
PARTS CATALOG

FOR
ONAN ELECTRIC GENERATING PLANTS

Crank 192A4

DZC
SERIES

PARTS AVAILABILITY
NO LONGER GUARANTEED

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NO LONGER GUARANTEED



DIVISION OF STUDEBAKER CORPORATION
MINNEAPOLIS 14, MINNESOTA

SUPPLEMENTARY PARTS LIST

This is a supplement to the ONAN parts catalog. Parts in this list apply to Spec E models. Onan parts which do not appear in this list will be found in parts catalog 945-3, component of 945-1 book assembly for DZC series plants.

REPLACEMENT ENGINE

NOTE: This item replaces similar item in the 945-3 parts catalog.

100P413	1	<p>Engine, Replacement (Hercules Motor Corporation Model DD-226H, Spec D226X85) General Description: Includes - Complete Cylinder Block; Oil Pans; Governor and Fuel Pump Assembly; Hand Primer Pump; Oil Pump; Oil Filter; Water Pump; Intake and Exhaust Manifold; 12 Volt Air Intake Heater; Primary and Secondary Fuel Filter; and Flywheel Housing (Generator Adapter). Excludes - Air Cleaner and Hose; Starter and Solenoid; Charge Generator; Belt and Voltage Regulator; Radiator and Hoses; Fan Blades and Belt.</p>
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Replaces 100P249

FIG. 1 - FUEL SYSTEM GROUP

NOTE: This is to up-date reference number 11, figure 1, of the 945-3 Parts Catalog.

11	1	<p>Bracket, Solenoid Mounting (With provision for Mounting Injection Pump) - Use Prior to Spec E Models Use Beginning Spec E Models</p>
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FIG. 3 - STARTING MOTOR & BATTERY CHARGE GENERATOR GROUP

NOTE: This is to up-date reference numbers 3, and 10, figure 3, of the 945-3 parts catalog.

3	1	<p>Belt, Charge Generator and Fan Drive - Use Prior to Spec E Models Use Beginning Spec E Models</p>
10	1	<p>Fan and Pulley, Charge Generator - Use Prior to Spec E Models Use Beginning Spec E Models</p>

Revised 8/10/62

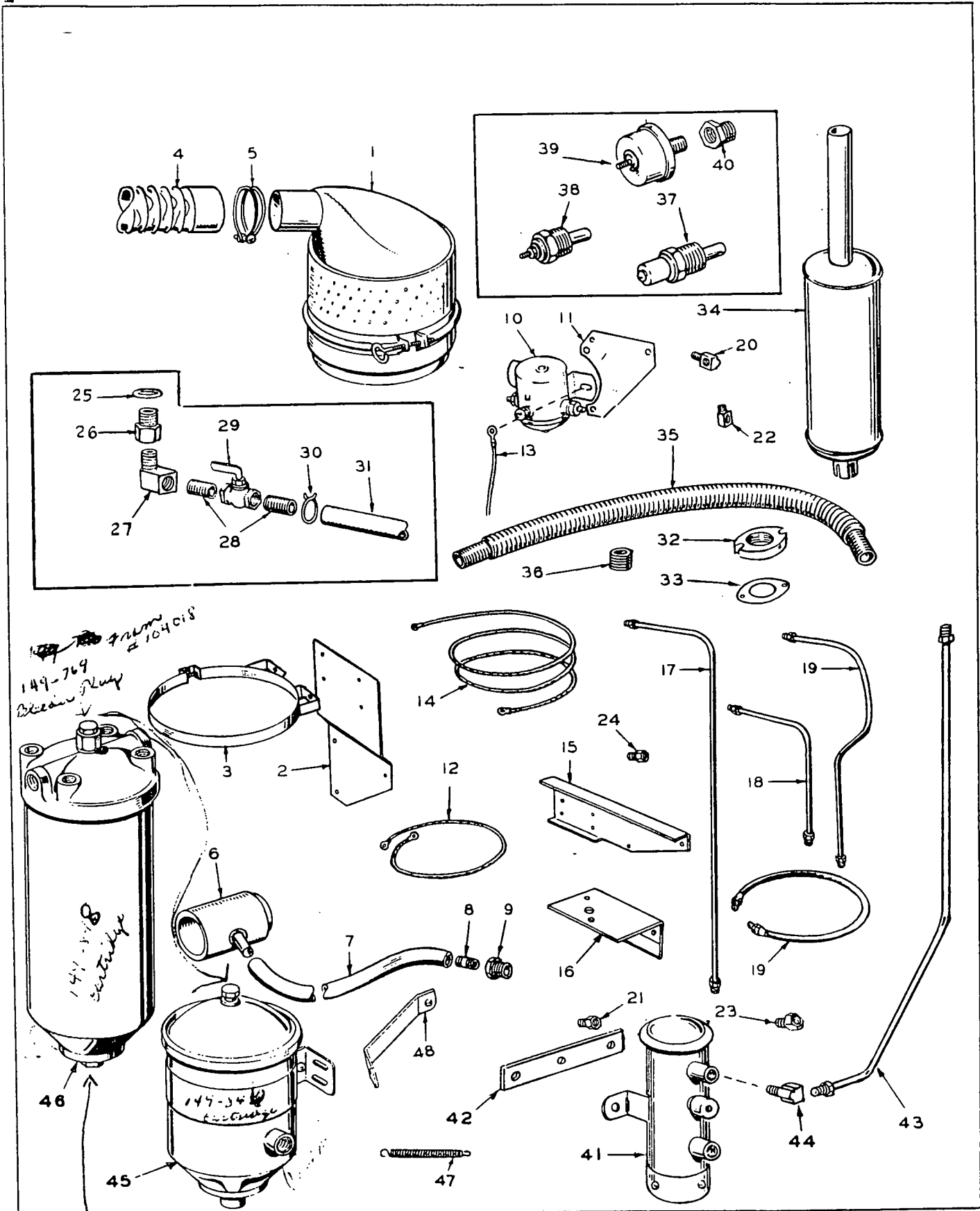


FIG. 1 - FUEL SYSTEM GROUP

Blower Pump # 62-28

PARTS CATALOG

1

DZC SERIES

This parts catalog applies to the standard ONAN DZC Series electric generating plants. They are powered by a Hercules Series D-2300 Engine beginning Spec F, or a Hercules Series DD-226H Engine Prior to Spec F, which is more completely described in the Hercules manual. Basically, the engine is a 4 cylinder, water cooled, diesel (compression ignition) type. The cylinder bore is 4 inches, piston stroke is 4-1/2 inches, and displacement is 226 cubic inches. Hercules Engine parts must be selected from the appropriate Hercules parts list and parts must be secured from the Hercules Division of Hupp Corporation.

Engine parts that are modified or added by ONAN will be found in this list. They all have ONAN part numbers and must be used in place of similar parts which may be listed by Hercules in their parts list.

"Right" and "Left" sides of the Generator, Control and Housing are determined by FACING the Radiator (Front) end.

ONAN parts are illustrated in groups and have reference numbers which correspond to the like numbers in the list for that group. Parts illustrations are typical and should not be construed to represent a particular part number.

Compare your ONAN plant nameplate MODEL and SPEC. with the Plant Data Table. The Plant Data Table contains all descriptive information pertinent to this list such as voltage, phase, etc. which appears in the description of some parts that differ between basic models.

UNLESS OTHERWISE MENTIONED IN THE PARTS DESCRIPTION, PARTS ARE INTERCHANGEABLE BETWEEN ALL MODELS LISTED IN THE DATA TABLE.

