

Medium DC Motors

CD180 to CD6900 Frame

7

• Overview & History	128
• Products/Types—(Frames)	129
• Model Numbers	130
• Serial Numbers	133
• Parts & Exploded Views	
– Kinamatic I-Type CD, Frames 210A to 680A	135
– Kinamatic II-Type CD, Frames 180AT to 500AT and Frames 2512AT, 2513AT, 2812AT, 2813AT	137
– Types CD and MCD, Frames 4300 to 4700	145
– Types CD and MCD, Frames 6000 to 6200, 6700 to 6900 ..	151
– Types CD and MCD, Frames 5000 to 9000 and Type CD, Frames 580 to 680	155
– Type MD, Frames 402 to 423	159
– Type MD, Frames 602 to 624	163
– Type MD, Frames 802 to 828	170
– Excavator Motor Generators—Type CDS, Frames 320 to 8000 and Types MPC and MCF, Frames 500 to 900	182
– Electric Vehicle—Type BT, Frames 1300 to 2300	189
• Maintenance Tips	190
• Standard Brushholders with Springs and Springs Only	195
• Commutator Information	196
• Field Modifications/Accessories	202



GE Support Services

Overview and History of Medium DC Motors

GE DC motors rated between 1 and 2500 horsepower, as well as generator ratings up to over 1300KW are manufactured in Dothan, AL, Monterrey, Mexico and Peterborough, Ontario.

The basic DC motor design is the same, that is, there is a stationary magnetic field structure and a rotating element. The rotating portion, the armature, is supported by a bearing structure.

The field frame consists of a ferrous frame with coils to provide for magnetic coupling of flux to the armature. There are main coils in the field to provide the magnetics. Comm coils are also used.

The armature has a shaft, coils to provide the magnetics to interact with the field coils, and a commutator. The commutator enables the coils on the rotating armature to be electrified. The brushes give a rotating connection between the armature and the power source.

The bearings are supported by bearing brackets or endbells. The bearings themselves can be ball bearings, roller bearings, or sleeve bearings. Sleeve bearings can be Bronze or Babbitt.

These basic elements are common to all DC motors. It is important to understand their relative positions when locating parts. There are also accessories which are added to the motor to improve performance, provide control data, and to protect the motor.

Products/ Types (Frames)

Motor Type	Market Application
CD180A/AT-680A	<i>Kinamatic Line Industrial Motors</i>
CD1000/1700	<i>Early Motors/Some Parts</i>
CD5000/9000	<i>Obsolete Motors/Parts Generally Available</i>
MD400/600/800	<i>Mill Drive and Excavator Motors, Parts available on 800, some 400 and 600</i>
GTE and LY	<i>Motors and Generators for the elevator industry</i>
BT	<i>Lift Truck, Electric vehicle motors, Mining Motors</i>
BY, CY	<i>Special Purpose Motors, Roll Grinder Transit</i>
CD4300/4700	<i>Industrial Drive Motors, High HP</i>
CD6200/6700	<i>Industrial Drive Motors, High HP</i>
Dynamometer	<i>Device to Measure Engine Performance or Motor Output</i>

MOTOR TYPE	Accessory Mounting Face	Armature Treatment		Brush Riggings		Cast Equalizer Comm End Coil Assembly and Support	Commutators				Compensated Pole Face Windings	Frames			Insulation		TIG Welded Riser Construction	TREC Field Coils
		Radiant Heat Process (RHP)	Vacuum Pressure Impregnation (VPI) 2 Cycles	Adjustable	Fixed		Glass Banded (w/Viton Sealant)	Interlocking	Molded	Cap and Cone (V Ring)		Laminated	Round	Split	Class F	Class H		
CD180AT	✓ ^①	✓		✓					✓				✓			✓		
CD210-320AT	✓ ^④	✓		✓					✓	✓ ^③			✓			✓		✓
CD360-500AT, 5010	✓	✓		✓				✓	✓	✓ ^③			✓			✓		✓
CD2512-2813AT	✓	✓			✓				✓			✓				✓		✓
CD6000-6200	✓		✓	✓		✓		✓	✓	✓ ^③		✓				✓		✓
CD6700-6900	✓		✓	✓		✓	✓ ^②			✓ ^③	✓		✓			✓		✓
MD802-812	✓ ^①	✓	✓		✓		✓ ^②	✓					✓			✓	✓	✓
MD814-826	✓ ^①		✓	✓		✓	✓ ^②				✓			✓		✓	✓	✓

- ① When specified
- ② With Viton sealant and polyurethane overcoat
- ③ Optional
- ④ Not available on TEFC, CD210AT



Model Numbers

The history of the GE model numbering system is actually quite old dating back to the early 1900's. Today's system has evolved from many years of experience. Learning from the past, it became quite clear to GE a system was needed to identify motor characteristics, ratings, and accessories with the model number alone. This system was first devised and implemented around 1970. An example of a model number would be 5CD194HA001A001. About 75% of our replacement requests are of this format.

Another format for model numbers following this pattern:

5CD14D02A112003 5CD580G12AB

These types of model numbers have been in use since about 1960 and are the second most frequent style seen on a daily basis representing about 15% of our requests. With these two types of model numbers, it is impossible to specify completely which motor is being requested without a serial number.

About 5% of the replacement requests have model numbers with format:

33A1557 5B225A50

Every motor is also assigned a serial number which is unique to that motor. Serial numbers for GE DC motors are one of two forms depending on the date the motor was built. The years between 1930 and 1956, serial numbers took the form of a seven digit code. These generally look like this:

7283200 7079100 2355299
 2164851 1839846 1590324

From about 1956 on to the present, serial numbers took the form of LL - N - NNN - LL where L = Letter and N = Number. These generally look like this:

GC-1-510-LC LL-N-NNN-LL
 CK-1-1085-EK the first N is always one of the follow
 RE-1-471-RE 1, 2, or 8
 AR-2-420-AR

For parts identification, the last two letters are dropped from this format. For instance, GC-1-510 would be typed in for C-1-510-LC.

Medium DC Motors Model Numbers			
Typical Format: 5CD NNN LL NNN L NNN N = Number; L = Letter			
	Model Number	Frame	Design
Examples:	5CD152GA001B002	CD218AT	KII
	5CD194SA005A007	CD368AT	KII
	5CD435LA805C801	CD4366	CD4000
Others:	5CD505G329	CD505	KI
	5BY444A27	CD3610	LOW INERTIA
	5CY949E9	CY949AY	ROLL GRINDER
	5MD160D100000AB	MD816AE	MD
	5AM604B218	AM604	AMPLIDYNE
	5CDS365G322	CDS365AY	EXCAVATOR
	5MD824C81	MDP824	EXCAVATOR MD
	223X782CF	MCF868C	EXCAVATOR GENERATOR
	5SDE2635A100	SDE2600	SYNCHRONOUS MOTOR

7-Medium DC

Model Numbers

and Their Equivalents

Model Number	Also known as:
5AM602B23	5AM602B23
5AN102B1G02	AN102B1G02
5BT1328B7	BT1328B7
5BY435A65	5BY435A65
5BT2379M2	5BT2378M2
5CD14E06A36630	14E06A36630
5CD123WE001B	5CD123WE001B
5CD144WA801A800	5CD144WA801A800
5CD25D26G001513	25D26G001513
5CD362MA001A001	5CD362001A001
5CD432EA001C800	5CD432EA001C800
5CD256G177	5CD256E177
5CD684E143BE	5CD684E143BE
5CDS326G230	5CD326G230
5CY1031E1	5CY1032E1
5GTE20D03A1	5GTE20D03A1
5MD020D114100SD	020D1141100SD
5MD824A3	5MD824A3
34B615	34B615
36X958083	36X958083

When having difficulty with a model: 1. drop 5 and impute, 2. drop 5 and first letter and impute, 3. drop 5 and first two letters and impute. In many cases, it is easier to inquire in the model list, E.G. 5CD184TA001A rather than the entire model number.

General Notes

Kinamatic II Models, for example, 5CD184TA001A001, the full number is the model list which includes accessories, covers, thermostats, and so forth. These make the unit unique. The base number, E.G. 5CD184TA001A, is the machine list, which list the field coils, armature, bearings, brushrigging, and so forth. Armature coils are found on the armature list on the machine list.

MD800 motors are imputed with the 5MD dropped from the model. The last two letters indicate the ventilation and some other accessories. The basic number, without the 5MD and the two letter suffix has most of the data that is normally requested.

When listing part numbers, always line the extension on the space 12, 13 and 14.
 For example: _____ XXX XXX = appropriate group or part number.

Serial numbers are entered with dashes.



Model Numbers

Kinamatic II Design

CD4000 Line

CD6000 Line

MODEL NUMBER PREFIX	FRAME SIZE	MODEL NUMBER PREFIX	FRAME SIZE	MODEL NUMBER PREFIX	FRAME SIZE
5CD122	CD146	5CD431 D-K	CD4350	5CD601 D-K	CD6050
5CD123	CD148	5CD431 L-N	CD4354	5CD601 L-M	CD6054
5CD124	CD149	5CD432 D-K	CD4352	5CD602 D-K	CD6052
5CD125	CD1412	5CD432 L-N	CD4357	5CD602 L-M	CD6057
5CD142	CDL182AT	5CD433 D-K	CD4355	5CD603 D-K	CD6055
5CD143	CD186AT	5CD433 L-N	CD4359	5CD603 L-M	CD6059
5CD144	CDL186AT	5CD434 D-K	CD4358	5CD604 D-K	CD6058
5CD145	CD189AT	5CD434 L-N	CD4363	5CD604 L-M	CD6063
5CD152	CD218AT	5CD435 D-K	CD4362	5CD605 D-K	CD6062
5CD153	CD219AT	5CD435 L-N	CD4366	5CD605 L-M	CD6066
5CD154	CD2110AT	5CD442 E-K	CD4454	5CD612 E-K	CD6154
5CD163	CD258AT	5CD442 L-N	CD4463	5CD612 L-N	CD6163
5CD164	CD259AT	5CD443 E-K	CD4457	5CD613 E-K	CD6157
5CD173	CD287AT	5CD443 L-N	CD4465	5CD613 L-N	CD6165
5CD174	CD288AT	5CD444 E-K	CD4460	5CD614 E-K	CD6160
5CD183	CD327AT	5CD444 L-N	CD4468	5CD614 L-N	CD6168
5CD184	CD328AT	5CD445 E-K	CD4464	5CD615 E-K	CD6164
5CD192	CD365AT	5CD445 L-N	CD4473	5CD615 L-N	CD6173
5CD193	CD366AT	5CD446 E-K	CD4469	5CD616 E-K	CD6169
5CD194	CD368AT	5CD446 L-N	CD4477	5CD616 L-N	CD6177
5CD203 A	CDL407AT	5CD453 E-K	CD4559	5CD623 E-K	CD6259
5CD203 B-R	CD407AT	5CD453 L-N	CD4568	5CD623 L-M	CD6268
5CD203 S-Y	CDL407AT	5CD454 E-K	CD4562	5CD624 E-K	CD6262
5CD204 A	CDL409AT	5CD454 L-N	CD4570	5CD624 L-M	CD6270
5CD204 B-R	CD409AT	5CD455 E-K	CD4566	5CD625 E-K	CD6266
5CD204 S-Y	CDL409AT	5CD455 L-N	CD4575	5CD625 L-M	CD6275
5CD222 A-T,X,Y	CD504AT	5CD456 E-K	CD4571	5CD626 E-K	CD6271
5CD222 U-W	CDL504AT	5CD456 L-N	CD4580	5CD626 L-M	CD6280
5CD223 A-T,X,Y	CD506AT	5CD463 H-M	CD4670	5CD673 G-N	CD6766
5CD223 U-W	CDL506AT	5CD463 N-R	CD4674	5CD673 P	CD6771
5CD224 A-T,X,Y	CD508AT	5CD464 H-M	CD4673	5CD674 G-N	CD6770
5CD224 U-W	CDL508AT	5CD464 N-R	CD4678	5CD674 P	CD6776
5CD226	CD5010ATZ	5CD465 H-M	CD4677	5CD675 G-N	CD6774
5CD362	CD2512AT	5CD465 N-R	CD4681	5CD675 P	CD6778
5CD363	CD2513AT	5CD466 H-M	CD4682	5CD676 G-N	CD6779
5CD372	CD2812AT	5CD466 N-R	CD4686	5CD676 P	CD6785
5CD373	CD2813AT	5CD473 K-N	CD4773	5CD683 H-N,W	CD6873
		5CD473 P-T	CD4781	5CD683 P,R,S	CD6882
		5CD474 K-N	CD4776	5CD684 H-N,W	CD6876
		5CD474 P-T	CD4784	5CD684 P,R,S	CD6885
		5CD475 K-N	CD4780	5CD685 H-N,W	CD6881
		5CD475 P-T	CD4789	5CD685 P,R,S	CD6890
		5CD476 K-N	CD4785	5CD686 H-N,W	CD6887
		5CD476 P-T	CD4793	5CD686 P,R,S	CD6896
		5CD477 K-N	CD4791	5CD693 L-N	CD6977
		5CD477 P-T	CD4799	5CD693 P-T	CD6986
				5CD694 L-N	CD6981
				5CD694 P-T	CD6990
				5CD695 L-N	CD6985
				5CD695 P-T	CD6996
				5CD696 L-N	CD6991
				5CD696 P-T	CD6999

7-Medium DC

Serial Numbers

Serial Numbers are stamped on the nameplate. Model numbers are also on the nameplate. If the nameplate is gone, the serial number is also metal stenciled into the frame, usually in the general area of the nameplate. Modern serial numbers are AA-N-NNNN. Older motors can have a scheme NNNNNNN (seven numbers).

The DC Buyers Guide (GEP387) has the most commonly used motors and accessories.

Please Note the renewal parts accessory guide at the end of this section.

Nameplate Info.

CD180AT – 500AT
CD580 – 9000

GENERAL ELECTRIC			
KINAMATIC DIRECT CURRENT MOTOR			
HP	250	RPM	1150 / 1700
VOLTS	500		
ARM AMPS	398	WOUND	SHUNT
FLD AMPS	(8.2) / (4.15)	FLD OHMS 25C	21.1
INSUL CLASS	F	DUTY	CONT
MAX AMBIENT	40 C		
FLD VOLTS	= (240) / (120)		
SEP VENT	590 CFM @ .65 IN		
TYPE	CD508AT	ENCL	DPFG - SV
INSTR	GEH 3967		
MOD	5CD224 RA 092 B 001	SER	ND - 1 - 120 PD

Annotations:

- If @ Base Speed
- 1 Circuit
- If @ Top Speed
- 1 Circuit
- 1 Circuit
- V_F @ 2 Circuit
- V_F @ 1 Circuit
- 4 Field Leads Out

7-Medium DC

Serial Numbers

Serial numbers are of the form... LL - B - NNN - KK

The letters stand for:

- LL Month of year and manufacture...See table
- B Place of manufacture...1 = Building 13, Erie, (medium)
- 2 Building 17, Erie, (large)
- 8 Dothan Motor Plant, AL., (small)
- NNN Consecutively numbered individual units each month
- KK Month and year of shipment....See table.

Example: ZE - 1 - 125 - NF
 Indicates—Erie, Medium, Shipped Jan'91

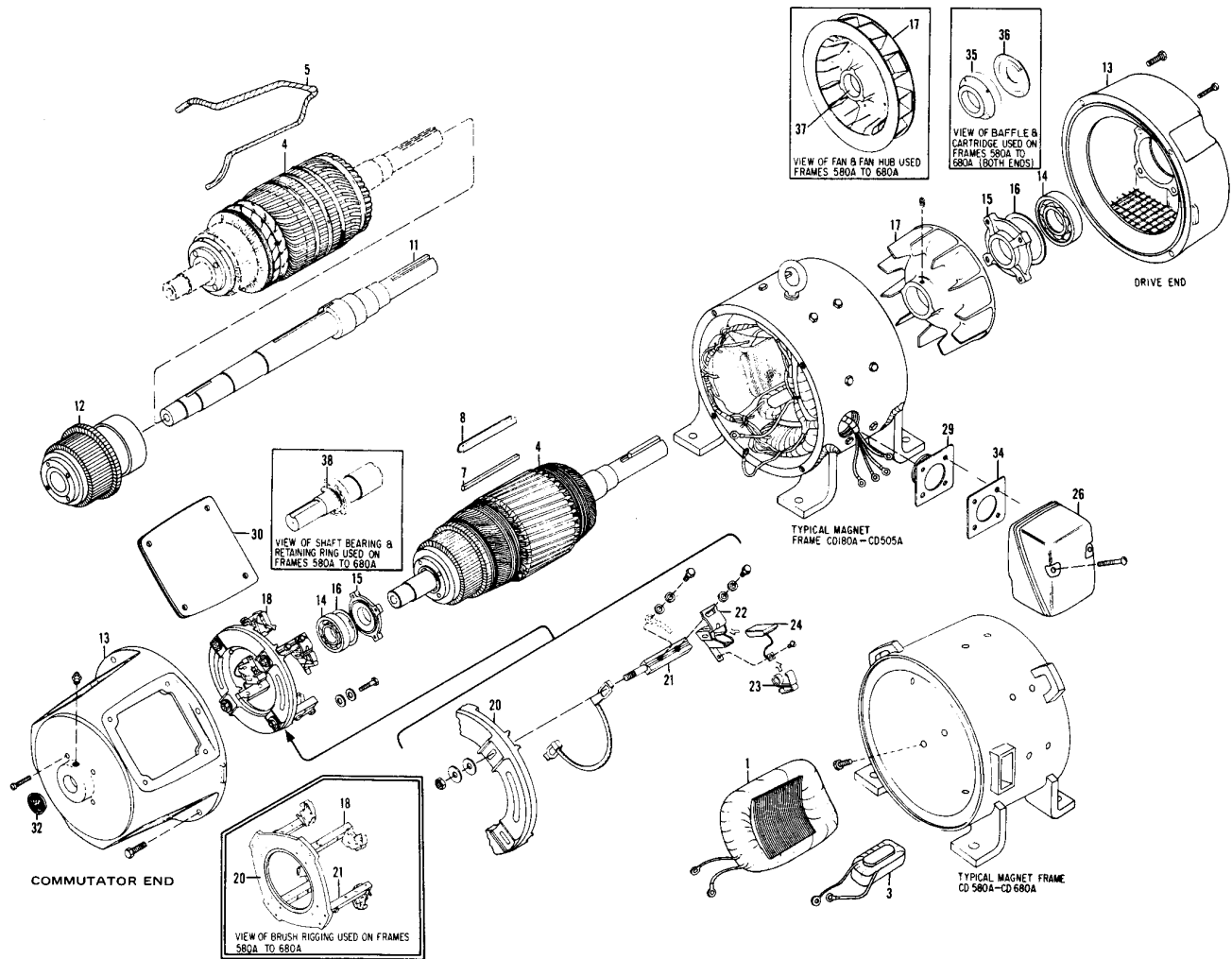
Note: Serial Number is also stamped in the frame, near the nameplate

YEAR	PRIOR YEARS	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1965	1923	AA	BA	CA	DA	EA	FA	GA	HA	JA	KA	LA	MA
1966	1924	AB	BB	CB	DB	EB	FB	GB	HB	JB	KB	LB	MB
1967	1925	AC	BC	CC	DC	EC	FC	GC	HC	JC	KC	LC	MC
1968	1926	AD	BD	CD	DD	ED	FD	GD	HD	JD	KD	LD	MD
1969	1927	AE	BE	CE	DE	EE	FE	GE	HE	JE	KE	LE	ME
1970	1928	AF	BF	CF	DF	EF	FF	GF	HF	JF	KF	LF	MF
1971	1929	AG	BG	CG	DG	EG	FG	GG	HG	JG	KG	LG	MG
1972	1930	AH	BH	CH	DH	EH	FH	GH	HH	JH	KH	LH	MH
1973	1931	AJ	BJ	CJ	DJ	EJ	FJ	GJ	HJ	JJ	KJ	LJ	MJ
1974	1932	AK	BK	CK	DK	EK	FK	GK	HK	JK	KK	LK	MK
1975	1933	AL	BL	CL	DL	EL	FL	GL	HL	JL	KL	LL	ML
1976	1934	AM	BM	CM	DM	EM	FM	GM	HM	JM	KM	LM	MN
1977	1935	AN	BN	CN	DN	EN	FN	GN	HN	JN	KN	LN	MM
1978	1936	AP	BP	CP	DP	EP	FP	GP	HP	JP	KP	LP	MP
1979	1937	AR	BR	CR	DR	ER	FR	GR	HR	JR	KR	LR	MR
1980	1938	AS	BS	CS	DS	ES	FS	GS	HS	JS	KS	LS	MS
1981	1939	AT	BT	CT	DT	ET	FT	GT	HT	JT	KT	LT	MT
1982	1940	AU	BU	CU	DU	EU	FU	GU	HU	JU	KU	LU	MU
1983	1941	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW
1984	1942	AX	BX	CX	DX	EX	FX	GX	HX	JX	KX	LX	MX
1985	1943	AY	BY	CY	DY	EY	FY	GY	HY	JY	KY	LY	MY
1986	1944	NA	OA	PA	RA	SA	TA	UA	VA	WA	XA	YA	ZA
1987	1945	NB	OB	PB	RB	SB	TB	UB	VB	WB	XB	YB	ZB
1988	1946	NC	OC	PC	RC	SC	TC	UC	VC	WC	XC	YC	ZC
1989	1947	ND	OD	PD	RD	SD	TD	UD	VD	WD	XD	YD	ZD
1990	1948	NE	OE	PE	RE	SE	TE	UE	VE	WE	XE	YE	ZE
1991	1949	NF	OF	PF	RF	SF	TF	UF	VF	WF	XF	YF	ZF
1992	1950	NG	OG	PG	RG	SG	TG	UG	VG	WG	XG	YG	ZG
1993	1951	NH	OH	PH	RH	SH	TH	UH	VH	WH	XH	YH	ZH
1994	1952	NJ	OJ	PJ	RJ	SJ	TJ	UJ	VJ	WJ	XJ	YJ	ZJ
1995	1953	NK	OK	PK	RK	SK	TK	UK	VK	WK	XK	YK	ZK
1996	1954	NL	OL	PL	RL	SL	TL	UL	VL	WL	XL	YL	ZL
1997	1955	NM	OM	PM	RM	SM	TM	UM	VM	WM	XM	YM	ZM
1998	1956	NN	ON	PN	RN	SN	TN	UN	VN	WN	XN	YN	ZN
1999	1957	NP	OP	PP	RP	SP	TP	UP	VP	WP	XP	YP	ZP
2000	1958	NR	OR	PR	RR	SR	TR	UR	VR	WR	XR	YR	ZR
2001	1959	NS	OS	PS	RS	SS	TS	US	VS	WS	XS	YS	ZS
2002	1960	NT	OT	PT	RT	ST	TT	UT	VT	WT	XT	YT	ZT
2003	1961	NV	OV	PV	RV	SV	TV	UV	VV	WV	XV	YV	ZV
2004	1962	NW	OW	PW	RW	SW	TW	UW	VW	WW	XW	YW	ZW
2005	1963	NX	OX	PX	RX	SX	TX	UX	VX	WX	XX	YX	ZX
2006	1964	NY	OY	PY	RY	SY	TY	UY	VY	WY	XY	YY	ZY

7-Medium DC

Kinamatic I

Type CD, Frames 210A-680A



Exploded View, Type CD, Frames 215A to L685A

Ref. No.	Description	Ref. No.	Description
1	Coil, main and pole	18	Rigging holder
3	Coil, comm and pole	20	Yoke , brush holder
4	Armature	21	Stud, brush holder
5	Coil, armature	22	Brush holder (with pressure spring)
7	Wedge, slot (through CD250A)	23	Spring, brush holder
8	Strip, slot insulation	24	Brush, carbon
11	Shaft, armature (not available for frame 256 and smaller)	26	Conduit box
12	Commutator	29	Adapter, conduit box (not used on CD580A & CD680A)
13	§ Bracket, bearing	30	Cover, hand hole
14	§ Bearing, ball antifriction	32	Monogram (not used on CD580A & CD680A)
15	§ Cap, bearing	34	Gasket, adapter, conduit box
16	§ Gasket, bearing cap	35	§ Cartridge, bearing
17	Fan, armature	36	§ Baffle, metering plate
		37	Hub, fan
		38	§ Ring, retaining

§Specify whether for drive end or commutator end.



Kinamatic I

Type CD, Frames 210A–680A

Renewal Parts

As insurance against costly downtime, it is strongly recommended that spare parts be kept on hand in accordance with the chart below.

Recommended Parts

Description	NUMBER OF DUPLICATE MOTORS IN SERVICE				
	1	2–4	5–10	10–20	More than 20
WITH OR WITHOUT ELECTRICAL SHOP FACILITIES					
Complete Machine	...	...	...	1	2
Drive End Ball Bearing	1	1	1	2	3
Commutator End Ball Bearing	1	1	1	2	3
Brushes (Sets)	2	4	6	8	10
Brush holders (Sets)	...	1/2	1/2	1	1
Brush holder Spring (Sets)	1/2	1	1	2	2
Main Field Coil and Pole	...	1	1	2	3
Commutating Field Coil and Pole	...	1	1	2	3
Armature Complete*	...	1	1	2	2
Blower vent, motors					
Blower motors	...	1	1	2	2
Filters	2	4	6	8	10
WITH ELECTRICAL SHOP FACILITIES					
Shaft**	...	...	...	1	1
Armature Rewinding Supplies	...	1	1	2	3

* If shop facilities are available the quantity of armatures may be reduced by stocking the armature parts listed in the second group.

** Shaft not replaceable in diameters 250 and smaller.

Kinamatic II

Type CD, Frames 180AT–500AT; Frames 2512AT, 2513AT, 2812AT, 2813AT

Approximate Net Weights*				
Frame Size	Armature Weight		Motor Weight	
	lbs.	kgs.	lbs.	kgs.
CDL182AT	17	8	80	36
CD186AT	25	11	102	46
CDL186AT	35	16	128	58
CD189AT	45	20	162	74
CD218AT	50	23	240	106
CD219AT	56	25	250	114
CD2110AT	63	29	280	127
CD258AT	78	35	360	164
CD259AT	89	40	400	183
CD287AT	113	51	500	225
CD288AT	130	59	550	250
CD289AT	175	80	660	300
CD2811AT	210	95	790	360
CD327AT	158	72	690	315
CD328AT	181	82	770	350
CD365AT	220	100	750	340
CD366AT	260	120	860	390
CD368AT	300	140	1020	465
CD3610AT	400	130	1310	595
CD3612AT	530	240	1650	750
CD407AT	400	180	1300	590
CDL407AT	400	180	1350	610
CD409AT	500	225	1600	725
CDL409AT	500	225	1650	750
CD4012AT	780	350	3210	1460
CD504AT	590	265	1900	860
CDL504AT	590	265	2070	940
CD506AT	720	330	2290	1040
CDL506AT	720	330	2440	1110
CD508AT	890	405	2810	1275
CDL508AT	890	405	2970	1350
CD5010AT	1200	545	4260	1935

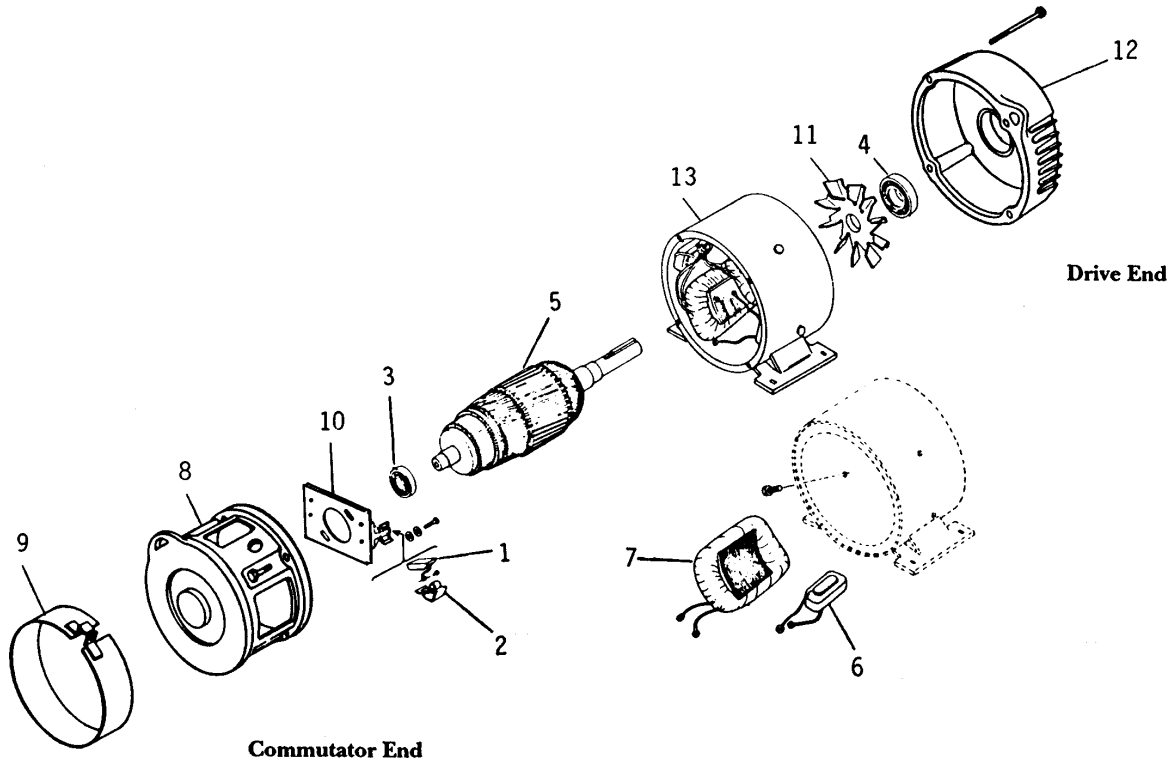
*Appropriate weights for typical motors in each frame size. Does not include weights of accessories such as tachometers, blowers, heat exchangers, etc. For specific weights, refer to certified outline.

Commutator Diameters (IN INCHES)		
Frame	New	Minimum
CD180AT	2.76	2.62
CD210AT	4.50	4.27
CD250AT	5.00	4.75
CD280AT	5.78	5.49
CD320AT	6.50	6.17
CD360AT	7.50	7.13
CD400AT	8.32	7.92
CD500AT	10.25	9.75



Kinamatic II

CD180AT Frames



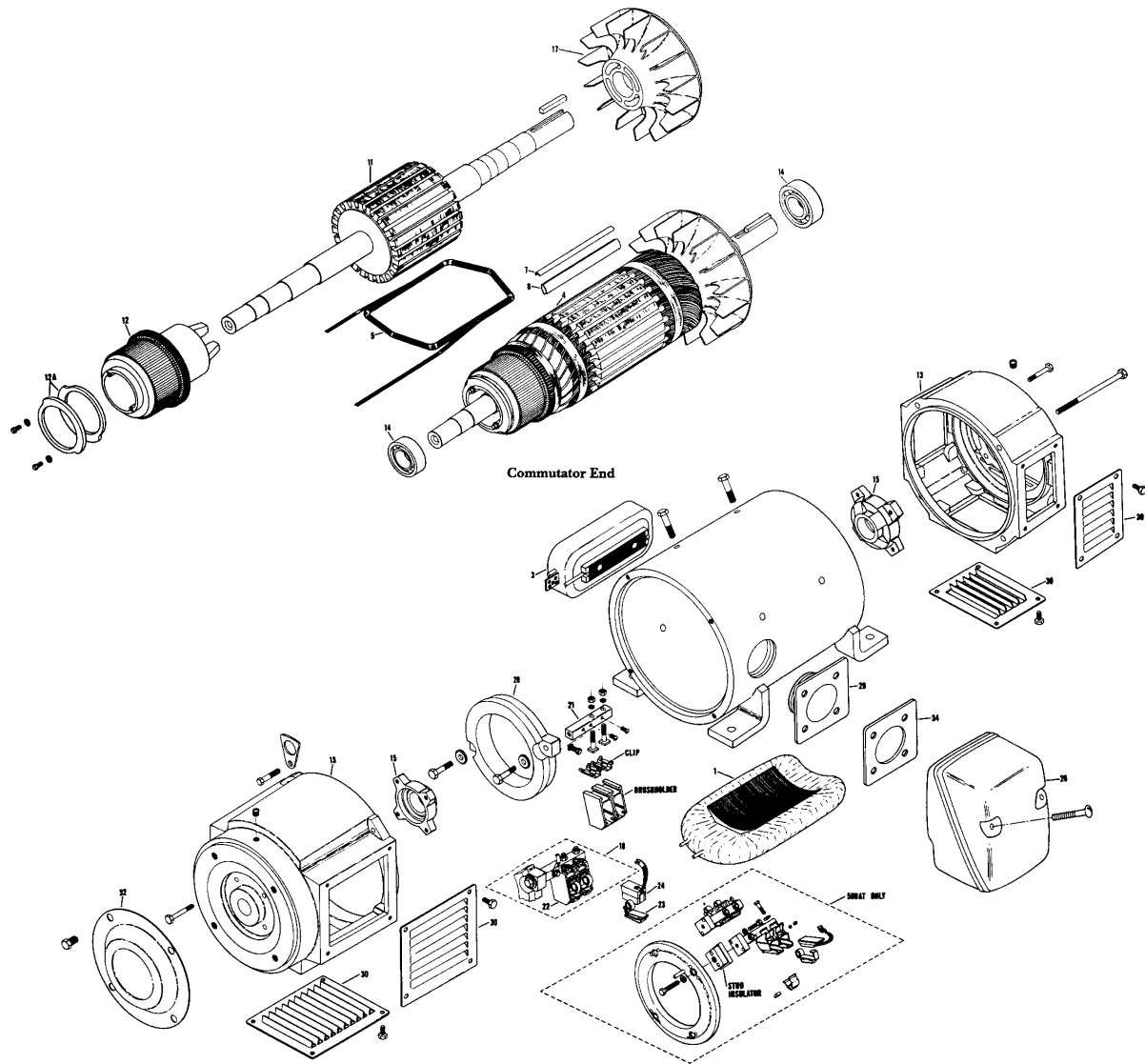
Exploded View, Kinamatic II • CD180AT Frames

<u>Ref. No.</u>	<u>Description</u>	<u>Qty.</u>
1	Brush	2
2	Brush Springs	2
3	Bearing C.E.	1
4	Bearing D.E.	1
5	Armature	1
6	Coil & Pole Comm.	2
7	Coil Main	2
8	Bearing Bracket (CE)	1
9	Access Cover	1
10	Brush Rigging	1
11	Armature Fan	1
12	Bearing Bracket (DE)	1
13	Wound Frame Assembly	1

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Kinamatic II

CD210AT-CD500AT Frames



Exploded View, Kinamatic II • CD210AT-CD500AT Frames

Ref. No.	Description
1	Main Coil and Pole Assembly
3	Comm. Coil and Pole Assembly
4	Armature
5	Armature Coil
7	Slot Wedge (through CD400AT)
8	Slot Insulation (through CD400AT)
11	Armature Shaft and Core Assembly
12	Commutator
12A	Balance Rings (used on CD180AT-CD320AT)
13	§ Bearing Bracket
14	§ Ball Bearing
15	§ Bearing Cap
17	Armature Fan

Ref. No.	Description
18	Brush Rigging (includes complete assembly for CD180AT)
20	Brushholder Yoke
21	Brushholder Stud (includes Insulator on CD500AT)
22	Brushholder (with Pressure Spring and Clip, if needed)
23	Brushholder Spring
24	Carbon Brush
26	Conduit Box
29	Conduit Box Adapter
30	§ Bearing Bracket Covers (specify side, bottom or top)
32	Shaft Cover
34	Conduit Box Gasket
38	Bearing Retaining Ring (used on CD360AT-CD500AT Drive End Only)

§ Specify whether for drive end or commutator end



Kinamatic II

CD180 to CD500AT

Identification of Brushholders, Springs and Brushes

5CD14 – (CD1801A) – Example 5CD14E01A900001

Qty. 1 – 36A164935AAG01 – Brush Rigging

Qty. 2 – 36A164933CAG01 – Spring Only

Qty. 2 – 894A506 P01 – Brush

5CD142 – 143 – 144 – 145 – (CD180AT) – Example 5CD143BA001A001

Qty. 1 – 36A167271AAG01 – Brush Rigging

Qty. 2 – 36B467022AA001 – Spring Only

Qty. 2 – 36A167400AAP01 – Brush GE-581 GRADE .375 X 1.00

5CD152 – 153 – 154 – (CD210AT) – Example 5CD152JA003B007

The winding letter determines brush rigging quantities:

A to S – Qty is 2 per motor

T to X – Qty. is 4 per motor

Z – Consult Factory

36A167280AAG01 – Brushholder with Spring

36B467011AA001 – Brushholder only

36B467020AA001 – Spring only – 2.9 lbs. Max. 2.00 lbs Min.

36A167401AAP08 – Brush T-563 Grade .625 x .875 x 1.5 (.70 is min length)

36A167401AAP02 – Brush T-566 Grade Papermill & Extruder

5CD163 – 164 – (CD250AT) – Example 5CD163RA001A014

The winding letter determines brush rigging quantities:

A to N – Qty is 2 per motor

P to W – Qty. is 4 per motor

Z – Consult Factory

36A167280AAG01 – Brushholder with Spring

36B467011AA001 – Brushholder only

36B467020AA001 – Spring only – 2.9 lbs. Max. 2.00 lbs Min.

36A167401AAP08 – Brush T-563 Grade .625 x .875 x 1.5 (.70 is min length)

36A167401AAP02 – Brush T-566 Grade Papermill & Extruder

5CD173 – 174 – (CD280AT) – Example 5CD174RA006A034

The winding letter determines brush rigging quantities:

A to T – Qty is 2 per motor

U to X – Qty. is 4 per motor

Z – Consult Factory

36A167281AAG01 – Brushholder with Spring

36B467012AA001 – Brushholder only

36B467021AA001 – Spring only – 4.75 lbs. Max. 3.0 lbs Min.

36A167402AAP04 – Brush T-563 Grade .75 x 1.25 x 2.0 (.90 is min length)

36A167402AAP02 – Brush T-566 Grade Papermill & Extruder

5CD362 – 363 – (CD2512AT and CD2513AT) – Example 5CD363MA001A001**5CD372 – 373 – (CD2812AT and CD2813AT) – Example 5CD373LA003A007**

The winding letter determines brush rigging quantities:

A to P – Qty is 2 per motor

R to X – Qty. is 4 per motor

Z – Consult Factory

36B473004AAG01 – Brushholder only for CD2512 and CD2513

36B473004AAG02 – Brushholder only for CD2812 and CD2813

36C703083AA001 – Spring only – 5.1 lbs. Max. 4.0 lbs Min.

36A171014AAP11 – Brush T-559 Grade 1.00 x 1.25 x 2.6 (1.00 is min length)

36A171014AAP12 – Brush T-566 Grade Papermill & Extruder

Kinamatic II

CD180 to CD500AT

Identification of Brushholders, Springs and Brushes

5CD183 - 184 - (CD320AT) - Example 5CD184TA004A010

The winding letter determines brush rigging quantities:

A to R - Qty is 2 per motor

S to Y - Qty. is 4 per motor

X - Qty. is 6 per motor

Z - Consult Factory

36A167281AAG01 - Brushholder with Spring

36B467012AA001 - Brushholder only

36B467021AA001 - Spring only - 4.6 lbs. Max. 3.0 lbs Min.

36A167402AAP04 - Brush T-563 Grade
.75 x 1.25 x 2.0 (.90 is min length)

36A167402AAP02 - Brush T-566 Grade Papermill & Extruder

5CD192 - 193 - 194 - (CD360AT) - Example 5CD193PA007A814

The winding letter determines brush rigging quantities:

D to P - Qty is 4 per motor

B,C,R,S,T,X - Qty. is 8 per motor

U,V,W - Qty. is 12 per motor

Z - Consult Factory

36A160426AAG01 - Brushholder with Spring

36B465476AA001 - Brushholder only

36B465486AA001 - Spring only (86A) - 4.75 lbs. Max. 3.0 lbs Min.

36A164456AAP21 - Brush T-563 Grade .625 x 1.25 x 2.1 (1.06 is min length)

36A164456AAP05 - Brush T-566 Grade Papermill & Extruder

5CD203 - 204 (CD400AT) - Example 5CD203PA001A007

The winding letter determines brush rigging quantities:

D to M - Qty is 4 per motor

B,C,N,P,R - Qty. is 8 per motor

A,S,T,X,Y - Qty. is 12 per motor

u,v,w - Qty. is 16 per motor

Z - Consult Factory

36A160421AAG02 - Brushholder with Spring

36B465471AA001 - Brushholder only

36B465481AA001 - Spring only (81A) - 4.75 lbs. Max. 3.62 lbs Min.

