

**Onan**

# **Parts Manual**

**UR**

## **Alternator Single-Bearing**



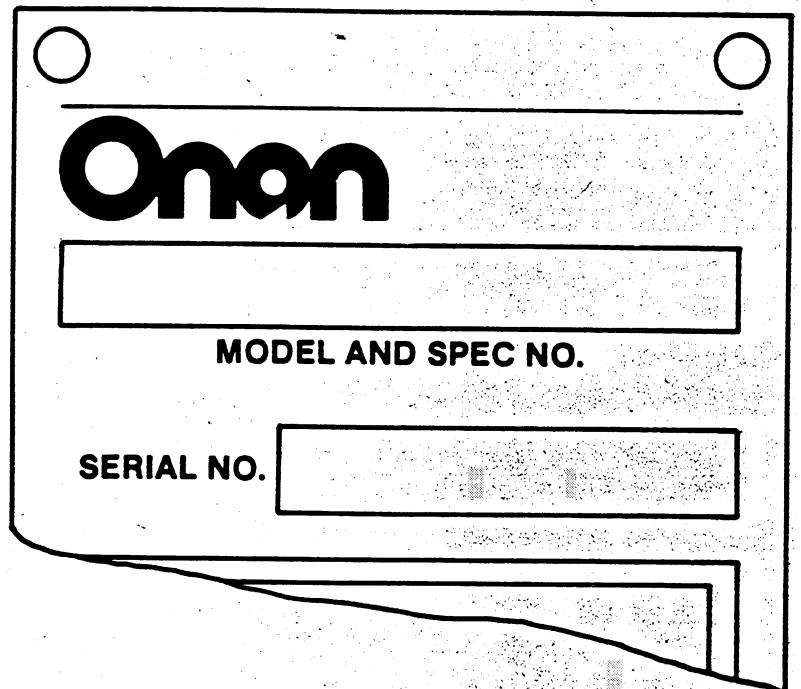
**Onan Service Parts**

**971-0200**  
**2-86 (SPEC A-F)**  
Printed in U.S.A.

## **General Information**

**For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.**

**To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.**



**For handy reference, insert "YOUR"  
nameplate information in the spaces above.**

# Important Safety Precautions

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Read and observe these safety precautions when using or working on electric generators, engines and related equipment. Also read and follow the literature provided with the equipment.

Proper operation and maintenance are critical to performance and safety. Electricity, fuel, exhaust, moving parts and batteries present hazards that can cause severe personal injury or death.

## FUEL, ENGINE OIL, AND FUMES ARE FLAMMABLE AND TOXIC

Fire, explosion, and personal injury can result from improper practices.

- Used engine oil, and benzene and lead, found in some gasoline, have been identified by government agencies as causing cancer or reproductive toxicity. When checking, draining or adding fuel or oil, do not ingest, breathe the fumes, or contact gasoline or used oil.
- Do not fill tanks with engine running. Do not smoke around the area. Wipe up oil or fuel spills. Do not leave rags in engine compartment or on equipment. Keep this and surrounding area clean.
- Inspect fuel system before each operation and periodically while running.
- Equip fuel supply with a positive fuel shutoff.
- Do not store or transport equipment with fuel in tank.
- Keep an ABC-rated fire extinguisher available near equipment and adjacent areas for use on all types of fires except alcohol.
- Unless provided with equipment or noted otherwise in installation manual, fuel lines must be copper or steel, secured, free of leaks and separated or shielded from electrical wiring.
- Use approved, non-conductive flexible fuel hose for fuel connections. Do not use copper tubing as a flexible connection. It will work-harden and break.

## EXHAUST GAS IS DEADLY

- Engine exhaust contains carbon monoxide (CO), an odorless, invisible, poisonous gas. Learn the symptoms of CO poisoning.
- Never sleep in a vessel, vehicle, or room with a genset or engine running unless the area is equipped with an operating CO detector with an audible alarm.
- Each time the engine or genset is started, or at least every day, thoroughly inspect the exhaust system. Shut down the unit and repair leaks immediately.

- Warning: Engine exhaust is known to the State of California to cause cancer, birth defects and other reproductive harm.

*Make sure exhaust is properly ventilated.*

- Vessel bilge must have an operating power exhaust.
- Vehicle exhaust system must extend beyond vehicle perimeter and not near windows, doors or vents.
- Do not use engine or genset cooling air to heat an area.
- Do not operate engine/genset in enclosed area without ample fresh air ventilation.
- Expel exhaust away from enclosed, sheltered, or occupied areas.
- Make sure exhaust system components are securely fastened and not warped.

## MOVING PARTS CAN CAUSE SEVERE PERSONAL INJURY OR DEATH

- Do not remove any guards or covers with the equipment running.
- Keep hands, clothing, hair, and jewelry away from moving parts.
- Before performing any maintenance, disconnect battery (negative [-] cable first) to prevent accidental starting.
- Make sure fasteners and joints are secure. Tighten supports and clamps, keep guards in position over fans, drive belts, etc.
- If adjustments must be made while equipment is running, use extreme caution around hot manifolds and moving parts, etc. Wear safety glasses and protective clothing.

## BATTERY GAS IS EXPLOSIVE

- Wear safety glasses and do not smoke while servicing batteries.
- Always disconnect battery negative (-) lead first and reconnect it last. Make sure you connect battery correctly. A direct short across battery terminals can cause an explosion. Do not smoke while servicing batteries. Hydrogen gas given off during charging is explosive.
- Do not disconnect or connect battery cables if fuel vapors are present. Ventilate the area thoroughly.

## **DO NOT OPERATE IN FLAMMABLE AND EXPLOSIVE ENVIRONMENTS**

Flammable vapor can be ignited by equipment operation or cause a diesel engine to overspeed and become difficult to stop, resulting in possible fire, explosion, severe personal injury and death. **Do not operate diesel equipment where a flammable vapor environment can be created by fuel spill, leak, etc., unless equipped with an automatic safety device to block the air intake and stop the engine.**

## **HOT COOLANT CAN CAUSE SEVERE PERSONAL INJURY**

- Hot coolant is under pressure. Do not loosen the coolant pressure cap while the engine is hot. Let the engine cool before opening the pressure cap.

## **ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH**

- Do not service control panel or engine with unit running. High voltages are present. Work that must be done while unit is running should be done only by qualified service personnel.
- Do not connect the generator set to the public utility or to any other electrical power system. Electrocution can occur at a remote site where line or equipment repairs are being made. An approved transfer switch must be used if more than one power source is connected.
- Disconnect starting battery (negative [-] cable first) before removing protective shields or touching electrical equipment. Use insulative mats placed on dry wood platforms. Do not wear jewelry, damp clothing or allow skin surface to be damp when handling electrical equipment.
- Use insulated tools. Do not tamper with interlocks.
- Follow all applicable state and local electrical codes. Have all electrical installations performed by a qualified licensed electrician. Tag open switches to avoid accidental closure.
- With transfer switches, keep cabinet closed and locked. Only authorized personnel should have cabinet or operational keys. Due to serious shock hazard from high voltages within cabinet, all service and adjustments must be performed by an electrician or authorized service representative.

If the cabinet must be opened for any reason:

1. Move genset operation switch or Stop/Auto/Handcrank switch (whichever applies) to Stop.
2. Disconnect genset batteries (negative [-] lead first).
3. Remove AC power to automatic transfer switch. If instructions require otherwise, use extreme caution due to shock hazard.

## **MEDIUM VOLTAGE GENERATOR SETS (601V TO 15kV)**

- Medium voltage acts differently than low voltage. Special equipment and training are required to work on or around medium voltage equipment. Operation and maintenance must be done only by persons trained and qualified to work on such devices. Improper use or procedures will result in severe personal injury or death.
- Do not work on energized equipment. Unauthorized personnel must not be permitted near energized equipment. Induced voltage remains even after equipment is disconnected from the power source. Plan maintenance with authorized personnel so equipment can be de-energized and safely grounded.

## **GENERAL SAFETY PRECAUTIONS**

- Do not work on equipment when mentally or physically fatigued or after consuming alcohol or drugs.
- Carefully follow all applicable local, state and federal codes.
- Never step on equipment (as when entering or leaving the engine compartment). It can stress and break unit components, possibly resulting in dangerous operating conditions from leaking fuel, leaking exhaust fumes, etc.
- Keep equipment and area clean. Oil, grease, dirt, or stowed gear can cause fire or damage equipment by restricting airflow.
- Equipment owners and operators are solely responsible for operating equipment safely. Contact your authorized Onan/Cummins dealer or distributor for more information.

**KEEP THIS DOCUMENT NEAR EQUIPMENT FOR EASY REFERENCE.**

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## INTRODUCTION

This Parts Manual applies to the Standard Units Listed below. The illustrations are arranged in groups of related items, and each part or assembly is identified by a Reference Number. All parts illustrated are typical, and unless otherwise mentioned in the description column the parts are interchangeable between models.

These typical illustrations are subject to change and reflect only the latest replacement parts arrangement. The Right and Left sides of the Unit are determined by FACING the FRONT or input end of the Unit. (Ref: Fan and Drive Disc).

UNIT DATA TABLE

MODEL IDENTIFICATION	RATING	MODEL IDENTIFICATION	RATING
25.0 UR - */ # @	25,000 WATTS	100.0 UR - */ # @	100,000 WATTS
30.0 UR - */ # @	30,000 WATTS	110.0 UR - */ # @	110,000 WATTS
45.0 UR - */ # @	45,000 WATTS	115.0 UR - */ # @	115,000 WATTS
50.0 UR - */ # @	50,000 WATTS	125.0 UR - */ # @	125,000 WATTS
55.0 UR - */ # @	55,000 WATTS	130.0 UR - */ # @	130,000 WATTS
65.0 UR - */ # @	65,000 WATTS	135.0 UR - */ # @	135,000 WATTS
75.0 UR - */ # @	75,000 WATTS	140.0 UR - */ # @	140,000 WATTS
85.0 UR - */ # @	85,000 WATTS	150.0 UR - */ # @	150,000 WATTS
90.0 UR - */ # @	90,000 WATTS	175.0 UR - */ # @	175,000 WATTS

ELECTRICAL DATA TABLE

*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
15	120/240	60	3	1	
	347/600	60	4	3	
	120/240	60	12	1	+
	120/208	60	12	3	
	120/240	60	12	3	
	127/220	60	12	3	
	139/240	60	12	3	
	240/416	60	12	3	
	254/440	60	12	3	
215	277/480	60	12	3	
	Same as 15	50/60	12	1	+
53 515	Same as 15	50/60	12	3	
	120/240	50	3	1	+
	110/220	50	12	1	
	115/230	50	12	1	
	110/190	50	12	3	
	110/220	50	12	3	
	115/200	50	12	3	
	115/230	50	12	3	
	120/208	50	12	3	
	127/220	50	12	3	
	220/380	50	12	3	
	230/400	50	12	3	
	240/416	50	12	3	
	254/440	50	12	3	

