

General Electric Company

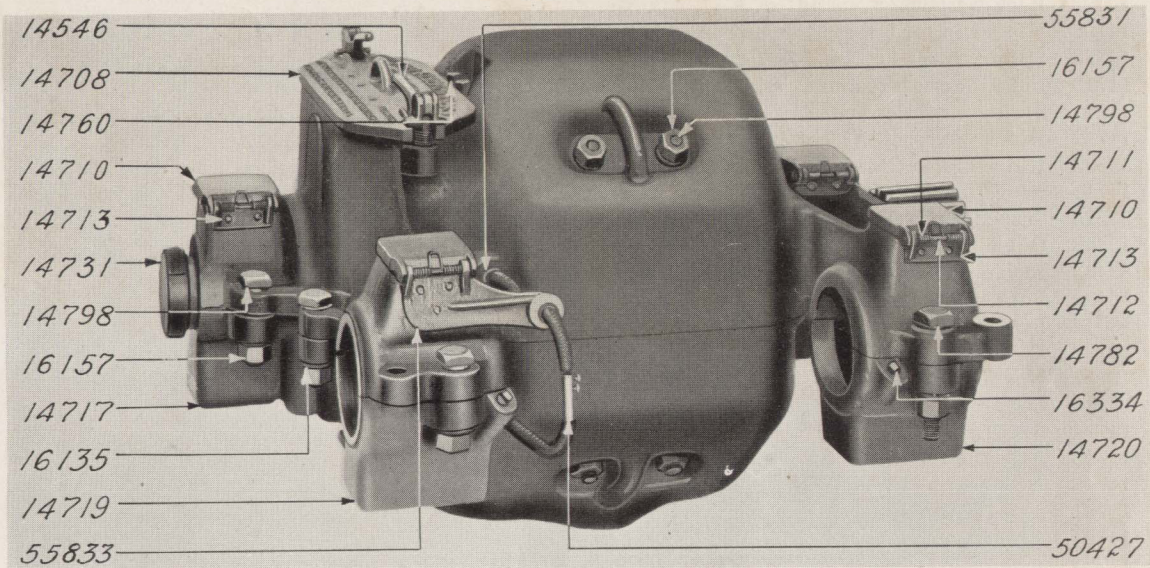
Schenectady, N.Y.

SUPPLY DEPARTMENT

March, 1914

*Bulletin No. 54400

PARTS OF GE-1000-A, 500 VOLT RAILWAY MOTOR



WEIGHTS

Motor, complete, without axle gear and case.....	1984 lb.
Armature without pinion.....	553 lb.
Axle gear (67 teeth).....	190 lb.
Gear case.....	136 lb.
Field coil.....	59 lb.

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Brush-holder cables, field coil connection cables and motor leads are 49 No. 22 B.&S. wire, requiring approximately 28 feet.

Cat. No.	Description
14708	LID with felt packing, for upper frame casting, over commutator.....
14546	Cam with eyebolt, fastening lid in position.....
16074	Nut for No. 14546 ($\frac{5}{8}$ in.-11, hex. rough).....
16137	Lock washer for No. 16074.....
10578	Spring cotter for No. 14708 ($\frac{1}{4}$ in. by 3 in.).....
14714	Sponge holder or lid for lower frame casting, commutator end.....
14715	Leather gasket for sponge holder.....
14716	Bolt fastening No. 14714 to casting ($\frac{1}{2}$ in.-13, $1\frac{1}{2}$ in. sq. h.).....
55831	Soft rubber bushing for use with cables.....
14717	ARMATURE BEARING CAP, commutator end.....
14718	Armature bearing cap, pinion end.....
14719	AXLE BEARING CAP, commutator end.....

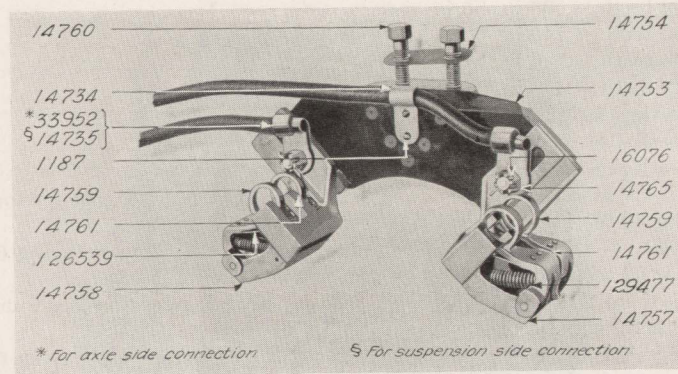
NOTE.—The data in this publication are for the convenience of customers, and every effort is made to avoid error, but this Company does not guarantee their correctness, nor does it hold itself responsible for any errors or omissions in this publication. Subject to change without notice.