36A164451ABP18 - Brush T-563 Grade .75 x 1.5 x 2.75 (1.5 is min length)

36A164451ABP05 - Brush T-566 Grade Papermill & Extruder

5CD222 - 223 - 224 - 226 - (CD500AT) - Example 5CD224TA010B024

The winding letter determines brush rigging quantities:

F to L - Qty is 4 per motor

D,E,M,N,P - Qty. is 8 per motor

C,R,S,Y - Qty. is 12 per motor

A,B,T - Qty. is 16 per motor

U,V,W - Qty. is 20 per motor

Z - Consult Factory

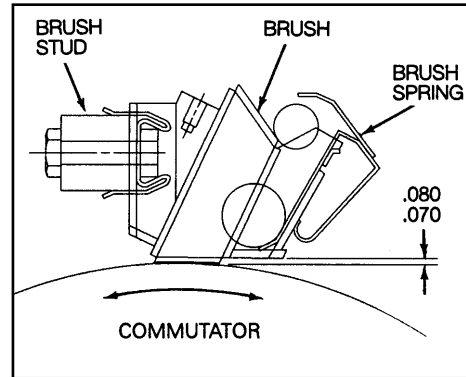
36A160422AAG02 - Brushholder with Spring

36B465472AA001 - Brushholder only

36B465482AA001 - Spring only (82A) - 5.6 lbs. Max. 4.6 lbs Min.

36A164452AAP21 - Brush T-563 Grade .88 x 1.5 x 3.25 (1.6 is min length)

36A164452AAP05 - Brush T-566 Grade Papermill & Extruder



Correct Spacing of Brushholder to Commutator



Kinamatic II

Standard Bearing Information

The following chart shows the standard ball bearings used in Kinamatic motors. Standard practice for oversized shafts and/or oversized ball bearings is to use the ball bearing size of the next larger frame (no oversized bearings or shafts available in CD5010AY frame). This chart does **not** apply to motors with roller bearings. Non-standards are manufactured for special applications. Therefore, not all Kinamatic motors follow the chart below. Refer to GE Support Services for non-standard motors.

Standard Bearings for Kinamatic DC Motors		
Frame Size	Drive End GE Part Number	Comm End GE Part Number
CD140AT	894A605ZJ 005	894A605ZJ 004
CD2512AT / CD2513AT	894A605AB 009	894A605AB 007
CD2812AT / CD2813AT	894A605AB 010	894A605AB 009
CD180AT	894A605ZJ 006	894A605ZJ 006
CD210AT	894A605ZJ 007	894A605ZJ 006
CD250AT	894A605 009	894A605 007
CD280AT	894A605 010	894A605 009
CD320AT	894A605 011	894A605 010
CD360AT	894A605 013	894A605 011
CD400AT	894A605 014	894A605 013
CD504AT / CD508AT	894A605 018	894A605 016
CD5010AY	894A605 022	894A605 018
CD6000	894A605 023	894A605 020
CD6100	894A605 025	894A605 023
CD6200	894A605 027	894A605 025
CD6700	894A605 029	894A605 029
CD6800	894A605 029	894A605 029
CD6900	894A605 031	894A605 031

Renewal Parts Service

The Kinamatic motor is designed for tough industrial applications. Maintain the original performance standards of the Kinamatic design by using genuine GE renewal parts. Kinamatic renewal parts, such as main and commutator coils, pole assemblies, and armature coils are produced to original factory specifications including form fits, materials, and dimensions. A permanently attached stainless steel nameplate displays the model and serial number, providing all the information needed for ordering. Parts are available directly from authorized GE parts distributors. For authorized distributor information or technical support, contact GE Support Services. Also, Repair service is available from authorized GE service facilities.

Recommended Spare Parts for Frames CD180AT–CD500AT

In an effort to minimize costly downtime, it is recommended that spare parts be kept on hand in accordance with the chart below:

Description	Number of Duplicate Motors in Service				
	1	2–4	5–10	10–20	More than 20
With or Without Electrical Shop Facilities					
Complete Machine	...	...	...	1	2
Ball Bearing (sets)	1	1	1	2	3
Brushes (Sets)	2	4	6	8	10
Brushholders (Sets)	...	1/2	1/2	1	1
Brushholder Springs (Sets)	1/2	1	1	2	2
Main Field Coil and Pole	...	1	1	2	3
Commutating Field Coil and Pole	...	1	1	2	3
Armature Complete	...	1	1	2	2
Blower Ventilated, motors	...	1	1	2	2
Blower motors	...	1	1	2	2

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Kinamatic II

Type CD, Frames 2512AT, 2513AT, 2812AT, 2813AT

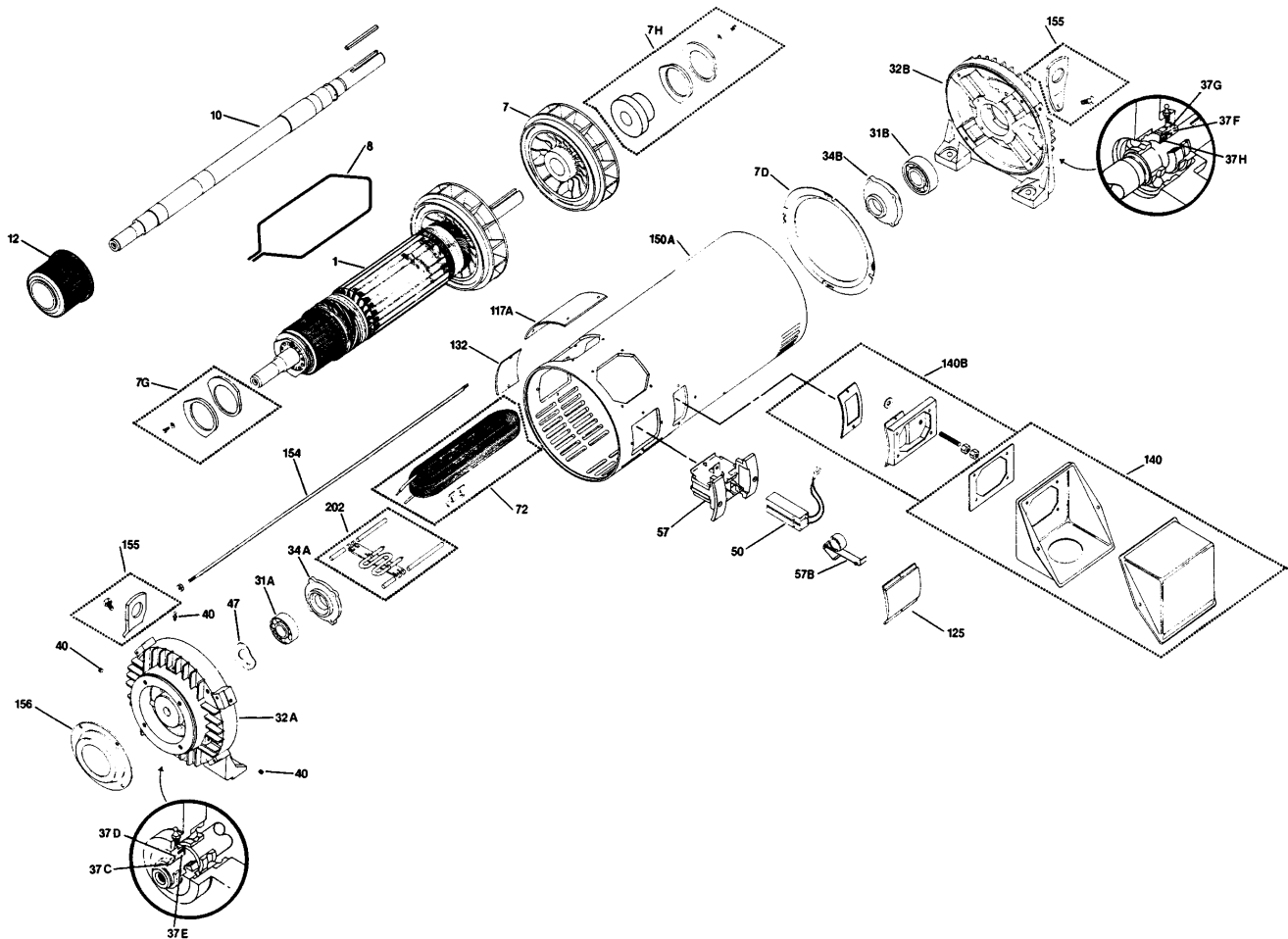
Typical Weights*			Commutator Diameters (in Inches)		
Frame Size	Motor (Less Accessories)	Armature	Start	Min.	Wear
CD2512AT	500	120	5.30	5.02	0.140
CD2513AT	550	135			
CD2812AT	650	160	5.96	5.66	0.150
CD2813AT	750	190			

* Typical weights. For specific weight, see certified outline.



Kinamatic II

Type CD, Frames 2512AT, 2513AT, 2812AT, 2813AT



Exploded View, Type CD Frames 2512AT–2813AT

Ref. No.	Description	Ref. No.	Description
1	Armature	37G	Bearing Seal, Adapter DE (when specified)
7	Armature Fan	37H	Bearing Seal, Rubbing DE (when specified)
7D	Armature Baffle	40	Grease Fitting Kit
7G	Balance Ring Kit, CE	47	Bearing Preload Spring
7H	Balance Ring Kit, DE	50	Brush
8	Armature Rewind Kit	57	Brush Holder
10	Shaft w/Key	57B	Brush Holder Spring
12	Commutator (Requires No. 8 Rewind Kit)	72	Comm Coil Kit
31A	Bearing, CE	117A	Cover, Top CE, Solid
31B	Bearing, DE	125	Cover, Brush Holder w/Gasket
32A	Bearing Bracket, CE	132	Cover, Opposite Conduit Box
32B	Bearing Bracket, DE	140	Conduit Box
34A	Bearing Cap, CE	140B	Conduit Box Adapter Kit
34B	Bearing Cap, DE	150A	Coiled Frame
37C	Bearing Seal, Labyrinth CE (when specified)	153	Shaft Thimble
37D	Bearing Seal, Adapter CE (when specified)	154	Bracket to Frame Stud
37E	Bearing Seal, Rubbing CE (when specified)	155	Lifting Lug Kit
37F	Bearing Seal, Labyrinth DE (when specified)	202	Space Heater Kit

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

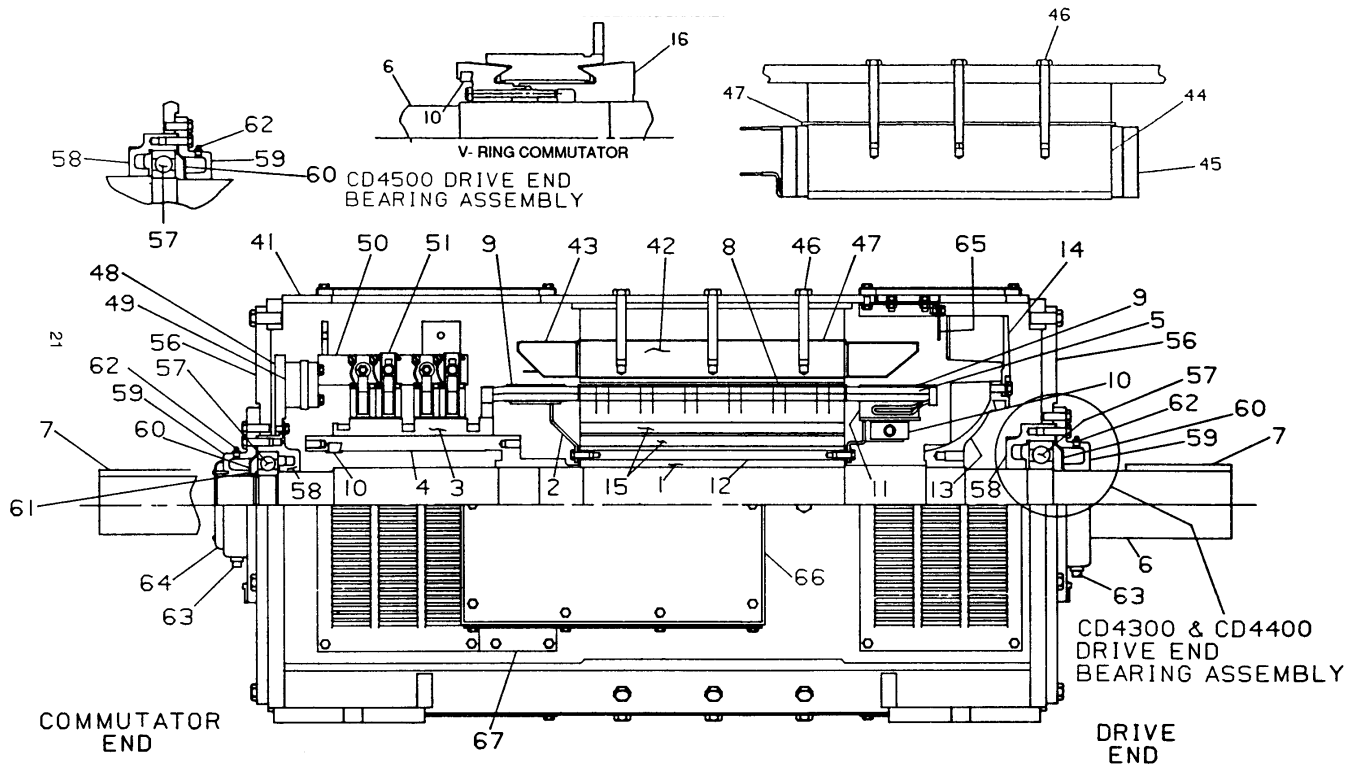
Types CD and MCD, Frames 4300 to 4700

Frame	Aprox. Net Weight		Aprox. Arm Net Weight	
	LBS.	KG	LBS.	KG
CD4350	3900	1770	1100	500
CD4352	4200	1910	1200	540
CD4354	4100	1860	1300	600
CD4355	4700	2130	1400	640
CD4357	4500	2040	1500	680
CD4358	5300	2400	1500	680
CD4359	5000	2270	1600	730
CD4362	6000	2720	1700	770
CD4363	5600	2540	1800	820
CD4366	6300	2860	1900	860
CD4454	5800	2630	1700	770
CD4457	6500	2950	1900	860
CD4460	7300	3310	2200	1000
CD4463	6300	2860	2400	1090
CD4464	8300	3760	2500	1130
CD4465	7000	3180	2500	1130
CD4468	7800	3540	2700	1230
CD4469	9500	4310	2800	1270
CD4473	8800	3990	3000	1360
CD4477	10000	4540	3200	1450
CD4559	9800	4450	2700	1230
CD4562	11100	5040	3100	1410
CD4566	12700	5760	3600	1630
CD4568	10400	4720	3700	1600
CD4570	11700	5310	4000	1810
CD4571	14500	6580	4100	1860
CD4575	13300	6030	4300	1980
CD4580	15200	6890	4500	2040
CD4670	14700	6670	4400	2000
CD4673	16100	7300	5000	2270
CD4674	15300	6940	5100	2310
CD4677	17900	8120	5700	2590
CD4678	16900	7670	5700	2590
CD4681	18700	8480	6200	2810
CD4682	19900	9030	6400	2900
CD4686	20600	9340	6500	2950
CD4773	18700	8480	5400	2450
CD4776	20800	9430	5900	2680
CD4780	23500	10660	6700	3040
CD4781	20100	9120	6700	3040
CD4784	21900	9930	6900	3130
CD4785	26100	11840	6900	3130
CD4789	24600	11160	7400	3360
CD4791	29700	13470	8200	3720
CD4793	27200	12340	8200	3720
CD4799	30800	13970	9300	4220

7-Medium DC



Type CD, Frames 4300, 4400 and 4500



LO. MISC. 95R00
DRAW 1

FIG. 2A TYPICAL CD4300, CD4400 & CD4500 MOTOR OR GENERATOR WITH BRUSH YOKE MOUNTED ON BEARING CARTRIDGE (BEFORE JUNE 1985) (FOURTH FROM THE LAST CHARACTER OF MODEL NUMBER IS "A" OR "B".)

Rotating Parts

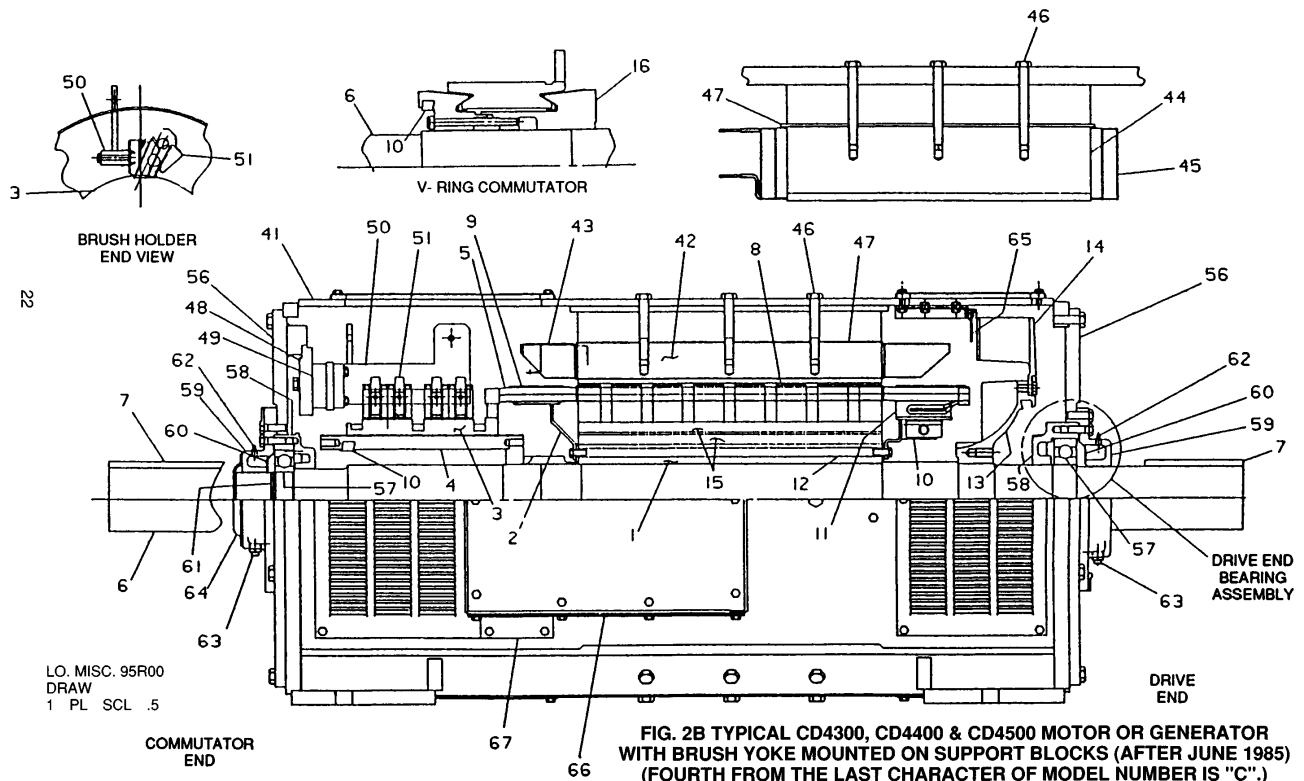
Ref. No.	Description
1	Armature Core
2	Armature Coil Support
3	Commutator (Glass-Banded)
4	Commutator Shell
5	Armature Coils
6	Shaft
7	Key
8	Glass Banding (Core)
9	Glass Banding (End Turns)
10	Balance Weight
11	Molded Equalizer or Armature Coil Support
12	Core Rivet
13	Fan Hub (Self-Vent Only)
14	Fan (Self-Vent. Only)
15	Axial Vent Holes
16	Commutator (V-Ring)

Stationary Parts

Ref. No.	Description
41	Magnet Frame
42	Main Pole
43	Main Coil
44	Commutating Pole
45	Commutating Coil
46	Pole Bolt
47	Pole Shims
48	Brush Holder Yoke
49	Insulation Block
50	Brush Holder Stud
51	Brush Holder & Spring
56	Bearing Bracket
57	Ball Bearing
58	Bearing Cartridge
58	Bearing Cap
60	Grease Metering Plate
61	Bearing Retaining Ring
62	Grease Fitting
63	Grease Relief Plug
64	Shaft Cover
65	Fan Baffle (Self-Vent. Only)
66	Conduit Box
67	Conduit Box Adapter

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Type CD, Frames 4300, 4400 and 4500



Rotating Parts

Ref. No.	Description
1	Armature Core
2	Armature Coil Support
3	Commutator (Glass-Banded)
4	Commutator Shell
5	Armature Coils
6	Shaft
7	Key
8	Glass Banding (Core)
9	Glass Banding (End Turns)
10	Balance Weight
11	Molded Equalizer Or Armature Coil Support
12	Core Rivet
13	Fan Hub (Self-Vent. Only)
14	Fan (Self-Vent. Only)
15	Axial Vent Holes
16	Commutator (V-Ring)

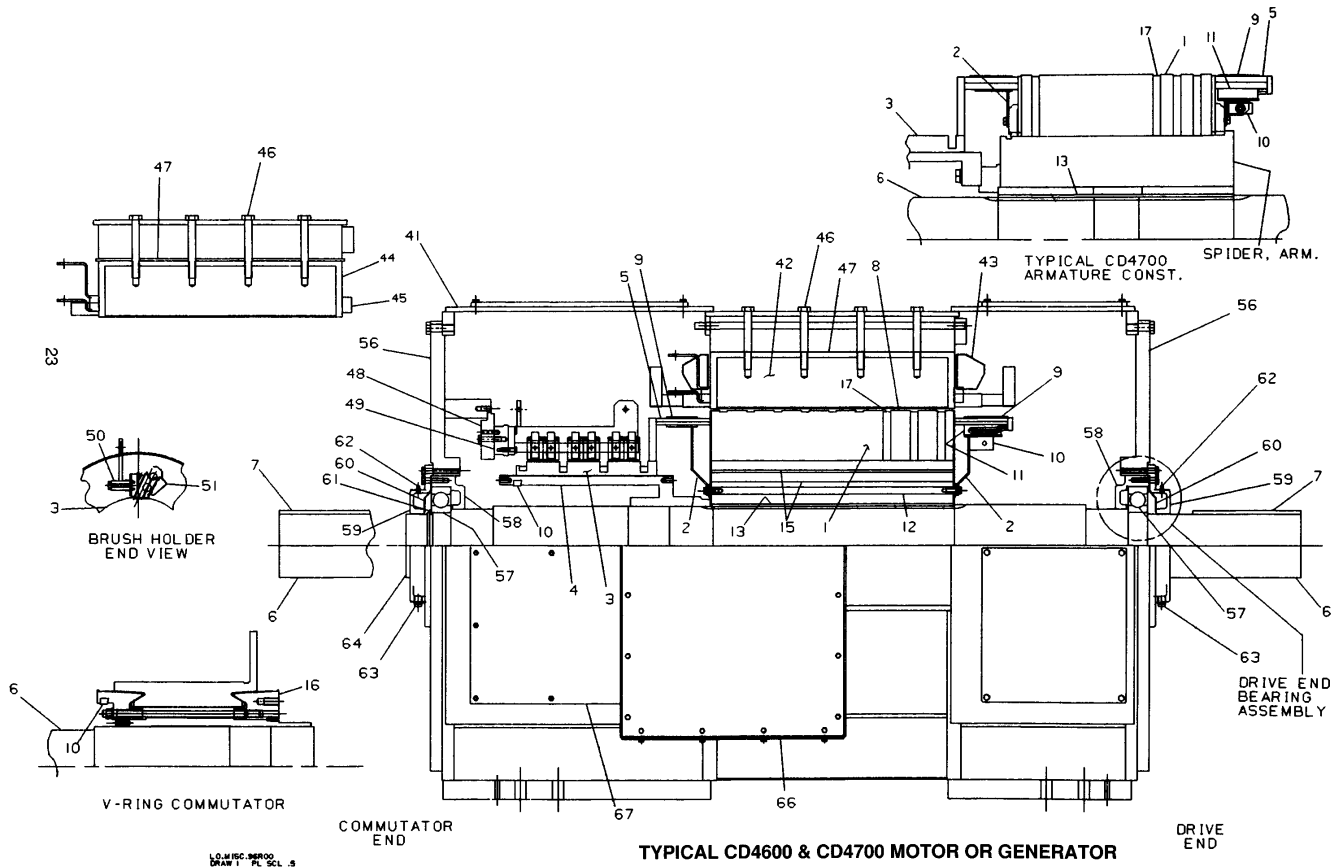
Stationary Parts

Ref. No.	Description
41	Magnet Frame
42	Main Pole
43	Main Coil
44	Commutating Pole
45	Commutating Coil
46	Pole Bolt
47	Pole Shims
49	Brush Holder Yoke
49	Insulation Block
50	Brush Holder Stud
51	Brush Holder & Spring
56	Bearing Bracket
57	Ball Bearing
58	Bearing Cartridge
59	Bearing Cap
60	Grease Metering Plate
61	Bearing Retaining Ring
62	Grease Fitting
63	Grease Relief Plug
64	Shaft Cover
65	Fan Baffle (Self-Vent. Only)
66	Conduit Box
67	Conduit Box Adapter

7-Medium DC



Type CD, Frames 4600 and 4700



Rotating Parts

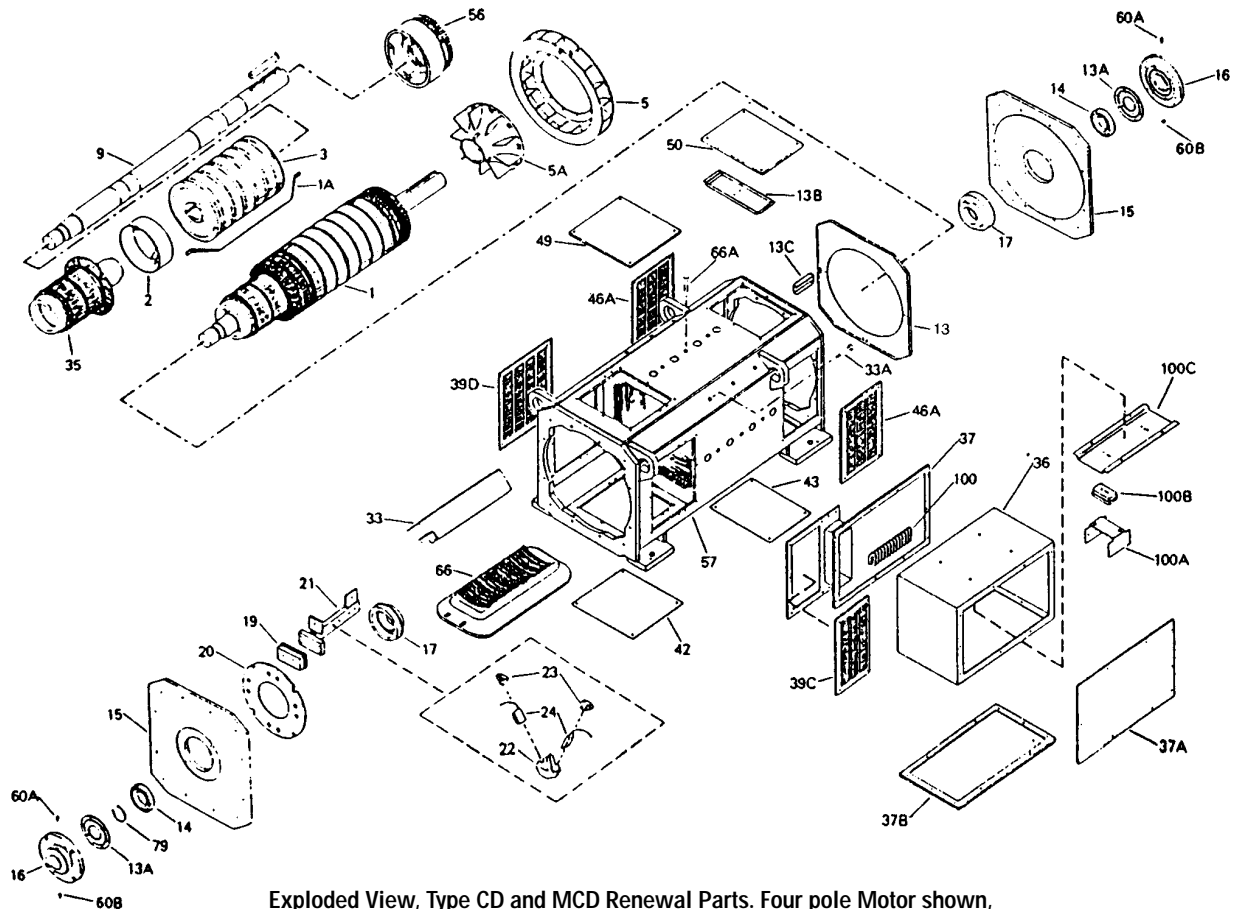
Ref. No.	Description
1	Armature Core
2	Armature Coil Support
3	Commutator (Glass-Banded)
4	Commutator Shell
5	Armature Coils
6	Shaft
7	Key
8	Glass Banding (Core)
9	Glass Banding (End Turns)
10	Balance Weight
11	Molded Equalizer Or Armature Coil Support
12	Core Rivet
13	Armature Core Key
15	Axial Vent Holes
16	Commutator (V-Ring)
17	Radial Ventilation Ducts

Stationary Parts

Ref. No.	Description
41	Magnet Frame
42	Main Pole
43	Main Coil
44	Commutating Pole
45	Commutating Coil
46	Pole Bolt
47	Pole Shims
48	Brush Holder Yoke
49	Insulation Block
50	Brush Holder Stud
51	Brush Holder & Spring
56	Bearing Bracket
57	Ball Bearing
58	Bearing Cartridge
59	Bearing Cap
60	Grease Metering Plate
61	Bearing Retaining Ring
62	Grease Fitting
63	Grease Relief Plug
64	Shaft Cover
66	Conduit Box
67	Conduit Box Adapter

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Type CD, Frames 4300–4500 (Four Pole) Type CD, Frames 4600–4700 (Six Pole)



Exploded View, Type CD and MCD Renewal Parts. Four pole Motor shown, but parts identification are typical to both Four and Six pole Motors.

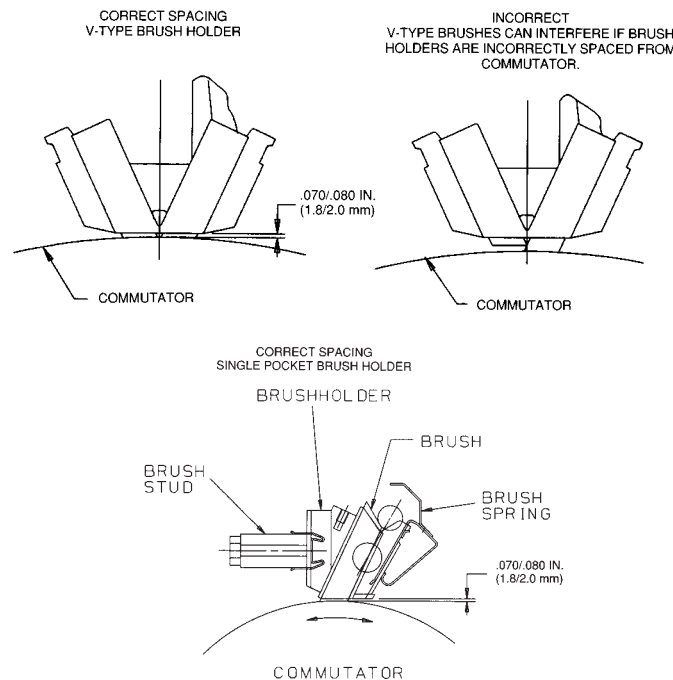
Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
1	Armature	20	Brushholder Yoke	46A	Cover, Side Louvered-DE
1A	Armature Coil	21	Brushholder Stud	49	Cover, Top-CE
2	Armature Coil Support	22	Brushholder (w/Spring)	50	Cover, Top-DE
3	Armature Core	23	Brushholder Spring	56	Equalizer Coil
5	Armature Fan	24	Brush	57	Frame
5A	Armature Fan Hub	33	Comm Coil & Pole	60A	Grease Fitting
9	Armature Shaft	33A	Comm Coil & Pole Bolt	60B	Grease Pipe Plug
13	Baffle, Fan	35	Commutator	66	Main Coil & Pole
13A	Baffle, Metering Plate	36	Conduit Box	66A	Main Coil & Pole Bolt
13B	Baffle, Handhole Fan	37	Conduit Box Adapter	79	Retaining Ring
13C	Baffle, Hand Hole Bracket	37A	Conduit Box Cover-End	100	Terminal Board
14	Bearing	37B	Conduit Cox Cover-Bottom	100A	Line Adapter, Arma Series Fld.
15	Bearing Bracket	39C	Cover, Adapter Conduit-CE	100B	Line Adapter, Ins. Blk.
16	Bearing Cap	39D	Cover, Side Louvered-CE	100C	Line Adapter Support
17	Bearing Cartridge	42	Cover, Bottom-CE		
19	Brushholder Stud Ins Blk	43	Cover, Bottom-DE		

7-Medium DC



Type CD and MCD, Frames 4300–4700

CD4000 V – Holder Style Brush Rigging Identification of Brushholders, Springs, and Brushes	
.375 x 1.50 Brush	
36A172040AAG03	Brushholder with Springs
36C702000AA003	Brushholder only
36B472000AA003	Springs Only (0A3) 3.0 lbs max. 2.16 lbs min.
36A164454DAP01	Brush T-563 Grade .375 x 1.5 x 2.5 (1.25 is min. length)
36A164454DAP05	Brush T-606 Grade Papermill
36A164454DAP02	Brush T-566 Grade Extruder
.500 x 1.50 Brush	
36A172040AAG02	Brushholder with Springs
36C702000AA002	Brushholder only
36B472000AA002	Springs Only (0A2) 4.0 lbs max. 2.7 lbs min.
36A164455DAP01	Brush T-563 Grade .50 x 1.5 x 2.5 (1.25 is min. length)
36A164455DAP05	Brush T-606 Grade Papermill
36A164455DAP02	Brush T-566 Grade Extruder
.625 x 1.50 Brush	
36A172040AAG01	Brushholder with Springs
36C702000AA001	Brushholder only
36B472000AA001	Springs Only (0A1) 5.75 lbs max. 3.4 lbs min.
36A164456DAP01	Brush T-563 Grade .625 x 1.5 x 2.5 (1.25 is min. length)
36A164456DAP05	Brush T-606 Grade Papermill
36A164456DAP02	Brush T-566 Grade Extruder



Type CD and MCD, Frames 6000–6200, 6700–6900

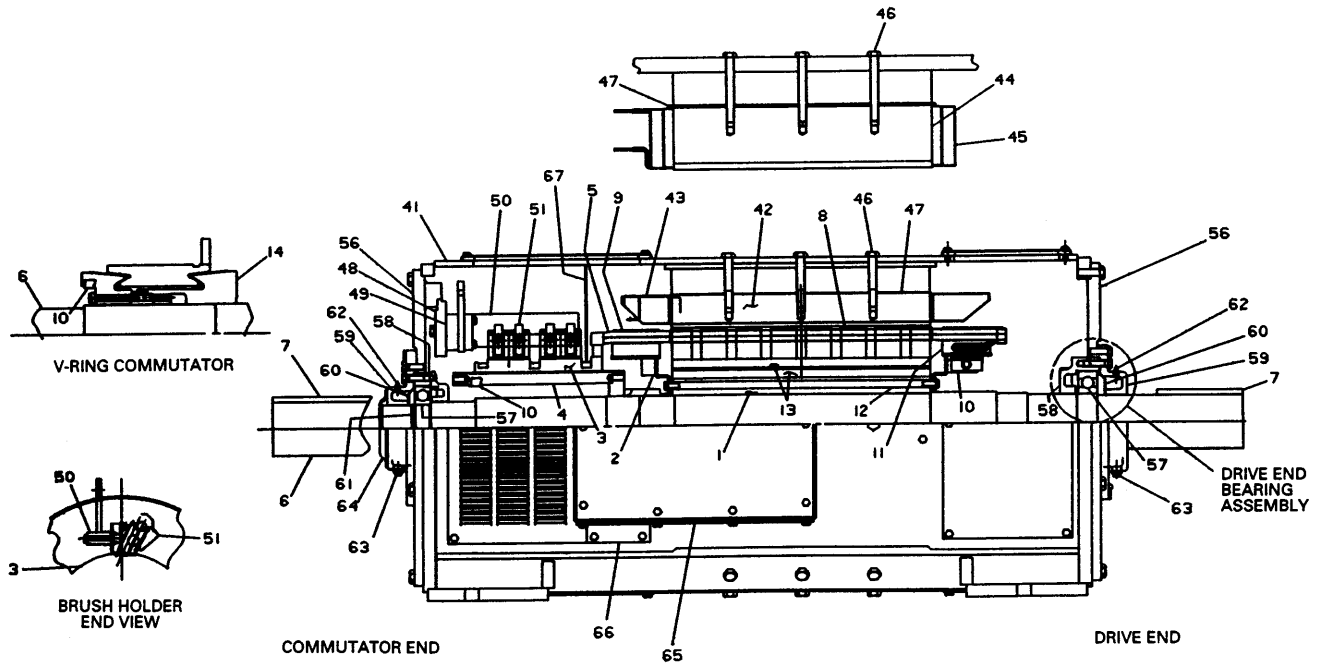
Typical Weights**									
Frame	Approx. Net Weight		Approx. Arm Net Weight		FRAME	Approx. Net Weight		Approx. Arm Net Weight	
	lbs.	kgs.	lbs.	kgs		lbs.	kgs	lbs.	kgs
CD6050	3900	1770	1100	500	CD6766	12100	5490	3565	1620
CD6052	4200	1910	1200	540	CD6770	14000	6350	3915	1780
CD6054	4100	1860	1300	600	CD6771	12400	5630	3835	1740
CD6055	4700	2130	1400	640	CD6774	15200	6900	4410	2000
CD6057	4500	2040	1500	680	CD6776	14000	6350	4185	1900
CD6058	5300	2400	1500	680	CD6778	15600	7080	4685	2130
CD6059	5000	2270	1600	730	CD6779	17200	7810	4920	2230
CD6062	6000	2720	1700	770	CD6785	17600	7990	5205	2360
CD6063	5600	2540	1800	820	CD6873	16000	7260	4730	2150
CD6066	6300	2860	1900	860	CD6876	17700	8040	5120	2320
CD6154	5800	2630	1700	770	CD6881	20300	9220	6090	2560
CD6157	6500	2950	1900	860	CD6882	16800	7630	5250	2380
CD6160	7300	3310	2200	1000	CD6885	18500	8400	5640	2860
CD6163	6300	2860	2400	1090	CD6887	23500	10670	7440	3380
CD6164	8300	3760	2500	1130	CD6890	21000	9530	6610	3000
CD6165	7000	3180	2500	1130	CD6896	23500	10670	7960	3610
CD6168	7800	3540	2700	1230	CD6977	23400	10620	5925	2690
CD6169	9500	4310	2800	1270	CD6981	26000	11800	6685	3030
CD6173	8800	3990	3000	1360	CD6985	28700	13030	7540	3420
CD6177	10000	4540	3200	1450	CD6986	24300	11030	6480	2940
CD6259	9800	4450	2700	1230	CD6990	26900	12210	7240	3290
CD6262	11100	5040	3100	1410	CD6991	31700	14390	8770	3980
CD6266	12700	5760	3600	1630	CD6996	29600	13440	8095	3680
CD6268	10400	4720	3700	1600	CD6999	34400	15620	9325	4230
CD6270	11700	5310	4000	1810					
CD6271	14500	6580	4100	1860					
CD6275	13300	6030	4300	1980					
CD6280	15200	6890	4500	2040					

** Approximate weights for typical motors in each frame size. Does not include weight of accessories such as tachometers, blowers, heat exchangers, etc. For specific weights, refer to certified outline.