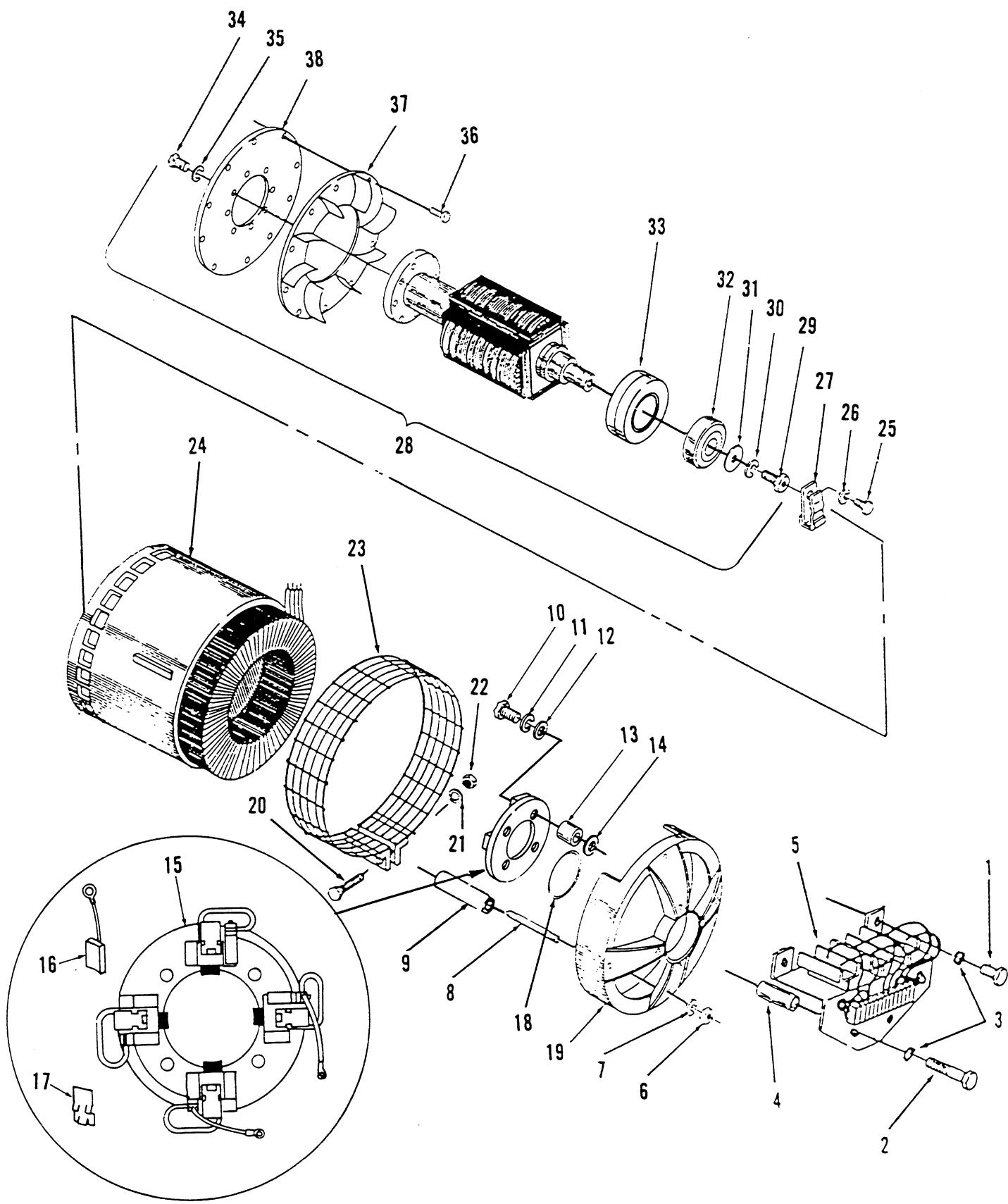
\* - Voltage Codes follow Model Letter designations.

# - Specification Number: Number 1 is Standard, all other indicate variations.

@ - Specification Letter: Letter advances ( A to B, B to C, etc) with major manufacturing changes.

+ - The Stators are Reconnectible.

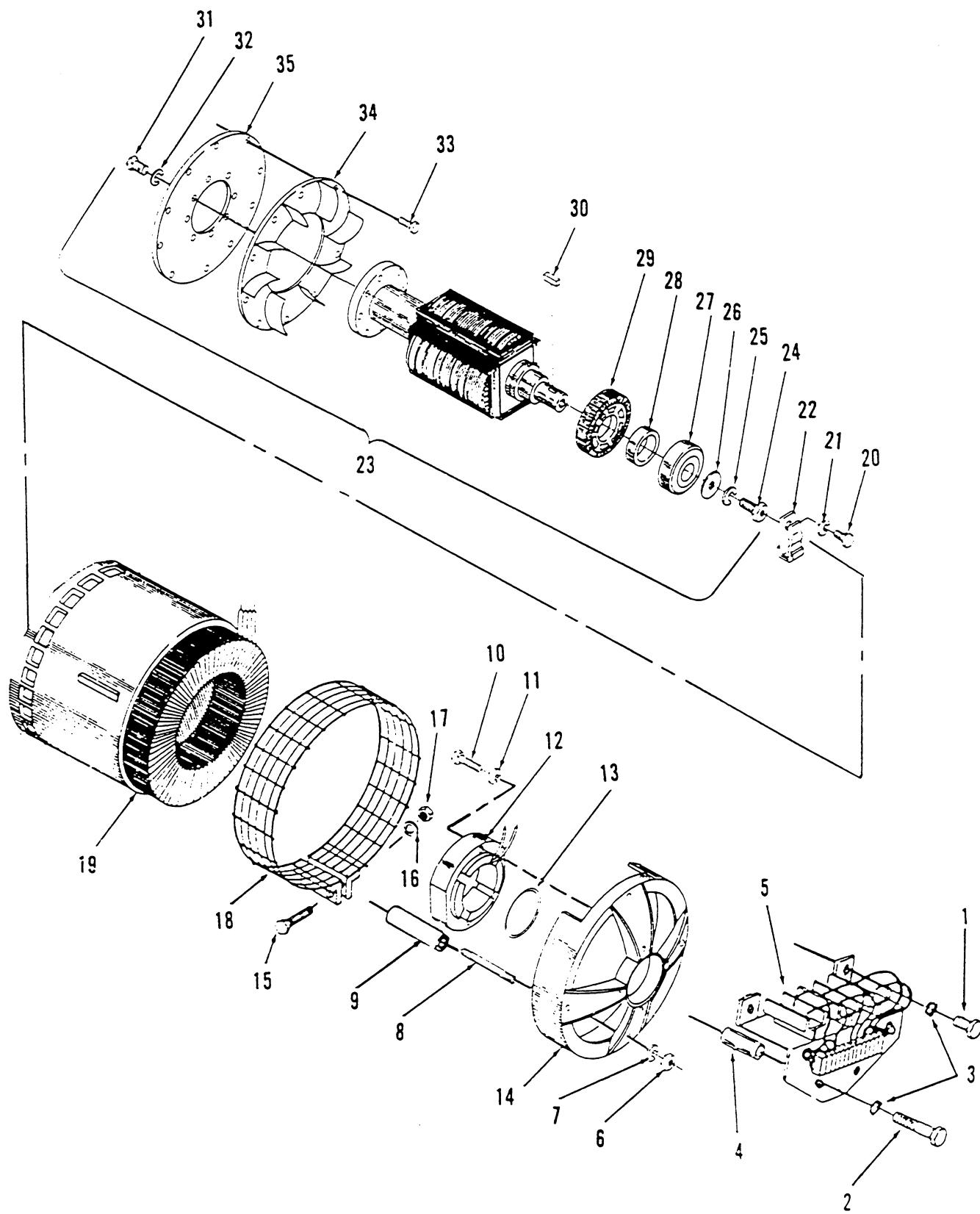
Alternator  
SPEC A  
25-65KW SAE#2



**Alternator**  
**SPEC A**  
**25-65KW SAE#2**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	20	114-0023	2	Screw, Cap - Hex Head, Heat Treated (1/4-20 x 1-1/4")
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	21	850-0040	2	Washer, Lock - Spring (1/4")
3	853-0013	3	Washer, Lock - ET (1/4")	22	862-0001	2	Nut, Hex (1/4-20)
4	305-0481	2	Spacer, Sleeve	23	234-0368	1	Screen, Air
5		1	Regulator, Voltage (See Separate Page for Parts)	24	220-1552	1	Stator, Alternator 30KW Code 3
	305-0489	1	25 - 60 KW Sets		220-1451	1	30KW Code 215
	305-0483	1	65 - 100 KW Sets		220-1454	1	40KW Code 215
6	862-0011	4	Nut, Hex - Grade 8 (3/8-16)	25	800-0048	1	65KW Code 215
7	850-0050	4	Washer, Lock - Spring (3/8")	26	856-0010	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
8		4	Stud (3/8-16 UNC x) 14-11/16"LG	27	150-0717	1	Washer, Lock - EIT (3/8")
	520-0718	4	16-11/32"LG	28			Switch, Overspeed
	520-0721	4	17-15/16"LG				Rotor, Alternator (Includes Fan, Drive Disk, Bearing, Collector Ring)
9	503-0611	4	Hose, Rubber				30KW Code 3
10	114-0023	4	Screw, Cap - Hex Head, Heat Treated (1/4-20 x 1-1/4")	201-1643		1	30KW Code 215
11	850-0040	4	Washer, Lock - Spring (1/4")	201-1640		1	40KW Code 215
12	526-0108	4	Washer, Flat (17/64"ID x 7/16"OD x 1/32"THK)	201-1643		1	65KW Code 215
13	212-1225	4	Spacer, Sleeve	29	800-0513	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
14	526-0018	8	Washer, Flat (17/64"ID x 5/8"OD x 1/16"THK)	30	850-0079	1	Washer, Lock - Spring (3/4")
15	212-0413	1	Brush Rig (Includes Brushes and Springs)	31	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
16	214-0046	4	Brush, Alternator	32	510-0101	1	Bearing, Ball
	815-0203	4	Screw, Machine - Round Head with ET Lockwasher, Brass (#10-32 x 7/8")	33	204-0083	1	Ring, Collector
	853-0008	12	Washer, Lock - ET (#10)	34	805-0035	8	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
	526-0049	4	Washer, Flat (13/64"ID x 7/16"OD x 1/32"THK)	35	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
	871-0010	8	Nut, Hex - Brass (#10-32)	36	805-0019	8	Bolt, Place - Hex Head, Grade 8 (3/8-16 x 1-1/4")
17	212-1105	4	Spring, Brush	37	205-0089	1	Fan, Cooling
18	509-0125	1	Seal, Oil - "O" Ring	38	232-2078	1	Disk, Drive
19	211-0185	1	Bell, End				