PLANT DATA TABLE

MODEL & SPEC NO. †		ELECTRICAL DATA				
HOUSED	UNHOUSED	WATTS	VOLTS	CYCLES★	PHASE	WIRE
30DZC-3R/	30DZC-3R8/	30,000	120/240	60	1	3
30DZC-4R/	30DZC-4R8/	30,000	120/208	60	3	4
30DZC-5DR/▲	30DZC-5DR8/▲	30,000	120/240	60	3	4
30DZC-4XR/	30DZC-4XR8/	30,000	277/480	60	3	4

† - The NUMBER after the diagonal line (/) signifies standard or optional features (1 is Standard). The LETTER ending the Model and Spec. No. is the Spec Letter and will advance with manufacturing changes (A to B, B to C, etc.).

▲ - This is a delta-wound 240 volt model with one phase center-tapped. A limited amount of 1 Phase, 120/240 volt power can be utilized together with 3 Phase power as long as no terminal current exceeds the rated nameplate current.

★ - AS PERTAINS TO THE GENERATOR (EXCITER PORTION) AND AC OUTPUT CONTROL GROUPS ONLY. This list covers 60 cycle plants only. For 50 cycle plants, (check ONAN Nameplate) use only as a guide. Order parts by description and be sure to give complete ONAN nameplate information.

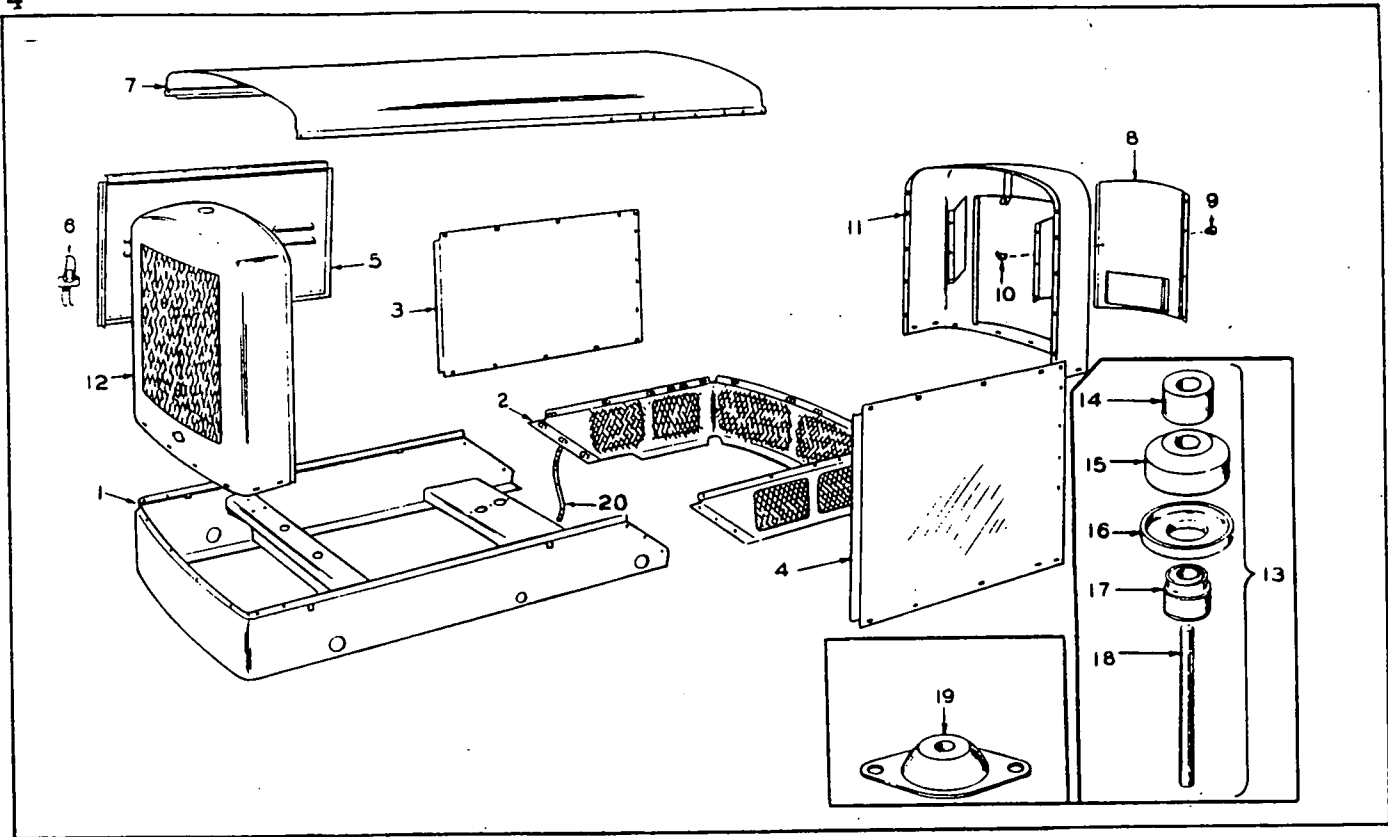


FIG. 4 - HOUSING GROUP (Housed Plants Only)

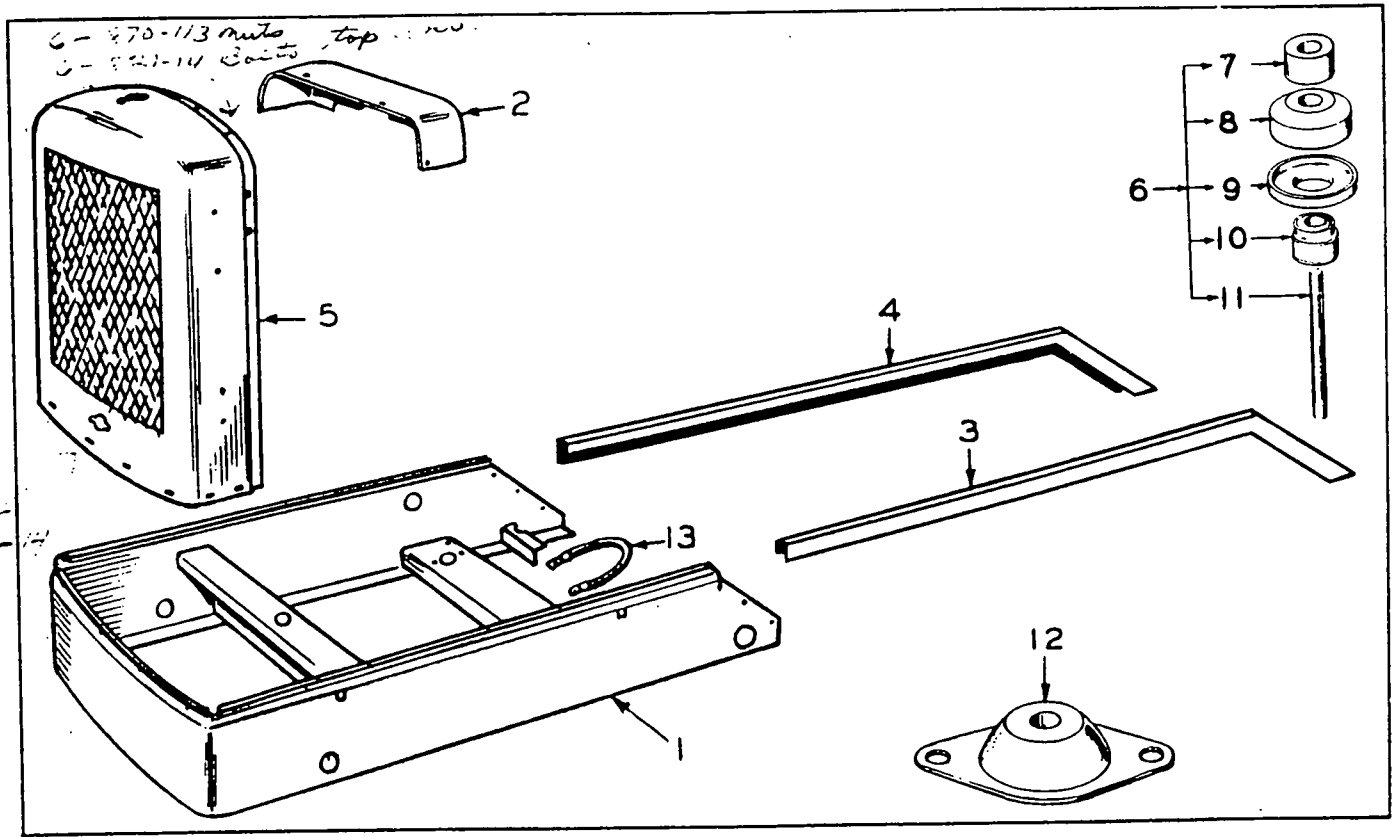


FIG. 5 - MOUNTING GROUP (Unhoused Plants Only)

