

★
T.O. 2R-0470-4
AN 02A-40EA-4

TECHNICAL MANUAL
ILLUSTRATED PARTS BREAKDOWN

AIRCRAFT ENGINES

MODELS 0-470-7 AND 0-470-11

CHANGE
NOTICE

LATEST CHANGED PAGES SUPERSEDE
THE SAME PAGES OF PREVIOUS DATE

Insert changed pages into basic
publication. Destroy superseded pages.

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE
AND THE CHIEF OF THE BUREAU OF AERONAUTICS

Reproduction for nonmilitary use of the information or illustrations contained in this publication is not permitted without specific approval of the issuing service (BuAer or USAF). The policy for use of Classified Publications is established for the Air Force in AFR 205-1 and for the Navy in Navy Regulations, Article 1509.

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page.

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 74 , CONSISTING OF THE FOLLOWING:

Page No.	Issue
*Title	15 May 1959
*A	15 May 1959
1 thru 11	15 December 1957
1 thru 3	Original
4 thru 5	15 December 1957
6 thru 20	Original
*21	15 May 1959
22 thru 23	Original
24	15 December 1957
25	Original
26 thru 27	15 December 1957
28 thru 31	Original
32	15 December 1957
33 thru 40	Original
41 thru 46	15 December 1957
47	Original
48	15 December 1957
49	Original
50	15 December 1957
50A	15 January 1958
50B Blank	15 January 1958
51	15 January 1958
52 thru 53	Original
54 thru 55	15 January 1958
*56	15 May 1959
57 thru 59	15 January 1958
60 Deleted	15 December 1957
61 thru 62	15 December 1957
63	Original
64	15 December 1957
65 thru 66	Original
67 thru 68	15 December 1957

* The asterisk indicates pages changed, added, or deleted by the current change.

ADDITIONAL COPIES OF THIS PUBLICATION MAY BE OBTAINED AS FOLLOWS:

USAF ACTIVITIES.—In accordance with T.O. 00-5-2.

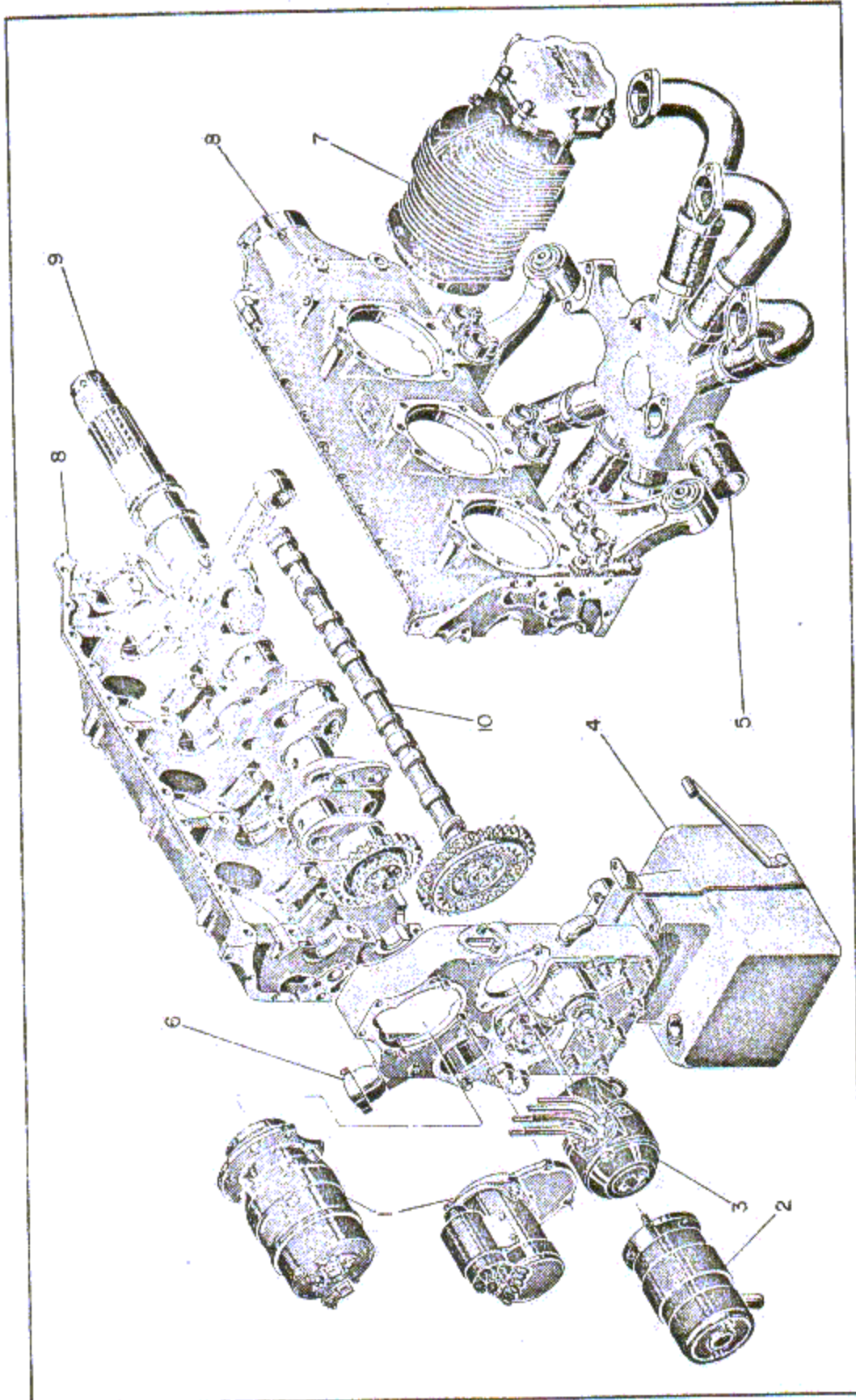
USAF

NAVY ACTIVITIES.—Submit request to nearest supply point listed below, using form NavAer 140; NASD, Philadelphia, Pa.; NAS, Alameda, Calif.; NAS, Jacksonville, Fla.; NAS, Norfolk, Va.; NAS, San Diego, Calif.; NAS, Seattle, Wash.; ASD, NSC, Guam.

For listing of available material and details of distribution see Naval Aeronautics Publications Index NavAer 00-500.

TABLE OF CONTENTS

Section		Page
I	INTRODUCTION	1
	Figure 1. Continental O-470-7 Aircraft Engine Exploded into Component Assemblies	11
	Figure 2. Assembly Groups Peculiar to Type O-470-11 Engines ..	3
II	GROUP ASSEMBLY PARTS LIST	4
	Figure 3. Starters for Model O-470-7	4
	Figure 3A. Model O-470-7 Generator and Drive Assembly	4A
	Figure 4. O-470-11 Accessories	6
	Figure 5. Exploded Parts View of Eisemann Ignition System	7
	Figure 6. Exploded Parts View of O-470-7 Scintilla Ignition System	10
	Figure 7. Exploded Parts View of O-470-11 Ignition System	12
	Figure 8. Exploded Parts View of O-470-11 Ignition System	14
	Figure 9. Exploded Parts View of O-470-7 Oil Sump	17
	Figure 10. Exploded Parts View of O-470-11 Oil Sump	19
	Figure 11. Exploded Parts View of Induction System	22
	Figure 12. Exploded Parts View of O-470-7 Accessory Case	24
	Figure 13. Exploded Parts View of O-470-7 Pressure Oil Screen and Housing Assembly	28
	Figure 14. Exploded Parts View of O-470-7 Right Side Accessory Drive Assembly	29
	Figure 15. Exploded Parts View of O-470-7 Oil Pump Assembly	30
	Figure 16. Exploded Parts View of O-470-11 Accessory Case	32
	Figure 17. Exploded Parts View of O-470-11 Front and Rear Accessory Case Machining Assembly	36
	Figure 18. Exploded Parts View of O-470-11 Oil Pump	39
	Figure 19. Exploded Parts View of Cylinder and Piston	41
	Figure 20. Exploded Parts View of Crankcase	45
	Figure 21. Exploded Parts View of Crankshafts and Connecting Rods	50
	Figure 22. Exploded Parts View of Camshaft and Valve Lifters	52
III	NUMERICAL PARTS LIST	53
IV	SPECIAL SERVICE TOOLS LIST	61
	Figure 23. Special Service Tools	63
	Figure 24. Special Overhaul Tools	63
	Figure 25. Special Overhaul Tools	64
	Figure 26. Special Overhaul Tools	65
	Figure 27. Special Overhaul Tools	66
	Figure 28. Special Overhaul Tools	67
	Figure 29. Special Overhaul Tools	68



Index No.	Group Designation	Figure No.	Index No.	Group Designation	Figure No.	Index No.	Group Designation	Figure No.
1	Starters for Model O-470-7 . . .	3	4	Oil Sump Group	8	8	Crankcase Group	20
2	Model O-470-7 Generator and Drive Assembly	3A	5	Induction System Group . . .	9	9	Crankshaft and Connecting Rod Group	21
3	Ignition System	5-6	6	Accessory Case Group	12-15	10	Camshaft and Valve Lifter Group	22
			7	Cylinder and Piston Group . .	19			

Figure 1. Continental O-470-7 Aircraft Engine Exploded into Component Assemblies

SECTION I
INTRODUCTION

1-1. MODELS AND SERIES.

1-2. In this catalog are listed all parts of the types O-470-7, O-470-7A, O-470-7B and O-470-11 aircraft engines manufactured by Continental Motors Corporation, Muskegon, Michigan. The manufacturer's model designation of types O-470-7, O-470-7A and O-470-7B is E185-3. This designation is stamped on the engine identification plates. Type O-470-7 engines require 14 mm. spark plugs, while type O-470-7A engines are equipped for 18 mm. plugs. Otherwise these two types are identical. Type O-470-7B engines are equipped with the same pistons and cylinders as type O-470-11 and require a special type crankcase. There is no manufacturer's model number for type O-470-11.

1-3. SYMBOLS EMPLOYED IN THIS CATALOG.

1-4. Symbols defined in the following table are used in Sections II and III of this catalog.

Symbol	Significance
ANPT	Aeronautical national pipe thread (tapered)
ID	Inside diameter (with dimensions)
NEF	National extra fine thread
NP	Non-procurable
OD	Outside diameter (with dimensions)
Opt	Optional part (in quantity column)
OS	Oversize (in connection with dimensions)
PD	Pitch diameter of a thread
Ref	Reference (parts listed elsewhere in catalog or illustrated elsewhere in same figure.)
US	Undersize (in connection with dimensions)
*	Part number of a part which is not procurable (Section II only)
†	Oversize parts are available (Section III only)
- x - x -	End of a group of attaching parts

1-5. ASSEMBLY GROUPS.

1-6. Figures 1 and 2 provide a visual index to major assemblies into which these engines have been divided for the purpose of listing and illustrating the parts. In general, each group comprises those parts which are assembled together or which operate together to

perform an essential function. Index numbers in figures 1 and 2 indicate the illustrations of major assemblies exploded in those figures to show their relative positions. The numerical order of index numbers is the order of assembly removal. Below the two illustrations are the lists of group index numbers and corresponding designations. In these lists the figure number for each group is the number of the illustration in which detail parts of the group are shown in exploded positions. Within each group list in Section II, sub-assemblies and detail parts are listed in the order of removal during engine disassembly, and index numbers, placed in numerical order in each group list, refer to illustrations of detail parts in the corresponding exploded view of the group. A few deviations from this order of listing are unavoidable.

1-7. CROSS INDEX SYSTEM.

1-8. Accessories supplied by the engine manufacturer, but manufactured by others, are listed in Section II, with the accessory manufacturer's part number in the "Part Number" column and the engine manufacturer's number in parenthesis following the nomenclature. In Section III both numbers of such parts are listed in correct alpha-numerical order, with total quantity and assembly group location information following the accessory manufacturer's number and with a reference to that number placed after the engine manufacturer's number. In Section III the figure and index number listed opposite each part number indicates the location of the detail part illustration and description in the exploded views and lists in Section II. Succeeding figure and index numbers above the next part number line in Section III indicate other applications of the same part. Only the lowest figure and index number of each standard hardware part is listed in Section III, however, the total quantity per engine of each part listed in Section III is stated opposite the part number, regardless of the number of points of application.

1-9. PARTS NUMBERING SYSTEM.

1-10. Parts designed by the engine manufacturer prior to 1946 were numbered in blocks according to the size of the drawings. The blocks assigned to various drawing sizes were as follows:

Part Number Block	Factory	Drawing Size
2000-2999 and 20000-29999	Muskegon, Mich.	A
3000-3999 and 30000-39999	Muskegon, Mich.	B
4000-4999 and 40000-49999	Muskegon, Mich.	C
5000-5999 and 50000-59999	Muskegon, Mich.	D
6000-6999-----	Muskegon, Mich.	Roll

1-11. Starting in 1945, in the manufacturer's Detroit factory, and in 1947, in the Muskegon factory, blocks of part numbers were assigned by factory and without regard to drawing size or model. The current blocks

of part numbers within which numbers are assigned to re-designed parts and new parts of the "E" series of engines and type O-470-11, are:

Part Number Block	Approximate Dates	Factory	Drawing Size
350001-353000	JULY 1945-DEC. 1946	DETROIT	All
400000-401999	Jan. 1945-Dec. 1946	Detroit	All
520000-529999	Jan. 1947-Dec. 1947	Detroit	All
530000-539999	Jan. 1947-Onward	Muskegon	All

1-12. DETERMINATION OF PART NUMBER AND NOMENCLATURE.