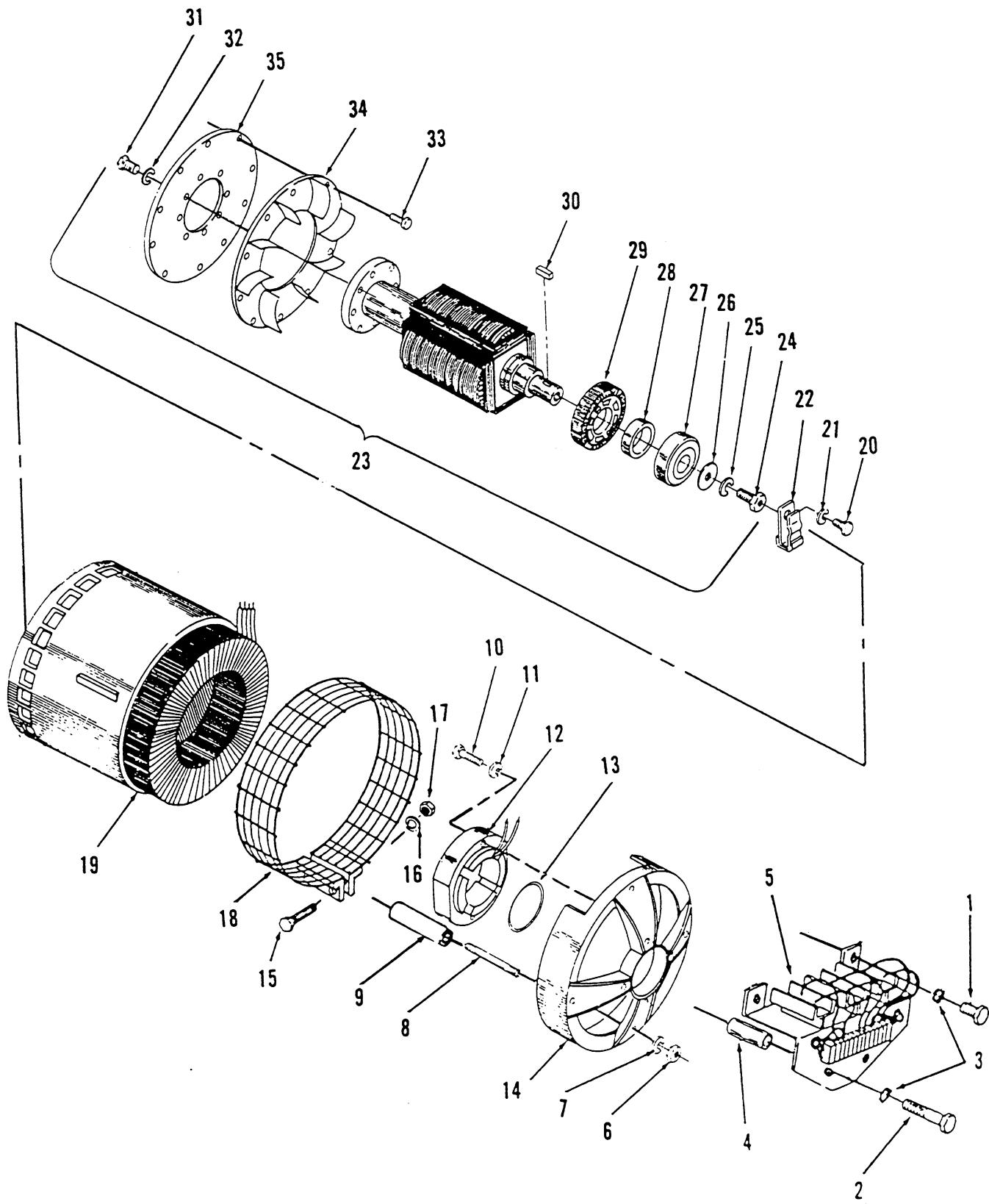
Alternator  
Spec B  
25-60KW SAE#2



**Alternator**  
**Spec B**  
**25-60KW SAE#2**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	20	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	21	856-0010	1	Washer, Lock - EIT (3/8")
3	853-0013	4	Washer, Lock - ET (1/4")	22	150-0717	1	Switch, Overspeed
4	305-0481	2	Spacer, Sleeve	23			Rotor, Alternator (Includes Fan, Drive Disk, Bearing, Exciter Rotor)
5	305-0491	1	Regulator, Voltage (See Separate Page for Components)	201-2666		1	30KW Codes 9, 15, 215
6	862-0011	4	Nut, Hex - Grade 8 (3/8-16)	201-2669		1	30KW Code 3
7	850-0050	4	Washer, Lock - Spring (3/8")	201-2671		1	45KW Codes 9, 15, 215
8			Stud (3/8-16 UNC x)	201-2670		1	45KW Code 3
	520-0718	4	14-11/16"LG	24	800-0513	1	55KW Codes 15, 215
	520-0721	4	16-11/32"LG				Screw, Cap - Hex Head, Modified W/Tapped Hole
	520-0722	4	17-3/32"LG	25	850-0079	1	Washer, Lock - Spring (3/4")
	520-0723	4	17-15/16"LG	26	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
9	503-0611	4	Hose, Rubber	27	510-0101	1	Bearing, Ball
10	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	28	232-2102	1	Spacer, Sleeve
11	850-0040	4	Washer, Lock - Spring (1/4")	29			Rotor, Exciter (See Separate Page for Component)
12			Stator, Exciter				Standard
	220-2353	1	Standard	201-1739		1	Environmental Protected
	220-1774	1	Environmental Protected	201-1845		1	Key, Machine (1/4" x 1/4" x 7/8")
13	509-0125	1	Seal, Oil - "O" Ring	30	515-0145	1	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
14	211-0185	1	Bell, End	31	905-0035	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
15	114-0023	2	Screw, Cap - Hex Head, Heat Treated (1/4-20 x 1-1/4")	32	526-0259	8	Bolt, Place - Hex Head, Grade 8 (3/8-16 x 1-1/4")
16	850-0040	2	Washer, Lock - Spring (1/4")	33	805-0019	8	Fan, Cooling
17	862-0001	2	Nut, Hex (1/4-20)	34	205-0089	1	Disk, Drive
18	234-0368	1	Screen, Air	35	232-2078	1	
19			Stator, Alternator				
	220-1552	1	30KW Code 3				
	220-1554	1	45KW Code 3				
	220-1599	1	30KW Code 9				
	220-1602	1	45KW Code 9				
	220-1451	1	30KW Codes 15, 215				
	220-1454	1	45KW Codes 15, 215				
	220-1455	1	55KW Codes 15, 215				

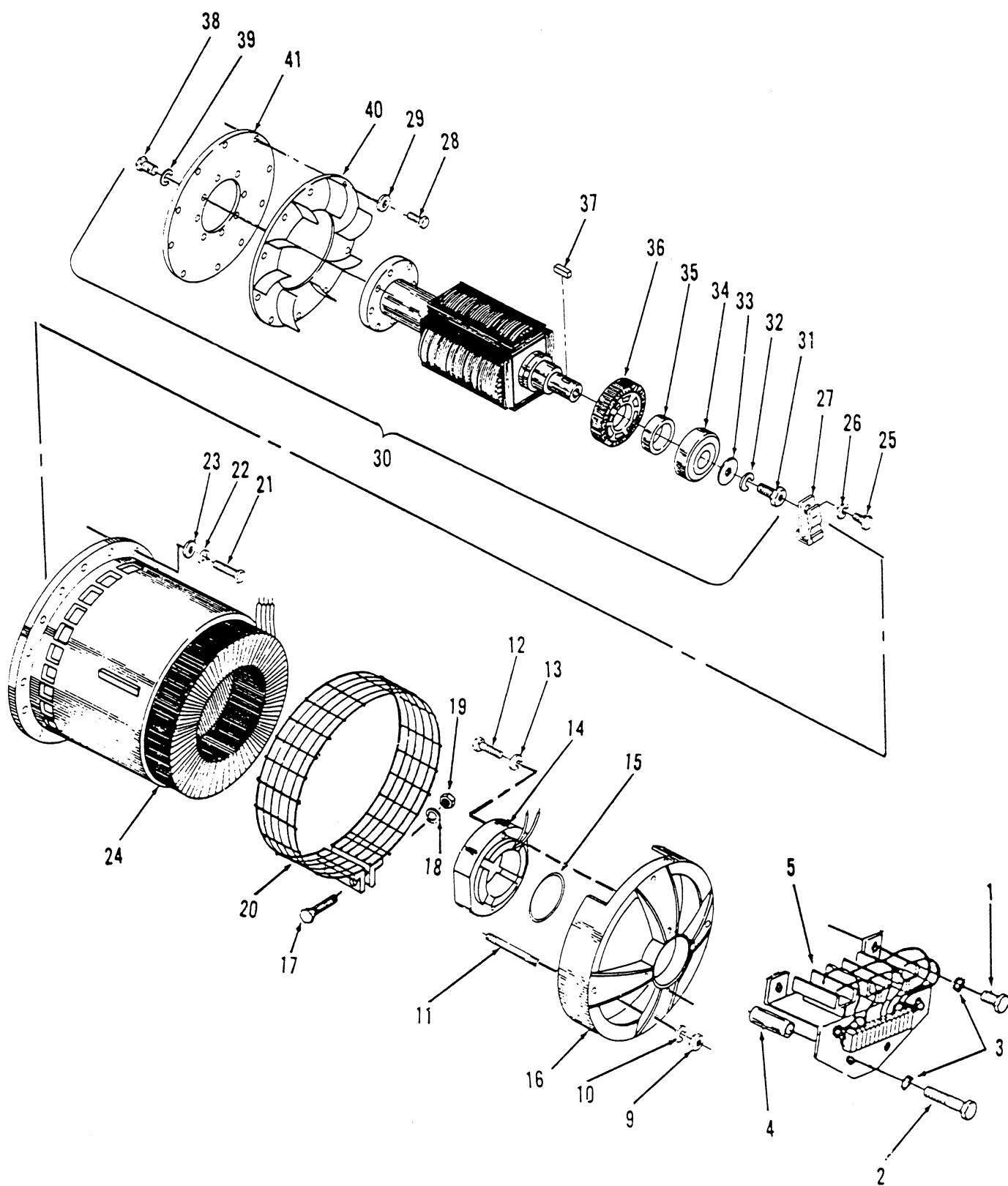
Alternator  
Spec B  
65-100KW SAE#2



**Alternator**  
**Spec B**  
**65-100KW SAE#2**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	20	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	21	856-0010	1	Washer, Lock - EIT (3/8")
3	853-0013	4	Washer, Lock - ET (1/4")	23			Rotor, Alternator (Includes Fan, Drive Disk, Bearing, Exciter Rotor)
4	305-0481	2	Spacer, Sleeve	201-2671		1	65KW Code 9, 15, 215
5	305-0491	1	Regulator, Voltage (See Separate Page for Components)	201-2674		1	65KW Code 15 Extended Stack
6	862-0011	4	Nut, Hex - Grade 8 (3/8-16)	201-2675		1	75KW Code 9, 15, 215
7	850-0050	4	Washer, Lock - Spring (3/8")	201-2673		1	75KW Code 15 Extended Stack
8			Stud (3/8-16 UNC x)	201-2676		1	85 & 90KW Code 9, 15, 215
	520-0723	4	17-15/16"LG	24	800-0513	1	90KW Code 15 Extended Stack
	520-0724	4	18-29/32"LG	25	850-0079	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
	520-0726	4	20-1/16"LG	26	526-0238	1	Washer, Lock - Spring (3/4")
	520-0727	4	21-7/16"LG	27	510-0101	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
	520-0728	4	22-15/16"LG	28	232-2102	1	Bearing, Ball
	520-0729	4	24-11/16"LG	29		1	Spacer, Sleeve
9	503-0611	4	Hose, Rubber				Rotor, Exciter (See Separate Page for Component)
10	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")				Standard
11	850-0040	4	Washer, Lock - Spring (1/4")	201-1739		1	Enviromental Protected
12			Stator, Exciter	201-1845		1	Key, Machine (1/4" x 1/4" x 7/8")
	220-2353	1	Standard	30	515-0145	1	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
	220-1774	1	Enviromental Protected				Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
13	509-0125	1	Seal, Oil - "O" Ring	31	805-0035	8	Bolt, Place - Hex Head, Grade 8 (3/8-16 x 1-1/4")
14	211-0185	1	Bell, End				Fan, Cooling
15	114-0023	2	Screw, Cap - Hex Head, Heat Treated (1/4-20 x 1-1/4")	32	526-0259	8	Disk, Drive
16	850-0040	2	Washer, Lock - Spring (1/4")				
17	862-0001	2	Nut, Hex (1/4-20)	33	805-0019	8	
18	234-0368	1	Screen, Air				
19			Stator, Alternator	34	205-0089	1	
	220-1604	1	65KW Code 9	35	232-2078	1	
	220-1456	1	65KW Code 15, 215				
	220-1459	1	65KW Code 15 Extended Stack				
	220-1605	1	75KW Code 9				
	220-1457	1	75KW Code 15, 215				
	220-1460	1	75KW Code 15 Extended Stack				
	220-1606	1	85 & 90KW Code 9				
	220-1458	1	85 & 90KW Code 15, 215				
	220-1461	1	90KW Code 15 Extended Stack				