* Supersedes Bulletin No. 4731.

54400-2 Parts of GE-1000-A, 500 Volt Railway Motor

Cat. No.	Description
14720	Axle bearing cap, pinion end.....
141986	Dowel pin for bearing caps ($\frac{5}{8}$ in. by $1\frac{3}{8}$ in.).....
16334	Pipe plug for bearing caps ($\frac{3}{8}$ in. pipe).....
14732	Oil feeder for bearings.....
14798	Bolt fastening upper and lower frame castings together and bearing caps in position ($\frac{7}{8}$ in.-9, 4 in. sq. h. sp'l).....
14549	Hinge bolt for frame castings ($\frac{7}{8}$ in.-9, $3\frac{5}{16}$ in. sp'l).....
16157	Nut for Nos. 14798, 14549 ($\frac{7}{8}$ in.-9, hex. rough).....
16135	Lock washer for No. 16157.....
14707	Hinge pin for upper frame casting ($\frac{7}{8}$ in. by $4\frac{3}{8}$ in.).....
16323	Spring cotter for No. 14707 ($\frac{3}{16}$ in. by $1\frac{1}{2}$ in.).....
14710	Lid for armature and axle bearing grease chambers, commutator and pinion ends.....
14711	Spring for lid.....
14712	Hinge pin for lid ($\frac{1}{4}$ in. by $3\frac{5}{8}$ in. r. h.).....
55833	Hinge bracket for lid, with rivets, for axle bearing grease chamber, commutator end.....
14713	Hinge for lid, with rivets, except axle bearing grease chamber, commutator end.....
153275	Suspension stud (1 in.-8, $4\frac{1}{2}$ in. long).....
15443	Outside nut for No. 153275 (1 in.-8, hex. rough, st'd).....
153443	Inside nut for No. 153275 (1 in.-8, sq. cham. both sides, sp'l).....
16130	Lock washer for No. 15443.....
153444	POLE PIECE.....
14798	Bolt fastening pole piece to frame casting ($\frac{7}{8}$ in.-9, 4 in. sq. h. sp'l).....
16157	Nut for No. 14798 ($\frac{7}{8}$ in.-9, hex. rough).....
16135	Lock washer for No. 16157.....
14722	AXLE BEARING LINING, malleable iron and babbitt (2 halves, $3\frac{3}{8}$ in. bore).....
14725	Axle bearing lining, brass (2 halves, $3\frac{3}{8}$ in. bore).....
14748	Axle bearing lining, malleable iron and babbitt (2 halves, $3\frac{5}{8}$ in. bore).....
14721	Axle bearing lining, malleable iron and babbitt (2 halves, $3\frac{3}{4}$ in. bore).....
14724	Axle bearing lining, brass (2 halves, $3\frac{3}{4}$ in. bore).....
14723	Axle bearing lining, malleable iron and babbitt (2 halves, 4 in. bore).....
14726	Axle bearing lining, brass (2 halves, 4 in. bore).....
33605	Axle bearing lining, brass (2 halves, $4\frac{1}{4}$ in. bore).....
33425	Axle bearing lining, brass (2 halves, $4\frac{1}{2}$ in. bore).....
14729	ARMATURE BEARING LINING, commutator end, cast iron and babbitt.....
14728	Armature bearing lining, pinion end, cast iron and babbitt.....
14730	Armature bearing lining, commutator end, brass.....
14727	Armature bearing lining, pinion end, brass.....
14731	Screw cap for Nos. 14729, 14730.....
153445	BRUSH-HOLDER YOKE, complete, with brush-holders and cables, for axle side connection.....
14752	Brush-holder yoke, complete, with brush-holders and cables, for suspension side connection.....
14753	Brush-holder yoke with end plates, bracket and cap screws.....
14755	Right-hand brush-holder, complete.....
14756	Left-hand brush-holder, complete.....
14757	Right-hand brush-holder body with pins.....
14758	Left-hand brush-holder body with pins.....
14759	Pressure arm, inner, for right-hand brush-holder and outer, for left-hand brush-holder, with contact spring and tip.....
14761	Pressure arm, outer, for right-hand brush-holder and inner, for left-hand brush-holder, with contact spring and tip.....
126539	Contact spring with tip and rivets.....
153446	Long hinge pin for pressure arms ($\frac{1}{4}$ in. by $\frac{3}{32}$ in.).....
153447	Short hinge pin for pressure arms ($\frac{1}{4}$ in. by $\frac{9}{16}$ in.).....
129477	Tension spring.....
116014	Pin for tension springs ($\frac{3}{16}$ in. by $3\frac{1}{4}$ in.).....
136116	Sleeve for No. 116014 ($\frac{3}{16}$ in. by $\frac{5}{16}$ in. by $1\frac{3}{16}$ in. long, fiber).....