1-13. When it is desired to procure a replacement for a part whose appearance and position in the engine are known, the correct part number and nomenclature may be determined by locating in figure 1 or 2 the index number of the assembly or system in which the part is used, the group designation and figure number. In the Table of Contents find the page number on which the figure appears and turn to that page. In the exploded parts view of the assembly locate the illustration of the desired part and observe its index number. On the same page or an adjacent page, and in the parts list for the same assembly group, the figure number of the exploded parts view appears in the first column. In the same column index numbers of sub-assemblies and detail parts follow the figure number and a dash. Locate the index number of the desired part, as determined from the illustration, in its numerical position in the list. The part number and nomenclature follow on the same line.

1-14. IDENTIFICATION OF PARTS OF KNOWN NUMBERS.

1-15. To locate the illustration and nomenclature of a part whose number is known, turn to Section III, and find the part number in its numerical position in the part number column. In the next column, and on the same line, will be found the figure number of the exploded parts view of the assembly or system in which the part is used. If a dash number follows the figure number the part is illustrated as a separate part in the indicated figure and is identified therein by the number following the dash. In the Table of Contents and the page number of the figure determined in Section III, and turn to that page. Locate the index number of the desired part. A leader connects the number to the illustration of the part. In that related assembly group list locate the same index number and on the same line, the known part number and correct

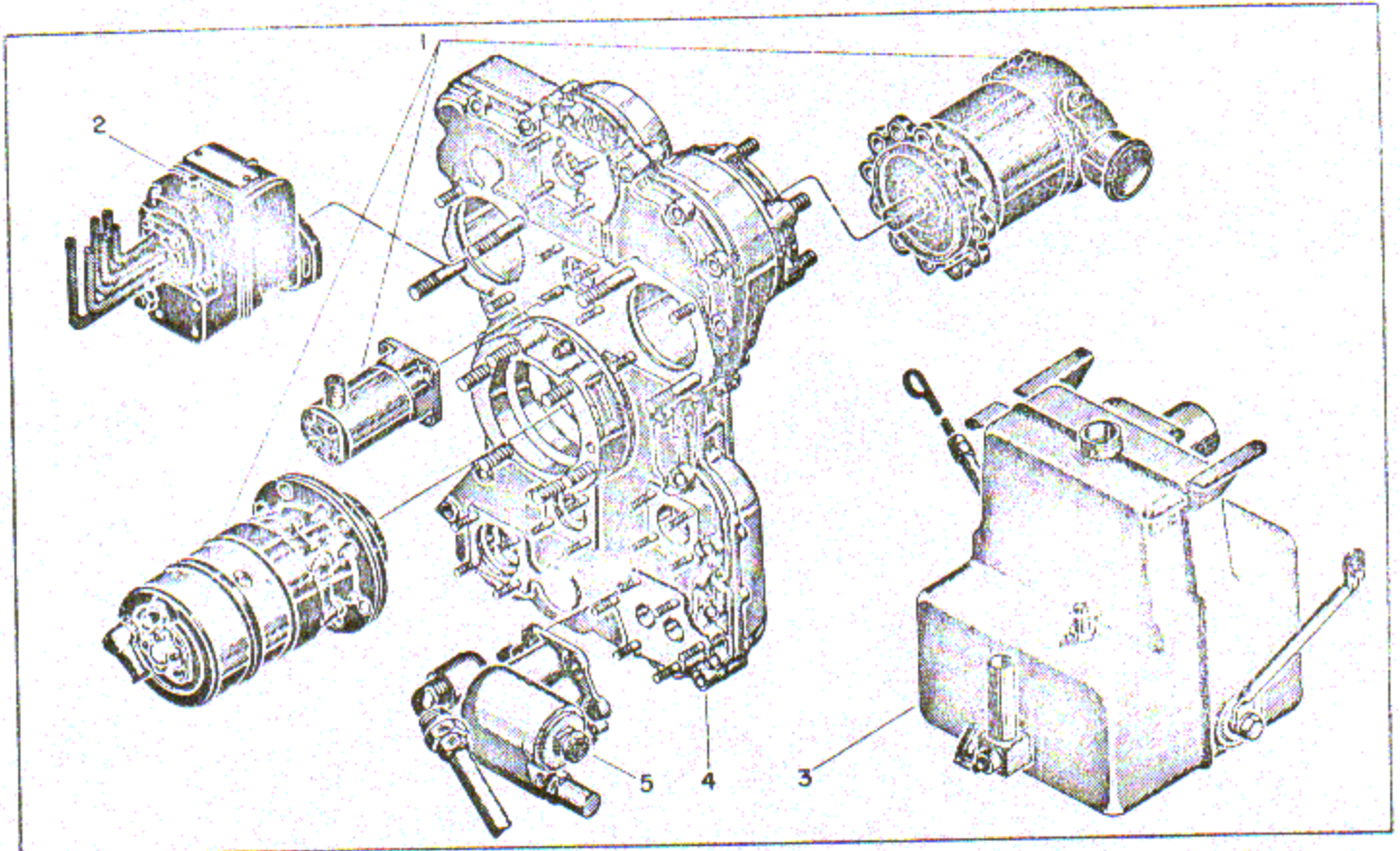
nomenclature. If no index number follows the figure number listed opposite the known part number in Section III, the known part number may be located by scanning the assembly group list which has the same title as the indicated figure in Section II. If the desired part is determined to be an assembly, its detail parts will be illustrated in exploded positions in the figure and will be listed in the assembly group list immediately following the assembly and its attaching parts.

1-16. DETERMINATION OF AVAILABLE NON-STANDARD SIZES.

1-17. If a part must be replaced by an oversize or an undersize, the available non-standard sizes will be found in the appropriate assembly group list in Section II immediately following the part number and nomenclature of the standard size part. Locate the listing of the standard size by one of the methods described in paragraph 1-13 and 1-15. Only standard size part numbers are listed in Section III. If oversizes or undersizes are available the part number in the numerical list is preceded by a dagger symbol (†).

1-18. NON-PROCURABLE PARTS.

1-19. Non-procurable assemblies must be replaced by procurable sub-assemblies and other detail parts. Non-procurable detail parts must be replaced with the smallest assemblies in which they are installed. The smallest assembly in which a non-procurable detail part is used will be found in the same assembly group list in Section II, and it will be the first assembly listed above the desired part, its nomenclature beginning in the next column to the left of that in which nomenclature of the desired part begins. Parts required to make up a non-procurable assembly are listed in Section II immediately below the assembly and its attaching parts, their nomenclature beginning in the next column to the right of that in which nomenclature of the desired assembly begins.



Index No.	Group Designation	Figure No.	Index No.	Group Designation	Figure No.
1	O-470-11 Accessories	4	4	O-470-11 Accessory Case . . .	16-17
2	O-470-11 Ignition System . . .	8	5	O-470-11 Oil Pump	18
3	O-470-11 Oil Sump	10			

Figure 2. Assembly Groups Peculiar to Type O-470-11 Engines

SECTION II
GROUP ASSEMBLY PARTS LIST

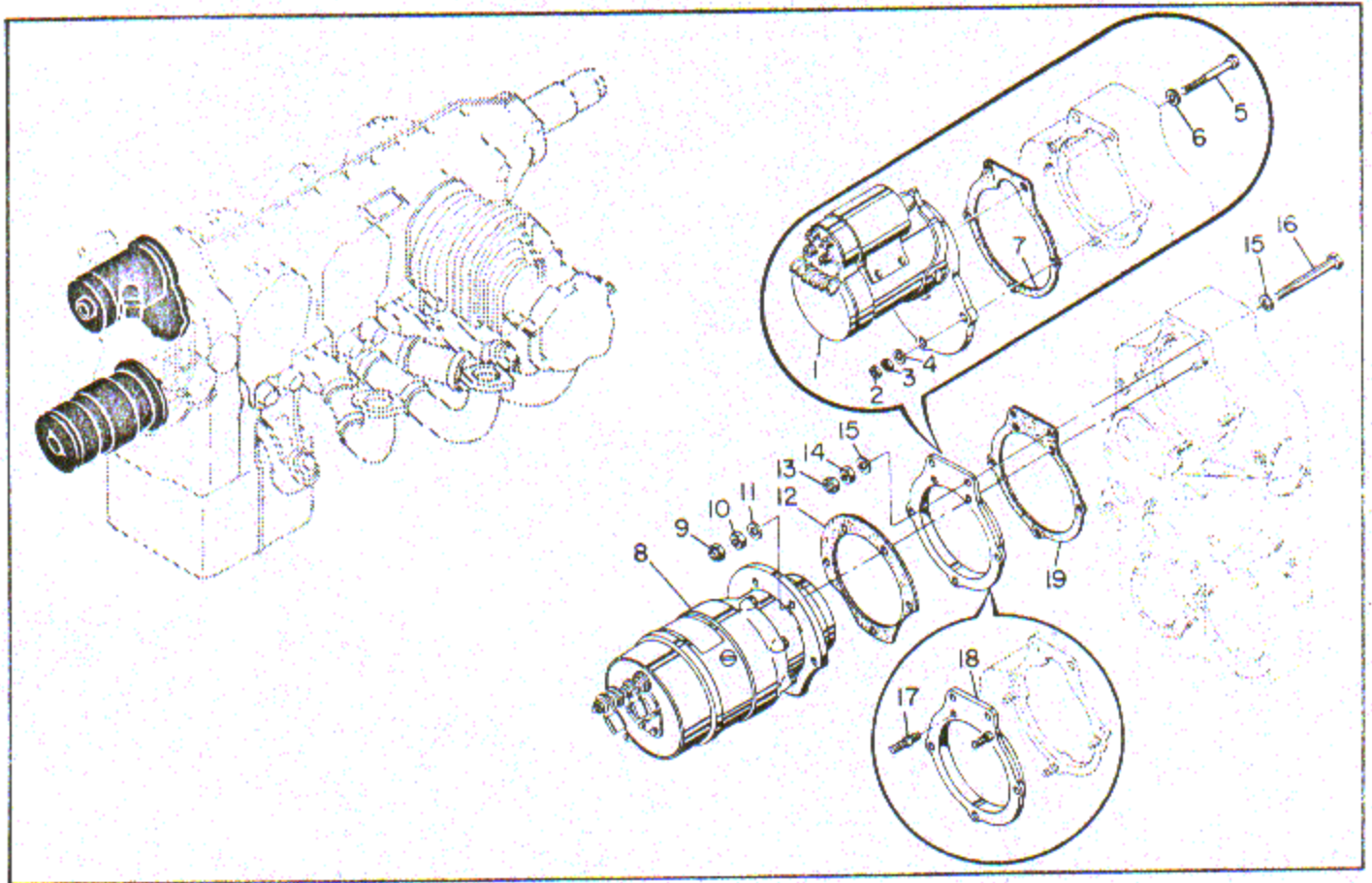


Figure 3. Starters for Model O-470-7

DELCO-REMY STARTER AND GENERATOR

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
3-1	1109660	Starter - 12 volt (Delco-Remy Div., GMC) (352006)							1	abc
		ATTACHING PARTS								
-2	356-524	Lock - Nut							3	abc
-3	AN121503	Nut - Plain 5/16-24							3	abc
-4	AN960-516L	Washer - Flat 5/16 in.							3	abc
-5	AN103042	Bolt - Hex head 5/16-24 x 3-5/8 in. long							2	abc
-6	AN960-516L	Washer - Flat 5/16 in.							2	abc
		- x - x -								
-7	352179	Gasket - Starter to accessory case (for No. 1109660 starter)							1	abc

DELCO-REMY STARTER AND GENERATOR (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
3-8	§E-80	Starter - Eclipse							1	abc
		ATTACHING PARTS								
-9	§356-524	Lock - Nut							5	abc
-10	§AN121503	Nut - Plain 5/16-24							5	abc
-11	§AN960-516L	Washer - Flat 5/16 in.							5	abc
		- x - x -								
-12	§530340	Gasket - Starter to adapter (for E-80 starter)							1	abc
	§531007	Adapter Assembly - Eclipse starter							1	abc
		ATTACHING PARTS								
-13	§356-524	Lock - Nut							2	abc
-14	§AN121503	Nut - Plain 5/16-24							2	abc
-15	§AN960-516L	Washer - Flat 5/16 in.							4	abc
-16	§530347	Screw - Hex head 5/16-24 x 3.91 in. long							2	abc
		- x - x -								
-17	§531006	. Stud - Special 5/16-18 x 5/16-24 x 1-3/16 in. long							2	abc
	§531008P003	. Stud - 5/16-18 x 5/16-24 x 1-3/16 in. 0.003 in. OS on PD							AR	abc
	§531006P006	. Stud - 5/16-18 x 5/16-24 x 1-3/16 in. 0.006 in. OS on PD							AR	abc
	§531006P009	. Stud - 5/16-18 x 5/16-24 x 1-3/16 in. 0.009 in. OS on PD							AR	abc
-18	§530334	. Adapter - Starter							NP	abc
-19	§530341	Gasket - Adapter to cover							1	abc

§ Indicates parts used with E-80 starter.

For application code, see page 4.