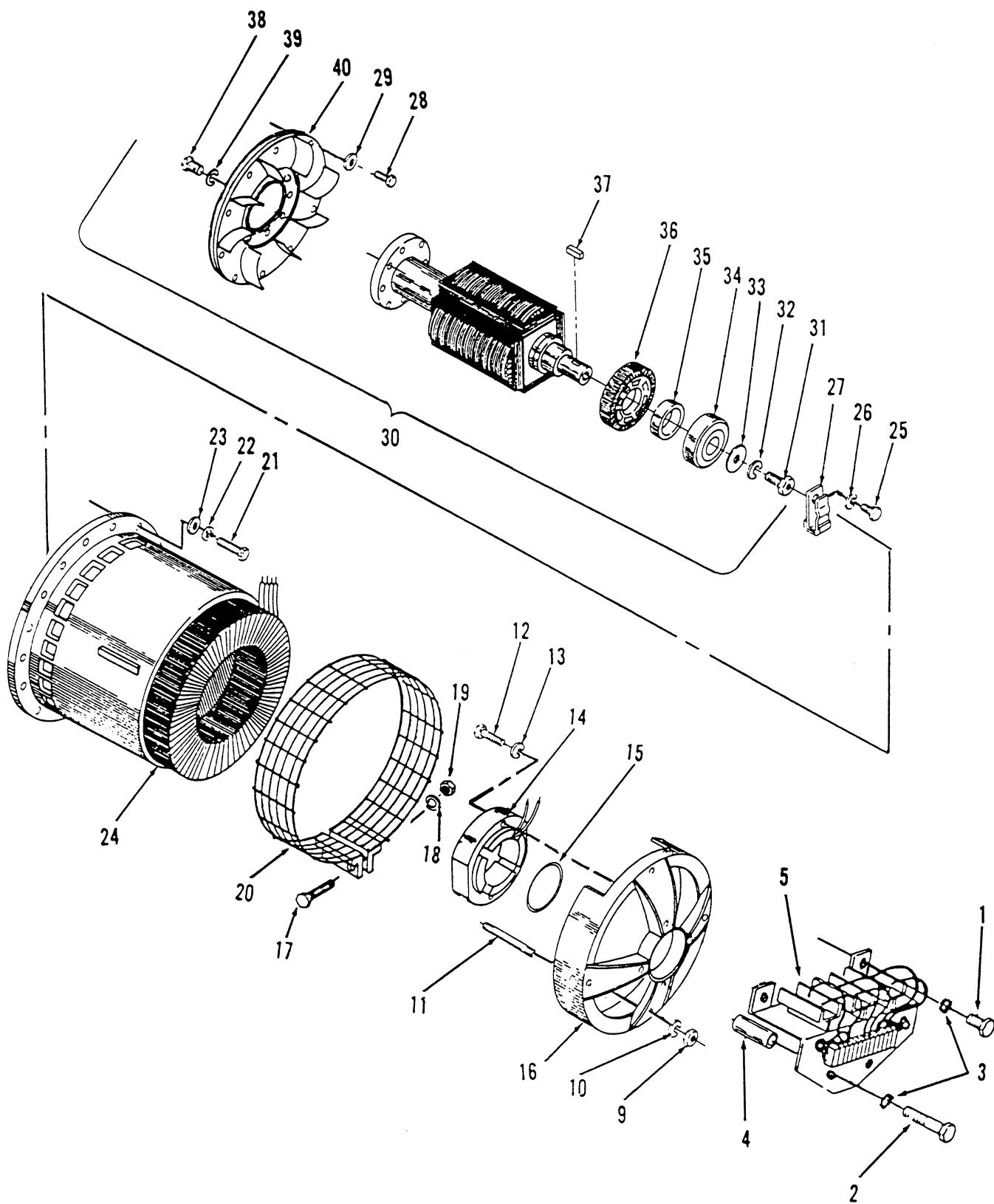
Alternator  
Spec B  
73-150KW SAE#1



**Alternator**  
**Spec B**  
**73-150KW SAE#1**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	220-1612	1	140KW Code 9	
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	220-1517	1	140KW Code 15, 215	
3	853-0013	4	Washer, Lock - ET (1/4")	220-1613	1	150KW Code 9	
4	305-0481	2	Spacer, Sleeve	220-1518	1	150KW Code 15, 215	
5	305-0491	1	Regulator, Voltage (See Separate Page for Components)	25	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)	26	856-0010	1	Washer, Lock - EIT (3/8")
10	850-0050	4	Washer, Lock - Spring (3/8")	27	150-0717	1	Switch, Overspeed
11	520-0735	4	Stud (3/8-16 x 5-3/4"LG)	28	805-0032	8	Bolt, Place - Hex Head, Grade 8 (1/2-13 x 1-1/4")
12	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	29	526-0028	8	Washer, Flat (9/16"ID x 15/16"OD x 1/16"THK)
13	850-0040	4	Washer, Lock - Spring (1/4")	30			Rotor, Alternator (Includes Fan, Drive Disk, Bearing, Exciter Rotor)
14	220-2353	1	Stator, Exciter Standard	201-2677	1	100KW Code 9, 15, 215	
	220-1774	1	Environmental Protected	201-2678	1	115KW Code 9, 15, 215	
15	509-0125	1	Seal, Oil - "O" Ring	201-2679	1	125KW Code 9, 15, 215	
16	211-0185	1	Bell, End	201-2680	1	140KW Code 9, 15, 215	
17	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	31	800-0513	1	150KW Code 9, 15, 215
18	850-0040	2	Washer, Lock - Spring (1/4")	32	850-0079	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
19	862-0001	2	Nut, Hex (1/4-20)	33	526-0238	1	Washer, Lock - Spring (3/4")
20	234-0368	1	Screen, Air	34	510-0101	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
21	800-0073	12	Screw, Cap - Hex Head (7/16-14 x 1-1/2")	35	232-2102	1	Bearing, Ball
22	850-0055	12	Washer, Lock - Spring (7/16")	36			Spacer, Sleeve
23	526-0032	12	Washer, Flat (29/64"ID x 7/8"OD x 1/16"THK)		201-1739	1	Rotor, Exciter (See Separate Page for Component)
24			Stator, Alternator 100KW Code 9		201-1845	1	Standard
	220-1610	1	100KW Code 15, 215		515-0145	1	Environmental Protected
	220-1515	1	115KW Code 15, 215				Key, Machine (1/4" x 1/4" x 7/8")
	220-1516	1	125KW Code 9	38	805-0035	8	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
	220-1612	1	125KW Code 15, 215	39	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
	220-1517	1		40	205-0095	1	Fan, Cooling
				41	232-2037	1	Disk, Drive

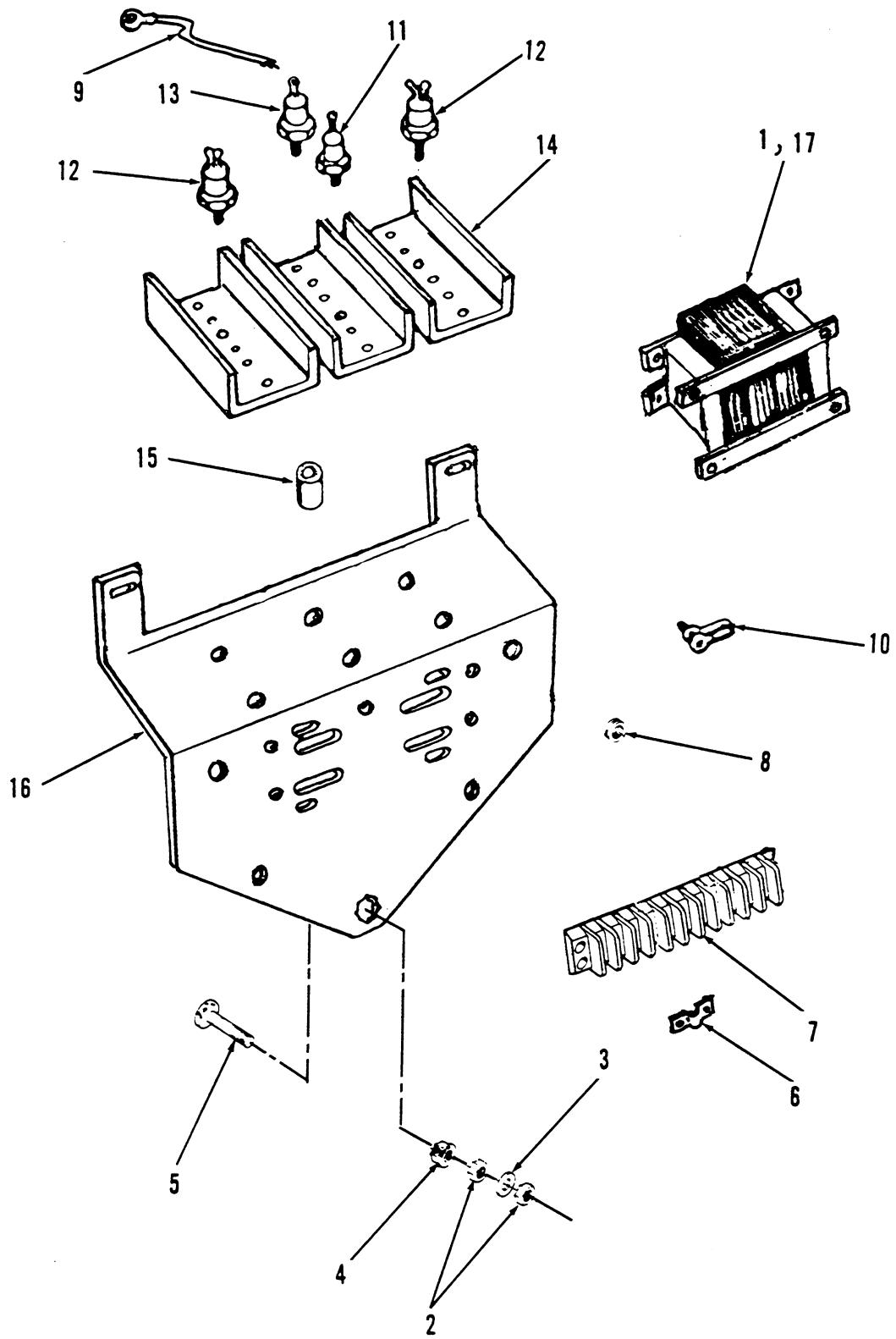
Alternator  
Spec B  
125-175KW SAE#1



**Alternator**  
**Spec B**  
**125-175KW SAE#1**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	25	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	26	856-0010	1	Washer, Lock - EIT (3/8")
3	853-0013	4	Washer, Lock - ET (1/4")	27	150-0717	1	Switch, Overspeed
4	305-0481	2	Spacer, Sleeve	28	805-0032	8	Bolt, Place - Hex Head, Grade 8 (1/2-13 x 1-1/4")
5	305-0491	1	Regulator, Voltage (See Separate Page for Components)	29	526-0028	8	Washer, Flat (9/16"ID x 15/16"OD x 1/16"THK)
				30			Rotor, Alternator (Includes Fan & Disk Assy, Bearing, Exciter Rotor)
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)				125KW Code 15 Extended Stack
10	850-0050	4	Washer, Lock - Spring (3/8")	201-2478		1	150KW Code 515
11	520-0735	4	Stud (3/8-16 x 5-3/4"LG)	201-2478		1	175KW Code 9, 15, 215
12	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	201-2478		1	
13	850-0040	4	Washer, Lock - Spring (1/4")	31	800-0513	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
14			Stator, Exciter	32	850-0079	1	Washer, Lock - Spring (3/4")
	220-2353	1	Standard	33	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
	220-1774	1	Enviromental Protected				
15	509-0125	1	Seal, Oil - "O" Ring	34	510-0101	1	Bearing, Ball
16	211-0185	1	Bell, End	35	232-2102	1	Spacer, Sleeve
17	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	36			Rotor, Exciter (See Separate Page for Component)
18	850-0040	2	Washer, Lock - Spring (1/4")				Standard
19	862-0001	2	Nut, Hex (1/4-20)	201-1739		1	Enviromental Protected
20	234-0368	1	Screen, Air	201-1845		1	Key, Machine (1/4" x 1/4" x 7/8")
21	800-0073	12	Screw, Cap - Hex Head (7/16-14 x 1-1/2")	37	515-0145	1	
22	850-0055	12	Washer, Lock - Spring (7/16")	38	805-0035	8	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
23	526-0032	12	Washer, Flat (29/64"ID x 7/8"OD x 1/16"THK)	39	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
24			Stator, Alternator				Fan & Disk Assy
	220-1519	1	125KW Code 15 Extended Stack	40	232-2898	1	
	220-1991	1	150KW Code 515				
	220-1614	1	175KW Code 9				
	220-1519	1	175KW Code 15, 215				

