	Cascade Machinery & Electric	4600 E Marginal Way, S	206-762-0500	(2, 3, 4, 6)
	Seattle	Greenwood Electric Motors	8719 Greenwood Ave. N	206-782-8181	(2, 4, 6)
	Seattle	Harris Electric	1510 NW 48th	206-782-6668	(2, 4, 6)
	Seattle	United Electrical Motors	308 9th Ave. N	206-624-0044	(2, 4, 6)
	Spokane	H & N Electric	5511 E Broadway	509-534-6271	(2, 4, 6)
	Spokane	K & N Electric	E 611 Sprague	509-838-8000	(2, 4, 6)
	Spokane	National Electric Co.	415 Fancher Rd. N	509-535-8751	(2, 3, 4, 5, 6)
	Spokane	Paragon Sales & Service	N 128 Stone	509-534-4125	(1, 2, 4, 6)
	Tacoma	Center Electric Co.	1212 S 30th	206-383-4416	(1, 2, 4, 5, 6)
	Tacoma	Electric Motor Service Co.	1928 Milwaukee St.	206-383-5453	(2, 3, 4, 6)
	Vancouver	Pacific Electric	1009 W 13th St.	206-694-2171	(2, 4, 6)
	Walla Walla	Berry Electric Co.	301 S 3rd	509-529-2812	(2, 4, 6)
	Walla Walla	Harold's Electric	811 W Rose St.	509-525-5070	(2, 4, 6)
	Wenatchee	Industrial Electric Co.	1512 Walla Walla Ave.	509-663-4756	(2, 4, 6)
WEST VIRGINIA	Beckley	Gunter's Electric Shop	404 Johnstown Rd.	304-253-4671	(2, 4, 6)
	Beckley	Southern Industrial Marketers	(Mabscott)	304-252-7171	(2, 4, 6)
	Charleston	Kanawha Electric Machine Co.	6304 Mac Corkle Ave. SE	304-925-6691	(2, 4, 5, 6)
	Chattaroy	Tramco	Rt. #14 Plant #3	304-235-5370	(3)
	Fairmont	Davis Electric	309 Mound Ave.	304-363-8730	(2, 4, 6)
	Fairmont	Soles Electric Co.	1552 Tulip Lane	304-363-2058	(1, 2, 4, 6)
	Huntington	Lawter Electric Mtr. Co.	202 Adams Ave.	304-522-8297	(2, 4, 6)
	Huntington	Service Pump & Supply Inc.	4446 Waverly Rd.	304-429-6731	(2, 3, 4, 6)
	Huntington	Star Delta Electric Motors	212 17th St.	304-522-2007	(2, 4, 6)
	Martinsburg	Biedler's Electric Motor Repair	Charles Town Rd.	304-263-9995	(2, 4, 6)
	Moundsville	Mound City Electric Rpr. Works	1307 1st St.	304-845-2030	(2, 4, 6)
	Moundsville	Tri-State Elec. & Machine Co.	1702 Wheeling Ave.	304-845-4540	(2, 4, 6)
	Parkersburg	Sturm Supply Inc.	Rosmar Rd.	304-295-8555	(2, 4, 6)
	West Logan	B & M Repair Inc.	74 2nd Ave.	304-752-1651	(2, 4, 6)
	Wheeling	Warco Sales, Inc.	623 N River Rd.	304-277-2550	(2, 3, 4, 5, 6)
Williamson	Tramco	Rt. #14	304-235-5370	(2, 4, 6)	
WISCONSIN	Algoma	Eloy's Electric Service	1719 Cedar Corners Rd.	414-487-2847	(2, 4, 6)
	Appleton	Crescent Electric Motor Serv.	1727 N Richmond St.	414-733-6136	(2, 4, 6)
	Appleton	Kurz Electric Service Corp.	3621 S Oneida St.	800-776-3629	(2, 3, 4, 5, 6)
	Arcadia	Arcadia Electric Mtr. Serv.	114 S Jackson	608-323-7838	(2, 4, 6)
	Berlin	Electric Motor Service	325 N Washington St.	414-361-0353	(2, 4, 6)
	Blair	Stetzer Electric, Inc.	520 W Broadway St.	608-989-2571	(2, 4, 6)
	Cedar Grove	Lenz Electric Mtr. Rpr.	W 2877 Hwy. G	414-668-6825	(2, 4, 6)
	Elmwood	Schneider Electric Motors	200 N Main St.	715-639-4182	(2, 4, 6)
	Fond DuLac	W W Electric Motors Inc.	215 Morris Ct.	414-922-9200	(2, 4, 5, 6)
	Fort Atkinson	Lake Geneva Spindustries	633 Hilltop Trail	414-563-8493	(2, 4, 6)
	Green Bay	Beemster Electric Co.	133 N Broadway	414-437-3238	(2, 4, 6)
	Green Bay	Christianson Electric	1138 State St.	414-435-6924	(2, 4, 6)
	Janesville	Energetics	821 N Parker Dr.	608-754-4403	(2, 3, 4, 6)
	Kaukauna	EMS, Inc.	1150 Prospect Ln.	414-766-0166	(2, 3, 4, 6)
	Krakow	Krakow Electric, Inc.	Angelica St.	414-899-3641	(2, 4, 6)
	LaCross	Advanced Electric Equip. Serv.	2411 Larson St.	608-781-2627	(2, 4, 6)
	LaCross	Lackore Electric Mtr. Rpr., Inc.	520 S 3rd St.	608-782-7635	(2, 4, 6)
	Lone Rock	Electric Motors	Rt. 1 Hwy. 14	608-583-2506	(2, 4, 6)
	Madison	Electric Motors, Unlimited	1000 Jonathan Dr.	608-271-2311	(1, 2, 3, 4, 5, 6)
	Manitowoc	Manitowoc Electric Motors	1925 S 14th St.	414-684-5040	(2, 4, 6)
	Marshfield	Marshfield Electric Motor	1100 S Central Ave.	715-384-9010	(2, 4, 6)
	Mayville	Schroeder Electric	1106 Breckenridge	414-387-3940	(2, 4, 6)
	Milwaukee	Badger Electric Co.	1005 S 60th St.	414-476-2526	(2, 3, 4, 6)
	Milwaukee	Dietz Electric Co., Inc.	4329 W Lincoln Ave.	414-645-3000	(1, 2, 3, 4, 5, 6)
	Milwaukee	Holl Electric	5225 W State St.	414-771-6600	(1, 2, 3, 4, 5, 6)
	Milwaukee	Peerless Electric, Inc.	9638 W Flagg Ave.	414-461-7000	(2, 4, 6)
	Milwaukee	Quality Electric Service	4170 N 35th St.	414-873-3710	(2, 4, 6)
	Milwaukee	Trester Service Electric	3225 N Pierce St.	414-264-8170	(2, 3, 4, 6)
	Milwaukee	U. S. Industrial Sales Co.	2156 S 4th St.	414-645-8300	(2, 4, 6)
	Mishicot	K & K Electric Motors	Rt. 1	414-755-2631	(2, 4, 6)
	Monroe	Precision Drive & Control, Inc.	504 11th St.	608-328-5600	(2, 3, 4, 6)

AUTHORIZED SERVICE CENTERS

DEFINITIONS:

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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
WISCONSIN	Oshkosh	W & W Electric	521 W 15th Ave.	414-235-3880	(2, 4, 6)
	Plainfield	Tri-County Electric Mtrs.	Rt. 1	715-335-4127	(2, 4, 6)
	Plover	Rlštey's Electric Mtr. Serv.	Hwy. 54 W	715-344-0010	(2, 4, 6)
	Plymouth	Hubacek Electric Mtr. Serv.	110 Rustic St.	414-892-4055	(2, 4, 6)
	Racine	Motoronics Elec. Sis. & Serv., Inc.	2200 N Western Ave.	414-634-5827	(2, 4, 6)
	Rice Lake	Moberg Electric, Inc.	1763 20½ St.	715-234-7961	(2, 4, 6)
	St. Croix Falls	Krueger Electric Inc.	316 Vincent St.	715-483-3355	(2, 4, 6)
	Schofield	L & S Electric, Inc.	5101 Mesker St.	800-472-9700	(2, 3, 4, 5, 6)
	Sheboygan	C & M Service Corp.	2012 N 15th St.	414-458-4722	(2, 4, 6)
	Sheboygan	Sheboygan Armature Works	2727 N 21st	414-452-3389	(2, 4, 6)
	Tomahawk	Bollech Electric Motors, Inc.	1515 N 4th St.	715-453-5525	(2, 4, 6)
	Watertown	Kottwitz Electric Motors, Inc.	202 N Water St.	414-261-3233	(2, 4, 6)
	Waukesha	D & G Electric Motor	516 W 22255 Arcadian Ave.	414-549-5051	(2, 4, 6)
	Waukesha	Machine Drive Sales & Eng.	308 Wilmont Dr.	414-549-9063	(2, 4, 6)
	Waukesha	Rusch Electric Motor Co.	330 E North St.	414-547-4037	(2, 4, 6)
	Waupin	W. W. Electric Motors, Inc.	RR 1	414-324-3811	(2, 4, 6)
	West Bend	Electric Motor & Vent. Sales, Inc.	202 N Water St.	414-261-3233	(2, 4, 6)
West Bend	Surak Electric	319 S Island Ave.	414-933-2698	(2, 3, 4, 6)	
WYOMING	Big Piney	Energy Performance	#2 Gopher Rd.	307-276-3926	(2, 4, 6)
	Casper	Mooney Electric	3289 S Prospector Dr.	307-266-1000	(2, 3, 4, 6)
	Cody	Opatz Electric Motor Repair	304 C St.	307-587-6961	(2, 4, 6)
	Mills	State Wide Electric	302 Van Horn Ave.	307-265-2567	(2, 4, 6)
PUERTO RICO	Ponce	Nieves Electric Service, Inc.	12 Comercio St.	809-842-1335	(2, 4, 6)
	San Juan	Cortes Industrial Organization, Prologacion Calle Paz	Edif. #3, Miramar	809-724-0041	(2, 4, 5, 6)

GOLD SEAL WARRANTY

Baldor Electric offers an optional extended warranty period of three (3) years after initial date of purchase, on our Integral Horsepower DC Product Line. This option is known as the Baldor Gold Seal Warranty. The motor will carry an additional nameplate which is dated at time of sale.

In addition to standard features, each Gold Seal Motor will have maximum capacity bearings on the pulley end. Grease fittings and reliefs will be added to each endplate on frames 210AT and larger.

This limited warranty requires customer responsibilities as outlined below:

1. Brushes, brush springs, bearings and commutator resurfacing is not covered under the warranty if replacement is due to normal wear and maintenance.
2. Bearings should be correctly relubed with approved grease every 600 hours.
3. After each year of use, the motor should be inspected and any routine maintenance performed. These annual inspection records must be kept on file.
4. Warranty includes the basic motor as well as all accessories.
5. Pricing for the 36 month Gold Seal Warranty will be an additional 10 percent of the total price of the motor with all accessories.

CANADIAN AUTHORIZED SERVICE CENTERS

DEFINITIONS:

1. U.L. Listed
1A. CSA Listed

2. AC up to 200 HP
3. AC over 200 HP

4. DC up to 10 K.W.
5. DC over 10 K.W.

6. Gearmotors

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
ALBERTA	Calgary	Del's Electric Ltd.	915-42 Ave. SE	403-244-0893	(2, 4, 6)
	Calgary	E. C. & M. Electric Ltd.	1835-10 Ave. SW	403-244-0771	(1A, 2, 3, 4, 5, 6)
	Calgary	James Electric Mtr. Serv.	6115-3 St. SE	403-252-5477	(1A, 2, 3, 4, 5, 6)
	Calgary	Kristian Electric	4710 -1 St. SW	403-292-9111	(2, 4)
	Calgary	Star Electric	3504-64 Ave. SE	403-279-7202	(1A, 2, 3, 4, 5, 6)
	Camrose	C. J. Electric Mtr. Rpr.	#5 4617-41 St.	403-672-5133	(2, 4, 6)
	Edmonton	Alberta Rewind	8717-53 Ave.	403-468-7175	(2, 4, 6)
	Edmonton	Bennett & Emmott (1986) Ltd.	18131-118 Ave.	403-454-9000	(1A, 2, 3, 4, 5, 6)
	Edmonton	Custom Motor Sales & Service	11612-170 St.	403-451-5577	(1A, 2, 3, 4, 5, 6)
	Edmonton	Electrical Industries Ltd.	10136-111 St.	403-426-0865	(1A, 2, 4, 5, 6)
	Edmonton	Electric Motor Service	10589-106 St.	403-426-6490	(1A, 2, 3, 4, 5, 6)
	Edmonton	Renown Industries Ltd.	5608-94 A St.	403-435-3447	(2)
	Edmonton	Scona Electric	9950-75 Ave.	403-433-4247	(1A, 2, 3, 4, 5, 6)
	Edmonton	Standard Electric Ltd.	4755 Elenlak Rd.	403-465-9817	(1A, 2, 3, 4, 5, 6)
	Edmonton	Universal Rewind Ltd.	15711-116 Ave.	403-451-4781	(2, 4, 6)
	Grande Prairie	G.P.R. Industries, Ltd.	9923-112 Ave.	403-532-5900	(1A, 2, 3, 4, 5, 6)
	Grande Prairie	Bermar Rewind Ltd.	9609-109 St.	403-532-0818	(2, 4, 6)
	Lethbridge	Hagen Auto Electric	1202-2 Ave. S	403-328-8826	(1A, 2, 3, 4, 5, 6)
	Lethbridge	Southern Mech. & Rewind Ltd.	3306-9 Ave. N	403-328-9049	(1A, 2, 3, 4, 5, 6)
Lloydminster	R. L. Electric Motor Rewinding	5528-50 Ave.	403-875-6880	(2, 4, 6)	
Red Deer	McAuley's Electric Mtr. Serv.	5301-50 Ave.	403-346-3361	(2, 3, 4, 5, 6)	
Wainwright	Wainwright Electric Mtr. Rpr.		403-842-4979	(2, 4, 6)	
Wetaskiwin	Broere Electric Ltd.	4024-49 St.	403-352-2246	(2, 3, 4, 6)	
BRITISH COLUMBIA	Burnaby	Mercer Electric Mtr. Serv.	111-2544 Douglas Rd.	604-291-9919	(2, 4, 6)
	Castlegar	Elektro Dohmen Ltd.	1055 Columbia Ave.	604-365-3212	(2, 4, 6)
	Clearbrook	Fraser Valley Electric Motor	#15-31550 S Fraser Way	604-852-6190	(2, 4, 6)
	Cranbrook	Columbia Electric Ltd.	1700 Cranbrook St.	604-426-4069	(2, 3, 4, 6)
	Dawson Creek	Jacques Electric Mtr. Rew.	1533-97 Ave.	604-792-7029	(1A, 2, 3, 4, 5, 6)
	Fernie	Kooteney Rewind	1541-9th Ave.	604-433-3664	(2, 3, 4, 5, 6)
	Grand Forks	Boundary Electric Ltd.	Box 758	604-442-5561	(2, 4, 6)
	Kamloops	Thompson Valley Rewind Ltd	1647 Valleyview Dr.	604-374-1633	(2, 4, 6)
	Kelowna	Central Electric	1920 Kent Rd.	604-860-4415	(2, 4, 6)
	Mission	City Electric (Mission) Ltd.	7202 Timberlake Rd.	604-826-2416	(2, 4, 6)
	Nanaimo	Burwood Electric Mtr. Serv.	291 Eaton St.	604-753-6544	(2, 4, 5, 6)
	Penticton	A. C. Motor Electric Ltd.	259 Okanagan Ave. E	604-493-1440	(2, 4, 6)
	Port Coquitlam	Saturn Tech Controls	#12, 1870 McLean Ave.	604-941-3831	(2, 4, 6)
	Prince George	Bater Electric (1983) Ltd.	3674-18 Ave.	604-563-8181	(1A, 2, 3, 4, 5, 6)
	Prince Rupert	H & H Rewinding	P.O. Box 833	604-627-7469	(2, 4, 6)
	Quesnel	P. Scheck Industrial Elec. Ltd.	2051 Hwy. 97N	604-992-2316	(2, 3, 4, 6)
	Richmond	Mahara Electric Ltd.	4331 B. Vanguard Rd.	604-273-5322	(2, 3, 4, 6)
	Surrey	B & B Electric Motor	#10-7788-132 St.	604-591-3371	(2, 3, 4, 6)
	Surrey	Longley Electric Co.	7911-128 St.	604-591-6426	(2, 4, 6)
	Vancouver	Drakes Universal Sales & Serv.	1007-E. Cordova St.	604-254-4412	(2, 4)
Vernon	Electrical Enterprises	4600-31 St.	604-542-1166	(2, 3, 4, 5, 6)	
Victoria	Troy Electric Ltd.	#3 2333 Government St.	604-382-7442	(2, 4, 6)	
MANITOBA	Brandon	Fort Ignition	1940 Queens Ave.	204-725-1354	(2, 6)
	Brandon	Harold's Auto Electric	362 Pacific Ave.	204-727-7292	(2)
	Melita	Russell's Electric	Box 566	204-522-3483	(2)
	Potage La Prairie	Laramie Enterprises	322 Saskatchewan Ave.	204-857-3483	(2)
	Steinbach	PalmLite Electric	Box 3308	204-326-9271	(2)
	Winkler	Peter Rempel Electric	Box 755	204-325-7220	(2, 6)
	Winnipeg	Del's Electric Motors	54 Princess St.	204-947-1391	(2, 6)
	Wlnnepeg	Kings Electric Motors Ltd.	633 Tyne Ave.	204-663-5332	(2, 3, 4, 5, 6)
NEW BRUNSWICK	Fredericton	Electric Motor Service	129 Westmoreland St.	506-458-8770	(2, 4, 6)
	Hartland	Hartland Armature Works	Hartland Industrial Park	506-375-6797	(2, 4, 6)
	Memramcook	A. B. Electric Motor Shop	Memramcook West RR 1	506-758-9669	(2, 4, 6)
	Moncton	Electrical & Refrigeration Ltd.	88 Beaverbrook St.	506-857-2233	(2, 4, 6)
Moncton	Moncton Electric Motor	345 Collishaw St.	506-859-7505	(2, 4, 6)	
NEWFOUNDLAND	St. John's	Electric Motor & Pump S & S	578 Water St.	709-739-9626	(2, 4, 6)
	St. John's	Rideout Tool & Machine Inc.	222 Kenmount Rd.	709-754-2240	(2, 4, 6)
NW TERRITORIES	Yellowknife	Territorial Rewind	P. O. Box 1648	-	(2, 4, 6)

CANADIAN AUTHORIZED SERVICE CENTERS

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STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES
NOVA SCOTIA	Bedford	Downesview Electric Mtr. Rpr.	125 Rocky Lake Rd.	902-835-1222	(2, 4, 6)
	Dartmouth	Fader Agencies	83 Shore Rd.	902-466-2333	(2, 4, 6)
	Halifax	N.S.A.W. (1989) Ltd.	2453 James St.	902-429-1590	(2, 4, 6)
	Sydney	MacNeil Electric	39 Forrest St.	902-529-1373	(2, 4, 6)
	Truro	Gary McCarthy Enterprises	65 Lower Truro Rd.	902-893-3634	(2, 4, 6)
	Truro	Smith Motor & Pump Shop Ltd.	333 Industrial Ave.	902-893-7291	(2, 4, 6)
	Wollville	Industrial Electrics Ltd.	R.R. 2	902-542-2100	(2, 4, 6)
ONTARIO	Alliston	Alliston Electric Motors	59 Victoria St. E	705-435-3061	(2, 4, 6)
	Barrie	Wallwin Electric Service Ltd.	50 Innisfill St.	705-726-1859	(2, 4, 6)
	Belleville	Emsco Ltd.	57 Cannifton Rd.	613-966-3234	(2, 4, 6)
	Brantford	Johnson & Cook Electric Ltd.	104 Marlborough St.	519-753-0652	(2, 4, 6)
	Brantford	Gilbert-McEachern Elec. Ltd.	225 Drummond St.	519-753-0468	(2, 4, 6)
	Brockville	Buehiow Electric Mtr. Serv.	153 Perth St.	—	(2, 4, 6)
	Brockville	Hewitts Machine & Welding Ltd.	165 Parkdale Ave.	613-342-7903	(2, 4, 6)
	Cambridge	Rod's Electric Mtr. Serv.	21 Jarvis St.	519-621-8291	(2, 4, 6)
	Chatham	Chandler Electric	50 Richmond St.	416-359-0646	(2, 4, 6)
	Chatham	Moncur Electric Motors Ltd.	444 Riverview Unit #6	519-351-6162	(2, 4, 6)
	Concord	Royal Electric	163 Bowes Rd. Unit #3	—	(2, 4, 6)
	Cornwall	Surgeson Electric Ltd.	1730 Pitt St.	613-933-2355	(2, 4, 6)
	Downsview	R.T.A. Electric Mtr. Serv.	100 St. Regis Cres.	416-636-9546	(2, 4, 6)
	Fordwich	John Wilson Electric Ltd.	Patrick St.	519-335-3501	(2, 3, 4, 5, 6)
	Guelph	Alfred Schnurr electric Ltd.	61 Dawson Rd.	519-822-5480	(2, 3, 4, 6)
	Guelph	Harlock-Schultz Electric Inc.	19 Malcolm Rd.	519-824-3680	(2, 4, 6)
	Hamilton	Duke Electric	986 Barton St. E	—	(2, 3, 4, 5, 6)
	Hamilton	Electric Motor Service	192 Cannon St. E	416-522-2051	(2, 4, 6)
	Hawksbury	Master Electric	335 Dufferin St.	613-632-3491	(2, 4, 6)
	Lindsay	Jordan Electric Mtr. Serv.	4 Durham St. E	705-324-9427	(2, 4, 6)
	London	TME Delta Inc.	550 Admiral Dr.	519-659-4982	(2, 4, 6)
	Midland	Dana Electric Motors	206 Fourth St.	705-526-7651	(2, 3, 4, 6)
	Milton	Milton Electric	300A Market Dr.	416-826-6490	(2, 3, 4, 6)
	Mississauga	Ring Electric Motor Ltd.	2771 Thamesgate Dr.	416-677-1602	(2, 4, 6)
	Mississauga	Standard Electric Armature Ltd.	7885 Tranmere Dr. Unit #19	416-677-6667	(2, 4, 6)
	Oakville	Oakville Electric Mtr. Serv. Inc.	220 Wyecott Rd. Unit #43	416-842-0420	(2, 4, 6)
	Oakville	Polyphase Electric Mtr. Serv.	1200 Speers Rd. Unit #21	416-845-5291	(2, 4, 6)
	Orillia	Orser Electric Ltd.	301 Forest Ave.	705-326-6427	(2, 4, 6)
	Ottawa	Grant Electric Ottawa Ltd.	401 Preston St.	—	(2, 3, 4, 5, 6)
	Pembroke	Kirk's Electric Motor Works	298 Christie St.	613-732-3547	(2, 4, 6)
	Peterborough	Dependable Electric Mtr. Serv.	861 Webber Ave.	416-652-1460	(2, 4, 6)
	Peterborough	Larry Electric Mtr. Serv.	164 Sherbrooke St.	705-743-3167	(2, 4, 6)
	Richmond Hill	C.A.F. Electric	45-47-49 Industrial Rd.	416-324-2845	(2, 4, 6)
	St. Catherines	Blenkhorn & Sawle Ltd.	100 Grantham Ave.	416-682-9251	(2, 3, 4, 5, 6)
	St. Catherines	Kaupp Electric	225 Merritt St.	416-227-1661	(2, 3, 4, 6)
	Sarnia	TME Delta Inc.	177 Samuel St.	519-332-8800	(2, 3, 4, 5, 6)
	Scarborough	Industrial Mtr. Serv. Ltd.	793 Warden Ave.	416-751-7971	(2, 4, 6)
	Scarborough	Toronto Electric	72 Crockford Blvd.	416-755-7716	(2, 3, 4, 5, 6)
	Stratford	Culliton Brothers Ltd.	473 Douro St.	519-271-1981	(2, 4, 6)
	Stratford	Fenton Electric Ltd.	24 Corcoran St.	519-273-3601	(2, 4, 6)
	Tavistock	Sommers Motor Gen. Sales Ltd.	35 Elizabeth St.	519-655-2396	(2, 4, 6)
	Thunder Bay	Mahon Electric	340 N Waterloo St.	807-623-8471	(2, 3, 4, 5, 6)
	Thunder Bay	Merse Motor Electric	194 S Court St.	807-345-2323	(2, 6)
	Toronto	Ainsworth Electric	131 Bermondsey Rd.	416-751-4420	(2, 3, 4, 5, 6)
	Toronto	Anron Electric Ltd.	136 Sears St.	416-466-5575	(2, 4, 6)
	Toronto	Electric Repair & Mach. Co. Ltd.	35 Chauncey Ave.	416-236-1861	(2, 4, 6)
	Trenton	Branch Electric Mtr. Serv.	7 Frankford Crescent	613-394-4851	(2, 4, 6)
Wallaceburg	TME Delta Inc.	139 Arnold St.	519-659-4983	(2, 4, 6)	
Waterloo	Distel Engineering Co. Ltd.	641 Colby Dr.	519-884-9811	(2, 3, 4, 6)	
Welland	Burger Electric Mtr. Serv. Ltd.	60 Clark St.	416-734-6171	(2, 4, 6)	
Whitby	Milton Electric Ltd.	208 Chestnut St. E	416-668-2670	(2, 4, 6)	
Windsor	Moncur Electric Motors Ltd.	333 Eugenie St.	519-969-9660	(2, 3, 4, 6)	
Windsor	Waffles Electric Ltd.	400 Erie St. E	519-254-9215	(2, 3, 4, 5, 6)	
Woodstock	Reliable Electric Sis. & Serv. Ltd.	595 Henry St.	519-537-6661	(2, 4, 6)	
PR. EDWARD IS	Charlottetown	Andrews Motor Repair	21 Jordan Crescent	902-892-8703	(2, 4, 6)

