

1. SCOPE

1.1 Purpose. - The purpose of this specification is to authorize the use of reconditioned parts and to provide instructions for reconditioning and modifying Type M-3 generators for use on Model C-450 and C-45H aircraft.

1.2 Application. - All reconditioning operations and repairs covered by this specification may be accomplished where required without further authorization. Repairs not authorized by this specification cannot be performed without further authorization.

1.3 List of Pages and Revisions. - This specification consists of the pages listed below. An asterisk (*) denotes pages revised by the current revision.

<u>Page</u>	<u>Date</u>	<u>Description of Revision</u>	<u>Serial Effectivity</u>
1	5-28-53		
2	5-28-53		
3	5-28-53		
4	5-28-53		
5	5-28-53		
6	5-28-53		
7	5-28-53		
8	5-28-53		
9	5-28-53		
10	5-28-53		

APPROVED:

J. Bush
 USAF Quality Control

WRITTEN BY <i>F. W. Cooper</i>	DATE ISSUED 5-28-53	OVERHAUL SPECIFICATION GENERATOR TYPE M-3 - MODEL C-450 AND C-45H		
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED	Deeb Overholt CORPORATION Wichita, Kansas	OVERHAUL SPECIFICATION NO. 9114	PAGE 1
APPROVAL <i>[Signature]</i>				

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2. APPLICABLE PUBLICATIONS

2.1 Beech.-

OS 7003 Air Frame and Control Antifriction Bearings

2.2 Technical Orders.- Compliance with this specification constitutes compliance with technical orders listed below.

03-5AB-14 Leese-Neville, dated October 9, 1951

03-5AA-9 Eclipse Pioneer, dated September 1, 1951

01-1-581 Inspection of Leese-Neville Generator, dated November 10, 1952

3. REQUIREMENTS

3.1 Parts Involved.- See Figures 1 and 2 for exploded views and parts lists.

3.1.1 Parts Not Used.- The parts listed below will not be re-used in C-45B or C-45E aircraft and will be disposed of at the direction of the customer.

886279 Tabbed lock washer (Eclipse Pioneer)

8110082 Pencil drive shaft gasket (Eclipse Pioneer)

6812 Tabbed lock washers (Leese Neville)

24249 Felt pad (Leese Neville)

3.1.2 Parts to be Reconditioned.- The following parts are to be reconditioned in accordance with the instructions contained herein. "Reconditioned" means the disassembly, cleaning, inspection, and correction of discrepancies, repair and/or replacement of components, and modification to incorporate changes in accordance with applicable engineering drawings to assure an operationally safe and serviceable aircraft.

3.1.3 Parts to be New.-

886279 Lock tab (Eclipse Pioneer)

8110082 Pencil drive shaft gasket (Eclipse Pioneer)

6812 Tabbed lock washers (Leese Neville)

24249 Felt pad (Leese Neville)

WRITER BY <i>J.H. Cooper</i>	DATE REVISION 5-24-53	OVERHAUL SPECIFICATION GENERATOR TIPS H-3 - MODEL C-45B AND C-45E	
DESIGNED <i>[Signature]</i>		CHECKED Gessert Aircraft CORPORATION 1100 E. 1st Street	OVERHAUL SPECIFICATION NO 9114
APPROVED <i>[Signature]</i>	DATE REVISION		

3.2 Cause for Rejection.— Damage or wear which cannot be corrected by one or more of the authorized repairs listed in Paragraph 3.1 of this specification is cause for rejection.

- (a) Scrap armature laminations which are cracked or excessively corroded.
- (b) Scrap brushes which are worn or of the dimensions specified in the tolerance chart Paragraph 3.1 of this specification, or which have been damaged.
- (c) Scrap brush holders which are scored or excessively corroded.
- (d) Scrap bearings which do not meet the requirements specified in OS 7003.
- (e) Scrap field coils which have cracked, burned or excessively worn insulation.