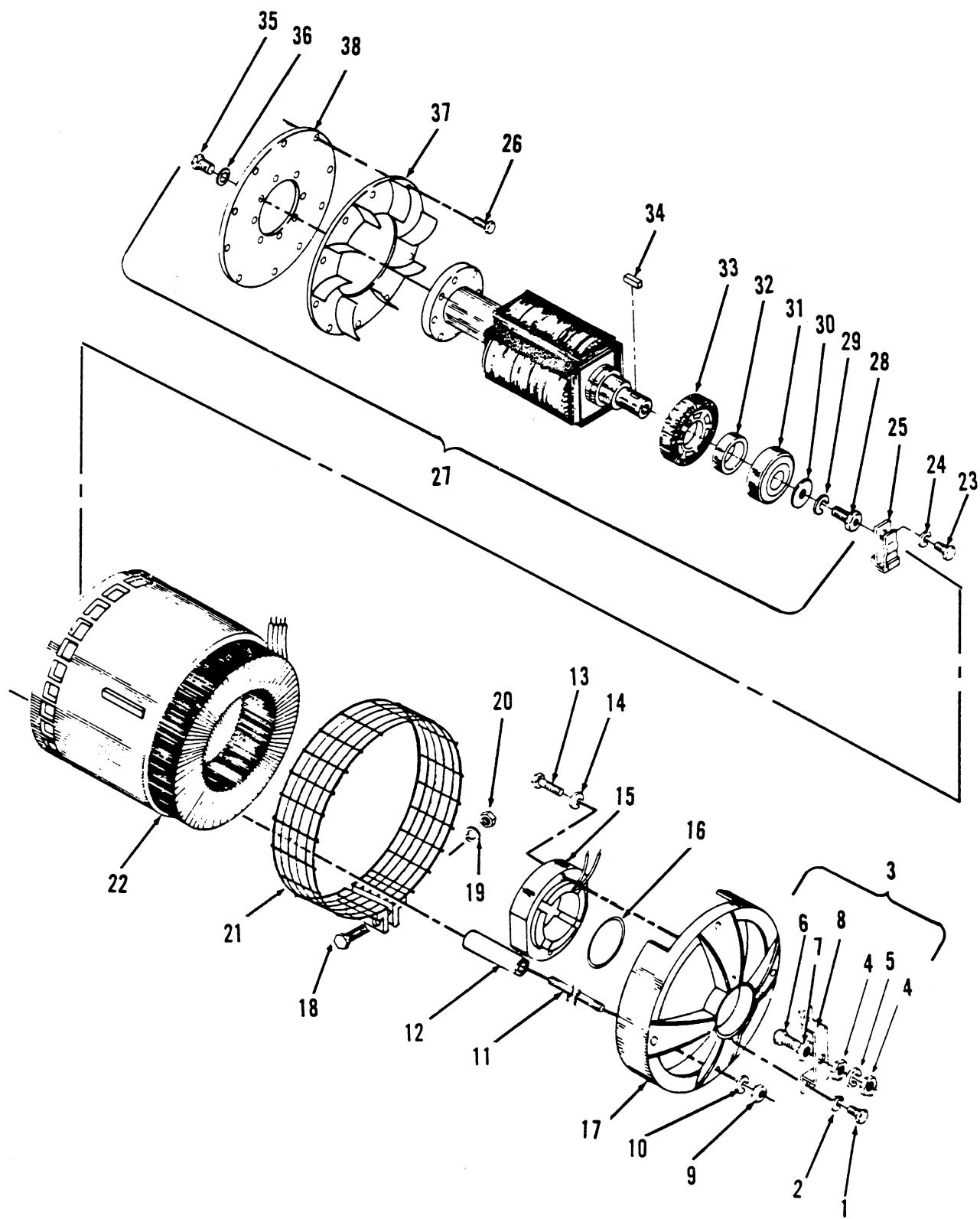
Regulator - Voltage  
Spec A thru B



**Regulator - Voltage**  
**Spec A thru B**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Regulator, Voltage -	10	332-1415	1	Clamp, Cable
			Brush Alternator	11	358-0029	1	Rectifier (CR3)
305-0489	1	25KW Thru 40KW Code 3, 53		871-0010	1	Nut, Hex - Brass (#10-32)	
305-0489	1	25KW Thru 60KW Code 15, 515		850-0030	1	Washer, Lock - Spring (#10)	
305-0483	1	65KW Thru 90KW Code 15, 515		526-0009	1	Washer, Flat (7/32"ID x 1/2"OD x 1/16"THK)	
305-0491	1	Brushless Alternator, All Codes		12			Rectifier (Q4, Q5)
1			Reactor (L1)	364-0012	2	Part of 305-0489	
315-0339	1	Part of 305-0483		364-0014	2	Part of 305-0491	
315-0341	1	Part of 305-0489		871-0018	2	Nut, Hex - Brass (1/4-20)	
813-0100	4	Screw, Machine - Round Head (#10-32 x 1/2")		850-0040	2	Washer, Lock - Spring (1/4")	
	853-0008	4	Washer, Lock - ET (#10)	526-0018	2	Washer, Flat (17/64"ID x 5/8"OD x 1/16"THK)	
2	862-0001	2	Nut, Hex (1/4-20)	13			Rectifier (CR1, CR2)
3	853-0013	1	Washer, Lock - ET (1/4")	358-0031	2	Part of 305-0489	
4	870-0250	1	Nut, Insulating (1/4")	358-0035	2	Part of 305-0491	
5	150-0723	1	Contact, Electrical	871-0018	2	Nut, Hex - Brass (1/4-20)	
6	332-1043	2	Juniper, Terminal	850-0040	2	Washer, Lock - Spring (1/4")	
7	332-1266	1	Block, Terminal	526-0018	2	Washer, Flat (17/64"ID x 5/8"OD x 1/16"THK)	
	812-0081	2	Screw, Machine - Round Head (#8-32 x 5/8")	14	363-0048	3	Sink, Heat
	853-0005	2	Washer, Lock - ET (#8)	812-0077	12	Screw, Machine - Round Head (#8-32 x 3/8")	
	860-0008	2	Nut, Hex (#8-32)	853-0005	12	Washer, Lock - ET (#8)	
8	508-0002	2	Grommet	15	332-1265	6	Insulator, Standoff
9	NFS		Leads, Electrical	16	305-0482	1	Chassis
	812-0079	3	Screw, Machine - Round Head (#8-32 x 1/2")	17	315-0343	1	Reactor (L1) (Part of 305-0491)
	853-0005	3	Washer, Lock - ET (#8)	812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")	
	526-0048	2	Washer, Flat - Brass (11/64" ID x 3/8"OD x 1/32"THK)	853-0005	2	Washer, Lock - ET (#8)	
	871-0007	3	Nut, Hex - Brass (#8-32)	860-0008	2	Nut, Hex (#8-32)	

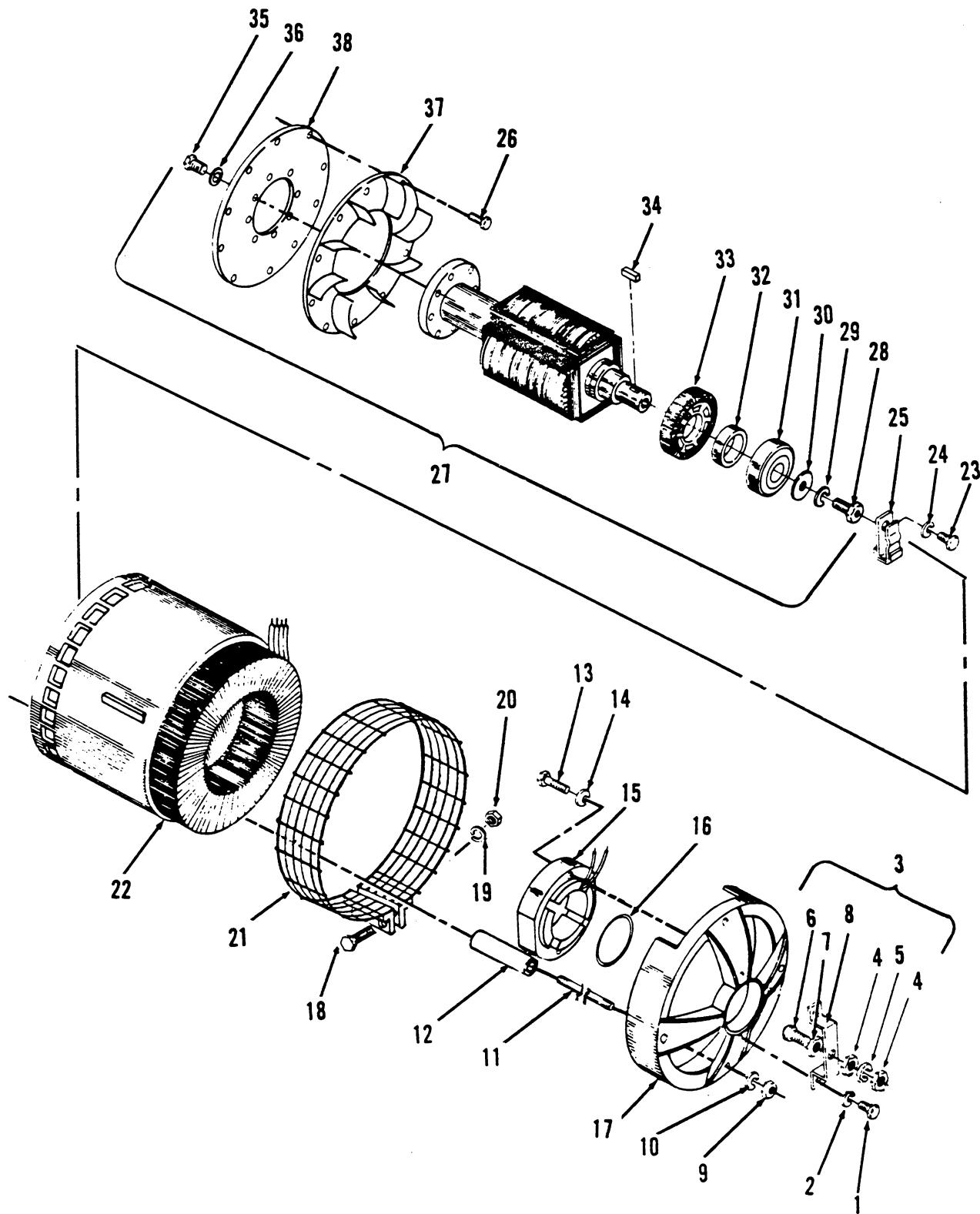
Alternator  
Begin Spec C  
25-60KW SAE#2