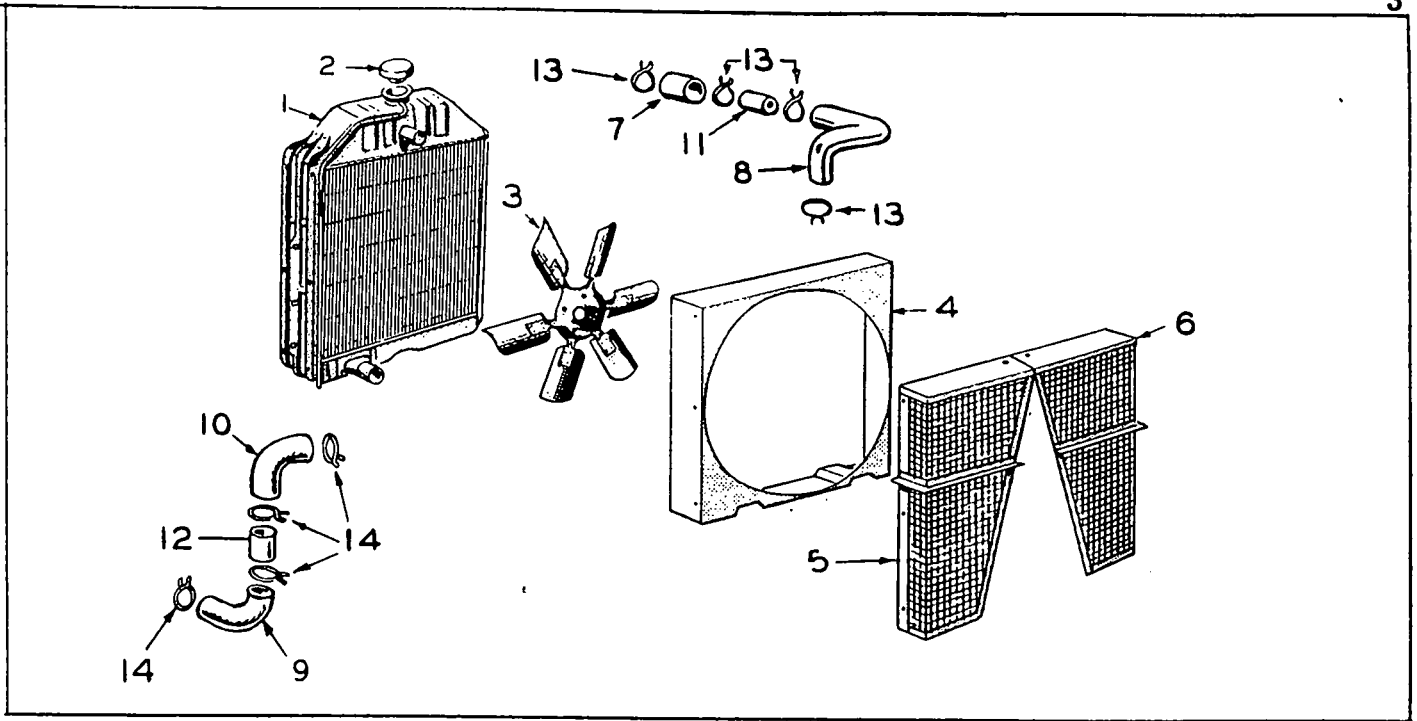


FIG. 2 - COOLING SYSTEM GROUP

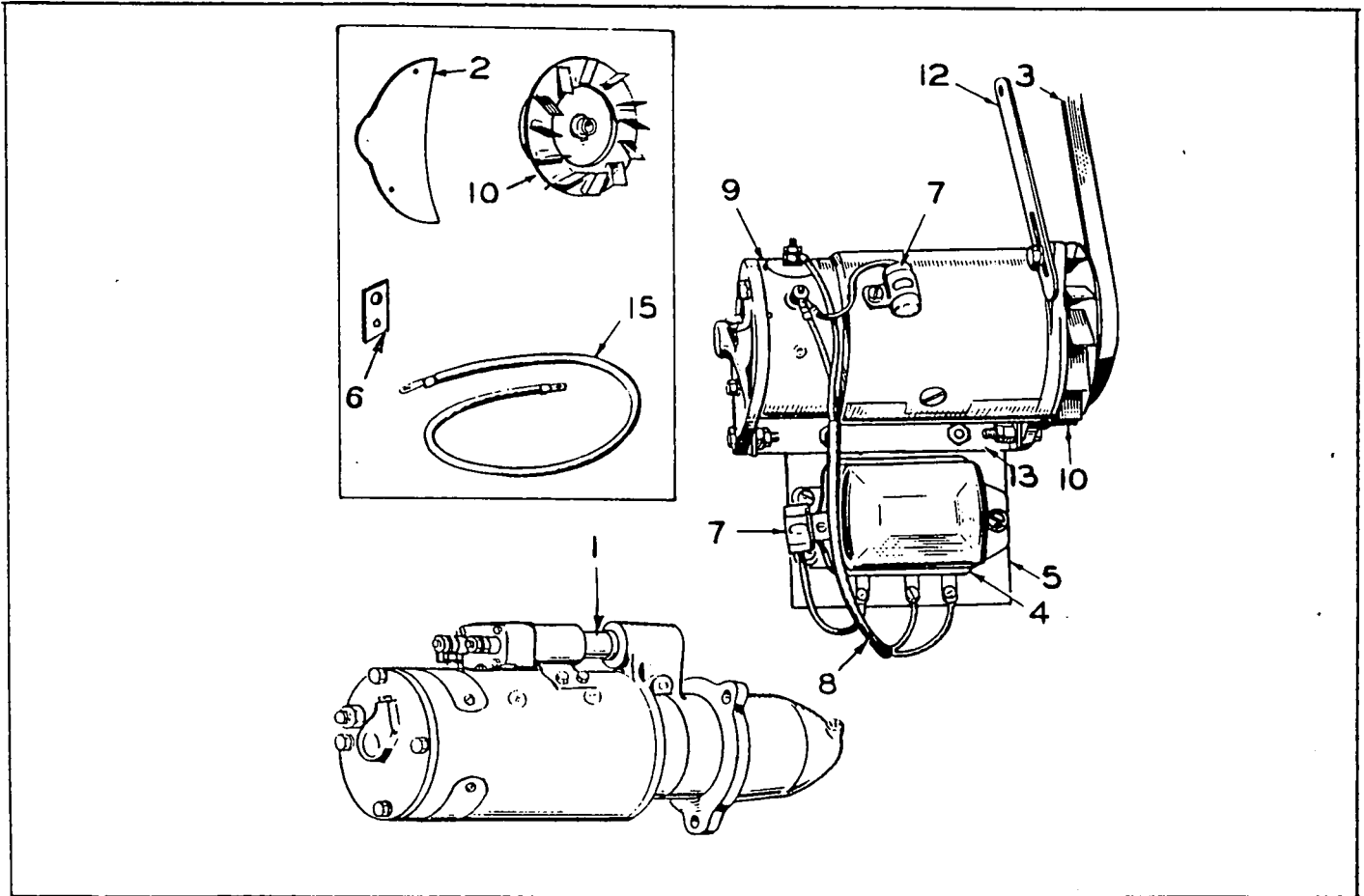


FIG. 3 - STARTING MOTOR & BATTERY CHARGE GENERATOR GROUP