3.3 Reconditioning Operations.

- (a) Disassemble the generator.
- (b) Clean in accordance with OS 7003.
- (c) Recondition bearings in accordance with OS 7003.
- (d) Inspect for nonrepairable components.
- (e) Check armature for proper ground circuits.
- (f) Check the field coil assembly for worn, cracked or burned insulation and for proper ground circuits. The field coil resistance should be between 0.7 and 1.0 ohms.
- (g) Remove the paint from the end housing and mounting flange of all Leese Variable Generators and inspect the end housing and mounting flange for damage, especially in the vicinity of ventilating holes. Scrap cracked housings. Do not repair serviceable housings used in Air Force generators and make an entry in Air Force Form 60A indicating that TO 01-1-521 has been complied with. Repair serviceable housings used on Navy generators, and do not make an entry in Air Force Form 60A showing compliance with TO 01-1-521.

3.4 Authorized Repairs.

- (a) Resurface rough surfaces or repairs. Do not wear the commutator below the minimum thickness specified in the tolerance chart.

WRITTEN BY <i>F. H. Cooper</i>	DATE REVISION <i>2-2-52</i>	OVERHAUL SPECIFICATION GENERATOR TYPE M-3 - MODEL C-452 AND C-45E	
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISION	Checked General CORPORATION	OVERHAUL SPECIFICATION OS 911A
APPROVAL <i>[Signature]</i>		General CORPORATION	PAGE 3

3.4 Authorized Repairs.- (Continued)

- (b) Replace unserviceable brush holders.
- (c) Replace brushes worn in excess of the limitations specified in the tolerance chart below.
- (d) Replace unserviceable field coils.
- (e) Replace cracked housings.
- (f) Replace unserviceable bearings.

COMMUTATOR TOLERANCE CHART

Leece-Neville minimum diameter	1.875
Eclipse-Pibneer minimum diameter	1.875
Maximum clearance between commutator shaft and bearing	.0005
Maximum clearance between bearing and housing	.0005
Minimum serviceable length of brushes	.5

4. INSPECTION

4.1 General.- The parts will be inspected to the general acceptable quality standards of OS 7008 and the specific quality standards listed below.

- (a) When new generators are installed on Air Force airplanes, the reconditioning operation specified in Paragraph 3.3.(g) of this specification need not be complied with. Make an entry in Air Force Form 60A stating that TO 01-1-581 has not been complied with because a new generator was installed.

WRITTEN BY <i>F. H. Cooper</i>	DATE ISSUED 5-28-53	OVERHAUL SPECIFICATION GENERATOR TYPE M-3 - MODEL C-45G AND C-45H		
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED			
APPROVAL <i>[Signature]</i>		Deech Aircraft CORPORATION Urbana, Illinois	OVERHAUL SPECIFICATION NO 9114	PAGE 4
APPROVAL <i>[Signature]</i>				

DATE ISSUED 5-28-53	PROJECT ECLIPSE PIIONEER GENERATOR	DESIGNER [Signature]	APPROVAL [Signature]
DATE REVISION			
OVERHAUL SPECIFICATION GENERATOR TYPE M-3 - MODEL C-450 AND C-45H		Goody Corporation Wichita, Kansas	
OVERHAUL SPECIFICATION NO. 9114		PAGE 5	