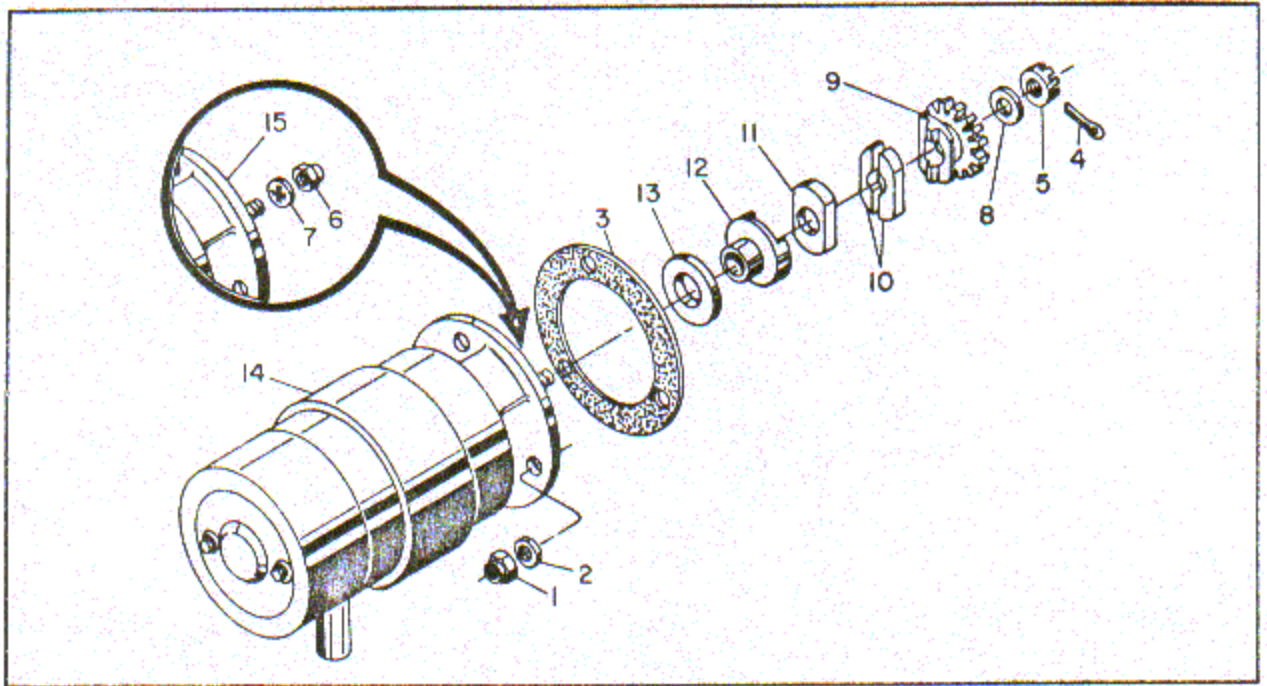


Figure 3A. Model O-470-7 Generator and Drive Assembly

DELCO-REMY GENERATOR AND DRIVE ASSEMBLY

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
3A-	530946	Generator and Drive Assembly							1	ab
	533730	Generator and Drive Assembly							1	c
		ATTACHING PARTS								
-1	AN365-524	Nut - Self locking 5/16-24 in.							3	abc
-2	AN960-516L	Washer - Plain 5/16 in.							3	abc
-3	352066	Gasket - Generator							1	abc
		- x - x -								
-4	AN380-2-2	Pin - Cotter 1/16 dia x 1/2 in.							1	ab
-5	530412	Nut - Slotted hex shouldered 5/16-24 in.							1	ab
-6	29NTE-064	Nut - Type TE elastic stop 3/8-24 x 9/16 hex x 9/32 in. high (Elastic Stop Nut Corp.) (531231)							1	c
-7	401507	Washer - 3/8 ID x 3/4 OD x 0.45 in.							1	c
-8	AN960C516L	Washer - Plain 5/16 in.							1	ab
-9	530997	Gear - Generator drive							1	abc
-10	530998	Bushing - Generator drive coupling							2	abc
-11	352030	Retainer - Generator coupling							1	abc
-12	352029	Hub - Generator coupling							1	abc
-13	352068	Seal - Oil 1.5 OD for .968 in. dia shaft							1	abc

DELCO-REMY GENERATOR AND DRIVE ASSEMBLY (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
3A-14	1101880	.	Generator	-	35	Amp	(Delco-Remy Div., General Motors Corp., Anderson, Indiana) (530743)		1	ab
-15	1101887	.	Generator	-	35	Amp	(Delco-Remy Div., General Motors Corp.) (532701)		1	c

For application code, see page 4B

O-470-11 ACCESSORIES

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
4-1	AN5547-2	Generator	-	Tachometer	four	pole	(General Electric Co, Schenectady 5, N.Y.) (2CM9AAA-1) (For a list of details, see T.O. 5E5-3-1-34)		Opt	a
	AN5547-2	Generator	-	Tachometer	four	pole	(Jack & Heintz Precision Industries, Cleveland, Ohio) (H60-050) (For a list of detail parts, see T.O. 5E5-3-3-23)		Opt	a
		ATTACHING PARTS								
-2	356-428	Lock	-	Nut	1/4-28				4	a
-3	AN121502	Nut	-	Plain	1/4-28				4	a
-4	AN960-416L	Washer	-	Plain	1/4 in.				4	a
-5	AN4045-1	Gasket	-	Vacuum	and	hydraulic	power pumps		1	a
		- x - x -								
-6	AN4116-R1	Starter	-	Aircraft	direct	cranking	24 volt d-c type 756, model 10, style C (Eclipse Pioneer Div, Bendix Aviation Corp. Teterboro, N.J.) (532197) (See T.O. 8D12-3-8-4)		1	a

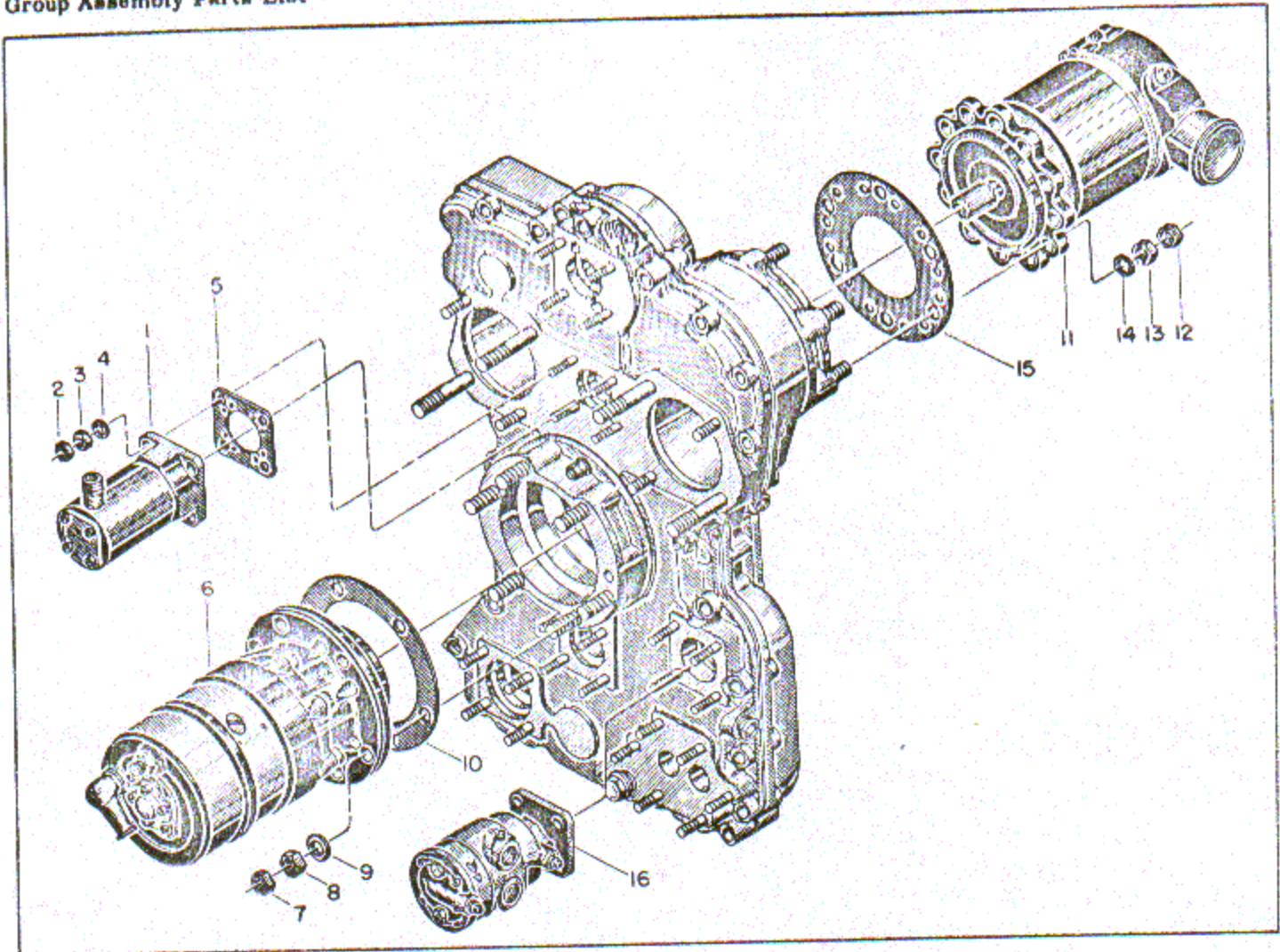


Figure 4. O-470-11 Accessories

O-470-11 ACCESSORIES (Cont)

Figure & Index No.	Part Number	Nomenclature	Units per Assy	Application Code
		1 2 3 4 5 6 7		
		ATTACHING PARTS		
4-7	356-624	Lock - Nut 3/8-24	6	a
-8	AN121504	Nut - Plain 3/8-24	6	a
-9	AN960-616	Washer - Plain 3/8 in.	6	a
-10	AN4047-1	Gasket - Type XII engine accessory drive	1	a
		- x - x -		
-11	1345-3	Generator - Engine driven 24 volt d-c (Eclipse Pioneer Div, Bendix Aviation Corp, Teterboro, N.J.) (532182) (See T.O. 8D6-2-5-4)	1	a
	901-9B	Generator - Engine driven 24 volt d-c type O-4 (Eclipse Pioneer Div, Bendix Aviation Corp, Teterboro, N.J.) (See T.O. 8D6-3-2-1) (533026)	Opt	a
		ATTACHING PARTS		
-12	356-624	Lock - Nut 3/8-24	6	a
-13	AN121504	Nut - Plain 3/8-24	6	a
-14	AN960-616	Washer - Plain 3/8 in.	6	a
-15	AN4047-1	Gasket - Type XII engine accessory drive	1	a
		- x - x -		

For application code, see page 5

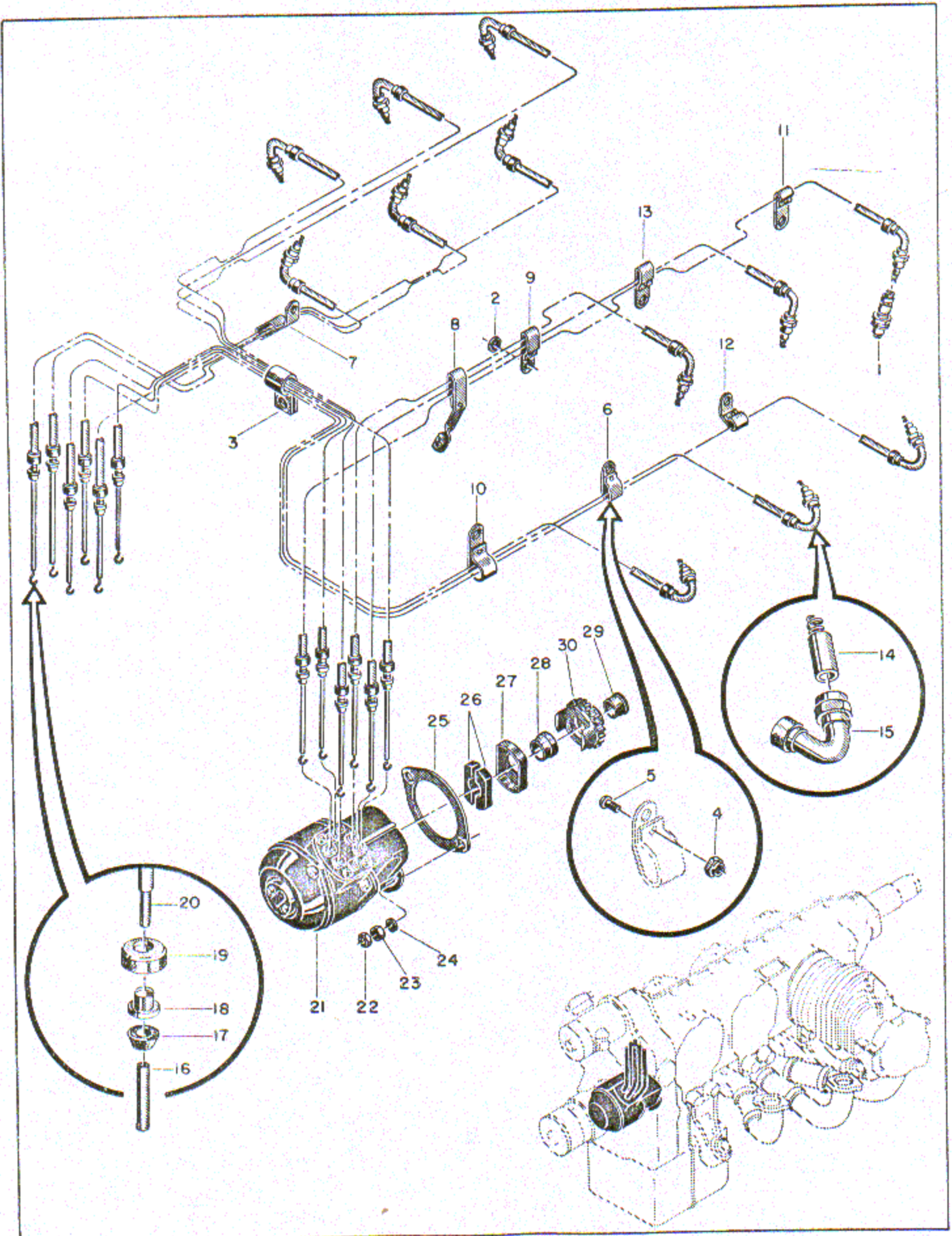


Figure 5. Exploded Parts View of Elsemann Ignition System

O-470-11 ACCESSORIES (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
4-16	83802-692-2	Pump -- Vacuum, type B11A-EA (For attaching parts see figure 16-30, -31, -32, -33.) (For a list of detail parts refer to T.O. 9V2-2-2-1) (Eclipse-Pioneer)							1	a
	3P-194-F	Pump -- Vacuum, type B-11A (For a list of detail parts refer to T.O. 9V2-2-6-1) (Pesco Products Co) For application code, see page 5.							Opt	a