338-4006

CANADIAN AUTHORIZED SERVICE CENTERS

DEFINITIONS:

- 1. U.L. Listed
- 2. AC up to 200 HP
- 3. AC over 200 HP
- 4. DC up to 10 K.W.
- 5. DC over 10 K.W.
- 6. Gearmotors

STATE	CITY	COMPANY NAME	ADDRESS	TELEPHONE	ACTIVITIES	
QUEBEC	Chicoutimi	Les Entr. Electriques Gilbert	252 A Ave. Begin	418-543-4671	(2, 4, 6)	
	Coaticook	Les Armatures Coaticook Inc.	655 Merrill, Parc Industriel	819-849-9131	(2, 4, 6)	
	Dotbeau	Les Moteurs Electriques Conroy	1849 Boul Wallberg	418-276-6596	(2, 4, 6)	
	Drummondville	Atelier Moteur Croteau Inc.	3570 Jean Brebeue	819-395-4430	(2, 4, 6)	
	Farnham	Meunier Electrique	354 Rue St. Vicent	514-293-4302	(2, 4, 6)	
	Joliette	Jolec Industrie Inc.	1625 St. Pierre Nord	514-755-2002	(2, 4, 6)	
	Lafontaine	Moteur Electrique Desjardins	163 Rue Belanger	514-438-5628	(2, 4, 6)	
	La Pocatiere	Belanger Electrique Enr.	80 Rt. Jeffrey C.P. 1013	418-856-4617	(2, 4, 6)	
	Mont-Joli	J. E. Poirer & Fils Inc.	109 Chemin Price	418-775-5335	(2, 4, 6)	
	Mont. Laurier	Moteur Electrique Enrg.	642 Alix	819-623-2760	(2, 4, 6)	
	Montreal	Delstar Inc.	13065 Jean Grou	514-642-8220	(2, 4, 6)	
	Montreal	Laval Electriques Ltee	9390 Charles De Laour	514-381-3992	(2, 4, 6)	
	Montreal	L.M. Electriques Inc.	3006 Ste-Catherine Est.	514-523-1444	(2, 4, 6)	
	St. Alexandre	Serge Guertin	2674 Grande Ligne	514-296-8866	(2, 4, 6)	
	St. Celestin	Atelier Du Moteur St. Celestin	755 Marquis	819-229-3463	(2, 4, 6)	
	St. Cuthbert	Denomme Moteur Electrique	121 Fafard	514-836-2907	(2, 4, 6)	
	St. Dumase	Moteurs Elec. Dumas Engr.	25 Principale	514-797-3596	(2, 4, 6)	
	St. Georges Beauce	Les Aeliers Electriques D.Y.	10750 Boal Lacroix	418-228-4840	(2, 4, 6)	
	St. Germain-De-Grantham	Breton Moteurs Electriques Enr.	245 Ch. Yamaska Rt. 122	819-395-4172	(2, 4, 6)	
	St. Hughes	Moteurs Electriques Bisailton	420 Ste-Elezbeth	514-794-2122	(2, 4, 6)	
	St. Marc					
	Des Carrieres	J. R. Perreault & Fils Ltee	561 Principale	418-268-3566	(2, 4, 6)	
	St. Theodore D'Acton	Moteurs Electriques Fontaine	1600 Principale	514-546-7166	(2, 4, 6)	
	Sherbrooke	Moteurs Electriques Gosselin	255 Ouest, Rue Galt	819-288-4700	(2, 4, 6)	
	Sherbrooke	Promotech Electrique	1110 Rue King Est	819-822-2111	(2, 4, 6)	
	Sherbrooke	Shelco Inc.	1635 Rue Denault	819-569-6373	(2, 4, 6)	
	Sherrington	G.S. Moteurs Electriques inc.	501 St. Patrice Rt. 219	819-454-4450	(2, 4, 6)	
	Ste-Claire Dorch	Moteur Electrique Ste-Clair	110 Boul. Begin CP 156	418-883-2181	(2, 4, 6)	
	Ste-Foy	Electro-Mecanik Inc.	445 Marconi	418-683-1724	(2, 4, 6)	
	Ste-Marie					
	CTE Beauce Nord	F.L. Moteur Electrique Enr.	1105 Boul. Vachon	418-387-3883	(2, 4, 6)	
	Ste-Monique	Moteurs Electriques B.S.B.	195 Rue St.-Jean	418-347-5025	(2, 4, 6)	
	Thetford Mines	Thetford Armature Inc.	240 Smith Nord CP 335	418-335-3405	(2, 4, 6)	
	Trois-Rivieres	M. Electrique Ltee	1330 Rue Cartier, CP 1570	819-374-4687	(2, 4, 6)	
	Vald'or	Zuritt Corp.	2400 Boul. Industriel	819-825-3150	(2, 4, 6)	
	Valleyfield	J.H. Sauve & Fils (1979) Inc.	573 Chemin Larocque	514-373-7622	(2, 4, 6)	
Victoriaville	Baril Electrique Inc.	444 Cantin-Parc Industriel	819-752-4480	(2, 4, 6)		
Ville Lemoyne	Roy Electrique Inc.	1505 St. Thomas	514-466-2100	(2, 4, 6)		
SASKATCHEWAN	Prince Albert	P. A. Electric Service	129-16th St. W	308-784-4236	(2)	
	Regina	Capital Electric	1234 Scarth St.	308-525-2704	(2, 3, 6)	
	Regina	Stockdales	305 Dewdney Ave. E	308-352-4505	(2)	
	Saskatoon	Davis Electric	602 48th St.	308-933-2433	(2, 6)	
	Saskatoon	GMR Electric	526B-45th St. E	308-931-8456	(2, 3, 4, 5, 6)	
	Saskatoon	Klassen Electric	203G-47th St. E	308-931-2967	(2, 4, 5, 6)	
	Saskatoon	R. L. Electric Motor Rewinding	3302 Wells Ave.	308-242-0212	(2, 4, 5, 6)	
	Tisdale	Tisdale Motor Rewinding	P. O. Box 2198	308-873-2681	(2)	
YUKON	Whitehorse	Oscars Electric Ltd.	310 Alexander St.	-	(2, 4, 6)	

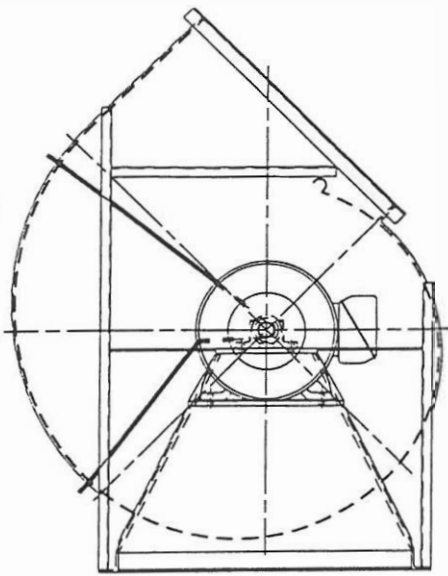
THREE YEAR WARRANTY

BALDOR AC premium efficiency electric motors are warranted for a period of three (3) years, from the date of shipment from the factory or factory warehouse, against defects in material and workmanship. Standard efficiency motors are warranted for a period of one (1) year, from the date of shipment from the factory or factory warehouse, against defects in material and workmanship. To allow for stocking and/or fabrication period, the warranty period will be extended for an additional period of six months of shipment date from factory or factory warehouse stock. In no case will the warranty be extended for a longer period. BALDOR extends this limited warranty to each of the electric motor for the purpose of resale and to the original purchaser for use.

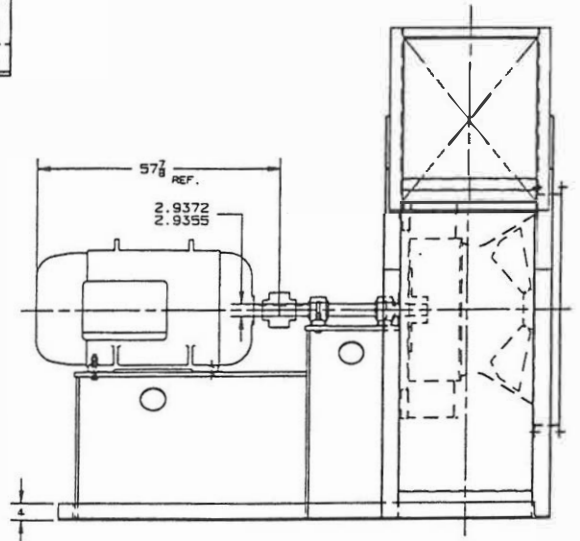
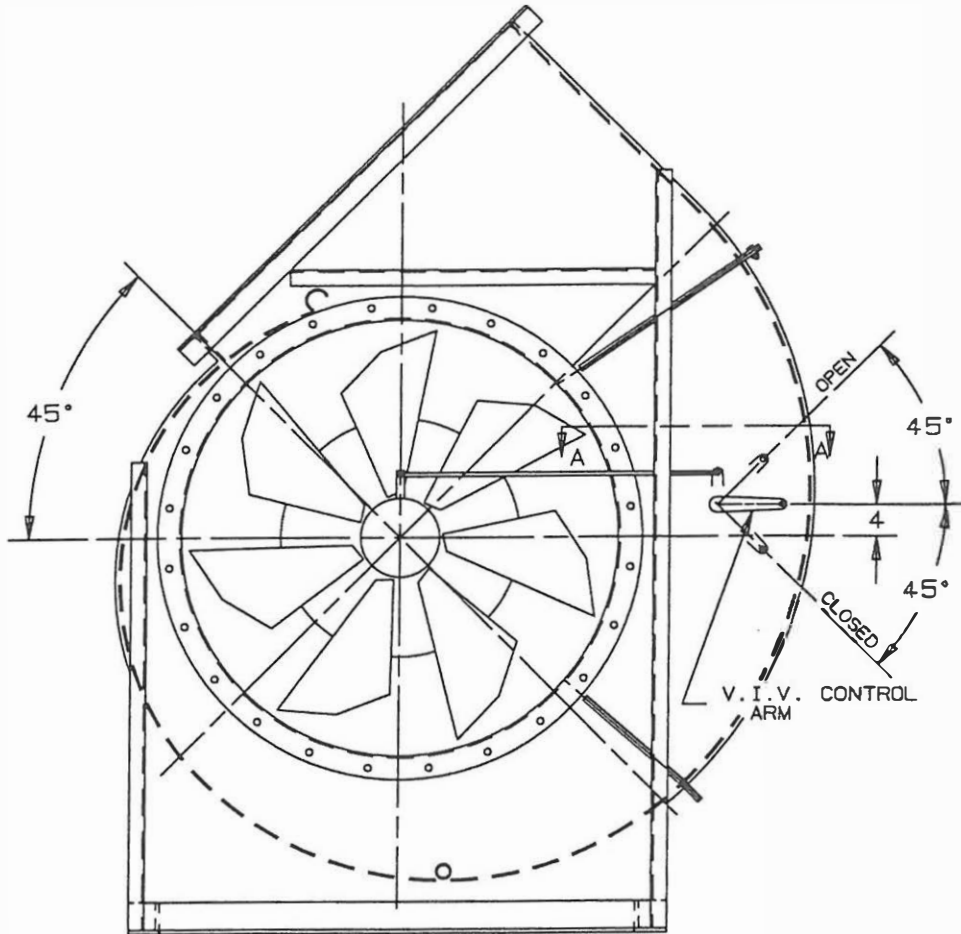
NOTES

BALDOR ELECTRIC COMPANY
FORT SMITH, ARKANSAS 72901 U.S.A.
PHONE (501) 646-4711 • FAX (501) 648-5792

FAN EQUIPMENT OPERATION MANUAL



Fan Serial No. _____



**NORTHERN
BLOWER**



Air Movement and Control Association
30 West University Drive
Arlington Heights, Illinois 60004

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901 Regent Avenue West
WINNIPEG, MANITOBA
CANADA
R2C 2Z8

1990

CML NORTHERN BLOWER INC.

STANDARD TERMS AND CONDITIONS and WARRANTY

STANDARD TERMS AND CONDITIONS

TERMS OF PAYMENT: Terms of payment are net thirty (30) days subject to the prior approval of the CML Northern Blower Inc. ("CML Northern") Credit Department. Notwithstanding such approval, if in CML Northern's judgement the customer's financial condition does not warrant the continuation of production or shipment on the original terms, CML Northern reserves the right to request payment in advance. Overdue accounts will bear interest at the prevailing bank rate charged to CML Northern.

ACCEPTANCE AND PRICES: Prices quoted for products manufactured by CML Northern are subject to acceptance by the purchaser no later than thirty (30) days from the date of the Quotation - Proposal.

Prices quoted for items which are not manufactured by CML Northern such as motors and drives, etc. are subject to change at any time the cost of such items charged to CML Northern changes.

Prices on orders for products manufactured by CML Northern are firm provided approval and release for production and shipment is received from the customer within ninety (90) days of the date of CML Northern's receipt of the customer's order and the products are shipped within twelve (12) months of the date of CML Northern's receipt of the customer's order. When such approval and release for production and shipment is received after ninety (90) days of the date of CML Northern's receipt of the customer's order or products are shipped after twelve (12) months of the date of CML Northern's receipt of the customer's order, such prices are subject to adjustment to CML Northern prices in effect on the date approval and release from customer is received by CML Northern or at time of shipment.

Orders for non-stock equipment released for production and scheduled by CML Northern cannot be rescheduled by the customer unless it is done at least eight (8) weeks before the CML Northern scheduled shipping date. If production is started the customer must accept delivery when the order is ready for shipment.

CANCELLATIONS: Accepted orders cancelled by the customer are subject to cancellation charges for all expenses incurred and commitments made by CML Northern. The cancellation charges on completed items will be one hundred (100%) percent of the selling price. The aforementioned cancellation charges shall not in anyway whatsoever limit CML Northern's other remedies it may have at law including, without limiting the generality of the foregoing, the ability of CML Northern to claim and recover any amounts or damages to which CML Northern would otherwise be entitled by reason of accepted orders cancelled by the customer.

FREIGHT CLAIMS: Unless otherwise expressly agreed in writing, delivery of the product is made FOB CML Northern Plant. The liability and responsibility of CML Northern for the product ceases upon delivery of the product in good order to the carrier. All claims for damage and shortage in transit are the customer's responsibility and the customer must file the claim against the carrier. Claims for factory shortage will not be recognized unless such alleged shortage is reported to CML Northern in writing within ten (10) days after receipt of the product.

TAXES: The amount of any present or future taxes shall be added to the price contained herein and shall be paid by the customer in the same manner and with the same effect as if originally added thereto.

DELAYS: CML Northern shall not be liable to the customer or to any third party for any delays caused by riots, strikes, lockouts, weather, fire, floods, lack of transportation, accidents, the failure of CML Northern's suppliers to meet their contractual obligations, breakdowns, or any other contingency beyond CML Northern's reasonable control and receipt of the product by the customer shall constitute a waiver of all claims for loss or damage due to delay.

PRODUCT CHANGES: CML Northern reserves the right to change or modify the product in the interest of continuous product improvement without liability.

RETURNED GOODS: Goods may not be returned except by the written permission of the President, General Manager or General Sales Manager of CML Northern and when so returned will be subject to a handling charge and transportation costs.

MODIFICATION: These Standard Terms and Conditions may not be modified except by written agreement signed by the President, General Manager or General Sales Manager of CML Northern. The failure of CML Northern to object to provisions contained in the customer's purchase orders or other communications shall not be deemed waiver of the Standard Terms and Conditions hereof or acceptance of such provisions. No other terms and conditions other than the Standard Terms and Conditions contained herein and those terms and conditions with respect to the description of product, quantity and price contained in the "Quotation-Proposal" shall be binding upon CML Northern unless made in writing and signed by the President, General Manager or General Sales Manager of CML Northern. Without restricting the generality of the foregoing, agents and sales representatives of CML Northern do not have authority to modify these Standard Terms and Conditions.

WARRANTY

CML Northern Blower Inc. (the "Seller") warrants products of its manufacture (the "product", "equipment" or "fan") to be free of defects in material and workmanship if properly installed, and cared for, and operated under normal conditions, and with competent supervision, all in accordance with the Seller's Operation Manual. If any questions exist as to whether the proposed operation of the Seller's equipment is within "normal conditions" for such equipment, details of such proposed operation should be provided to the Seller at its Winnipeg factory. The Seller will review the proposed operation of the equipment (at a fee) and advise if the proposed operation is acceptable.

- (1) The Seller's obligation under this warranty is limited to the repair or replacement, at its option at its Winnipeg factory, of any defective part or parts which shall within one (1) year after shipment thereof to the original purchaser (the "Purchaser"), be returned to its Winnipeg factory with transportation charges prepaid by the Purchaser and upon such repair or replacement the Seller shall have fulfilled all its obligations to the Purchaser. The Seller will not be liable, in any circumstances, for costs or expenses incurred by the Purchaser or any person claiming through the Purchaser in the removal or replacement of equipment alleged to be defective. Except as specifically provided herein, the Seller will not be liable, in any circumstances, for any loss or damage of whatever nature or kind (including, without limiting the generality of the foregoing, direct, indirect, incidental or consequential loss or damage or damage resulting from business interruption) should the equipment be so defective as to preclude the remedy of warranted defects by repair or replacement. In such event, the Purchaser's sole and exclusive remedy shall be the refund of the purchase price paid by the Purchaser for all the defective equipment.
- (2) The Seller shall not be liable for the repair or replacement of any such defective part or parts, or for loss, damage, or any expense of repairs when any adjustment, alteration or repair shall have been made or attempted outside of its factory, except if such adjustment, alteration or repair outside its factory is made or attempted after the Seller's written consent is first obtained.
- (3) The Seller shall not be liable for any corrosion or fouling caused by any foreign substance deposited in or on the equipment.
- (4) Because the Seller is unaware of any forms of construction, materials, alloys or coatings which will successfully resist all abrasion, erosion, corrosion, or deterioration from excessive heat, the Seller's warranty does not apply when any of its products or equipment are subjected to conditions which cause such abrasion, erosion, corrosion or deterioration from excessive heat or any damages similar or related thereto.
- (5) The performance of the Seller's fan equipment outside of the laboratory may vary widely and differ from the performance specifications contained in its sales literature. Therefore, the Seller cannot and does not guarantee or warrant the performance of its fan equipment at the Purchaser's location.
- (6) ALL WARRANTIES OF THE SELLER, EXPRESS OR IMPLIED, WITH RESPECT TO MOTORS, SWITCHES, CONTROLS OR OTHER ACCESSORIES NOT MANUFACTURED BY THE SELLER, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY OR FITNESS FOR ANY PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.
- (7) The Seller shall have no liability under the terms of this Warranty or otherwise where the Purchaser undertakes the responsibility of mounting the fan wheel directly to the motor or turbine shafts without the Seller having inspected and tested the assembled unit (at a fee) before the fan is operated in any fashion. If the Seller does not inspect and test the assembled unit within ten (10) days of being requested to do so by the Purchaser and receipt of payment of the aforementioned fee, the Seller shall be deemed to have waived its requirement to inspect and test the assembled unit.
- (8) The Seller shall have no liability under the terms of this warranty or otherwise until the Purchaser has made full payment to the Seller for the product or equipment to which this warranty is to apply.
- (9) NO WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY OR FITNESS FOR ANY PARTICULAR PURPOSE, ARE MADE BY THE SELLER EXCEPT AS EXPRESSLY PROVIDED HEREIN.
- (10) The terms of this warranty may not be modified except by written agreement signed by the President, General Manager or General Sales Manager of the Seller. The Seller's failure to object to provisions contained in the Purchaser's purchase orders or other communications shall not be deemed waiver of the terms and conditions hereof nor acceptance of such provisions. No representations or warranties other than those contained herein shall be binding upon the Seller unless made in writing and signed by the President, General Manager or General Sales Manager of the Seller. Without restricting the generality of the foregoing, agents and sales representatives of the Seller do not have authority to modify the the terms of this Warranty or make representations or warranties other than those contained herein.