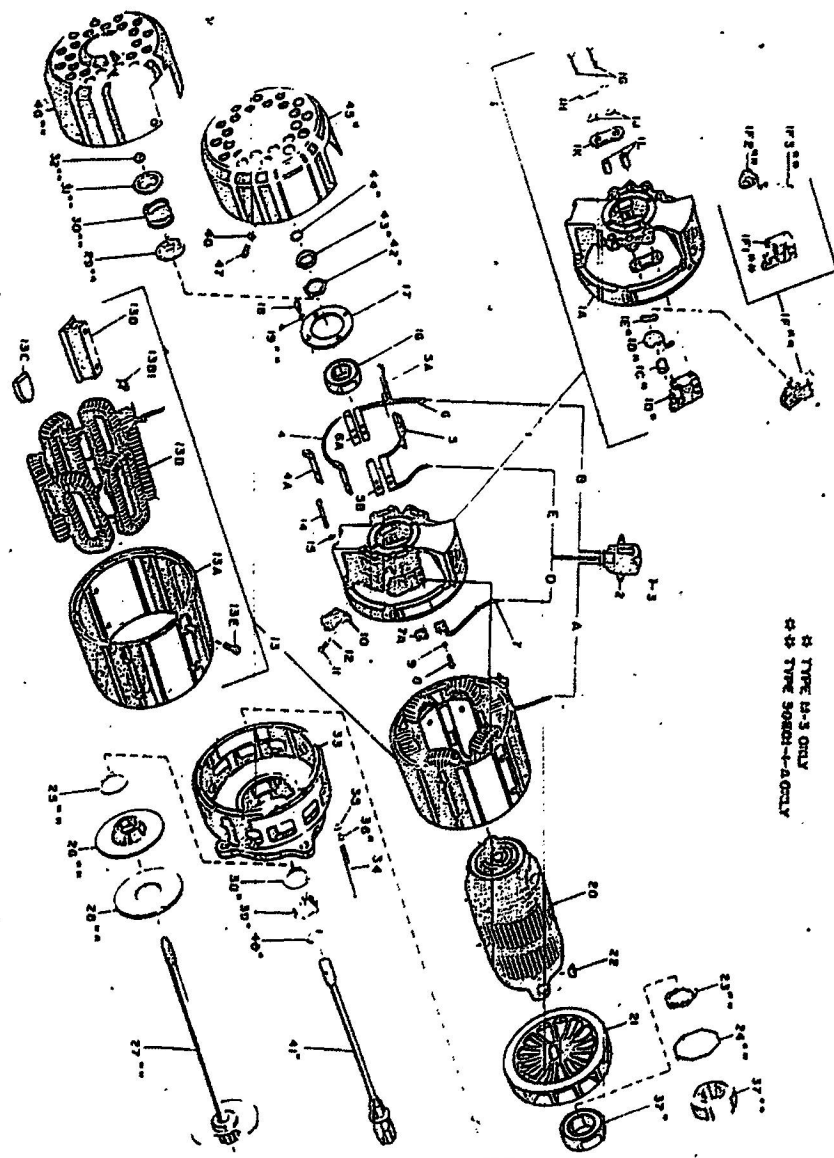


FIGURE 1 - ECLIPSE PIIONEER GENERATOR

1-3 TYPE M-3 ONLY
4-4 TYPE 308H-1-A ONLY

FIGURE & INDEX NUMBER	PART NUMBER	NOMENCLATURE	UNITS PER ASSY							APPLCA TION CODE	ARMY STATUS	PROPERTY CLASSIFICATION		
			1	2	3	4	5	6	7			U S ARMY	U S NAVY	BRITISH
	E124624	Generator - D-C, AF Type M-3												
	307501-1-A	Generator - D-C												
	D124625	Head Assembly - Front								A		4213		105U
1A	E124625	Head - Front								A		4213		
1B	H105377	Box Assembly - Brush								AH		4213		137AA
1C	H91074	Sleeve - Brush spring adjusting								A		4213		137AA
1D	H105383	Spring - Brush								A		4213		137AA
1E	H112993	Clip - Brush spring								A		4213		137AA
1F	H945107	Brush Spring and Box Assembly								A		4213		137AA
1F1	H105377	Box Assembly - Brush								A		4213		137AA
1F2	H953155	Brush Spring Assembly								R		4213		137AA
1F3	AN390-2-2	Pin - Cotter (20503-10)								R		4213		137AA
1G	H105394	Screw - Brush box								R				
1H	H105385	Lock - Tab, brush box screw								R				
1J	H19128	Washer - Brush box screw								AH		4213		137AA
1K	H105387	Insulator - Brush box								AH		4213		137AA
1L	H105388	Tube - Insulating								AH		4213		137AA
2	AN3102-22-12P	Receptacle (C91790)								AH		4213		137AA
3	AN3014-5	Screw - Receptacle mounting (H61839)								AH		4213		137AA
4	H111479	Jumper Assembly - Brush box								AH		4213		137AA
4A	H930720	Terminal - Brush box								AH		4202		105N
5	H111480	Jumper Assembly - Brush box to "E"								AH		6700		128
5A	H105391	Terminal - Brush box								AH		4213		137AA
5B	H930719	Terminal - Brush box								AH		4213		137AA
6	H930722	Jumper Assembly - Brush box to "B"								AH		4213		137AA
6A	H930721	Terminal								AH		4213		137AA
7	H11345	Lead Assembly - Brush box to "D"								AH				
7A	H23230	Terminal								AH				
8	AN51518-6P	Screw - Brush lead terminal and jumper assembly terminal lug (H20502-2)								AH		4213		137AA
9	AN035198	Washer - Lock, lead assembly terminal and jumper assembly lug (H20500-22)								AH		4213		137AA