7-Medium DC



Type CD, Frames 6000 and 6200



Typical CD6000 - CD6200 Motor or Generator

Rotating Parts

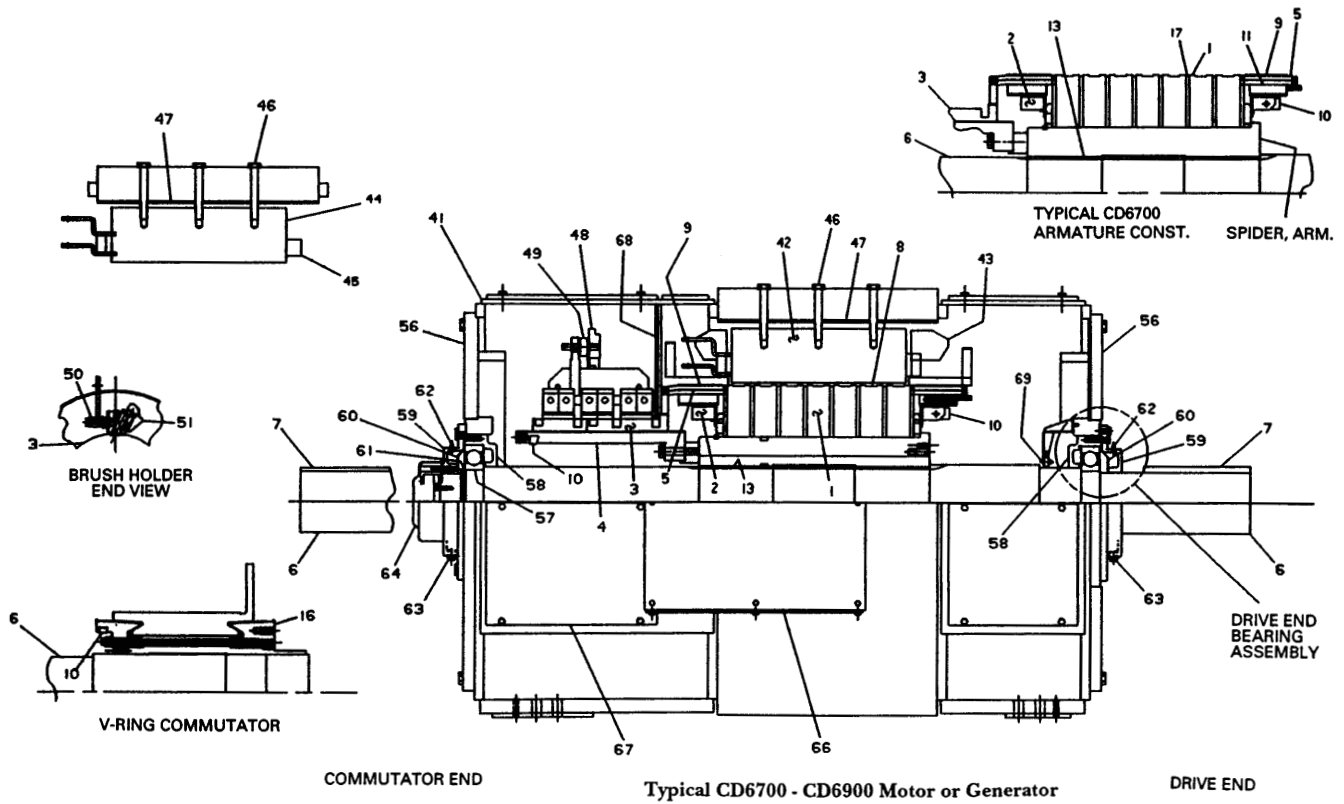
Ref. No.	Description
1	Armature Core
2	Armature Coil Support
3	Commutator (Glass-Banded)
4	Commutator Shell
5	Armature Coils
6	Shaft
7	Key
8	Glass Banding (Core)
9	Glass Banding (End Turns)
10	Balance Weight
11	Molded Equalizer or Armature Coil Support
12	Core Rivet
13	Axial Vent Holes
14	Commutator (V-Ring)

Stationary Parts

Ref. No.	Description
41	Magnet Frame
42	Main Pole
43	Main Coil
44	Commutating Pole
45	Commutating Coil
46	Pole Bolt
47	Pole Shims
48	Brush Holder Yoke
49	Insulation Block
50	Brush Holder Stud
51	Brush Holder & Spring
56	Bearing Bracket
57	Ball Bearing
58	Bearing Cartridge
59	Bearing Cap
60	Grease Metering Plate
61	Bearing Retaining Ring
62	Grease Fitting
63	Grease Relief Plug
64	Shaft Cover
66	Conduit Box
67	Air Baffle (on CD6000 only)

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Type CD, Frames 6700–6900



Rotating Parts

Ref. No.	Description
1	Armature Core
2	Armature Coil Support
3	Commutator (Glass-Banded)
4	Commutator Shell
5	Armature Coils
6	Shaft
7	Key
8	Glass Banding (Core)
9	Glass Banding (End Turns)
10	Balance Weight
11	Molded Equalizer or Armature Coil Support
13	Armature Core Key
16	Commutator (V-Ring)
17	Radial Ventilation Ducts

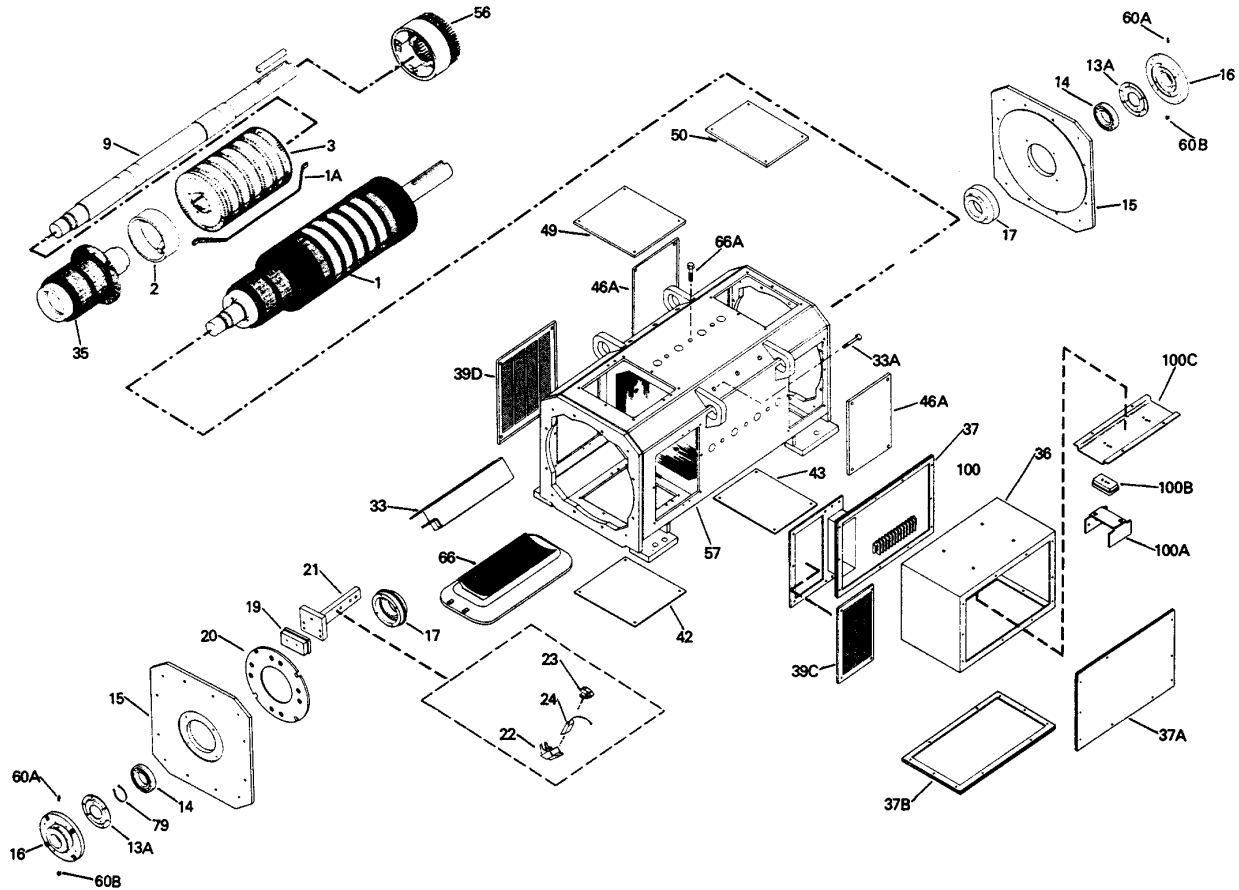
Stationary Parts

Ref. No.	Description
41	Magnet Frame
42	Main Pole
43	Main Coil
44	Commutating Pole
45	Commutating Coil
46	Pole Bolt
47	Pole Shims
48	Brush Holder Yoke
49	Insulation Block
50	Brush Holder Stud
51	Brush Holder & Spring
56	Bearing Bracket
57	Ball Bearing
58	Bearing Cartridge
59	Bearing Cap
60	Grease Metering Plate
61	Bearing Retaining Ring
62	Grease Fitting
63	Grease Relief Plug
64	Shaft Cover
66	Conduit Box
66	Conduit Box Adapter
67	Air Baffle (on CD6200 only)

7-Medium DC



Type CD, Frames 6000–6200 (Four Pole) Type CD, Frames 6700–6900 (Six Pole)



Exploded View, Type CD and MCD Renewal Parts. Four pole Motor shown, but parts identification are typical to both Four and Six pole Motors.

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
1	Armature	23	Brushholder Spring	49	Cover, Top–CE
1A	Armature Coil	24	Brush	50	Cover, Top–DE
2	Armature Coil Support	33	Comm Coil & Pole	56	Equalizer Coil
3	Armature Core	33A	Comm Coil & Pole Bolt	57	Frame
9	Armature Shaft	35	Commutator	60A	Grease Fitting
13A	Baffle, Metering Plate	36	Conduit Box	60B	Grease Pipe Plug
14	Bearing	37	Conduit Box Adapter	66	Main Coil & Pole
15	Bearing Bracket	37A	Conduit Box Cover–End	66A	Main Coil & Pole Bolt
16	Bearing Cap	37B	Conduit Box Cover–Bottom	79	Retaining Ring
17	Bearing Cartridge	39C	Cover, Adapter Conduit–CE	100	Terminal Board
19	Brushholder Stud Ins. Blk.	39D	Cover, Side Louvered–CE	100A	Line Adapter, Arma/Series Fld.
20	Brushholder Yoke	42	Cover Bottom–CE	100B	Line Adapter, Ins. Blk.
21	Brushholder Stud	43	Cover Bottom–DE	100C	Line Adapter Support
22	Brushholder (w/Spring)	46A	Cover, Side Louvered–CE		

Type CD and MCD, Frames 5000–9000

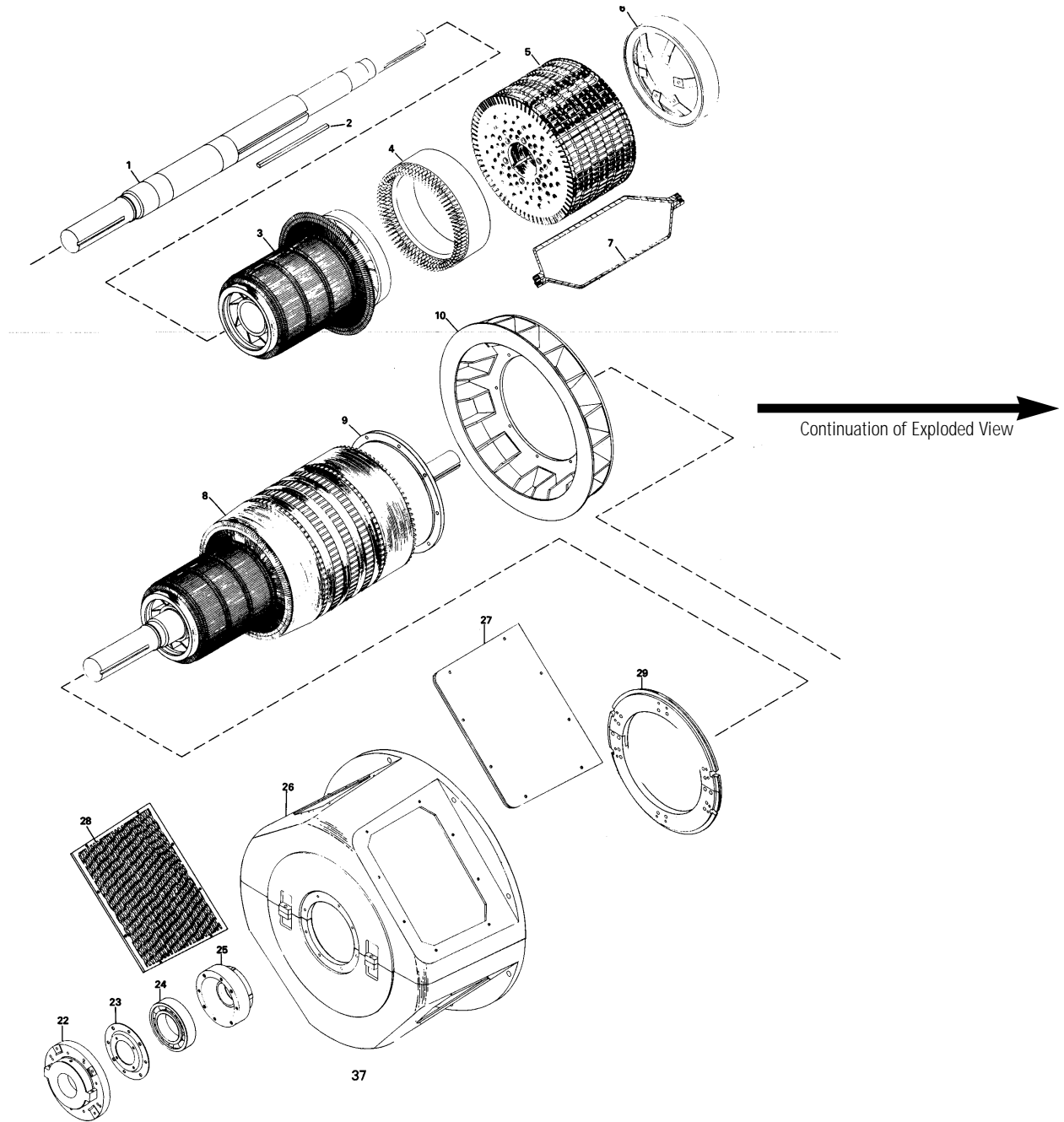
Type CD, Frames 580–680

Typical Weights**				
Frame Size	Pounds		Kilograms	
	Armature Only	Complete Motor	Armature Only	Complete Motor
584	620	2600	280	1200
585	700	2900	320	1300
586	800	3400	360	1500
683	1000	4000	450	1800
684	1100	4600	500	2100
685	1300	5300	600	2400
5423	1400	5700	640	2600
5545	1800	7200	820	3300
6453	2000	8100	900	3700
6665	2900	11900	1300	5400
7452	2700	10500	1200	4800
7666	4100	15000	1900	7200
8482	4000	14800	1800	6700
8836	6900	25500	3100	11600
9542	4900	17000	2200	7700
9966	9500	33100	4300	15000

**Weights for typical machines in each frame size. For specific weights, refer to certified outline.

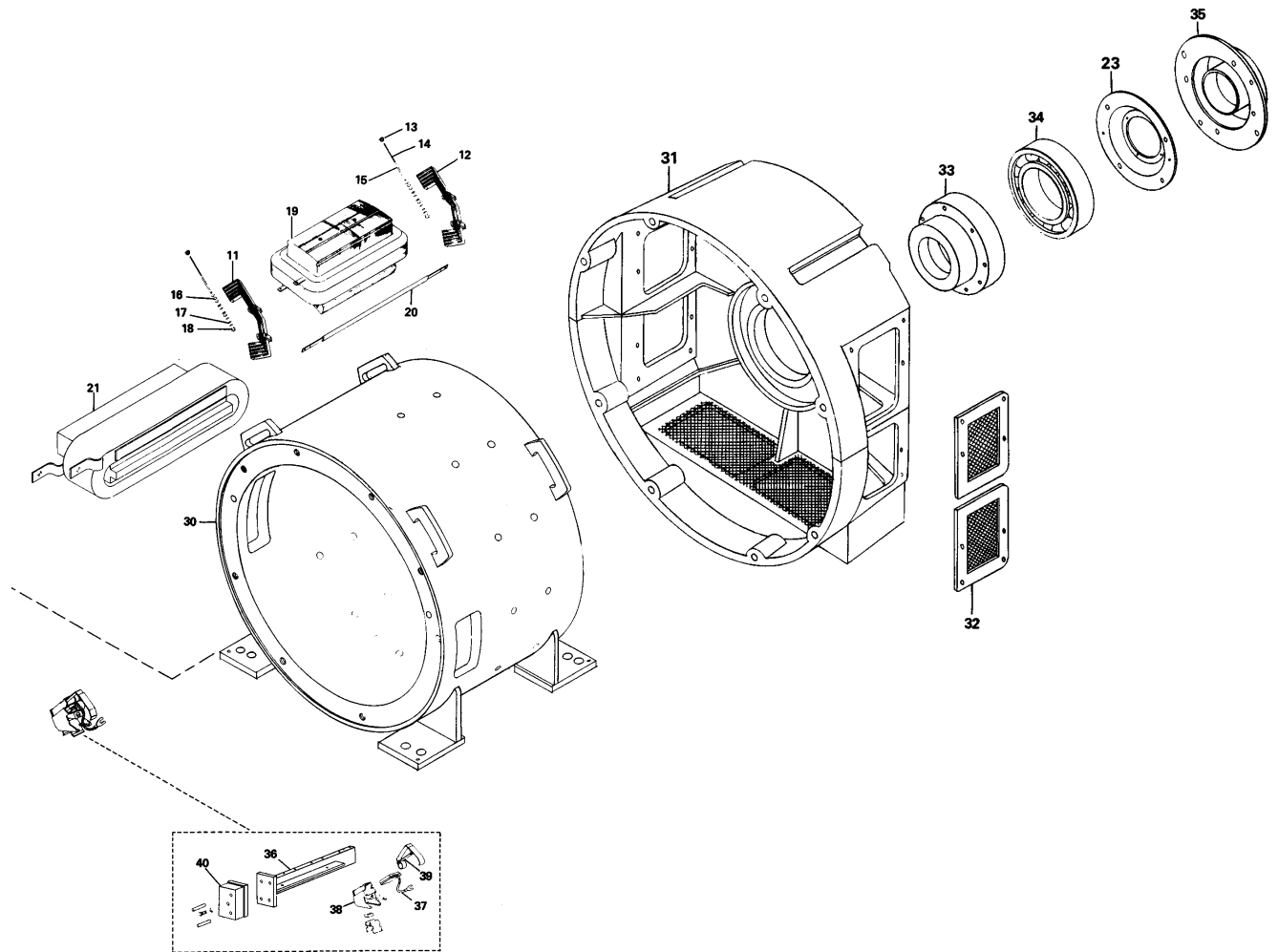


Type CD, Frames 5000–9000



Exploded View, Type CD and MCD Renewal Parts.
See facing page for descriptions.

Type CD, Frames 5000–9000



Ref. No.	Description
1	Shaft
2	Key
3	Commutator
4	Equalizer Coils—Molded
5	Armature Core
6	Coil Support (Drive End)
7	Armature Coil
8	Armature
9	Fan Hub
11	Pole Face Bar Connections (Commutator End)
12	Pole Face Bar Connections (Drive End)
13	"T" Nut
14	Stud
15	Insulating Tube
18	Insulating Spacer
17	Belleville Washer
18	Lock Nut
19	Main Coil And Pole And Pole Face Bar Assembly
20	Pole Face Bar
21	Commutating Coil L And Pole Assembly

Ref. No.	Description
22	Bearing Cap (Commutator End)
23	Grease Metering Plate
24	Bearing (Commutator End)
25	Bearing Cartridge Commutator End
28	Bearing Bracket Commutator End
27	Cover, Upper (Commutator End)
28	Screen Cover, Lower (Commutator End)
29	Brushholder Yoke
30	Magnet Frame
31	Bearing Bracket (Drive End)
32	Screen Cover, Side (Drive End)
33	Bearing Cartridge (Drive End)
34	Bearing (Drive End)
35	Bearing Cap (Drive End)
36	Stud, Brushholder
37	Brush, Carbon
38	Brushholder
39	Brushholder Spring
40	Insulating Block—Brushholder Stud

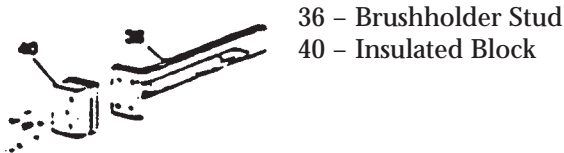
7-Medium DC



Identification of Brushholders, Springs, and Brushes

Type CD and MCD, Frames 5000–9000
Type CD, Frames 580–680

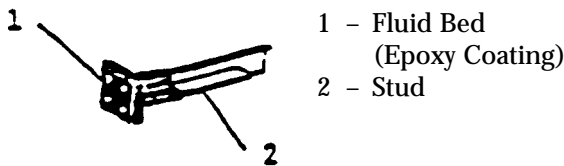
Ask customer for type of stud being used and thickness of brush. Use this chart for: **Insulated block & stud** (2 piece design)



3/4" Thick Brush	
36A160421AAG02	Brushholder w/Spring
36B465481AA001	Spring Only
36A164451AAP21	Brush (Standard)
36A164451AAP05	Brush (Papermill Use Only)
7/8" Thick Brush	
36A160422AAG02	Brushholder w/Spring
36B465482AA001	Spring Only
36A164452AAP21	Brush (Standard)
36A164452AAP05	Brush (Papermill Use Only)
1" Thick Brush	
36A160423AAG02	Brushholder w/Spring
36B465483AA001	Spring Only
36A164453AAP21	Brush (Standard)
36A164453AAP05	Brush (Papermill Use Only)

Type CD and MCD, Frames 5000–9000
Type CD, Frames 580–680

Ask customer for type of stud being used and thickness of brush. Use this chart for: **Fluid Bed Stud** (1 piece design)



3/4" Thick Brush	
36A161101AAG01	Brushholder w/Spring
36B465081AA001	Spring Only
36A161401AAP20	Brush (Standard)
36A161401AAP06	Brush (Papermill Use Only)
7/8" Thick Brush	
36A161102AAG01	Brushholder w/Spring
36B465082AA001	Spring Only
36A161402AAP20	Brush (Standard)
36A161402AAP06	Brush (Papermill Use Only)
1" Thick Brush	
36A161103AAG01	Brushholder w/Spring
36B465083AA001	Spring Only
36A161403AAP20	Brush (Standard)
36A161403AAP06	Brush (Papermill Use Only)

7-Medium DC

Type MD, Frames 402 to 423

Principal Renewal Parts

Give Description, Cat. No. and Quantity of Each Item Required

Ref. No.	Description
1	Exciting field coil
5	Commutating field coil
9	Armature with frame heads, bearing cap and bearings
10	Armature
11	Armature coil
12	Set of armature rewinding insulation
14	Shaft with key
16	Commutator
17	Set of copper and mica segments, finished and bound
18	Combination inner and outer mica cone for front and back of commutator
19	Mica collar under segments
21	Roller bearing
32	◇ Brush holder with pressure arms and insulated studs (Position_____) see ◇ footnote
32	◇ Brush holder with pressure arms and insulated studs (Position_____) see ◇ footnote
33	Pressure arm with tip
34	Insulator for stud
35	Carbon brush with pigtail and terminal
ø 41	Set of cables

ø Not Shown in illustration.

Renewal Parts Available if Required

Ref. No.	No. Req.	Description	Ref. No.	No. Req.	Description
2	△	Spring flange for exciting field coil	27	1	Split retaining ring for bearing or mounting sleeve
3	△	Metal pad for exciting field coil	28	1	Lock nut for lower mounting sleeve
4	△	Insulating pad for exciting field coil	29	1	Spacing collar, upper
6	△	Spring flange for commutating field coil	30	1	Spacing collar, lower
7	△	Metal pad for commutating field coil	31	1	Shrink ring for bearing
8	△	Insulating pad for commutating field coil	36	△	Hinge pin for ratchet
13	△	Set of punches	37	2	§ Pinion key
15	2	§ Thrust collar with grease deflector	38	2	Pinion nut
20	2	§ Frame head with bearing cap and grease fittings	39	2	Washer for pinion nut
22	2	Bearing cap with thrust bushing	ø 40	△	‡ Rubber bushing
23	2	§ Thrust bushing for bearing cap	ø 42	△	† Cover for frame over commutator
24	2	§ Thrust ring for frame head	43	△	Laminated pole piece for exciting field coil
25	1	Mounting sleeve, upper, including Ref. 27	44	△	Commutating pole piece
26	1	Mounting sleeve, lower	45	1	Fan for armature

‡ Specify cable hole size.

△ Quantity variable.

§ Specify whether for pinion end or commutator end.

† Specify whether right- or left-hand facing commutator end.

◇ Brush holder position, facing commutator end. The position (a to h) must be filled in on line for Ref. No. 32.

(a) Right-hand.

(b) Left-hand.

(c) Upper-right- or lower left-hand.

(d) Upper left- or lower right-hand.

(e) Top or bottom or upper left- or lower right hand.

(f) Upper left- or right- or upper middle right- or lower middle left-hand.

(g) Upper right- or lower left- or upper middle left- or lower middle right-hand.

(h) Top or bottom, or upper right- or lower left-hand.

Type MD, Frames 402 to 408

Standard Renewal Parts Identification

Renewal Parts	MD402	Qty.	MD403	Qty.	MD404	Qty.	MD406	Qty.	MD407	Qty.	MD408	Qty.
Armature Coils	2721244G02	1	2721160G02	1	2721099G02	1	2721094G02	1	—	1	2721085G04	1
Shaft	2721248G01	1	2721158-001	1	2721100G01	1	2721129G01	1	—		2721072G01	1
Coil & Pole – Comm	2721249G65	2	2721154G65	2	2721149G65	2	2721092G65	2	2721505G65	2	2721027G65	2
Coil Only – Comm	2721249G61	2	2721154G61	2	2721149G61	2	2721092G61	2	2721505G61	2	2721027G61	2
Coil & Pole –Series	2721250G65	4	2721155G65	4	2721150G65	4	2721093G65	4	2721506G65	4	2721028G65	4
Coil Only –Series	2721250G61	4	2721155G61	4	2721150G61	4	2721093G61	4	2721506G61	4	2721028G61	4
Coil & Pole –Shunt	2721447G65	4	2721280G65	4	2721595G65	4	2721664G65	4	—	4	2721563G65	4
Coil Only – Shunt	2721447G61	4	2721280G61	4	2721595G61	4	2721664G61	4	—	4	2721563G61	4
Coil & Pole –Compound	2721260G65	4	2721283G65	4	2721266G65	4	2721261G65	4	4728401G65	4	2721236G65	4
Coil Only – Compound	2721260G61	4	2721283G61	4	2721266G61	4	2721261G61	4	4728401G61	4	2721236G61	4
CE/DE Bearing	8832705-001	2	751722-005	2	751722-005	2	7517722-007	2	—		751722-009	2
Brushholder & Spring												
–Right Hand Side	6x523	1	4750665-001	1	6x104	1	6x104	1	—		6x531	1
–Left Hand Side	6x524	1	4750665-001		6x105	1	6x105	1	—		6x532	1
Spring only												
Brush	6709782-P01		6709782-P01		8809558-P01		8809558-P01		—		6709784-P01	
CE Insp. Cover												
Lockwasher – Spring	36A164222AA001	2	36A164222AA001	2	36A164222AA001	2	36A164222AA002	2	—		36A164222AA003	2
Lockwasher–Flat	431832-001	2	2706929-001	2	2906929-001	2	419082-001	2	—		4714021-101	2
Pinion Nut	8815254-001	2	2706022-001	2	2706022-001	2	8815257-001	2	—		2706023-001	2
Cable Bushings												
Series Motor	41B533331-013	8	41B533331-013	8	41B453331-013	8	41B533331-006	8	—		41B533331-009	8
Shunt Motor–Field	41B533331-013	8	41B533331-013	8	41B533331-013	8	41B533331-003	4	—		41B533331-004	4
Armature	—		—		—		41B533331-006	4	—		41B533331-006	4
Compound Motor												
Field/Armature	41B533331-013	8	41B533331-103	8	41B533331-013	8	41B533331-006	8	—		41B533331-009	8
Series Lead	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4	—		41B533331-001	4



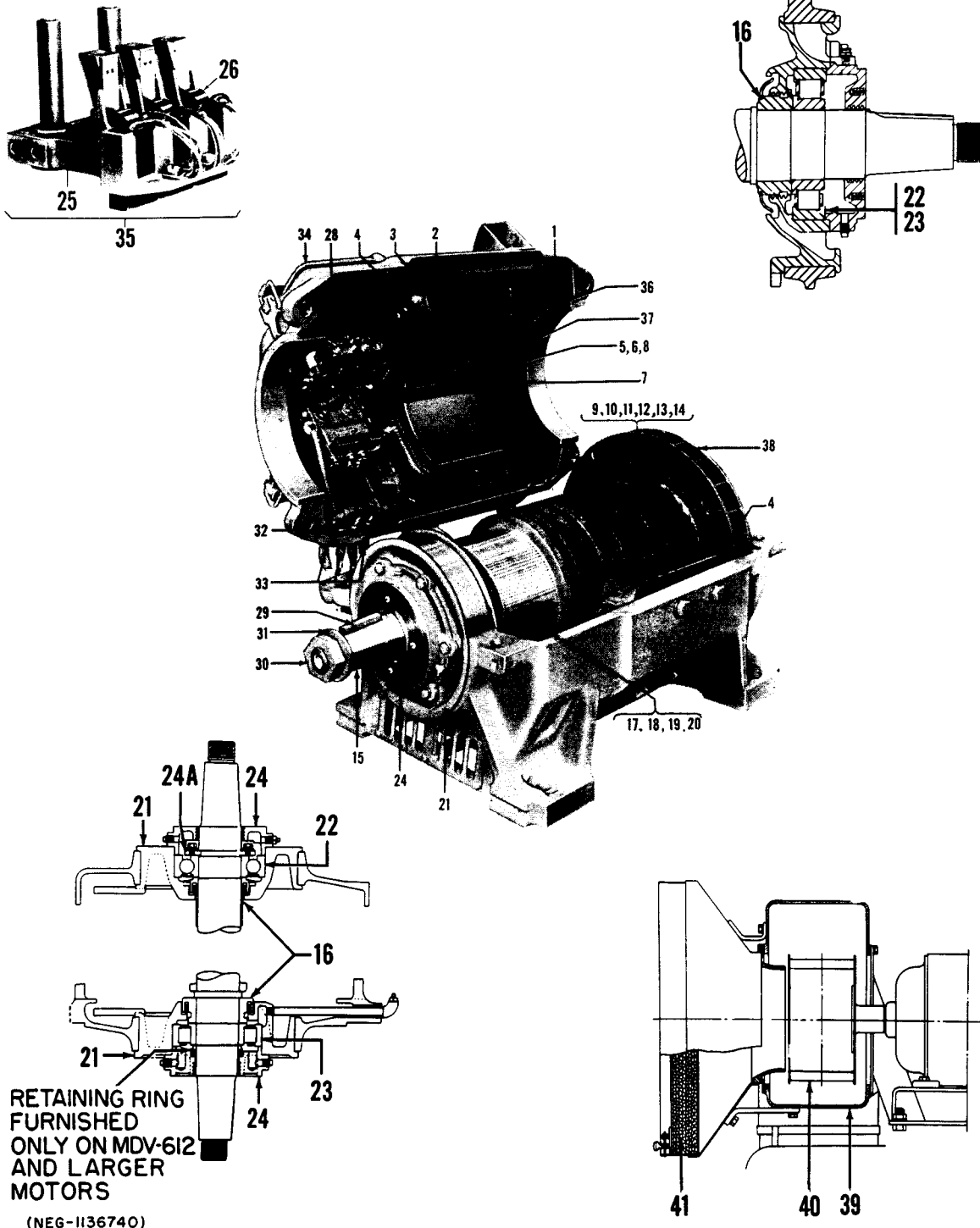
Type MD, Frames 410 to 420

Standard Renewal Parts Identification

Renewal Part	MD410	Qty.	MD412	Qty.	MD414	Qty.	MD416	Qty.	MD418	Qty.	MD420	Qty.
Armature Coils	2721029G02	1	4722976G02	1	2721183G02	1	2721148G02	1	2721193G02	1	2721875G02	1
Shaft	2721125G01	1	2721175G01	1	2721185G01	1	272136AAG01	1	2721529G01		2721049G01	1
Coil & Pole – Comm	2721018G65	2	41C631195G65	2	41C631174G65	2	2721128G65	2	4722726G65	2	2721394G65	2
Coil Only – Comm	2721018G61	2	41C631195G61	2	41C631174G61	2	2721128G61	2	4722726G61	2	2721394G61	2
Coil & Pole –Series	2721019G65	4	41C631209G65	2	41C631214G65	2	2721130G65	4	2721190G65	4	2721209G65	4
Coil Only –Series	2721019G61	4	41C631209G61	2	41C631214G61	2	2721130G61	4	2721190G61	4	2721209G61	4
Coil & Pole –Shunt	2721281G65	4	2721326G65	4	2721343G65	4	2721430G65	4	2721190G65	4	2721345G65	4
Coil Only – Shunt	2721281G61	4	2721326G61	4	2721343G61	4	2721430G61	4	2721190G61	4	2721345G61	4
Coil & Pole –Compound	41C631223G65	4	41C631207G65	2	41C631176G65	2	2721253G65	4	2721334G65	4	2721229G65	4
Coil Only – Compound	41C631223G61	4	41C631207G61	2	41C631176G61	2	2721253G61	4	2721334G61	4	2721229G61	4
CE/DE Bearing	6x515	2	751722–010	2	8832705AB016	2	8832705AB017	2	8832705AB020	2	8832705AB022	2
Brushholder & Spring												
–Right Hand Side	6x106	1	907A683AG001	1	747939G07		747926G01		2721046G03		754124G01	
–Left Hand Side	6x106	1	747916G13	1	747939G10		747926G02		2721046G01		754124G02	
Spring only												
Brush	8809563–P01		6709782–P01		6709764–P01		6709784–P01		8809553–P01		6709741–P01	
Lockwasher – Spring	36A164222AA004	2	36A164222AA005	2	36A164222AA006	2	36A164222AA007	2	36A164222AA009	2	36A164222AA009	2
Lockwasher–Flat	435173–001	2	434161–001	2	8809867–001	2	433635–001	2	433635–001	2	433636–001	2
Pinion Nut	2706024–001	2	2706043–001	2	2706025–001	2	2706026–001	2	6709539–001	2	6709762–001	2
Cable Bushings												
Series Motor	41B533331–009	8	717502–001	8	41B533331–020	8	41B453331–010	12	41B533331–022	12	2702930–001	4
Shunt Motor	41B533331–004	4	41B533331–020	4	422356–001	4	422356–001	4	41B533331–024	4	2702930–001	2
	41B533331–009	4	717502–001	4	41B533331–020	4	41B533331–010	8	41B533331–022	12	422356–001	2
Compound Motor	41B533331–013	4	422356–001	4	422356–001	4	422356–001	4	422356–001	8	422356–001	2
	41B533331–009	8	717502–001	8	41B533331–20	8	41B533331–010	12	41B533331–022	12	2702930–001	4
Field/Armature	41B533331–013	8	41B533331–103	8	41B533331–013	8	41B533331–006	8	—————		41B533331–009	8
Series Lead	41B533331–001	4	41B533331–001	4	41B533331–001	4	41B533331–001	4	—————		41B533331–001	4

7-Medium DC

Type MD, Frames 602 to 624



Exploded View, Type MD 602-624 Renewal Parts.

See following page for descriptions.



Type MD, Frames 602 to 624

Principal Renewal Parts

Give Description, Cat. No. and Quantity of Each Item Required

Ref. No.	Description
1	Exciting field coil
5	Commutating field coil
9	Armature with frame heads, bearing cap and bearings
10	Armature
11	Armature coil
12	Equalizer coil
13	Set of armature rewinding insulation
14	Set of punchings
15	Shaft with keys
17	Commutator
18	Set of copper and mica segments, finished and bound
19	Combination inner and outer mica cone for front and back of commutator
20	Mica collar under segments
22	Ball or roller bearing, commutator end
23	Roller bearing, pinion end
25	◇ Brush holder with spring assembly and insulated studs (Position____) see ◇ footnote
25	◇ Brush holder with spring assembly and insulated studs (Position____) see ◇ footnote
26	Constant pressure spring assembly
*27	Insulated stud
28	Carbon brush with pigtail and terminal
33	Set of cables
35	Complete conversion kit

Renewal Parts Available if Required

Ref. No.	No. Req.	Description	Ref. No.	No. Req.	Description
2	8	Spring flange for exciting field coil	30	△	§Pinion nut
3	4	Metal pad for exciting field coil	31	△	§Washer for pinion nut
4	△	Insulating pad for exciting field coil	32	△	‡Rubber bushing
6	8	Spring flange for commutating field coil	34	△	†Cover for frame over commutator
7	4	Metal pad for commutating field coil	36	4	Laminated pole piece for exciting field coil
8	△	Insulating pad for commutating field coil	37	4	Commutating pole piece
16	2	§Thrust collar with grease deflector	38	1	Fan for armature
21	2	§Frame head with bearing cap and grease fittings	39	1	Shell with inlet flange
24	2	§Bearing cap	40	1	Impeller
24A	1	Split retaining ring, commutator end	41	△	Filter pad
29	△	§Pinion key			

‡Specify cable hole size.

△Quantity variable.

*Not illustrated.

§Specify whether for pinion end or commutator end.

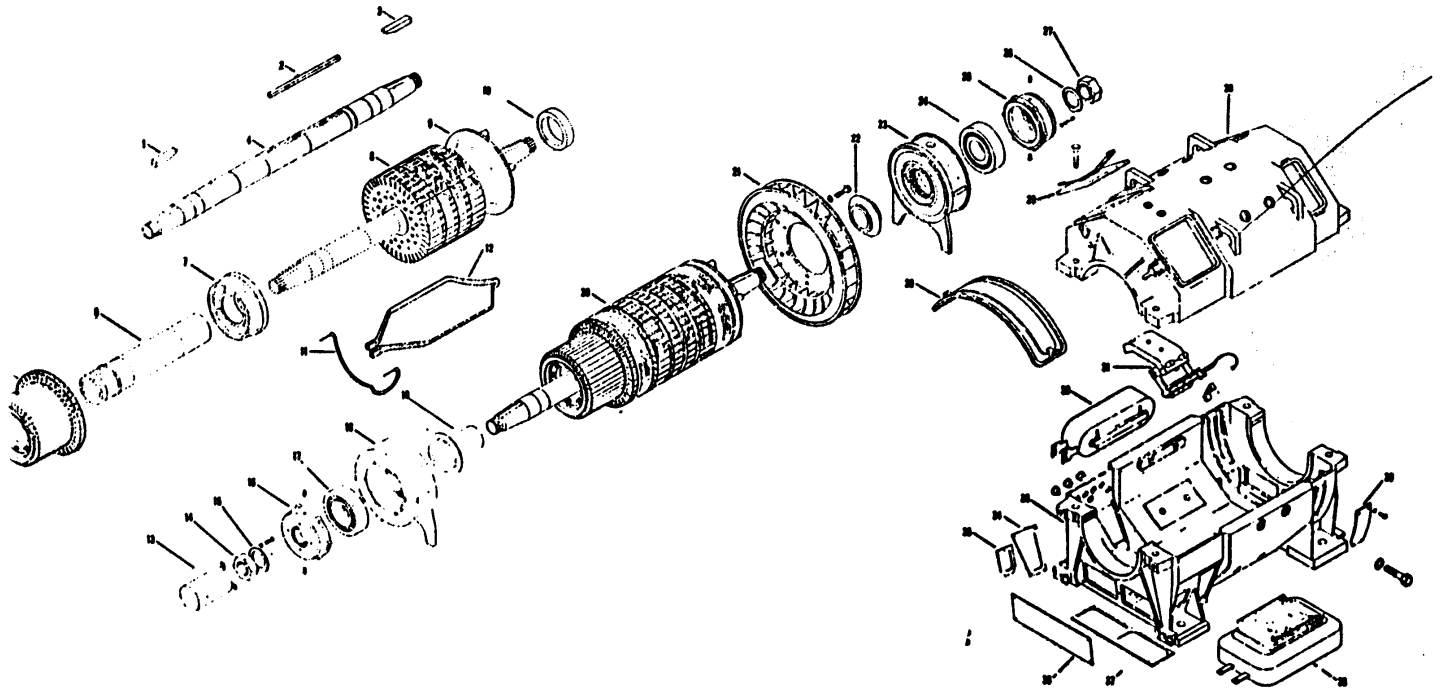
†Specify whether right- or left-hand facing commutator end.

◇ Brush holder position, facing commutator end. The position (a to b) must be filled in on line for Ref. No. 25.