CML NORTHERN BLOWER INC. OPERATION MANUAL - FAN EQUIPMENT

SAFETY PRECAUTIONS

FAN EQUIPMENT CAN BECOME A SOURCE OF INJURY AND DEATH IF NOT PROPERLY INSTALLED, OPERATED OR MAINTAINED. Do not exceed the maximum operating temperature or speed limits for which the fan equipment was designed. Limits for some lines of fan equipment are given in CML Northern Blower Inc. ("CML Northern") catalogues. Limits for non-catalogued lines of fan equipment should be obtained in writing from the CML Northern Winnipeg factory and not otherwise. Do not rely on limits obtained in any other manner.

The user should make all personnel who operate or maintain the fan equipment aware of all possible hazards.

THE RESPONSIBILITY FOR PROVIDING SAFETY ACCESSORIES FOR FAN EQUIPMENT SUPPLIED BY CML NORTHERN IS THAT OF THE USER OF THE FAN EQUIPMENT. CML Northern sells its fan equipment with or without safety accessories, and accordingly, it can supply standard safety accessories upon receipt of an order. Ensure that all necessary safety accessories have been installed before operation of the fan equipment.

The warning notice set out below should be affixed upon the fan equipment:

CML NORTHERN BLOWER INC.

WARNING

This fan has rotating parts and may be hot. Keep body, hands and foreign objects away from inlet and outlet. Do not touch fan or motor during operation.

Operate, install and maintain only in strict accordance with safety practices and instructions in manufacturer's Operation Manual. Do not exceed the maximum operating temperature, speed, or vibration level identified in the manufacturer's catalogues and Operation Manual. Untrained personnel should never operate, install, adjust or maintain fan or motor.

ADDITIONAL SAFETY ACCESSORIES FOR THE FAN EQUIPMENT ARE AVAILABLE FROM THE MANUFACTURER. THE RESPONSIBILITY FOR PROVIDING SUCH ADDITIONAL SAFETY ACCESSORIES IS THAT OF THE USER OF THE FAN EQUIPMENT. CONSULT THE MANUFACTURER'S OPERATION MANUAL FOR GUIDANCE.

Before starting maintenance work, lock disconnect switch in the off position, de-energize and disconnect all power sources to the motor and to accessory devices and secure fan impeller. Cleanout doors must be secure during operation. Unsecured cleanout doors may shoot open during operation because of pressure build up inside the fan.

Do not start-up when fan impeller is rotating backwards.

FAILURE TO FOLLOW MANUFACTURER'S INSTRUCTIONS AS TO OPERATION, INSTALLATION, ADJUSTMENT, MAINTENANCE, SAFETY EQUIPMENT OR APPROPRIATE OPERATING CONDITIONS COULD RESULT IN DAMAGE TO THIS EQUIPMENT, DAMAGE TO OTHER EQUIPMENT, PERSONAL INJURY OR DEATH.

Should the warning notice not be affixed to the fan equipment purchased, CML Northern will supply such a warning notice upon request made to its head office.

The user of the fan equipment, in making its determination as to the appropriate safety accessories to be installed and any additional warning notices to be affixed upon the fan equipment, should consider (1) the location of the installation of the fan equipment, (2) the accessibility of employ-

ees and other persons to the fan equipment, (3) any adjacent equipment, (4) applicable building codes, and (5) applicable health and safety legislation.

Users and installers of the fan equipment should read "RECOMMENDED SAFETY PRACTICES FOR AIR MOVING DEVICES" which is published by the Air Movement and Control Association, 30 West University Drive, Arlington Heights, Illinois, 60004.

INSTALLATION, OPERATION & MAINTENANCE OF CML NORTHERN FAN EQUIPMENT

INTRODUCTION

The purpose of this section is to aid in the proper installation, operation, and maintenance of CML Northern fan equipment. These instructions are intended to supplement good general practices and are not intended to cover detailed instruction procedures.

The receipt, handling, installation, operation and maintenance of CML Northern fan equipment is the responsibility of the user. It is important that the installation and start-up of the fan equipment be supervised or inspected by personnel experienced in such work and equipment. Trained personnel are available from CML Northern, and arrangements for such supervision and inspection (at a fee) should be made through your local CML Northern representative or at CML Northern's head office. Failure to arrange for such supervision or inspection may affect or void the CML Northern Warranty (please refer to paragraph 7 of CML Northern's Warranty).

SHIPMENT & RECEIVING

CML Northern has thoroughly inspected the fan equipment at its factory and has prepared the fan equipment for shipment in accordance with the uniform freight classification followed by all carriers. The fan equipment should be in perfect condition when received, unless damaged in transit. Upon acceptance by the carrier, as evidenced by a signed bill of lading, the carrier accepts responsibility for all shortages or damage, whether concealed or evident. Claims covering shortages or damage must be made to the carrier by the purchaser. Any shortages or damage should be noted by the user on the delivery receipt.

The fan equipment may contain components manufactured by manufacturers other than CML Northern. Such other manufacturers may have furnished instructions and/or other literature concerning their component. A list of such instructions and/or other literature is forwarded with the fan equipment (see page 15 of this manual). If any of the items on the list are missing, please contact your CML Northern representative, CML Northern at its head office or contact the component's manufacturer directly.

HANDLING

The fan equipment should be handled with care. Some fans are provided with lifting lugs or holes for easy handling. Others must be handled using nylon straps or well-padded chains and cables which protect the fan's coating and housing. Spreader bars should be used when lifting large parts.

Axial fans should be lifted by using straps around the fan housing only. **DO NOT LIFT AXIAL FANS BY THE MOTOR, MOTOR BASE, IMPELLER OR FLANGES.**

Centrifugal fans are best lifted using straps attached to structural base members of the fan. **DO NOT LIFT CENTRIFUGAL FANS BY THE FAN SHAFT, IMPELLER, FLANGES OR INLET SUPPORTS.**

Roof ventilators should be lifted by using straps attached to lifting lugs or base only. Spreader bars should also be used to avoid damage to the butterfly damper assembly or the weatherhood. **DO NOT LIFT ROOF VENTILATORS BY THE BUTTERFLY DAMPER ASSEMBLY OR WEATHERHOOD.**

Centrifugal rotor assemblies (i.e. impeller and shaft assemblies) have been designed to be supported by the shaft, and should be lifted by slings around the shaft as close as possible to the hub on each side of the impeller (wheel). Slings should not press against the side plates of the wheel as this may damage and distort the wheel. A spreader bar should be used when lifting the rotor assembly (Figure 1). The wheel should never rest on the side plates or blades, nor should the rotor assembly be lifted by any components of the fan wheel. To do so may damage the rotor assembly and destroy the dynamic balance that is necessary for low vibration operation. If this balance is destroyed, rebalancing of the rotor assembly will be necessary. If the wheel and shaft have not been assembled, the fan wheel may be lifted by a timber or wrapped bar of sufficient strength passed through the hub. The finished bore of the hub and the bearing surfaces of the shaft must also be protected from damage.

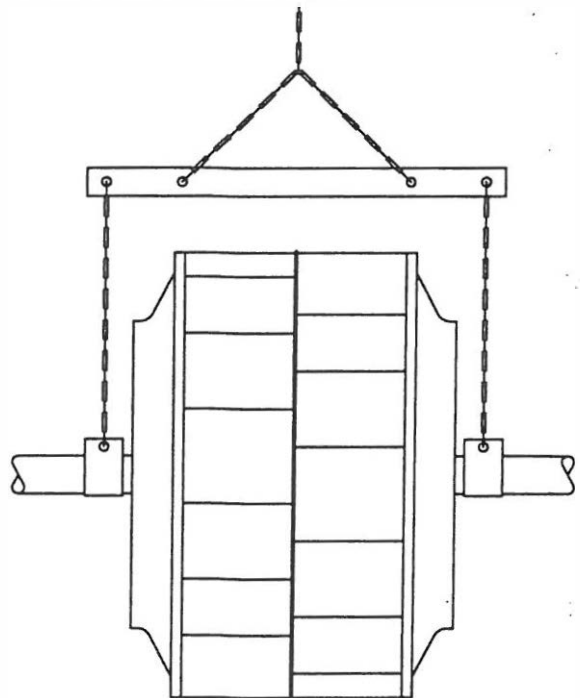


Fig. 1 Correct use of spreader bar when lifting centrifugal rotor assembly.

STORAGE

If fan equipment is not installed immediately, fans should be protected so as to remain dry at all times.

(1) If temporary storage is necessary:

Store in a dry area which is free of any vibration, and protect from extremes and rapid changes in humidity and temperature.

- (A) Temperatures: between 50°F (10°C) and 120°F (49°C).
- (B) Maximum relative humidity: 60%.
- (C) Shock or vibration: 2 mils displacement maximum to prevent bearings from brinelling. Exceeding this limit will require vibration dampening material under the fan equipment.

(2) If extended storage is necessary:

Motor bearings and fan bearings are to be lubricated at the time of placement into extended storage. Motor shafts and fan shafts are to be manually rotated every month and additional lubricant added, purging some of the lubricant in the bearing cavity every six (6) months. LUBRICANT IN THE BEARINGS IS TO BE PURGED AT THE TIME OF REMOVAL FROM STORAGE, ENSURING THAT AN AMPLE SUPPLY OF FRESH LUBRICANT IS IN EACH LUBRICANT CAVITY. LUBRICANT USED MUST BE COMPATIBLE WITH THE LUBRICANT ALREADY IN THE MOTOR AND FAN BEARINGS.

Electric motors in storage may absorb moisture in their windings which may result in a significant loss of insulation resistance. When removed from storage the insulation resistance of all motors should be checked in accordance with the motor manufacturer's instructions or in accordance with IEEE standard 43-1974 "IEEE Recommended Practice for Testing Insulation Resistance of Rotating Machinery". Motors with insufficient insulation resistance must be cleaned and dried in accordance with motor manufacturer's instructions or IEEE standard 43-1974 to return the insulation resistance to acceptable levels. THE APPLICATION OF POWER TO A MOTOR WITH INSUFFICIENT INSULATION RESISTANCE MAY RESULT IN DAMAGE TO THE MOTOR OR DAMAGE TO OTHER EQUIPMENT.

On v-belt drive fans, belts should be checked at the time of removal from storage for proper v-belt tension. Tighten belts if necessary (refer to the "V-BELT DRIVE INSTALLATION" section on page 9 of this manual).

When installing fan equipment after storage, follow the instructions contained in the "INSTALLATION OF FAN EQUIPMENT" and "OPERATION OF FAN EQUIPMENT" appearing at pages 8 and pages 10 of this manual respectively.

Storage records evidencing compliance with the above requirements should be maintained by the purchaser.

INSTALLATION OF FAN EQUIPMENT

- (1) Safe and smooth operation of the fan equipment requires a proper foundation that is level, rigid, and of sufficient structure and mass to support the equipment. IT IS ALWAYS IMPERATIVE TO CONSULT A QUALIFIED STRUCTURAL ENGINEER IN ORDER TO DESIGN A PROPER FOUNDATION.

A properly designed concrete base is the preferred foundation. The concrete base mass should be a minimum of four times that of the fan equipment when the plan view area of the concrete base is no more than twice the plan view area of the fan equipment.

Steel platforms or bases are good alternatives when properly designed. Steel platforms must be braced in all directions. Care must be taken to ensure that the natural frequency of all steel base components differs significantly from the rotating speed of the fan and the driver. FAILURE TO HEED THIS GOOD DESIGN PRACTICE MAY RESULT IN A RESONANT CONDITION AND CONSEQUENT LIFE THREATENING CATASTROPHIC STRUCTURAL FAILURE.

Fans mounted off ground level should be rigidly mounted to a structural platform and should be placed as near as possible to, or over, a solid wall or column (refer to paragraph one of this section).

Supports for suspended fans must be crossbraced to prevent side sway.

- (2) Fan equipment must be level prior to operation. Do not twist or distort fan equipment. Shim fan support points before tightening foundation bolts to help ensure distortion does not occur.
- (3) For roof mounted fans, place the fan curb panel on the roof curb. Level and then anchor the unit to the curb using lag screws, neoprene washers and flat washers. DO NOT MOUNT UNSUPPORTED STACKS ON THE FAN. STACKS MUST BE INDEPENDENTLY MOUNTED TO THE ROOF. Anchor independently mounted stacks with guy wires to prevent side sway.

- (4) Ducts must be independently supported, and must never be supported by the fan. Use flexible duct connections wherever possible. The independent mounting of stacks and ducts to the fan will ensure that the fan will not be twisted or deformed with the addition of external loads.
- (5) It is recommended that access doors be placed in ductwork just ahead of the fan inlet and just behind the fan outlet for ease of inspection and maintenance. **IN ORDER TO AVOID EQUIPMENT DAMAGE AND PERSONAL INJURY ACCESS DOORS IN A DUCT SYSTEM SHOULD BE SECURELY CLOSED AND SHOULD NEVER BE OPENED WITH THE FAN RUNNING.**
- (6) Lubricate fan bearings in strict accordance with bearing manufacturer's recommendations. Lubricate bearings upon receipt of fan. Do not over-lubricate. Bearings should be locked to the shaft. Ensure that locking mechanisms on bearings are in correct position and that locking mechanisms are fastened before operation of fan.
- (7) Flexible couplings must be installed and maintained in accordance with the coupling manufacturer's instructions. Refer to fan submittal drawings for details of drive arrangements and the general location of the coupling halves on the fan and motor shafts.

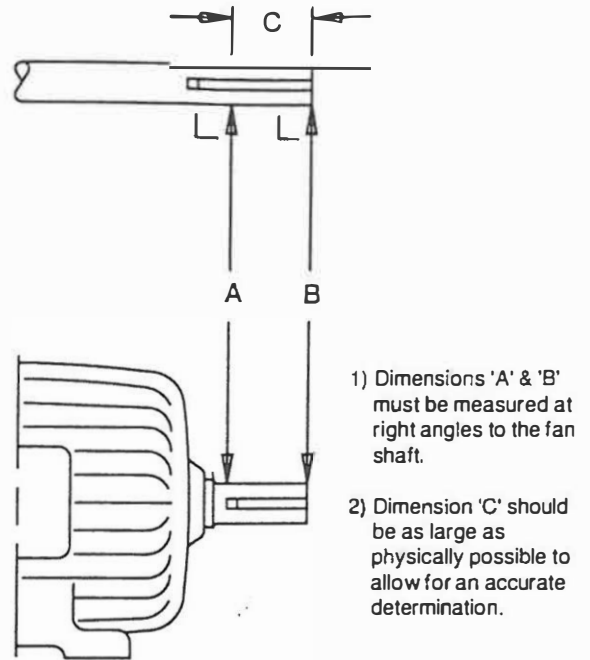


Fig. 2 Determination of parallel shafts.

V-BELT DRIVE INSTALLATION

V-belt drive systems are the most common type of belt systems used to drive fan equipment. Other types of belt systems are used ("cog", belts etc.) but are not discussed in this manual.

Proper alignment is essential to long fan bearing, driver bearing, v-belt and sheave life. Ensure that driver and fan shafts are parallel. The most common causes of misalignment are nonparallel shafts and improperly located sheaves. Where shafts are not parallel, v-belts on one side are drawn tighter and pull more than their share of the load. As a result, these v-belts wear out faster, requiring the entire set to be replaced before it has given maximum service. If the sheaves are misaligned, v-belts will enter and leave the grooves at an angle, causing excessive v-belt and sheave wear.

Shaft alignment can be checked by measuring the distance between the shafts at two or more locations as shown in Figure 2. If the distances are equal, the shafts are parallel.

Check the location of the sheaves on the shaft with a straight edge or a length of string. If the sheaves are properly aligned the string will touch them at the points indicated by the arrows in Figure 3. Rotating each sheave one-half (1/2) revolution will indicate if the sheave is misaligned or the shaft is bent. Correct any causes of misalignment.

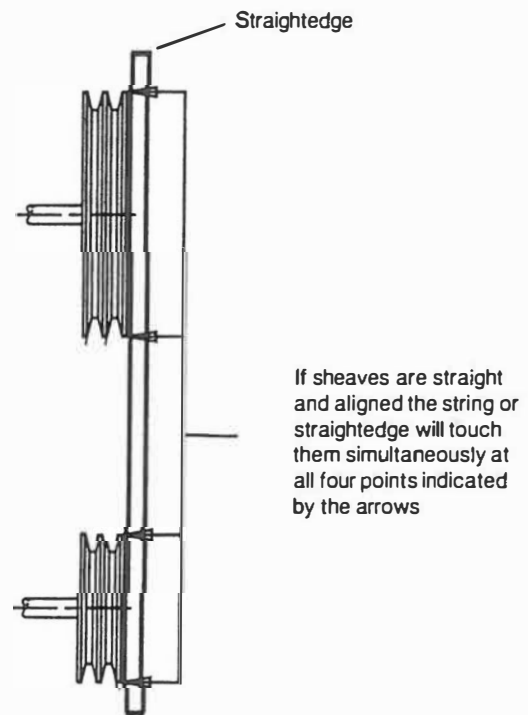


Fig. 3 Sheave alignment.

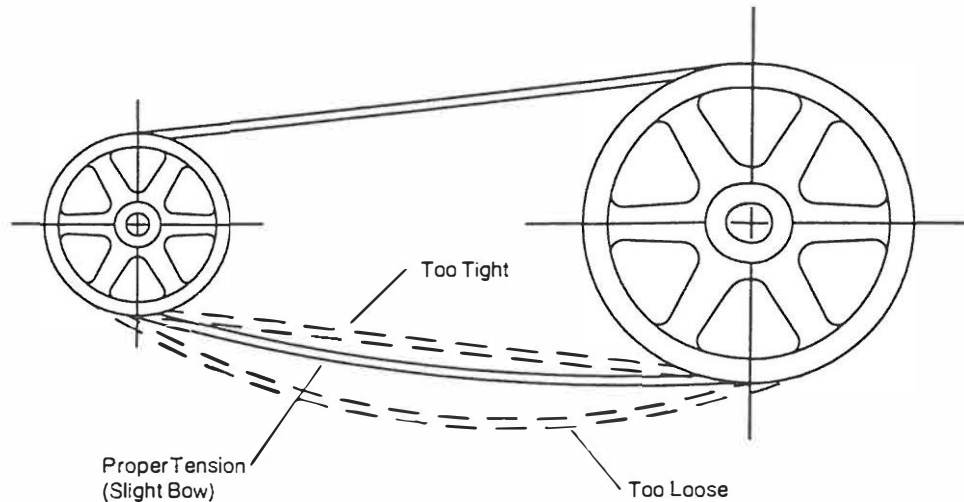


Fig. 4 Belt tension.

Always use matched v-belts and never mix new and used v-belts on a drive. Install v-belts correctly:

- (i) Shorten the center distance between the driven and driver sheave so the v-belts can be slipped into the sheave groove without damage. While the v-belts are still loose on the drive, rotate the drive until all the slack is on one side. Then increase the center distance until the v-belts are snug (Figure 4). NOTE: Never "roll" or "pry" the v-belts into the sheave grooves. This can damage the v-belt cords and lead to v-belt turnover, short life, or actual breakage. Moreover, it is both difficult and unsafe to install v-belts this way. Keep takeup rails, motor base, or other means of center distance adjustment free of dirt, rust, and grit. Lubricate adjusting screws and slide rails as required.
- (ii) Operate the drive and fan a few minutes to seat the v-belts in the sheave grooves (operate the fan equipment only after following the procedure listed in the "Operation of Equipment" section of this manual). Observe the operation of the drive under its highest load condition (usually starting). A slight bowing of the slack side of the drive indicates proper tension. If the slack side remains taught during peak load, the drive is too tight. Excessive bowing or slippage indicates insufficient tension. If the v-belts squeal severely as the motor comes on or at some subsequent peak load, they are not tight enough to deliver the torque demanded by the fan. The fan should be stopped and the v-belts tightened.

- (iii) Check the tension on a new drive frequently during the first day of operation by observing the slack side span. After a few days of operation the belts will seat themselves in the sheave grooves and it may become necessary to readjust so that the drive again shows a slight bow in the slack side.

OPERATION OF FAN EQUIPMENT

- (1) Lock out all power sources.
- (2) Ensure that bearings are properly aligned and lubricated with special attention to the locking mechanisms, cleanliness, and possible corrosion. Bearings showing signs of corrosion must be replaced prior to operation of fan equipment.
- (3) Check set screws and keys (or taperlock hub if present) in fan impeller, and bolts on cooling wheel.
- (4) Check foundation bolts and other hardware for tightness.
- (5) Ensure that the fan housing, ducts, etc., are free of foreign objects.
- (6) Ensure that all access doors are secure.
- (7) Check the impeller to inlet cone and impeller to fan housing clearance to ensure that there is no interference. Turn the impeller by hand, ensuring that it rotates freely.
- (8) On belt drive fans, check sheave alignment and v-belt tension (refer to the section entitled "V-BELT DRIVE INSTALLATION" on page 9 of this manual).

(9) If the fan is equipped with damper or variable inlet vane, close same to lessen starting load on motor. Ensure any dampers or variable inlet vanes furnished with the fan, or used in conjunction with the fan, do not stick or bind. If an automatic control mechanism is used to operate the damper or variable inlet vane, adjust the limits of travel of the automatic control mechanism in accordance with the control manufacturer's instructions to avoid putting force on the damper or variable inlet vane when it is fully opened or fully closed.

(10) If the fan is driven by an electric motor, read instructions of motor and starter manufacturer. Ensure that the motor and starter are set up in compliance with the motor and starter manufacturers' instructions prior to any application of electric power. If the fan is powered by some other form of driver, read the manufacturer's instructions prior start-up.