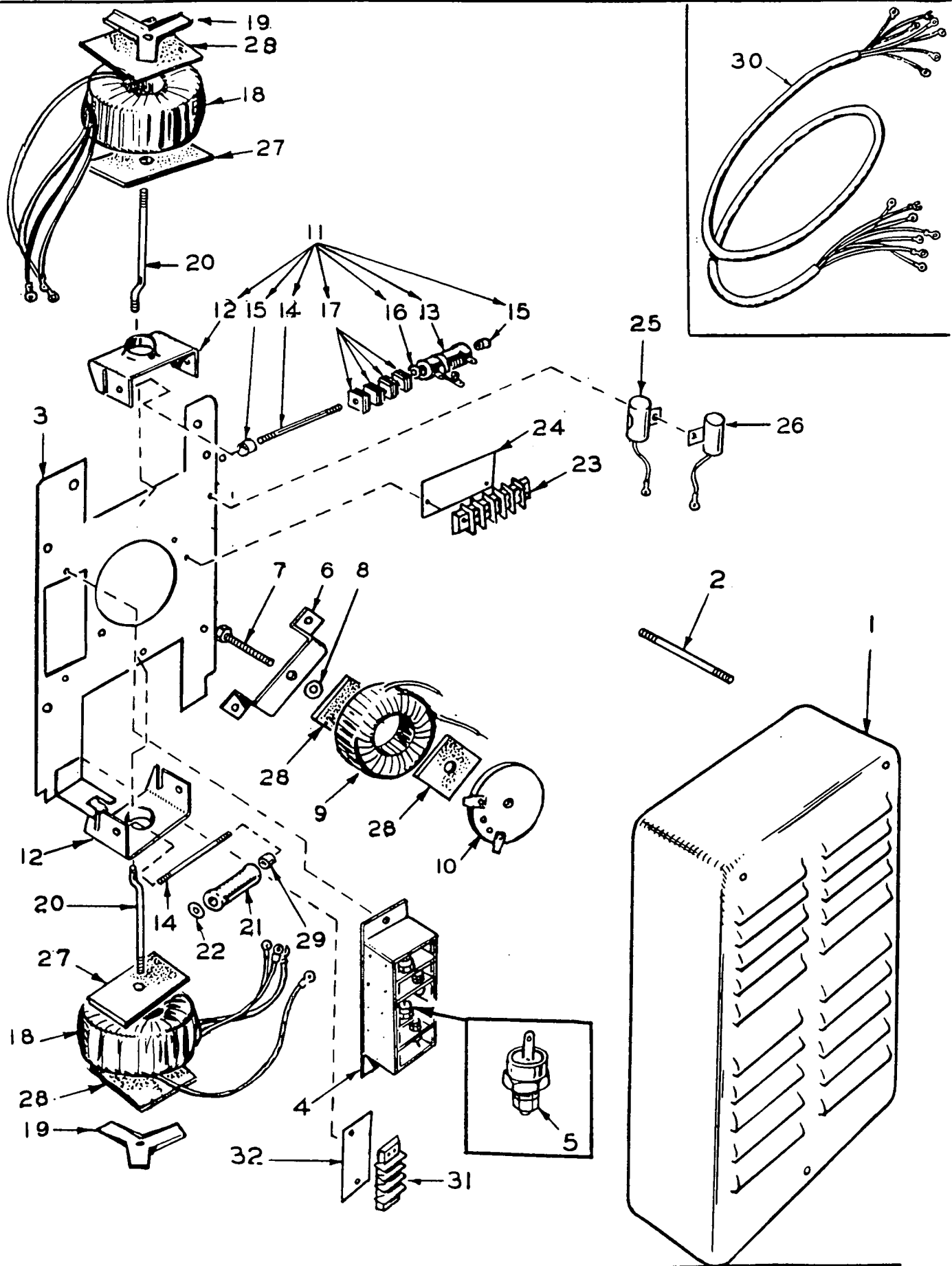


FIG. 7 - GENERATOR GROUP (Exciter Portion)

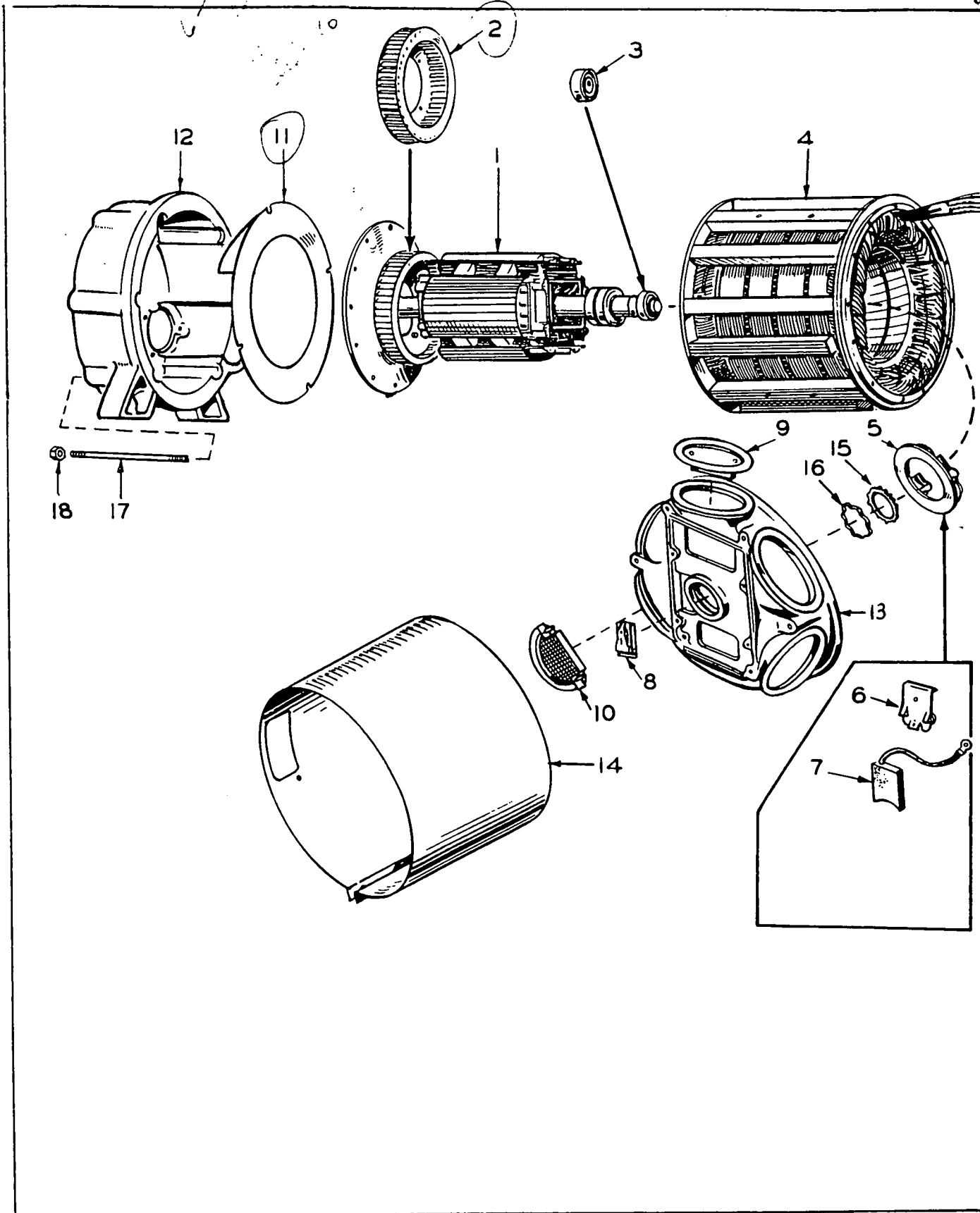


FIG. 6 - GENERATOR GROUP (Alternator Portion)