10	H105393	Brush Assembly								AH		6700		128
11	AN51518-6P	Screw - Brush lead terminal and jumper assembly terminal lug (H20502-2)								AH		4213		137AA
12	AN035198	Washer - Lock, brush lead terminal and jumper assembly terminal lug (H20500-22)								AH		4213		137AA
13	D124615	Yoke and Field Coils Assembly								AH		6700		128
13A	D124614	Yoke								AH		4213		137AA
13B	D124623	Field Assembly - Field								AH		4213		137AA
13B1	H25238	Terminal - Field coil lead								AH		4213		137AA
13C	H845157	Shim								AH		4213		137AA
13D	H105397	Shoe Assembly - Pole								AH		4213		137AA
13E	H85702	Screw - Pole shoe to yoke								AH		4213		137AA
14	H105403	Washer - Front head to yoke								AH		4213		137AA
15	H105404	Bearing - Ball, front head								AH		4213		137AA
16	H86277	Bearing - Ball, front head								AH		4213		137AA
17	C890112-7	Retainer - Front head ball bearing								A		4213		137AA
18	H105405	Screw - Front head ball bearing								B		4213		137AA
19	AN500A8-6	(B11358)								AH		4213		137AA
20	AN835-6	Washer - Lock (H20500-44)								AH		4213		137AA
21	D124626	Armature Assembly								B		6700		128
22	H862177	Fan								A		4213		137AA
23	C105422	Key - Woodruff, fan								A				
24	H20A21-7	Washer - Spring								AH		4213		137AA
25	H862184	Spring - Floating bearing								AH		4213		137AA
26	H834183	Ring - Lock								B				
27	D92588-08	Plate - Front								B				
28	C862170	Shaft Assembly - Drive								B				
29	C862180	Idling								B				
30	H862207	Nut - Front bearing								B				
31	H847877	Spring								B				
32	H847878	Retainer - Spring								B				
33	H847879	Nut - Self locking								B				
34	C890108-29	Head - Back								B				
35	E124491	Screw - Back head to yoke								AH		4213		137AA
36	H118842	Washer - Back head to yoke screw								AH		4213		137AA
37	H18347	Washer - Lock, back head to yoke screw (H20500-1)								AH		4213		137AA
38	AN835-10	Bearing - Ball, back head								A		6700		128
39	H20504-49	Bearing - Ball, back head								A		4213		137AA
40	C890112-10	Bearing - Ball, back head								B		4213		137AA