EISEMANN IGNITION SYSTEM

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code	
		1	2	3	4	5	6	7			
5-1	707-SR	Plug -- Spark 14 mm (BG Corp, New York, N.Y.) (520129)							12	a	
	706-S	Plug -- Spark 18 mm (BG Corp, New York, N.Y.) (530203)							12	b	
	352083	Ignition Assembly -- Complete radio shielded							1	ab	
		ATTACHING PARTS									
-2	AN960-818	Washer -- Cable bracket to upper cylinder base stud 25/64 ID 1/16 in.							5	ab	
			- x - x -								
		352084	. Harness Assembly -- Ignition cylinders 1, 3, 5 upper					1	ab		
		352086	. Harness Assembly -- Ignition cylinders 2, 4, 6 upper					1	ab		
		352085	. Harness Assembly -- Ignition cylinders 1, 3, 5 lower					1	ab		
	352087	. Harness Assembly -- Ignition cylinders 2, 4, 6 lower					1	ab			
		ATTACHING PARTS									
-3	352078	. Bracket -- Ignition harness 1, 3, 5 lower and 2, 4, 6 upper							1	ab	
			- x - x -								
-4	AN365-440	. . Nut -- Self locking No. 4-40							4	ab	
-5	AN516-4-5	. . Screw -- Round head machine No. 4-40 x 5/16 in.							4	ab	
-6	25145	. . Bracket -- Ignition cable Nos. 3, 5 lower and 4, 6 lower							1	ab	
-7	25146	. . Bracket -- Ignition cable Nos. 2, 4, 6 lower							1	ab	
-8	25147	. . Bracket -- Ignition cable Nos. 1, 3, 5 upper							1	ab	
-9	24227	. . Bracket -- Ignition cable Nos. 1, 3, 5 upper and 2, 4, 6 upper							1	ab	
		. . Bracket -- Ignition cable Nos. 1, 3, 5 lower							1	ab	
-10	352079	. . Bracket -- Ignition cable No. 5 upper and No. 6 upper							1	ab	
-11	352080	. . Bracket -- Ignition cable No. 5 lower							1	ab	
-12	352081	. . Bracket -- Ignition cable Nos. 3, 5 upper							1	ab	
-13	520084	. . Sleeve -- Spark plug terminal (BG Corp) (21440)							3	ab	
-14	M366	. . Elbow, Cone and Nut Assembly -- Spark plug (BG Corp) (A22886)							3	ab	
-15	A1873	. . Tube -- Cable magneto terminal (Jack & Heintz Precision Industries, Cleveland, Ohio) (24645)							3	ab	
-16	H26-748	. . Gland -- Cable nut							3	ab	
-17	22549	. . Ferrule -- Ignition cable							3	ab	
-18	20087	. . Nut -- Union knurled 11/16-24 NEF							3	ab	
-19	22115										

EISEMANN IGNITION SYSTEM (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
5-20	844	.	.	Cable — Flexible shielded ignition (Packard Electric Division, General Motors Corp, Warren, Ohio) ..					AR	ab
-21	H27-725			Magneto — Eisemann model LA-6 (Jack & Heintz Precision Industries, Cleveland, Ohio) (For a list of detail parts refer to T.O. 8E2-5-2-4) (36102)					2	ab
				ATTACHING PARTS						
-22	356-524			Lock — Nut 5/16-24					4	ab
-23	AN121503			Nut — Plain 5/16-24					4	ab
-24	401506			Washer — Plain steel .33 ID x .75 OD x .09 in. thick.					4	ab
-25	5535324			Gasket — Magneto					2	ab
				- x - x -						
-26	531179			Bushing — Magneto drive coupling.					4	ab
-27	531178			Retainer — Magneto drive coupling.					2	ab
	531180			Gear Assembly — Magneto drive					2	ab
-28	531177			. Sleeve — Magneto drive gear					1	ab
-29	*352037			. Bushing — Magneto drive gear					NP	ab
-30	*531176			. Gear — Magneto drive.					NP	ab
				For application code, see page 8.						

§ Use gasket No. 352057 until stock is depleted.

* Indicates non-procurable part.

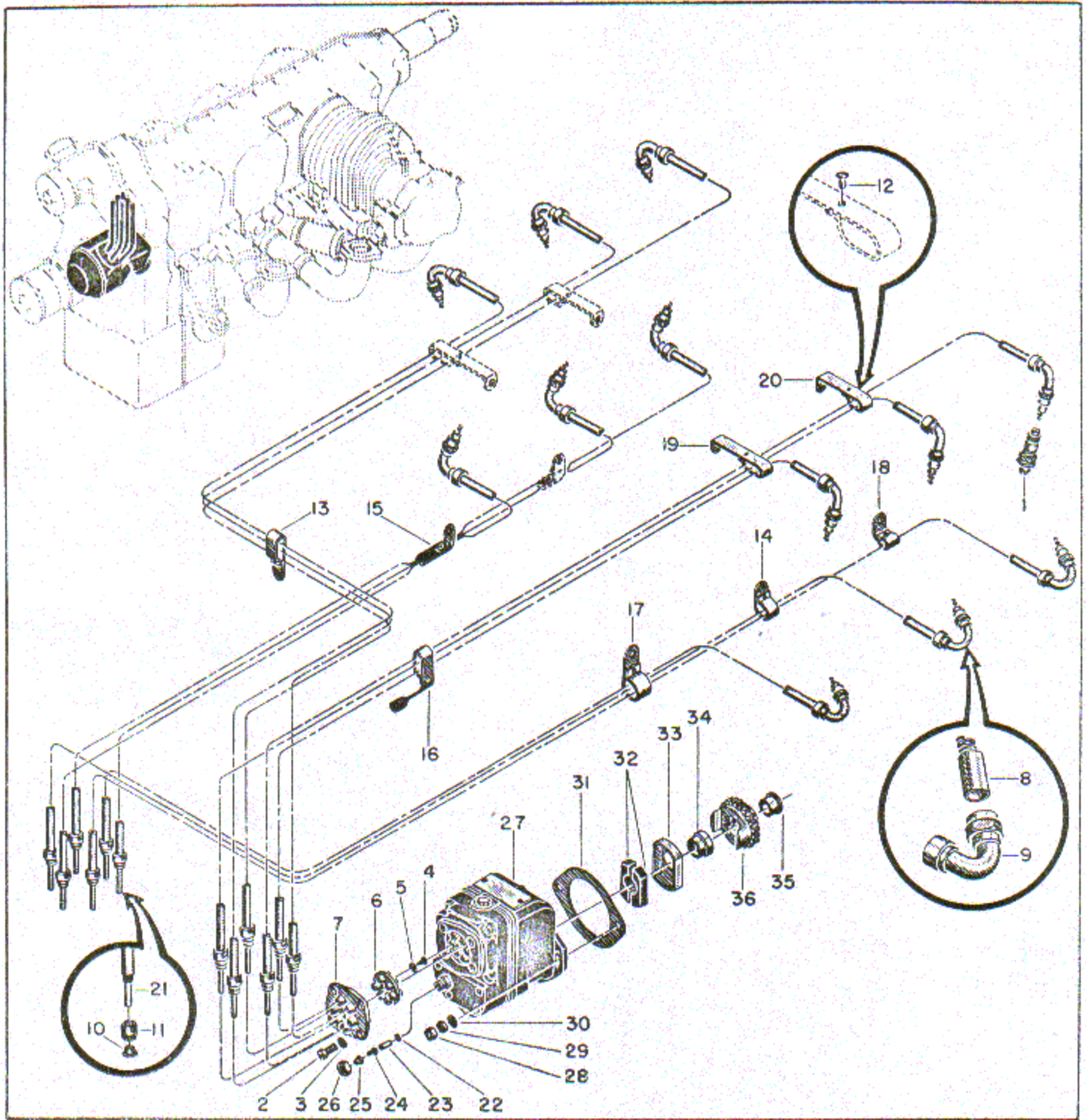


Figure 6. Exploded Parts View of O-470-7 Scintilla Ignition System

O-470-7 SCINTILLA IGNITION SYSTEM

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A, O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
6 -1	707-SR	Plug - Spark 14 mm (BG Corp, New York, N.Y.) (520129)...							12	a
	706-S	Plug - Spark 18 mm (BG Corp, New York, N.Y.) (530203)...							12	b
	520028-A2	Ignition System - Complete radio shielded.....							1	ab
ATTACHING PARTS										
-2	AN501-10-10	Screw - Fillister head No. 10-32 x .625 in.							8	ab
-3	AN935-10	Washer - Spring lock .2 ID x .047 in. thick							8	ab
-4	A-4	Screw - High tension cable contact (Parker-Kalon Corp, New York, N.Y.) (25387)							12	ab
-5	10-8785	Washer - Plain brass .125 ID x .281 OD x .025 in. (25388) ..							12	ab
-6	10-50771	Grommet - Six cylinder distributor cable (Scintilla) (36219) .							2	ab
-7	10-50777	Plate - Six cylinder cable outlet shielded (Scintilla) (25312) .							2	ab
- x - x -										
	539749	. Harness Assembly - Ignition cylinders 1, 3, 5 upper							1	ab
	539749	. Harness Assembly - Ignition cylinders 2, 4, 6 upper							1	ab
	539748	. Harness Assembly - Ignition cylinders 1, 3, 5 lower							1	ab
	539748	. Harness Assembly - Ignition cylinders 2, 4, 6 lower							1	ab
-8	M366	. Sleeve - Spark plug terminal (BG) (21440)							3	ab
-9	A1873	. Elbow, Cone and Nut Assembly - Spark plug (BG Corp) (A22886)							3	ab
-10	20087	. Ferrule - Cable brass.							3	ab
-11	25302	. Nut - Ignition cable coupling							3	ab
-12	AN435-4U4	. Rivet - Round head 1/8 dia x 1/4 in.							2	ab
-13	24227	. Bracket - Ignition cables 2, 4, 6 upper							1	ab
-14	25145	. Bracket - Ignition cables 3, 5 lower and 4, 6 lower.							1	ab
-15	25146	. Bracket - Ignition cables 2, 4, 6 lower							1	ab
-16	25147	. Bracket - Ignition cables 1, 3, 5 upper							1	ab
-17	352079	. Bracket - Ignition cables 1, 3, 5 lower							1	ab
-18	352081	. Bracket - Ignition cable No. 5 lower							1	ab
-19	531115	. Bracket - Ignition cables 1, 3, 5 upper and 2, 4, 6 upper							1	ab
-20	530986	. Bracket - Ignition cables 3, 5 upper and 4, 6 upper.							1	ab
-21	844	. Cable - Flexible shielded ignition (Packard Electric Div, General Motors Corp, Warren, Ohio).							AR	ab
-22	2-155	Washer - Plain brass .1 ID x .313 OD x .02 in. thick (Scintilla) (25314)							2	ab
-23	10-37668	Sleeve - Ground wire insulating .188 ID x .375 OD x .968 in. long (Scintilla) (530455)							2	ab
-24	10-7029	Ferrule - Shielded ground wire inner (Scintilla) (25316)							2	ab
-25	10-7030	Ferrule - Shielded ground wire outer (Scintilla) (25317)							2	ab
-26	10-37669	Nut - Hex coupling 5/8-24 (Scintilla) (25318)							2	ab
-27	10-51365-17	Magneto - Model S6LN-21 (Scintilla) (531676)(T.O. 8E2-5-2-14)							2	ab
ATTACHING PARTS										
-28	356-524	Lock - Nut 5/16-24							4	ab
-29	AN121503	Nut - Plain 5/16-24							4	ab
-30	401508	Washer - Plain steel .33 ID x .75 OD x .09 in.							4	ab
-31	535324	Gasket - Magneto							2	ab
- x - x -										
-32	531179	Bushings - Magneto drive coupling							4	ab
-33	531178	Retainer - Magneto drive coupling							2	ab
	531180	Gear Assembly - Magneto drive							2	ab
-34	531177	. Sleeve - Magneto drive gear							1	ab
-35	*352037	. Bushing - Magneto drive gear							NP	ab
-36	*531176	. Gear - Magneto drive							NP	ab

§ Use gasket No. 352057 until stock is depleted.
* Indicates non-procurable part.