(11) If the fan is equipped with water cooled bearings turn on the water supply to the bearings prior to starting the fan. Consult the watercooled bearing manufacturer's instructions.

(12) If the fan is to handle a "hot gas" (i.e. a gas with a temperature greater than 150°F [65°C]) it is imperative that the fan be subject to only a slow gradual rate of gas temperature change, not to exceed a rate of 15°F/minute (8°C/minute). When the fan is being put in operation the temperature of the gas must not rise at a rate greater than 15°F/minute (8°C/minute). Never subject a "cold" fan to a "hot" gas stream. When the fan is being taken out of operation the temperature of the gas must not decline at a rate greater than 15°F/minute (8°C/minute), and when the gas temperature has reached a level of 150°F (65°C) or less it is imperative that the fan be operated at this temperature for a period of time sufficient to allow the entire fan structure to reach an equilibrium temperature of 150°F (65°C). Only when the entire fan structure has reached an equilibrium temperature of 150°F (65°C) or less can the fan be shut off and removed from operation. Failure to follow these instructions may result in damage to the fan equipment. NEVER EXCEED THE MAXIMUM OPERATING TEMPERATURE OR SPEED FOR WHICH THE FAN WAS DESIGNED.

(13) Connect the power source.

(14) Fan impeller should always be stationary prior to startup. Startup while fan impeller is rotating backwards can cause damage.

(15) Apply power to the driver momentarily (i.e. "bump") to check for proper rotation. Any dampers or other air control devices in the system should be at least partially closed during starting periods to reduce power requirements. Damper closure is particularly important in the case of a fan designed for high temperature operation being "run in" at a temperature less than design temperature.

(16) Apply power to the driver and allow the fan to come up to design speed. Turn off. Look and listen for any unusual noise or mechanical action while the impeller is still spinning. If any are noticed, lock out all power sources, locate cause and correct.

(17) Lock out all power sources and recheck tightness of all set screws, keys, foundation bolts and any other hardware. The initial start up will tend to relieve their tightness and they may require re-tightening.

(18) Reconnect all power sources.

(19) It is recommended that upon fan installation, the operating vibration levels be checked to ensure that the levels do not exceed the levels indicated on the inspection sheets shipped with the fan and/or the vibration levels set forth in the "Vibration" section of this manual.

Once it has been determined that the fan equipment is operating satisfactorily, it should be operated, if practical, for at least eight (8) continuous hours. Operation should be monitored at least once each hour during this period. Inspection should be made for any change of operation during this period. Some bearings will have to "run in" and will heat up during this period. The maximum bearing temperature should not exceed 200°F (93°C). It is normal for bearings lubricated with grease to purge a small amount of the grease through the bearing seals during run-in.

NOTE THAT ALL BOLTS, SETSCREWS AND V-BELTS SHOULD BE RE-TIGHTENED AFTER TWO (2) DAYS OF INITIAL OPERATION.

MAINTENANCE OF FAN EQUIPMENT

BEFORE STARTING MAINTENANCE WORK ON FAN EQUIPMENT LOCK MOTOR, LOCK DISCONNECT SWITCH IN THE OFF POSITION, DE-ENERGIZE AND DISCONNECT ALL POWER SOURCES TO THE MOTOR AND TO ACCESSORY DEVICES, AND SECURE FAN IMPELLER.

Bearings and Lubrication

Selection of the correct fan bearing lubricant and lubrication intervals depends on several factors. Extreme high or low temperatures and dirty or damp surroundings are all conditions that will create a requirement for more frequent lubrication or special lubricants. READ THE BEARING

MANUFACTURER'S INSTRUCTIONS TO DETERMINE THE TYPE AND FREQUENCY OF BEARING LUBRICATION REQUIRED.

THE MOTOR BEARINGS SHOULD BE LUBRICATED IN ACCORDANCE WITH MOTOR MANUFACTURER'S LUBRICATION INSTRUCTIONS AND RECOMMENDATIONS SHOULD BE FOLLOWED CLOSELY.

Bearing failure may be caused by failure to lubricate as often as required, use of an excessive quantity of lubricant or the use of incompatible lubricants. Excessive vibration, especially if the bearing is not rotating, will also cause bearings to fail. Bearings must also be protected from water and moisture to avoid internal corrosion.

Bearings are susceptible to damage from exposure to excess shaft heat transfer which may occur when a fan operating at a temperature greater than 200°F (93°C) is shut down without a sufficient period of gradual temperature reduction. See section (12) of "Operation of Fan Equipment" set forth on page 11 of this manual.

Bearing Replacement

Replacement of fan bearings should not be required for many years if cared for strictly in accordance with bearing manufacturer's instructions. The procedure used to replace fan bearings will vary depending on the type of fan and the type of bearing. It is important that the replacement of bearings be supervised or inspected by personnel experienced in such work and equipment. Trained personnel are available from CML Northern and arrangements for such supervision or inspection (at a fee) should be made through your local CML Northern representative or at CML Northern's head office.

Variable Inlet Vane

Once a year, the variable inlet vane coverplate should be removed and the moving parts re-packed with grease. The lubrication interval should be increased where moisture or particles are present in the airstream.

CAUTION: Where automatic control mechanisms are used to operate the variable inlet vane, care should be taken to correctly adjust control mechanism stroke limits as **OVERTRAVEL MAY DAMAGE THE VARIABLE INLET VANE OPERATING MECHANISM.**

Motors

DO NOT OPERATE THE MOTOR WITHOUT FIRST READING THE MOTOR MANUFACTURER'S INSTRUCTIONS. OPERATE THE MOTOR ONLY IN ACCORDANCE WITH THE INSTRUCTIONS.

The fundamental principle of electrical maintenance is to **KEEP THE MOTOR CLEAN AND DRY.** This requires periodic inspection of the motor. The frequency of the inspections depends upon the type of motor, the service and the motor manufacturer's instructions.

Periodic checks of voltage, frequency and current of a motor while in operation are recommended. Such checks ensure the correctness of frequency and voltage applied to the motor and yield an indication of the fan load. Comparison of this data with previous data will give an indication of the fan performance. Any serious deviations should be investigated and corrected.

Spare Parts

Spare parts may be ordered through your CML Northern sales office by providing the following information:

- (1) Part name (e.g. impeller, shaft, motor, bearing, etc).
- (2) Fan Serial Number from the nameplate.
- (3) If possible, the fan shaft diameter or bearing size together with the fan class specified on the nameplate.

DUE TO THE SMALL NUMBER OF PARTS REQUIRED, SPARE PARTS LISTS ARE NEITHER NECESSARY NOR AVAILABLE.

Vibration

A vibration analyzer must be used to accurately determine the level of fan vibration. Vibration readings should be taken by personnel experienced with vibration analysis and vibration analysis equipment. Trained personnel are available from CML Northern, and arrangements for vibration analysis (at a fee) may be made through your local CML Northern representative or at CML Northern's head office.

The fan should not be operated unless the **vibration velocity** of the fan is less than 0.20 inches per second.

If the vibration analyzer being used to measure vibration levels will provide only **vibration displacement** readings refer to Figure 5. Figure 5 is a graph used to determine whether the **vibration velocity** of a fan is acceptable or unacceptable if the vibration analyzer is capable of measuring only the **vibration displacement**. To utilize Figure 5 it is necessary to identify the following:

- (1) the **vibration displacement** in mils (where 1 mil is equal to 1/1000th of an inch).
- (2) the **vibration frequency** in cycles per minute (generally taken as the fan speed in rpm).

Find the vibration displacement on the left vertical axis of Figure 5, and the vibration frequency on the horizontal axis. **DO NOT OPERATE THE FAN** if the point of intersection of these values lies in the region labelled "UNACCEPTABLE". All points in the region labelled "UNACCEPTABLE" are indicative of vibration velocities exceeding 0.20 inches per second and corrective action must be taken to reduce the vibration velocity below this value before the fan is returned to normal operation.

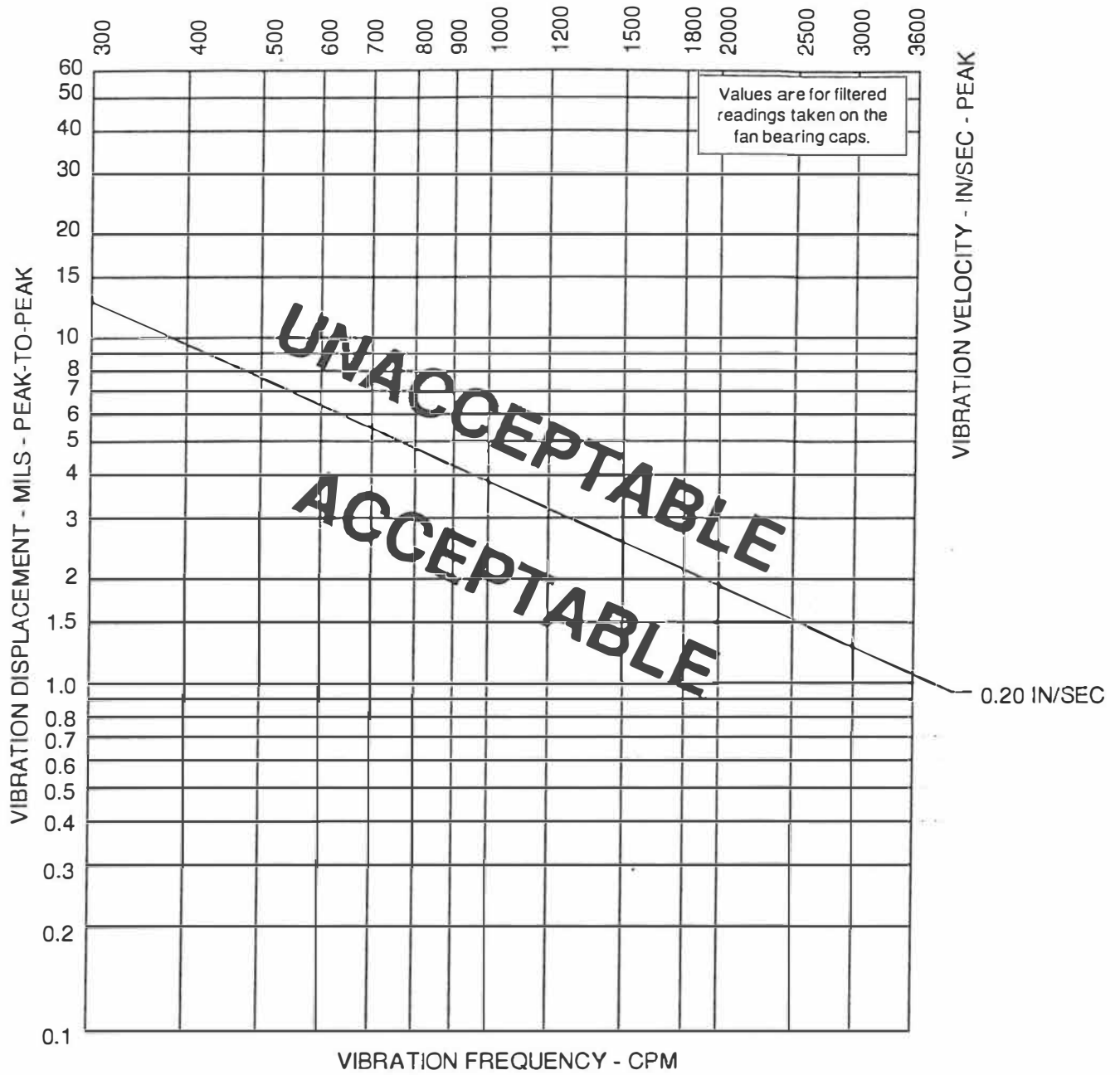


Fig. 5 Fan Vibration Severity Chart

FAN TROUBLE-SHOOTING CHART

PROBLEMS	PROBABLE CAUSES
INSUFFICIENT AIR FLOW	<ul style="list-style-type: none">• duct elbows near fan inlet or outlet• restricted fan inlet or outlet• impeller rotating in wrong direction• fan speed lower than design• system resistance higher than design• dampers shut• faulty ductwork• dirty or clogged filters and/or coils• inlet or outlet screens clogged
EXCESSIVE AIR FLOW	<ul style="list-style-type: none">• system resistance less than design• fan speed too high• filters not in place• registers or grilles not installed• improper damper adjustment
EXCESSIVE HORSEPOWER DRAW	<ul style="list-style-type: none">• fan speed higher than design• gas density higher than design• impeller rotating in wrong direction• static pressure less than anticipated• fan size or type not appropriate for application
EXCESSIVE VIBRATION	<ul style="list-style-type: none">• accumulated material on impeller• worn or corroded impeller• bent shaft• impeller or sheaves loose on shaft• motor out of balance• impeller out of balance• sheaves eccentric or out of balance• bearing or drive misalignment• mismatched belts• belts too loose or too tight• loose or worn bearings• loose bearing bolts• loose fan mounting bolts• weak or resonant foundation• foundation unlevel• structures not crossbraced• fan operating in unstable system condition
INOPERATIVE FAN	<ul style="list-style-type: none">• blown fuse• broken belts• loose sheave• motor too small• wrong voltage

OTHER INSTRUCTIONS and LITERATURE

FAN EQUIPMENT SERIAL No. _____ MAY CONTAIN COMPONENTS MANUFACTURED BY MANUFACTURERS OTHER THAN CML NORTHERN. SUCH MANUFACTURERS MAY HAVE FURNISHED INSTRUCTIONS AND/OR OTHER LITERATURE CONCERNING THEIR COMPONENT. A LIST OF SUCH INSTRUCTIONS AND/OR OTHER LITERATURE FORWARDED WITH FAN EQUIPMENT SERIAL No. _____ IS GIVEN BELOW.

(1) **CML NORTHERN BEARING LUBRICATION INSTRUCTIONS:**

- LUBRICATION INSTRUCTIONS FOR DOUBLE ROW SPHERICAL ROLLER BEARINGS 22500 SERIES SPLIT PILLOW BLOCK.
- LUBRICATION INSTRUCTIONS FOR SERIES 22400 SERIES DOUBLE ROW SPHERICAL ROLLER BEARINGS.
- LUBRICATION INSTRUCTIONS FOR 300 SERIES BALL BEARINGS.
- LUBRICATION INSTRUCTIONS FOR 200 SERIES BALL BEARINGS.

(2) **BEARING MANUFACTURER'S INSTRUCTIONS:**

YES NO

(3) **MOTOR MANUFACTURER'S INSTRUCTIONS:**

YES NO

(4) **COUPLING INSTRUCTIONS:**

CML NORTHERN COUPLING INSTRUCTIONS YES NO

COUPLING MANUFACTURER'S INSTRUCTIONS YES NO

(5) **ACTUATOR/CONTROLLER MANUFACTURER'S INSTRUCTIONS:**

YES NO

(6) **OTHER LITERATURE/INSTRUCTIONS:**



CML Northern Blower Inc.
901 Regent Avenue West
Winnipeg, Manitoba
Canada R2C 2Z8
Telephone: (204) 222-4216
Telefacsimile: (204) 222-7601

**MECHANICAL DRAWING LIST
KENNEDY DIE CASTINGS INC.
JOB #1857**

DRAWING NO.	DESCRIPTION
GROUP 22 A1-39847 A2-19892	GA, Four Wheel Wire Mesh Belt Machine Design Criteria & Blast Pattern Layout
GROUP 3 A1-40138	Reclaim Screw Arrangement
GROUP 5 A1-39991 A1-40015 A1-40025 A1-29073 A2-19699 A2-8719	Inspection Cover Arrangement Upper Cabinet Door Assembly Lower Cabinet Door Assembly Upper Cabinet Door Seal Assembly Lower Cabinet Door Seal Assembly Micro Switch Mounting Assembly & Details
GROUP 9 A1-39848 A1-39849 A2-15801 A3-18723	10" x 26" Elevator Assembly 7" Elevator Belt Assembly Front Inspection Cover Assembly Shot Disc Assembly
GROUP 10 A1-40038	30" Twin Separator Assembly
GROUP 14 A1-30176	32" Dia. Rotary Drum Arrangement
GROUP 20 A2-19451 A1-40183 A1-37387 A3-19915	Blast Wheel Assembly Blast Wheel Internals Blast Wheel Liner Arrangement Motor Group
GROUP 24 A1-40120	Platform Arrangement
GROUP 27 A1-28653	Liners In Line Arrangement
GROUP 28 A1-40241	Feed Pipe Arrangement
GROUP 30 A1-39981 A1-29838 A1-29942 A1-29869 A2-10576	Dust Collector Arrangement, JPC 12 Jet Pulse Unit Dust Collector Access Door Explosion Door Cartridge Safety Hanger Arrangement

A3-15155
A3-5022
A3-992

Pulse Control Valve Assembly
Magnehelic Gauge Mounting Assembly
Header Assembly

GROUP 35

A1-40176
A1-25497
A1-40190

Wire Mesh Conveyor Arrangement
Wire Mesh Belt Support Assembly
Wire Mesh Guard Arrangement

GROUP 41

A1-35884
A2-16980
A2-16981

Vestibule Seal Arrangement
Seal Assembly
Seal Assembly

GROUP 50

A1-40391

Closing Plate Arrangement

GROUP 65

A2-19908

Pneumatic Schematic

GROUP 71

A2-19844

Abrasive Adder Arrangement

GROUP 73

A2-19845

Trash & Overflow Pipe Arrangement

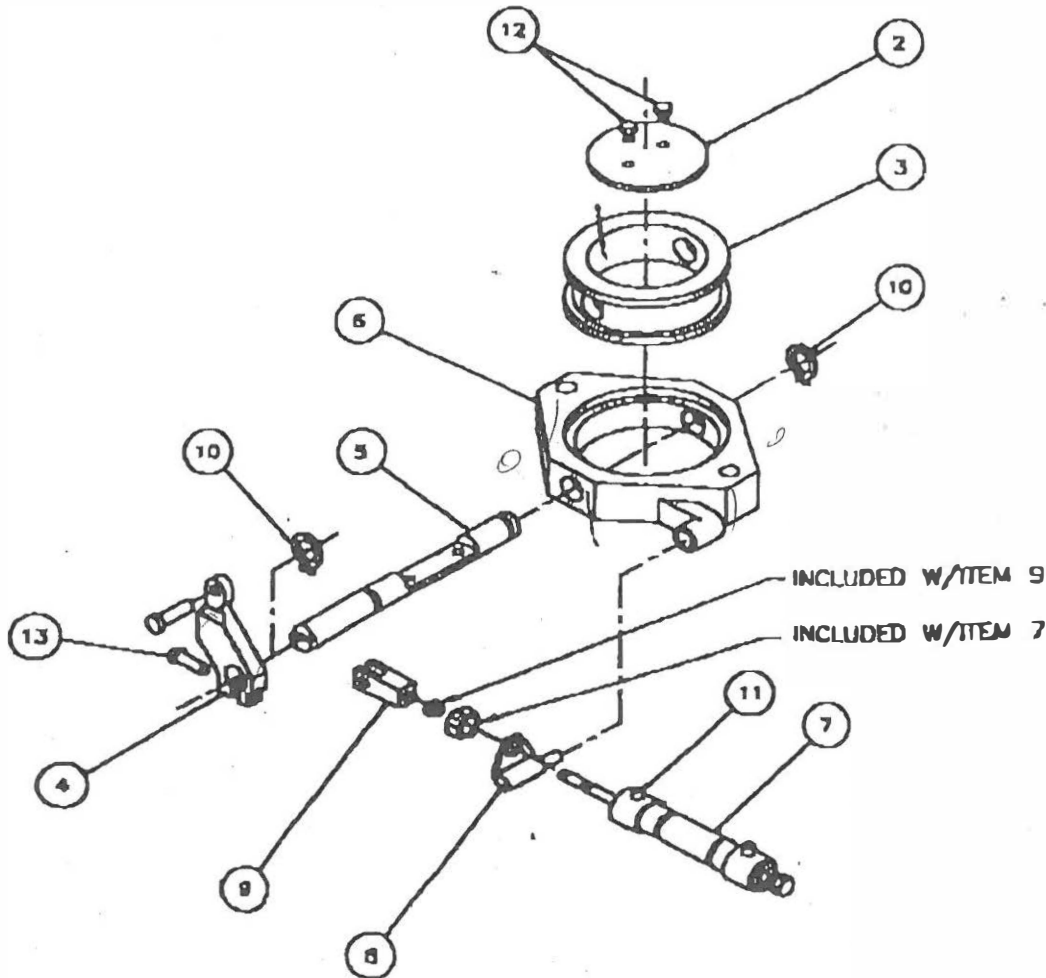
**ELECTRICAL DRAWING LIST
KENNEDY DIE CASTINGS INC.
JOB # 1857**

Drawing No.	Description
Group 96	
A3-22152	Power Schematic
A3-22153	Control Schematic
A3-22154	SLC Input Schematic
A3-22155	SLC Output Schematic
A3-22185	Frequency Drive Schematic
A4-7733	Electrical Schematic List
	Bill of Materials

REPLACEMENT PARTS LIST - 2-1/4" ABRASIVE VALVE ASSEMBLY

(G15763)

Item Number	Part Number	Qty	Description
2	G2058	1	Butterfly Disc
3	G5121	1	Valve Body Insert
4	G5139	1	Lever, Abrasive Valve
5	G3943	1	Shaft, Abrasive Valve
6	G5103	1	Valve Body, Abrasive 2-1/4"
7	G8136	1	Air Cylinder
8	G5190	1	Cylinder Mount Bracket
9	G80142	1	Clevis Rod
10	G60938	2	Ring Retainer
11	G61165	2	Fitting
12	G78878	2	Screw BH 10-24
13	G73310	1	Bolt, Allen HD 1/4-20 x 1



BCP Duct Velocity Test

May 3, 2017

Aaron Goller / Justin Gillespie

Measured Velocity was 4460 ft/min. on the 13" Duct Pipe.

Design velocity is 4500 ft/min.

Test Point was between Shot Trap and building wall.