(a) Right-hand

(b) Left-hand

Type MD 600



Ref. No.	Description
1	Key, Pinion
2	Key, Spider
3	Key, Pinion
4	Shaft
5	Commutator
6	Armature Spider
7	Armature Head
8	Armature Core
9	Armature Flange
10	Shrink Ring
11	Coil, Equalizer
12	Coil, Armature
13	Thimble, Shaft
14	Nut, Pinion
15	Washer, Pinion
16	Cap, Bearing
17	‡ Bearing
18	Frame Head
19	Thrust Collar & Grease Slinger
20	Armature
21	Armature Fan
22	Thrust Collar & Grease Slinger
23	Frame Head
24	Bearing, Roller
25	Cap, Bearing

Ref. No.	Description
26	Washer, Pinion
27	Nut, Pinion
28	Cover, Topside, Comm. End (MD602–MD612)
29	Cover, Topside, Comm. End (MD614–MD618)
30	Frame, Top Half
31	Brush Holder Assembly
32	Commutating Coil & Pole Assembly
33	Frame, Bottom Half
34	Large Cover, Bottom (Side), Commutator End
35	Small Cover, Bottom (Side), Commutator End
36	Cover, Bottom (Front), Commutator End
37	Cover, Bottom (Front), Commutator End
38	Main Coil & Pole Assembly
39	Cover, Bottom (Side), Drive End
40	Hood, Top (Side), Drive End
41	Cover Adapter, Blower
42	Screen
43	Connection Elbow
44	Band
45	Blower Housing
46	Screen Housing
47	Impeller
48	Blower Mounting Bracket
49	Blower Motion

‡ Roller Bearing—Horizontal Construction
Ball Bearing—Vertical Construction

7-Medium DC



Type MD, Frames 602 to 610

230V Standard Renewal Parts Identification

Renewal Part	MD602	Qty.	MD603	Qty.	MD604	Qty.	MD606	Qty.	MD608	Qty.	MD610	Qty.
Armature	6791731G01	1	6791759G01	1	6791729G01	1	6791734G01	1	6791772G01	1	6791782G01	1
Armature Coils	6739323G01	1	8832060G01	1	6739295G01	1	88320419G01	1	6739487G01	1	6739255G01	1
Insulation Set	6739363ABG01	1	36C695833AAG01	1	36C695834AAG01	1	36C695835AAG01	1	36C695836AAG01	1	36C695837AAG01	1
Commutator	764979G01	1	8822219G01	1	8822635G01	1	8822951G01	1	8822696G01	1	8822852G01	1
Shaft	6739383G02	1	8832390G02	1	8832022G03	1	8832307G02	1	8832542G01	1	8832543G01	1
Fan	6739486-001	1	8832383-001	1	8832027-001	1	8832312-001	1	8832100-001	1	8832166-001	1
Coil & Pole – Comm	6739324G65	4	8832061G65	4	6739296G65	4	8832050G65	4	6739488G65	4	6739256G65	1
Coil Only – Comm	6739324G61	4	8832061G61	4	6739296G61	4	8832050G61	4	6739488G61	4	6739256G61	1
Coil & Pole –Series	6739325G65	4	8832062G65	4	6739297G65	4	8832051G65	4	6739489G65	4	6739257G65	4
Coil Only –Series	6739325G61	4	8832062G61	4	6739297G61	4	8832051G61	4	6739489G61	4	6739257G61	4
Coil & Pole –Shunt	6739326G65	4	8832064G65	4	6739298G65	4	8832053G65	4	6739491G65	4	6739258G65	4
Coil Only – Shunt	6739326G61	4	8832064G61	4	6739298G65	4	8832053G61	4	6739491G61	4	6739258G61	4
Coil & Pole –Compound	6739354G65	4	8832063G65	4	6739479G65	4	8832052G65	4	6739490G65	4	6739482G65	4
Coil Only – Compound	6739354G61	4	8832063G61	4	6739479G61	4	8832052G61	4	6739490G61	4	6739490G61	4
Coil & Pole –Stab Shunt	8832779G65	4	8832066G65	4	6739481G65	4	8832055G65	4	6739493G65	4	6739482G65	4
Coil Only –Stab Shunt	8832779G61	4	8832066G61	4	6739481G61	4	8832055G61	4	6739493G61	4	6739484G61	4
CE/DE Bearing	8832705-002	2	8832705-002	2	8832705-004	2	8832705-005	2	8832705-006	2	8832705-007	2
Brushholder & Spring	Constant Pressure											
–Right Hand Side	428C685G01	1	428C685G01	1	428C694G01	1	428C695G01	1	428C686G01	1	428C697G01	1
–Left Hand Side	428C685G02	1	428C685G02	1	428C694G02	1	428C695G02	1	428C686G02	1	428C697G02	1
Spring only	41B533105G01	4	41B533105G01	4	36B465487AA001	4	337B689G02	4	337B689G02	4	337B689G02	4
Brush	337B696-P02	4	337B696-P02	4	337B696-P03	4	337B696-P04	4	337B696-P05	4	337B696-P08	4
Brushholder & Spring	Clockspring											
–Right Hand Side	6748708G01	1	6748708G01	1	6749037G01	1	6749232G01	1	6749108G01	1	6749108G03	1
–Left Hand Side	6748708G02	1	6748708G02	1	6749037G02	1	6749232G02	1	6749108G02	1	6749108G04	1
Brush	6709783-P01	4	6709783-P01	4	6709786-P01	4	8809716-P01	4	8809563-P01	4	8809552-P01	4
CE Insp. Cover	6739384G01	1	6736007G01	1	6736007G01	1	8832322G01	1	8832105G01	1	8832105G01	1
Lockwasher – Spring	36A164222AA001	2	36A164222AA001	2	36A164222AA001	2	36A164222AA002	2	36A164222AA003	2	36A164222AA004	2
Lockwasher –Flat	88099863-001	2	2706929-001	2	2706929-001	2	8809863-001	2	8809864-001	2	8809865-001	2
Pinion Nut	8815255-001	2	8815256-001	2	8815256-001	2	8815257-001	2	8815258-001	2	8815259-001	2
Cable Bushings												
Series Motor	41B533331-001	8	41B533331-001	8	41B533331-002	8	41B533331-003	8	41B533331-003	8	41B533331-005	8
Shunt Motor–Field	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4
Armature	41B533331-001	4	41B533331-001	4	41B533331-002	4	41B533331-003	4	41B533331-003	4	41B533331-005	4
Compound Motor Field	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4	41B533331-001	4
Armature	41B533331-001	4	41B533331-001	4	41B533331-0021	4	41B533331-003	4	41B533331-003	4	41B533331-005	4

7-Medium DC

Type MD, Frames 612 to 622

230V Standard Renewal Parts Identification

Renewal Part	MD612	Qty.	MD614	Qty.	MD616	Qty.	MD618	Qty.	MD620	Qty.	MD622	Qty.
Armature	6791786G01	1	6792403G01	1	6793951G01	1	6792407G01	1				
Armature Coils	6739237G01	1	8832010G01	1	8832037G01	1	6739341G01	1	428C588G01	1	428C564G01	1
Equalizer Coils			8832919G01	1	8832924G01	1	8832923G01	1				
Insulation Set	36C695838AAG01	1	36C695839AAG01	1	428C345G01	1	8842626ABG01	1	428C587ABG01	1	428C562ABG01	1
Commutator	6727740G01	1	8822836G01	1	8822910G01	1	6739413G01	1				
Shaft	8832544G01	1	8832545G01	1	8832546G01	1	8832547G01	1				
Fan	6739459-001	1	8832138-001	1	8832260-001	1	6739496-001	1				
Coil & Pole – Comm	6739238G65	4	8832011G65	4	8832038G65	4	6739342G65	4	428C333G65*	4	8842401G65**	6
									4	8842624G65**	4	
Coil Only – Comm	6739238G61	4	8832011G61	4	8832038G61	4	6739342G61	4	428C333G61*	4	8842401G61**	6
										8842624G61**	4	
Coil & Pole –Series	6739239G65	4	8832012G65	4	8832039G65	4	6739343G65	4	428C348G65	4		
Coil Only –Series	6739239G61	4	8832012G61	4	8832039G61	4	6739343G61	4	428C348G61	4		
Coil & Pole –Shunt	6739243G65	4	8832016G65	4	8832043G65	4	6739345G65	4	8842697G65	4		
Coil Only – Shunt	6739243G61	4	8832016G61	4	8832043G61	4	6739345G61	4	8842697G61	4	8842631G61**	6
Coil & Pole – Shunt w/bars									8842644ABG62	4	8842441ABG63	6
Coil & Pole –Compound	6793241G65	4	8832014G65	4	8832041G65	4	6739344G65	4	428C308G65*	4	8851734G65	6
Coil Only – Compound	6793241G61	4	8832014G61	4	8832041G61	4	6739344G61	4	428C308G61	4	8851734G61	6
Coil & Pole –Stab Shunt	6739247G65	4	8832020G65	4	8832047G65	4	6739347G65	4				
Coil Only –Stab Shunt	6739247G61	4	8832020G61	4	8832047G61	4	6739347G61	4				
CE/DE Bearing	8832705-008	2	8832705-009	2	8832705-010	2	8832705-011	2	8832705-012	2	8832705-013	2
Brushholder & Spring	Constant Pressure											
	428C682G02	2	428C683G02	4	428C687G02	4	428C689G02	4				
Spring only	337B689G02	6	337B689G02	16	337B689G02	16	337B689G02	16				
Brush	337B696-P07	6	337B696-P08	16	337B696-P07	4	337B696-P09	16	337B696-P07			
Brushholder & Spring	Clockspring											
	6748585G02	2	6749126G01	2	6749126G04	2	6748745G02	4				
Brush	6709764-P01	6	8809552-P01	16	8670764-P01	16	6709776-P01	16				
CE Insp. Cover	6739277G01	2	8832142G01	2	8832142G01	2	8832142G01	2	8819615-001			
Lockwasher – Spring	36A164222AA005	2	36A164222AA006	2	36A164222AA007	2	36A164222AA007	2	36A160535AA009	2	36A160535AA009	
Lockwasher –Flat	8809866-001	2	8809867-001	2	8809868-001	2	8809869-001	2	8819685-001	2	8819685-001	2
Pinion Nut	8815260-001	2	8815261-001	2	8815262-001	2	8815263-001	2	8819612-001	2	88519629-001	2
Cable Bushings												
Series Motor	41B533331-009	8	41B533331-009	8	41B533331-011	8	41B533331-010	8				
Shunt Motor –Field	41B533331-001	4	41B533331-001	4	41B533331-025	4	41B533331-025	4	41B533331-002	6		
Armature	41B533331-009	4	41B533331-009	4	41B533331-011	4	41B533331-010	4	41A236629AA00160			
Compound Motor Field	41B533331-001	4	41B533331-001	4	41B533331-025	4	41B533331-025	4	41B533331-002	6		
Armature	41B533331-009	8	41B533331-009	8	41B533331-011	8	41B533331-010	8				

*Non Compensated **Compensated

7-Medium DC



Type MD, Frames 602 to 624

Identification of Brushholders, Springs and Brushes

230 Volt Constant Pressure

602	Qty. 1 – 428C685G01 – RH Brushholder w/Spring Qty. 1 – 428C685G02 – LH Brushholder w/Spring Qty. 4 – 41B533105G01 – Spring Only Qty. 4 – 337B696 P02 – Brush
603	Qty. 1 – 428C685G01 – RH Brushholder w/Spring Qty. 1 – 428C685G02 – LH Brushholder w/Spring Qty. 4 – 41B533105G01 – Spring Only Qty. 4 – 337B696 P02 – Brush
604	Qty. 1 – 428C694G01 – RH Brushholder w/Spring Qty. 1 – 428C694G02 – LH Brushholder w/Spring Qty. 4 – 36B465487AA001 – Spring Only Qty. 4 – 337B696 P03 – Brush
606	Qty. 1 – 428C695G01 – RH Brushholder w/Spring Qty. 1 – 428C695G02 – LH Brushholder w/Spring Qty. 4 – 337B689G01 – Spring Only Qty. 4 – 337B696 P04 – Brush
608	Qty. 1 – 428C686G01 – RH Brushholder w/Spring Qty. 1 – 428C686G02 – LH Brushholder w/Spring Qty. 4 – 337B689G01 – Spring Only Qty. 4 – 337B696 P05 – Brush
610	Qty. 1 – 428C697G01 – RH Brushholder w/Spring Qty. 1 – 428C697G02 – LH Brushholder w/Spring Qty. 6 – 337B689G02 – Spring Only Qty. 6 – 337B696 P08 – Brush
612	Qty. 2 – 428C682G02 – Brushholder w/Spring Qty. 6 – 337B689G01 – Spring Only Qty. 6 – 337B696 P07 – Brush
614	Qty. 4 – 428C683G02 – Brushholder w/Spring Qty. 16 – 337B689G01 – Spring Only Qty. 16 – 337B696 P08 – Brush
616	Qty. 4 – 428C687G02 – Brushholder w/Spring Qty. 16 – 337B689G01 – Spring Only Qty. 16 – 337B696 P07 – Brush
618	Qty. 4 – 428C689G02 – Brushholder w/Spring Qty. 16 – 337B689G01 – Spring Only Qty. 16 – 337B696 P09 – Brush

230 Volt Coil Spring

602	Qty. 1 – 6748708G01 – RH Brushholder Qty. 1 – 6748708G02 – LH Brushholder Qty. 4 – 6709783 P01 – Brush
603	Qty. 1 – 6748708G01 – RH Brushholder Qty. 1 – 6748708G02 – LH Brushholder Qty. 4 – 6709783 P01 – Brush
604	Qty. 1 – 6749037G01 – RH Brushholder Qty. 1 – 6749037G02 – LH Brushholder Qty. 4 – 6709786 P01 – Brush
606	Qty. 1 – 6749232G01 – RH Brushholder Qty. 1 – 6749232G02 – LH Brushholder Qty. 4 – 8809716 P01 – Brush
608	Qty. 1 – 6749108G01 – RH Brushholder Qty. 1 – 6749108G02 – LH Brushholder Qty. 4 – 8809563 P01 – Brush
610	Qty. 1 – 6749108G03 – RH Brushholder Qty. 1 – 6749108G04 – LH Brushholder Qty. 6 – 8809552 P01 – Brush
612	Qty. 2 – 6748585G02 – Brushholder Qty. 6 – 6709764 P01 – Brush
614	Qty. 4 – 6749126G02 – Brushholder Qty. 16 – 8809552 P01 – Brush
616	Qty. 4 – 6749126G04 – Brushholder Qty. 16 – 6709764 P01 – Brush
618	Qty. 4 – 6748745G02 – Brushholder Qty. 16 – 6709776 P01 – Brush

Above quantities represent total required per motor.

Type MD, Frames 602 to 624

Identification of Brushholders, Springs and Brushes

550 Volt Constant Pressure

602	No constant pressure replacement.
603	Qty. 1 – 428C685G01 – LH Brushholder w/Spring Qty. 1 – 428C685G02 – RH Brushholder w/Spring Qty. 4 – 41B533105G01 – Spring Only Qty. 4 – 337B696 P02 – Brush
604	Qty. 1 – 428C685G01 – LH Brushholder w/Spring Qty. 1 – 428C685G02 – RH Brushholder w/Spring Qty. 4 – 41B533105G01 – Spring Only Qty. 4 – 337B696 P02 – Brush
606	Qty. 1 – 428C694G01 – LH Brushholder w/Spring Qty. 1 – 428C694G02 – RH Brushholder w/Spring Qty. 4 – 36B465487AA001 – Spring Only Qty. 4 – 337B696 P03 – Brush
608	Qty. 1 – 428C695G01 – LH Brushholder w/Spring Qty. 1 – 428C695G02 – RH Brushholder w/Spring Qty. 4 – 337B689G01 – Spring Only Qty. 4 – 337B696 P04 – Brush
610	Qty. 1 – 428C686G01 – LH Brushholder w/Spring Qty. 1 – 428C686G02 – RH Brushholder w/Spring Qty. 4 – 337B689G01 – Spring Only Qty. 4 – 337B696 P05 – Brush
612	Qty. 2 – 41C631160G02 – Brushholder w/Spring Qty. 4 – 337B689G01 – Spring Only Qty. 4 – 337B696 P05 – Brush
614	Qty. 4 – 41C631160G02 – Brushholder w/Spring Qty. 8 – 337B689G01 – Spring Only Qty. 8 – 337B696 P05 – Brush
616	Qty. 2 – 41C31397G01 – Brushholder w/Spring Qty. 12 – 337B689G01 – Spring Only Qty. 12 – 337B696 P08 – Brush
618	Qty. 4 – 428C683G02 – Brushholder w/Spring Qty. 16 – 337B689G01 – Spring Only Qty. 16 – 337B696 P08 – Brush

550 Volt Coil Spring

602	Qty. 1 – 6748708G03 – RH Brushholder Qty. 1 – 6748708G04 – LH Brushholder Qty. 4 – 8807309 P01 – Brush
603	Qty. 1 – 6748708G01 – RH Brushholder Qty. 1 – 6748708G02 – LH Brushholder Qty. 4 – 6709783 P01 – Brush
604	Qty. 1 – 6748708G01 – RH Brushholder Qty. 1 – 6748708G02 – LH Brushholder Qty. 4 – 6709783 P01 – Brush
606	Qty. 1 – 6749232G03 – RH Brushholder Qty. 1 – 6749232G04 – LH Brushholder Qty. 4 – 6709786 P01 – Brush
608	Qty. 1 – 6749232G01 – RH Brushholder Qty. 1 – 6749232G02 – LH Brushholder Qty. 4 – 8809716 P01 – Brush
610	Qty. 1 – 6749108G01 – RH Brushholder Qty. 1 – 6749108G02 – LH Brushholder Qty. 4 – 8809563 P01 – Brush
612	Qty. 2 – 6749310G02 – Brushholder Qty. 4 – 8809563 P01 – Brush
614	Qty. 4 – 6749310G02 – Brushholder Qty. 8 – 8809563 P01 – Brush
616	Qty. 2 – 6749315G02 – Brushholder Qty. 12 – 8809522 P01 – Brush
618	Qty. 4 – 6749126G02 – Brushholder Qty. 16 – 8809522 P01 – Brush

Above quantities represent total required per motor.



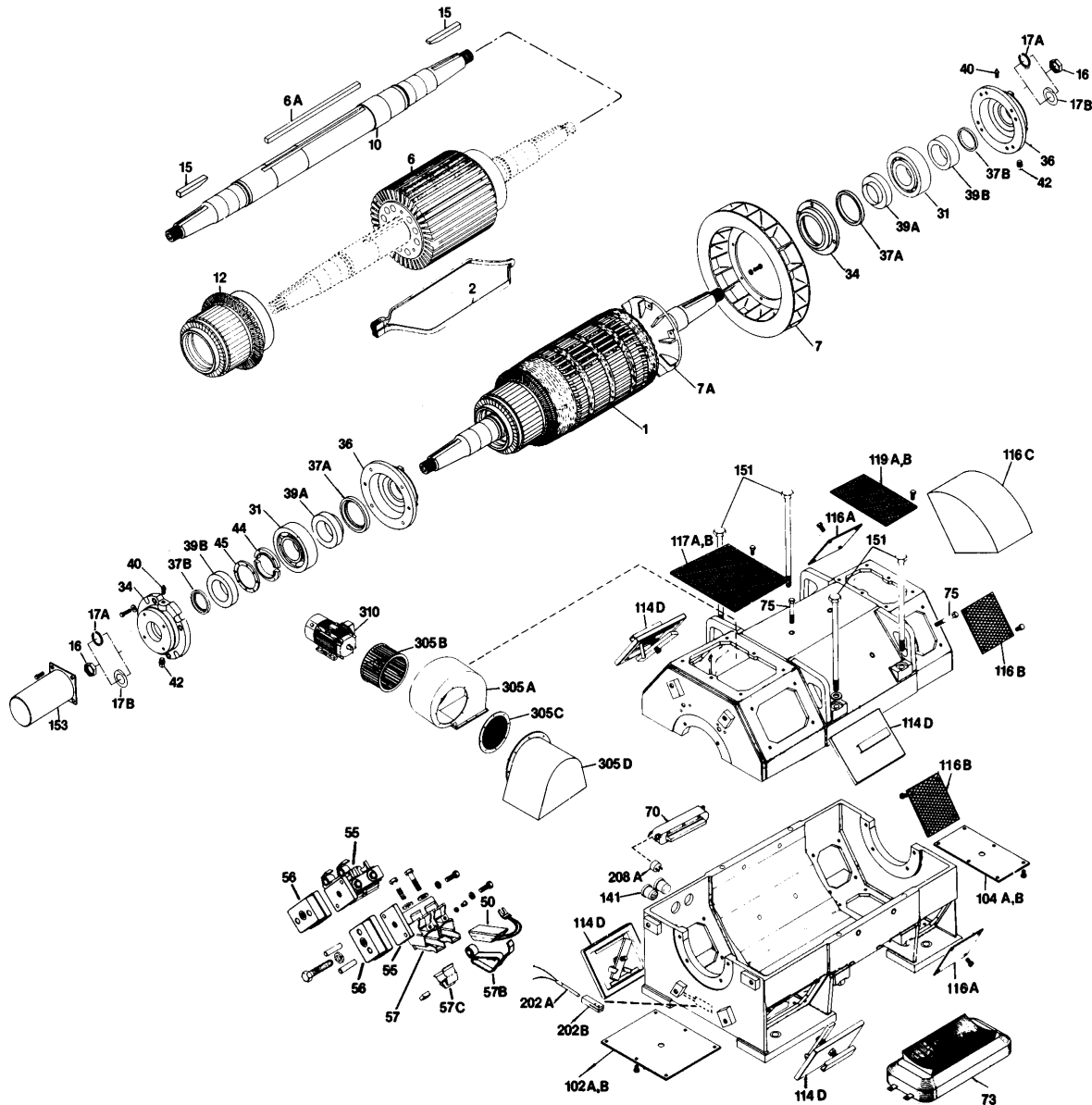
Type MD, Frames 802 to 828

Typical Weights

Frame	Pounds		Kilograms	
	Armature Only	Complete Motor	Armature Only	Complete Motor
802	160	550	75	250
803	210	780	95	355
804	290	960	130	435
806	370	1300	170	590
808	540	1820	245	825
810	720	2480	325	1125
812	960	3310	435	1500
814	1140	4620	655	2100
816	2030	5840	920	2650
818	2630	7730	1195	3500
820	3040	12100	1380	5490
822	3850	15200	1745	6700
824	4650	19100	2110	8660
828	11060	39100	5020	17740

MDP804 thru MDP808 Motors

Exploded View Horizontal



Ref. No. Description

- 1 Armature
- 2 Armature Coil
- 6 Armature Core
- 6A Armature Core Key
- 7 Armature Fan
- 7A Armature Fan Hub
- 10 Shaft
- 12 Commutator
- 15 Pinion Key
- 16 Pinion Nut
- 17A Pinion Lock Washer—Split Type
- 17B Pinion Lock Washer—Bent Type
- 31 Bearing
- 34 Bearing Cap
- 36 Bearing Cartridge
- 37A Bearing Seal—Inner
- 37B Bearing Seal—Outer
- 39A Thrust Collar—Inner
- 39B Thrust Collar—Outer

Ref. No. Description

- 40 Grease Fitting
- 42 Pipe Plug
- 44 Split Ring
- 45 Locking Ring
- 50 Brush
- 55 Brushholder Stud
- 56 Brushholder Stud Insulation
- 57 Brushholder
- 57B Brushholder Spring
- 57C Brushholder Mounting Clip
- 70 Comm Coil & Pole Assembly
- 73 Main Field Coil & Pole
- 75 Pole Bolts
- 102A Cover, Bottom Comm End—Solid
- 102B Cover, Bottom Comm End—Screen
- 104A Cover, Bottom Drive End—Solid
- 104B Cover, Bottom Drive End—Screen
- 114D Cover, Quick Access—Comm End—Solid
- 116A Cover, Side Drive End—Solid

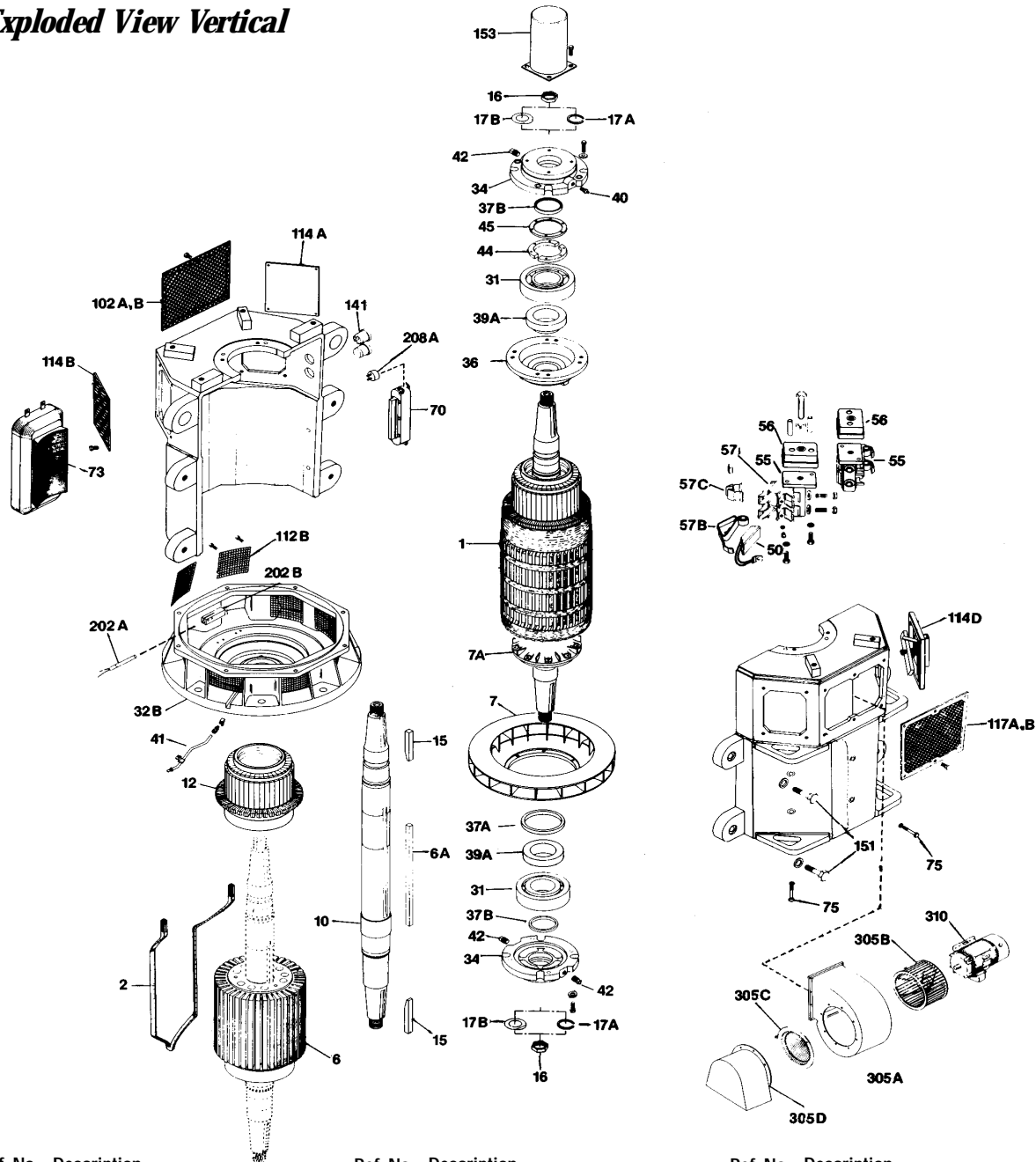
Ref. No. Description

- 116B Cover, Side Drive End—Screen
- 116C Cover, Side Drive End—Hood
- 117A Cover, Top Comm End—Solid
- 117B Cover, Top Comm End—Screen
- 119A Cover, Top Drive End—Solid
- 119B Cover, Top Drive End—Screen
- 141 Cable Bushing
- 151 Frame Split Bolt
- 153 Shaft Thimble
- 202A Space Heater Only
- 202B Heat Sink—Space Heater
- 208A Thermostat
- 305A Blower Housing
- 305B Blower Impeller
- 305C Air Inlet Screen
- 305D Air Inlet Hood With Screen
- 310 Blower Motor



MDV804 thru MDV808 Motors

Exploded View Vertical



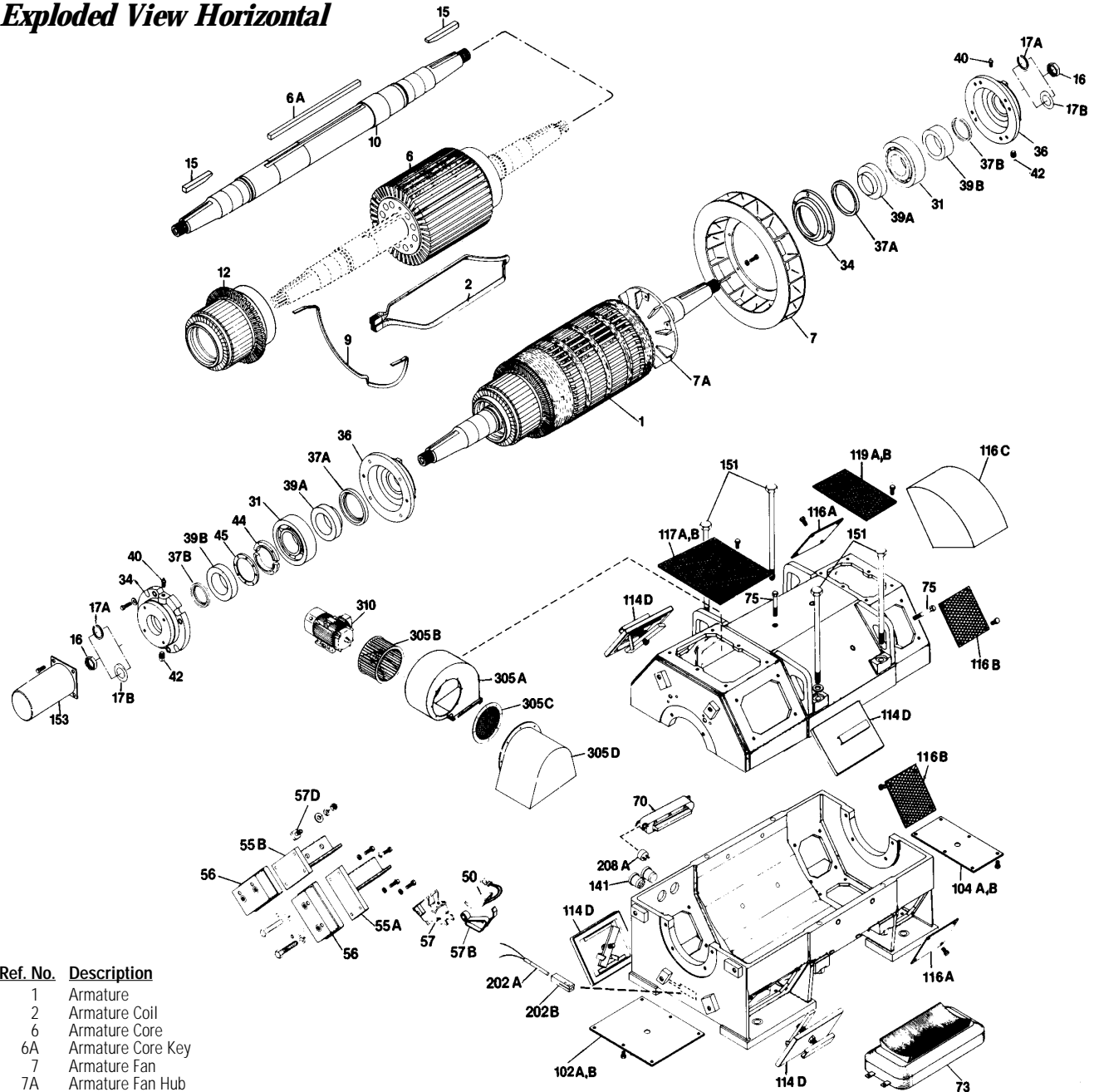
Ref. No.	Description
1	Armature
2	Armature Coil
6	Armature Core
6A	Armature Core Key
7	Armature Fan
7A	Armature Fan Hub
10	Shaft
12	Commutator
15	Pinion Key
16	Pinion Nut
17A	Pinion Lock Washer-Split Type
17B	Pinion Lock Washer-Bent Type
31	Bearing
32B	Bearing Bracket-Drive End
34	Bearing Cap
36	Bearing Cartridge
37A	Bearing Seal-Inner
37B	Bearing Seal-Outer

Ref. No.	Description
39A	Thrust Collar-Inner
40	Grease Fitting
41	Grease Tube Assembly
42	Pipe Plug
44	Split Ring
45	Locking Ring
50	Brush
55A	Brushholder Stud-Right Hand
55B	Brushholder Stud-Left Hand
56	Brushholder Stud Insulation
57	Brushholder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73	Main Field Coil & Pole
75	Pole Bolts
102A	Cover, Bottom Comm End-Solid
102B	Cover, Bottom Comm End-Screen

Ref. No.	Description
112B	Cover, Bottom Side Drive End-Screen
114A	Cover, Side Comm End-Solid
114B	Cover, Side Comm End-Screen
114D	Cover, Quick Access-Comm End-Solid
117A	Cover, Top Comm End-Solid
117B	Cover, Top Comm End-Screen
141	Cable Bushing
151	Frame Split Bolt
153	Shaft Thimble
202A	Space Heater Only
202B	Heat Sink-Space Heater
208A	Thermostat
305A	Blower Housing
305B	Blower Impeller
305C	Air Inlet Screen
305D	Air Inlet Hood With Screen
310	Blower Motor

MDP810 thru MDP818 Motors

Exploded View Horizontal



Ref. No. Description

- 1 Armature
- 2 Armature Coil
- 6 Armature Core
- 6A Armature Core Key
- 7 Armature Fan
- 7A Armature Fan Hub
- 9 Equalizer Coil
- 10 Shaft
- 12 Commutator
- 15 Pinion Key
- 16 Pinion Nut
- 17A Pinion Lock Washer—Split Type
- 17B Pinion Lock Washer—Bent Type
- 31 Bearing
- 34 Bearing Cap
- 36 Bearing Cartridge
- 37A Bearing Seal—Inner
- 37B Bearing Seal—Outer
- 39A Thrust Collar—Inner
- 39B Thrust Collar—Outer
- 40 Grease Fitting
- 42 Pipe Plug
- 44 Split Ring
- 45 Locking Ring
- 50 Brush

Ref. No. Description

- 55A Brushholder Stud—Right Hand
- 55B Brushholder Stud—Left Hand
- 56 Brushholder Stud Insulation
- 57 Brushholder
- 57B Brushholder Spring
- 57D Brushholder Mounting Bolt
- 70 Comm Coil & Pole Assembly
- 73 Main Field Coil & Pole
- 75 Pole Bolts
- 102A Cover, Bottom Comm End—Solid
- 102B Cover, Bottom Comm End—Screen
- 104A Cover, Bottom Drive End—Solid
- 104B Cover, Bottom Drive End—Screen
- 114D Cover, Quick Access—Comm End—Solid
- 116A Cover, Side Drive End—Solid
- 116B Cover, Side Drive End—Screen
- 116C Cover, Side Drive End—Hood

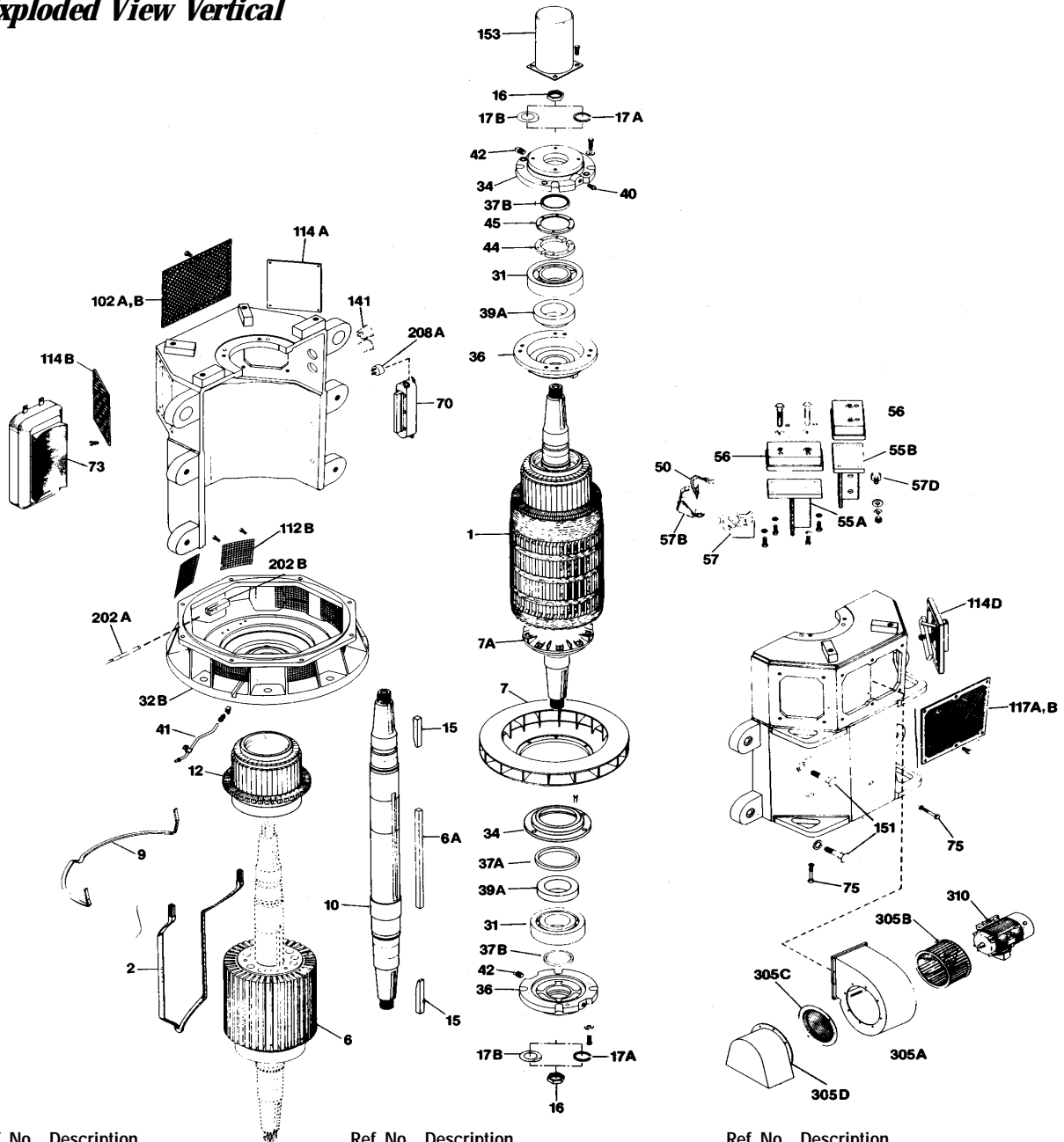
Ref. No. Description

- 117A Cover, Top Comm End—Solid
- 117B Cover, Top Comm End—Screen
- 119A Cover, Top Drive End—Solid
- 119B Cover, Top Drive End—Screen
- 141 Cable Bushing
- 151 Frame Split Bolt
- 153 Shaft Thimble
- 202A Space Heater Only
- 202B Heat Sink—Space Heater
- 208A Thermostat
- 305A Blower Housing
- 305B Blower Impeller
- 305C Air Inlet Screen
- 305D Air Inlet Hood With Screen
- 310 Blower Motor



MDV810 thru MDV818 Motors

Exploded View Vertical



Ref. No.	Description
1	Armature
2	Armature Coil
6	Armature Core
6A	Armature Core Key
7	Armature Fan
7A	Armature Fan Hub
9	Equalizer Coil
10	Shaft
12	Commutator
15	Pinion Key
16	Pinion Nut
17A	Pinion Lock Washer-Split Type
17B	Pinion Lock Washer-Bent Type
31	Bearing
32B	Bearing Bracket-Drive End
34	Bearing Cap
36	Bearing Cartridge
37A	Bearing Seal-Inner

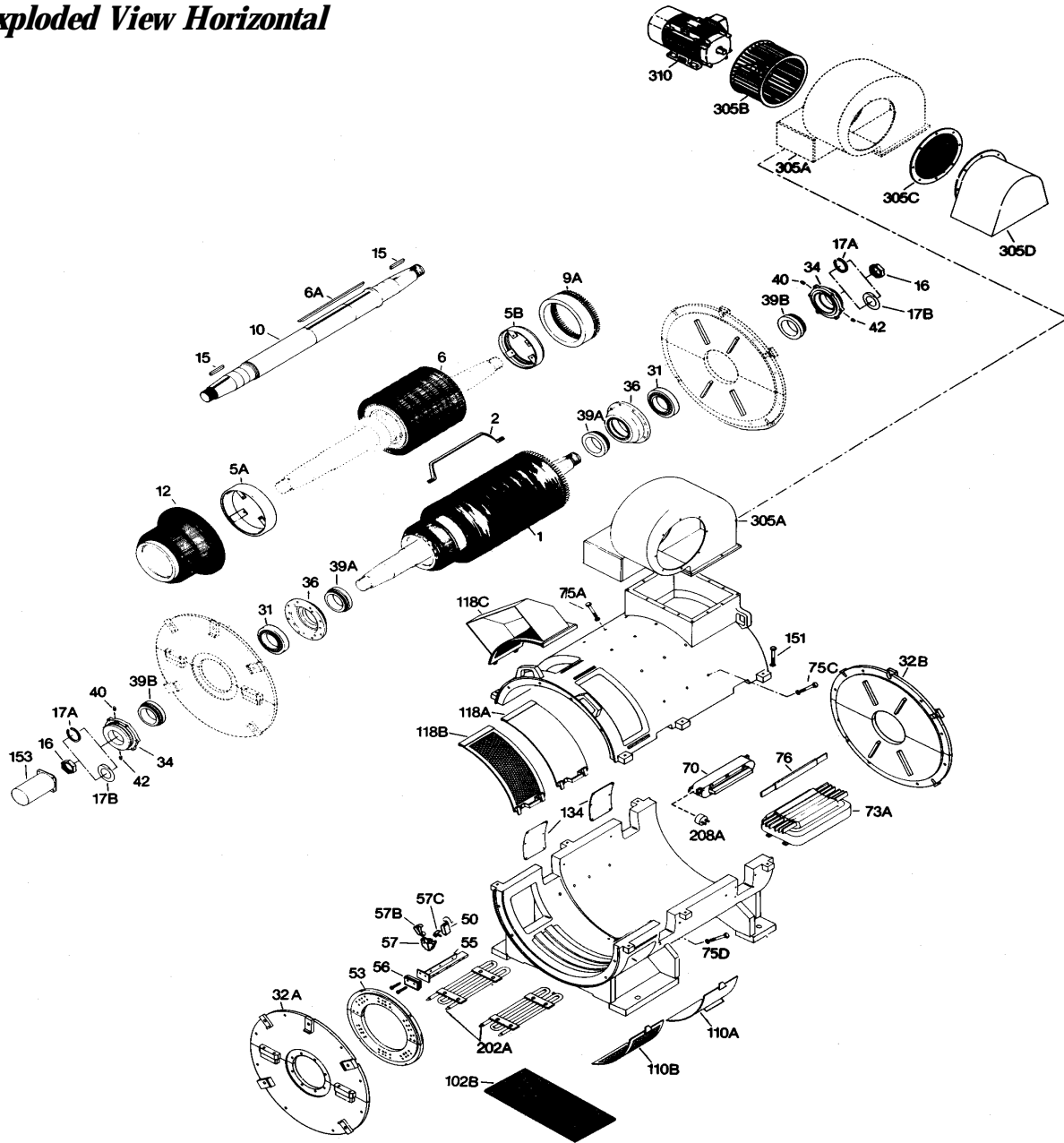
Ref. No.	Description
37B	Bearing Seal-Outer
39A	Thrust Collar-Inner
40	Grease Fitting
41	Grease Tube Assembly
42	Pipe Plug
44	Split Ring
45	Locking Ring
50	Brush
55A	Brushholder Stud-Right Hand
55B	Brushholder Stud-Left Hand
56	Brushholder Stud Insulation
57	Brushholder
57B	Brushholder Spring
57D	Brushholder Mounting Bolt
70	Comm Coil & Pole Assembly
73	Main Field Coil & Pole
75	Pole Bolts
102A	Cover, Bottom Comm End-Solid