**Alternator**  
**Begin Spec C**  
**25-60KW SAE#2**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	220-1603		1	55KW Code 9
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	220-1455		1	55KW Code 15, 215
3	150-1456	1	Contact Assembly - Overspeed Switch (Includes Contact and Mounting Bracket)	220-1458		1	55KW Code 15 Extended Stack
				220-1999		1	55KW Code 515
4	862-0001	2	Nut, Hex (1/4-20)	23	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
5	853-0013	1	Washer, Lock - ET (1/4")	24	856-0010	1	Washer, Lock - EIT (3/8")
6	150-0723	1	Contact, Electrical	25	150-0717	1	Switch, Overspeed
7	870-0250	1	Nut, Insulated	26			Rotor, Alternator (Includes Fan, Drive Disk, Bearing, Exciter Rotor)
8	150-1356	1	Bracket, Mounting - Contact	201-2666		1	25KW Code 515
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)	201-2669		1	25KW Code 53 Extended Stack
10	850-0050	4	Washer, Lock - Spring (3/8")	201-2669		1	25KW Code 515 Extended Stack
11			Stud (3/8-16 UNC x)	201-2669		1	30KW Code 3
	520-0718	4	14-11/16"LG	201-2666		1	30KW Code 9, 15, 215
	520-0721	4	16-11/32"LG	201-2669		1	30KW Code 15 Extended Stack
	520-0722	4	17-3/32"LG	201-2669		1	30KW Code 215 Extended Stack
	520-0723	4	17-15/16"LG	201-2669		1	40KW Code 515
	520-0724	4	18-29/32"LG	201-2671		1	45KW Code 3
	520-0726	4	20-1/16"LG	201-2669		1	45KW Code 9, 15, 215
12	503-0611	4	Hose, Rubber	201-2670		1	47KW Code 515
13	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	201-2669		1	50KW Code 9, 15, 215
14	850-0040	4	Washer, Lock - Spring (1/4")	201-2672		1	50KW Code 15 Extended Stack
15			Stator, Exciter	201-2671		1	55KW Code 515
	220-2353	1	Standard	201-2673		1	55KW Code 15 Extended Stack
	220-1774	1	Enviromental Protected	27	800-0513	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
16	509-0125	1	Seal, Oil - "O" Ring	28	850-0079	1	Washer, Lock - Spring (3/4")
17	211-0185	1	Bell, End	29	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
18	114-0023	2	Screw, Cap - Hex Head, Heat Treated (1/4-20 x 1-1/4")	30	510-0101	1	Bearing, Ball
19	850-0040	2	Washer, Lock - Spring (1/4")	31	232-2102	1	Spacer, Sleeve
20	862-0001	2	Nut, Hex (1/4-20)	32			Rotor, Exciter (See Separate Page for Component)
21	234-0368	1	Screen, Air				Standard
22			Stator, Alternator				Enviromental Protected
	220-1994	1	25KW Code 515	201-1739		1	Key, Machine (1/4" x 1/4" x 7/8")
	220-1997	1	25KW Code 53 Extended Stack	201-1845		1	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
	220-1997	1	25KW Code 515 Extended Stack	33	515-0145	1	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
	220-1552	1	30KW Code 3	34	805-0035	8	Bolt, Place - Hex Head, Grade 8 (3/8-16 x 1-1/4")
	220-1599	1	30KW Code 9	35	526-0259	8	Fan, Cooling
	220-1451	1	30KW Code 15, 215	36	805-0019	8	Disk, Drive
	220-1454	1	30KW Code 15 Extended Stack	37	205-0089	1	
	220-1454	1	30KW Code 215 Extended Stack	38	232-2078	1	
	220-1997	1	40KW Code 515				
	220-1554	1	45KW Code 3				
	220-1602	1	45 & 50KW Code 9				
	220-1454	1	45 & 50KW Code 15, 215				
	220-1998	1	47KW Code 515				
	220-1457	1	50KW Code 15 Extended Stack				

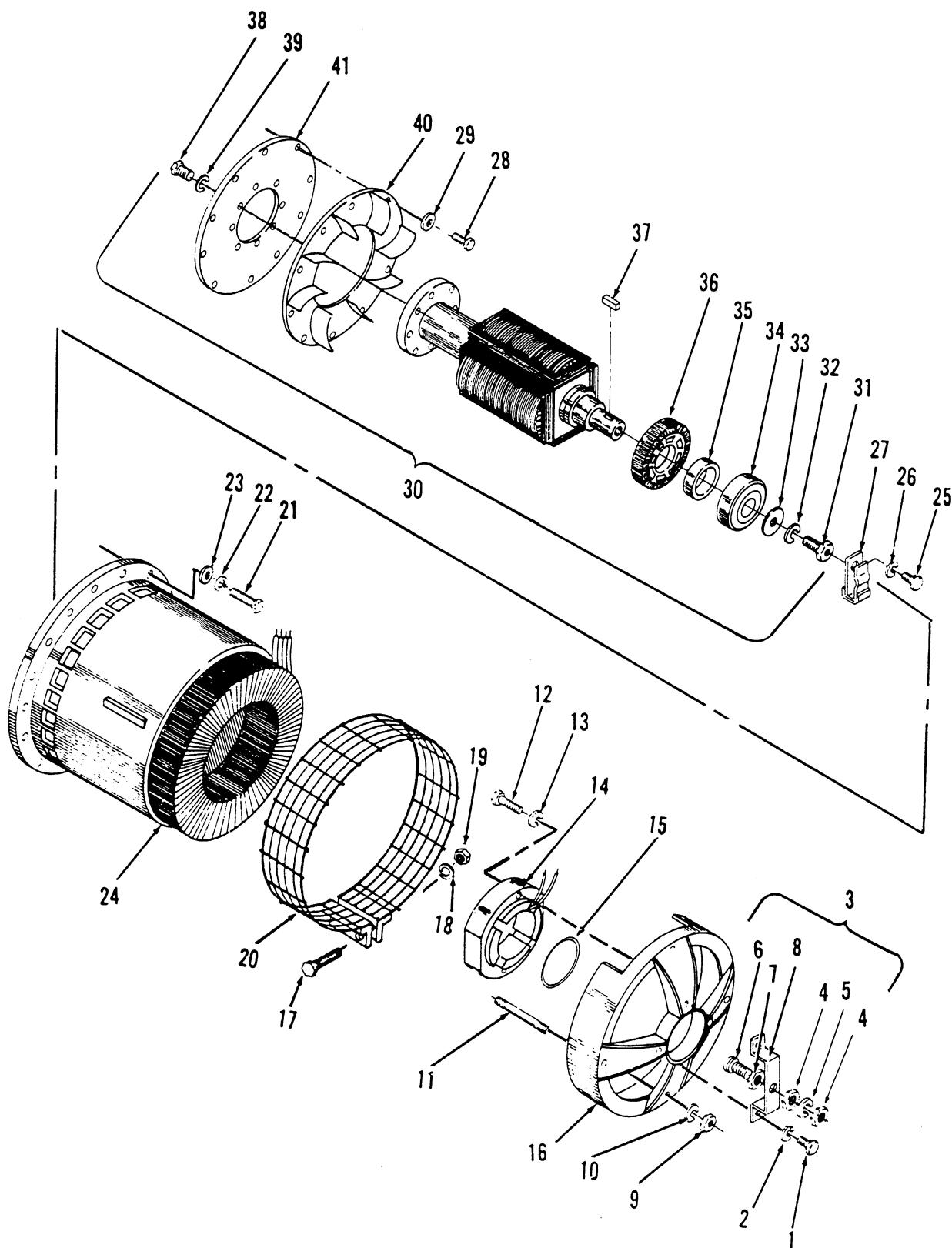
Alternator  
Begin Spec C  
65-100KW SAE#2



**Alternator**  
**Begin Spec C**  
**65-100KW SAE#2**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION	
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	220-1606	1	90KW Code 9		
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	220-1458	1	90KW Code 15, 215		
3	150-1456	1	Contact Assembly - Overspeed Switch (Includes Contact and Mounting Bracket)	220-1461	1	90KW Code 15 Extended Stack		
4	862-0001	2	Nut, Hex (1/4-20)	220-1607	1	100KW Code 9		
5	853-0013	1	Washer, Lock - ET (1/4")	220-1459	1	100KW Code 15, 215		
6	150-0723	1	Contact, Electrical	220-1462	1	100KW Code 15 Extended Stack		
7	870-0250	1	Nut, Insulated	23	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")	
8	150-1356	1	Bracket, Mounting - Contact	24	856-0010	1	Washer, Lock - EIT (3/8")	
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)	25	150-0717	1	Switch, Overspeed	
10	850-0050	4	Washer, Lock - Spring (3/8")	26			Rotor, Alternator	
11			Stud (3/8-16 UNC x)	201-2672	1	(Includes Fan, Drive Disk, Bearing, Exciter Rotor)		
	520-0723	4	17-15/16"LG	201-2671	1	65KW Code 515		
	520-0724	4	18-29/32"LG	201-2674	1	65KW Code 9, 15, 215		
	520-0726	4	20-1/16"LG	201-2672	1	65KW Code 15 Extended Stack		
	520-0727	4	21-7/16"LG	201-2675	1	75KW Code 9, 15, 215		
	520-0728	4	22-15/16"LG	201-2676	1	75KW Code 15 Extended Stack		
	520-0729	4	24-11/16"LG	201-2673	1	90KW Code 9, 15, 215		
	520-0863	4	26-7/8"LG	201-2676	1	90KW Code 15 Extended Stack		
12	503-0611	4	Hose, Rubber	201-2674	1	100KW Code 9, 15, 215		
13	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	201-2682	1	100KW Code 15 Extended Stack		
14	850-0040	4	Washer, Lock - Spring (1/4")	27	800-0513	1	Screw, Cap - Hex Head, Modified W/Tapped Hole	
15			Stator, Exciter	28	850-0079	1	Washer, Lock - Spring (3/4")	
	220-2353	1	Standard	29	526-0238	1	Washer, Flat - Steel Alloy	
	220-1774	1	Enviromental Protected	30	510-0101	1	(13/16"ID x 2"OD x 3/16"THK)	
16	509-0125	1	Seal, Oil - "O" Ring	31	232-2102	1	Bearing, Ball	
17	211-0185	1	Bell, End	32			Spacer, Sleeve	
18	114-0023	2	Screw, Cap - Hex Head, Heat Treated (1/4-20 x 1-1/4")	201-1739	1	Rotor, Exciter (See Separate Page for Component)		
19	850-0040	2	Washer, Lock - Spring (1/4")	201-1845	1	Standard		
20	862-0001	2	Nut, Hex (1/4-20)	33	515-0145	1	Enviromental Protected	
21	234-0368	1	Screen, Air	34	805-0035	8	Key, Machine (1/4" x 1/4" x 7/8")	
22			Stator, Alternator	35	526-0259	8	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")	
	220-2000	1	65KW Code 515	36	805-0019	8	Washer, Flat - Hardened Steel	
	220-1604	1	65KW Code 9	37	205-0089	1	(11/16"ID x 1-3/8"OD x 7/64"THK)	
	220-1456	1	65KW Code 15, 215	38	232-2078	1	Bolt, Place - Hex Head, Grade 8 (3/8-16 x 1-1/4")	
	220-1459	1	65KW Code 15 Extended Stack				Fan, Cooling	
	220-1605	1	75KW Code 9				Disk, Drive	
	220-1457	1	75KW Code 15, 215					
	220-1460	1	75KW Code 15 Extended Stack					
	220-2004	1	75KW Code 515 Extended Stack					

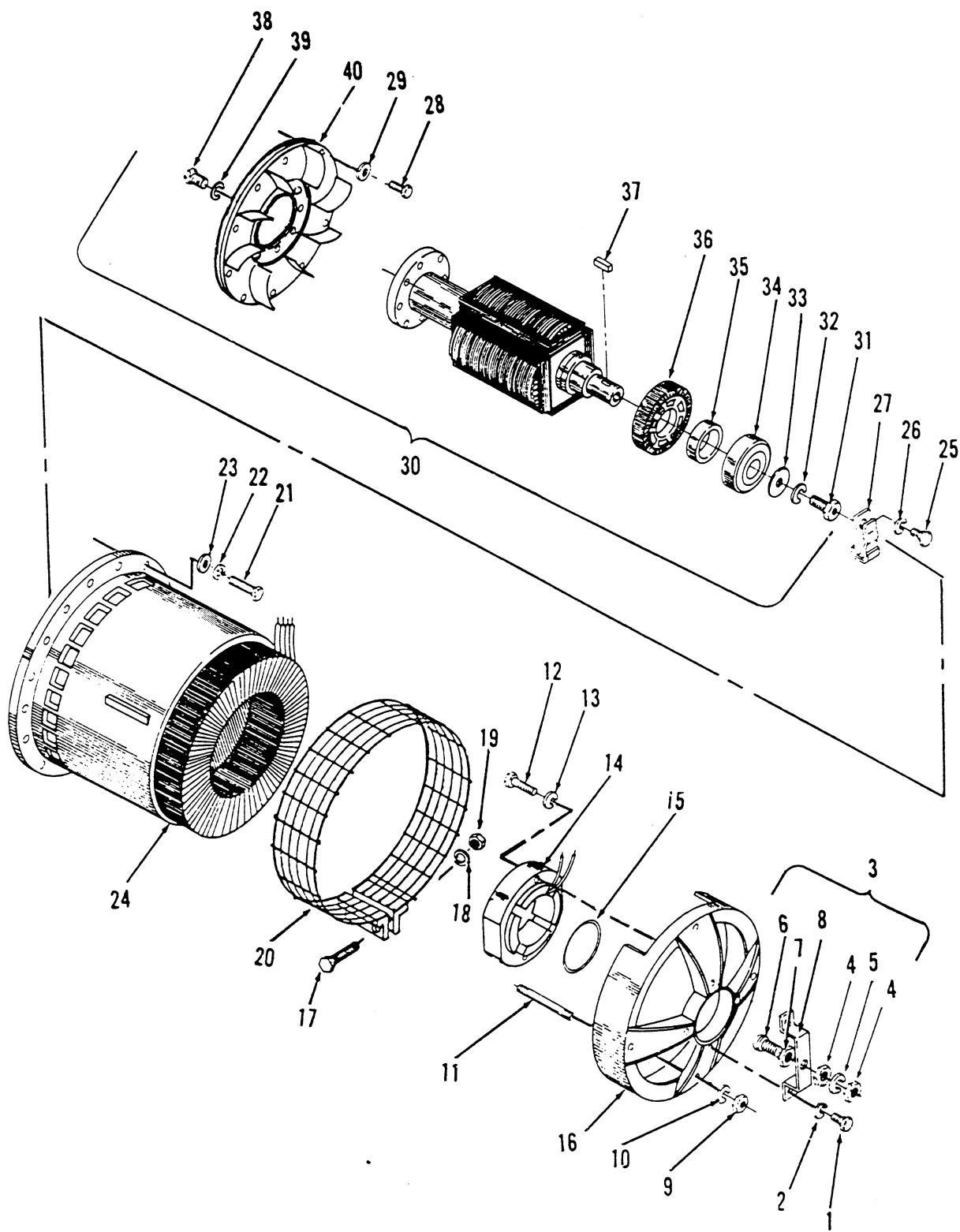
Alternator  
Begin Spec C  
73-150KW SAE#1