Farr Dust Collector

Model L-110007-2-A
Type 8L
Serial 89DC 4460
ORDER NO. 42463

purchased from Blast-a-brade
6-28-06. contact "Tyler Cotton"

— Do NOT buy from this company or person —



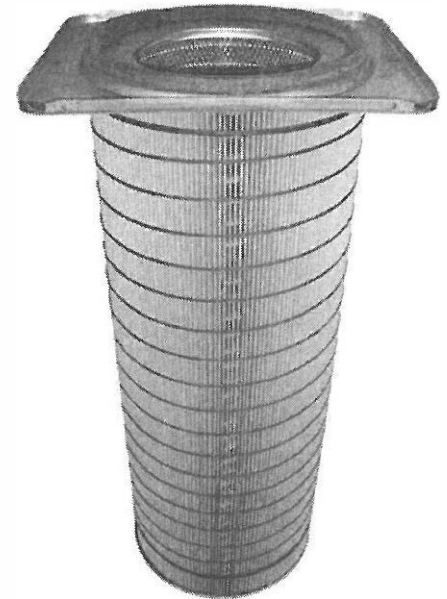
FARR APC
Air Pollution Control



HemiPleat™ Tenkay®

Cartridge for Tenkay Mark III & IV Collectors

- ◆ Greater media utilization and more effective filtration provide enhanced performance and longer service life.
- ◆ The new PolyTech™ media is the most advanced pulse-cleaned media ever made, and now comes standard with silicone impregnation for high humidity resistance.
- ◆ Continuous one-piece gasket provides rigidity and eliminates leakage.
- ◆ The HemiPleat separator bead opens up the pleats uniformly, allowing more effective cleaning, low pressure drop and long life.
- ◆ A wide variety of media and construction options provides a multitude of cartridge configuration options to suit your application.



Specifications

- ◆ Efficiency: 99.99% on 0.5 micron and larger particles by weight
- ◆ Air Permeability: 25-35 cfm/sq. ft. per 0.5" w.c. (457 - 640 m³/m²h at 125 Pa)
- ◆ Pleat Height: 2.0" (51mm)
- ◆ Mullen Burst: (Dry) 40 psi (2.8 bars) - AIM
20 psi (1.4 bars) - Minimum
- ◆ Gasket: I.D. = 11.38" (289 mm)
O.D. = 12.38" (314 mm)
Height = 0.62" (16 mm)
Width = 0.50" (13 mm)
- ◆ Pans: Galvanized steel (top & bottom)
Optional: Stainless steel
- ◆ Op. Temps: 160°F (71°C) for Standard
180°F (82°C) for Med. Temp.
- ◆ Surge. Temps: 180°F (82°C) for Standard
200°F (93°C) for Med. Temp.
- ◆ External helical cords and internal rings secure the filter element from movement.

Poly Blend Filter Media:

HMPTS - PolyTech Standard (Color: green)

Proprietary blend of cellulosic fibers and polyester fibers with a moisture resistant silicone treatment for optimum dust release characteristics yielding long service life at high filtration efficiencies.

HMPTC - PolyTech Carbon Impreg. (Color: black)

Base HMPTS media described above, chemically treated and impregnated with carbon for static dissipation.

HMPTF - PolyTech Flame Retardant (Color: off white with yellow stripes) Base HMPTS media described above, chemically treated with a fire retardant.

HMPTU - PolyTech Ultra High Efficiency (White/green)

Base HMPTS media described above with a microfiber synthetic melt blown surface laminate that yields the industry's best filtration efficiency at 99.999% on 0.5 micron and larger particles by weight.

HMPTUF - PolyTech Flame Retardant Ultra High Efficiency (White/off white)

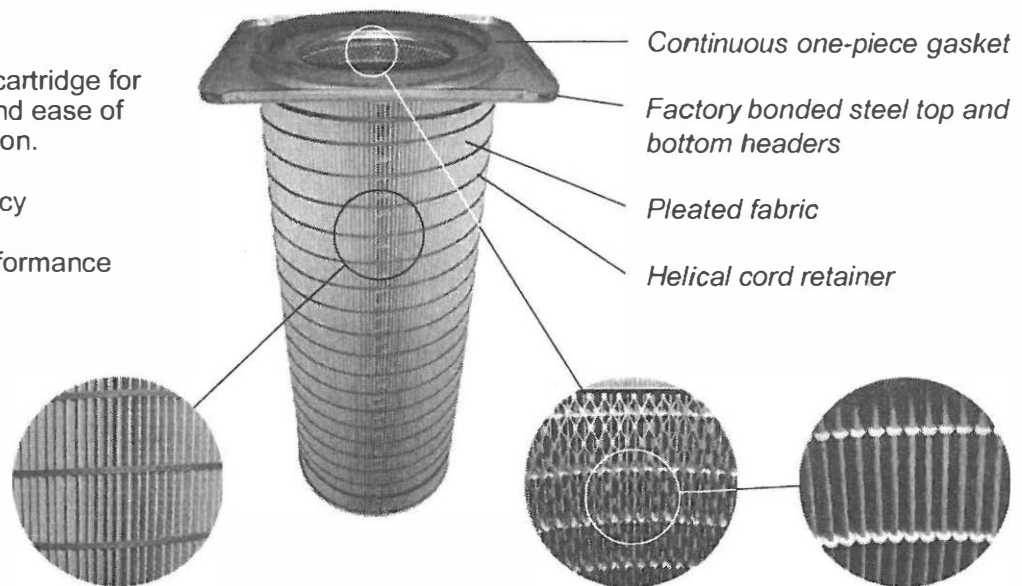
HMPTF fire retardant media described above with a microfiber synthetic melt blown surface laminate that yields the industry's best filtration efficiency at 99.999% on 0.5 micron and larger particles by weight.

Configurations

Filter Series	HemiPleat™ PolyTech™ Media Type	Standard Filter Model No. / Part No.	Medium Temperature Model No. / Part No.	Stainless Steel Pans Model No. / Part No.	Med. Temp. / S.S. Pans Model No. / Part No.
Tenkay Mark III 27" (68 cm) Long 12.75" (.32M) Dia. 14 lbs. (6.4 kgs)	Standard	HMP-STL-140 / 211547-001	HMP-MTL-140 / 211547-101	HMP-SSL-140 / 211547-201	HMP-MSL-140 / 211547-301
	Carbon impregnated	HMP-CBL-140 / 211547-001	HMP-MCBL-140 / 211547-102	HMP-SSCBL-140 / 211547-202	HMP-MSCBL-140 / 211547-302
	Flame retardant	HMP-FPL-140 / 211547-003	HMP-MFPL-140 / 211547-103	HMP-SSFPL-140 / 211547-203	HMP-MSFPL-140 / 211547-303
	Ultra High efficiency	HMP-UTL-140 / 211547-004	HMP-MUFL-140 / 211547-104	HMP-SSUTL-140 / 211547-204	HMP-MSUTL-140 / 211547-304
	Ultra Hi-Eff, Flame retardant	HMP-UFTL-140 / 211547-005	HMP-MUFTL-140 / 211547-105	HMP-SSUFTL-140 / 211547-205	HMP-MSUFTL-140 / 211547-305
Tenkay Mark IV 34" (86 cm) Long 12.75" (.32M) Dia. 19 lbs (8.6 kgs)	Standard	HMP-STXL-177 / 211736-001	HMP-MTXL-177 / 211736-101	HMP-SSXL-177 / 211736-201	HMP-MSXL-177 / 211736-301
	Carbon impregnated	HMP-CBXL-177 / 211736-002	HMP-MCBXL-177 / 211736-102	HMP-SSCBXL-177 / 211736-202	HMP-MSCBXL-177 / 211736-302
	Flame retardant	HMP-FPXL-177 / 211736-003	HMP-MFPXL-177 / 211736-103	HMP-SSFPXL-177 / 211736-203	HMP-MSFPXL-177 / 211736-303
	Ultra High efficiency	HMP-UXL-177 / 211736-004	HMP-MUXL-177 / 211736-104	HMP-SSUXL-177 / 211736-204	HMP-MSUXL-177 / 211736-304
	Ultra Hi-Eff, Flame retardant	HMP-UFXL-177 / 211736-005	HMP-MUFXL-177 / 211736-104	HMP-SSUFXL-177 / 211736-205	HMP-MSUFXL-177 / 211736-305

Key Benefits:

- Vertically integrated cartridge for better dust release and ease of removal and installation.
- High filtration efficiency
- Excellent energy performance
- Long element life



Internal HemiPleat separator bead ensures uniform pleat spacing externally.

Typical Applications

- **Blasting (room & wheel)**
- **Thermal/flame spray**
- **Paper trim/scrap systems**
- **Sanding & grinding dust**
- **Talc & cornstarch dust**
- **Foundry sand/metal pouring**
- **Laser/plasma cutter fumes**
- **Wood dust**
- **Fiberglass manufacturing**
- **Pharmaceutical dust**
- **Welding fumes**
- **Mixing & blending dust**
- **Mineral, silica dust**
- **Plastic & composite dust**
- **Food additive/spices**



FARR APC
Air Pollution Control

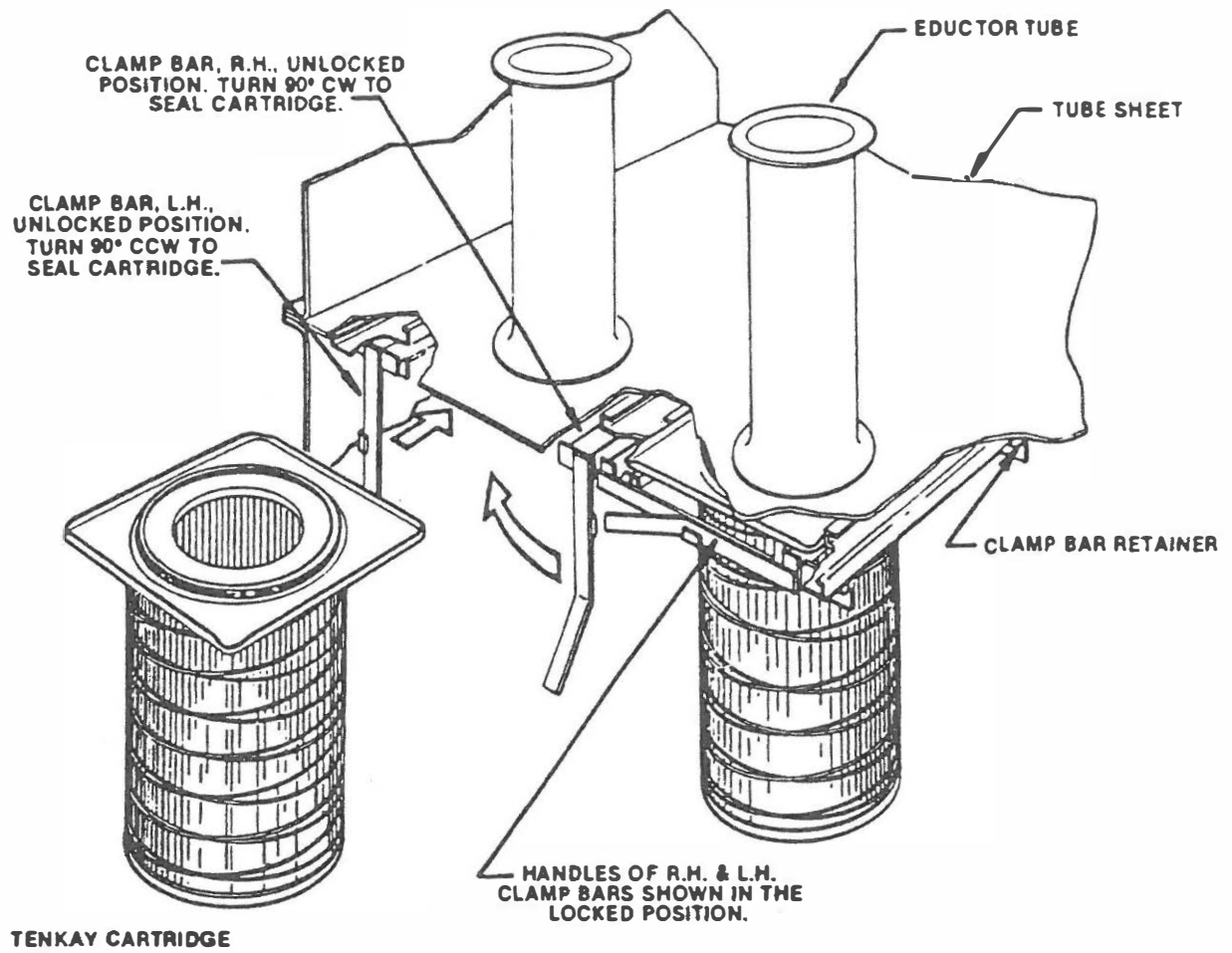
Farr APC is a proud member of the Camfil Farr group.

03/05



FIGURE 6.13

TENKAY CARTRIDGE INSTALLATION



Bruce Oberstar

From: domcar [domcar@dominioncarolina.com]
Sent: Thursday, June 29, 2006 2:28 PM
To: boberstar@imperialdiecasting.com
Subject: Farr Fan

Bruce,

Farr Fan – Standard Construction – FS6 – 15hp 18PLR-6.0-60-9

- External Top Mount Fan
- 230/460/3/60 vac, C-Face, TEFC motor
- Backward inclined non overloading wheel (except for FS1 and FS2 fans)
- Manual outlet damper
- 5,000 CFM @ 8" SP

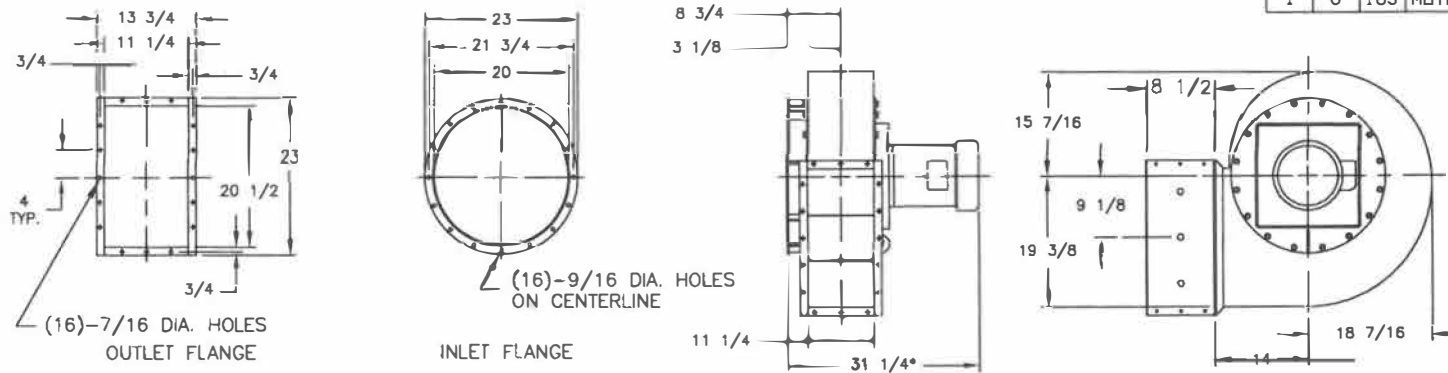
Price: \$4,000.00

In Stock

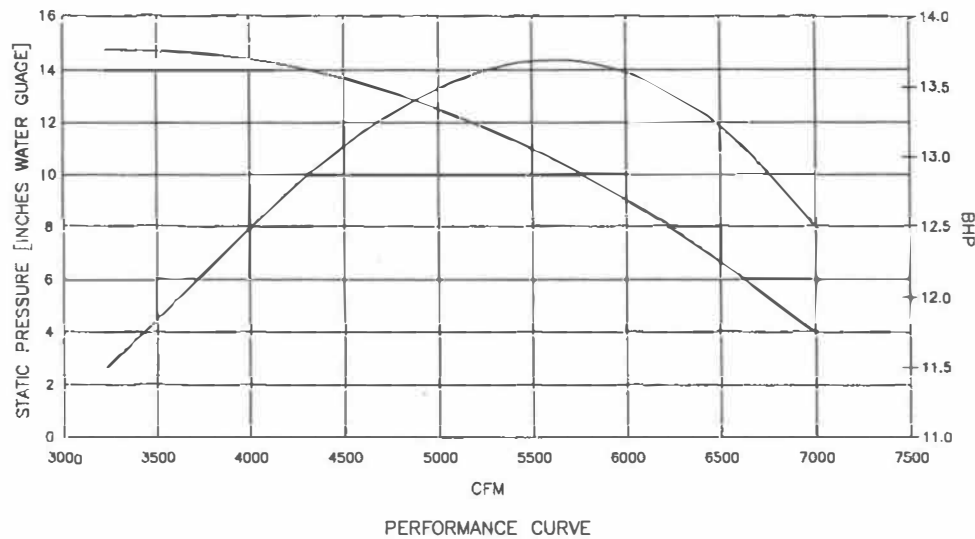
Dale Grimsley
Dominion Carolina Sales, Inc.
(336)882-1132 - Phone
(336)882-1102 - Fax
domcar@dominioncarolina.com

Visit our website at www.dominioncarolina.com

NO REQ	ITEM	DESCRIPTION	DWG NO.
1	1	101 BLOWER HOUSING	
0	1	102 MOTOR 575V/50/3	208184 003
1	0	103 MOTOR 230-460V/60/3	208184 001



*: Actual dimension may vary depending on motor manufacturer.



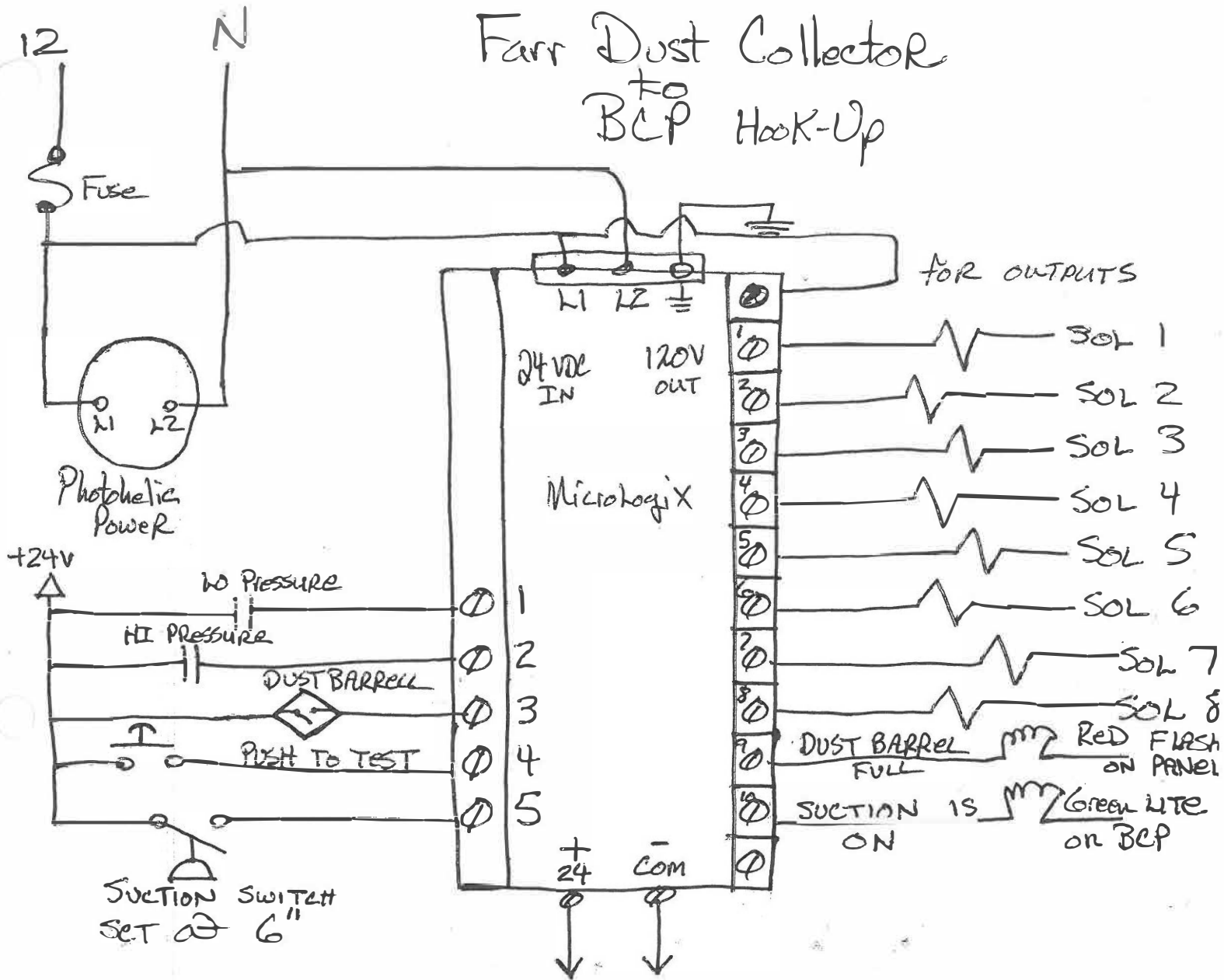
- Farr APC Fan Specifications for FS6-15HP-18 PLR-6.0-60-9
- CW Rotation, Arrangement 4V
 - 6,000 CFM, 9.1" SP, 3500 RPM, 13.6 BHP
 - 1/4 Ga. Housing Sides, Scroll, Driveside Plate
 - 15 HP, 3600 RPM, 3-60-230/460V TEFC, 215TC Motor
 - Painted "Farr Evergreen"
 - Weight = 550 lbs.