Ref. No.	Description
102B	Cover, Bottom Comm End-Screen
112B	Cover, Bottom Side Drive End-Screen
114A	Cover, Side Comm End-Solid
114B	Cover, Side Comm End-Screen
114D	Cover, Quick Access-Comm End-Solid
117A	Cover, Top Comm End-Solid
117B	Cover, Top Comm End-Screen
141	Cable Bushing
151	Frame Split Bolt
153	Shaft Thimble
202A	Space Heater Only
202B	Heat Sink-Space Heater
208A	Thermostat
305A	Blower Housing
305B	Blower Impeller
305C	Air Inlet Screen
305D	Air Inlet Hood With Screen
310	Blower Motor

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

MDP820

Exploded View Horizontal



Ref. No.	Description
1	Armature
2	Armature Coil
5A	Armature Coil Support-Comm End
5B	Armature Coil Support-Drive End
6	Armature Core
6A	Armature Core Key
9A	Equalizer-Molded
10	Shaft
12	Commutator
15	Pinion Key
16	Pinion Nut
17A	Pinion Lock Washer-Split Type
17B	Pinion Lock Washer-Bent Type
31	Bearing
32A	Bearing Bracket-Comm End
32B	Bearing Bracket-Drive End
34	Bearing Cap
36	Bearing Cartridge

Ref. No.	Description
39A	Thrust Collar-Inner
39B	Thrust Collar-Outer
40	Grease Fitting
42A	Pipe Plug
50	Brush
53	Brushholder Yoke
55	Brushholder Stud
56	Brushholder Stud Insulation
57	Brushholder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73A	Main Field Coil & Pole With Bars
75A	Comm Pole Bolt
75C	Main Field Pole Bolt
75D	Main Field Pole Bolt-Bottom
76	Pole Face Bars

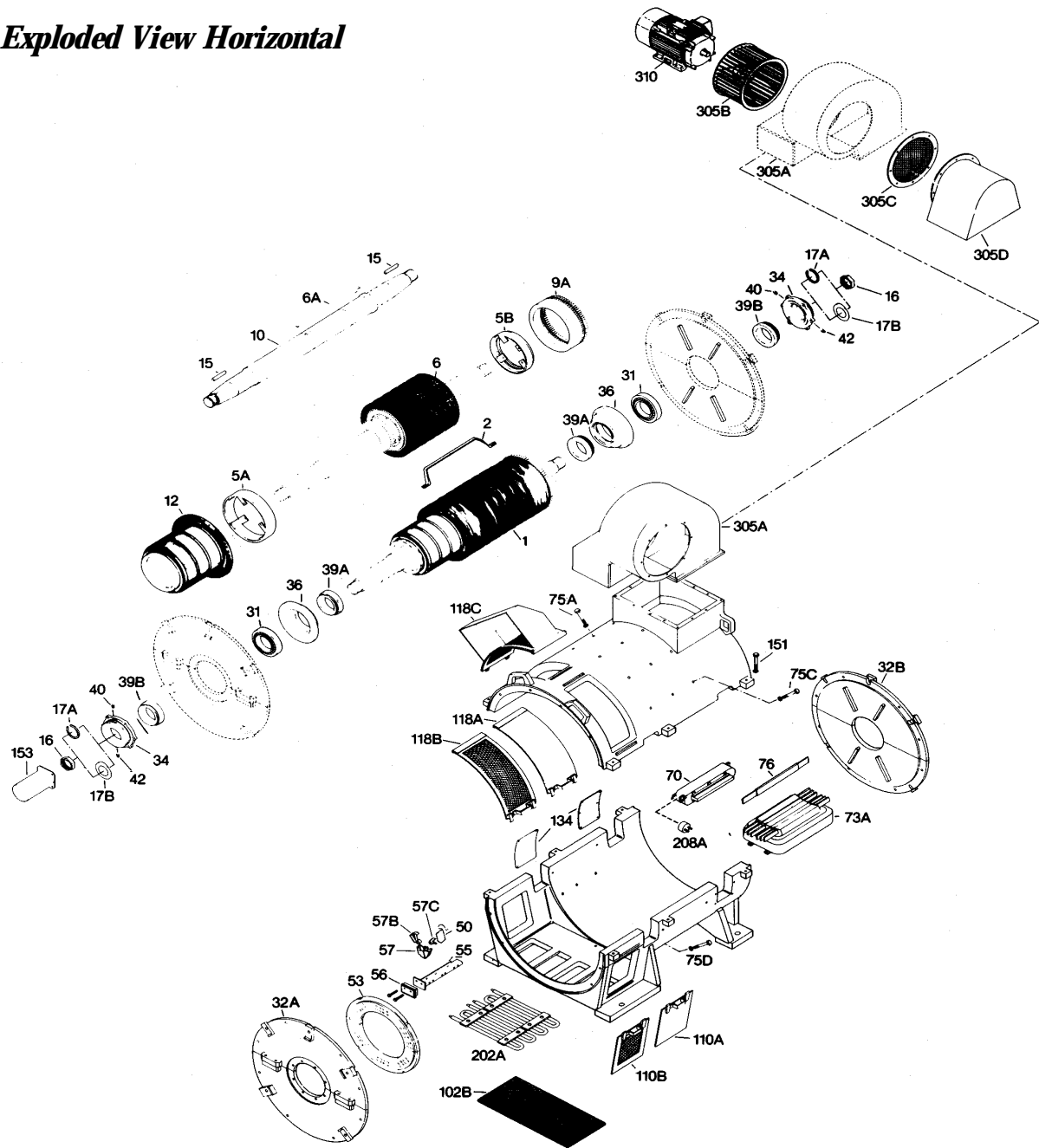
Ref. No.	Description
102B	Cover, Bottom Comm End-Screen
110A	Cover, Bottom Side Comm End-Solid
110B	Cover, Bottom Side Comm End-Screen
118A	Cover, Top Side Comm End-Solid
118B	Cover, Top Side Comm End-Screen
118C	Cover, Top Side Comm End-Hood
134	Cover, Lead
151	Frame Split Bolt
153	Shaft Thimble
202A	Space Heater Only
208A	Thermostat
305A	Blower Housing
305B	Blower Impeller
305C	Air Inlet Screen
305D	Air Inlet Hood With Screen
310	Blower Motor

7-Medium DC



MDP822 Motors

Exploded View Horizontal



Ref. No. Description

- 1 Armature
- 2 Armature Coil
- 5A Armature Coil Support-Comm End
- 5B Armature Coil Support-Drive End
- 6 Armature Core
- 6A Armature Core Key
- 9A Equalizer-Molded
- 10 Shaft
- 12 Commutator
- 15 Pinion Key
- 16 Pinion Nut
- 17A Pinion Lock Washer-Split Type
- 17B Pinion Lock Washer-Bent Type
- 31 Bearing
- 32A Bearing Bracket-Comm End
- 32B Bearing Bracket-Drive End
- 34 Bearing Cap

Ref. No. Description

- 36 Bearing Cartridge
- 39A Thrust Collar-Inner
- 39B Thrust Collar-Outer
- 40 Grease Fitting
- 42 Pipe Plug
- 50 Brush
- 53 Brushholder Yoke
- 55 Brushholder Stud
- 56 Brushholder Stud Insulation
- 57 Brush Holder
- 57B Brushholder Spring
- 57C Brushholder Mounting Clip
- 70 Comm Coil & Pole Assembly
- 75A Comm Pole Bolt
- 73A Main Field Coil & Pole With Bars
- 75C Main Field Pole Bolt
- 75D Main Field Pole Bolt-Bottom

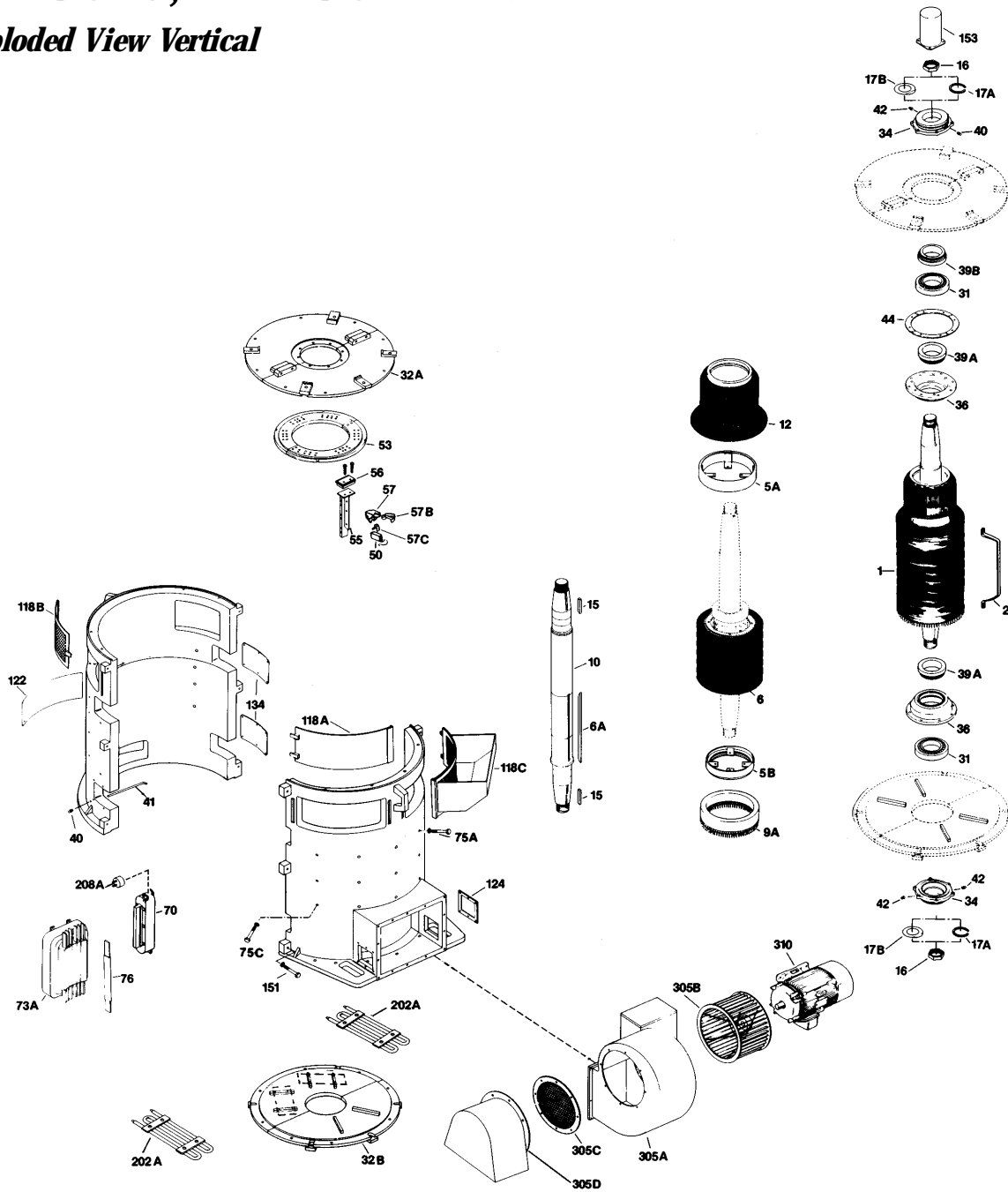
Ref. No. Description

- 76 Pole Face Bars
- 102B Cover, Bottom Comm End-Screen
- 110A Cover, Bottom Side Comm End-Solid
- 110B Cover, Bottom Side Comm End-Screen
- 118A Cover, Top Side Comm End-Solid
- 118B Cover, Top Side Comm End-Screen
- 118C Cover, Top Side Comm End-Hood
- 134 Cover, Lead
- 151 Frame Split Bolt
- 153 Shaft Thimble
- 202A Space Heater Only
- 208A Thermostat
- 305A Blower Housing
- 305B Blower Impeller
- 305C Air Inlet Screen
- 305D Air Inlet Hood With Screen
- 310 Blower Motor

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

MDV820, MDV822 Motors

Exploded View Vertical



Ref. No. Description

1	Armature
2	Armature Coil
5A	Armature Coil Support-Comm End
5B	Armature Coil Support-Drive End
6	Armature Core
6A	Armature Core Key
9A	Equalizer-Molded
10	Shaft
12	Commutator
15	Pinion Key
16	Pinion Nut
17A	Pinion Lock Washer-Split Type
17B	Pinion Lock Washer-Bent Type
31	Bearing
32A	Bearing Bracket-Comm End
32B	Bearing Bracket-Drive End
34	Bearing Cap

Ref. No. Description

36	Bearing Cartridge
39A	Thrust Collar-Inner
39B	Thrust Collar-Outer
40	Grease Fitting
41	Grease Tube Assembly
42	Pipe Plug
44	Split Ring
50	Brush
53	Brushholder Yoke
55	Brushholder Stud
56	Brushholder Stud Insulation
57	Brushholder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73A	Main Field Coil & Pole With Bars
75A	Comm Pole Bolt

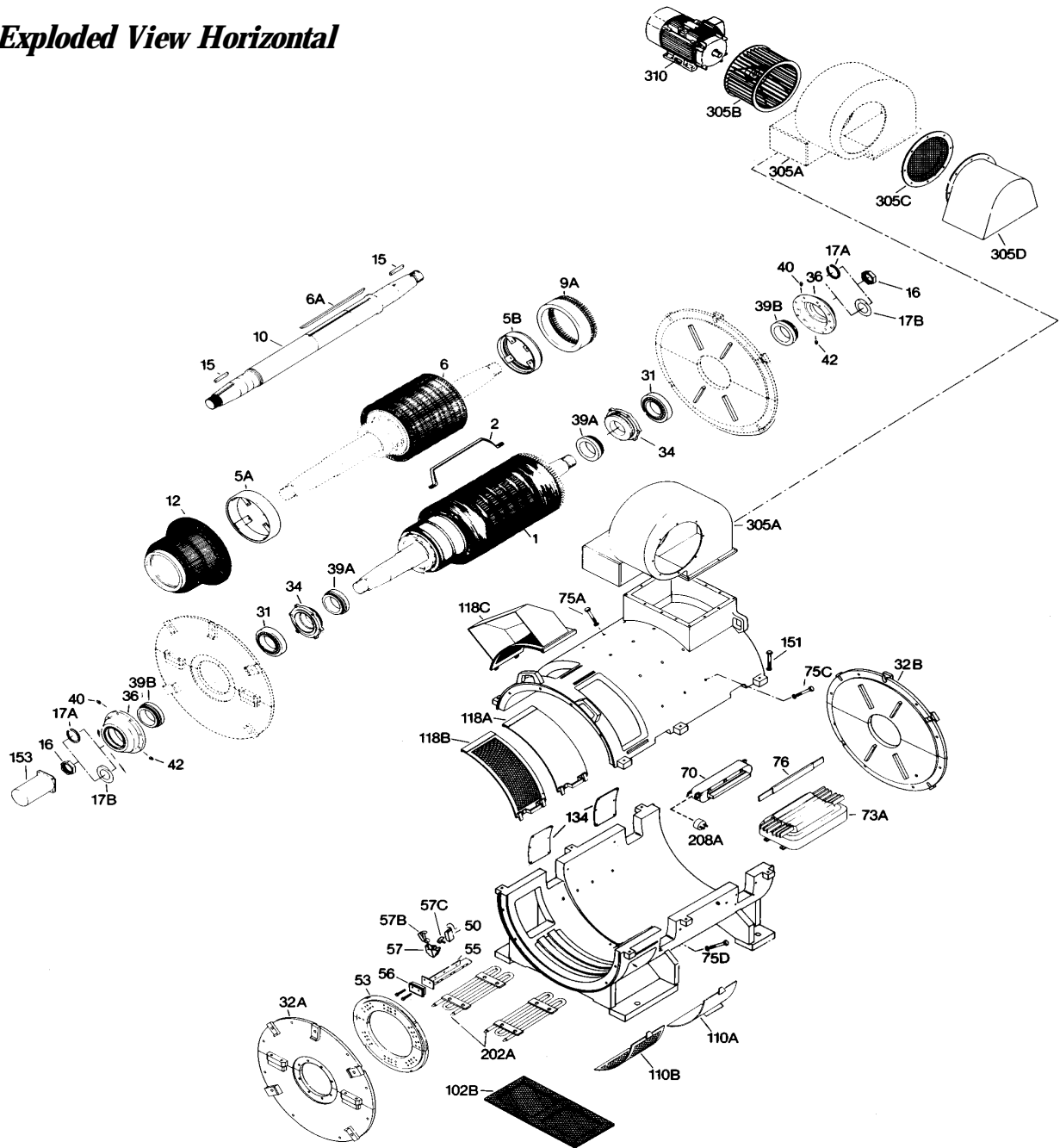
Ref. No. Description

75C	Main Field Pole Bolt
76	Pole Face Bars
118A	Cover, Top Side Comm End-Solid
118B	Cover, Top Side Comm End-Screen
118C	Cover, Top Side Comm End-Hood
122	Cover, Space Heater Access
124	Cover, Frame Mounting Access
134	Cover, Lead
151	Frame Split Bolt
153	Shaft Thimble
202A	Space Heater Only
208A	Thermostat
305A	Blower Housing
305B	Blower Impeller
305C	Air Inlet Screen
305D	Air Inlet Hood w/Screen
310	Blower Motor



MDP824 Motors

Exploded View Horizontal



Ref. No. Description

1	Armature
2	Armature Coil
5A	Armature Coil Support-Comm End
5B	Armature Coil Support-Drive End
6	Armature Core
6A	Armature Core Key
9A	Equalizer-Molded
10	Shaft
12	Commutator
15	Pinion Key
16	Pinion Nut
17A	Pinion Lock Washer-Split Type
17B	Pinion Lock Washer-Bent Type
31	Bearing
32A	Bearing Bracket-Comm End
32B	Bearing Bracket-Drive End
34	Bearing Cap

Ref. No. Description

36	Bearing Cartridge
39A	Thrust Collar-Inner
39B	Thrust Collar-Outer
40	Grease Fitting
42	Pipe Plug
50	Brush
53	Brushholder Yoke
55	Brushholder Stud
56	Brushholder Stud Insulation
57	Brushholder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73A	Main Field Coil & Pole With Bars
75A	Comm Pole Bolt
75C	Main Field Pole Bolt
75D	Main Field Pole Bolt-Bottom

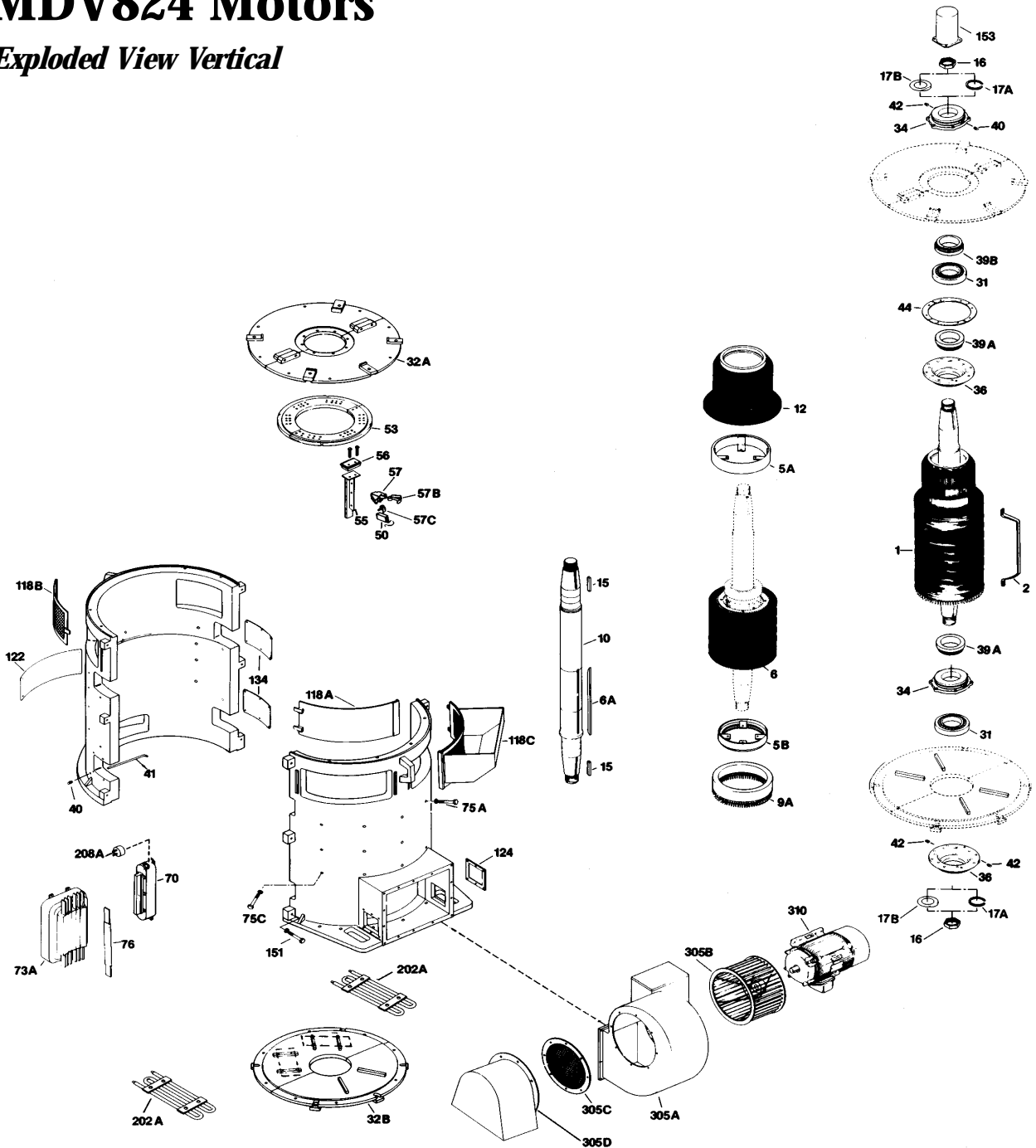
Ref. No. Description

76	Pole Face Bars
102B	Cover, Bottom Comm End-Screen
110A	Cover, Bottom Side Comm End-Solid
110B	Cover, Bottom Side Comm End-Screen
118A	Cover, Top Side Comm End-Solid
118B	Cover, Top Side Comm End-Screen
118C	Cover, Top Side Comm End-Hood
134	Cover, Lead
151	Frame Split Bolt
153	Shaft Thimble
202A	Space Heater Only
208A	Thermostat
305A	Blower Housing
305B	Blower Impeller
305C	Air Inlet Screen
305D	Air Inlet Hood With Screen
310	Blower Motor

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

MDV824 Motors

Exploded View Vertical



Ref. No.	Description
1	Armature
2	Armature Coil
5A	Armature Coil Support-Comm End
5B	Armature Coil Support-Drive End
6	Armature Core
6A	Armature Core Key
9A	Equalizer-Molded
10	Shaft
12	Commutator
15	Pinion Key
16	Pinion Nut
17A	Pinion Lock Washer-Split Type
17B	Pinion Lock Washer-Bent Type
31	Bearing
32A	Bearing Bracket-Comm End
32B	Bearing Bracket-Drive End
34	Bearing Cap

Ref. No.	Description
36	Bearing Cartridge
39A	Thrust Collar-Inner
39B	Thrust Collar-Outer
40	Grease Fitting
41	Grease Tube Assembly
42	Pipe Plug
44	Split Ring
50	Brush
53	Brushholder Yoke
55	Brushholder Stud
56	Brushholder Stud Insulation
57	Brushholder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73A	Main Field Coil & Pole With Bars
75A	Comm Pole Bolt

Ref. No.	Description
75C	Main Field Pole Bolt
76	Pole Face Bars
118A	Cover, Top Side Comm End-Solid
118B	Cover, Top Side Comm End-Screen
118C	Cover, Top Side Comm End-Hood
122	Cover, Space Heater Access
124	Cover, Frame Mounting Access
134	Cover, Lead
151	Frame Split Bolt
153	Shaft Thimble
202A	Space Heater Only
208A	Thermostat
305A	Blower Housing
305B	Blower Impeller
305C	Air Inlet Screen
305D	Air Inlet Hood With Screen
310	Blower Motor



GE Support Services

Type MD, Frames 802 to 806

230V Standard Renewal Parts Identification

Renewal Part	MD802A	Qty.	MD802B	Qty.	MD802C	Qty.	MD803	Qty.	MD804	Qty.	MD806	Qty.
Armature	36A164230AAG01	1	36A164230AAG01	1	36A164230AAG01	1	36A164231AAG01	1	36A164232AAG01	1	36A164233AAG01	1
Armature w/Frameheads	36A164230AAG03	1	36A164230AAG03	1	36A164230AAG03	1	36A164231AAG03	1	36A164232AAG03	1	36A164232AAG03	1
Armature Coils	36A164160AAG01	1	36A164160AAG01	1	36A164160AAG01	1	36A164161AAG01	1	36A164162AAG01	1	36A164163AAG01	1
Equalizer Coils												
Insulation Set	36A164190AAG01	1	36A164190AAG01	1	36A164190AAG01	1	36A164191AAG01	1	36A164192AAG01	1	36A164193AAG01	1
Commutator	36A164080AAG01	1	36A164080AAG01	1	36A164080AAG01	1	36A164081AAG01	1	36A164082AAG01	1	36A164083AAG01	1
Shaft	36B465450AAG01	1	36B465450AAG01	1	36B465450AAG01	1	36B465451AAG01	1	36B465452AAG01	1	36B465453AAG01	1
Fan	36A164070CA001	1	36A164070CA001	1	36A164070CA001	1	36A164071CA001	1	36A164072CBG01	1	36A164072CA001	1
Coil & Pole – Comm	36A164360BAG01	4	36A164360BAG01	4	36A164360BBG01	4	36A164361BAG01	4	36A164362AAG01	4	36A164363AAG01	4
Coil Only – Comm	36A164360BAG02	4	36A164360BAG02	4	36A164360BBG02	4	36A164361AAG02	4	36A164362AAG02	4	36A164363AAG02	4
Coil & Pole –Series	36A164400TCG01	4	36A164400TDG01	4	36A164400TEG01	4	36A164401TBG01	4	36A164402TBG01	4	36A164403TBG01	4
Coil Only –Series	36A164400TCG02	4	36A164400TDG02	4	36A164400TEG02	4	36A164401TBG02	4	36A164402TBG02	4	36A164403TBG02	4
Coil & Pole –Shunt	36A164400AGG01	4	36A164400AAG01	4	36A164400AAG01	4	36A164401AAG01	4	36A164402AAG01	4	36A164403AAG01	4
Coil Only – Shunt	36A164400AGG02	4	36A164400AAG02	4	36A164400AAG02	4	36A164401AAG02	4	36A164402AAG02	4	36A164403AAG02	4
Coil & Pole –Compound	36A164400JCG01	4	36A164400JEG01	4	36A164400JFG01	4	36A164401JCG01	4	36A164402JCG01	4	36A164403JCG01	4
Coil Only – Compound	36A164400JCG02	4	36A164400JEG02	4	36A164400JFG02	4	36A164401JCG02	4	36A164402JCG02	4	36A164403JCG02	4
Coil & Pole –Stab Shunt	36A164400JRG01	4	36A164400JRG01	4	36A164400JRG01	4	36A164401JRG01	4	36A164402JEG01	4	36A164403JRG01	4
Coil Only –Stab Shunt	36A164400JRG02	4	36A164400JRG02	4	36A164400JRG02	4	36A164401JRG02	4	36A164402JEG02	4	36A164403JRG02	4
CE/DE Bearing	8832705-002	2	8832705-002	2	8832705-002	2	8832705-003	2	8832705-004	2	8832705-005	2
Brushholder & Spring	36A160424AAG01	4	36A160424AAG01	4	36A160424AAG01	4	36A164425AAG01	4	36A160426AAG01	4	36A160427AAG01	4
Spring only	36B465484AA001	4	36B465484AA001	4	36B465484AA001	4	36B465485AA001	4	36B465486AA001	4	36A164487AA001	4
Brush	36A164454AAP20	4	36A164454AAP20	4	36A164454AAP20	4	36A164455AAP20	4	36A164456AAP20	4	36A164457AAP20	4
CE QCK Removal Cover	36A164470CAG01	2	36A164470CAG01	2	36A164470CAG01	2	36A164471CAG01	2	36A164472CAG01	2	36A164473CAG01	2
Lockwasher – Spring	36A164222AA001	2	36A164222AA001	2	36A164222AA001	2	36A164222AA001	2	36A164222AA001	2	36A164222AA002	2
Lockwasher –Flat	36A164222AB001	2	36A164222AB001	2	36A164222AB001	2	36A164222AB001	2	36A164222AB002	2	36A164222AB003	2
Pinion Nut	36A164223AA001	2	36A164223AA001	2	36A164223AA001	2	36A164223AA002	2	36A164223AA002	2	36A164223AA003	2
Cable Bushings												
Series Motor	36A164527AA001	4	36A164527AC001	4	36A164527AC001	4	36A164527AC001	4	36A164527CAG01	2	36A164527AC001	2
Larger Hole									36A164527AC002	2	36A164527AC002	2
Shunt Motor –Field	36A164527AC001	2	36A164527AC001	2	36A164527AC001	2	36A164527AC001	2	36A164527AC001	2	36A164527AC002	2
Blank	36A164527AA004	2	36A164527AA004	2	36A164527AA004	2	36A164527AA004	2	36A164527AA004	2	36A164527AA004	2
Compound Motor	36A164527AC001	4	36A164527AC001	4	36A164527AC001	4	36A164527AC001	4	36A164527AC001	2	36A164527AC001	2
Larger Hole									36A164527AC002	2	36A164527AC002	2

7-Medium DC

Type MD, Frames 808 to 818

230V Standard Renewal Parts Identification

Renewal Part	MD808	Qty.	MD810	Qty.	MD812	Qty.	MD814	Qty.	MD816	Qty.	MD818	Qty.
Armature	36A164234AAG01	1	36A164235AAG01	1	36A164236AAG01	1	36A164237AAG01	1	36A164238AAG01	1	36A164239AAG01	1
Armature w/Frameheads	36A164234AAG03	1	36A164235AAG03	1	36A164236AAG03	1	36A164237AAG03	1	36A164238AAG03	1	36A164239AAG03	1
Armature Coils	36A164164AAG01	1	36A164165AAG01	1	36A164166AAG01	1	36A164167AAG01	1	36A164168AAG01	1	36A164169AAG01	1
Equalizer Coils							36A164177AB001	29	36A164178AB001	29	36A164179AB001	27
Insulation Set	36A164194AAG01	1	36A164195AAG01	1	36A164196AAG01	1	36A164197AAG01	1	36A164198AAG01	1	36A164199AAG01	1
Commutator	36A164084AAG01	1	36A164085AAG01	1	36A164086AAG01	1	36A164087AAG01	1	36A164088AAG01	1	36A164089AAG01	1
Shaft	36B465454AAG01	1	36B465455AAG01	1	36B465456AAG01	1	36B465457AAG01	1	36B465458AAG01	1	36B465459AAG01	1
Fan	36A164074CB001	1	36A164074CA001	1	36A164076CA001	1	36A164077CA001	1	36A164078CAG01	1	36A164079CA001	1
Coil & Pole – Comm	36A164364AAG01	4	36A164365AAG01	4	36A164366AAG01	4	36A164367AAG01	4	36A164368AAG01	4	36A164369AAG01	4
Coil Only – Comm	36A164364AAG02	4	36A164365AAG02	4	36A164366AAG02	4	36A164367AAG02	4	36A164368AAG02	4	36A164369AAG02	4
Coil & Pole –Series	36A164404SBBG01	4	36A164405SBBG01	4	36A164406SBBG01	4	36A164407SBBG01	4	36A164408SBBG01	4	36A164409SBBG01	4
Coil Only –Series	36A164404SBBG02	4	36A164405SBBG02	4	36A164406SBBG02	4	36A164407SBBG02	4	36A164408SBBG02	4	36A164409SBBG02	4
Coil & Pole –Shunt	36A164404AAG01	4	36A164405AAG01	4	36A164406AAG01	4	36A164407AAG01	4	36A164408AAG01	4	36A164409AAG01	4
Coil Only – Shunt	36A164404AGG02	4	36A164405AGG02	4	36A164406AGG02	4	36A164407AGG02	4	36A164408AGG02	4	36A164409AGG02	4
Coil & Pole –Compound	36A164404KBBG01	4	36A164405KBBG01	4	36A164406KBBG01	4	36A164407KBBG01	4	36A164408KBBG01	4	36A164409KBBG01	4
Coil Only – Compound	36A164404KBBG02	4	36A164405KBBG02	4	36A164406KBBG02	4	36A164407KBBG02	4	36A164408KBBG02	4	36A164409KBBG02	4
Coil & Pole –Stab Shunt	36A164400KFG01	4	36A164405KDG01	4	36A164406KEG01	4	36A164407KDG01	4	36A164408KDG01	4	36A164409KDG01	4
Coil Only –Stab Shunt	36A164400KFG02	4	36A164405KDG02	4	36A164406KEG02	4	36A164407KDG02	4	36A164408KDG02	4	36A164409KDG02	4
CE/DE Bearing	8832705–006	2	8832705–007	2	8832705–008	2	8832705–009	2	8832705–010	2	8832705–011	2
Brushholder & Spring	36A160421AAG01	6	36A160421AAG01	8	36A160422AAG01	8	36A160422AAG01	12	36A160422AAG01	16	36A160423AAG01	16
Spring only	36B465481AA001	6	36B465481AA001	8	36B465482AA001	8	36B465482AA001	12	36B465482AA001	16	36A164483AA001	16
Brush	36A164451AAP20	6	36A164451AAP20	8	36A164452AAP20	8	36A164452AAP20	12	36A164452AAP20	16	36A164453AAP20	16
CE QCK Removal Cover	36A164471CAG01	2	36A164472CAG01	2	36A164476CAG01	2	36A164477CAG01	2	36A164478CAG01	2	36A164479CAG01	2
Lockwasher – Spring	36A164222AA003	2	36A164222AA004	2	36A164222AA005	2	36A164222AA006	2	36A164222AA007	2	36A164222AA007	2
Lockwasher –Flat	36A164222AB004	2	36A164222AB005	2	36A164222AB006	2	36A164222AB007	2	36A164222AB008	2	36A164222AB009	2
Pinion Nut	36A164223AA004	2	36A164223AA005	2	36A164223AA006	2	36A164223AA007	2	36A164223AA008	2	36A164223AA009	2
Cable Bushings												
Series Motor	36A164527AC002	4	36A164527AB001	1	36A164527AB002	1	36A164527AB001	6	36A164527AB002	2	36A164527AB003	4
			36A164527AD006	1	36A164527AD003	1	36A164527AD006	2	36A164527AD003	2	36A164527AB003	2
			36A164527AE004	2	36A164527AE002	2						
Shunt Motor–Field	36A164527AC002	2	36A164527AE004	2	36A164527AE002	2	36A164527AA001	2	36A164527AB002	5	36A164527AA003	4
	36A164527AA004	2	36A164527AA001	1	36A164527AA002	1	36A164527AB001	2	36A164527AA002	3	36A164527AB003	2
			36A164527AF001	1	36A164527AF003	1	36A164527AA001	4			36A164527AD004	2
Compound Motor	36A164527AC002	4	36A164527AB001	1	36A164527AB002	1	36A164527AB001	6	36A164527AB002	6	36A164527AD003	6
			36A164527AD006	1	36A164527AD003	1	36A164527AD006	2	36A164527AD003	2	36A164527AD004	2
			36A164527AE004	2	36A164527AE002	2						

7-Medium DC



Excavator Motor Generators

Type CDS, Frames 320 to 8000

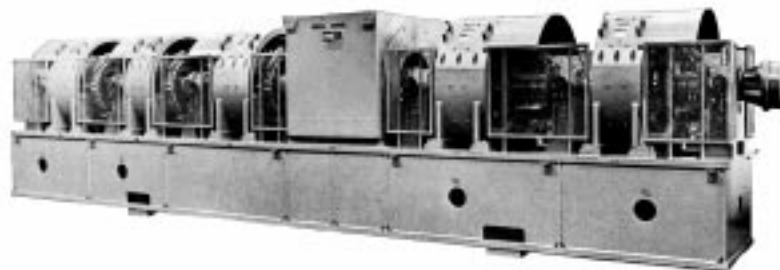
Types MPC and MCF, Frames 500 to 900

Typical Generator Weights in Pounds and Kilograms*				
Frame Size	Armature Only		Generator Complete	
	Pounds	Kilograms	Pounds	Kilograms
CD250	60	30	240	110
CD280	100	50	360	170
CD320	140	60	520	240
CD360	200	90	720	330
CD400	260	120	950	440
CD440	350	160	1320	600
CD500	550	250	1890	860
CDS580	800	360	2900	1320
CDS680	1050	480	4400	2000
CDS5000	2350	1070	6600	3000
MPC500	1700	770	5600	2540
CDS6000	2800	1270	10100	4580
MCF600	2900	1320	10100	4580
CDS7000	4000	1810	13650	6190
MCF700	4000	1810	12300	5580
CDS8000	5850	2650	14850	6740
MCF800	5850	2650	17500	7940
MCF900	5454	2470	16565	7510

*These weights are approximated and do not necessarily reflect specific generator ratings.