**Alternator**  
**Begin Spec C**  
**73-150KW SAE#1**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")		220-1612	1	140KW Code 9
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")		220-1517	1	140KW Code 15, 215
3	150-1456	1	Contact Assembly - Overspeed Switch (Includes Contact and Mounting Bracket)	25	800-0048	1	150KW Code 9
4	862-0001	2	Nut, Hex (1/4-20)	26	856-0010	1	150KW Code 15, 215
5	853-0013	1	Washer, Lock - ET (1/4")	27	150-0717	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
6	150-0723	1	Contact, Electrical	28	805-0032	8	Washer, Lock - EIT (3/8")
7	870-0250	1	Nut, Insulated	29	526-0028	8	Switch, Overspeed
8	150-1356	1	Bracket, Mounting - Contact	30			Bolt, Place - Hex Head, Grade 8 (1/2-13 x 1-1/4")
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)				Washer, Flat (9/16"ID x 15/16"OD x 1/16"THK)
10	850-0050	4	Washer, Lock - Spring (3/8")				Rotor, Alternator (Includes Fan, Drive Disk, Bearing, Exciter Rotor)
11	520-0735	4	Stud (3/8-16 x 5-3/4"LG)				73KW Code 515
12	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	201-2683		1	85KW Code 515
13	850-0040	4	Washer, Lock - Spring (1/4")	201-2677		1	100KW Code 9, 15, 215
14	220-2353	1	Stator, Exciter Standard	201-2677		1	115KW Code 9, 15, 215
	220-1774	1	Environmental Protected	201-2678		1	125KW Code 9, 15, 215
15	509-0125	1	Seal, Oil - "O" Ring	201-2679		1	130KW Code 515
16	211-0185	1	Bell, End	201-2680		1	140KW Code 9, 15, 215
17	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	31	800-0513	1	150KW Code 9, 15, 215
18	850-0040	2	Washer, Lock - Spring (1/4")	32	850-0079	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
19	862-0001	2	Nut, Hex (1/4-20)	33	526-0238	1	Washer, Lock - Spring (3/4")
20	234-0368	1	Screen, Air				Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
21	800-0073	12	Screw, Cap - Hex Head (7/16-14 x 1-1/2")	34	510-0101	1	Bearing, Ball
22	850-0055	12	Washer, Lock - Spring (7/16")	35	232-2102	1	Spacer, Sleeve
23	526-0032	12	Washer, Flat (29/64"ID x 7/8"OD x 1/16"THK)	36			Rotor, Exciter (See Separate Page for Component)
24			Stator, Alternator	(24)	201-1739	1	Standard
	220-1986	1	73KW Code 515		201-1845	1	Environmental Protected
	220-1987	1	85KW Code 515	37	515-0145	1	Key, Machine (1/4" x 1/4" x 7/8")
	220-1610	1	100KW Code 9	38	805-0035	8	Bolt, Place - Hex Head,
	220-1515	1	100KW Code 15, 215				Grade 8 (5/8-11 x 1-1/2")
	220-1989	1	110KW Code 515	39	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
	220-1516	1	115KW Code 15, 215				Fan, Cooling
	220-1612	1	125KW Code 9	40	205-0095	1	Disk, Drive
	220-1517	1	125KW Code 15, 215				
	220-1990	1	130KW Code 515	41	232-2037	1	

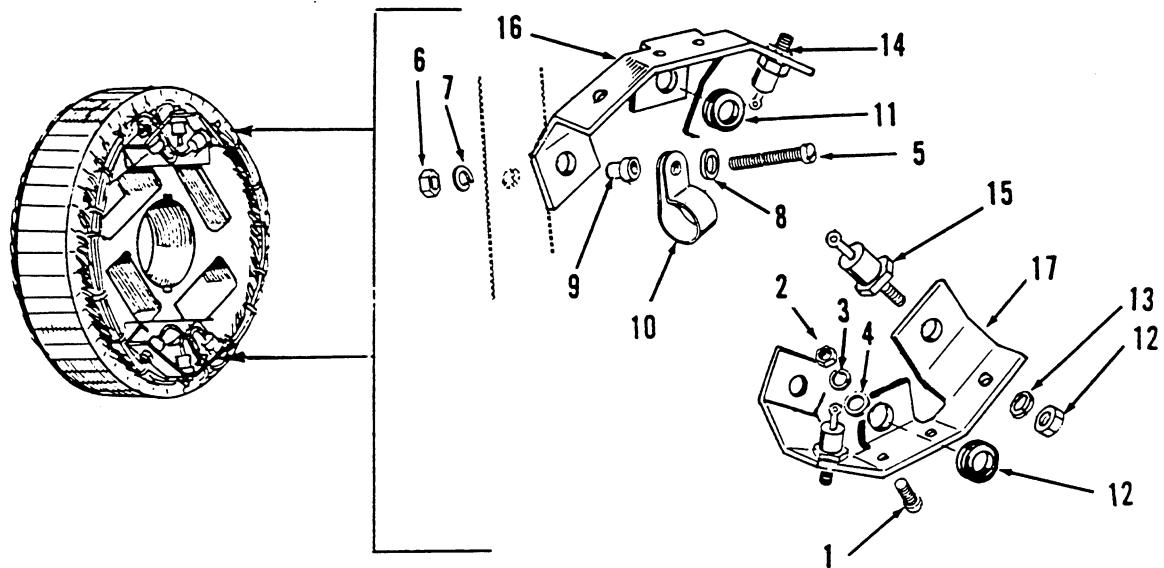
Alternator  
Begin Spec C  
125-175KW SAE#1



**Alternator**  
**Begin Spec C**  
**125-175KW SAE#1**

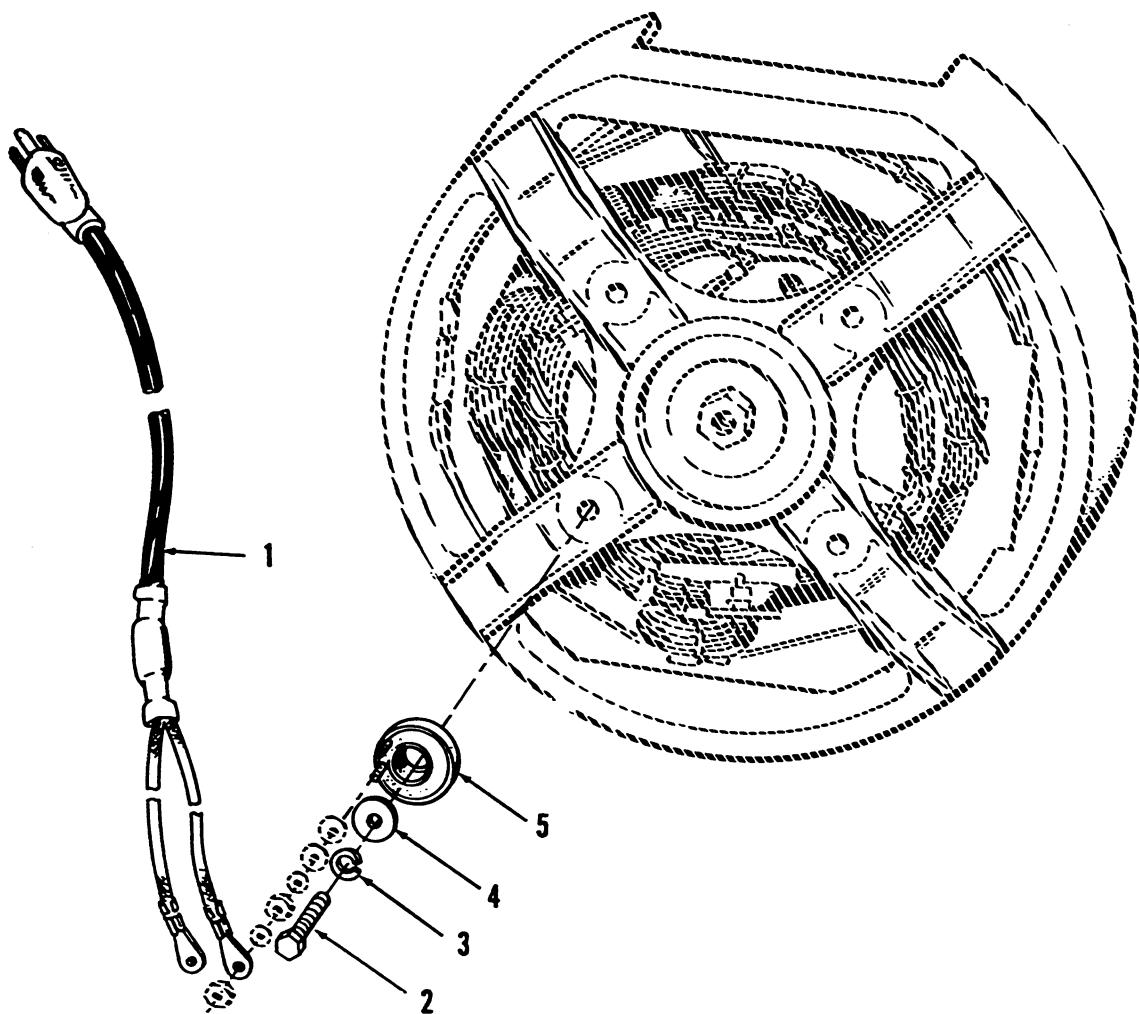
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	25	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
2	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	26	856-0010	1	Washer, Lock - EIT (3/8")
3	150-1456	1	Contact Assembly - Overspeed Switch (Includes Contact and Mounting Bracket)	27	150-0717	1	Switch, Overspeed
4	862-0001	2	Nut, Hex (1/4-20)	28	805-0032	8	Bolt, Place - Hex Head, Grade 8 (1/2-13 x 1-1/4")
5	853-0013	1	Washer, Lock - ET (1/4")	29	526-0028	8	Washer, Flat (9/16"ID x 15/16"OD x 1/16"THK)
6	150-0723	1	Contact, Electrical	30			Rotor, Alternator (Includes Fan & Disk Assy, Bearing, Exciter Rotor)
7	870-0250	1	Nut, Insulated	(i)	201-2478	1	125KW Code 15 Extended Stack
8	150-1356	1	Bracket, Mounting - Contact		201-2478	1	150KW Code 515
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)		201-2478	1	175KW Code 9, 15, 215
10	850-0050	4	Washer, Lock - Spring (3/8")	31	800-0513	1	Screw, Cap - Hex Head, Modified W/Tapped Hole
11	520-0735	4	Stud (3/8-16 x 5-3/4"LG)	32	850-0079	1	Washer, Lock - Spring (3/4")
12	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	33	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
13	850-0040	4	Washer, Lock - Spring (1/4")	34	510-0101	1	Bearing, Ball
14	220-2353	1	Stator, Exciter	35	232-2102	1	Spacer, Sleeve
(98)	220-1774	1	Standard Environmental Protected	36			Rotor, Exciter (See Separate Page for Component)
15	509-0125	1	Seal, Oil - "O" Ring	(24)	201-1739	1	Standard
16	211-0185	1	Bell, End	(2)	201-1845	1	Environmental Protected
17	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	37	515-0145	1	Key, Machine (1/4" x 1/4" x 7/8")
18	850-0040	2	Washer, Lock - Spring (1/4")	38	805-0035	8	Bolt, Place - Hex Head, Grade 8 (5/8-11 x 1-1/2")
19	862-0001	2	Nut, Hex (1/4-20)	39	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
20	234-0368	1	Screen, Air	40	232-2898	1	Fan & Disk Assy
21	800-0073	12	Screw, Cap - Hex Head (7/16-14 x 1-1/2")				
22	850-0055	12	Washer, Lock - Spring (7/16")				
23	526-0032	12	Washer, Flat (29/64"ID x 7/8"OD x 1/16"THK)				
24	220-1519	1	Stator, Alternator				
(2)	220-1519	1	125KW Code 15 Extended Stack				
220-1991	1	150KW Code 515					
220-1614	1	175KW Code 9					
220-1519	1	175KW Code 15, 215					