DIMENSIONS ARE IN INCHES
TOLERANCE: ±1/8"

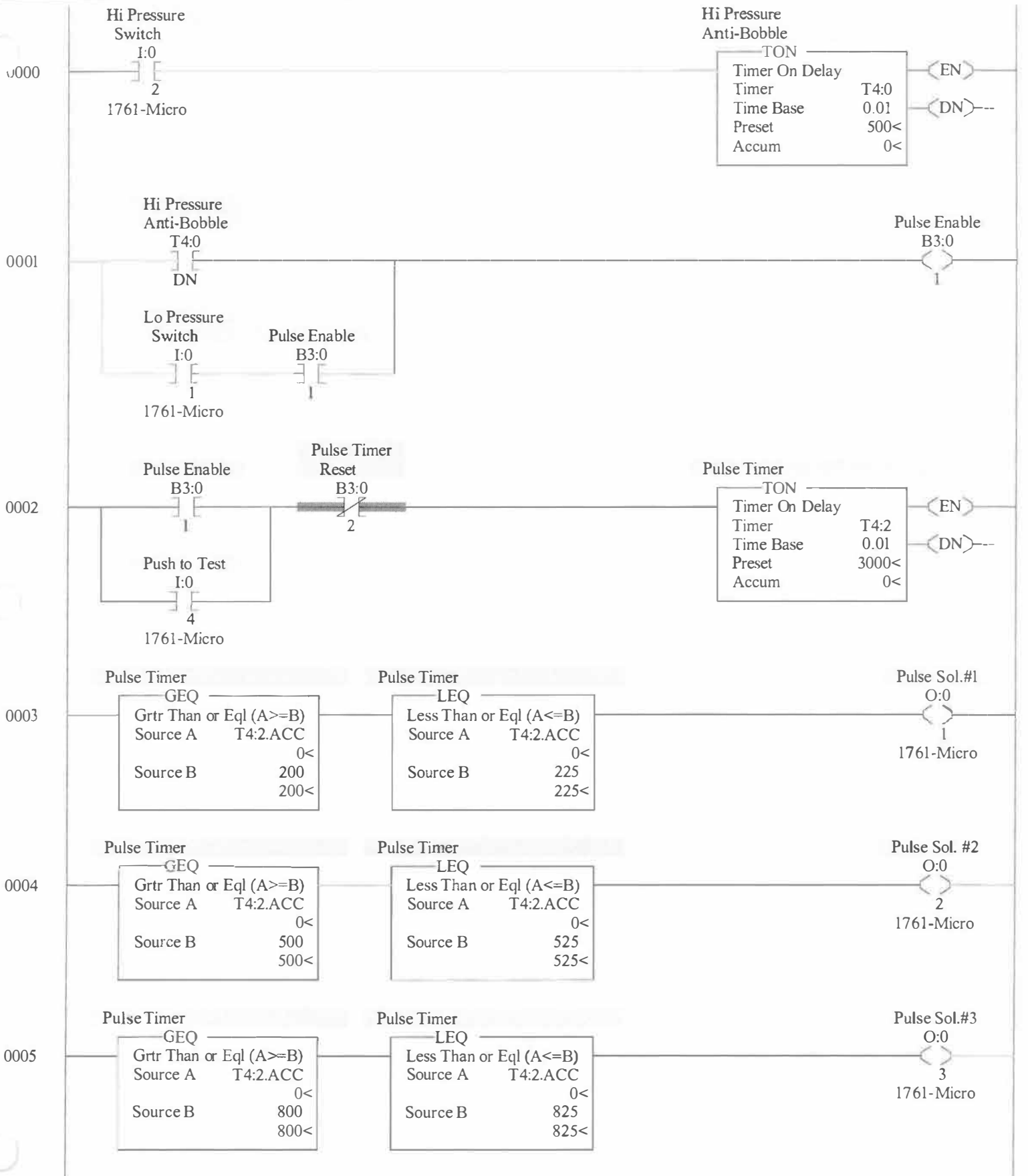
A	4-3	FIRST ISSUE		A	MV	MW	MW
REV	DATE	DESCRIPTION	DISP	EWO	BFT	CK	APP
UNLESS OTHERWISE NOTED		DO NOT	MAC PAC DATA				
DIMENSIONS ARE IN INCHES		SCALE	PROJ CLASS		UNIT OF MEASURE		
ISSUE REVISIONS - 1 REVISED		PRINT	SUB CLASS		EA		
TOLERANCES ARE:		CROSS REF					
FRACTIONS ±		NEXT ASSEMBLY					
2 PLACE DECIMAL ±		SCALE	NONE				
3 PLACE DECIMAL ±							
ANGULAR ±							
BLOWER W/DAMPER							
FS6-15HP-18PLR-6.0-60-9							
SITE		SHEET	SIZE	DRAWING NO.		REV	
JB-ENG		1 OF 1	B	208184		A	

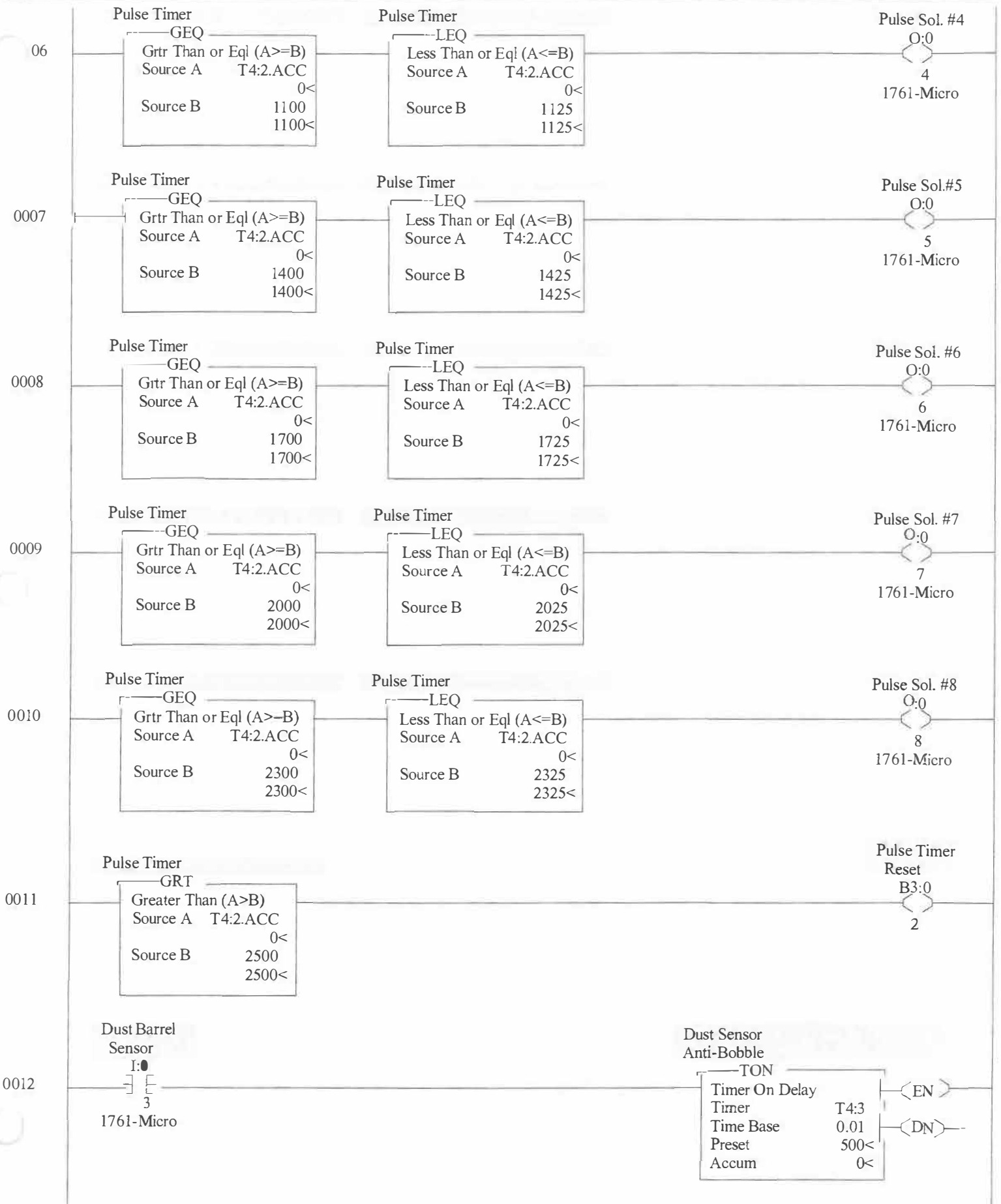
8-10-06

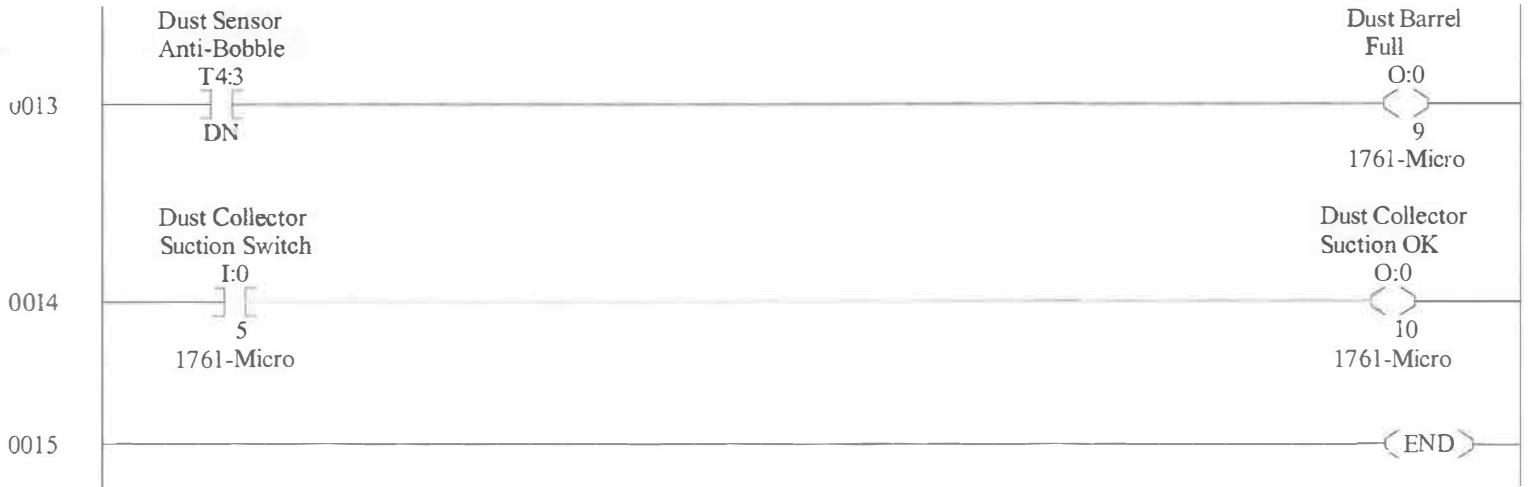
Farr Dust Collector to BCP Hook-Up



MICROLOGIX PLC
FARR DUST COLLECTOR





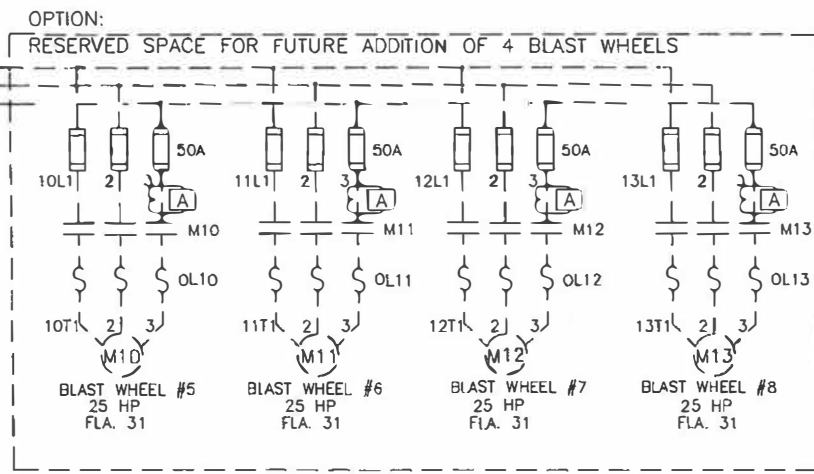
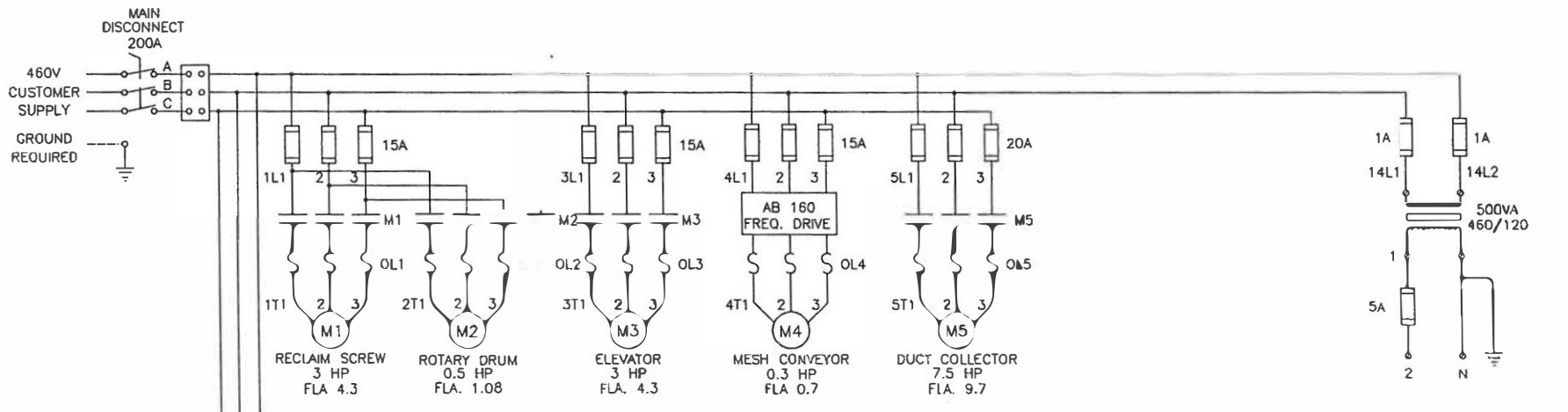