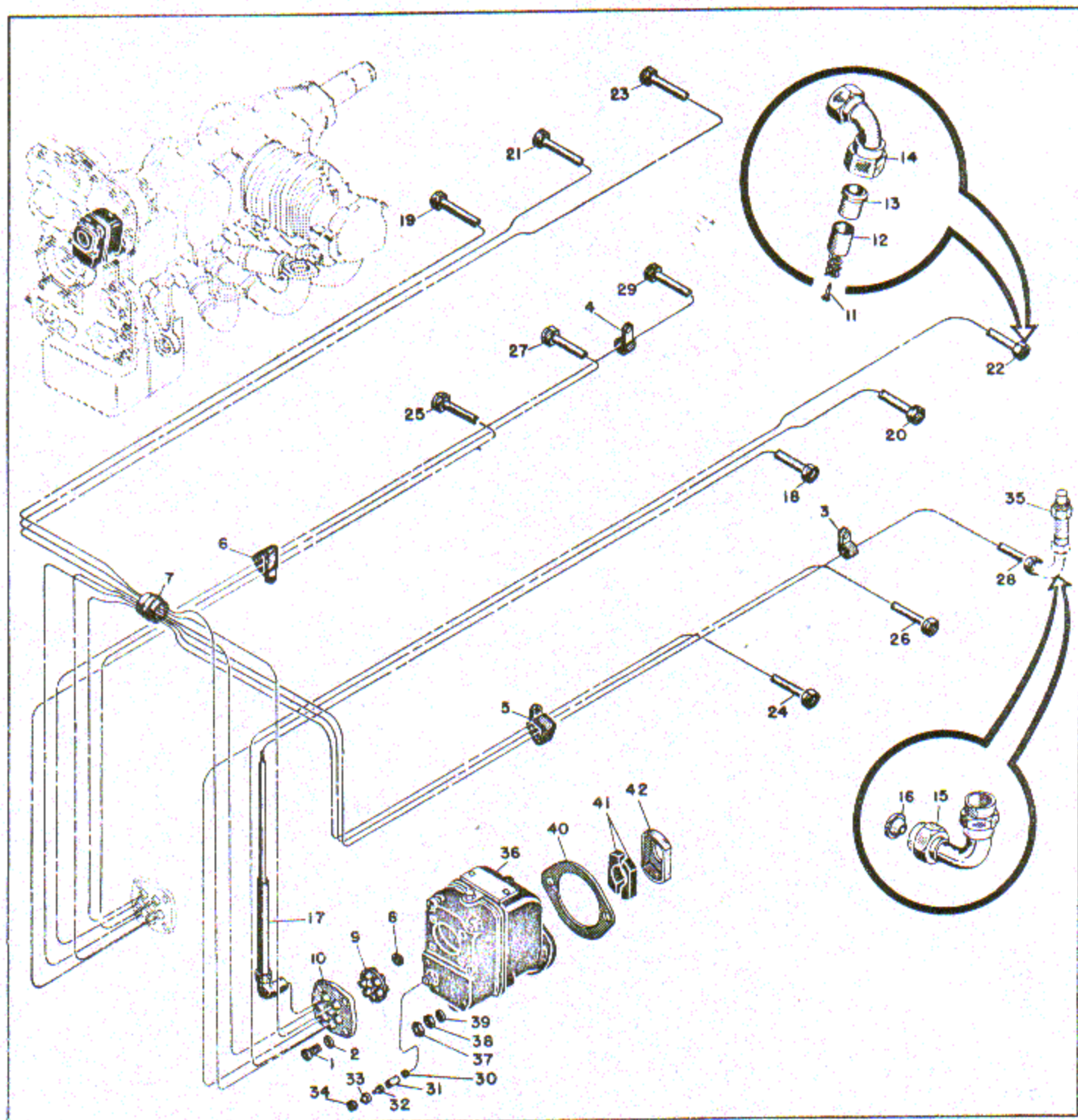


Figure 7. Exploded Parts View of O-470-11 Ignition System (7 mm. Cable)

O-470-11 IGNITION SYSTEM
(7mm. Cable)

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	Below 103829

Figure & Index No.	Part Number	Nomenclature 1 2 3 4 5 6 7	Units Per Assy	Application Code
7	D32611	Harness Assembly - Complete radio shielded ignition (Titeflex, Inc, Newark, N.J.) (532488)	1	a
		ATTACHING PARTS		
-1	AN501-10-10	Screw - Fillister hd No. 10-32 x 5/8 in.	8	a
-2	AN935-10	Washer - Spring lock No. 10	8	a
		- x - x -		
-3	A-25985	. Bracket - Ignition cable conduit No. 5 lower	1	a
-4	A-25985	. Bracket - Ignition cable conduit No. 6 lower	1	a
-5	A-25984	. Bracket - Ignition cable conduit Nos. 1, 3, 5 lower	1	a
-6	A-25984	. Bracket - Ignition cable conduit Nos. 2, 4, 6 lower	1	a
-7	49162	. Band - Harness wire size No. 5 (United Carr Corp, Cambridge 42, Mass.) (533067)	1	a
-8	10-51677	. Washer - High tension cable contact (Scintilla Magneto Div, Bendix Aviation Corp, Sidney, N.Y.)	12	a
-9	10-50771	. Grommet - Six cylinder distributor cable (Scintilla) (36219)	2	a
-10	10-50777	. Plate - Six cylinder shielded cable outlet (Scintilla) (25312)	2	a
-11	A-22524	. Nail - Brass	12	a
-12	A-25649	. Sleeve - Spark plug terminal contact (Titeflex)	12	a
-13	A-21844	. Bushing - Rubber (Titeflex)	12	a
-14	A-22184	. Elbow - Shielded spark plug 70° Nos. 1, 3, 5 upper and Nos. 1, 2, 3, 4, 5, 6 lower (Titeflex)	9	a
-15	A-24735	. Elbow - Shielded spark plug 90° Nos. 2, 4 6 upper (Titeflex)	3	a
-16	A-25440	. Cone - Spark plug elbow (Titeflex)	12	a
-17	No Number	. Cable - High tension ignition 7 mm (Spec No. MIL-C-3612 type I, grade "C", class 2)	AR †	a
-18	S3043-2708	. Conduit - Ignition cable shield No. 1 upper 27-1/2 in. long	1	a
-19	S3043-4800	. Conduit - Ignition cable shield No. 2 upper 48 in. long . . .	1	a
-20	S3043-3200	. Conduit - Ignition cable shield No. 3 upper 32 in. long . . .	1	a
-21	S3043-3300	. Conduit - Ignition cable shield No. 4 upper 33 in. long . . .	1	a
-22	S3043-4000	. Conduit - Ignition cable shield No. 5 upper 40 in. long . . .	1	a
-23	S3043-4000	. Conduit - Ignition cable shield No. 6 upper 40 in. long . . .	1	a
-24	S3043-3400	. Conduit - Ignition cable shield No. 1 lower 34 in. long . . .	1	a
-25	S3043-4600	. Conduit - Ignition cable shield No. 2 lower 46 in. long . . .	1	a
-26	S3043-4300	. Conduit - Ignition cable shield No. 3 lower 43 in. long . . .	1	a
-27	S3043-3200	. Conduit - Ignition cable shield No. 4 lower 32 in. long . . .	1	a
-28	S3043-4900	. Conduit - Ignition cable shield No. 5 lower 49 in. long . . .	1	a
-29	S3043-4100	. Conduit - Ignition cable shield No. 6 lower 41 in. long . . .	1	a
-30	2-155	Washer - Plain brass .1 ID x .313 OD x .02 in. thick (Scintilla) (25314)	2	a
-31	10-37668	Sleeve - Ground wire insulating .188 ID x .375 OD x .968 in. lg (Scintilla) (530455)	2	a
-32	10-7029	Ferrule - Shielded ground wire inner (Scintilla) (25316)	2	a
-33	10-7030	Ferrule - Shielded ground wire outer (Scintilla) (25317)	2	a
-34	10-37669	Nut - Hex coupling 5/8-24 (Scintilla) (25318)	2	a
-35	C27S	Plug - Spark (Champion Spark Plug Co, Toledo, Ohio) (531132-1)	12	a
-36	10-51365-17	Magneto - Model S6LN-21 (Scintilla) (531676)(T.O. 8E2-5-2-14)	2	a
		ATTACHING PARTS		
-37	356-524	Lock - Nut 5/16-24	4	a
-38	AN121503	Nut - Plain 5/16-24	4	a
-39	401506	Washer - Plain .33 ID x .75 OD x .09 in. thick	4	a

† Total length of ignition cable required per engine is 43 ft, 9 in.

Section II
Group Assembly Parts List

T.O. 2R-0470-4

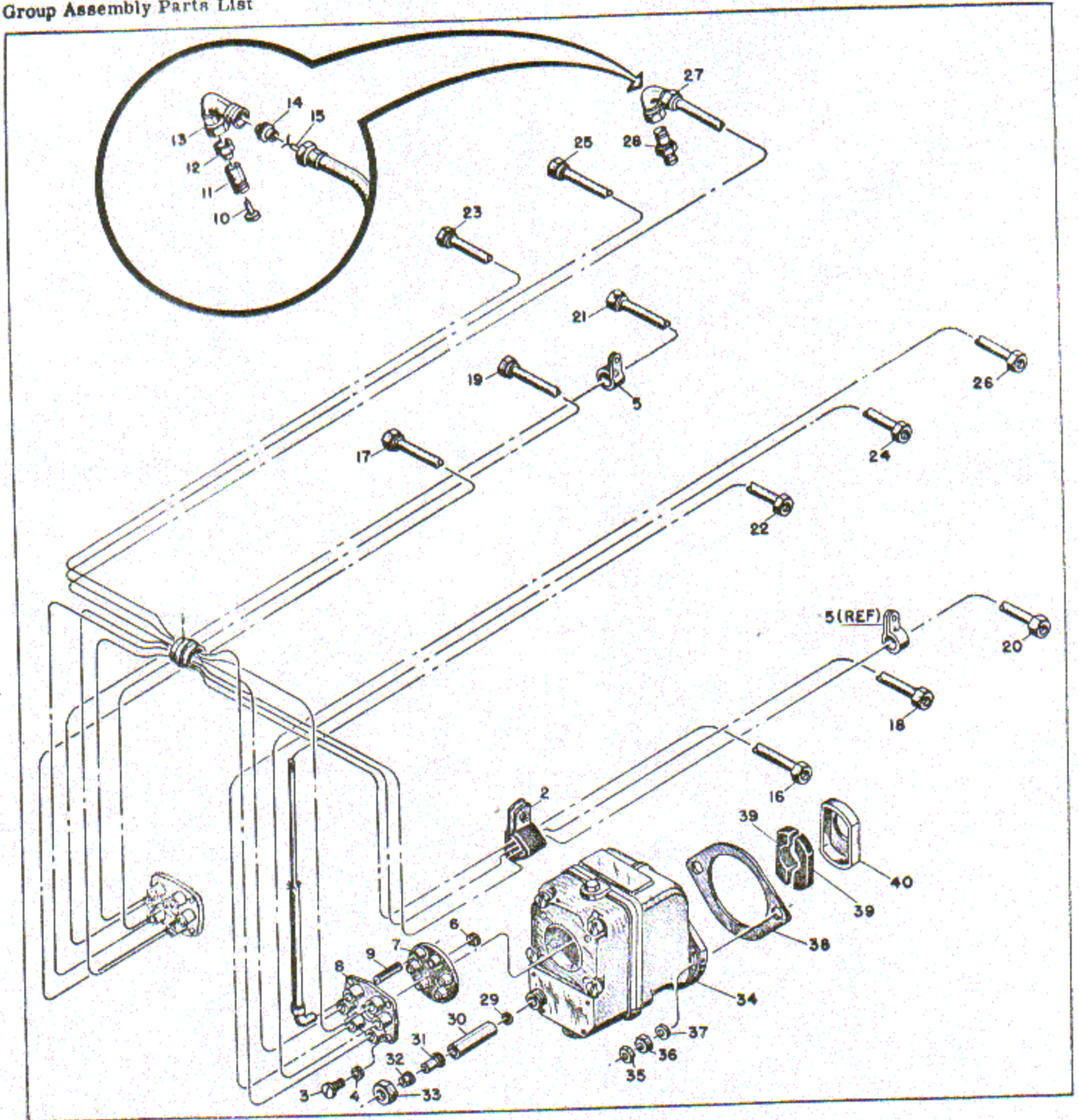


Figure 8. Exploded Parts View of O-470-11 Ignition System (5 mm. cable)

O-470-11 IGNITION SYSTEM (Cont)
(7 mm. Cable)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
7-40	535324	Gasket — Magneto							2	a
		- x - x -								
-41	531179	Bushing — Magneto drive coupling							4	a
-42	531178	Retainer — Magneto coupling							2	a

For application code, see page 13.

§ Use gasket No. 352057 until stock is depleted.