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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REPLACEMENT ENGINE

100P425	1	Engine, Replacement (Hercules Motor Corporation Series D-2300, Spec D2300X4) - Replaces 100P413 Hercules DD-226H, Spec D226X85, and 100P249 Hercules DD-226H, Spec D226X60. General Description:
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Includes - Complete Cylinder Block; Oil Pan; Governor and Fuel Pump Assembly; Hand Primer Pump; Oil Pump; Oil Filter; Water Pump; Intake and Exhaust Manifolds; 12 Volt Air Intake Heater; Primary and Secondary Fuel Filter; and Flywheel Housing (Generator Adapter).

Excludes - Air Cleaner and Hose; Starter and Solenoid; Charge Generator, Belt and Voltage Regulator; Radiator and Hoses; Fan Blades and Belt.

FIG. 1 - FUEL SYSTEM GROUP

1	140B62	1	Cleaner, Air.
2	140A527	1	Bracket, Air Cleaner Mounting.
3	140A80	2	Band, Air Cleaner Mounting.
4	503-345	1	Hose, Air Cleaner - 10-1/2" Long.
5	503-274	3	Clamp, Air Cleaner Hose (Replaces 503-44).
6	123A619	1	Breather Assembly, Air Intake - Air Cleaner Hose to manifold.
7	503-346	1	Hose, Breather - 6" Long - Valve Box Cover to Air Intake Breather.
8	505-98	1	Nipple, Close - 1/8" - Breather Hose to Reducer Bushing.
9	505-7	1	Bushing, Pipe Reducer (1/4 to 1.8) Breather Connection to Valve Box Cover.
10	307B40	1	Solenoid, Intake Manifold Heater.
11			Bracket, Solenoid Mounting (With provision for mounting Injection Pump Spring) - Use Prior to Spec "E" Models.
	301A1623	1	Use Beginning Spec "E" Models.
	307A684	1	Use Beginning Spec "E" Models.
12	336A713	1	Lead, Injection Pump Terminal to Ground - 8" Long.
13	336A1229	1	Lead, Solenoid to Air Heater - 17" Long.
14	336A1230	1	Lead, Solenoid to Starter - 42" Long.
15	149B740	1	Bracket, Primary Fuel Filter Mounting.
16	149B741	1	Bracket, Secondary Fuel Filter Mounting (Also Mounts Hand Primer Pump).

1774711 Fuel Pump Hand Primer

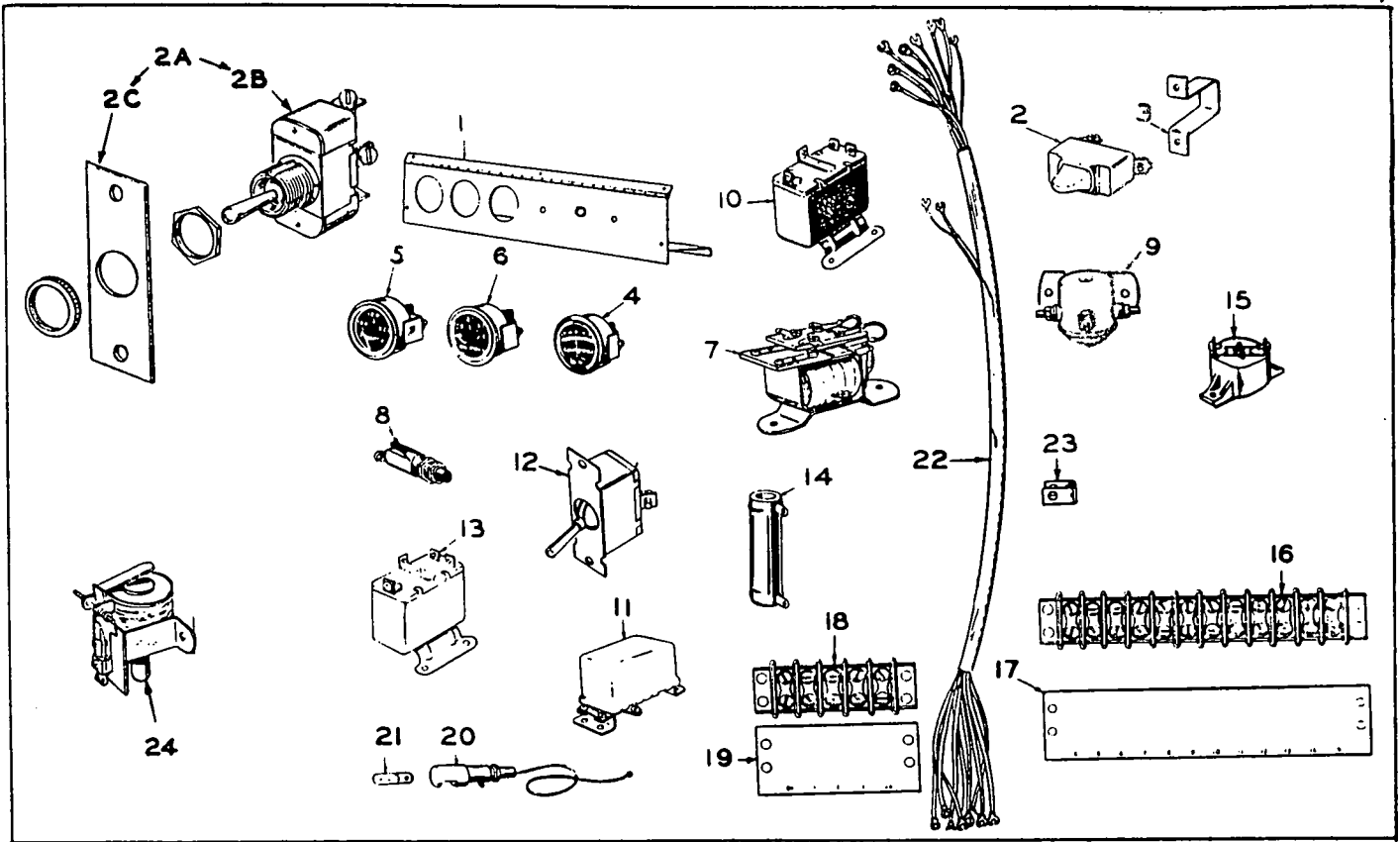


FIG. 8 - CONTROL GROUP (Engine Instruments Portion)