PARIS LIST FOR FIGURE 1 - ECLIPSE PIONEER GENERATOR

WRITTEN BY	DATE ISSUED	OVERHAUL SPECIFICATION GENERATOR TYPE M-3 - MODEL C-450 AND C-45E
PROJECT ENGINEER	5-28-53	
APPROVAL	DATE REVISED	Booth Aircraft CORPORATION Wichita, L. Kansas
APPROVAL		
OVERHAUL SPECIFICATION		NO. 9114
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FIGURE & INDEX NUMBER	PART NUMBER	NOMENCLATURE & 1 2 3 4 5 6 7	UNITS PER ASSY	APPLI- CATION CODE	ARMY STATUS	PROPERTY CLASSIFICATION		
						U. S. ARMY	U. S. NAVY	COMMON
38	H89521	Lock—Tail, armature shaft nut drive end	1	A		4213		137AA
39	H89520	Nut—Armature shaft, drive end	1	A		4213		137AA
40	H110082	Gasket—Pencil drive shaft	1	A		4213		137AA
41	D124493	Shaft—Pencil drive	1	A		4213		137AA
42	H89270	Lock—Tail, armature shaft nut, commutator end	1	A		4213		137AA
43	B80278	Nut—Armature shaft, commutator end	1	A		4213		137AA
44	B120167	Lock-Ring—Pencil drive shaft, commutator end	1	A		4213		137AA
45	D105426	Cover—Front head	1	A		4213		137AA
46	D862163	Cover—Front head	1	A		4213		137AA
47	AN500A8-5	Screw—Front head cover (H28053)	5	AH		6700		128
48	AN980-8	Washer—Front head cover screw (H25103)	5	AH		6500		128

PARTS LIST FOR FIGURE 1 - ECLIPSE-PIIONEER GENERATOR (Continued)

WRITTEN BY <i>[Signature]</i>	DATE DOWED 5-28-53	OVERHAUL SPECIFICATION	
DESIGNED BY <i>[Signature]</i>		GENERATOR TYPE M-3 - MODEL C-45G AND C-45H	
APPROVAL <i>[Signature]</i>	DATE REVISED	Beach Aircraft CORPORATION	OVERHAUL SPECIFICATION NO. 9114
APPROVAL <i>[Signature]</i>		Wichita, Kansas	PAGE 7

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DATE ISSUED	5-28-53	PROJECT	ENGINEER	APPROVAL	APPROVAL
DATE REVISION					
OVERHAUL SPECIFICATION GENERATOR TYPE M-3 - MODEL C-45G AND C-45H Beech Aircraft Corporation Wichita, Kansas No. 9114 OVERHAUL SPECIFICATION PAGE 8					