O-470-11 IGNITION SYSTEM
(5 mm. Cable)

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	103829 and Higher

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
8-1	49162	Band — Wire harness type B size 5 (United Carr Corp, Cambridge 42, Mass.) (533067)							1	a
-2	A25984	Bracket, Ignition cable (Titeflex) (537316)							2	a
	536043	Harness Assembly — Radio shielded ignition							1	a
ATTACHING PARTS										
-3	AN501-10-10	Screw — Fillister hd No. 10-32 x 5/8 in.							8	a
-4	AN935-10	Washer — Spring lock No. 10							8	a
		- x - x -								
-5	AN742D-9C	Bracket — Ignition cable							2	a
-6	10-51677	Washer — High tension cable contact (Scintilla Magneto Div, Bendix Aviation Corp, Sidney, N.Y.)							12	a
-7	10-50771	Grommet — Six cylinder distributor cable (Scintilla) (36219)							2	a
-8	10-50777	Plate — Six cylinder shielded cable outlet (Scintilla) (25312)							2	a
	536043-1	Harness Assembly — Ignition, left magneto							1	a
	536043-2	Harness Assembly — Ignition, right magneto							1	a
-9	RW1122	Socket — Synthetic rubber (Ray Whyte)							6	a
-10	AN302-20-3	Pin — Brass							6	a
-11	AN4164-2	Sleeve — Spark plug terminal contact							6	a
-12	WE1008	Bushing — Rubber (Ray Whyte)							6	a
-13	AN3104-1	Elbow — Shielded spark plug, 70°							6	a
-14	RW1009	Spacer Assembly (Ray Whyte)							6	a
-15	No Number	Cable — 5mm high tension ignition, Spec MIL-C-3162, Type I, Grade "C", Class 2							AR	a
-16	RW1214-L-3000	Conduit Assembly — Ignition cable No. 1 cyl lower Long elbow, 30 inches long (Ray Whyte)							1	a
-17	RW1214-L-2700	Conduit Assembly — Ignition cable No. 2 cyl lower Long elbow, 27 inches long (Ray Whyte)							1	a
-18	RW1214-L-3600	Conduit Assembly — Ignition cable No. 3 cyl lower Short elbow, 36 inches long (Ray Whyte)							1	a
-19	RW1214-L-3400	Conduit Assembly — Ignition cable No. 4 cyl lower Short elbow, 34 inches long (Ray Whyte)							1	a

O-470-11 IGNITION SYSTEM (Cont)
(5 mm. Cable)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
8-20	RW1214-L-4300	.	.	Conduit Assembly - Ignition cable No. 5 cyl lower Short elbow, 43 inches long (Ray Whyte)					1	a
-21	RW1214-L-4000	.	.	Conduit Assembly - Ignition cable No. 6 cyl lower Short elbow, 40 inches long (Ray Whyte)					1	a
-22	RW1214-R-2200	.	.	Conduit Assembly - Ignition cable No. 1 cyl upper Short elbow, 22 inches long (Ray Whyte)					1	a
-23	RW1214-R-3200	.	.	Conduit Assembly - Ignition cable No. 2 cyl upper Short elbow, 32 inches long (Ray Whyte)					1	a
-24	RW1214-R-3000	.	.	Conduit Assembly - Ignition cable No. 3 cyl upper Long elbow, 30 inches long (Ray Whyte)					1	a
-25	RW1214-R-3800	.	.	Conduit Assembly - Ignition cable No. 4 cyl upper Long elbow, 38 inches long (Ray Whyte)					1	a
-26	RW1214-R-3600	.	.	Conduit Assembly - Ignition cable No. 5 upper Short elbow, 36 inches long (Ray Whyte)					1	a
-27	RW1214-R-4200	.	.	Conduit Assembly - Ignition cable No. 6 cyl upper Short elbow, 42 inches long (Ray Whyte)					1	a
-28	C27S			Plug - Spark (Champion Spark Plug Co, Toledo, Ohio) (531132-1)					12	a
	10-52305			Kit - Ground terminal (Scintilla) (352024)					2	a
-29	2-155	.	.	Washer - Plain brass 0.1 ID x 0.313 OD x 0.02 in. thick (Scintilla) (25314)					1	a
-30	10-37668	.	.	Sleeve - Ground wire insulating 0.188 ID x 0.375 OD x 0.968 in. lg (Scintilla) (530455)					1	a
-31	10-7029	.	.	Ferrule - Shielded ground wire inner (Scintilla) (25316) .					1	a
-32	10-7030	.	.	Ferrule - Shielded ground wire outer (Scintilla) (25317) .					1	a
-33	10-37669	.	.	Nut - Hex coupling 5/8-24 (Scintilla) (25318)					1	a
-34	10-51365-17			Magneto - Model S6LN-21 (Scintilla) (531676)(T.O. 8E2-5-2-14)					2	a
				ATTACHING PARTS						
-35	356-524			Lock - Nut, 5/16-24					4	a
-36	AN121503			Nut - Plain, 5/16-24					4	a
-37	401506			Washer - Plain 0.33 ID x 0.75 OD x 0.09 in. thick					4	a
				- x - x -						
-38	5535324			Gasket - Magneto					2	a
-39	531179			Bushing - Magneto drive coupling					4	a
-40	531178			Retainer - Magneto coupling					2	a

For application code, see page 15

§ Use gasket No. 352057 until stock is depleted.

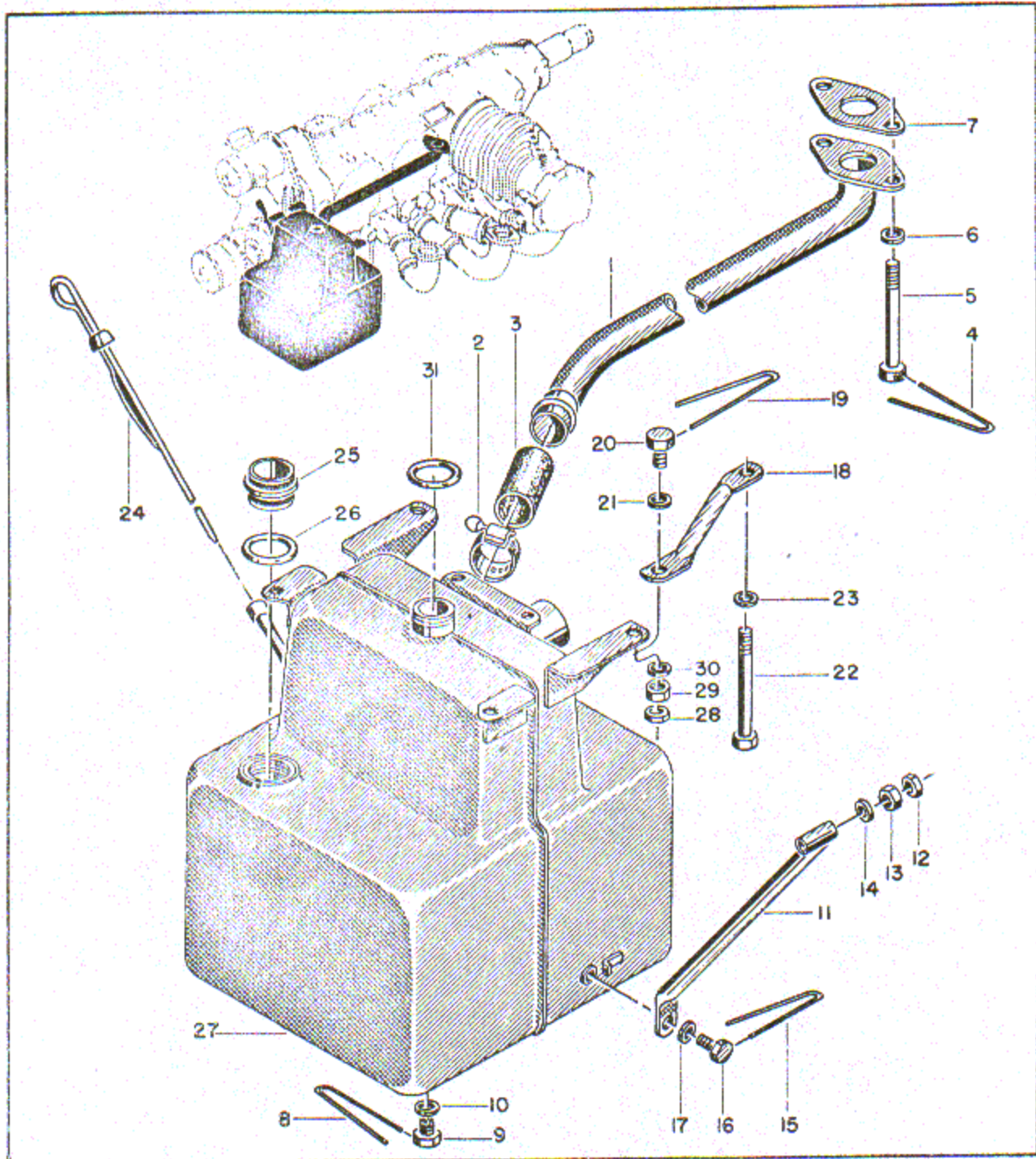


Figure 9. Exploded Parts View of O-470-7 Oil Sump

Section II
Group Assembly Parts List

AN02A-40EA-4

O-470-7 OIL SUMP

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A, O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
9-1	352088	Tube Assembly - Oil drain							1	ab
		ATTACHING PARTS								
-2	AN737-56	Clamp - Hose 1-3/4 in. dia.							2	ab
-3	531445-A	Hose - 1-1/4 ID x 1-3/4 OD x 3 in.							1	ab
-4	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713 (See figure 11-24)							Ref	ab
-5	AN75A21	Bolt - Aircraft drilled head 5/16-18 x 2-11/64 in. (See figure 11-25)							Ref	ab
-6	AN960-516L	Washer - Plain 5/16 in. (See figure 11-26)							Ref	ab
-7	352059	Gasket - Oil drain tube to manifold (See figure 11-28)							Ref	ab
		- x - x -								
-8	535011	Wire - Lock, CRES 18 ga. (.0403 in. dia) annealed, Spec MIL-W-6713							AR	ab
-9	530897	Plug - Oil sump magnetic drain hex head 5/8-18							1	ab
-10	AN900-10	Gasket - Copper-asbestos annular 5/8 in. ID							1	ab
-11	520005	Bracket Assembly - Oil sump side support right side							1	ab
	520006	Bracket Assembly - Oil sump side support left side							1	ab
		ATTACHING PARTS								
-12	356-524	Lock - Nut 5/16-24							2	ab
-13	AN121503	Nut - Plain 5/16-24							2	ab
-14	AN960-516	Washer - Plain 5/16 in.							2	ab
-15	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.							AR	ab
-16	530992	Bolt - Drilled hex head one hole 5/16-24 x 7/16 in.							2	ab
-17	AN960-516L	Washer - Plain 5/16 in.							2	ab
		- x - x -								
-18	352093	Bracket - Oil sump front support.							1	ab
		ATTACHING PARTS								
-19	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.							AR	ab
-20	530992	Bolt - Drilled hex head one hole 5/16-24 x 7/16 in.							1	ab
-21	AN960-516L	Washer - Plain 5/16 in.							1	ab
-22	AN103042	Bolt - Hex drilled head 5/16-18 x 3-5/8 in. (See figure 11-30)							Ref	ab
-23	AN960-516L	Washer - Plain 5/16 in. (See figure 11-31).							Ref	ab
		- x - x -								
	*352100	Sump Assembly - Complete oil							NP	ab
-24	A36114	Rod Assembly - Oil gauge.							1	ab
	23888	. . . . . Felt - Oil gauge collar							1	ab
	*23389	. . . . . Collar - Oil gauge dust							NP	ab
	*36114	. . . . . Rod - Oil gauge							NP	ab
-25	352092	. . . . . Tube - Oil sump by-pass.							1	ab
-26	AN123879	. . . . . Seal - "O" ring oil resistant 1.296 ID x .139 in. thick.							2	ab
-27	352071	. . . . . Sump Assembly - Oil							1	ab
		ATTACHING PARTS								
-28	356-524	. . . . . Lock - Nut 5/16-24							6	ab
-29	AN121503	. . . . . Nut - Plain 5/16-24							6	ab
-30	AN960-516L	. . . . . Washer - Plain 5/16 in.							6	ab
		- x - x -								
-31	AN123879	. . . . . Seal - "O" ring oil resistant 1.296 ID x .139 in. thick							1	ab

* Indicates non-procurable part.