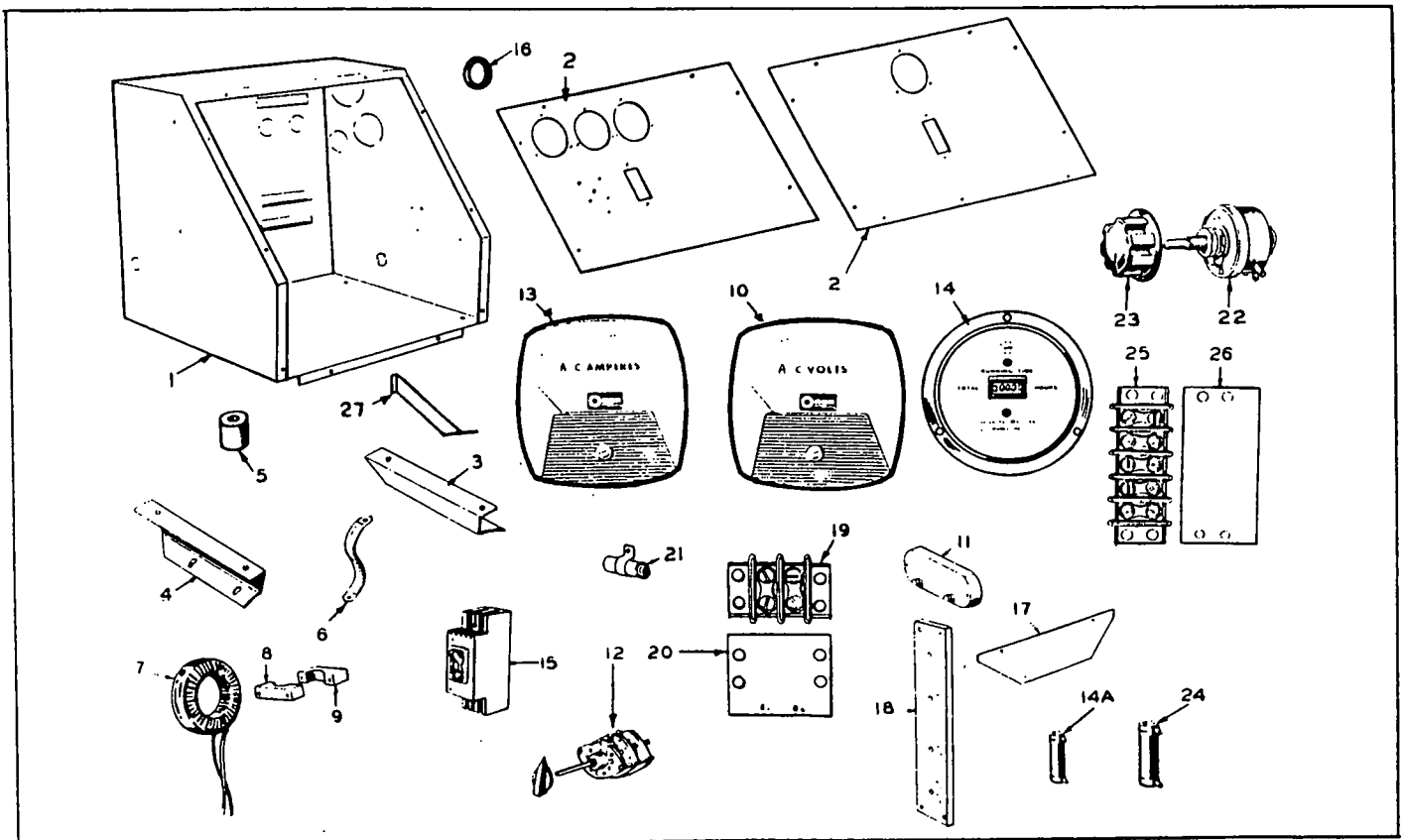


FIG. 9 - CONTROL GROUP (AC Output Portion)

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 2 - COOLING SYSTEM GROUP (continued)			
6	130C351	1	Guard, Fan - Left Hand Side.
7	503-3	1	Hose, Radiator - Upper (Sleeve to Radiator Inlet) 1-1/2" I.D. x 1-7/8" O.D. (Replaces #503-88).
8	503C320	1	Hose, Radiator - Upper (Sleeve to Engine Outlet) 1-1/2" I.D. x 1-7/8" O. D. (Replaces 503-349).
9	503A337	1	Hose, Radiator - Lower (Sleeve to Radiator Outlet) 1-3/4" I.D. x 2-1/8" O.D.
10	503A338	1	Hose, Radiator - Lower (Sleeve to Engine Inlet) 1-3/4" I.D. x 2-1/8" O.D.
11	130A508	1	Sleeve, Radiator Hose Connecting (Metal) - Upper Hoses - 1-1/2" O.D. (Replaces 130A448).
12	130A444	1	Sleeve, Radiator Hose Connecting (Metal) - Lower Hoses - 1-3/4" O.D.
13	503-129	4	Clamp, Radiator Hose - Upper Hoses.
14	503-287	4	Clamp, Radiator Hose - Lower Hoses.

FIG. 3 - STARTING MOTOR & BATTERY CHARGE GENERATOR GROUP

1	191C295	1	▲Starter - 12 Volt (Replaces 191B257).
2	191A268	1	Cover, Starter Hole.
3			Belt, Charge Generator and Fan Drive - Prior to Spec E Models (Use 511K65 Belt and Pulley). Begin Spec E Models.
	511P60	1	
4	191A228	1	Regulator, Voltage - 12 Volt (Delco Remy #1119001).
5	191B238	1	Bracket, Voltage Regulator Mounting - Spec A only.
6	191A214	1	Connector, Starter Terminal (1" x 2" Copper Strip).
7	312A58	2	Condenser - .1 Mfd. (1) Charge Generator, (1) Voltage Regulator.
8	338B105	1	Harness Assembly, Charge Generator to Voltage Regulator - 2 Wires in Sleeving.
9	191P251	1	▲Generator, Battery Charge - 12 Volt (Delco Remy- #1102044).
10			Fan and Pulley, Charge Generator - Prior to Spec "E" Models (Use 511K65 Belt and Pulley). Begin Spec "E".
	191A459	1	
12	191A235	1	Strap, Adjusting - Charge Generator.
13	191A234	1	Bracket, Charge Generator Mounting.
15			Cable, Battery - Positive.
	416A444	1	
	416A445	1	Negative.

▲ - For Component Parts not listed, contact your nearest Delco Remy Dealer. Supply Delco Model Number from Nameplate.

FIG. 4 - HOUSING GROUP (Housed Plants Only)

1	403D554	1	Chassis, Mounting.
2	403D332	1	Chassis, Mounting - Rear Section.