Rotor - Exciter  
Begin Spec B



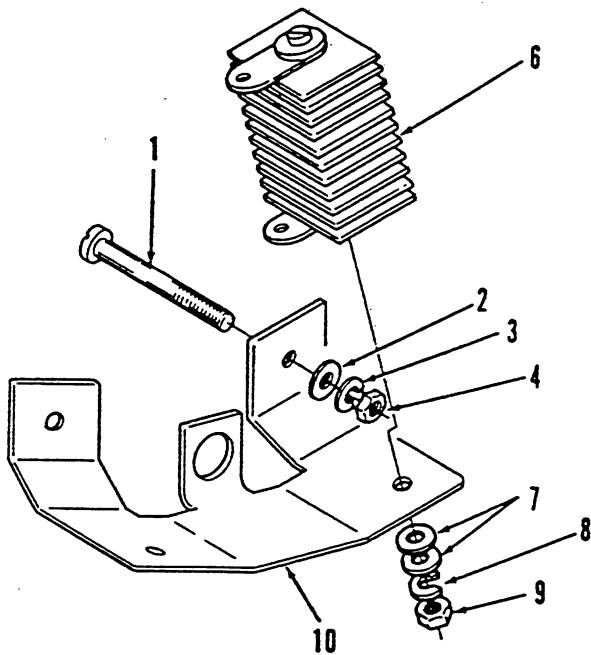
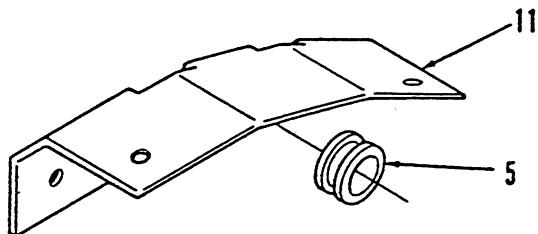
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")	10	332-0050	2	Clamp, Loop
2	870-0053	2	Nut, Hex (#10-32)	11	508-0093	2	Grommet
3	850-0030	2	Washer, Lock - Spring (#10)	12	870-0053	6	Nut, Hex (#10-32)
4	526-0008	2	Washer, Flat (13/64"ID x 7/16"OD x 1/32"THK)	13	850-0030	6	Washer, Lock - Spring (#10)
5	813-0110	4	Screw, Machine - Round Head (#10-32 x 2")	14	358-0097	3	Diode - Positive (CR1,CR2,CR3) Standard
6	870-0053	4	Nut, Hex (#10-32)	15	358-0044	3	Environmental Protected Diode - Negative (CR4,CR5,CR6)
7	850-0030	4	Washer, Lock - Spring (#10)	16	358-0096	3	Standard
8	526-0009	4	Washer, Flat (7/32"ID x 1/2"OD x 1/16"THK)	17	358-0043	3	Environmental Protected
9	508-0187	4	Spacer, Stepped	16	363-0054	1	Sink, Heat - Positive Diodes
				17	363-0055	1	Sink, Heat - Negative Diodes

## Heater - Alternator



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Cable, Electrical (Includes Thermostat)
	335-0146	1	120 VAC
	335-0147	1	240 VAC
2	800-0004	1	Screw, Cap - Hex Head (1/4-20 x 5/8")
3	850-0038	1	Washer, Lock - Spring (1/4")
4	526-0158	1	Washer, Flat (17/64"ID x 1"OD x 1/8"THK)
5			Heater, Electrical
	333-0059	1	125 W, 120 VAC
	333-0192	1	200 W, 240 VAC

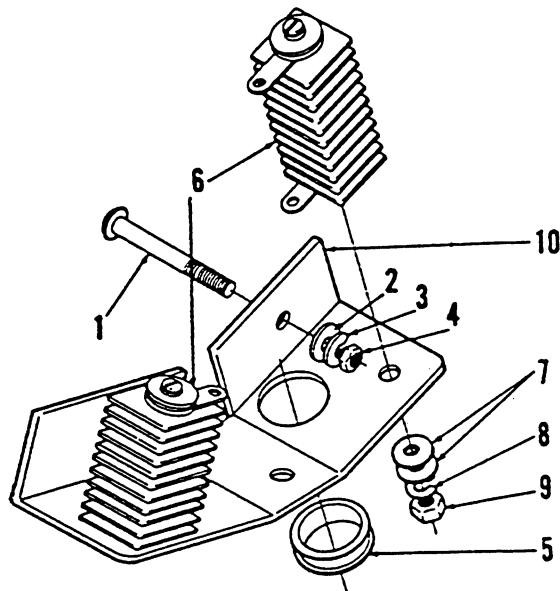
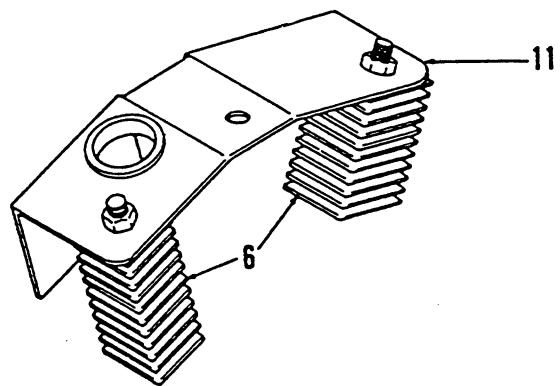
## Voltage Suppressor Components



XES1229

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
232-2444	1	1	Suppressor, Voltage	6	305-0526	1	Set, Voltage Suppressor
1 813-0112	4	4	Screw, Machine - Round Head (#10-32 x 2-1/2")	7	526-0140	4	Washer, Flat (#10)
2 526-0140	4	4	Washer, Flat (#10)	8	850-0030	4	Washer, Lock - Spring (#10)
3 850-0030	4	4	Washer, Lock - Spring (#10)	9	870-0053	4	Nut, Hex (#10-32)
4 870-0053	4	4	Nut, Hex (#10-32)	10	363-0054	1	Sink, Heat
5 508-0093	2	2	Grommet	11	363-0055	1	Sink, Heat

**Dual Voltage Suppressor Components**



XES1230

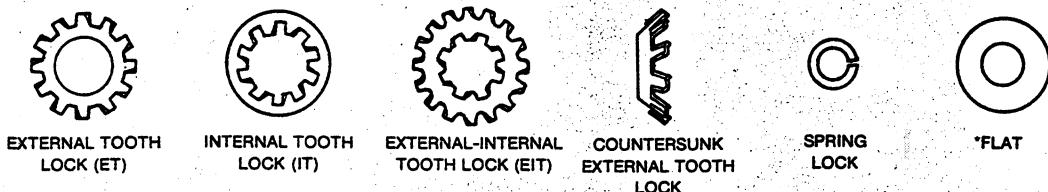
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	232-2639 813-0112	1 8	Suppressor, Voltage - Dual Screw, Machine - Round Head (#10-32 x 2-1/2")	6	305-0526 526-0140 850-0030	2 8 8	Set, Voltage Suppressor Washer, Flat (#10) Washer, Lock - Spring (#10)
2	526-0140	8	Washer, Flat (#10)	7	870-0053	8	Nut, Hex (#10-32)
3	850-0030	8	Washer, Lock - Spring (#10)	10	363-0025	1	Sink, Heat
4	870-0053	8	Nut, Hex (#10-32)	11	363-0033	1	Sink, Heat
5	508-0093	2	Grommet				



# HARDWARE IDENTIFICATION

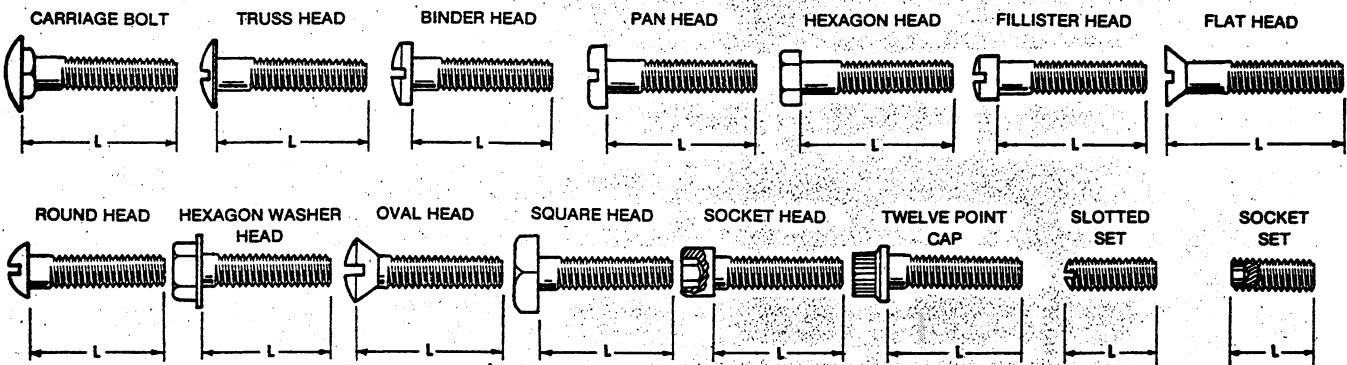
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

## WASHER TYPES



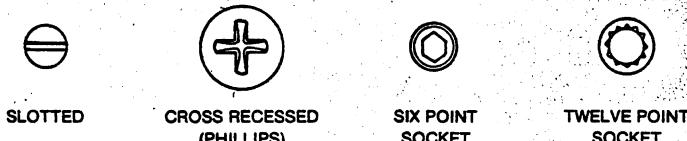
- Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

## BOLT AND SCREW TYPES



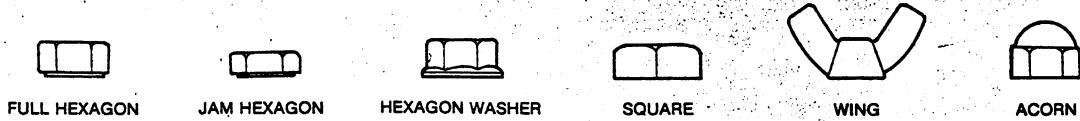
L - Measure length between these points.

## INTERNAL DRIVE TYPES



Nominal size (fractional diameter or screw number)  
Number of threads per inch  
Length in inches  
1/4-20 x 3/4"

## NUT TYPES





**ONAN**

1400 73rd Avenue N.E.  
Minneapolis, MN 55432 (612) 574-5000

Telex 29 0476 (U.S.)  
Telex 29 0856 (outside U.S.)  
TWX 910 576-2833  
Cable ONAN