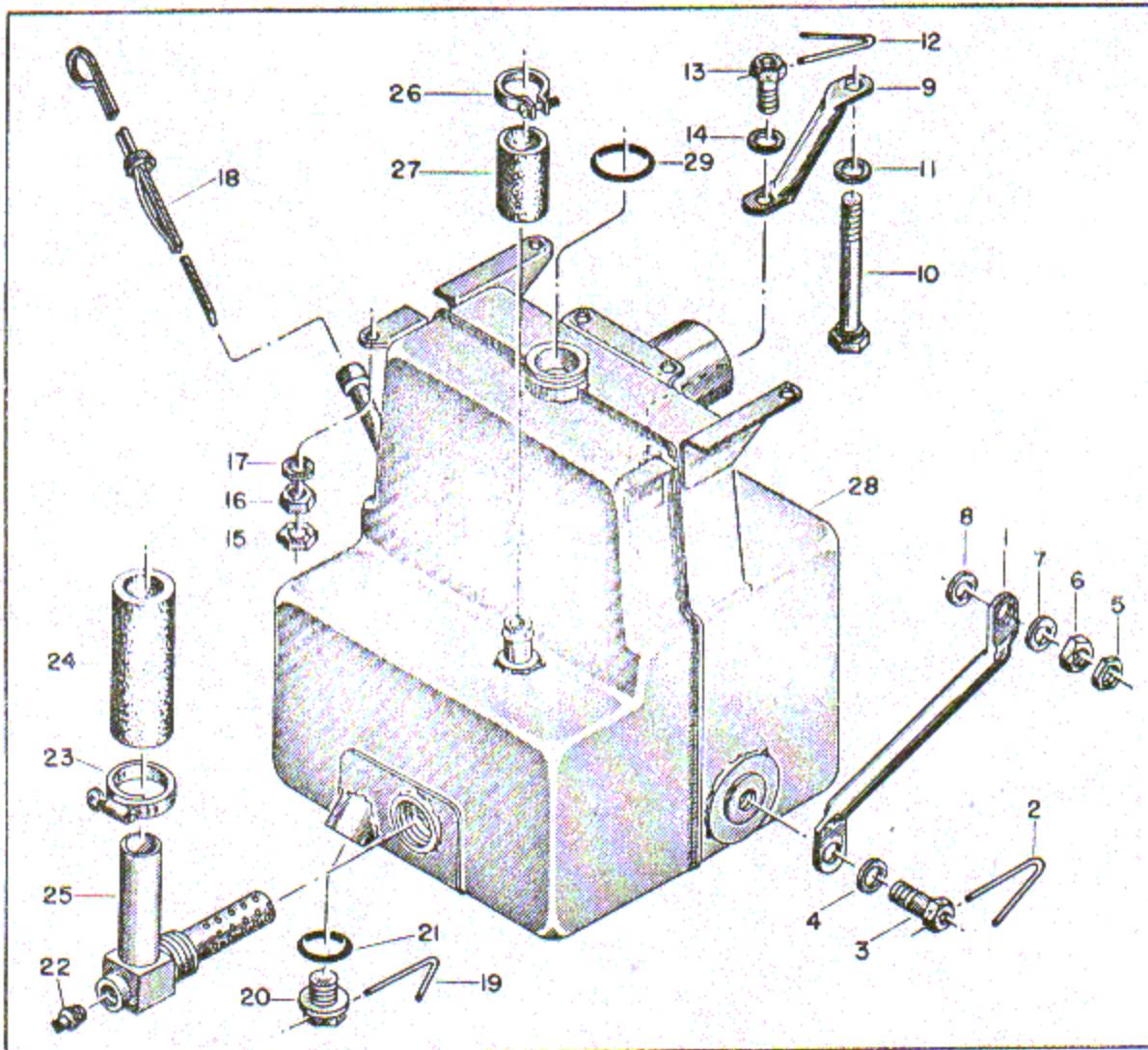


Figure 10. Exploded Parts View of O-470-11 Oil Sump

O-470-11 OIL SUMP

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
10-1	533025	Bracket - Oil sump side support							2	a
ATTACHING PARTS										
-2	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713							AR	a
-3	AN103006	Bolt - Drilled hex head 5/16-24 x 1/2 in.							2	a
-4	AN960-516L	Washer - Plain 5/16 in.							2	a
-5	356-524	Lock - Nut 5/16-24							2	a
-6	AN121503	Nut - Plain 5/16-24							2	a
-7	AN960-516L	Washer - Plain 5/16 in.							2	a
-8	AN960-516	Washer - Plain 5/16 in.							2	a

- x - x -

O-470-11 OIL SUMP (Cont)

Figure & Index No.	Part Number	Nomenclature 1 2 3 4 5 6 7	Units Per Assy	Appli- cation Code
10-9	352093	Bracket - Oil sump front support.	1	a
		ATTACHING PARTS		
-10	AN103042	Bolt - Hex drilled head 5/16-17 x 3-5/8 in. (See figure 11-30)	Ref	a
-11	AN960-516L	Washer - Plain 5/16 in. (See figure 11-31)	Ref	a
-12	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713	AR	a
-13	AN103006	Bolt - Drilled hex head 5/16-24 x 1/2 in.	1	a
-14	AN960-516L	Washer - Plain 5/16 in.	1	a
	*532461-A1	- x - x - Sump Assembly - Complete oil	NP	a
		ATTACHING PARTS		
-15	356-524	Lock - Nut 5/16-24	6	a
-16	AN121503	Nut - Plain 5/16-24	6	a
-17	AN960-516L	Washer - Plain 5/16 in.	6	a
		- x - x -		
-18	A36114	. Rod Assembly - Oil gauge	1	a
	23888	. . Felt - Oil gauge collar	1	a
	*23389	. . Collar - Oil gauge dust	NP	a
	*36114	. . Rod - Oil gauge	NP	a
-19	535011	. Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713	AR	a
-20	2832	. Plug - Hex drilled head brass 1-14NF	1	a
-21	AN900-16	. Gasket - Copper-asbestos annular 1 in. ID	1	a
-22	AN913-1D	. Plug - Square drilled head pipe thread aluminum alloy 1/8 in.	1	a
-23	AN745-3A	. Clamp - Hose 1-1/8 to 1-3/4 in.	2	a
-24	532490	. Hose - Reinforced synthetic rubber 1 ID x 4 in. long . . .	1	a
-25	532458	. Screen Assembly - Suction oil	1	a
-26	AN745-2A	. Clamp - Hose 3/4 to 1-1/8 in. ID	2	a
-27	20275	. Hose - Oil resistant syn rubber 5/8 ID x 1-1/16 OD x 1-7/8 in.	1	a
-28	532461	. Sump Assembly - Oil	1	a
-29	AN123879	Seal - "O" ring oil resistant 1.296 ID x .139 in. thick	1	a

For application code, see page 19.

* Indicates non-procurable part.

INDUCTION SYSTEM

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-11	All
d	O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
11-1	TFB1100-1	Pump - Fuel (Thompson Products, Inc, Cleveland, Ohio) (For a list of detail parts refer to T.O. 6R5-1-34 (530506)							1	ab
-2	RD7790-N	Pump - Fuel (Romec Div, Lear Avia, Inc, Elyria, Ohio) (531139)(See T.O. 6R5-3-7-4)							1	d
ATTACHING PARTS										
-3	356-428	Lock - Nut 1/4-28							1	abd
-4	AN121502	Nut - Plain 1/4-28							4	abd
-5	AN960-416L	Washer - Plain 1/4 in.							4	abd
- x - x -										
-6	AN4045-1	Gasket - Vacuum and hydraulic power pumps							1	abd
-7	RG-9080	Pump - Fuel, Type G18 (Romec Pump Div, Lear Avia, Inc, Elyria, Ohio) (532402) (T.O. 6R5-3-8-4)							1	c
ATTACHING PARTS										
-8	356-524	Lock - Nut 5/16-24							4	c
-9	AN121503	Nut - Plain engine 5/16-24							4	c
-10	AN960-516	Washer - Plain 5/16 in.							4	c
- x - x -										
-11	AN4059-1	Gasket - Type XIII engine accessory drive							1	c
-12	380230	Carburetor - Stromberg, Model PS-5C (Bendix Products Div, Bendix Aviation Corp, South Bend, Indiana) (For a list of detail parts refer to T.O. 6R1-3-5-4 (530486)							1	abd
	391318	Carburetor - Stromberg, Model PS-5C (Bendix Products Div, Bendix Aviation Corp, South Bend, Indiana) (For a list of detail parts refer to T.O. 6R1-3-5-4) (531857)							1	c
ATTACHING PARTS										
-13	356-524	Lock - Nut 5/16-24							4	All
-14	AN121503	Nut - Plain 5/16-24							4	All
-15	AN960-516L	Washer - Plain 5/16 in.							4	All
-16	35985	Gasket - Carburetor to manifold							1	All
-17	25135	Gasket - Carburetor to air scoop							1	All
- x - x -										
	*6757-A2	Induction Assembly - Complete							NP	abd
	*534204-A2	Induction Assembly - Complete							NP	c
ATTACHING PARTS										
-18	24830	Bolt - Hex drilled head 1/4-20 x .81 in.							12	All
-19	AN960-416L	Washer - Plain 1/4 in.							12	All
-20	AN936A416	Washer - Lock internal tooth 1/4 in.							12	All
-21	†536740	Seal - Intake manifold Hycar rubber							6	All
-22	36151-E	Clamp - Hose 2-3/8 in. ID							2	All
-23	24827	Hose - 2 ID x 2-1/2 in. long							1	All
-24	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713							AR	All
-25	AN75A21	Bolt - Aircraft drilled head 5/16-18 x 2-11/64 in.							2	All
-26	AN960-516L	Washer - Plain 5/16 in.							2	All
-27	5533724	Cover - Manifold oil drain							1	c
-28	5352059	Gasket - Oil drain cover to manifold							1	All

* Indicates non-procurable part.

† Use No. 536740 seals when stock of No. 531442 is depleted.

‡ Use on O-470-11 with No. 6757-A2 induction assembly.