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 1 - FUEL SYSTEM GROUP (continued)			
17	149A759	1	Line, Primary to Secondary Fuel Filter.
18	149B758	1	Line, Primer Pump to Primary Fuel Filter.
19	501A63	1	Line, Secondary Fuel Filter to Injection Pump - Flexible.
20	502-54	1	Elbow, Street - 90° - Primer Pump Inlet - Spec "A" Models Only.
21	502-35	1	Connector, Inverted Male - Primer Pump Outlet.
22	502-42	3	Elbow, Inverted Male (2) Primary Filter Inlet and Outlet, (1) Secondary Filter Inlet.
23	502-156	1	Elbow, Street - 45° - Secondary Filter Outlet.
24	502-31	1	Connector, Inverted Male - Injection Pump Inlet.
25	102A34	1	Gasket, Oil Drain Adapter.
26	102A33	1	Adapter, Oil Drain.
27	502-133	1	Elbow, Street - 90° - Oil Drain.
28	505-100	2	Nipple, Pipe Close - Oil Drain - 1/2".
29	504P11	1	Valve, Shut-off - Oil Drain.
30	503-197	1	Clamp, Oil Drain Hose.
31	503-348	1	Hose, Oil Drain - 15' Long.
32	154B560	1	Flange, Exhaust Manifold.
33	154A543	1	Gasket, Exhaust Flange.
34	155C608	1	Muffler, Exhaust.
35	155C633	1	Tube, Flexible Exhaust.
36	505-380	1	Nipple, Half - Muffler Inlet (2" x 3").
37	309B47	1	Switch, High Water Temperature Cut-Off.
38	193A109	1	Sender, Water Temperature Gauge (Engine Sending Unit Only).
39	193A108	1	Sender, Oil Pressure Gauge (Engine Sending Unit Only).
40	505-7	1	Bushing, Reducer - Oil Gauge Sender.
41	149P554	1	Pump, Fuel - Electric - Begin Spec "B".
42	149A784	1	Bracket, Fuel Pump Mounting - Begin Spec "B".
43	149B776	1	Line, Fuel - Electric Pump to Primer Pump - Begin Spec "B".
44	502-4	2	Elbow, Inverted Male (1 Primer Pump Inlet, 1 Electric Pump Outlet) Begin Spec "B".
45	149C823	1	Filter, Primary Fuel. - <i>Castrol 149B846</i>
46	149C825	1	Filter, Secondary Fuel. <i>Castrol 149B848</i>
47	145A158	1	Spring, Injection Pump.
48	149A889	1	Bracket, Support - Secondary Fuel Filter.

FIG. 2 - COOLING SYSTEM GROUP

1	130D353	1	Radiator.
2	130P372	1	Cap, Radiator.
3	130C446	1	Fan Only, Cooling.
4	130D350	1	Shroud, Fan.
5	130C352	1	Guard, Fan - Right Hand Side.

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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FIG. 4 - HOUSING GROUP (Housed Plants Only) (continued)

3	405D931	1	Panel, Housing - Left Side.
4	405D930	1	Panel, Housing - Right Side.
5	405C934	2	Panel, Door.
6	406A105	4	Clamp, Door.
7	405D929	1	Panel, Top.
8	405B932	1	Door, Rear Panel.
9	406-2	1	Knob, Door.
10	406-88	1	Catch, Panel Door.
11	405D928	1	Panel, Rear End - Excludes Door.
12	405D927	1	Panel, Front End.
13	402A201	1	Mounting Assembly, Front Engine - Includes Parts Marked * plus Washers and Nuts.
14	403A533	1	*Spacer, Front Engine Mounting.
15	402A10	1	*Mount, Rubber - Upper.
16	402A12	1	*Cup, Rubber Mount Retainer.
17	402A11	1	*Mount, Rubber - Lower.
18	520A576	1	*Stud, Engine Mounting.
19	402P190	2	Mount, Vibration - Generator.
20	336A476	1	Cable, Ground - Generator to Chassis.

* - Included with Mounting Assembly #402A201.

FIG. 5 - MOUNTING GROUP (Unhoused Plants Only)

1	403D554	1	Chassis, Mounting.
2	405C964	1	Extension, Radiator Hood.
3	403C374	1	Trim, Chassis - Right Hand Side.
4	403C375	1	Trim, Chassis - Left Hand Side.
5	405D927	1	Panel, Front End.
6	402A201	1	Mounting Assembly, Front Engine - Includes parts marked * plus washers and nuts.
7	403A533	1	*Spacer, Front Engine Mounting.
8	402A10	1	*Mount, Rubber - Upper.
9	402A12	1	*Cup, Rubber Mount Retainer.
10	402A11	1	*Mount, Rubber - Lower.
11	520A576	1	*Stud, Engine Mounting.
12	402P190	2	Mount, Vibration - Generator.
13	336A476	1	Cable, Ground - Generator to Chassis.

* - Included with Mounting Assembly #402A201.

FIG. 6 - GENERATOR GROUP (Alternator Portion)

1	★	1	Rotor Assembly, Wound - Includes Bearing, Blower and Drive Assembly.
	205B54	1	Blower.
	510P63	1	Bearing.
	★	1	Stator Assembly, Wound.

r by description, giving Model, Spec & Serial Number (ONAN Nameplate).

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 6 - GENERATOR GROUP (Alternator Portion) Continued			
5	212C248	1	Rig Assembly, Brush - Includes Brushes & Springs.
6	212B1105	4	Spring, Brush.
7	214A56	4	Brush.
8	150A717	1	Switch Assembly, Overspeed. Cover, End Bell Opening - Includes Latch & Bracket.
9	232B1254	2	Plain.
10	232B1253	2	Screened.
11	234C88	1	Scroll, Air.
12	231D85	1	Adapter, Engine to Generator (Flywheel Housing) Included with Replacement Engine.
13	211E131	1	Bell, End - Alternator to Exciter.
14			Band, Generator.
	232C1193	1	Single Phase Plants.
	232C1199	1	Three Phase Plants.
15	232A1186	1	Holder, Bearing - Anti-Rotation.
16	232A1187	1	Spring, Bearing Holder - Anti-Rotation.
17	520A593	6	Stud, Generator Adapter to Stator.
18	104A91	6	Nut, Adapter to Stator Stud.

FIG. 7 - GENERATOR GROUP (Exciter Portion) Model 07SX

NOTE: THIS GROUP APPLIES ONLY TO 60 CYCLE PLANTS

1			Cover, Exciter.
	234D59	1	Prior to Spec "C".
	234D106	1	Begin Spec "C".
2	520A575	3	Stud, Exciter Cover Mounting.
3			Panel Only, Exciter.
	234D100	1	Prior to Spec "C".
	234D105	1	Begin Spec "C".
4	305B200	1	Rectifier Assembly, Power (Complete) Includes four #305-199 plus wire and hardware.
5	305P239	4	Rectifier Only, Power (Field) Included in #305B200 Assembly (Replaces 305-199).
6	150B733	1	Bracket Only, Overspeed Switch.
7	232A1365	1	Stud & Contact Point Assembly, Voltage Control Reactor Mounting.
8			Washer, Fibre Insulating - Voltage Control Reactor Stud Mounting.
	508-18	2	1/4" x 3/4" x 1/16".
	508-29	1	1/4" x 3/8" x 1/32".

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 7 - GENERATOR GROUP (Exciter Portion) Model 07SX (Cont.)			
9			Reactor, Voltage Control - Does not include terminal block.
	315A49	1	Prior to Spec "C".
	315A74	1	Begin Spec "C".
10			Block, Terminal - Voltage Control Reactor.
	332A622	1	Prior to Spec "C".
	332A687	1	Begin Spec "C".
11	305B202	1	Rectifier Assembly, Resistor and (Includes parts marked * plus wire and hardware).
12	234B60	2	*Bracket, Gate Reactor Mounting (Note: 1 only included in #305B202 Assembly).
13	304A5	1	*Resistor, Control - Adjustable (150 Ohm, 25 Watt - 9/16" x 2").
14	520A579	2	*Stud, Resistor & Rectifier Mounting (Note: 1 only included in #305B202 Assembly).
15	232A1473	2	*Spacer, Adjustable Resistor & Rectifier to Stud (3/8" O.D. x 3/16" I.D. x 7/32" Long).
16	304A14	2	*Washer, Centering - Adjustable Resistor Mounting.
17	305P208	4	*Rectifier, Regulator (Control).
18	315A47	2	Reactor, Gate.
19	234B62	2	Retainer, Gate Reactor.
20	232A1361	2	Stud, Gate Reactor Mounting.
21	304A21	1	Resistor, Fixed - Alternator Field (200 Ohm, 50 Watt - 3/4" x 4").
22	304A15	2	Washer, Centering - Fixed Resistor Mounting.
23	332A604	1	Block, Terminal - 5 Place.
24	332A678	1	Strip, Block Marker - 5 Place. Condenser - 0.5 Mfd.
25	312A17	1	Left Hand - Prior to Spec "C".
26	312A27	1	Right Hand - Prior to Spec "C".
			Insulation, Gate Reactor Mounting.
27	232A1051	4	Gate Reactor to Mounting Bracket (1-1/4" x 1-5/8" x 1/8").
28	895-70	8	(6) Gate Reactor to Retainer (2) Voltage Control Reactor Mounting - SPECIFY SIZE REQUIRED.
29	232A1474	2	Spacer, Fixed Resistor to Stud (3/8" O.D. x 3/16" I. x 11/32" Long).
30			Harness, Exciter to AC Output Control (Includes Overspeed Switch Lead).
	338A202	1	Prior To Spec C.
	338A237	1	Begin Spec C.
31	332A537	1	Block, Terminal - 4 Place - Begin Spec "C".
32	332A686	1	Strip, Block Marker - 4 Place - Begin Spec "C".