DC-1725-1

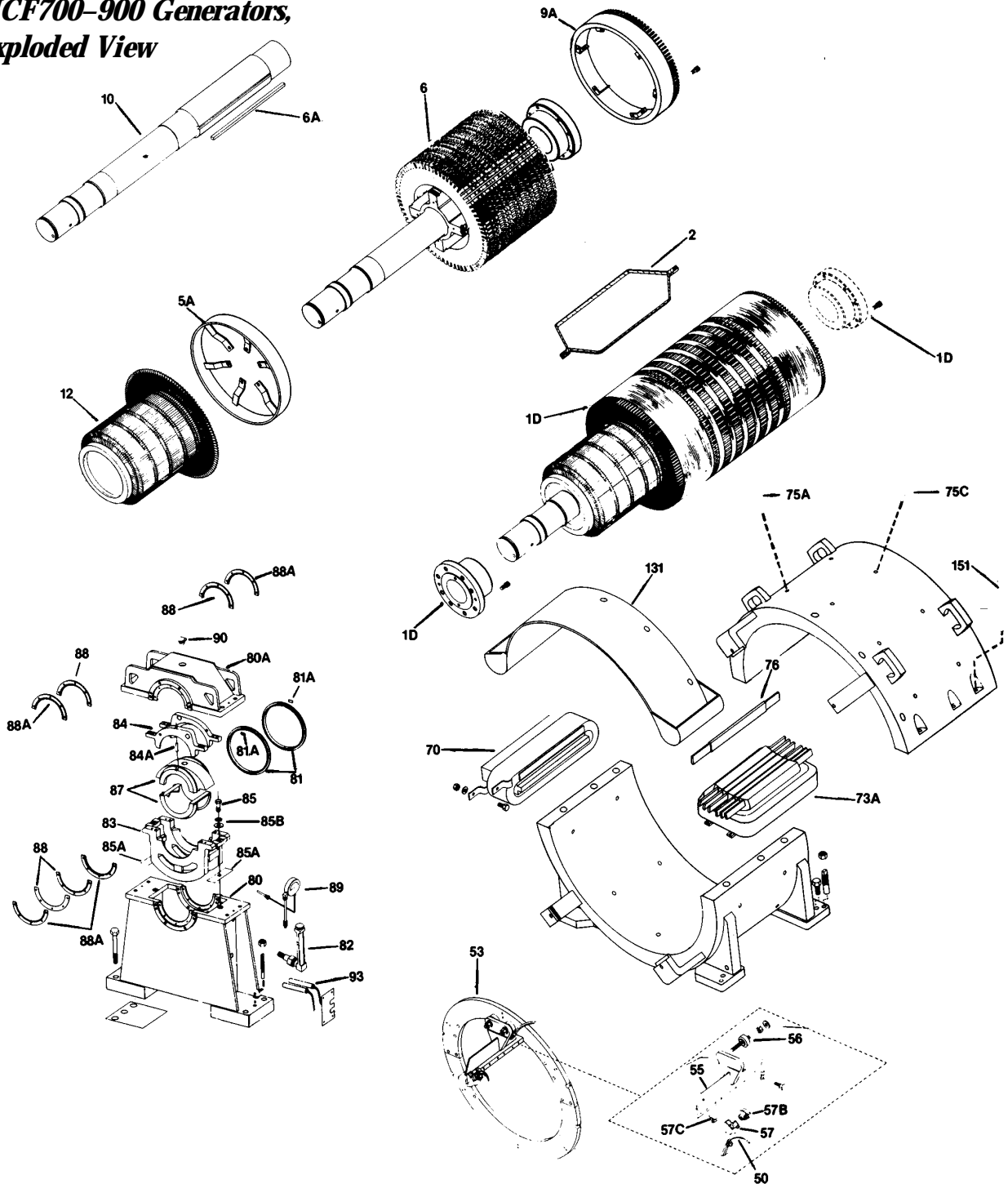


MG-5394-1

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Excavator Motor Generators

*MCF700-900 Generators,
Exploded View*



Ref. No. Description

1D	Armature & Couplings
2	Armature Coil Set
5A	Armature Coil Support-Comm End
5B	Armature Coil Support-Drive End
6	Armature Core
6A	Armature Core Key
9A	Equalizer-Molded
10	Shaft
12	Commutator
50	Brush
53	Brushholder Yoke
55	Brushholder Stud
56	Brushholder Stud Insulation

Ref. No. Description

57	Brushholder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73A	Main Field Coil & Pole With Bars
75A	Comm Pole Bolt
75C	Main Field Pole Bolt
76	Pole Face Bars
80A	Pedestal Cap
81	Oil Ring
81A	Oil Ring Wear Pads
82	Brushholder Stud
83	Cradle Bottom

Ref. No. Description

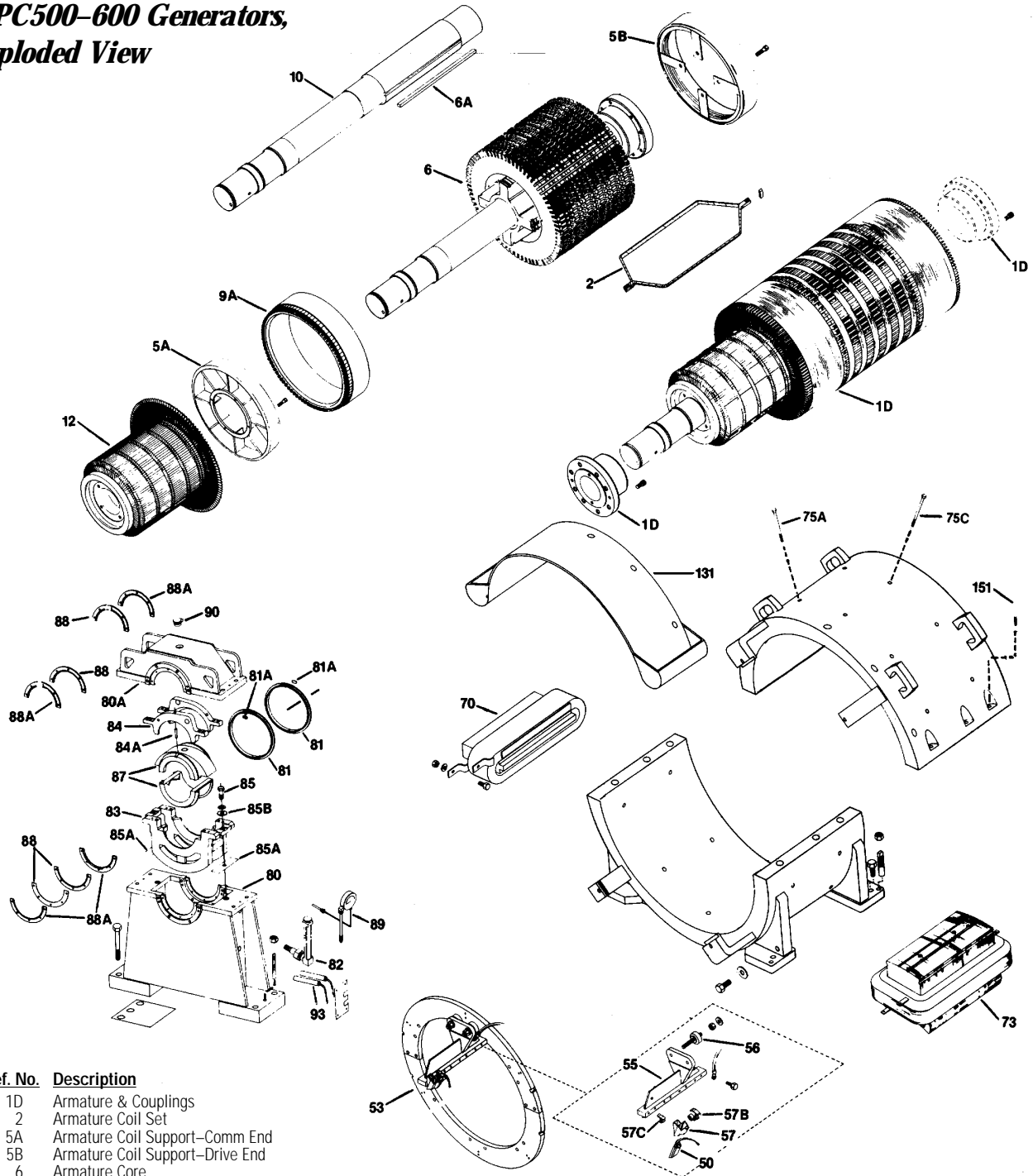
84	Cradle Cap
84A	Cradle Cap Dowel Pin
85	Insulating Bolt
85A	Insulating Shim
85B	Insulating Washer-Cradle Cap
87	Sleeve Bearing
88	Oil Seals-Leather
88A	Oil Seal Ring
89	Oil Temperature Gauge
90	Filler Cap
93	Space Heater, Pedestal Cover, Hood Comm End
131	Cover, Hood Comm End
151	Frame Split Bolt



GE Support Services

Excavator Motor Generators

MPC500-600 Generators, Exploded View



Ref. No. Description

- 1D Armature & Couplings
- 2 Armature Coil Set
- 5A Armature Coil Support-Comm End
- 5B Armature Coil Support-Drive End
- 6 Armature Core
- 6A Armature Core Key
- 9A Equalizer-Molded
- 10 Shaft
- 12 Commutator
- 50 Brush
- 53 Brushholder Yoke
- 55 Brushholder Stud
- 56 Brushholder Stud Insulation
- 57 Brush Holder
- 57B Brushholder Spring
- 57C Brushholder Mounting Clip
- 70 Comm Coil & Pole Assembly

Ref. No. Description

- 73 Main Field Coil & Pole
- 75A Comm Pole Bolt
- 75C Main Field Pole Bolt
- 80A Pedestal Cap
- 81 Oil Ring
- 81A Oil Ring Wear Pads
- 82 Sight Gauge
- 83 Cradle Bottom
- 84 Cradle Cap
- 84A Cradle Cap Dowel Pin

Ref. No. Description

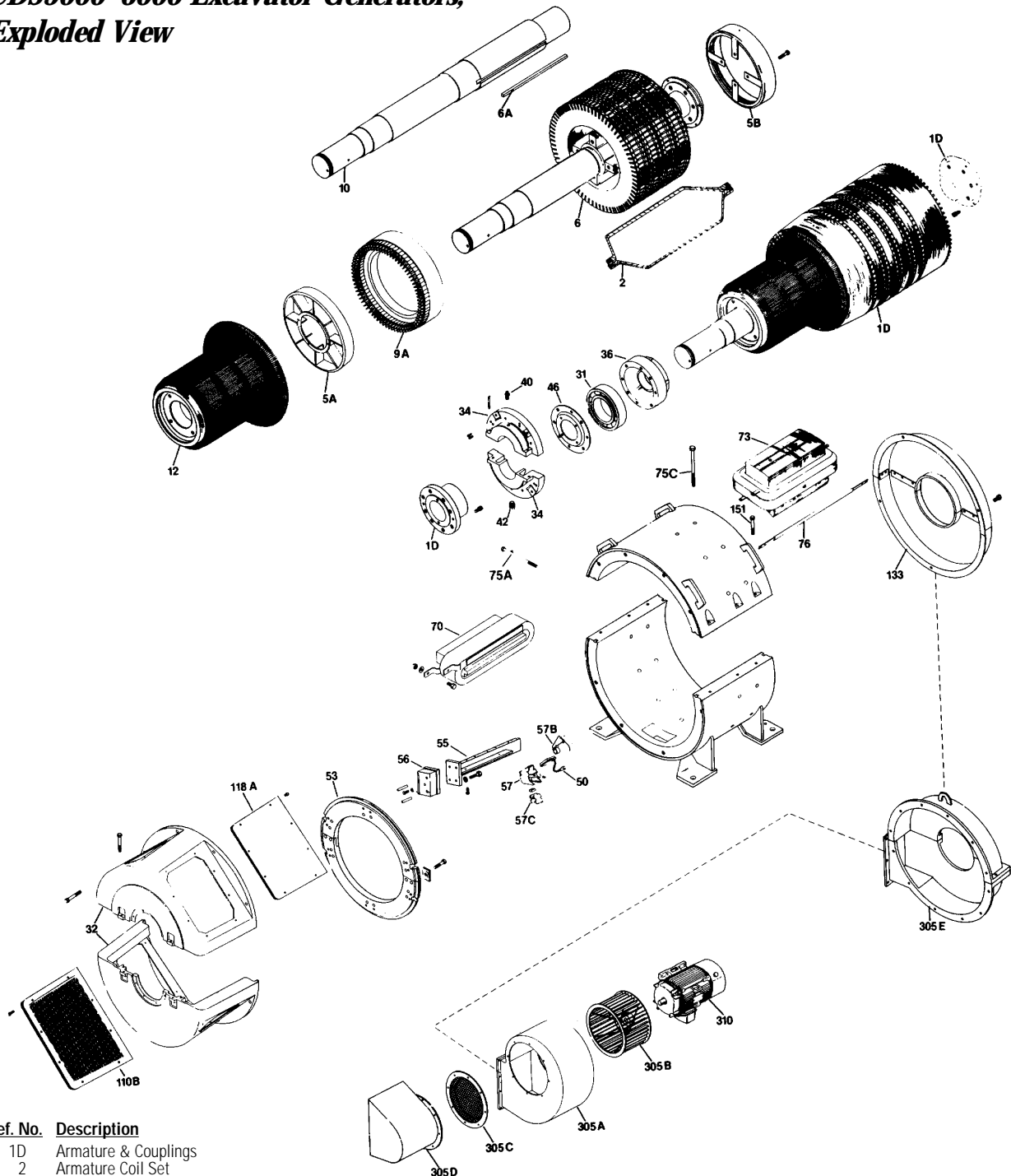
- 85 Insulating Bolt
- 85A Insulating Shim
- 85B Insulating Washer-Cradle Cap
- 87 Sleeve Bearing
- 88 Oil Seals-Leather
- 88A Oil Seal Ring
- 89 Oil Temperature Gauge
- 90 Filler Cap
- 93 Spacer Heater, Pedestal
- 131 Cover, Hood Comm End
- 151 Frame Split Bolt

7-Medium DC

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Excavator Motor Generators

*CDS5000–6000 Excavator Generators,
Exploded View*



Ref. No. Description

- 1D Armature & Couplings
- 2 Armature Coil Set
- 5A Armature Coil Support–Comm End
- 5B Armature Coil Support–Drive End
- 6 Armature Core
- 6A Armature Core Key
- 9A Equalizer–Molded
- 10 Shaft
- 12 Commutator
- 31 Bearing
- 32 Bearing Bracket
- 34 Bearing Cap
- 36 Bearing Cartridge
- 40 Grease Fitting
- 42 Pipe Plug
- 46 Grease Metering Plate
- 50 Brush
- 53 Brushholder Yoke

Ref. No. Description

- 55 Brushholder Stud
- 56 Brushholder Stud Insulation
- 57 Brushholder
- 57B Brushholder Spring
- 57C Brushholder Mounting Clip
- 70 Comm Coil & Pole Assembly
- 73 Main Field Coil & Pole
- 75A Comm Pole Bolt
- 75C Main Field Pole Bolt
- 76 Pole Face Bars
- 110B Cover, Bottom Side Comm End–Screen
- 118A Cover, Top Side Comm End–Solid
- 133 Cover, Drive End

Ref. No. Description

- 151 Frame Split Bolt
- 305A Blower Housing
- 305B Blower Impeller
- 305C Air Inlet Screen
- 305D Air Inlet Hood With Screen
- 305E Blower Bracket
- 310 Blower Motor

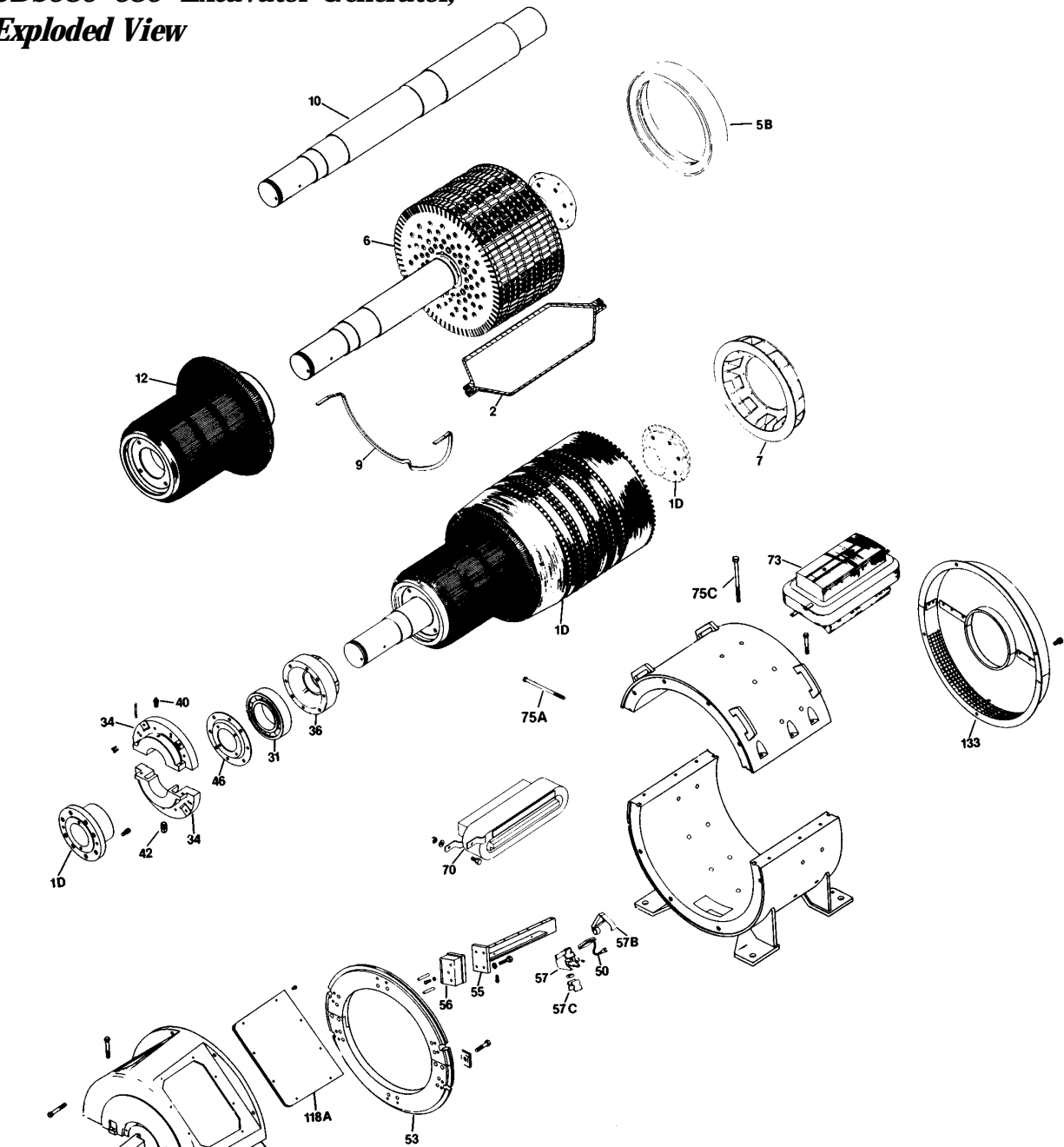


GE Support Services

7-Medium DC

Excavator Motor Generators

*CDS580-680 Excavator Generator;
Exploded View*



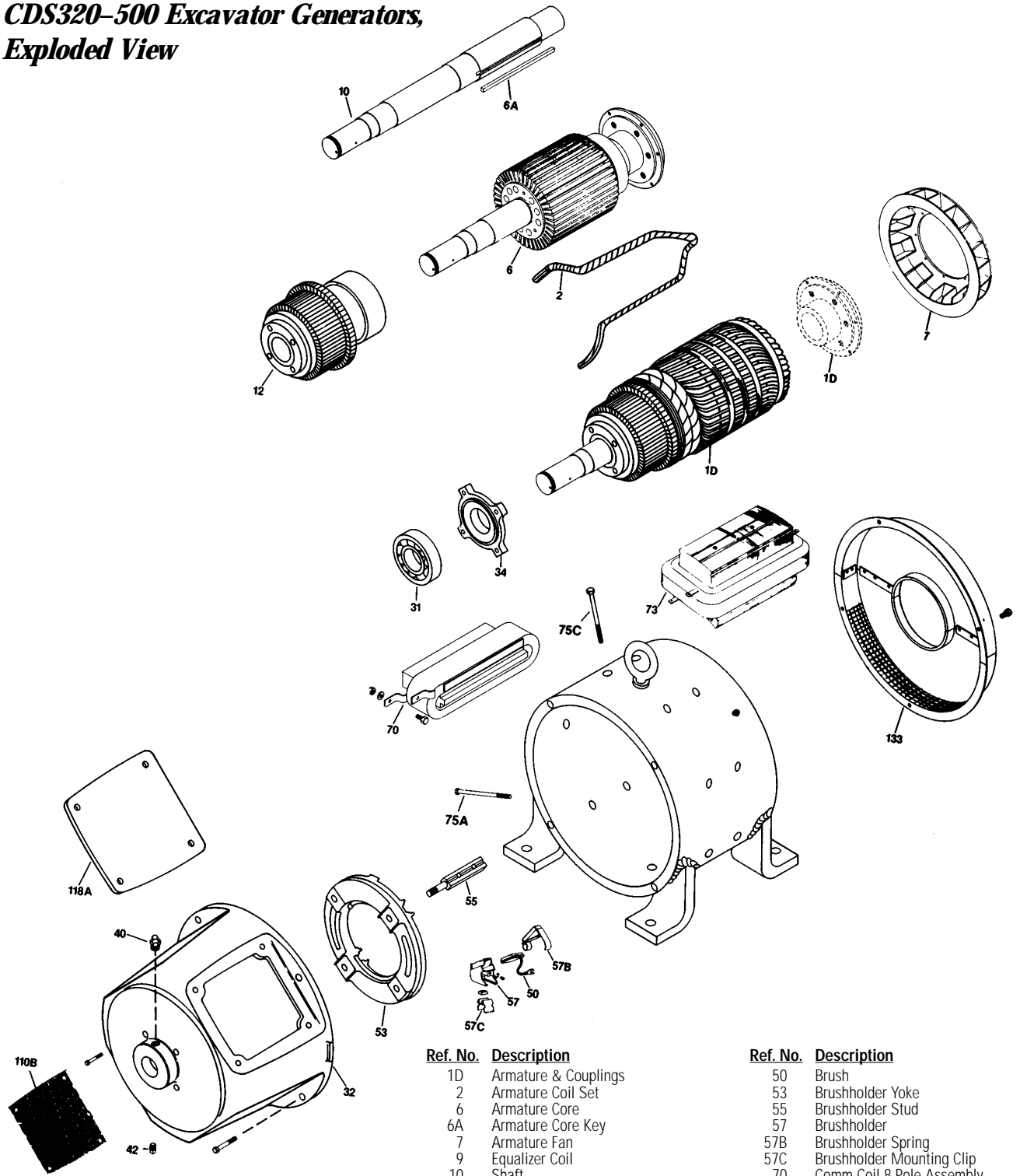
Ref. No.	Description
1D	Armature & Couplings
2	Armature Coil Set
5B	Armature Coil Support-Drive End
6	Armature Core
7	Armature Fan
9	Equalizer Coil
10	Shaft
12	Commutator
31	Bearing
32	Bearing Bracket
34	Bearing Cap
36	Bearing Cartridge
40	Grease Fitting
42	Pipe Plug
46	Grease Metering Plate

Ref. No.	Description
50	Brush
53	Brushholder Yoke
55	Brushholder Stud
56	Brushholder Stud Insulation
57	Brush Holder
57B	Brushholder Spring
57C	Brushholder Mounting Clip
70	Comm Coil & Pole Assembly
73	Main Field Coil & Pole
75A	Comm Pole Bolt
75B	Main Field Pole Bolt
110B	Cover, Bottom Side Comm End-Screen
118A	Cover, Top Side Comm End-Solid
133	Cover, Drive End

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Excavator Motor Generators

*CDS320-500 Excavator Generators,
Exploded View*



Ref. No.	Description	Ref. No.	Description
1D	Armature & Couplings	50	Brush
2	Armature Coil Set	53	Brushholder Yoke
6	Armature Core	55	Brushholder Stud
6A	Armature Core Key	57	Brushholder
7	Armature Fan	57B	Brushholder Spring
9	Equalizer Coil	57C	Brushholder Mounting Clip
10	Shaft	70	Comm Coil 8 Pole Assembly
12	Commutator	73	Main Field Coil 8 Pole
31	Bearing	75A	Comm Pole Bolt
32	Bearing Bracket	75C	Main Field Pole Bolt
34	Bearing Cap	110B	Cover, Bottom Side Comm End-Screen
40	Grease Fitting	118A	Cover, Top Side Comm End-Solid
42	Pipe Plug	133	Cover, Drive End

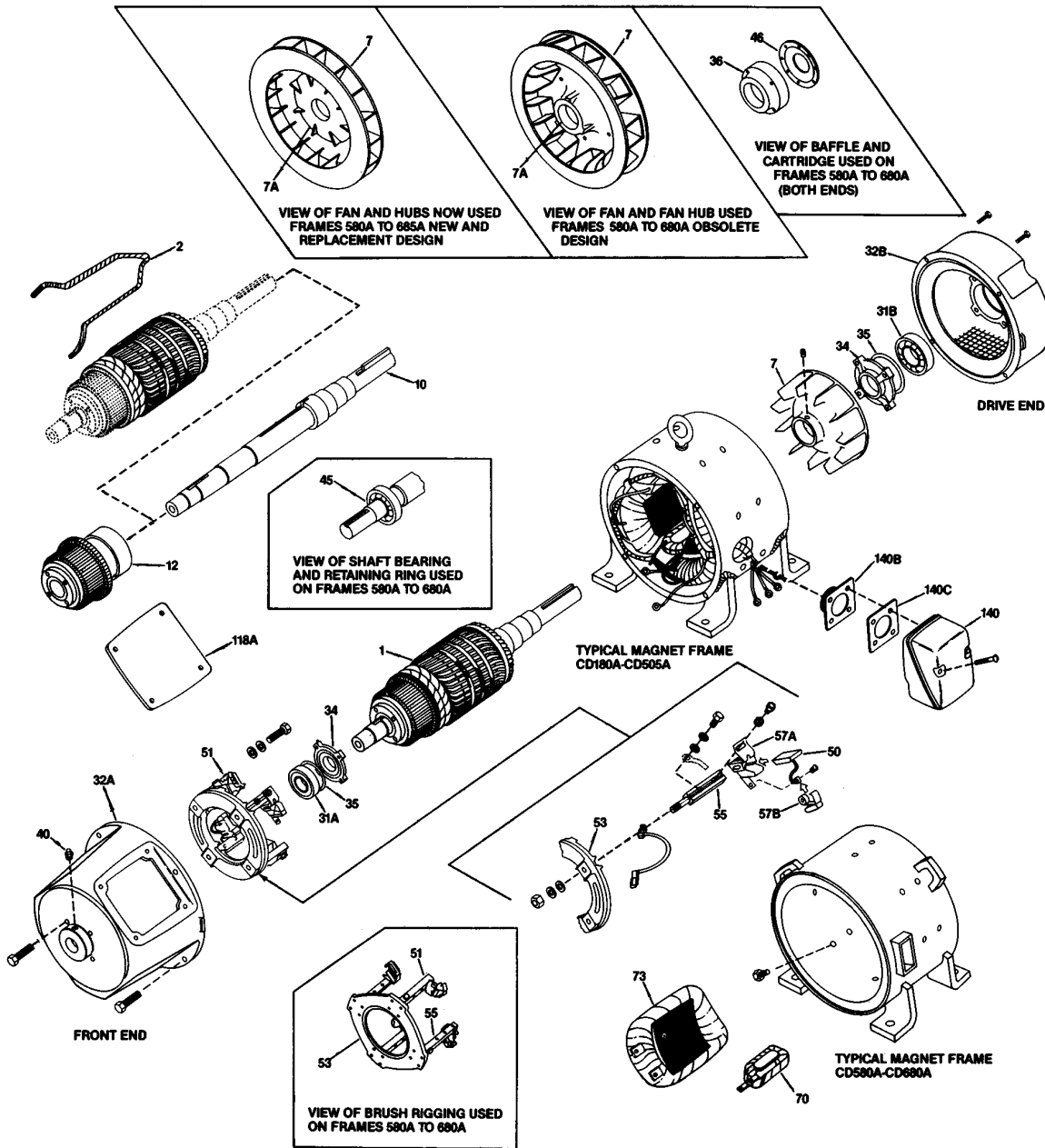
7-Medium DC



GE Support Services

Excavator Motor Generators

Type CD, Frames 186A to 685A Kinamatic, Exploded View



Ref. No. Description

- 1 Armature
- 2 Armature Coil
- 7 Armature Fan
- 7A Armature Fan Hub
- 10 Armature Shaft
- 46 Grease Metering Plate
- 31A,B Bearing
- 32A,B Bearing Bracket
- 34 Bearing Cap
- 35 Bearing Cap Gasket
- 36 Bearing Cartridge
- 51 Brush Rigging
- 53 Brushholder Yoke

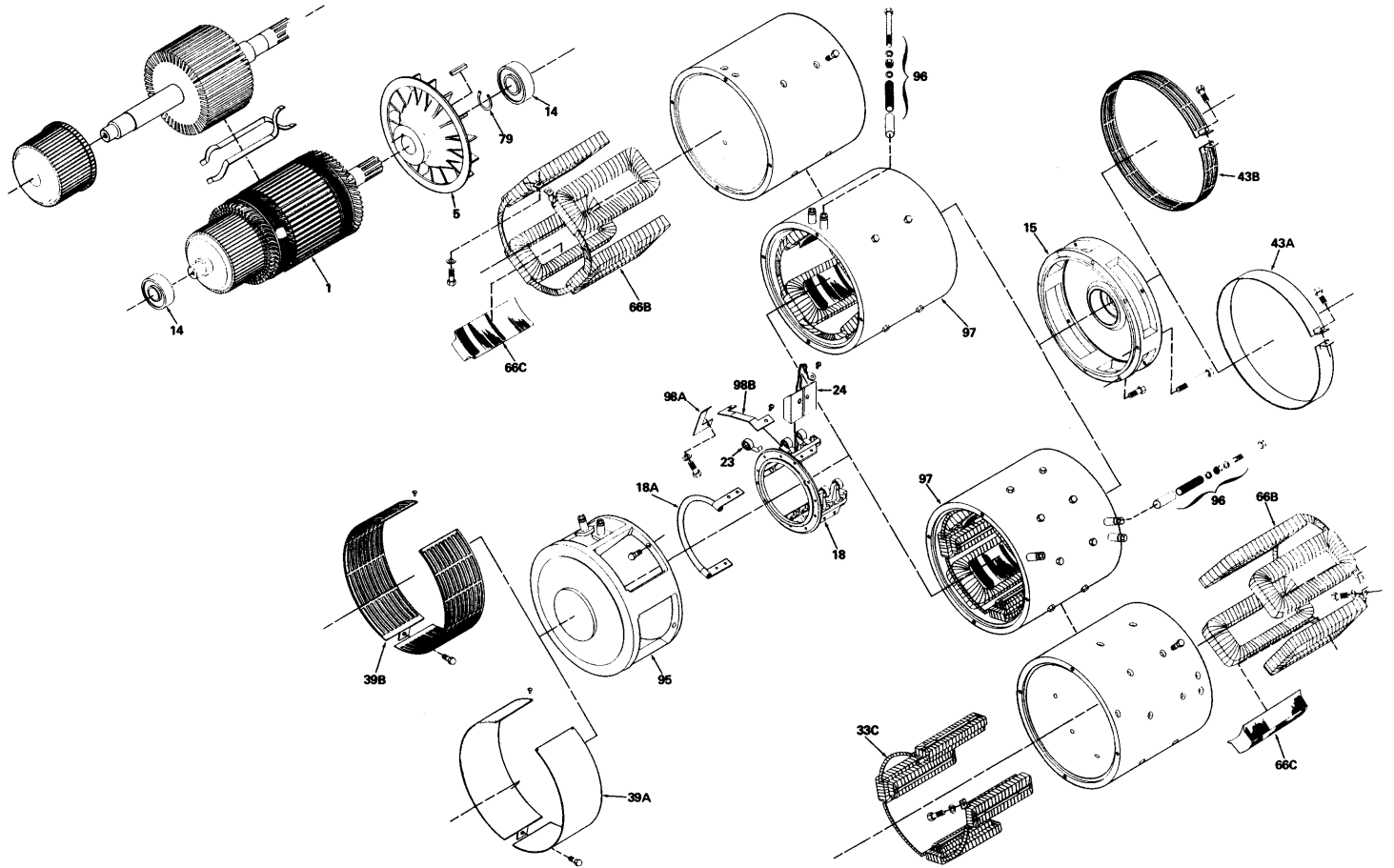
Ref. No. Description

- 55 Brushholder Stud
- 57A Brushholder
- 57B Brushholder Spring
- 50 Brush
- 70 Comm Coil And Pole Assembly
- 12 Commutator
- 140 Conduit Box
- 140B Conduit Box Adapter
- 140C Conduit Box Adapter Gasket
- 118A Cover, Topside Comm End-Solid
- 73 Field Coil & Pole
- 45 Locking Ring

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Electric Vehicles

BT1300 Thru BT2300



Ref. No.	Description
1	Armature
5	Armature Fan
14	Bearing-CE/DE
15	Bearing Bracket-DE
18	Brush Rigging
18A	Cross Connector
23	Brushholder Spring
24	Brush
33C	Commutating Coil Asm.
39A	Cover, Access Solid-CE
39B	Cover, Access Screen-CE

Ref. No.	Description
43A	Cover, Solid-DE
43B	Cover, Screen-DE
66B	Main Coil Assembly
66C	Main Pole
79	Retaining Ring
95	Yoke And Bearing Support-CE
96	Stud And Tube Assembly
97	Coiled Frame
98A	Connector-Short
98B	Connector-Long

7-Medium DC



Maintenance Tips

Armature Banding

Incorrect core band tension is a common cause of armature failures. A loose band will allow the coils to move and abrade, causing a short or ground. Proper tension should draw the coils to about one-third of the banding groove height. Under no circumstances should the tape rest on the bottom of the groove.

Recommended absolute pressures for glass tape of the armature core:

3/8 wide	30 end	200–225 lbs.
3/4 wide	60 end	400–450 lbs.

The armature should be preheated to 120°C. The tension device must be able to maintain tape pressure when stopped.

Bearings

Grease—Generally used is GE D6A2C5, lithium soap base. Do not use grease with EP designation and do not mix greases. EP designated greases should not be used on DC motors. The additives work at elevated temperatures above the normal capability and the grease materials may deteriorate the winding insulation.

Oil Leaks—Sleeve bearing housings are designed with vent passages to equalize air pressure on both sides of the bearing. Blockage of vents can cause oil leakage.

Warning: Ensure all power has been removed from the machine before performing maintenance.

To Replace Bearings—

1. First verify that the bearings are the problem. Symptoms may include contaminated oil, excessive vibration, noise, or heat.
2. Lubricate each bearing before installing: speeds below 1200 RPM use 300 SSU (Saybolt Seconds Universal) oil. Use 150 SSU oil for speeds above 1200 RPM.
3. Check for damaged seals and rings. Replacements are available from GE Support Services.

Warning: Ensure all power has been removed from the machine before performing maintenance.

Blower Impellers

These will move air in either direction of rotation. Make sure that the rotation maximizes air flow.

Blower Kit Modification

- Comm end mount, F1 or F2, 230/460V, 3 Phase, 60 Hz. For other requirements, refer to GE Support Services.
- CD180AT machines require drilling and tapping of mounting holes.
- Check the direction of rotation of the impeller before placing motor into service.
- Air flow may be reduced up to 30% due to accumulation of dirt on the impeller blades.
- Maximum air rise through the machine is 25°C.

Brushholder Replacement

Brush Box Height—Brush boxes are set .070–.080" above the commutator diameter on all GE Industrial DC motors, CD210AT–CD9000.

Brushholder setting spacers are available through GE Support Services to ensure uniform height above the commutator:

PT#36A178125AA001 for CD580AT–CD9000

PT#36A178125AA002 for CD210AT–CD500AT

Cleaning brushholder springs by sand blasting may erode spring material changing the force constant and may introduce sand into the motor. Glass beading brushholder springs is acceptable.

Warning: Ensure all power has been removed from the machine (e.g., lock out/tag out) before checking brush box heights.

Maintenance Tips

Enclosures

- DPFG, SPFG, TEFC, TAE0 constant torque to 60% base speed
- TEUC, TEWC constant torque to 40% base speed
- BV, SV constant torque to 5% base speed

Endplay

Always measure with dial indicator.

Motors:	MD600-800	.109 - .172"
	Kinamatic I	.005 - .040"
	Kinamatic II-2 Pole	.005 - .040"
	Kinamatic II-4 Pole	.000 - .015"
	CD580	.029 - .044"
	CD680	.037 - .052"

Field, Commutating

Commutating Pole Shims—When maintaining large DC machines, it is important to keep the same number of shims between the magnet frame and the pole. The order of the shims is also important to maintain magnetic balance. The correct order of the shims, starting from the comm pole out is:

1. Thick steel shims (.125" thick)
2. Thick aluminum shims (.125" thick)
3. Thin aluminum shims
4. Thin steel shims

The thin steel shims should rest against the frame.

Field, Data

- N/P volts = N/P current x N/P resistance x heat factor (1.39 Class F)
(1.29 Class B)

Field, Kinamatic II Connections Information

The field data listed on the nameplate with two field voltages assumes high voltage excitation. The field amps are listed for base speed and weak field speed. Resistance is given for series connection (one circuit) at 25°C. If operating at low voltage (two circuit), field data must be adjusted. Multiply the field amps by two and divide the field resistance by four. All data is given hot, except the field resistance.

Field, Main

- Up to 110% excitation...within speed and load capability of the armature
- Limit current to 50% maximum...armature at standstill or no blower use field economy relay
- Resistance increase of 40% not uncommon from cold to hot

Field, TREC Coils

Bonding New Coils to Poles—

1. Note the vertical position of the original coil on the pole and the position of the leads. Repositioning coils exactly on the pole is critical to the machine performance.
2. When bonding new coils to poles, first travel bonding compound directly to the pole, ensuring adequate compound fills 100% of the space between the coil and pole. Center the new coil on the pole and position the coil as noted in Step #1. GE Support Services recommends EPC PREG X93C 1961 bonding compound, which can be purchased through Epic Resins at 1-800-242-6649. Recommended cure time is 6 hours at 165°C.
3. Be sure to replace all magnetic pole shims in their original order.

Warning: Ensure all power has been removed from the machine before performing maintenance.



Maintenance Tips

Filler

Filler compound for hand wound equalizers is DOLPH CW-340-1 stator compound.
Ref: A50CD157A, 905A999AC218 purchase locally.

Filters

Kinamatic II: Numbers are molded in the plastic caps. The following identifies the filter number.

36A173048AAH01 – 36A173049AAH01 = FILTER #37A173047AAG01
 36A173048AAH02 – 36A173049AAH02 = FILTER #37A173047ABG01
 36A173048AAH03 – 36A173049AAH03 = FILTER #37A173047ACG01
 36A173048AAH03 – ONE END ONLY = FILTER #37A173047ADG01

Miscellaneous

- Torque = (horsepower x 5252) divided by base speed
- Air rise = air exhaust temperature minus air intake temperature in degrees C
(25 degrees C is considered high)

Molded Commutators

Molded commutator construction has been a feature of GE Motors for about twenty-five years. Molded commutators have proven to be a reliable and stable design. The use of molded commutators is being expanded. Heating of the replacement commutator is not generally required for a successful installation.

CD180AT	-Comm is cemented to shaft, cold.
CD210AT-CD320AT	-Comm is furnished on an aluminum shell. Press on cold.
CD360AT-CD500AT	-Comm is furnished on a cast iron shell. Permissible to preheat to 150°C to install.

Caution: Avoid excessive/uneven heating.

Motor Heating

Rule of thumb is that the air rise through the motor should be a max of 25 degree C. The allowable ampere rating of a drip proof motor drops significantly at speeds less than 60%. See heating curves.

Normal Environment

- Temperature 0 to 40 degrees C (32 to 104 degrees F)
- Humidity 40 to 99%
- Altitude less than 3300 feet
- Loading 20 to 100% + occasional 150% current (100% base speed)
occasional = 1 min or less, not part of regular duty cycle
- Starting 250% full load current – CD180AT thru CD5010AT
300% full load current – CD4000
less than 10 seconds, not stalled

Paint

GE motors gray paint is a standard ASA#49.

Pedestal Pads

Pedestal pads on drag line sets are small molded plastic pads used to guide oil rings. There are 2 per pedestal. 36A160583AA001

Maintenance Tips

Sealant

Silicone, RTV, or Bathtub Seal/Caulking is not recommended for sealing DC motors. The silicone compounds destroy brushes, use “Titeseal” sealing compound GE MOTORS #8064200000

Titeseal

Titeseal is the preferred sealant used on waterproof motors to seal fits and bolts. It is non-hardening, non-silicone. GE#8064200000.

Viton Protection

Viton protection kit for glass bound commutators – protects new bands from contamination. Kit is part 36A173329AAG02. Apply two coats of DOLPH ER41 (not included) over Viton.

DOLPH ER-41

This is the insulating enamel used for pole face connections.

Serial Number

Serial numbers for motors are stamped in the frame, usually near lift lugs.

Shaft Grounding Brushes

Voltage spikes from some static DC drives can be high enough to damage the bearings. One solution is to mount a brush on the shaft which grounds the voltage. These are constant pressure.

Motor Frame	Ground Brush Kit	Comments
CD2800	36B472160GGG02	DE OUTSIDE W/LABYRINTH
CD280AT	36B472160GBG05	DE OUTSIDE W/LABYRINTH
CD320AT	36B472160GBG04	DE OUTSIDE W/LABYRINTH
CD360AT	36B472160GBG01	DE OUTSIDE W/LABYRINTH
CD400AT	36B472160GBG02	DE OUTSIDE W/LABYRINTH
CD500AT	36B472160GBG03	DE OUTSIDE W/LABYRINTH
CD5010	36B472160GBG07	DE OUTSIDE W/LABYRINTH
CD4000/6000	36B472712AAG01	DE INSIDE NO LABYRINTH

Grounding brushholder with brush and spring – 36A180199AA001

Replacement brush only – 36A180199AA003

Speed Variation

- Plus or minus 7.5% at rated armature voltage and field current
- Not to exceed 15% full load (cold) to full load (hot) --ventilated
- Not to exceed 20% full load (cold) to full load (hot) --totally enclosed

Tachometer

Kit Modification

- The center hole of the motor shaft should not be used to locate the stub shaft for coupling.
- CD180AT TENV, CD180AT TEFC, and CD210AT TEFC motors should be reviewed by GE Support Services.
- BC tach kits will mount 56C face (5/8” shaft) tachs, such as Aviron (M738), Dynapar (62P), and Lakeshore (6200).
- Older helical spring-type couplings can be replaced with up-to-date Thomas flexible disc-type couplings.

Tachometers Type AN-DC

Tachometers type AN-DC use brush 36B467072AA003, Qty 4 per motor.



Maintenance Tips

Thermostats

Thermostats are generally attached to the Comm Coil with a two part high temp epoxy. GE #905A999AC222 generally a class F epoxy will work.

Unit Coolers

Unit coolers supplied on DC motors are not waterproof.

Weight of Steel

.28 lb per cubic inch.

Wire

Non-Magnetic banding steel wire is no longer used by GE Motors.