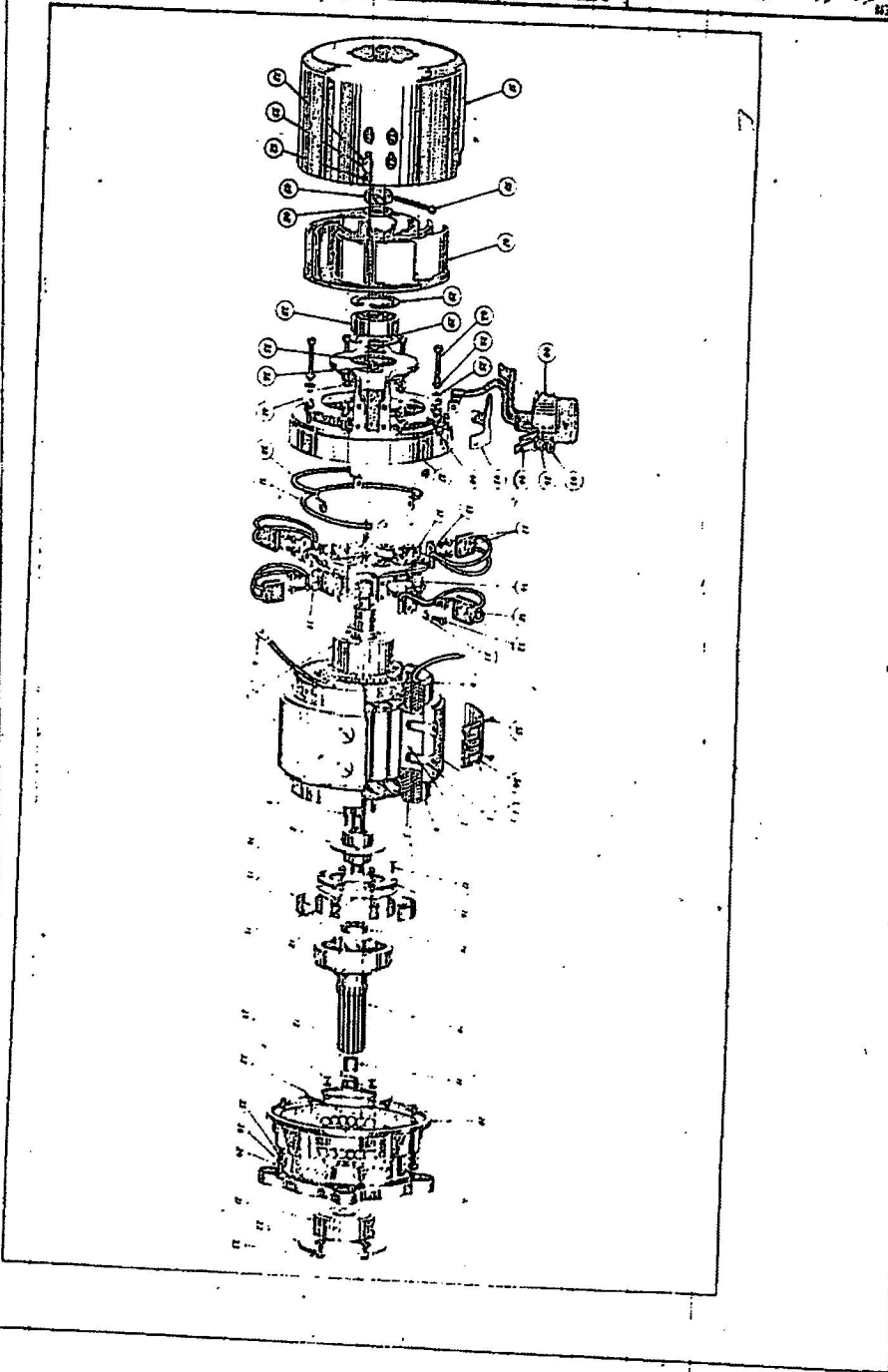


FIGURE 2 - LARGE-NEVILLE GENERATOR

GROUP Electrical Equipment		MAJOR ASSEMBLY Generator - Type M-3						PROPERTY CLASSIFICATION			
INDEX NO.	PART NUMBER	NOMENCLATURE						UNITS PER ASST	US NAVY	US ARMY	BRITISH
		1	2	3	4	5	6				
1	S-24506	Generator Assmbl						1			
2	S-24284	Ring Assmbl - Field						1	03-C	105V	
3	24230	Ring						1	03-C	105V	
4	S-24245	Pieke Assmbl - Pole						1	03-C	105V	
5	AN505-416-12	Screw						8	03-C	105V	
6	Conn.	Insulation - Manning paper						8	29	128	
7	S-24242	DID 3/4 x 10-1/4						2			
8	800-50	Coil Assmbl - Field						1			
9	S-24237	Terminal						1	03-C	105V	
10	S-11815	Armature Assmbl						1	03-C	105V	
11	11826	Cup Assmbl						1	03-C	105V	
12	S-25149	Key - Straight						2	03-C	105V	
13	S-25148	Shaft & Spring Assmbl						2	03-C	105V	
14	7277	Shaft Assmbl - Spine						1	03-C	105V	
15	11237	Bushing						1	03-C	105V	
16	24806	Plug						1	03-C	105V	
17	S-24241	Liner						2	03-C	105V	
18	24249	Spring Assmbl						2	03-C	105V	
19	24239	Pad - felt						2	03-C	105V	
20	AN505-6-4	Plate						1	03-C	105V	
21	28613	Screw						1	03-C	105V	
22	53K	Gasket						6	29	128	
23	S-25147	Bearing - Fairair Bearing Co.						1			
24	27297	Housing Assmbl - Drive End						1	29	105V	
25	205LD	Housing						1	03-C	105V	
26	24289	Bearing - Fairair Bearing Co.						1			
27	AN505-8-6	Retainer						2	29	105V	
28	501A10-22	Screw						2	03-C	105V	
29	8413	Screw						8	29	120	
30	AN935-10	Washer - Guard						8	29	120	
31	995-32-30	Lockwasher						8	03-C	105V	
32	24227	Wire - Lock						1	29	128	
33	203LL-2	Housing - Commutator End						1	04-A	130A	
34	26661	Bearing - Fairair Bearing Co.						1	03-C	105V	
35	S-24612	Ring - Snap						1	29	105V	
36	S-24602	Lead Assmbl						2	03-C	105V	
37	13932	Lock Assmbl						1	03-C	105V	
38	AN935-8	Screw						1	03-C	105V	
39	8-24808	Lockwasher						2			
40	AN505-8-12	Rippling Assmbl - Brush						2	29	128	
41	AN936-C8	Screw						1	03-C	105V	
42	600-6-7	Lockwasher						2	29	128	
43	995-32-1	Screw - Set						2	29	128	
44	995-32-20	Wire - Lock						2			
45	29709	Wire - Lock						2	04-A	130A	
46	22282	Brush Assmbl						1	04-A	130A	
47	13833	Plate Lock						1			
48	AN935-6	Screw						1			
49	24007	Lockwasher						1			
50	24608	Baffle - Upper						1	29	120	
51	601A10-18	Baffle - Lower						1	03-C	105V	
52	8418	Screw						1	03-C	105V	
53	AN936-10	Washer - Guard						1	29	128	
54	605-32-30	Lockwasher						1	03-C	105V	
55	21802	Wire - Lock						1	29	128	
56	8-24810	Gasket - Terminal Housing						1	04-A	130A	
		Housing Assmbl - Terminal						1	03-C	105V	