* - Included in Resistor and Rectifier Assembly #305B202.

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 8 - CONTROL GROUP (Engine Instruments Portion)			
1	★	1	Panel Only, Lower Control.
2	308-90	1	Switch, Start-stop - Obsolete, Order 308A166 Switch and Adapter Assembly.
2A	308A166	1	Switch and Adapter Assembly - Only For Replace- ment of 308-90 Switch.
2B	308P154	1	Switch, Start-stop - Mounts in Round Hole.
2C	301A1945	1	Adapter - For Adapting 308P154 to Panel With Square Hole.
3	301A974	1	Bracket - For Mounting 308-90 Switch (Only For Replacement of Similar Part).
4	302-61	1	Ammeter, Charge - 30-0-30.
5	193B106	1	Gauge, Water Temperature - Panel Unit Only.
6	193B107	1	Gauge, Oil Pressure - Panel Units Only.
7			Relay, Emergency Stop.
	307B299	1	Prior To Spec D.
	307B614	1	Begin Spec D.
8	308-91	1	Button, Emergency Stop Re-set.
9	307B40	1	Relay, Pilot.
10	307B52	1	Relay, Start Disconnect.
11	307B4	1	Relay, Stop.
12	308-37	1	Switch, Manifold Heater.
13	307B81	1	Relay, Starting Pilot.
14	304P32	1	Resistor, Fixed - Between Start Disconnect Relay and Stop Relay.
15	320P165	1	Breaker, Start Protection.
16	332A607	1	Block, Terminal - 12 Place, Engine Control.
17	332A608	1	Strip, Marker - For 12 Place Block, Marked 4 - 15.
18	332A604	1	Block, Terminal - 5 Place, Remote Operation.
19	332A616	1	Strip, Marker - 5 Place Block, Marked B+, 1, 2, 3, H.
20	322P49	1	Receptacle, Panel Light - Housed Plants Only.
21	322-26	1	Lamp, Panel Light - Housed Plants Only.
22			Harness Assembly - Engine To Control.
	338B220	1	Unhoused Plants - 9 Wires in Sleeving.
	338C221	1	Housed Plants - 10 Wires in Sleeving.
23	416A96	1	Clip, Harness - Engine Control Connection - 'U' Shaped.
24	307A388	1	Relay, Time Delay - Used With Optional Low Oil Pres- sure Cut-off Switch.

FIG. 9 - CONTROL GROUP (AC Output Portion)

Note: This Group Applies Only to 60 Cycle Plants

1	301D1106	1	Box Only, Control.
2	★	1	Panel Only, Upper Control.
★ - Order By Description Giving Model, Spec, And Serial Number (ONAN nameplate)			

PARTS LIST

15

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
			Bracket, Control Box Mounting - Unhoused Plants
3	301B1124	1	Left Hand.
4	301B1125	1	Right Hand.
5	402-78	4	Rubber, Mounting - Control Box to Mounting Brkt. - Unhoused Plants.
6	337A44	1	Strap, Ground - Unhoused Plants.
7			†Transformer, Current - Housed Plants (Select According to Rating On Transformer Nameplate).
	302B106	2	Transformer Nameplate Reads "Ratio 200/5."
	302B125	3	Transformer Nameplate Reads "Ratio 140/5."
	302B78	3	Transformer Nameplate Reads "Ratio 100/5."
	302B77	3	Transformer Nameplate Reads "Ratio 80/5."
	302B76	3	Transformer Nameplate Reads "Ratio 75/5."
	302B117	3	Transformer Nameplate Reads "Ratio 50/5."
			†Clamp, Current Transformer Mounting - Housed Plants.
8	302A235	3	Inside Half (Quantity 2 For Single Phase Plants).
9	302A236	3	Outside Half (Quantity 2 For Single Phase Plants).
10			Voltmeter, AC (Select According to Voltmeter Scale).
	302P421	1	Voltmeter Scale Reads 0-300 (Replaces 302-41).
	302P422	1	Voltmeter Scale Reads 0-500 (Replaces 302-42).
11	302-157	1	Multiplier, Meter - Use Only With 0-500 Voltmeter.
12	308-22	1	†Switch, Voltage and Current Selector - 3 Phase, Housed Plants Only.
13			†Ammeter, AC - Housed Plants Only (Select According To Scale On Ammeter.
	302-413	1	Ammeter Scale Reads 0-300 (Replaces 302-14).
	302-411	2	Ammeter Scale Reads 0-200 (Replaces 302-13).
	302-408	1	Ammeter Scale Reads 0-100 (Replaces 302-11).
	302-407	1	Ammeter Scale Reads 0-80 (Replaces 302-10).
	302-405	1	Ammeter Scale Reads 0-50 (Replaces 302-116).
	302P409	1	Ammeter Scale Reads 0-140.
	302P406	1	Ammeter Scale Reads 0-75.
14	302-212	1	Meter, Running Time - 60 Cycle, Housed Plants Only (Note: When used to replace 302-387 on plants requiring a resistor, also order 304A125 Resistor for 480 Volt Plants).
14A	304A125	1	Resistor, Running Time Meter - 480 Volt Plants Only (Used with 302-212 Meter).
15	320B17	1	Breaker, Circuit.
			† - Unhoused Plants With Optional Meter Panel Use Parts Marked †, As listed For Housed Plants.

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 9 - CONTROL GROUP (AC Output Portion) Cont.			
16	508P63	1	Grommet, Rubber (For 2-3/4" Hole).
17	301B1136	1	Cover, Output Lead - Unhoused Plants only.
18	332A513	1	Block, Terminal - AC Output.
19	332A333	1	Block, Terminal - 2 Place - Exciter Connections - Prior to Spec "C".
20	332A636	1	Strip, Block Marker - 2 Place (Marked E1, E2) - Prior to Spec "C".
21			Condenser, AC Output.
	312A58	2	Single Phase Plants.
	312A58	3	120/208 Volt - 3 Phase Plants.
	312A58	4	120/240 Volt - 3 Phase Plants.
	312A22	3	480 Volt - 3 Phase Plants.
22	303-97	1	Rheostat, Voltage Regulator - 75 Ohm, Model "H" - Begin Spec "C".
23	303-32	1	Knob, Rheostat - Begin Spec "C".
24	304A479	1	Resistor, Fixed - Rheostat (425 Ohm, 50 Watt - 3/4" x 4") - Begin Spec "C".
25	332A604	1	Block, Terminal - 5 Place - Exciter Connections - Begin Spec "C".
26			Strip, Block Marker - 5 Place.
	332A689	1	All Models EXCEPT 480 Volt - Begin Spec "C".
	332A690	1	480 Volt Plants - Begin Spec "C".
27	301A1914	1	Bracket, Panel Stop - Begin Spec C.