Standard Brushholders with Springs and Springs Only

Spring Identification by Brushholder Number

Brushholder w/Spring	Spring Only	Brushholder w/Spring	Spring Only
36A160421AAG02	36B465481AA001	428C687 G02	337B689 G01
36A160421AAG03	36B465481AA001	428C689 G02	337B689 G01
36A160422AAG02	36B465482AA001	428C694 G01	36B465487AA001
36A160422AAG03	36B465482AA001	428C694 G02	36B465487AA001
36A160422AAG04	36B465482AA001	428C695 G01	337B689 G01
36A160423AAG02	36B465483AA001	428C695 G02	337B689 G01
36A160423AAG03	36B465483AA001	428C697 G01	337B689 G01
36A160423AAG05	36B465483AA001	428C697 G02	337B689 G01
36A160424AAG01	36B465484AA001	527B837 G01	9973178 001
36A160424AAG03	36B465484AA001	527B837 G02	9973178 001
36A160425AAG01	36B465485AA001	527B837 G03	9973179 001
36A160425AAG03	36B465485AA001	527B837 G04	9973179 001
36A160426AAG01	36B465486AA001	5980811 G01	2415295 001
36A160426AAG02	36B465486AA001	5980811 G02	2415896 001
36A160426AAG03	36B465486AA001	5980811 G03	2415296 001
36A160427AAG01	36B465487AA001	5980822 G01	2415295 001
36A160427AAG02	36B465487AA001	5980822 G02	2415896 001
36A160427BAG01	36B465487AA001	5980822 G03	2415296 001
36A161101AAG01	36B465081AA001	5980924 G01	2415295 001
36A161101AAG03	36B465081BA001	5980924 G02	2415896 001
36A161101AAG04	36B465081AA001	5980924 G03	2415296 001
36A161101AAG05	36B465481AB001	608C878 G01	626B204 G01
36A161102AAG01	36B465082AA001	692B656 G01	265A236 001
36A161103AAG01	36B465083AA001	692B656 G02	265A237 001
36A161971AAG01	36B465081AA001	692B656 G03	265A238 001
36A161973AAG01	36B465083AA001	894A627 G01	626B202 G01
36A167280AAG01	36B467020AA001	894A627 G02	626B203 G01
36A167281AAG01	36B467021AA001	894A627 G03	626B203 G01
41C631160G02	337B689 G01	894A627 G04	767B958 G01
428C682 G02	337B689 G01	894A684 G01	626B204 G01
428C683 G02	337B689 G01	894A684 G02	626B204 G01
428C685 G01	41B533105G01	894A684 G03	626B205 G01
428C685 G02	41B533105G01	894A684 G04	626B206 G01
428C686 G01	337B689 G01	894A684 G05	626B207 G01
428C686 G02	337B689 G01		

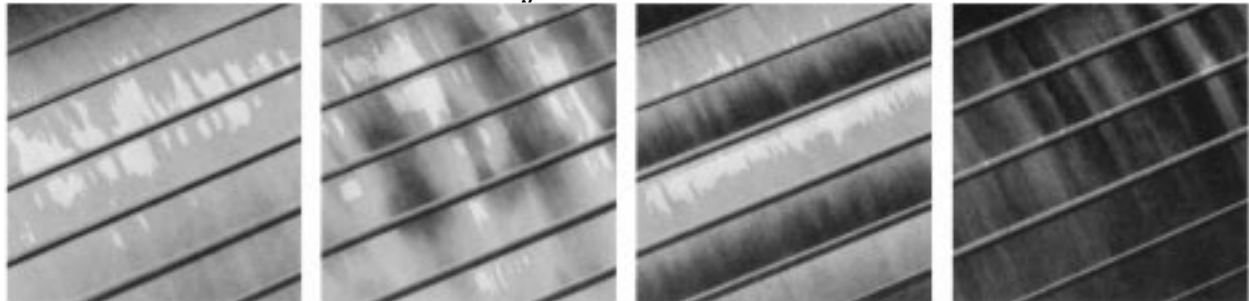
7-Medium DC



Commutators

Check Chart for Comparing Commutator Surface Markings

Satisfactory Commutator Surfaces



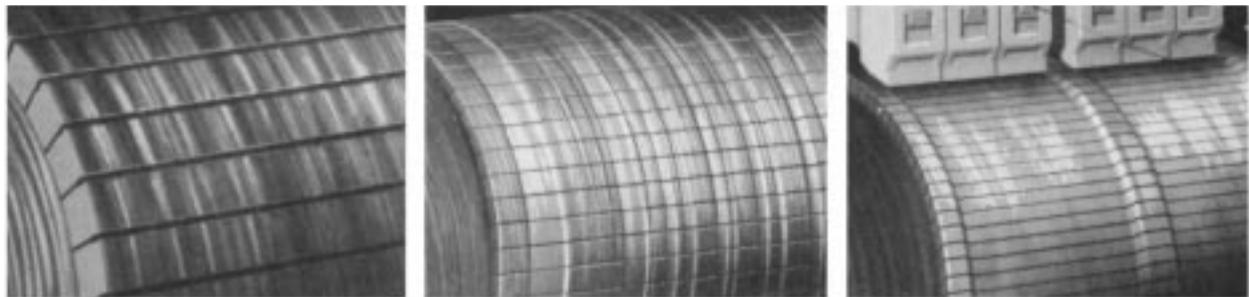
LIGHT TAN FILM over entire commutator surface is one of many normal conditions often seen on a well-functioning machine.

MOTTLED SURFACE with random film pattern is probably the most frequently observed condition of commutators in industry.

SLOT BAR-MARKING, a slightly darker film, appears on bars in a definite pattern related to number of conductors per slot.

HEAVY FILM can appear over entire area of efficient and normal commutator and, if uniform, is quite acceptable.

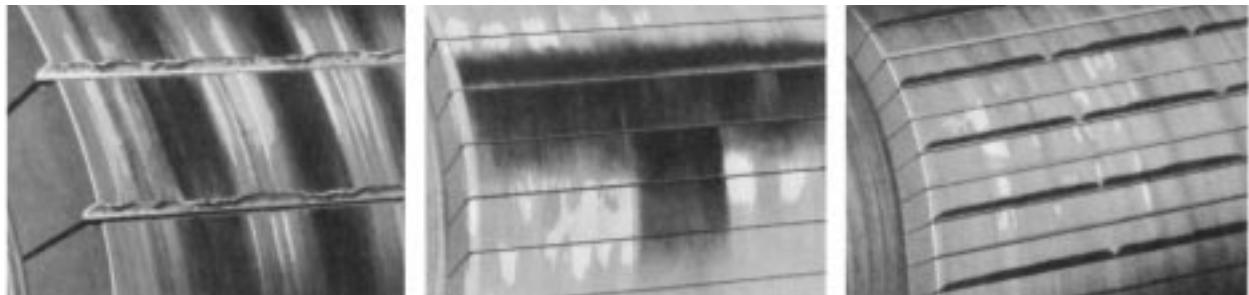
Watch for These Danger Signs



STREAKING on the commutator surface signals the beginning of serious metal transfer to the carbon brush. Check the chart below for possible causes.

THREADING of commutator with fine lines results when excessive metal transfer occurs. It usually leads to resurfacing of commutator and rapid brush wear.

GROOVING is a mechanical condition caused by abrasive material in the brush or atmosphere. If grooves form, start corrective action.



COPPER DRAG, an abnormal build-up of commutator material, forms most often at trailing edge of bar. Condition is rare, but can cause flashover if not checked.

PITCH BAR-MARKING produces low or burned spots on the commutator surface. The number of these markings equals half or all the number of poles on the motor.

HEAVY SLOT BAR-MARKING can involve etching of trailing edge of commutator bar. Pattern is related to number of conductors per slot.

CAUSES OF POOR COMMUTATOR CONDITION

Frequent visual inspection of commutator surfaces can warn you when any of the above conditions are developing so that you can take early corrective action. The chart below may indicate some possible causes of these conditions, suggesting the proper productive maintenance.

	Electrical Adjustment	Electrical Overload	Light Electrical Load	Armature Connection	Unbalanced Shunt Field	Brush Pressure (light)	Vibration	Type of Brush In Use		Contamination	
								Abrasive Brush	Porous Brush	Gas	Abrasive Dust
Streaking			X			X		X	X	X	X
Threading			X			X		X	X	X	
Grooving								X			X
Copper Drag						X	X	X		X	
Pitch Bar-Marking				X	X	X	X	X			
Slot Bar-Marking	X	X								X	

HOW TO GET THE MOST VALUE FROM THIS CHART

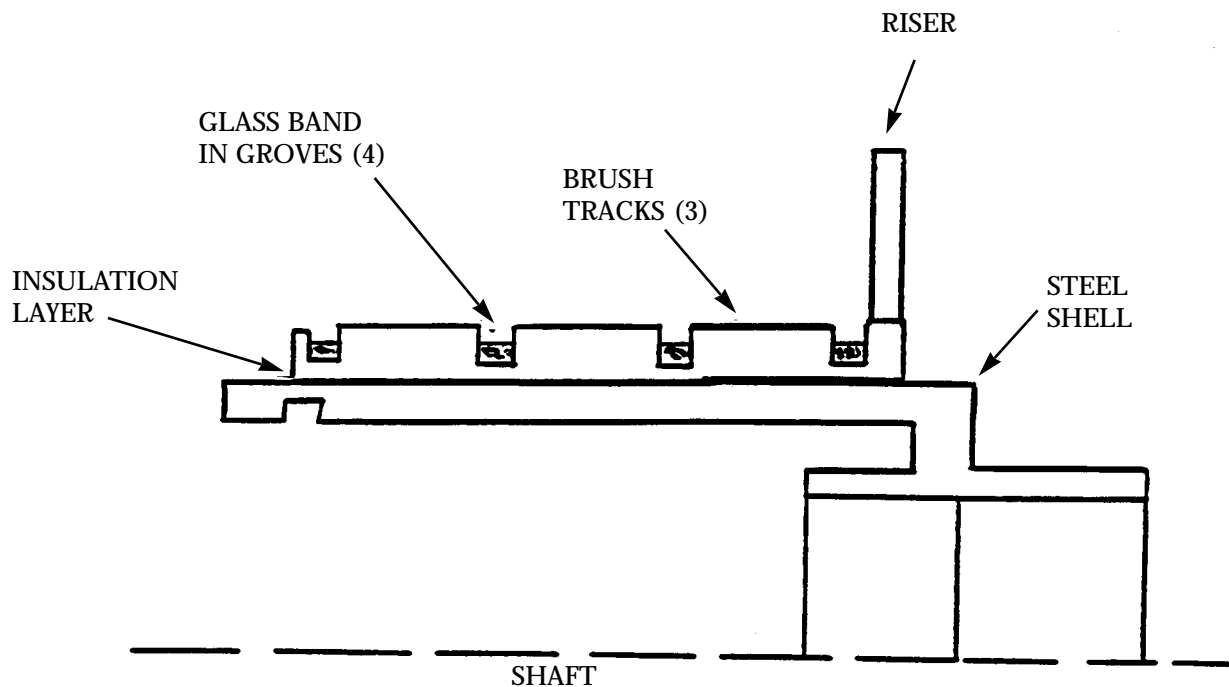
The purpose of the Commutator Check Chart is to help you spot undesirable commutator conditions as they develop so you can take corrective action before the condition becomes serious. This chart will also serve as an aid in recognizing satisfactory surfaces. The box chart above indicates the importance of selecting the correct brush and having the right operating conditions for optimum brush life and commutator wear. For additional information or help with carbon brush application or commutation problems, contact your nearest GE Sales Office or Distributor.

For more information contact a GE Motor Parts Master Distributor or GE Support Services.

Commutators

Glass Banded

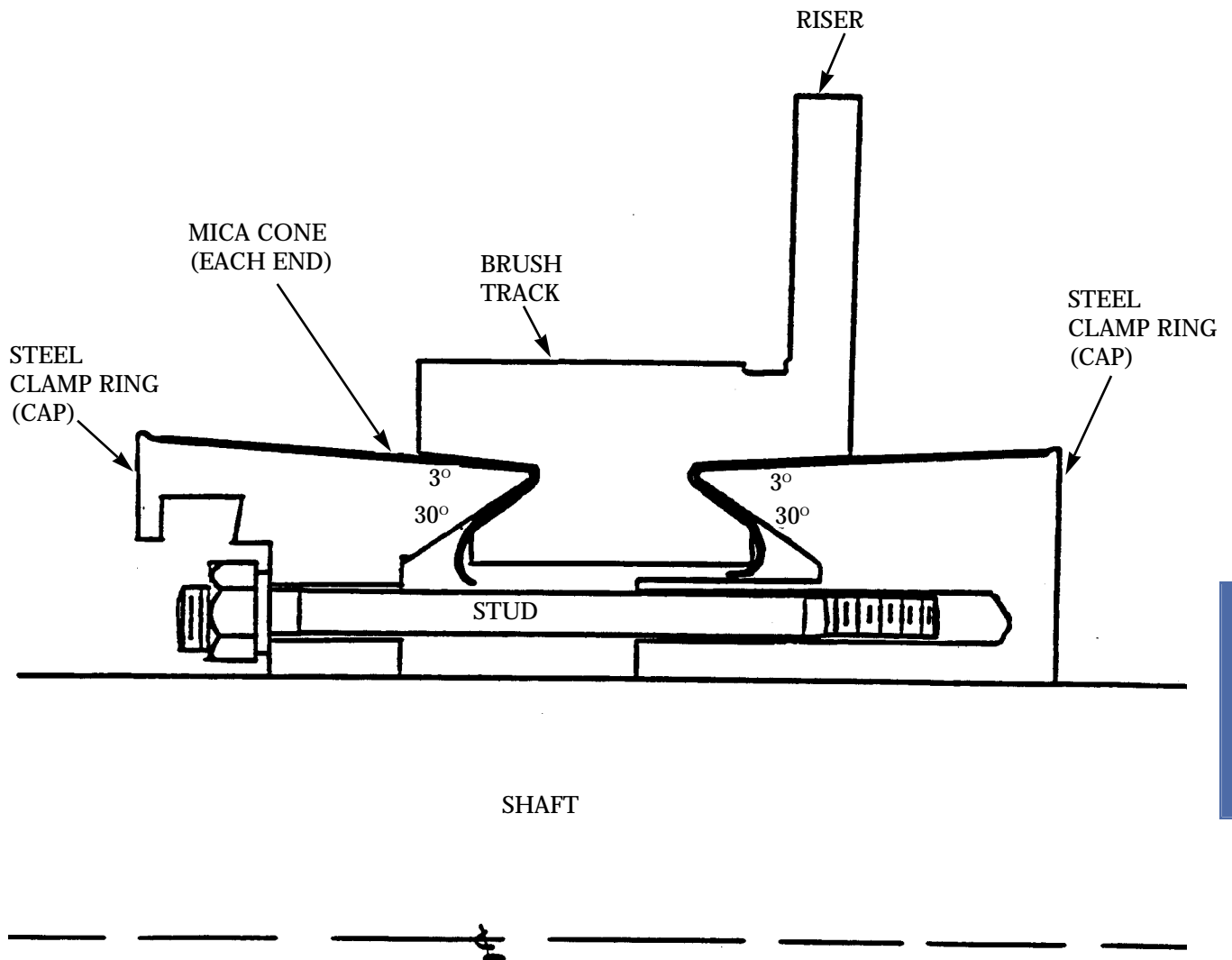
Medium DC Motors and Generator's standard commutator on larger machines from 300HP and above is made of glass banded construction. The copper and insulation segment pack has grooves machined between brush paths for application of high tension glass banding tape. This tape continually applies tension on the segment pack during service to maintain excellent stability at high speed. The shell consists of steel and covered with mica to provide ground insulation for the segment pack. An interference fit exists between the insulated shell and segment pack. Both open (separate piece) and closed (solid) risers are used. Band protection is provided by Viton (blue coating) to resist contamination that may attack bands. Solvent cleaning should not be used on commutators as contamination can be washed under the bands which could burn and deteriorate the bands from underneath which could lead to band failure.



Commutators

Cap and Cone or V-Ring

This construction is typically used on smaller horsepower machines or ones specifically ordered for steel or papermill applications. The segment pack has "V" grooves machined into the ends. The inner clamping side has a thirty degree angle and outer clearance side a three degree angle. Mica cones insulate the segment pack from the steel shell and provide ground support. The steel clamp rings are held in tension by studs with nuts or long bolts. During manufacture, the commutator is pressed together and the studs tightened. While this construction is not as stable for high speed as a glass banded commutator, the design is a rugged one and reparability is often performed by users.



7-Medium DC

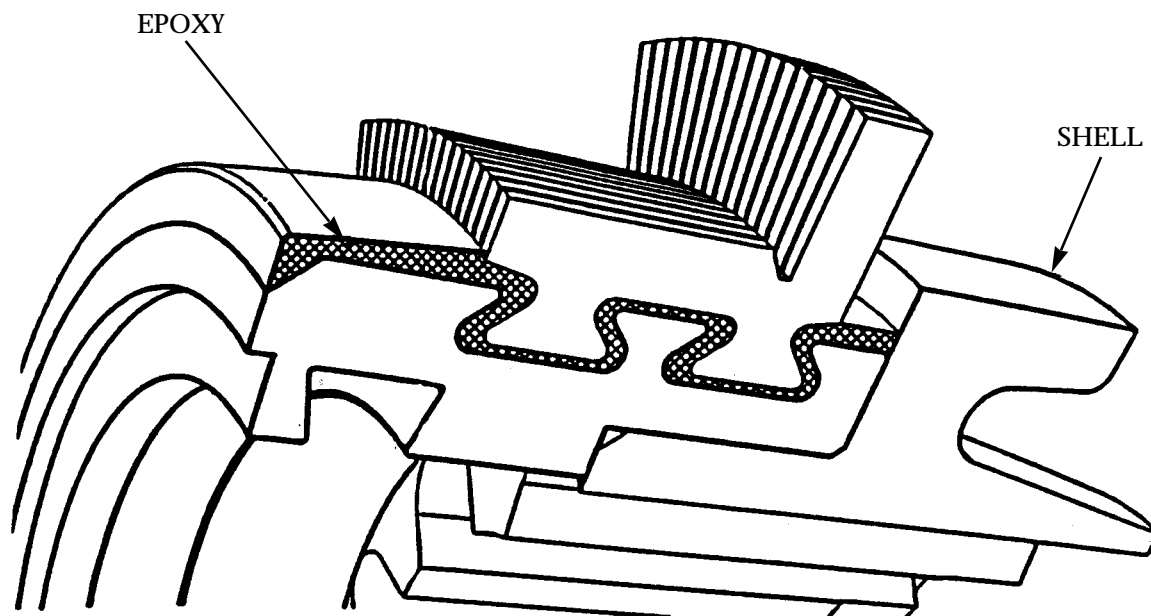


Commutators

Interlocking

A relatively new design of commutator is called the interlocking commutator. The copper segments have integral dovetails which are inserted into the steel shell with a matching dovetail. Mica insulation is then inserted between the copper segments and the segment pack is subjected to high circumferential pressure while epoxy compound is injected into the space between the shell and segment pack. The epoxy provides both the bond and ground insulation for the segment pack. The result is a very high quality commutator for high speed use.

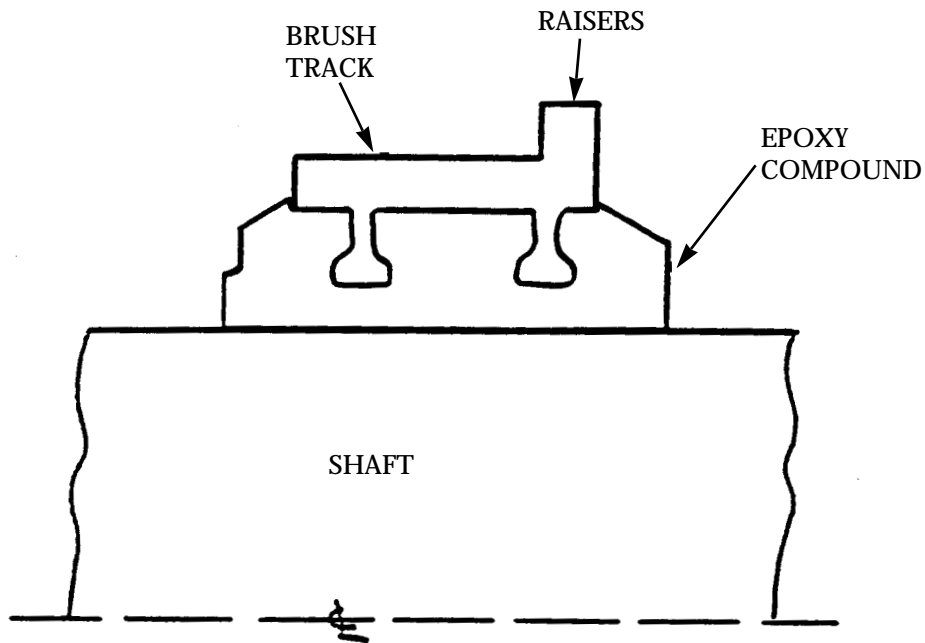
This commutator is used on the CD360-5010 motor line.



Commutators

Molded

For cost purposes, the smallest machines use a molded style commutator. These machines are very standardized, high volume, and low cost. The copper and insulation pieces are normally punched out with a notch in the center. Following stacking, an epoxy compound is injected to form the shell. This commutator is not repairable and the design is cost effective and adequate for most small motor applications.



Field Modifications/Accessories

Field Modification Kits, Frames CD180AT to CD5010AY

Custom Modification Kit

Custom modification kits allow modification of Kinamatic motors which have been shipped from the factory. They are designed for maximum flexibility and ease of installation, and are stocked by authorized **GE Motors parts distributors** to provide immediate availability.

The quick kit reference on the following pages lists the numbers of the most commonly used accessory kits and modification by frame size. Field modification kits cannot be mounted on all frame sizes or enclosures. Please review the application information carefully to determine availability. Contact GE Support Services or your GE Motors parts distributor for kit prices. **The information given is not to be used for new motor specification.**

Application Information

Blower Kits

Blower kits are designed for standard mounting on the motor commutator end and for addition only to dripproof fully guarded, separately ventilated motors. Blower motors are 230/460 volt AC, 3 phase, 60 hertz. To properly mount a blower kit on CD180AT frames, drilling and tapping of three holes is required.

Tachometer Kits

Tachometer kits are designed to be mounted on motors with an accessory comm end shaft extension of any fully guarded or totally enclosed Kinamatic motor, with the exception of totally enclosed fan cooled (TEFC) machines. Tach adapters are made of cast iron and are supplied with appropriate covers. Refer to GE Support Services for mounting of tachometer kits on TEFC motors. **Note: Type BC and Type PY tachometers must be ordered independently of the tachometer kits less tachometer.**

Type C Face Endshield Kits

Type C Face endshield kits are designed for mounting on the fully guarded or totally enclosed nonventilated (TENV) frames listed below. Addition of Type C Face endshield kits requires machine disassembly by a qualified service facility. For frames CD218AT-CD2110AT, refer to GE Support Services.

Frame Series	Standard C Face Dimension (in inches)
CDL182AT	8.5
CD287AT & CD288AT	10.5
CD327AT & CD328AT	12.5

Sliding Bases

Sliding bases are suggested as a convenient means for adjusting belt tension or may be used as mounting plates. (For horizontal mounting only—not available for ceiling or sidewall mounting. Sliding bases not available on CD6000 frames and above.)

Field Modifications/Accessories

Field Modification Kits, Frames CD180AT to CD5010AY

Frame Series	Blower Kit Less Filter ①	Blower Kit with Filter ①	C-Face Kit ③	Lexan Covers ⑤ (Qty. 2 required)
CDL182AT-CD189AT	36A167741CAG01 ②	36A167741CBG01 ②	④	NOT AVAILABLE
CD218AT-CD2110AT	36A167742AAG02	36A167742ABG02	36A172472AAG01	36A167802BAG02
CD258AT-CD259AT	36A167743AAG02	36A167743ABG02	36A172473AAG01	36A167803BAG02
CD2512AT-CD2513AT	36A171113AAG02	36A171113AAG01	36A172476AAG01	36A167804BAG02
CD287AT-CD288AT	36A167744AAG03	36A167744ABG03	36A172474AAG01	36A167805BAG02
CD2812AT-CD2813AT	36A171114AAG02	36A171114AAG01	36A172477AAG01	36A167806BAG02
CD327AT-CD328AT	36A167745GAG10	36A167745GBG10	36A172475AAG01	36A167806BAG02
CD365AT-CD368AT	36A167746GAG10	36A167746GBG10	NOT AVAILABLE	36A167807BAG02
CD407AT & CD409AT	36A167747GAG10	36A167747GBG10	NOT AVAILABLE	36A167809BAG02
CDL407AT & CDL409AT	36A167747GCG10	36A167747GDG10	NOT AVAILABLE	36B473083CAG01
CD504AT-CD5010AY	36A167749EAG30	36A167749EBG34	NOT AVAILABLE	36B473084CAG01

- ① Blower motor is 230/460 volt AC, 3 phase, 60 hertz.
- ② Requires drilling and tapping of three holes to install.
- ③ Requires motor disassembly by qualified service facility to install.
- ④ For dripproof motors use 36A172471AAG02. For totally enclosed motors use 36A172471AAG01.
- ⑤ For commutator end only.

Application Information

Frame	HP	Volts ⑧	Hertz	Phase	RPM	Full Load Amperes	HP	Volts ⑦	Hertz ⑧	Phase ⑥	RPM	Full Load Amperes ⑦
CD180AT	1/12	230/460	60	3	3600	.53/.25	1/12	380	50	3	3000	.3
CD210AT	1/12	230/460	60	3	3600	.53/.25	1/12	380	50	3	3000	.3
CD258AT, CD259AT	1/12	230/460	60	3	3600	.53/.25	1/12	380	50	3	3000	.3
CD287AT, CD288AT	1/3	200-230/460	60	3	3600	1.8/.9	1/3	380	50	3	3000	.76
CD320AT	1	200-230/460	60	3	3600	3.6/1.8	1	380	50	3	3000	1.6
CD360AT	1	200-230/460	60	3	3600	3.6/1.8	1	380	50	3	3000	1.6
CD400AT	1	200-230/460	60	3	3600	3.6/1.8	1	380	50	3	3000	1.6
CD504AT-CD5010AY	2	200-230/460	60	3	1800	5.8/2.9	2	380	50	3	1500	3.0
CD2512AT, CD2513AT	1	200-230/460	60	3	3600	3.6/1.8	1	380	50	3	3000	1.6
CD2812AT, CD2813AT	1	200-230/460	60	3	3600	3.6/1.8	1	380	50	3	3000	1.6
CD6000	5	230/460	60	3	1800	13.4/6.7	3	380	50	3	1500	5.2
CD6100	7.5	230/460	60	3	1800	19.6/9.8	5	380	50	3	1500	8
CD6200	10	230/460	60	3	1800	25.2/12.6	7.5	380	50	3	1500	11.4
CD6700	15	230/460	60	3	1800	38.8/19.4	10	380	50	3	1500	15.8
CD6800 < =1500 HP	15	230/460	60	3	1800	38.8/19.4	10	380	50	3	1500	15.8
> 1500 HP	15	REFER TO GE MOTORS										
CD6900 < =2000 HP	20	230/460	60	3	1800	49.6/24.8	15	380	50	3	1500	22.4
> 2000 HP	20	REFER TO GE MOTORS										

- ⑥ The use of a 50 Hertz blower may affect motor frame size and will affect motor price and delivery. Refer to GE Motors for use of 50 Hertz blowers.
- ⑦ Full load amperes for blower motors are typical values.
- ⑧ Suitable for operation with up to plus or minus 10% variation from rated voltage (i.e. 207-253V/414-506V, 60Hz; 342-418V, 50Hz).

7-Medium DC



Field Modifications/Accessories

Air Flow Requirements for Separately Ventilated Motors

Frame	Base Speed RPM	CFM	Static Pressure Inches of Water		
			A	B	C
			Standard Separately Ventilated	Enclosed Separately Ventilated	Blown from Drive End
CD180AT	3500	70	1.0	1.0	
	2500	50	0.6	0.6	
	1750*	35	0.3	0.3	
CD210AT	3500	180	1.6	2.96	3.7
	2500	130	0.8	1.5	1.9
	1750*	90	0.4	0.74	0.9
CD250AT	3500	320	1.8	3.28	4.0
	2500	230	0.86	1.66	2.0
	1750*	160	0.45	0.82	1.0
CD280AT	3500	540	2.16	3.92	4.3
	2500	385	1.04	1.96	2.4
	1750*	270	0.54	0.98	1.2
CD320AT	ALL	650	2.0	3.2	3.0
CD360AT	ALL	610	2.2	3.9	3.4
CD400AT	ALL	830	2.6	3.65	4.0
CD504AT-CD5010AY	ALL	1425	3.0	4.1	3.8
CD2512AT, CD2513AT	ALL	300	4.85	6.1	
CD2812AT, CD2813AT	ALL	455	4.8	5.64	

*1750 RPM or lower

Frame	HP	Base Speed RPM	CFM	Static Pressure Inches of Water
CD6000	ALL	ALL	2400	3
CD6100	ALL	ALL	3400	3
CD6200	ALL	ALL	4000	5
CD6700	ALL	ALL	5000	5
CD6800	≤1500	ALL	6200	5
	>1500	ALL	8000	8
CD6900	≤2000	ALL	7500	5
	>2000	ALL	10000	9
CDF1800	ALL	ALL	8000	3
CDF1900	≤1500	ALL	6000	2
	<3000	ALL	8000	3
	≤4500	ALL	12000	5.5
CDF2000	≤1500	ALL	6000	2
	<3000	ALL	10500	4.5
	≤4500	ALL	13500	5.5

NOTE: Airflows are for clean dry air less than 40°C (104°F) and at altitudes less than 1000M. (3330 FT).

WARNING: The static pressure values listed in the tabulations are based upon standard air inlet and standard air outlet utilization. The static pressure will be higher if either the air inlet or outlet openings are restricted or reduced in size or, in the case of air outlets, reduced in number.

A. Standard Separately Ventilated

Air in one CE opening with solid covers on the other CE openings. Standard louvered covers on DE air outlets.

B. Enclosed Separately Ventilated (Air ducted in and air ducted out)

Air in one CE opening with solid covers on the other CE opening. Air out one DE opening.

C. Blown from Drive End

Air in one DE opening with solid covers on the other DE openings. Standard louvered covers on CE air outlets.

	CD5010AY & Below		CD6000 & Above	
	ESV	SV	ESV	SV
Standard Air Inlet Location	CE TOP	CE TOP	DE*	DE*
Standard Air Exit Location	DE (either side)	DE Side & Bottom	CE*	CE**

CE-Commutator End ESV-Enclosed Separately Ventilated
 DE-Drive End SV-Separately Ventilated

*Motors are shipped with solid covers on both sides and top and bottom. Any DE cover may be removed for air entry and any CE cover for air exit. If a transparent cover is ordered, it will be located on the CE, conduit box side.

**If a transparent cover is ordered, air exit is opposite conduit box side and bottom. If no transparent cover is ordered, air is exited on both sides.

Field Modifications/Accessories

Field Modification Kits, Frames CD180AT to CD5010AY

FRAME SERIES	PY TACH KIT (LESS TACH)	SERVO-TEK TACH KIT (LESS TACH)	THERMOSTAT KIT
CD146ATC-CD1412ATC	893A690AAG01	893A666AAG01	893A659AAG01

FRAME SERIES	PY TACH KIT (LESS TACH)	BC TACH KIT (LESS TACH)	AN-AC TACH 45/90V/1000 RPM (INCLUDES TACH)	ANDG240A4 ⑨ 240 PPR (INCLUDES TACH)	ANDG240D4 ⑨ 240 PPR (INCLUDES TACH)
CDL182AT-CD328AT	36A167701AAG01	36A167700AAG01	36A167702AAG01	36A167712AAG04	36A167713AAG04
CD2512AT-CD2813AT	36A167701AAG01	36A167700AAG01	36A167702AAG01	36A167712AAG04	36A167713AAG04
CD365AT-CD368AT	36A167701BAG01	36A167700BAG01	36A167702BAG01	36A167712BAG04	36A167713BAG04
CD407AT-CDL409AT	36A167701CAG01	36A167700CAG01	36A167702CAG01	36A167712CAG04	36A167713CAG04
CD504AT-CD5010AY	36A167701CAG01	36A167700CAG01	36A167702DAG01	36A167712DAG04	36A167713DAG04

⑨ Bi-directional, dual output.

FRAME SERIES	AN-DG240L3 240 PPR ONE OUTPUT	AN-DG240L4 240 PPR DUAL OUTPUT	AN-DG600L3 600 PPR ONE OUTPUT	AN-DG600L4 600 PPR DUAL OUTPUT
CDL182AT-CD328AT	36C706050DA001	36C706050DB001	36C706050DC001	36C706050DD001
CD2512AT-CD2813AT	36C706050DA001	36C706050DB001	36C706050DC001	36C706050DD001
CD365AT-CD368AT	36C706050AA001	36C706050AB001	36C706050AC001	36C706050AD001
CD407AT-CDL409AT	36C706050AA002	36C706050AB002	36C706050AC002	36C706050AD002
CD504AT-CD5010AY	36C706050AA003	36C706050AB003	36C706050AC003	36C706050AD003

DC PY TACH ONLY (USES PY KIT)		DC BC42 TACH ONLY (USES BC KIT)		DC BC46 TACH ONLY (USES BC KIT)	
50V/1000 RPM	897A594-002	50V/1000 RPM	897A590-032	50V/1000 RPM	897A591-041
100V/1000 RPM	897A594-001	100V/1000 RPM	897A590-024	100V/1000 RPM	897A591-029

Sliding Base, Frames CD180AT to CD5010AY

FRAME SERIES	SLIDING BASE	FRAME SERIES	SLIDING BASE	FRAME SERIES	SLIDING BASE
CDL182AT	533C400-034	CD2512AT	533C400AH001	CD407AT	533C400-047
CD186AT	533C400-001	CD2513AT	533C400AH002	CDL407AT	533C400-047
CDL186AT	533C400-001	CD287AT	533C400-020	CD409AT	533C400-048
CD189AT	533C400-023	CD288AT	533C400-042	CDL409AT	533C400-048
CD218AT	533C400-019	CD2812AT	533C400AH003	CDL504AT	533C400-017
CD219AT	533C400-022	CD2813AT	533C400AH004	CD504AT	533C400-017
CD2110AT	533C400-039	CD327AT	533C400-043	CDL506AT	533C400-049
CD258AT	533C400-040	CD328AT	533C400-044	CD506AT	533C400-049
CD259AT	533C400-041	CD365AT	533C400-011	CD508AT	533C400-050
		CD366AT	533C400-012	CDL508AT	533C400-050
		CD368AT	533C400-046	CD5010AT	533C400AK001

7-Medium DC



Field Modifications/Accessories

Accessories and Modifications, CD180AT-CD6900

Description

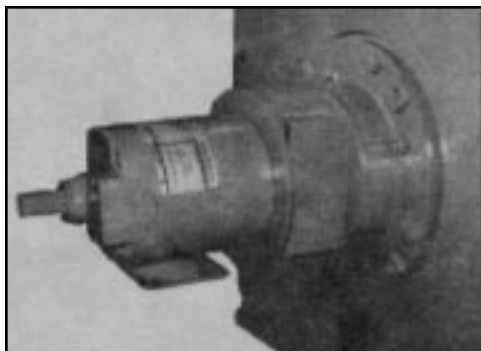
Tachometer Generator Equipment

On CD180AT or CD210AT fan cooled motors or where other accessories will be mounted on the motor, refer to GE Support Services to assure that the tachometer mounting can be accommodated. Refer to GE Support Services for use of tachometers on crane motors. **Refer to appropriate section of Application Manual for indicating or regulating accuracy.**

Speed Ranges

The following tachometer generator operating speeds are available with listed items:

Type	Tachometer Output	Operating Range
BC42	50 Volts/1000 RPM	100–5000 RPM
	100 Volts/1000 RPM	100–2750 RPM
BC46	50 Volts/1000 RPM	100–5000 RPM
	100 Volts/1000 RPM	100–3600 RPM
	200 Volts/1000 RPM	100–1800 RPM
Form Y	50 Volts/1000 RPM	100–5000 RPM
	100 Volts/1000 RPM	100–2500 RPM
AN-AC	90 Volts/1000 RPM	100–5000 RPM
AN-DG	240 pulses/revolution	0–5000 RPM
	600 pulses/revolution	0–5000 RPM



BC tachometers produce DC output to provide high accuracy speed regulation or speed indication.



PY tachometers provide a medium accuracy DC output for use with a regulated drive or for speed indication.

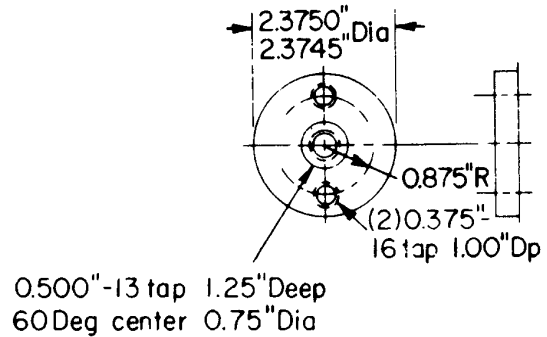
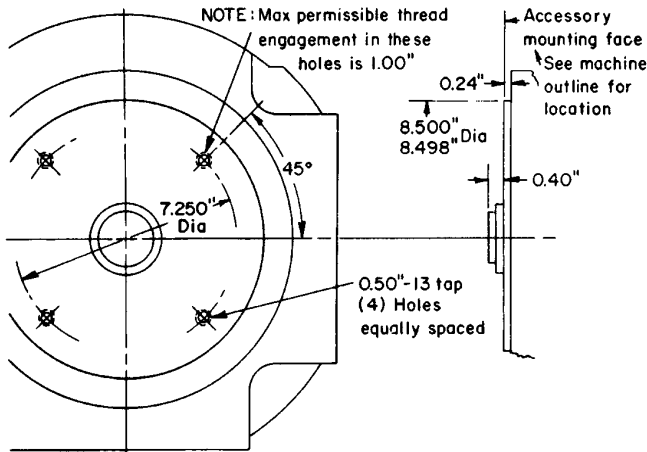


AN Series tachometers provide a compact construction with thru-shaft capabilities. The AN Series tachometers can be furnished with either AC or digital output signal for speed regulation or speed indication. (Type AN-DG tachometer shown above.)

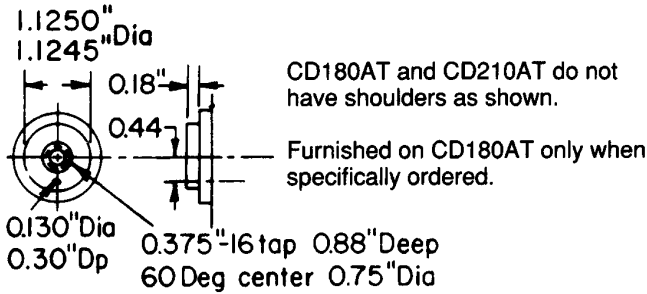
Field Modifications/Accessories

Accessory and Mountings, Frames 180AT to 5010AY

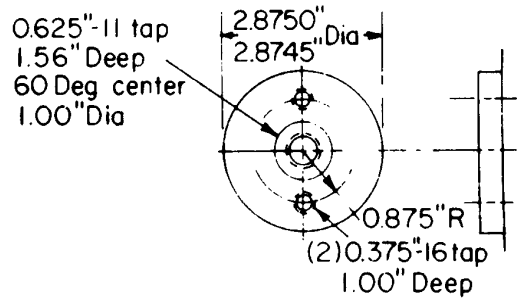
DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



CD400AT



CD180AT-320AT



CD500AT-
CD5010AY

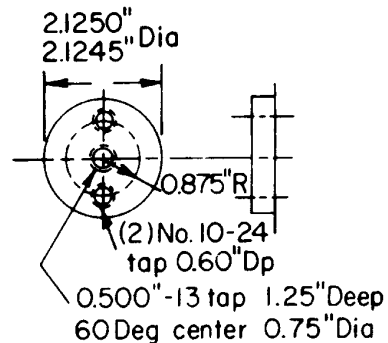
NOTES:

Accessories shaft as shown furnished on all machines not having commutator end shaft extensions.

Accessories shaft is suitable for driving tachometer and speed limit switch.

For brake application a keyed commutator end shaft extension is required.

Furnished on CD180AT only when specifically ordered.



