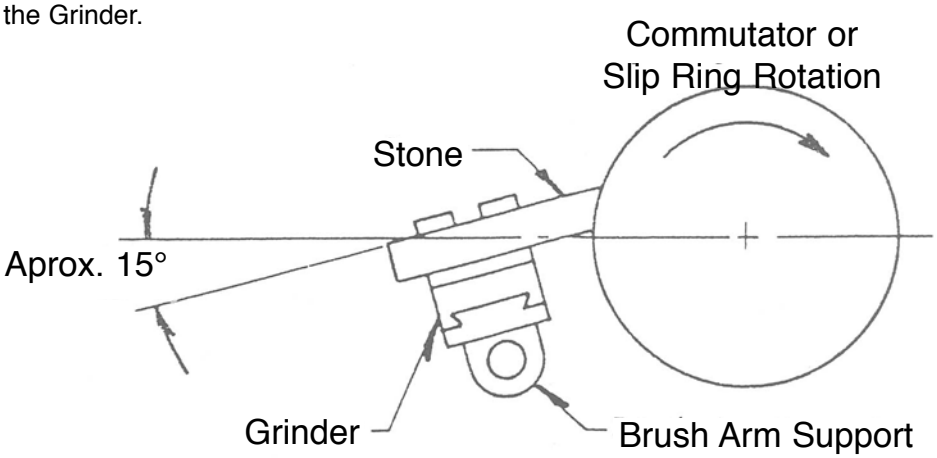
MARTINDALE

CHAIN-DRIVE COMMUTATOR GRINDER INSTRUCTIONS

CAUTION: All Grinder Supports **MUST BE INSULATED** from electrically live circuits and tested for absence of current at the Grinder, before beginning work.

GENERAL:

1. Mount the grinder on the proper side of the machine so the top of the commutator travels away from the Grinder.



2. Choose a brush stud which is accessible, in a comfortable grinding position, and where the operation and results of the grinding can be seen. Loosen the brush holders, and either remove them from the stud or slide them clear of the commutator. If the brush-arms are close together it may be necessary to remove the holders from two adjacent studs to make room for the Grinder.
3. Clamp the Grinder support over the brush stud. Be sure at least one of the split fiber bushings is around the stud to insulate the Grinder. Use as many of the fiber bushings as are necessary to bring the stud diameter up to 1-1/8".
4. Adjust the support so when the Grinder is in place the stones will be a little above center. The front edge of the support should be approximately 2" away from the commutator.
5. Position the Grinder on the support at the center of the commutator. To align the Grinder lay a 2" steel bar along the commutator and bump the Grinder base against it. Bolt it tightly in place. If the commutator is tapered originally the amount of taper can be determined by a level on the top of the commutator, providing the base of the machine is level. In such a case the taper may be removed by the setting of the Grinder.
6. Best results are obtained when using the full travel of the carriage, and the stone size should be such as to permit full travel.
7. It is permissible to use only one Commstone. One stone may be used in the stone-holder by blocking up the clamps, either with the stub of the old stone, or with a block of the same thickness. If the motor frame overhangs the commutator one stone may be set at an angle to reach the riser. Commstones will

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quickly shape themselves to the commutator.

8. Surface speed of the commutator should be approximately 2,000 feet per minute. The grinding operation should be a rapid traverse with a small feed. If the commutator is burned or badly grooved, start out with a course (Grade C) Commstone, and finish with a fine (Grade F) Commstone. If the commutator is not too bad, a medium (Grade M) Commstone may be used. Extra coarse (Grade EC), Polish (Grade P), and Extra Polish (Grade EP) Commstones are also available.

9. After grinding, the mica slots should be cleaned out. A fine wire or nylon brush is recommended for this operation. Undercutting is not necessary unless the mica strips are nearly even with the copper bars. Copper wears faster than mica, and if the mica projects above the copper the brushes will jump and arc. If undercutting is necessary we recommend one of the several styles of Undercutters shown in the Martindale catalog.

10. When the machine is back in service the brushes should be reseated with a Martindale Brush seater as the grooves which were in the commutator before grinding may still be in the brushes.