Cat. No.	Description
14760	Cap screw fastening yoke to frame casting ($\frac{5}{8}$ in.-11, $1\frac{7}{8}$ in. hex. h.).....
14754	Washer plate for No. 14760.....
14765	Crown nut for bolt fastening body to yoke ($\frac{1}{2}$ in.-13, hex. sp'l).....
16076	Spring cotter for No. 14765 ($\frac{1}{8}$ in. by 1 in.).....
33952	Terminal for cables, for No. 153445.....
14735	Terminal for cables, for No. 14752.....
14734	Clip for long brush-holder cable.....
1187	Screw for clip (No. 10, $\frac{7}{8}$ in. r. h.).....
50396	CARBON BRUSH ($2\frac{1}{4}$ in. long, $2\frac{3}{4}$ in. wide, $\frac{1}{2}$ in. thick) one required for each holder, two for each motor.....
14764	Carbon brush ($2\frac{1}{4}$ in. long, $1\frac{3}{8}$ in. wide, $\frac{1}{2}$ in. thick) two required for each holder, four for each motor.....



14768	FIELD COIL, complete.....
14769	Outside terminal with screws, for field coil.....
14770	Inside terminal with screws, for field coil.....
18	Screw for terminals (10-24, $\frac{1}{2}$ in. r. h.).....
50427	Two-way connector with screws, for field coil cable.....
32857	Screw for connector (12-24, $\frac{3}{8}$ in. r. h. blued).....
153448	Oiled canvas pad for field coil.....
15216	Ground cable terminal with screws.....
50428	Screw for terminal (14-24, $\frac{1}{2}$ in. r. h. blued).....
15946	AXLE KEY ($7\frac{1}{8}$ in. long).....
43901	*ADJUSTABLE AXLE COLLAR, 2 halves ($3\frac{3}{8}$ in. axle).....
43911	*Adjustable axle collar, 2 halves ($3\frac{5}{8}$ in. axle).....
43915	*Adjustable axle collar, 2 halves ($3\frac{3}{4}$ in. axle).....
43933	*Adjustable axle collar, 2 halves (4 in. axle).....
43948	*Adjustable axle collar, 2 halves ($4\frac{1}{4}$ in. axle).....
43957	*Adjustable axle collar, 2 halves ($4\frac{1}{2}$ in. axle).....
50436	Screw for adjusting axle collars from 7 in. to 9 in. (1 in.-8, $6\frac{7}{8}$ in. sp'l).....
17985	Spring cotter for No. 50436 ($\frac{3}{16}$ in. by $2\frac{1}{4}$ in.).....
17981	Bolt for axle collars ($\frac{3}{4}$ in.-10, $3\frac{1}{2}$ in. sq. h.).....
16326	Nut for No. 17981 ($\frac{3}{4}$ in.-10, hex. rough).....
16136	Lock washer for No. 16326.....
65770	SOLID GEAR, 65 teeth, $3\frac{7}{8}$ in. bore.....
65670	Solid gear, 65 teeth, 4.465 in. bore.....
45657	Split gear, 67 teeth, $3\frac{3}{4}$ in. bore.....
45654	Split gear, 67 teeth, 4 in. bore.....
45658	Split gear, 67 teeth, $4\frac{1}{4}$ in. bore.....

* Includes adjusting screw.