CD360AT

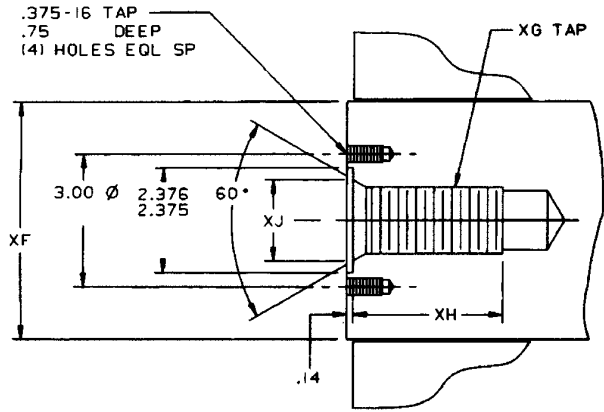
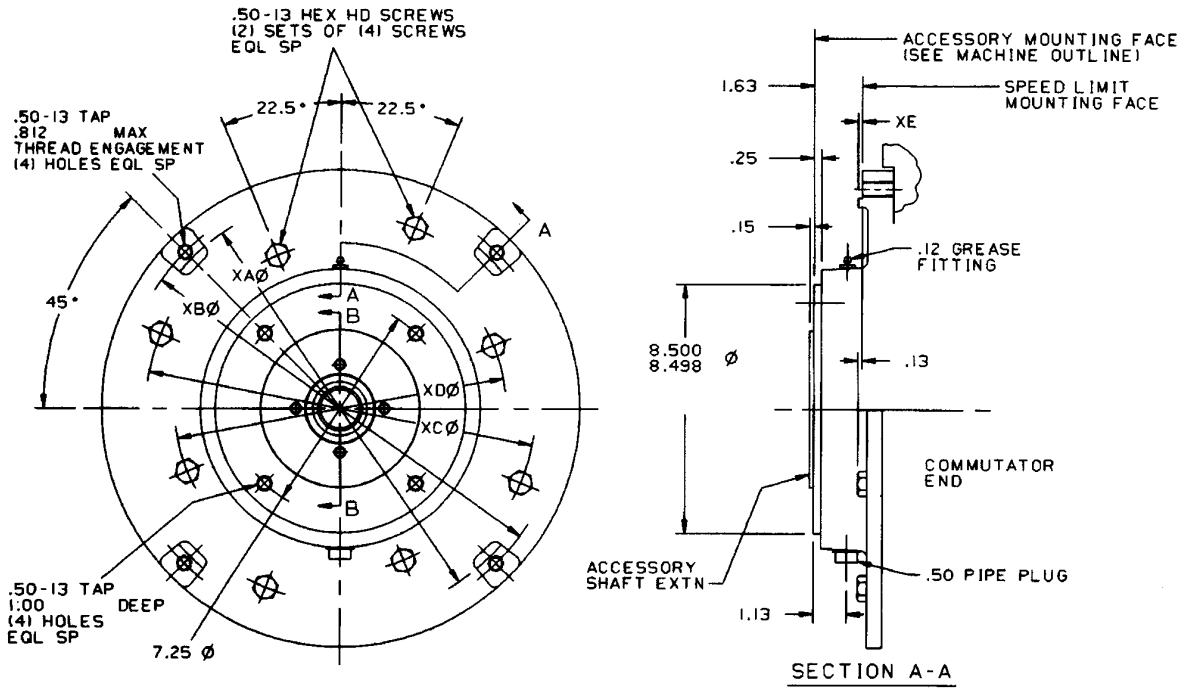
Standard Commutator End Bracket and Accessory Shaft Extension on CD180AT-CD500AT Machines (Dimensions do not apply to TEFC machines.)



Field Modifications/Accessories

Accessory Mountings, Frames 6000 to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



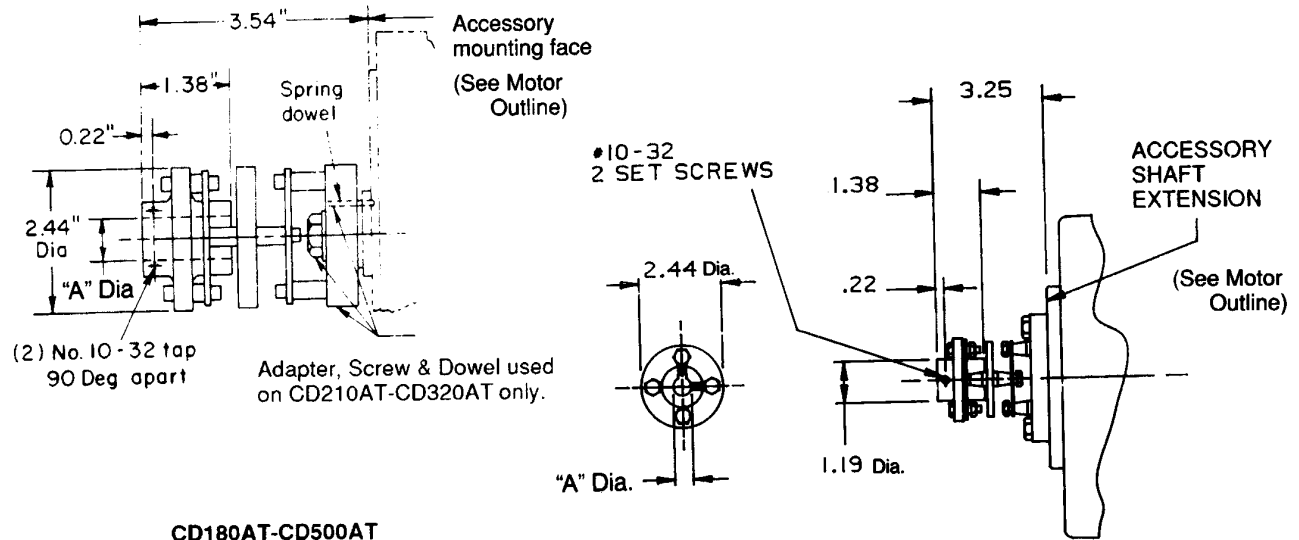
FRAME	XAØ	XBØ	XCØ	XDØ	XE	XFØ	XG	XH	XJØ
CD6000	11.125 11.123	11.75	11.75	9.875	.12	3.875	1.00-8	2.38	1.50
CD6100	11.125 11.123	11.75	11.75	9.75	.12	4.500	1.00-8	2.38	1.50
CD6200	14.375 14.372	15.00	13.25	11.25	.12	5.375	1.50-6	3.50	2.00
CD6700 CD6800	14.375 14.372	15.00	16.00	14.00	.12	4.25	1.50-6	3.50	2.00
CD6900	14.375 14.372	15.00	17.50	15.50	.14	4.25	1.50-6	3.50	2.00

XKØ	KEYWAY	
	WIDTH	DEPTH
.6255	.1875	.0937
.6250		
.7505	.1875	.0937
.7500		
.5005	OMIT	
.5000		
.3130	OMIT	
.3125		

Field Modifications/Accessories

Accessory Couplings, Frames 180AT to 500AT and 6000 to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction

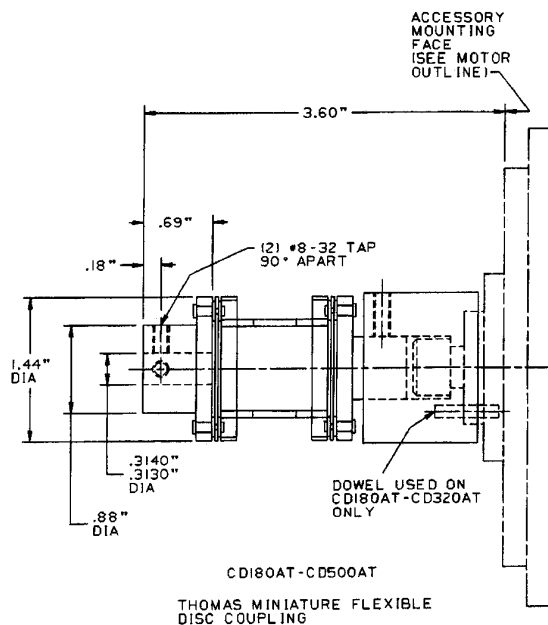


CD180AT-CD500AT

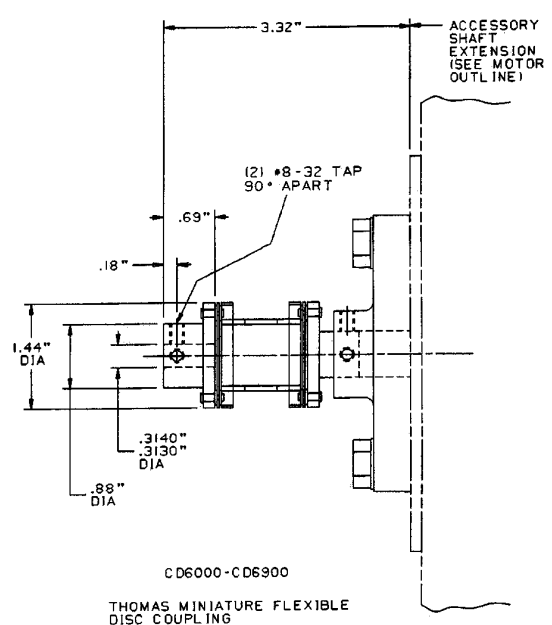
CD6000-CD6900

TORSIONALLY RIGID COUPLING
RATED AT .17 HP
PER 100 RPM

"A" Dia.	KEY WAY	
	WIDE	DEPTH
.6255	.1875	.0937
.6250	.1875	.0937
.7505	.1875	.0937
.7500	.1875	.0937
.5005	OMIT	
.5000	OMIT	



CD180AT-CD500AT
THOMAS MINIATURE FLEXIBLE DISC COUPLING



CD6000-CD6900
THOMAS MINIATURE FLEXIBLE DISC COUPLING

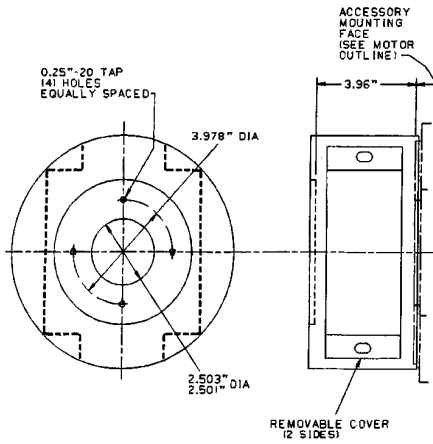
7-Medium DC



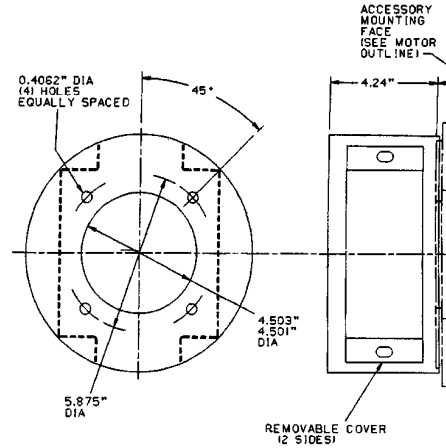
Field Modifications/Accessories

Accessory Adapters, Frames 180AT to 500AT and 6000 to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



Form "Y" tachometer adapter
mounts on bracket (See motor outline.)

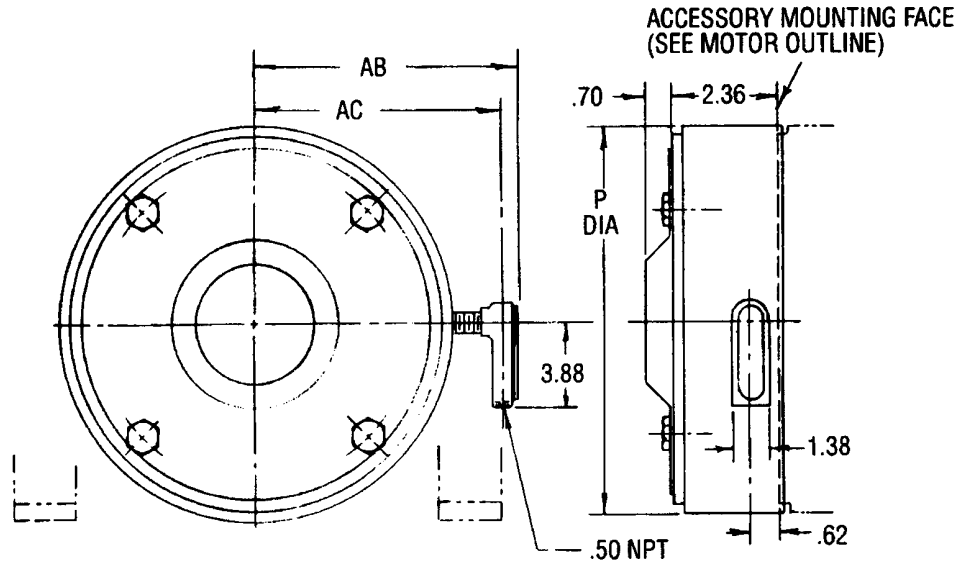


BC42/BC46 tachometer adapter
mounts on bracket (See motor outline.)

Field Modifications/Accessories

Speed Limit Device, Frames 180AT to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



NOTES:
 On frames CD180AT through CD320AT, the speed limit switch can be mounted with condulet on right or left side, but will be mounted on same side as machine leads unless otherwise specified. Providing mounting conditions permit, condulet may be turned so that entrance can be made in any direction.

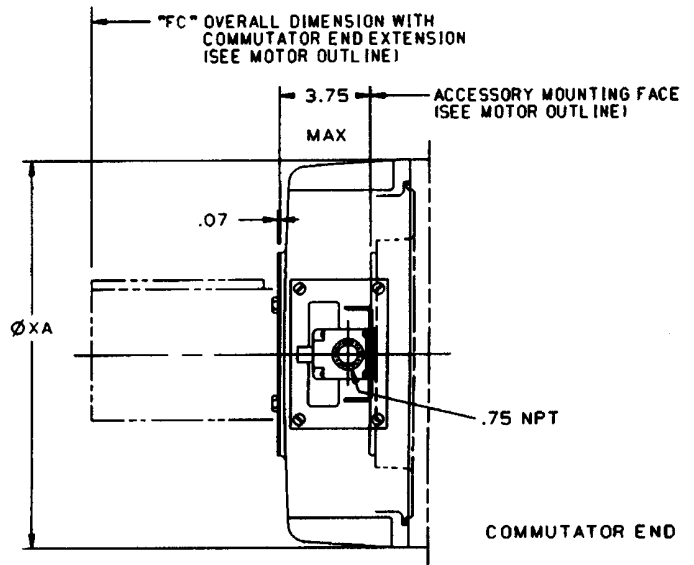
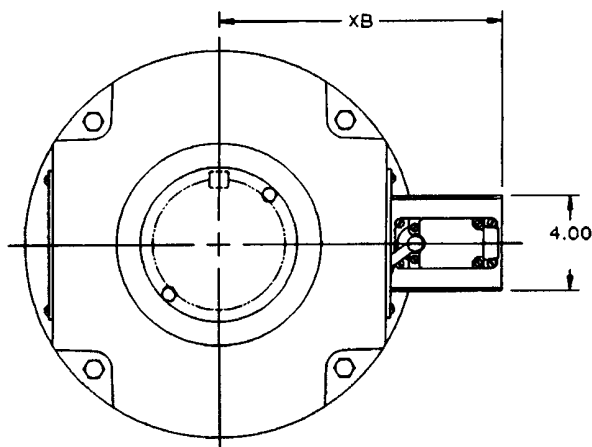
On frames CD360AT through CD500AT, the speed limit switch can be mounted with condulet on right or left side, or top or bottom, but will be mounted on same side as machine leads unless otherwise specified. Providing mounting conditions permit, condulet may be turned so that entrance can be made in any direction.

**FOR FRAMES CD180AT - CD500AT
 WEIGHT - 14 LB.**

FRAME	AB	AC	P
CD180AT	7.59	6.43	8.86
CD210AT THRU 500AT	7.92	6.76	9.73

From 36A168434AC

FOR FRAMES CD6000-CD6900



FRAME	APPROX. NET WT.	XA	XB
CD6000 CD6100	34 LB	13.00	10.00
CD6200 thru CD6900	50 LB	16.25	11.75

Limit switch may be arranged for circuit opening or circuit closing or both.

Limit switch may be mounted on either side, but will be mounted on the same side as machine leads unless otherwise specified.

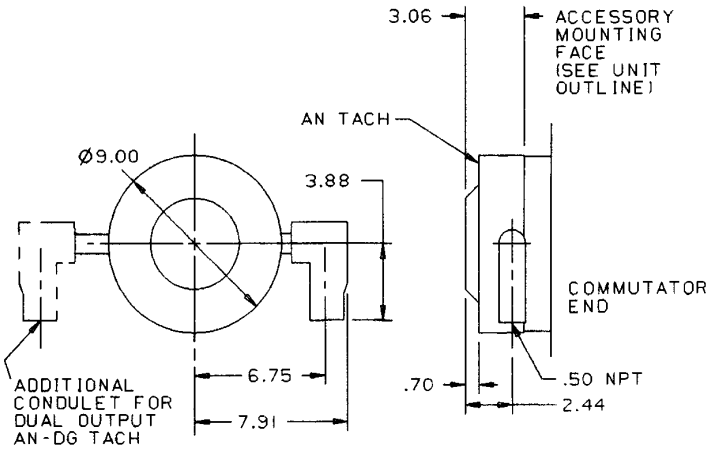


GE Support Services

Field Modifications/Accessories

Type AN Tachometer Generators, Frames 180AT to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction

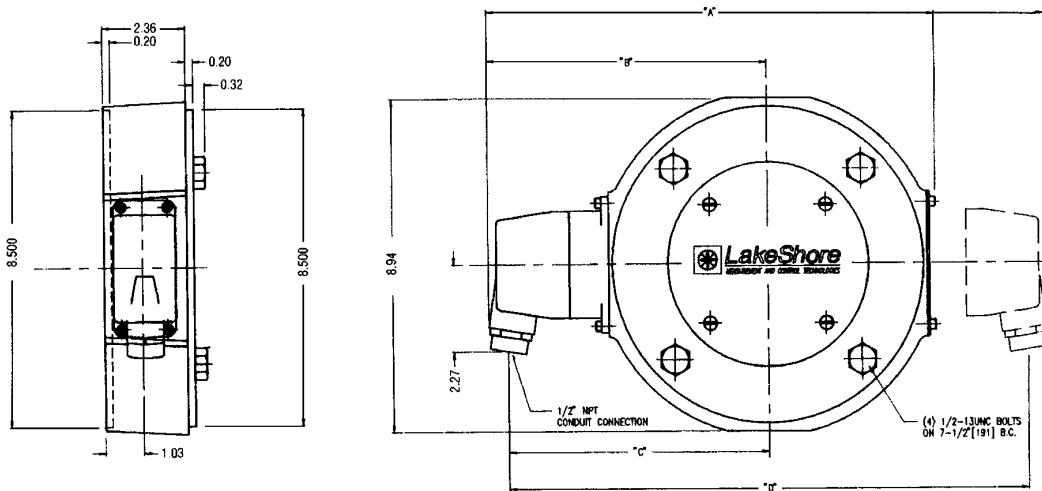


NOTES:

For frame sizes CD180AT through CD6900, the tachometer can be mounted with conduit on right or left side, top or bottom, but will be mounted on same side as machine leads unless otherwise specified. Providing mounting conditions permit, conduit may be turned so that entrance can be made in any direction.

**AN-AC, AN-DG240A4 and AN-DG240D4
WEIGHT — 15 LB.**

From 36A180215AA



DIMENSIONS ARE IN INCHES

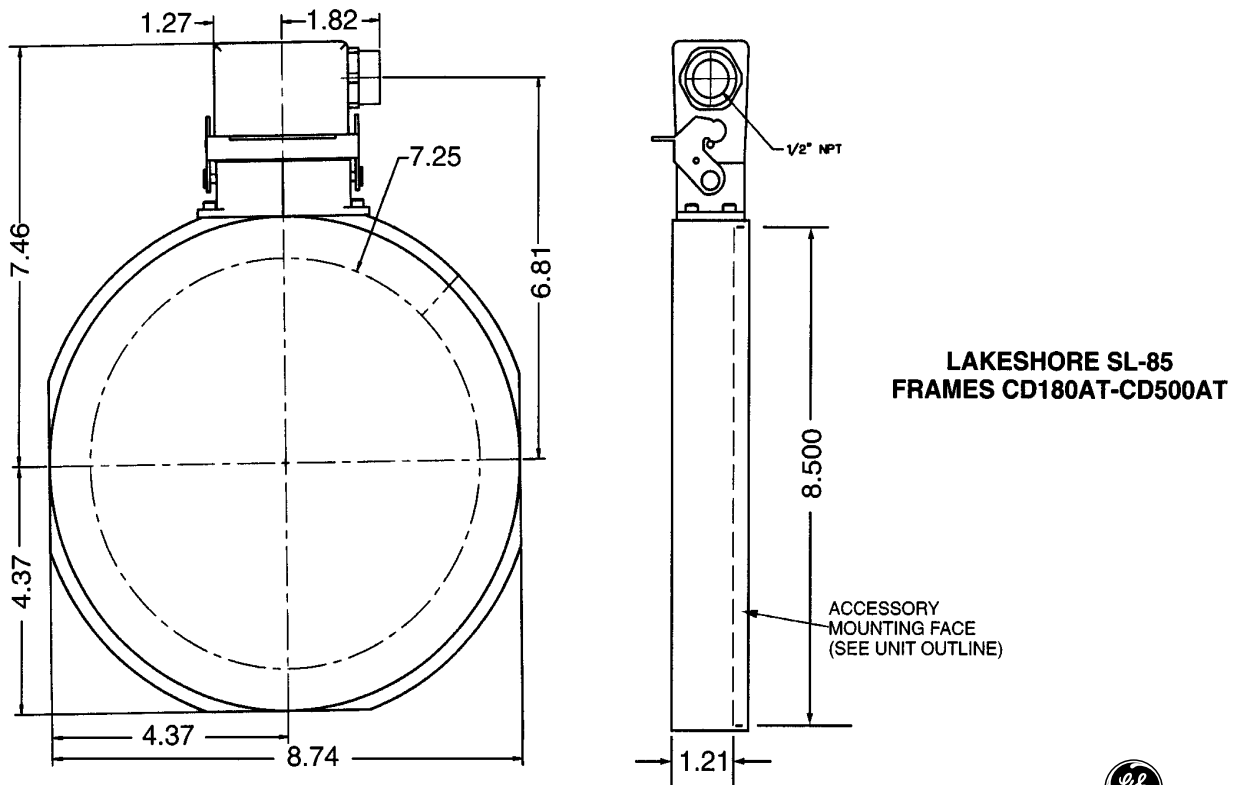
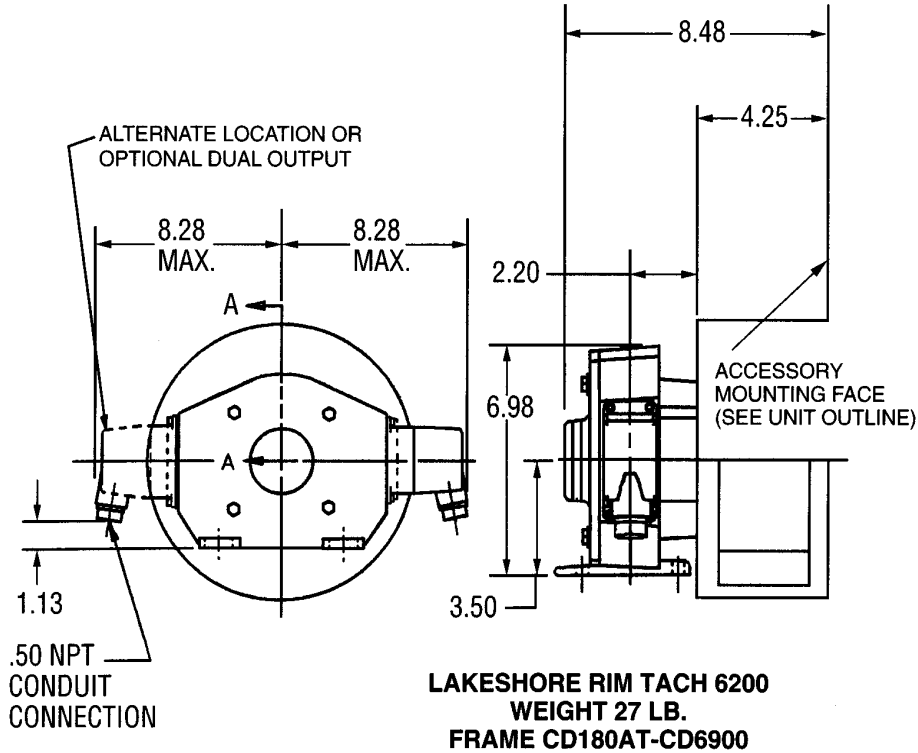
Output PPR	SINGLE				DUAL			
	A	B	C	D	A	B	C	D
240	12.22	7.64	7.11	—	15.28	7.64	7.11	14.21
600	12.78	8.21	7.67	—	16.41	8.21	7.67	15.34

**LAKESHORE RIM TACH 8500
AN-DG
WEIGHT — 15 LB.**

Field Modifications/Accessories

Lakeshore Tachometer

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



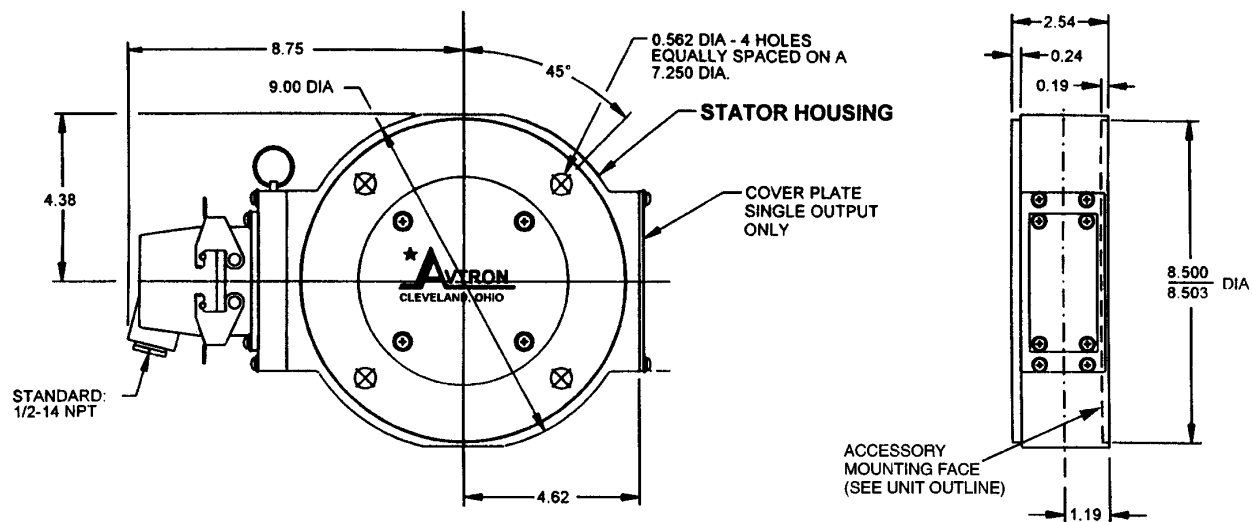
7-Medium DC



Field Modifications/Accessories

Avtron Tachometer, Frames 180AT to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



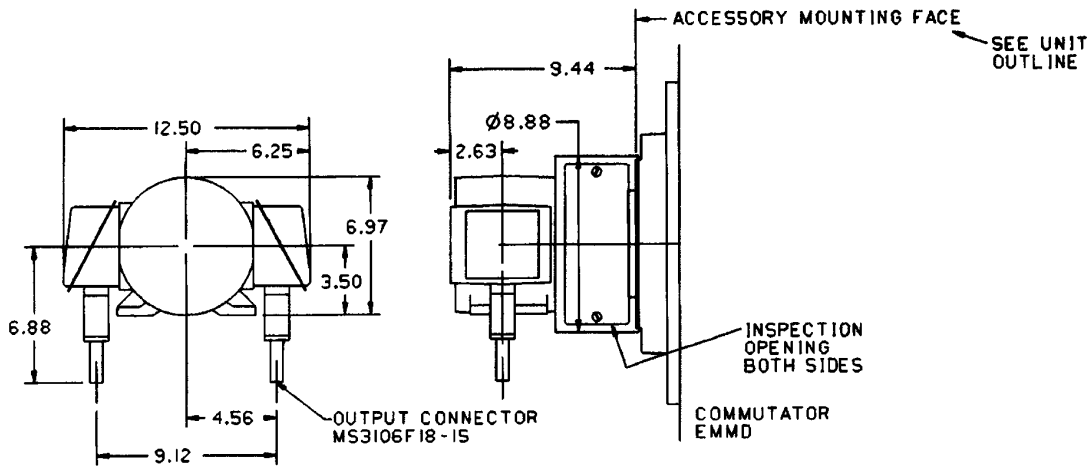
**AVTRON M285 SMART TACH
WITH INDUSTRIAL CONNECTOR
SINGLE OUTPUT**

7-Medium DC

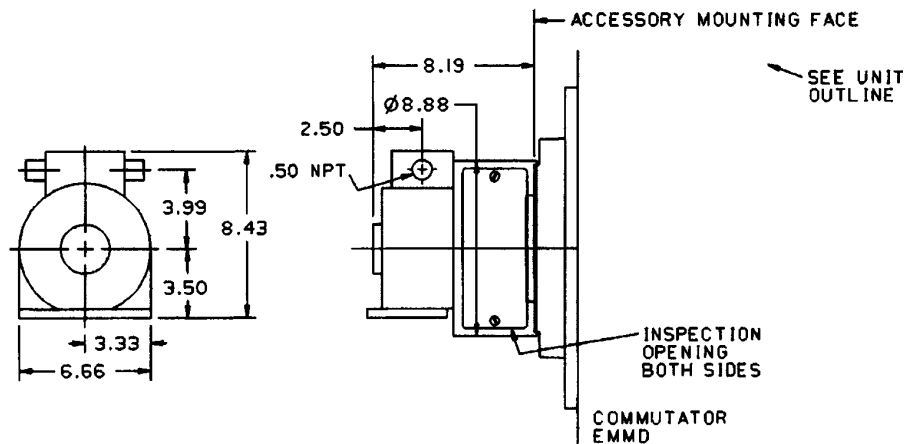
Field Modifications/Accessories

Avtron M785 & Dynapar 62P Tachometer Generators, Frames 180AT to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



**FOR FRAMES CD180AT-CD6900
AVTRON M785
WEIGHT — 30 LB.**



**FOR FRAMES CD180AT-CD6900
DYNAPAR 62P
WEIGHT — 25 LB.**

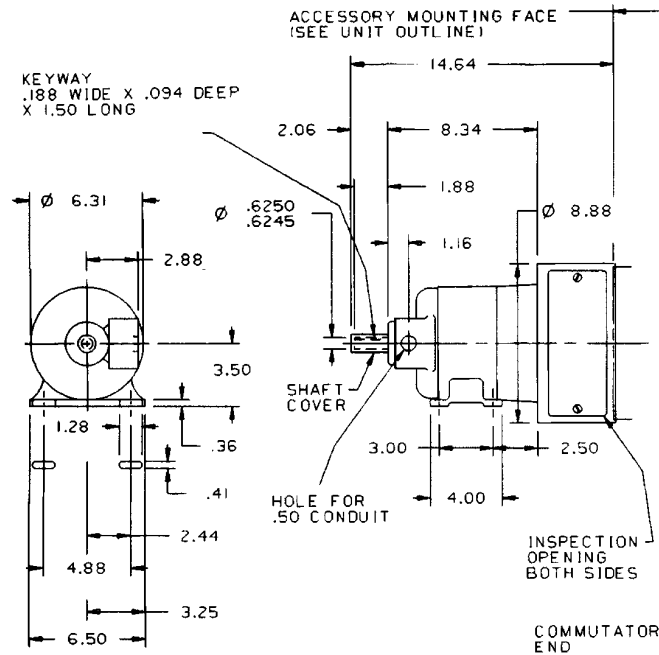
7-Medium DC



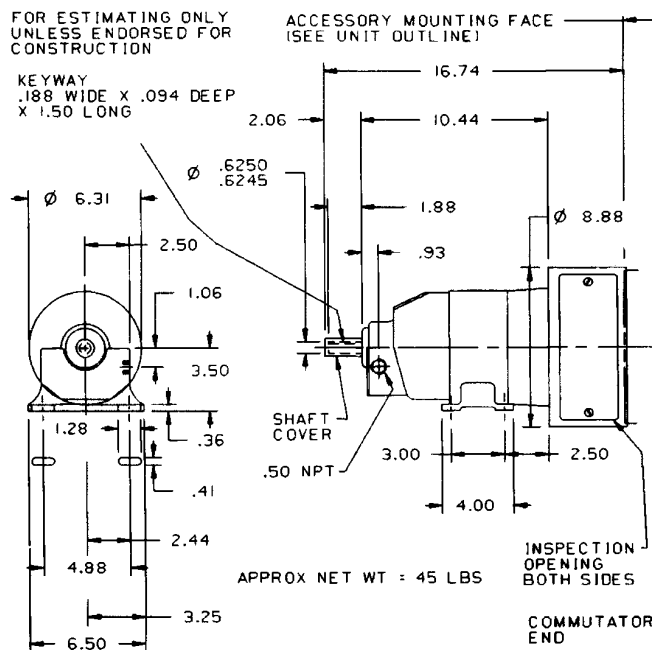
Field Modifications/Accessories

Type BC Tachometer Generator, Frames 180AT to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



**FOR FRAMES CD180AT-CD6900
BC42
WEIGHT — 35 LB.**



**FOR FRAMES CD180AT-CD6900
BC46
WEIGHT — 45 LB.**

7-Medium DC

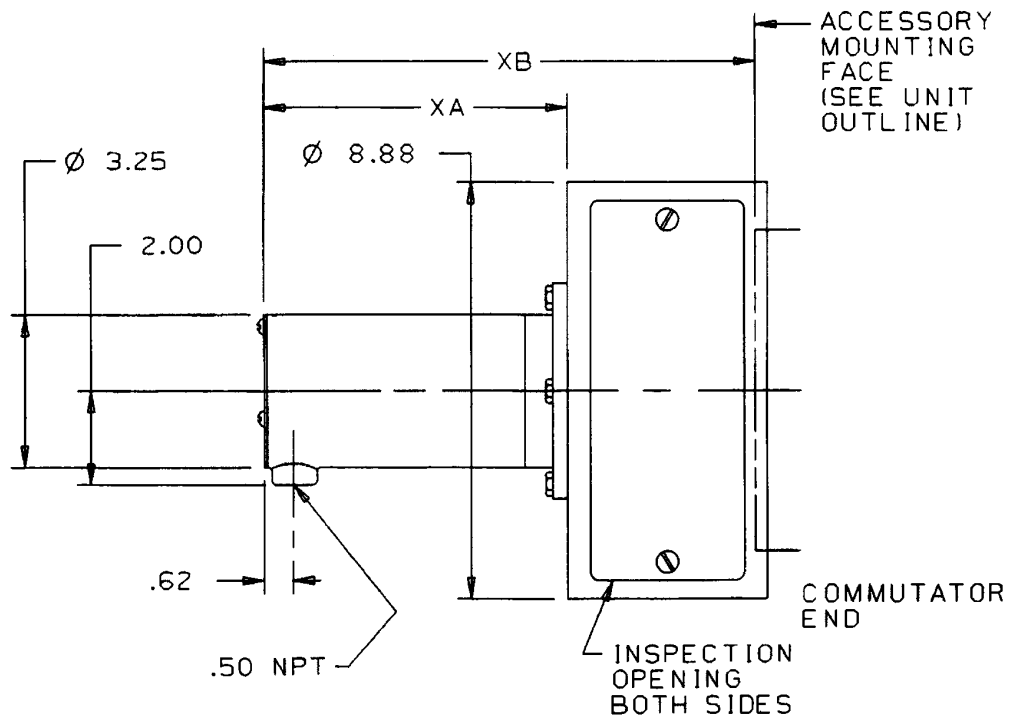
Field Modifications/Accessories

Form PY Tachometer Generator, Frames 180AT to 6900

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction

Model 5PY59EY is an AC tachometer generator for speed-indicating duty.

Model 5PY59JY is a DC tachometer generator for speed-regulating and/or speed-indicating duty.



TYPE	XA	XB
5PY59EY	5.06	9.02
5PY59JY	6.50	10.46

FOR FRAMES CD180AT-CD6900
FORM Y
WEIGHT — 25 LB.

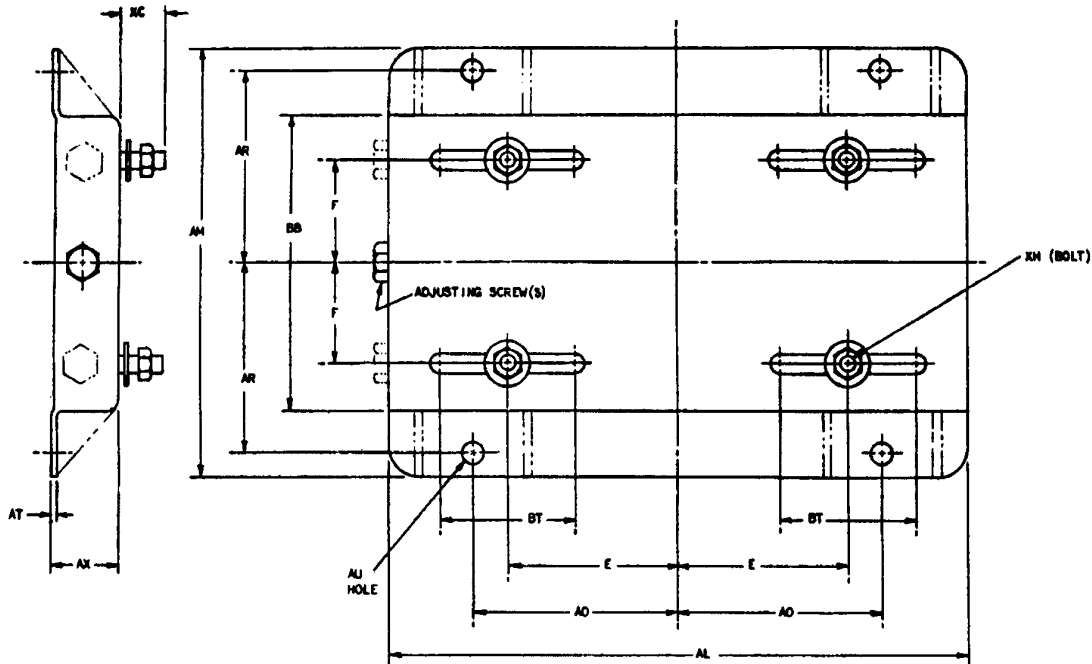


GE Support Services

Field Modifications/Accessories

Sliding Base, Frames 180AT to 500AT

DIMENSIONS — For ESTIMATING ONLY unless endorsed for construction



Dimensions Are in Inches														
Frame	Approx. Net Wt. (Lb.)	BB	E	F	AL	AM	AO	AR	AT	AU	AX	BT	XH	XC
CD182AT	9	6.50	3.75	2.25	12.75	9.50	4.50	4.25	.134	.50	1.50	3.00	.375 X 1.50	1.25
CD186AT	11	9.00	3.75	3.50	12.75	12.00	4.50	5.50	.134	.50	1.50	3.00	.375 X 1.50	1.25
CD189AT	14	12.00	3.75	5.00	12.75	15.00	4.50	7.00	.134	.50	1.50	3.00	.375 X 1.50	1.25
CD218AT	17	12.00	4.25	5.00	15.00	15.50	5.25	7.00	.164	.50	1.75	3.50	.375 X 1.50	1.25
CD219AT	21.5	13.00	4.25	5.50	15.00	16.50	5.25	7.50	.164	.50	1.75	3.50	.375 X 1.50	1.25
CD2110AT	19	14.50	4.25	6.25	15.00	18.00	5.25	8.25	.164	.50	1.75	3.50	.375 X 1.50	1.25
CD258AT	20	15.00	5.00	6.25	17.75	19.375	6.25	8.75	.1875	.625	2.00	4.00	.50 X 1.75	1.4375
CD259AT	21	16.50	5.00	7.00	17.75	20.875	6.25	9.50	.1875	.625	2.00	4.00	.50 X 1.75	1.4375
CD2512AT*	25	22.50	5.00	10.00	17.75	26.88	6.25	12.50	.1875	.625	2.00	4.00	.50	1.44
CD2513AT*	27	24.50	5.00	11.00	17.75	28.88	6.25	13.50	.1875	.625	2.00	4.00	.50	1.44
CD287AT	24	15.50	5.50	6.25	19.75	19.875	7.00	9.00	.1875	.625	2.00	4.50	.50 X 2.00	1.6875
CD288AT	24	17.00	5.50	7.00	19.75	21.375	7.00	9.75	.1875	.625	2.00	4.50	.50 X 2.00	1.6875
CD2812AT*	29	25.00	5.50	11.00	19.75	29.38	7.00	13.75	.1875	.625	2.00	4.50	.50	1.69
CD2813AT*	31	28.00	5.50	12.50	19.75	32.38	7.00	15.25	.1875	.625	2.00	4.50	.50	1.69
CD327AT	34	17.50	6.25	7.00	22.75	22.75	8.00	10.25	.1875	.75	2.50	5.25	.625 X 2.50	2.1875
CD328AT	35	19.50	6.25	8.00	22.75	24.75	8.00	11.25	.1875	.75	2.50	5.25	.625 X 2.50	2.1875
CD365AT*	45	16.50	7.00	6.12	25.50	21.50	9.00	9.62	.2500	.88	2.50	6.00	.750 X 3.00	2.50
CD366AT*	50	18.25	7.00	7.00	25.50	23.25	9.00	10.50	.2500	.88	2.50	6.00	.750 X 3.00	2.50
CD368AT*	60	22.25	7.00	9.00	25.50	27.25	9.00	12.50	.2500	.88	2.50	6.00	.750 X 3.00	2.50
CD407AT*	64	22.25	8.00	9.00	28.75	28.125	10.00	12.75	.2500	1.00	3.00	7.00	.875 X 3.50	3.00
CD409AT*	70	26.25	8.00	11.00	28.75	32.125	10.00	14.75	.2500	1.00	3.00	7.00	.875 X 3.50	3.00
CD504AT*	132	20.75	10.00	8.00	35.00	28.00	12.50	12.50	.3125	1.25	3.50	8.00	1.125 X 3.50	3.00
CD506AT*	138	24.75	10.00	10.00	35.00	32.00	12.50	14.50	.3125	1.25	3.50	8.00	1.125 X 3.50	3.00
CD508AT*	146	29.75	10.00	12.50	35.00	37.00	12.50	17.00	.3125	1.25	3.50	8.00	1.125 X 3.50	3.00

*These frames have two adjusting screws and eight gussets shown in phantom.