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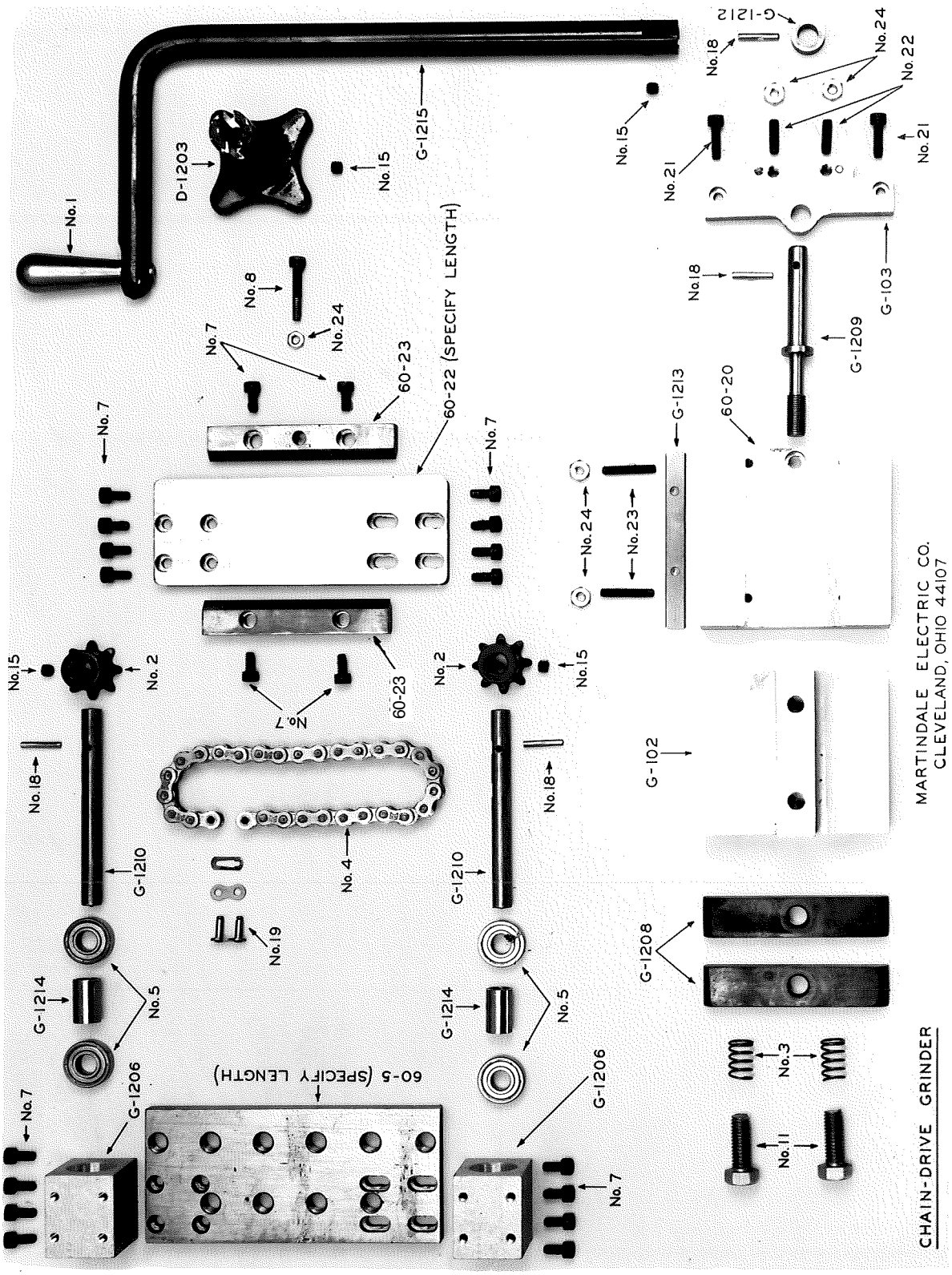
Chain-Drive Grinder Parts



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Chain-Drive Grinder Parts

Quantity	Description	Part No.
1	Knob	D-1203
1	Stone Holder	G-102
1	End Plate	G-103
2	Bearing Block	G-1206
2	Stone Clamp	G-1208
1	Stone Adjusting screw	G-1209
2	Shaft	G-1210
1	Stone Adjusting Screw Collar	G-1212
1	Gib (Stone Holder)	G-1213
2	Bearing Spacer	G-1214
1	Crank Handle	G-1215
1	Bottom Plate	60-5
1	Carriage	60-20
1	Top Plate	60-22
2	Gib, Bronze, Adjustable	60-23
1	Spacer (used on 10" & up)	60-19
2	Sprocket	2
2	Spring 3/8 x 1	3
1	Chain (specify base length)	4
4	77-R-6 Ball Bearing	5
20	10-24 x 3/8 Hollow Hd. Cap Screw	7
1	10-24 x1 Hollow Hd. Cap Screw	8
2	3/8 x 1 Hed Hd. Cap Screw	11
4	1/4-20 x 3/16 Hollow Hd. Set Screw	15
4	1/4 x 5/8 Driv-Lok Pin	18
1	Master Link	19
2	10-24 x 1/2 Hollow Hd. Cap Screw	21
2	10-24 x 5/8 Hollow Hd. Set Screw	22
2	8-32 x 1 Hollow Hd. Set Screw	23
3	Nut, 10-24, Full, Hex, Steel	24
2	Nut, 8-32, Full, Hex, Steel	24

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