* Not illustrated

PARTS LIST FOR FIGURE 2 - LEECE-NEVILLE GENERATOR		OVERHAUL SPECIFICATION	
WRITTEN BY	DATE ISSUED	GENERATOR TYPE M-3 -	
PROJECT ENGINEER	5-28-53	MODEL C-450 AND C-45H	
APPROVAL	DATE REVISED	Beach Aircraft CORPORATION Wichita, Kansas	OVERHAUL SPECIFICATION NO. 9114
APPROVAL			

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INDEX NO.	GROUP Electrical Equipment	MAJOR ASSEMBLY Generator - Type N-3						LIMITS PER ASSEMBLY	PROPERTY CLASSIFICATION				
		PART NUMBER	1	2	3	4	5		6	NOMENCLATURE	U.S. NAVY	U.S. ARMY	BRITISH
45	13783							Screw - No. 10-32 x 1/2 sq. hd. steel	2		03-C	105V	
46	8812							Lockwasher	2		03-C	105V	
28	AR935-10							Lockwasher	2		29	128	
22	13833							Screw - Lead	2				
33	AR935-8							Lockwasher	2		29	128	
47	24233							Fan	1		03-C	105V	
48	3249							Washer - Guard	1		03-C	105V	
49	13629							Nut - Castle 1/2-20 Hex Steel	1				
50	AR380-3-4							Pin - Cotter	1		29	128	
	995-32-2							Wire - Lock	4		04-A	130A	
51	24298							Cover	1		03-C	105V	
52	500A8-6							Screw	8		29	128	
53	AR960-8							Washer - Guard	8		04-A	128	
33	AR935-8							Lockwasher	8		29	128	
	995-32-3							Wire - Lock	4		04-A	130A	
54	22282							Plate - Name	1		03-C	105V	
55	AR635-8-4							Screw	2		29	128	
	20427							Guard - Air vent (Used only with hand crank drive and housing assembly.)			03-C	105V	
	* Not illustrated												

PARTS LIST FOR FIGURE 2 - LEECE-NEVILLE GENERATOR (Continued)

WRITTEN BY J. L. ...	DATE ISSUED 5-28-53	OVERHAUL SPECIFICATION		
PROJECT ENGINEER		GENERATOR TYPE N-3 -		
APPROVAL	DATE REVISED	MODEL C-45G AND C-45H		
APPROVAL		Boech Aircraft CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO. 9114	PAGE 10

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