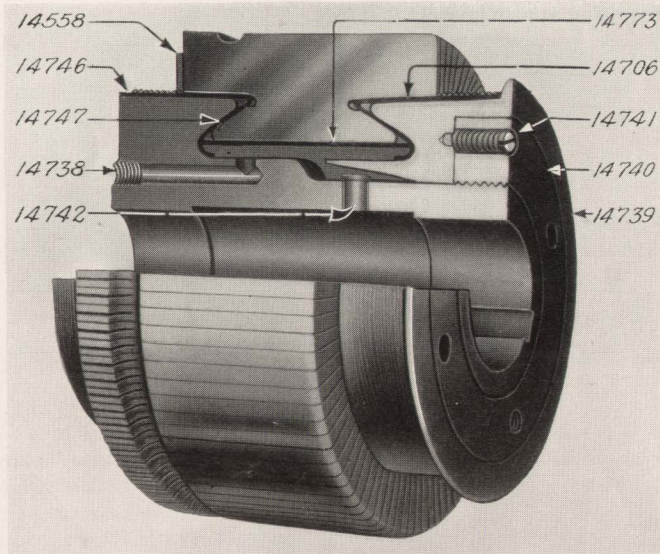
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Cat. No.	Description
45860	Split gear, 67 teeth, 4 $\frac{1}{4}$ in. bore.....
45861	Split gear, 67 teeth, 4 $\frac{1}{2}$ in. bore.....
30091	Solid gear, 67 teeth, 3.875 in. bore.....
45811	Solid gear, 67 teeth, 3.996 in. bore.....
45983	Solid gear, 67 teeth, 4.375 in. bore.....
135153	Solid gear, 67 teeth, 4.484 in. bore.....
45524	Solid gear, 67 teeth, 4.495 in. bore.....
45659	Split gear, 69 teeth, 3 $\frac{3}{4}$ in. bore.....
45660	Split gear, 69 teeth, 4 in. bore.....
45661	Split gear, 69 teeth, 4 $\frac{1}{4}$ in. bore.....
45865	Split gear, 69 teeth, 4 $\frac{1}{4}$ in. bore.....
45866	Split gear, 69 teeth, 4 $\frac{1}{2}$ in. bore.....
65516	Solid gear, 69 teeth, 3 $\frac{7}{8}$ in. bore.....
45821	Solid gear, 69 teeth, 3.996 in. bore.....
135193	Solid gear, 69 teeth, 4.246 in. bore.....
45822	Solid gear, 69 teeth, 4.246 in. bore.....
45823	Solid gear, 69 teeth, 4.495 in. bore.....
18494	Pinion, 15 teeth, 2 $\frac{3}{4}$ in. taper bore.....
18502	Pinion, 17 teeth, 2 $\frac{3}{4}$ in. taper bore.....
18506	Pinion, 19 teeth, 2 $\frac{3}{4}$ in. taper bore.....
55869	GEAR CASE (Symbol DE-13), complete, adapted for use with gear having 6 in. hub diameter, max. gear 62 teeth, max. pinion 24 teeth (malleable iron).....
21693	Gear case (Symbol DE-120), complete, adapted for use with gear having 6 $\frac{3}{4}$ in. hub diameter, max. gear 62 teeth, max. pinion 24 teeth (malleable iron).....
14795	Gear case (Symbol DE-6), complete, adapted for use with gear having 6 in. hub diameter, max. gear 67 teeth, max. pinion 20 teeth (malleable iron).....
21687	Gear case (Symbol DE-119), complete, adapted for use with gear having 6 $\frac{3}{4}$ in. hub diameter, max. gear 67 teeth, max. pinion 20 teeth (malleable iron).....
55868	Gear case (Symbol DE-14), complete, adapted for use with gear having 6 in. hub diameter, max. gear 70 teeth, max. pinion 18 teeth (malleable iron).....
21690	Gear case (Symbol DE-121), complete, adapted for use with gear having 6 $\frac{3}{4}$ in. hub diameter, max. gear 70 teeth, max. pinion 18 teeth (malleable iron).....
17462	Lid for oil hole, with spring and hinge pin, complete.....
17463	Spring for lid.....
13865	Hinge pin for lid ($\frac{1}{4}$ in. by 5 $\frac{1}{8}$ in.).....
14798	Bolt fastening halves of gear case together and short bolt fastening to frame ($\frac{7}{8}$ in.-9, 4 in. sq. h. sp'l).....
14782	Long bolt fastening gear case to frame ($\frac{7}{8}$ in.-9, 5 $\frac{5}{16}$ in. sq. h. sp'l).....
16157	Nut for Nos. 14798, 14782 ($\frac{7}{8}$ in.-9, hex. rough).....
16135	Lock washer for No. 16157.....
140099	ARMATURE, 3 turns, complete, with thrust collars, without pinion (No. 9 B.&S. D.C.C. wire).
140100	Armature, 4 turns, complete, with thrust collars, without pinion (No. 9 B.&S. D.C.C. wire).....
14778	*Armature coil, 3 turns (No. 9 B.&S. 0.114 in. D.C.C. wire) per set of 93.....
14779	*Armature coil, 4 turns (No. 9 B.&S. 0.114 in. D. C. C. wire) per set of 93.....
153449	Armature head, commutator end.....
153718	Armature head, pinion end.....
153719	Armature nut for holding armature head, commutator end, in position.....
153720	Key for armature head, pinion end ($\frac{1}{2}$ in. by $\frac{1}{2}$ in. by 3 $\frac{5}{16}$ in.).....
153721	Winding shield, pinion end.....
153722	Clamping nut for winding shield.....
14572	Thrust collar, commutator end.....
14751	Thrust collar, pinion end.....
14737	COMMUTATOR, Form 3, complete.....