RSLogix 500 Cross Reference Report - Sorted by Address

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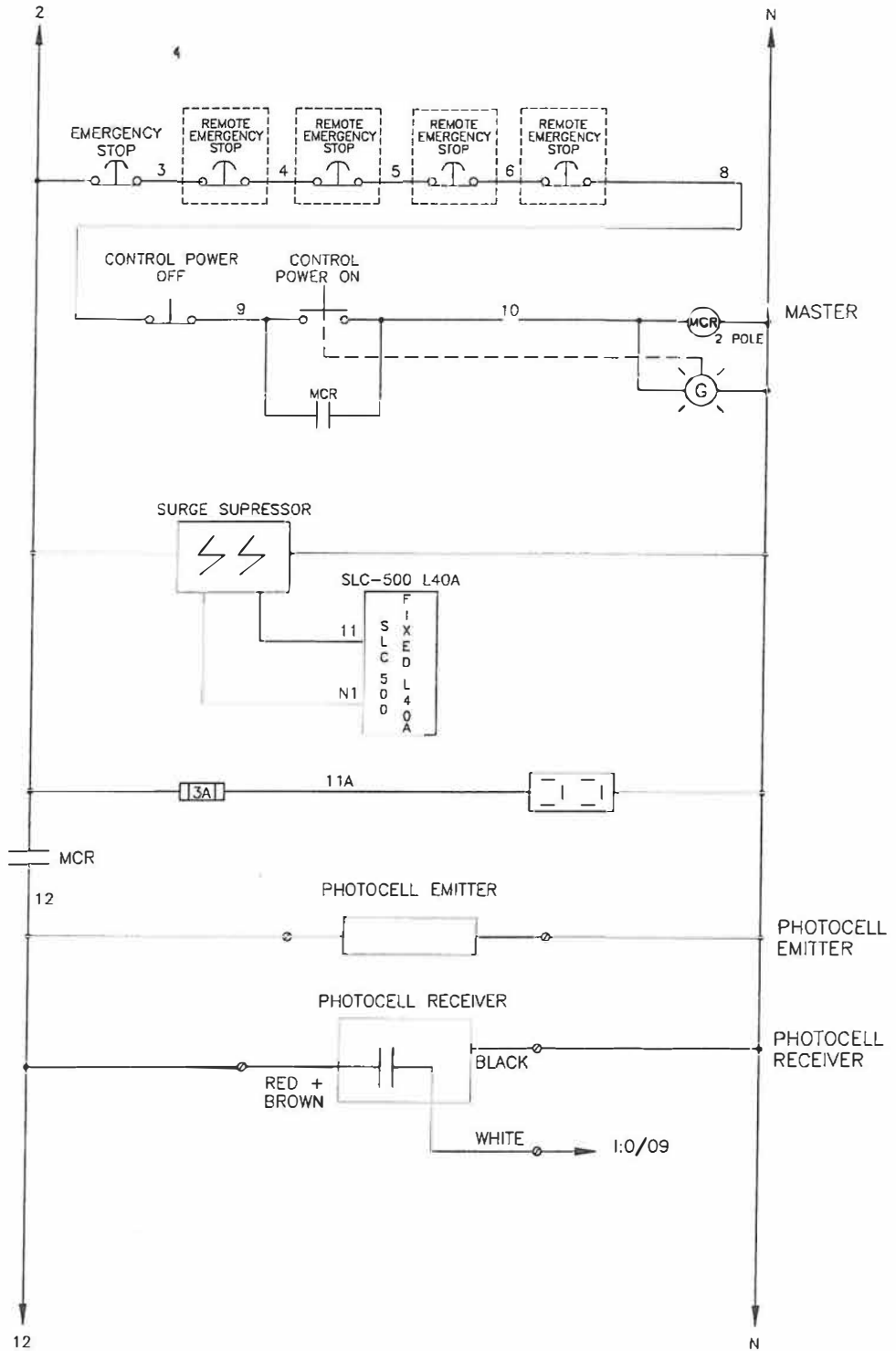
O:0/1      - Pulse Sol.#1
            OTE - File #2 MAIN_PROG - 3
O:0/2      - Pulse Sol. #2
            OTE - File #2 MAIN_PROG - 4
O:0/3      - Pulse Sol.#3
            OTE - File #2 MAIN_PROG - 5
O:0/4      - Pulse Sol. #4
            OTE - File #2 MAIN_PROG - 6
O:0/5      - Pulse Sol.#5
            OTE - File #2 MAIN_PROG - 7
O:0/6      - Pulse Sol. #6
            OTE - File #2 MAIN_PROG - 8
O:0/7      - Pulse Sol. #7
            OTE - File #2 MAIN_PROG - 9
O:0/8      - Pulse Sol. #8
            OTE - File #2 MAIN_PROG - 10
O:0/9      - Dust Barrel Full
            OTE - File #2 MAIN_PROG - 13
O:0/10     - Dust Collector Suction OK
            OTE - File #2 MAIN_PROG - 14
I:0/1      - Lo Pressure Switch
            XIC - File #2 MAIN_PROG - 1
I:0/2      - Hi Pressure Switch
            XIC - File #2 MAIN_PROG - 0
I:0/3      - Dust Barrel Sensor
            XIC - File #2 MAIN_PROG - 12
I:0/4      - Push to Test
            XIC - File #2 MAIN_PROG - 2
I:0/5      - Dust Collector Suction Switch
            XIC - File #2 MAIN_PROG - 14
B3:0/1     - Pulse Enable
            OTE - File #2 MAIN_PROG - 1
            XIC - File #2 MAIN_PROG - 1, 2
B3:0/2     - Pulse Timer Reset
            OTE - File #2 MAIN_PROG - 11
            XIO - File #2 MAIN_PROG - 2
T4:0       - Hi Pressure Anti-Bobble
            TON - File #2 MAIN_PROG - 0
T4:0/DN    - XIC - File #2 MAIN_PROG - 1
T4:2       - Pulse Timer
            TON - File #2 MAIN_PROG - 2
T4:2.ACC   - GRT - File #2 MAIN_PROG - 11
            GEQ - File #2 MAIN_PROG - 3, 4, 5, 6, 7, 8, 9, 10
            LEQ - File #2 MAIN_PROG - 3, 4, 5, 6, 7, 8, 9, 10
T4:3       - Dust Sensor Anti-Bobble
            TON - File #2 MAIN_PROG - 12
T4:3/DN    - XIC - File #2 MAIN_PROG - 13

```



ABC	-	#	00
1L1	-	#	14
3L1	-	#	14
4L1	-	#	14
5L1	-	#	14
6L1	-	#	8
7L1	-	#	8
8L1	-	#	8
9L1	-	#	8
14L1	-	#	14

NAMEPLATE DATA		THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF BLAST CLEANING PRODUCTS LTD. AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT		REFERENCE DRAWINGS		A4-7733	
VOLTS : 460 CONTROL : 120				BLAST CLEANING PRODUCTS LTD. OAKVILLE, ONTARIO, CANADA (905) 827-0643		DATE	
HP : 114.33 KW : 91.83						18 APR 97	
CYCLES : 60 AMPS : 144.07				POWER SCHEMATIC		THIN NGUYEN	
SERIAL NO.: 1857				KENNEDY DIE CASTING		DRAWING NO	
DATE : 18 APR 1997				JOB NO. 1857		A3-22152	
REV	DATE	DESCRIPTION	BY	GROUP	SCALE	DRAWING NO	REV
				96	NTS		0



THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF BLAST CLEANING PRODUCTS LTD. AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT

REFERENCE DRAWINGS

A4-7733



BLAST CLEANING PRODUCTS LTD.
OAKVILLE, ONTARIO, CANADA
(905) 627-0643

CONTROL SCHEMATIC
KENNEDY DIE CATING
JOB 1857

DATE
18 APRIL 97

DRAWN
THIN NGUYEN

GROUP
96

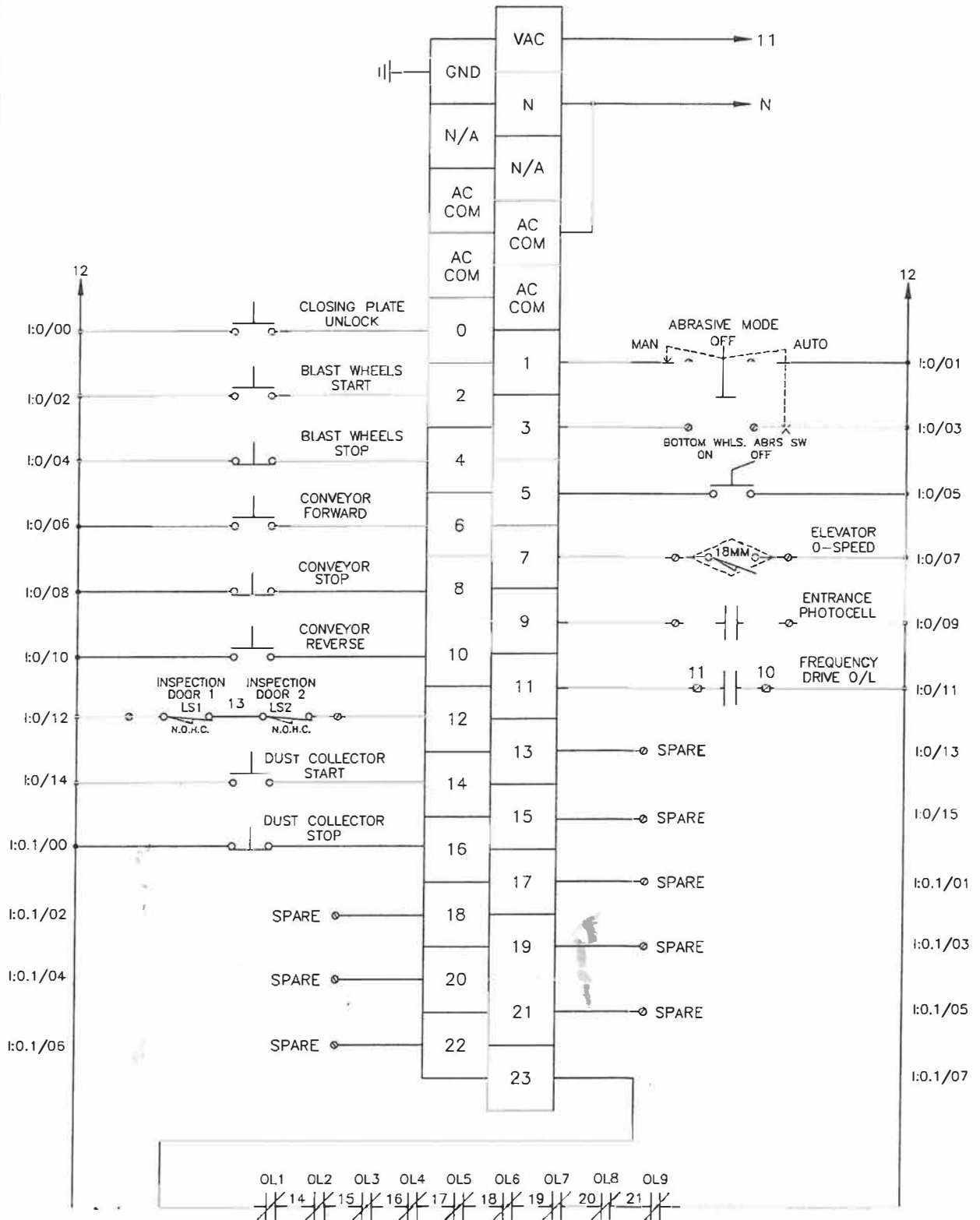
SCALE

DRAWING NO
A3-22153

REV
0

REV	DATE	DESCRIPTION	BY

SLC 500 FIXED
1747-L40A
(24) 120V INPUTS
I:0/0-I:0.1/07



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REFERENCE DRAWINGS

A4-7733



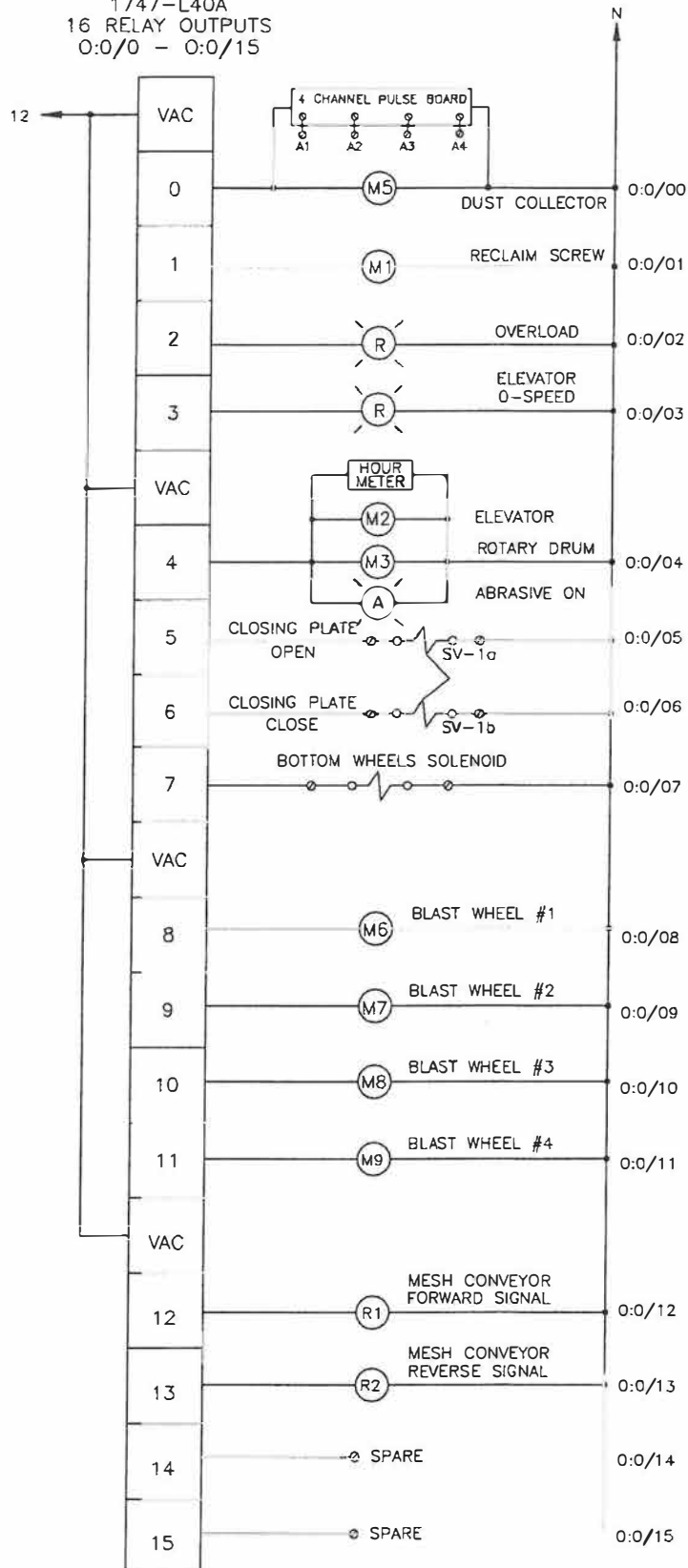
BLAST CLEANING PRODUCTS LTD.
OAKVILLE, ONTARIO, CANADA
(905) 827-0643

SLC INPUT SCHEMATIC
KENNEDY DIE CASTING
JOB 1857

DATE	19 APRIL 97	DRAWN	THIN NGUYEN
GROUP	96	SCALE	DRAWING NO
			A3-22154
			REV 0

REV	DATE	DESCRIPTION	BY

SLC 500 FIXED
1747-L40A
16 RELAY OUTPUTS
0:0/0 - 0:0/15



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REFERENCE DRAWINGS

A4-7733



BLAST CLEANING PRODUCTS LTD.

OAKVILLE, ONTARIO, CANADA
(416) 827-0643

SLC OUTPUT SCHEMATIC
KENNEDY DIE CASTING
JOB NO 1857

DATE
19 APRIL 97

DRAWN
THIN NGUYEN

REV	DATE	DESCRIPTION	BY

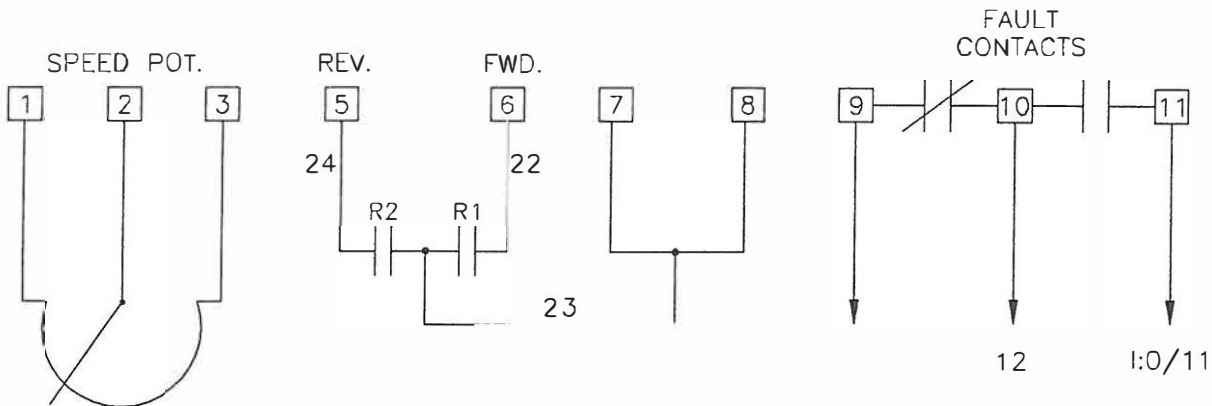
GROUP
96

SCALE
NTS


DRAWING NO
A3-22155

REV
0

MESH CONVEYOR
 AB 160-BA01NSF1P1
 FREQUENCY DRIVE TERMINALS.



- PARAMETER #30: ACCEL TIME -5 SEC
- PARAMETER #31: DECEL TIME -1 SEC
- PARAMETER #32: MIN. FREQ. -10 HZ
- PARAMETER #33: MAX. FREQ. -60 HZ
- PARAMETER #34: STOP SELECT 0
- PARAMETER #42: OVERLOAD CURRENT - 0.7 A

THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF BLAST CLEANING PRODUCTS LTD. AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT				REFERENCE DRAWINGS A4-7733			
 BLAST CLEANING PRODUCTS LTD. OAKVILLE, ONTARIO, CANADA (416) 827-0843				DATE 19 APRIL 97		DRAWN THIN NGUYEN	
				GROUP 96		SCALE NTS	
REV	DATE	DESCRIPTION	BY	FREQ. DRIVE SCHEMATIC KENNEDY DIE CASTING JOB NO 1857		REV 0	

THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF BLAST CLEANING PRODUCTS LTD. AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT

JOB NO 1857	DRAWING NO A4-7733	REV 0
----------------	-----------------------	----------

ITEM	QTY	PART NO	DWG NO	DESCRIPTION	WT
1	1	—	A3-22152	POWER SCHEMATIC	—
2	1	—	A3-22153	CONTROL SCHEMATIC	—
3	1	—	A3-22154	SLC INPUT SCHEMATIC	—
4	1	—	A3-22155	SLC OUTPUT SCHEMATIC	—
5	1	—	A3-22185	FREQ. DRIVE SCHEMATIC	—



BLAST CLEANING PRODUCTS LTD.

OAKVILLE, ONTARIO, CANADA
(905) 827-0643

ELECTRICAL
SCHEMATIC LIST
JOB No. 1857

DATE
18 APRIL 97

DRAWN
THIN NGUYEN

COPY OF
—

GROUP
96

SCALE
NTS

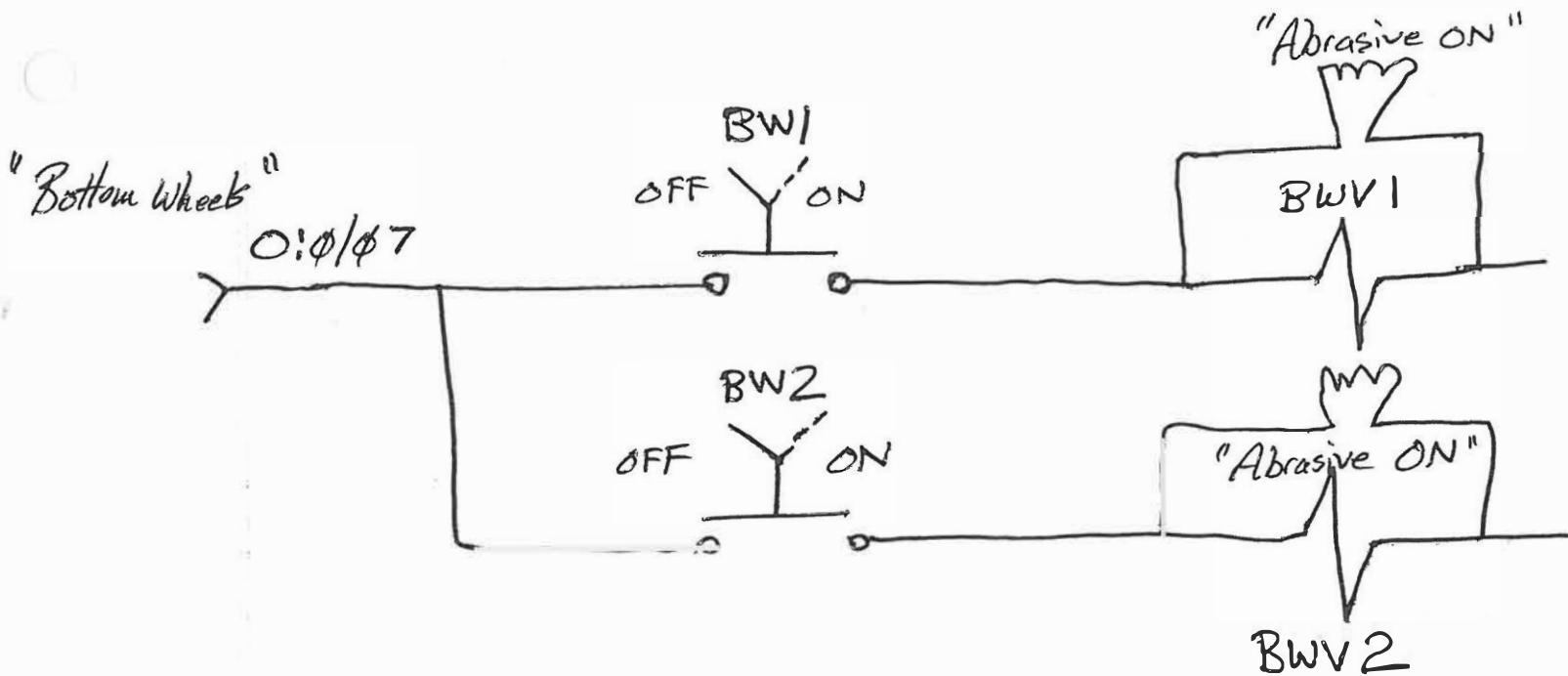
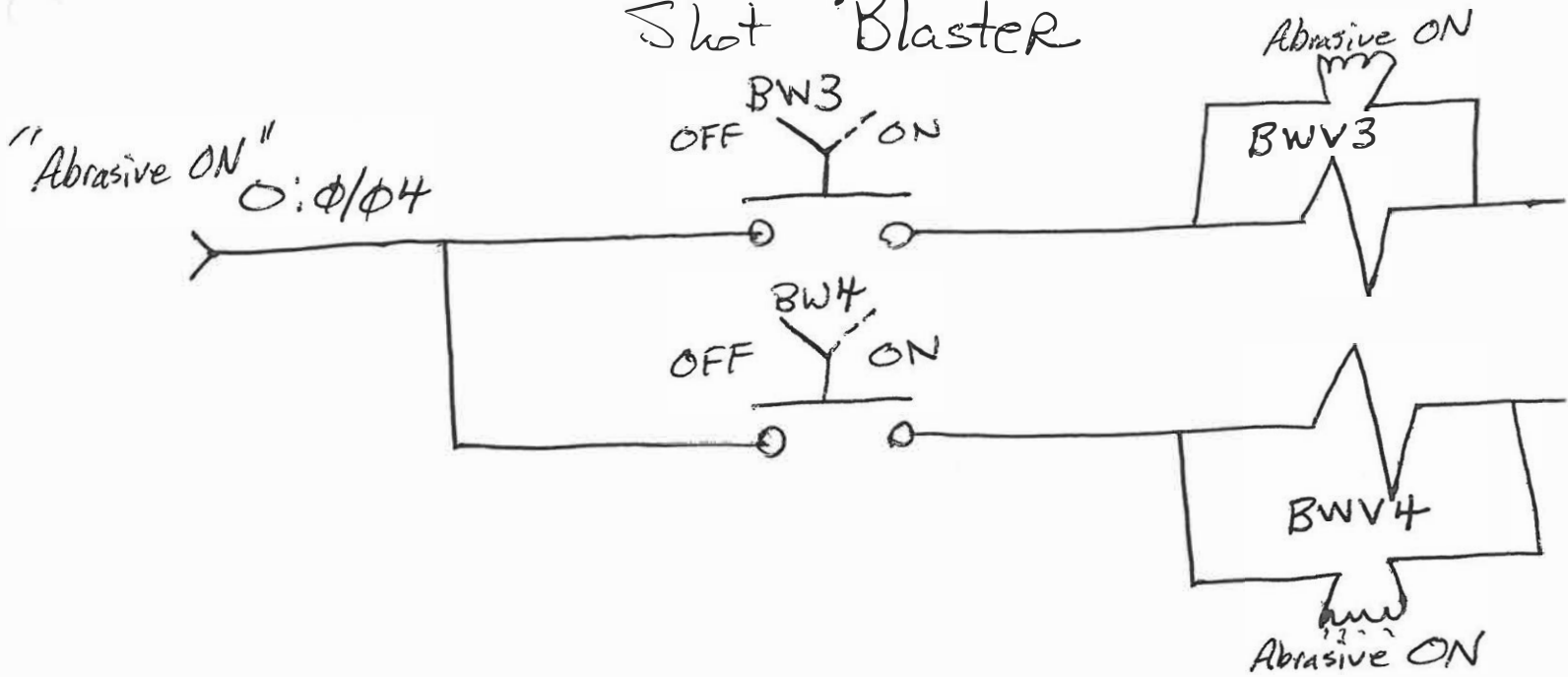
DRAWING NO
A4-7733

REV
0

WEIGHT
0 LB

8-16-06

Electrical Mods on BCP Shot Blaster