Supersedes Form 2 commutator Cat. No. 14783.

* 93 coils in complete set for one armature. Cat. No. is for one coil.

Cat. No.	Description
14738	Shell.....
14739	Cap.....
14740	Nut.....
14741	Set screw for nut ($\frac{3}{8}$ in.-16, $1\frac{1}{16}$ in. headless, sp'1).....
14742	Steady pin ($\frac{1}{4}$ in. by $\frac{13}{32}$ in.).....
44501	Pipe plug for shell ($\frac{1}{8}$ in. pipe).....
16391	Set of copper and mica segments, finished and bound (93 segments).....
14773	Mica collar under segments.....
14747	Inner mica cone.....
14746	Wide outer mica cone ($2\frac{9}{16}$ in. wide).....
14706	Narrow outer mica cone ($2\frac{7}{16}$ in. wide).....
14558	Mica ring back of commutator segments ($6\frac{5}{16}$ in. by $7\frac{9}{16}$ in. by $\frac{1}{16}$ in. thick).....



14783	COMMUTATOR, Form 2, complete. Superseded by Form 3, commutator Cat. No. 14737...
14784	Shell.....
14785	Cap.....
14786	Nut.....
14741	Set screw for nut ($\frac{3}{8}$ in.-16, $1\frac{1}{16}$ in. headless, sp'1).....
14702	Steady pin ($\frac{1}{4}$ in. by $\frac{1}{16}$ in.).....
16390	Set of copper and mica segments, finished and bound (93 segments).....
14789	Mica collar under segments.....
14790	Inner mica cone.....
14792	Outer mica cone ($2\frac{5}{8}$ in. wide).....
153723	Mica ring back of commutator segments (6 in. by $7\frac{1}{2}$ in. by $\frac{1}{16}$ in. thick).....
14749	Shaft, bare.....
153724	Key for shaft ($\frac{1}{2}$ in. by $\frac{1}{2}$ in. by $9\frac{1}{2}$ in. square ends).....
153725	Key for commutator ($\frac{5}{16}$ in. by $\frac{1}{2}$ in. by 8 in.).....
14750	Key for pinion ($\frac{1}{2}$ in. by $\frac{1}{2}$ in. by $3\frac{3}{4}$ in. round end).....
153726	Pinion nut.....

NOTE.—The GE-1000 motor as now manufactured is fitted with pinion having a slot cut off center in the side face to receive the flanged portion of the lock washer adapted to its use. A number of motors are in use having pinions with slot cut on a center line across the side face to receive lock washer with punched projection adapted to its use. Cat. Nos. of both washers are listed as follows:

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54400-6 Parts of GE-1000-A, 500 Volt Railway Motor

Cat. No.	Description
59394	Lock washer for pinion nut, used with pinion having slot cut off center in side face ($2\frac{3}{32}$ in. by $3\frac{5}{8}$ in. by 0.0625 in. sp'l).....
13738	Lock washer for pinion nut, used with pinion having slot cut on a center line across the side face ($2\frac{1}{4}$ in. by $3\frac{1}{2}$ in. by 0.0625 in. sp'l).....
153727	Complete set of armature core insulations.....
153728	Complete set of armature winding insulations for 3 turn armature.....
153752	Complete set of armature winding insulations for 4 turn armature.....
153729	Complete set of armature connecting insulations.....
153730	Complete set of armature binding insulations.....
17498	Binding clip ($1\frac{3}{8}$ in. by $\frac{3}{8}$ in. by 0.010 in. tin).....
14571	Binding clip ($2\frac{1}{2}$ in. by $\frac{1}{2}$ in. by 0.010 in. tin).....
19398	Binding clip ($1\frac{5}{8}$ in. by $\frac{5}{8}$ in. by 0.020 in. German silver, bent).....

Acme tape used in connecting and binding armature (1 in. wide) cord for dressing No. 7, binding wire is 0.045 in. tinned steel requiring approximately 250 feet.

GENERAL ELECTRIC COMPANY

Parts of GE-1000-A, 500 Volt Railway Motor 54400-7

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GENERAL ELECTRIC COMPANY

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Spokane, Wash.	Paulsen Building
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