NOTE: M5 Dust Collector Contactor Remote Mounted at Dust Collector.

Customer: Kennedy Die Castings, Inc.

Sorted by: Description

Job No: 1857

Qty.	Part#	Description	Motor Correlation
1	EL10151	2 POSITION SW. WITH 1NO AND 1NC CONTACT	
21	C10969	AB LABEL	
4	C10138	AMMETER 0-50A SCALE	M6-M9
4	C9366	CURRENT TRANSFORMER 50:5	M6-M9
1	C08007	DIGITAL CYCLE TIMER (4 DIGITS)	
1	C80189	DISCONNECT 200A	
1	C88589	DISCONNECT HANDLE FOR OETL-NF200P	
1	C8553	DUPLEX RECEPTACLE BOX	
1	C8552	DUPLEX RECEPTACLE COVERS	
1	C8390	ENCLOSURE DD 60X60X10	
1	C8459	ENCLOSURE FEET 10"	
1	EL10914	F.D. 1/2 HP AND KEYPAD COMPLETE	
3	C9778	FUSE 10A 600V	M4 (FREQ. DRIVE)
6	C9779	FUSE 15A 600V	M1-M3
2	C75376	FUSE 1A 600V	PRI TRANSFORMER
3	C9780	FUSE 20A 600V	M5
1	C9388	FUSE 3A 250V	FOR RECEPTACLE BOX
12	C9785	FUSE 50A 600V	M6-M9
1	C10033	FUSE 5A 250V	SEC TRANSFORMER
2	C10076	FUSE HOLDER 30A 250V 1P	SEC TRANS. & RECEPTACLE BOX
1	C75092	FUSE HOLDER 30A 600V 2P	PRI TRANSFORMER
4	C9414	FUSE HOLDER 30A 600V 3P	M1-M5
4	C9415	FUSE HOLDER 60A 600V 3P	M6-M9
1	C8771	HOUR METER	
7	C9013	LABEL LAMACOID TYPE 3/4X2	
1	C10615	OVERLOAD 0.6-0.9A	M4
1	EL10322	OVERLOAD 1.0-2.9A	M2
2	EL10729	OVERLOAD 1.6-5.0A	M1,M3
4	EL10854	OVERLOAD 14-45A (FOR A38-A45)	M6-M9
1	EL10324	OVERLOAD 3.7-12.0A	M5
1	C10646	OVERLOAD SEPERATE MOUNT	M4
5	C10504	P.B. FLUSH GREEN MOM.	
4	C10508	P.B. FLUSH RED MOM.	
1	C10501	P.B. ILL. EXTENDED	
1	C10749	P.B. LENS GREEN	
5	C8630	P.B. MUSHROOM MAIN. RED	
3	C10511	P.L. 120VAC	

Job No: 1857

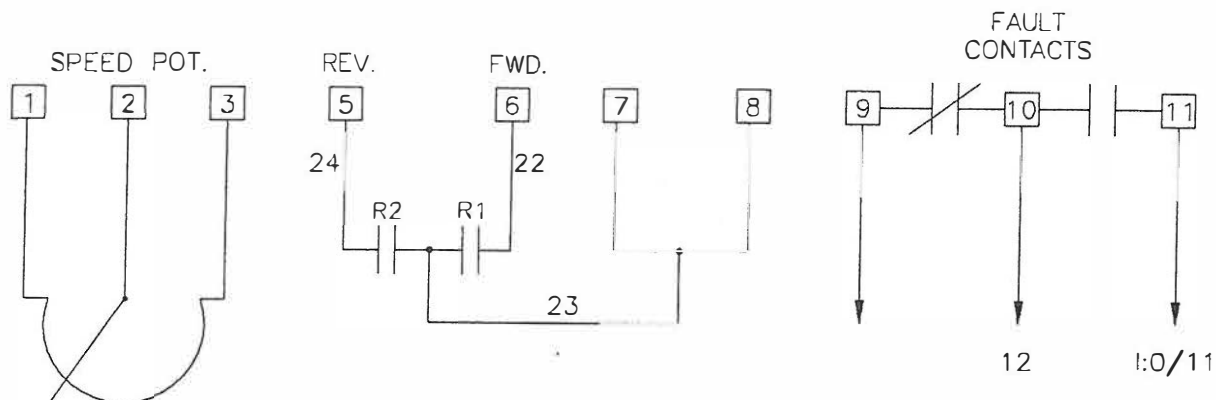
Qty.	Part#	Description	Motor Correlation
1	C10764	P.L. LENSE AMBER	
2	C10762	P.L. LENSE RED	
4	C10754	PENDANT STATION 1 HOLE 30MM	
1	EL10146	PHOTO SW. EMITTER/RECEIVER	
1	C75661	POT 10K COMPLETE	
1	C33115	PROXY BRACKET 18MM	
1	C10068	PROXY SWITCH 18MM INDUCTIVE SHIELDED N/O 115-220VAC	
1	C8738	PULSE BOARD 4 CHANNEL	
1	C8554	RECEPTACLE BROWN	
1	C10530	RELAY 2 POLE	MCR
1	C10952	RELAY BASE 8 PIN	MCR
1	C10773	S.S. 3 POS. MAIN.	
1	C78367	SLC COMPONENT PROCESSOR I/O 40 120VAC	
1	C86458	SPLITTER 1X6 2/0-#14AWG	
3	C10600	STARTER 0-5 HP 460V	M1-3
4	C10605	STARTER 25 HP 460V	M6-9
1	C10601	STARTER 7.5 HP 460V	M5
1	C9460	SURGE SUPRESSOR	
1	C8545	TRANSFORMER 500VA 480/120V	

Owner: TH
Creation Date: 22-Apr-97

Customer: Kennedy Die Castings, Inc.
Job#: 1857

Additional Information: Material in April 30, 1997

MESH CONVEYOR
 AB 160-BA01NSF1P1
 FREQUENCY DRIVE TERMINALS.



PARAMETER #30: ACCEL TIME -5 SEC
 PARAMETER #31: DECEL TIME -1 SEC
 PARAMETER #32: MIN. FREQ. -10 HZ
 PARAMETER #33: MAX. FREQ. -60 HZ
 PARAMETER #34: STOP SELECT 0
 PARAMETER #42: OVERLOAD CURRENT - 0.7 A

THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF BLAST CLEANING PRODUCTS LTD. AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT

REFERENCE DRAWINGS

A4-7733

BGP BLAST CLEANING PRODUCTS LTD.
 OAKVILLE, ONTARIO, CANADA
 (416) 827-0843

FREQ. DRIVE SCHEMATIC
 KENNEDY DIE CASTING
 JOB NO 1857

DATE
 19 APRIL 97

DRAWN
 THIN NGUYEN

REV	DATE	DESCRIPTION	BY

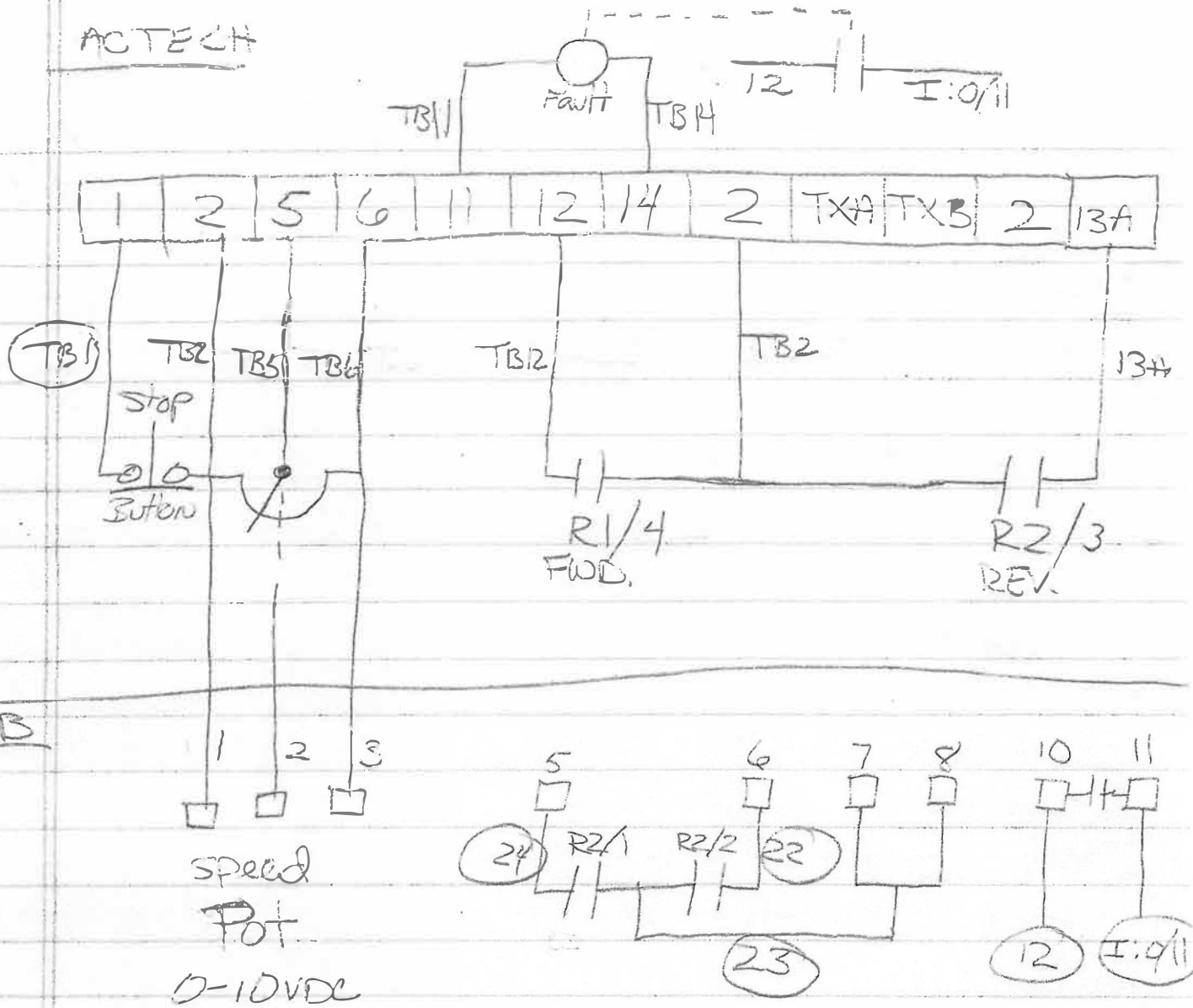
GROUP
 96

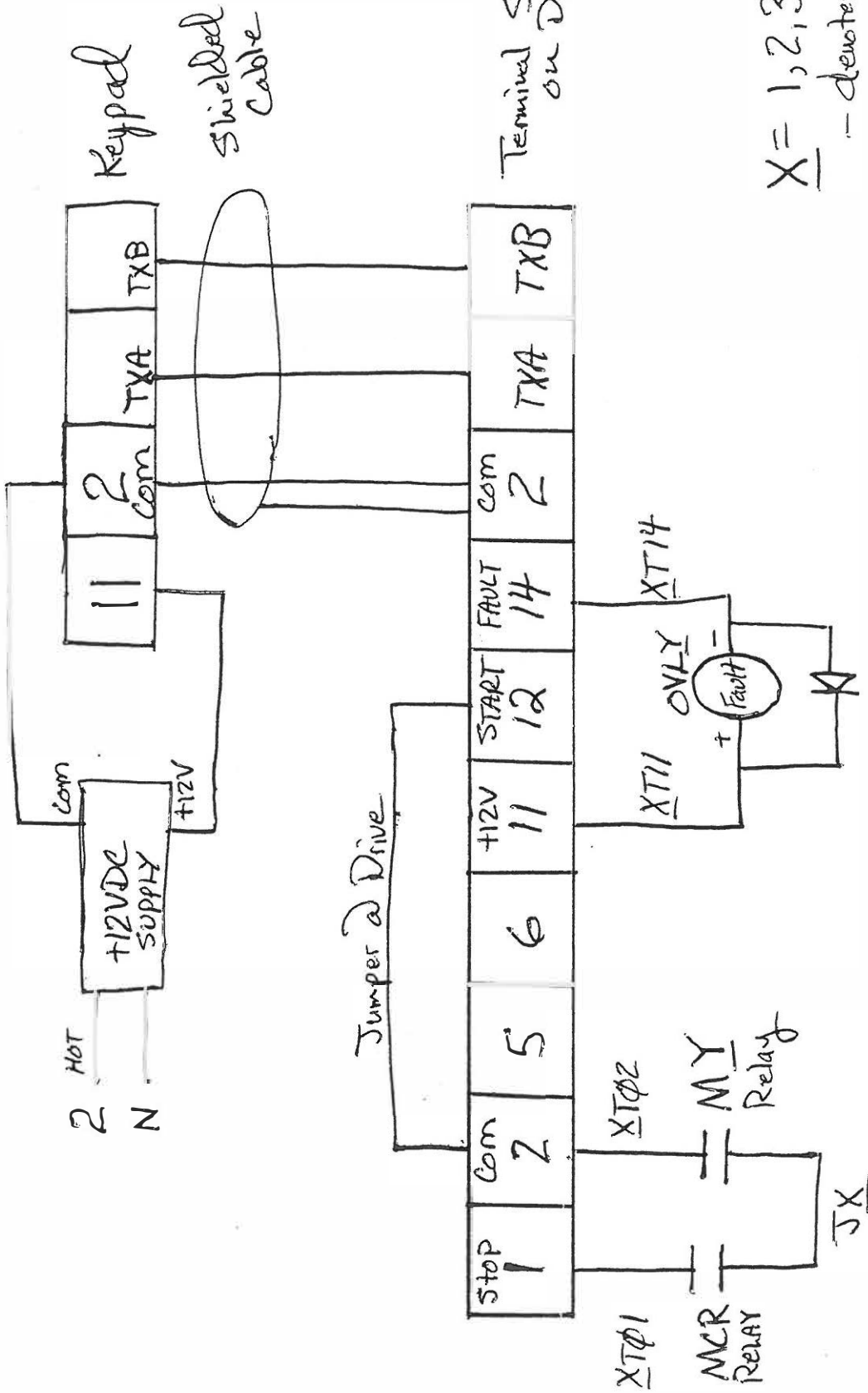
SCALE
 NTS

DRAWING NO
 A3-22185

REV
 0

ACTECH





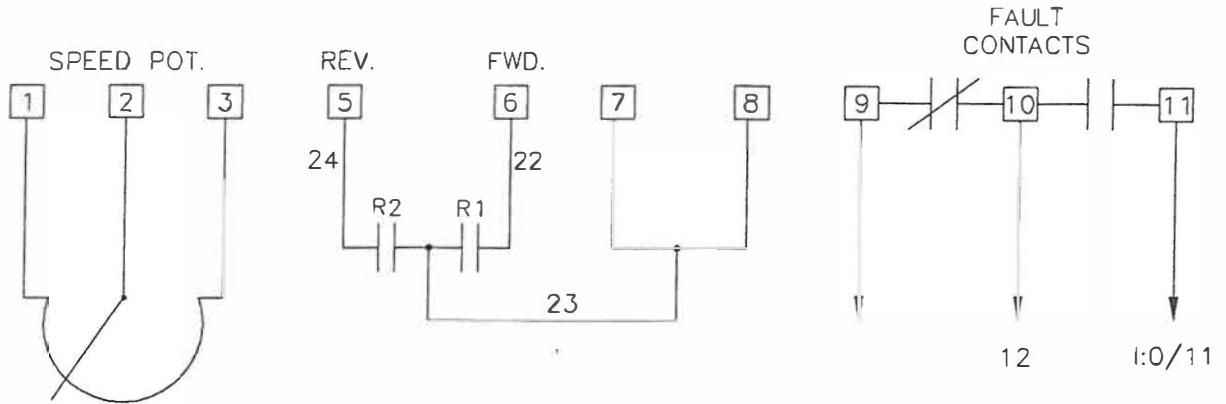
X = 1, 2, 3, or 4
 - denotes Drive 1

Y = 6, 7, 8, 9
 - denotes BCP Starter No. -


AC TECH Drive
 Hook-Up
 for BCP
 8-16-06 (BKO)

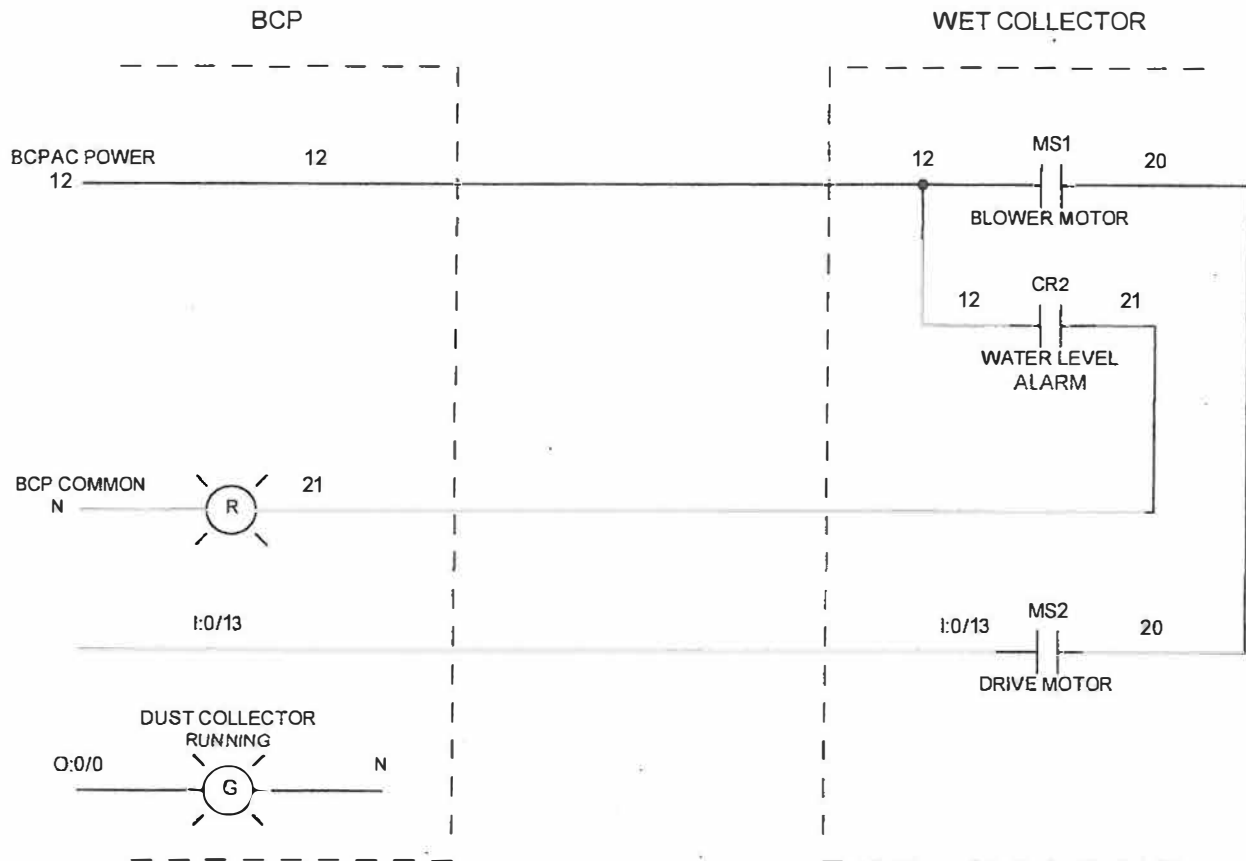
- Blast Wheel #1 ⇒ M6 ⇒ OVL6
- " #2 ⇒ M7 ⇒ OVL7
- " #3 ⇒ M8 ⇒ OVL8
- " #4 ⇒ M9 ⇒ OVL9

MESH CONVEYOR
 AB 160-BA01NSF1P1
 FREQUENCY DRIVE TERMINALS.



- PARAMETER #30: ACCEL TIME -5 SEC
- PARAMETER #31: DECEL TIME -1 SEC
- PARAMETER #32: MIN. FREQ. -10 HZ
- PARAMETER #33: MAX. FREQ. -60 HZ
- PARAMETER #34: STOP SELECT 0
- PARAMETER #42: OVERLOAD CURRENT - 0.7 A

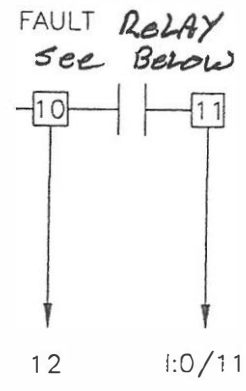
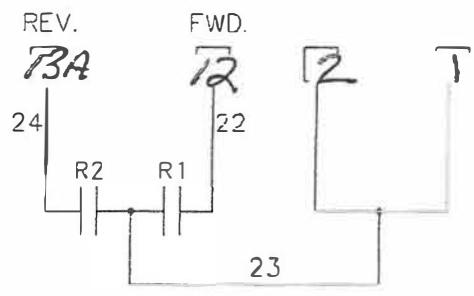
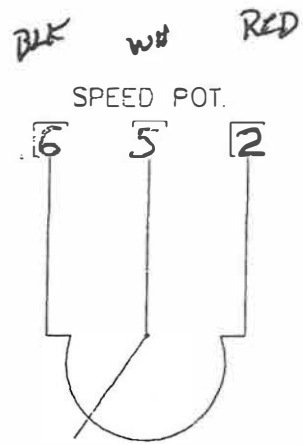
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 BLAST CLEANING PRODUCTS LTD. OAKVILLE, ONTARIO, CANADA (416) 827-0843				DATE 19 APRIL 97		DRAWN THIN NGUYEN	
				FREQ. DRIVE SCHEMATIC KENNEDY DIE CASTING JOB NO 1857		GROUP 96	SCALE NTS
REV	DATE	DESCRIPTION	BY				



COMMENTS:	<i>BCP to Wet Collector Interface</i>			
	DESIGN BY:	BKO		Pg. of

12-29-17 Converted A/B conveyor
Drive over to AC TECH

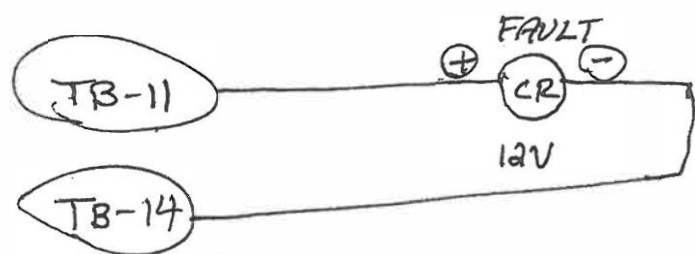
MESH CONVEYOR
AB 160-BA01NSF1P1
FREQUENCY DRIVE TERMINALS



P17: DIRECTION = 02
P10: 13A SELECT = 05
P06: Fault TB-14 = 03
P05: Speed Source = 03

OFF = RUN
ON = FAULT

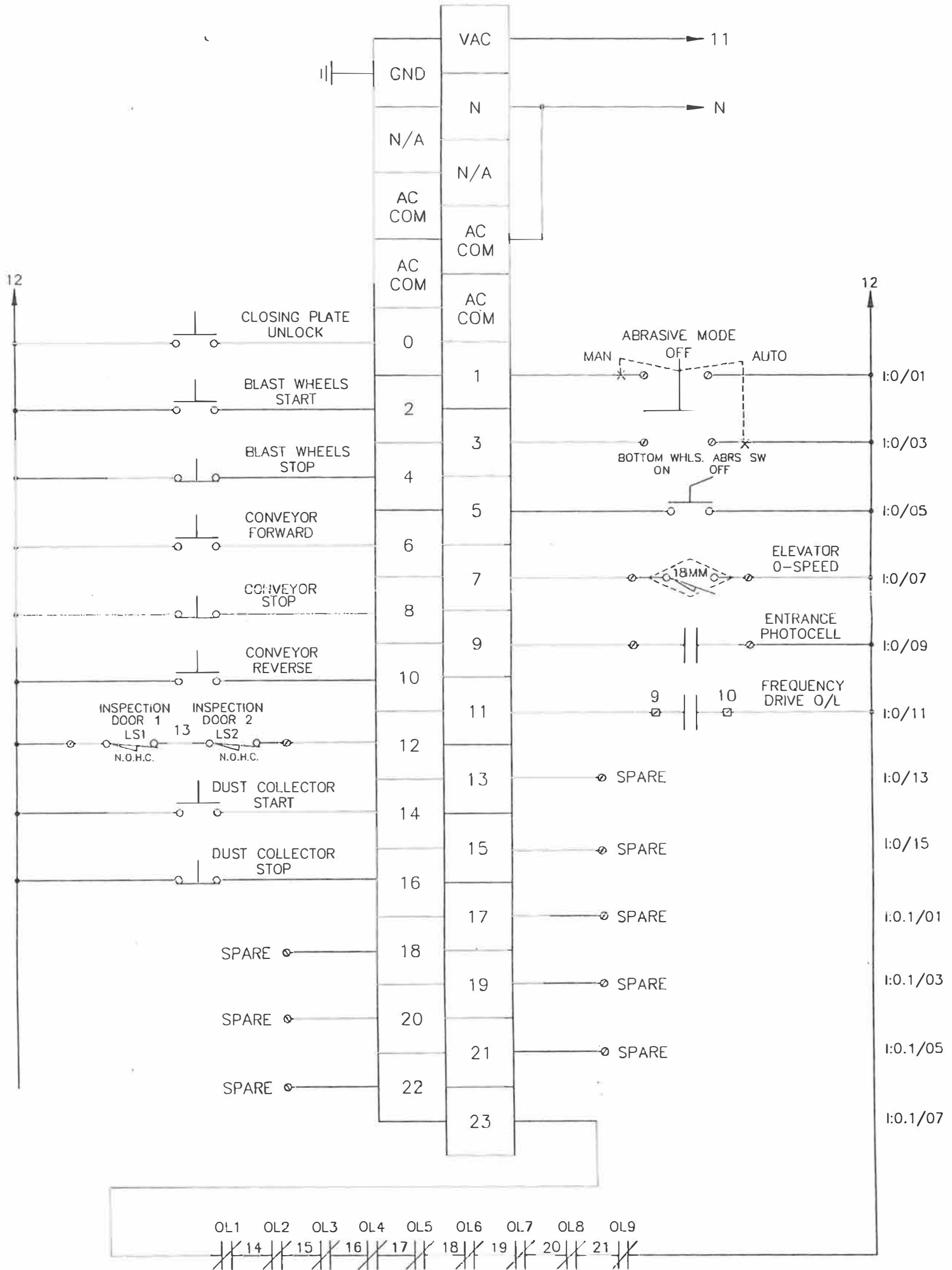
- PARAMETER 19: ACCEL TIME -5 SEC
- PARAMETER 20: DECEL TIME -1 SEC
- PARAMETER 23: MIN. FREQ. -10 HZ
- PARAMETER 24: MAX. FREQ. -60 HZ
- PARAMETER 4: STOP SELECT 3
- PARAMETER 26: OVERLOAD CURRENT - 0.7 A = 35%



#12 FAULT I:0/11

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BPP BLAST CLEANING PRODUCTS LTD. OAKVILLE, ONTARIO, CANADA (416) 827-0843				DATE 19 APRIL 97		DRAWN THIN NGUYEN	
				FREQ. DRIVE SCHEMATIC KENNEDY DIE CASTING JOB NO 1857		GROUP 96	SCALE NTS
REV	DATE	DESCRIPTION	BY				

SLC 500 FIXED
1747-L40A
(24) 120V INPUTS
I:0/0-I:0.1/07



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REFERENCE DRAWINGS

A4-7733



BLAST CLEANING PRODUCTS LTD.
OAKVILLE, ONTARIO, CANADA
(905) 827-0843

SLC INPUT SCHEMATIC
KENNEDY DIE CASTING
JOB 1857

DATE
19 APRIL 97
GROUP
96

DRAWN
THIN NGUYEN

DRAWING NO
A3-22154

REV
0

REV	DATE	DESCRIPTION	BY