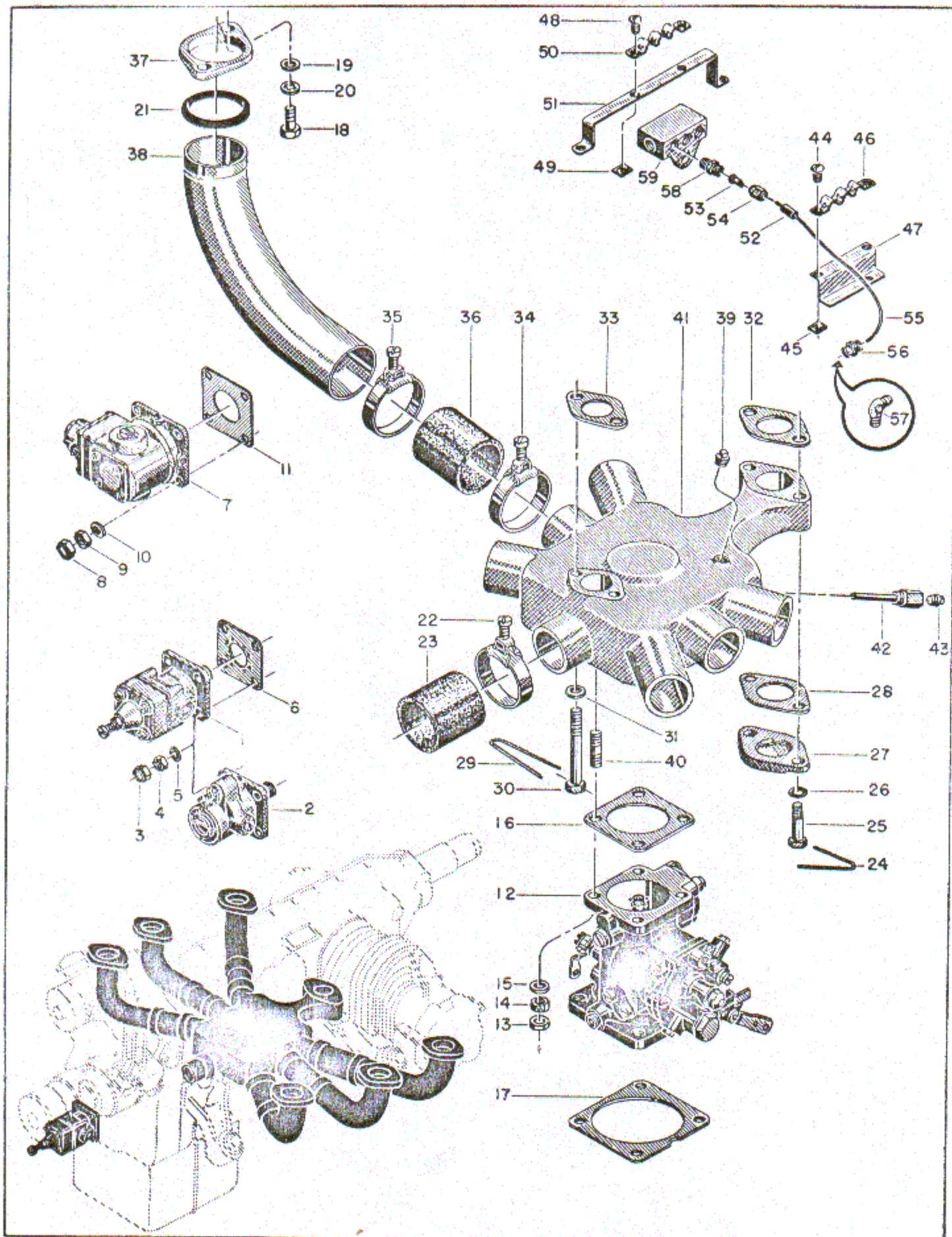


Figure 11. Exploded Parts View of Induction System

INDUCTION SYSTEM (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
11-29	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.							AR	All
-30	AN103042	Bolt - Hex drilled head 5/16-18 x 3-5/8 in.							2	All
-31	AN960-516L	Washer - Plain 5/16 in.							2	All
-32	352059	Gasket - Manifold to crankcase front							1	All
-33	352060	Gasket - Manifold to crankcase rear							1	All
		- x - x -								
-34	36151-E	. Clamp - Hose 2-3/8 in. ID							6	All
-35	36151-E	. Clamp - Hose 2-3/8 in. ID							6	All
-36	24827	. Hose - 2 ID x 2-1/2 in. long							6	All
-37	24828	. Flange - Intake manifold tube							6	All
-38	40640-C	. Tube - Intake manifold to cylinder							6	All
	6757-A1	. Manifold Studding Assembly - Intake and oil drain							1	abd
	534204-A1	. Manifold Studding Assembly - Intake and oil drain							1	c
-39	AN913-1S	. Plug - Square head pipe thread steel 1/8 in. ANPT							1	All
-40	22145	. Stud - Manifold to carburetor 5/16-18 x 5/16-24 x 1-3/8 in.							4	All
	22145P003	. Stud - 5/16-18 x 5/16-24 x 1-3/8 in., .003 in. OS on PD							AR	All
	22145P006	. Stud - 5/16-18 x 5/16-24 x 1-3/8 in., .006 in. OS on PD							AR	All
	22145P009	. Stud - 5/16-18 x 5/16-24 x 1-3/8 in., .009 in. OS on PD							AR	All
-41	*6757	. Manifold - Intake and oil drain							NP	abd
	*534204	. Manifold - Intake and oil drain							NP	c
-42	520087	Jet Assembly - Primer							1	abd
-43	AN913-1S	Plug - Square head pipe thread steel 1/8 in. ANPT							1	All
	532946	Clamp Assembly - Primer line 1, 3, 5 side							1	c
-44	AN530-10-6	. Screw - Sheet metal round hd No. 10 x 3/8 in.							2	c
-45	C1779-10Z-1	. Nut - Speed No. 10 (Tinnerman Products Co, Cleveland, Ohio) (532362).							2	c
-46	532945	. Clamp - Primer line							1	c
-47	532947	. Bracket - Primer line clamp 1, 3, 5 side							1	c
	532943	Clamp Assembly - Primer line 2, 4, 6 side							1	c
-48	AN530-10-6	. Screw - Sheet metal round hd No. 10 x 3/8 in.							2	c
-49	C1779-10Z-1	. Nut - Speed No. 10 (Tinnerman Products Co, Cleveland, Ohio) (532362).							2	c
-50	532945	. Clamp - Primer line							1	c
-51	532944	. Bracket - Primer line clamp							1	c
	532685	Tube Assembly - Primer cylinders Nos. 3 and 4							2	c
	532686	Tube Assembly - Primer cylinders Nos. 1 and 2							2	c
	532687	Tube Assembly - Primer cylinders Nos. 5 and 6							2	c
-52	21512	. Protector - Syn rubber tubular 1/8 ID x 5/16 OD x 5/8 in. long							1	c
-53	AN800C2	. Cone - Union corrosion resisting steel for 1/8 in. OD tubing							2	c
-54	AN805-2	. Nut - Union brass for 1/8 in. OD tubing							2	c
-55	*532698	. Tube - Steel 1/8 in. OD x 18.5 in. cylinders 1 and 2							NP	c
	*532699	. Tube - Steel 1/8 in. OD x 15.37 in. cylinders 3 and 4							NP	c
	*532700	. Tube - Steel 1/8 in. OD x 16.5 in. cylinders 5 and 6							NP	c
-56	AN4022-1	Nipple Assembly - Priming system jet for 1/8 OD tubing 5/16-32 NEF-3 x 1/8 in. ANPT (Nos. 1, 3, 4 and 6 cylinders)							4	c
-57	AN4023-1	Elbow Assembly - Priming system jet for 1/8 OD tubing 5/16-32 NEF-3 x 1/8 in. ANPT (Nos. 2 and 5 cylinders).							2	c
-58	AN780-2	Nipple - Union brass for 1/8 in. OD tubing (See figure 20-12)							Ref	c
-59	532676	Distributor - Primer (See figure 20-13)							Ref	c

For application code, see page 21.

* Indicates non-procurable part.

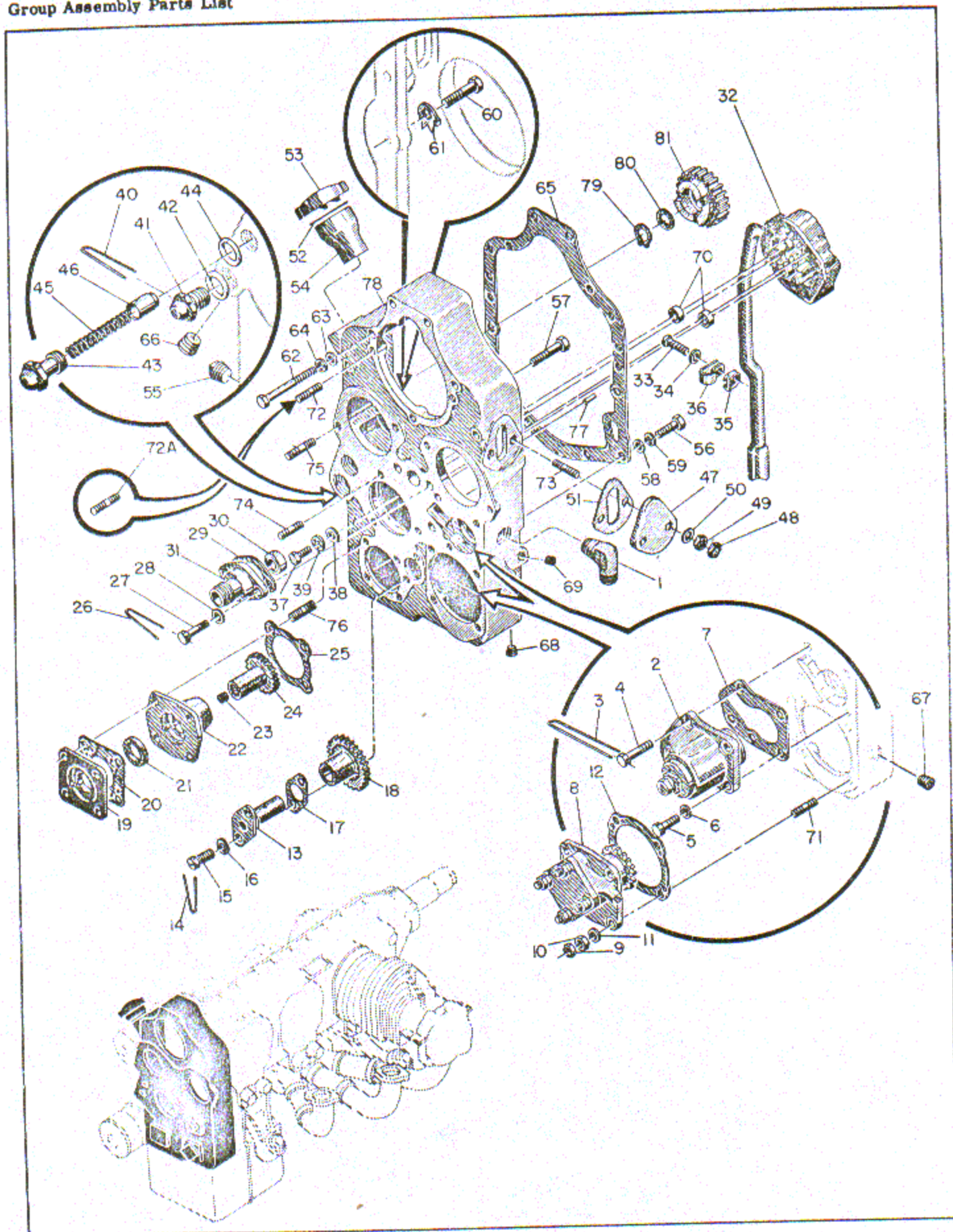


Figure 12. Exploded Parts View of O-470-7 Accessory Case

O-470-7 ACCESSORY CASE

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7, O-470-7A	All
b	O-470-7, O-470-7A	5200-D and higher
c	O-470-7, O-470-7A	above 5755-D
d	O-470-7B	All
e	O-470-7B	below 6104

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
12-1	AN822-10D	Elbow - Flared tube and pipe thread 90° x 7/8-14 x 1/2 in. ANPT							1	ad
-2	*40660-A1	Screen and Housing Assembly - Pressure oil (See figure 13).							NP	ad
ATTACHING PARTS										
-3	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713							AR	ad
-4	24872	Bolt - Hex drilled head 1/4-20 x 1-5/8 in.							2	ad
-5	24873	Bolt - Hex drilled head 1/4-20 x 1 in.							3	ad
-6	AN960-416L	Washer - Plain 1/4 in.							5	ad
-7	352067	Gasket - Pressure oil screen housing.							1	ad
- x - x -										
-8	*A36055-A1	Drive Assembly - Right side accessory (See figure 14)							NP	ad
ATTACHING PARTS										
-9	356-524	Lock - Nut 5/16-24							4	ad
-10	AN121503	Nut - Plain 5/16-24.							4	ad
-11	520014	Washer - Plain steel .33 ID x .036 in.							4	ad
-12	36027	Gasket - Right side accessory drive							1	ad
- x - x -										
-13	35999	Shaft - Accessory drive idler gear							1	ad
ATTACHING PARTS										
-14	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.							AR	ad
-15	AN500A416-10	Screw - Fillister head coarse thread 1/4-20 x 5/8 in.							2	ad
-16	530671	Washer - Plain copper 1/4 ID x 1/16 in.							2	ad
-17	520004	Gasket - Idler gear shaft							1	ad
- x - x -										
-18	352014	Gear - Accessory drive idler							1	ad
-19	530371	Spacer - Fuel pump.							1	ad
-20	AN4045-1	Gasket - Vacuum and hydraulic power pumps.							1	ad
-21	25102	Seal - Oil							1	ad
-22	530443	Adapter - Fuel pump drive shaft gear.							1	ad
-23	†AN932-1	Plug - Countersunk hex head pipe 1/16 in. ANPT							1	ad
-24	352018	Shaftgear - Hydraulic pump drive.							1	ad
-25	352061	Gasket - Hydraulic and scavenge oil pump shaftgear adapter.							1	ad
	35978-A1	Housing Assembly - Tachometer drive							1	ad
ATTACHING PARTS										
-26	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.							AR	ad
-27	24834	Bolt - Hex drilled head 1/4-20 x 1-3/8 in.							2	ad
-28	AN960-416L	Washer - Plain 1/4 in.							2	ad
-29	352062	Gasket - Tachometer drive housing							1	ad
- x - x -										
-30	21163	Seal - Oil 3/8 shaft dia x 1.003 OD x 3/8 in.							1	ad
-31	*35978	Housing - Tachometer drive							NP	ad
-32	*No number	Pump Assembly - Oil (See figure 15)							NP	ad
ATTACHING PARTS										
-33	AN530-10-20	Screw - Round head sheet metal No. 10 x 1-1/4 in.							1	ad

* Indicates non-procurable part.

† Plug required if shaftgear part no. 352018 is tapped.

O-470-7 ACCESSORY CASE (Cont)

Figure & Index No.	Part Number	Nomenclature 1 2 3 4 5 6 7	Units	Appli-
			Per Assy	cation Code
12-34	AN900-3	Gasket - Copper-asbestos annular 3/16 in. ID	1	ad
-35	25027	Nut - Speed No. 10 sheet metal screw	1	ad
-36	24908	Clip - Oil suction tube to accessory case	1	ad
-37	24832	Bolt - Special hex head 1/4-20 x 5/8 in.	1	ad
-38	AN900-416L	Washer - Plain steel for 1/4 in. bolt	1	ad
-39	AN936A416	Washer - Lock internal tooth 1/4 in.	1	ad
		- x - x -		
-40	535011	Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.	AR	ad
-41	21113	Cap - Oil cooler by-pass valve	1	ad
-42	AN900-14	Gasket - Copper-asbestos annular 7/8 in. ID	1	ad
-43	24823	Cap - Oil pressure relief valve	1	ad
-44	AN900-14	Gasket - Copper-asbestos annular 7/8 in. ID	1	ad
-45	530838	Spring - Oil pressure relief valve	1	ad
-46	21114	Plunger - Oil pressure relief valve	1	ad
-47	35979	Cover - Fuel pump pad	2	ae
		ATTACHING PARTS		
-48	356-524	Lock - Nut 5/16-24	4	ae
-49	AN121503	Nut - Plain 5/16-24.	4	ae
-50	AN960-516L	Washer - Plain 5/16 in.	4	ae
-51	352065	Gasket - Fuel pump pad cover	2	ae
		- x - x -		
	352111	Cap Assembly - Oil filler	1	ad
-52	533355	. Gasket - Oil filler cap	1	a
-53	*No Number	. Cap - Oil filler	NP	a
-54	535063	Neck - Oil filler	1	ad
-55	AN913-4	Plug - Square head pipe thread brass 1/2 in. ANPT	1	ad
	352178	Studding Assembly - Accessory case	1	ad
		ATTACHING PARTS		
-56	352106	Screw - Special hex head 1/4-20 x 15/16 in.	1	ad
-57	352107	Screw - Special hex head 1/4-20 x 1.72 in.	3	ad
-58	AN960-416L	Washer - Plain 1/4 in.	4	ad
-59	AN936A416	Washer - Lock internal tooth 1/4 in.	4	ad
-60	24835	Screw - Hex head 1/4-20 x .94 inch	2	ad
-61	36025	Washer - Tab .26 inch ID	2	ad
-62	24829	Screw - Hex head 1/4-20 x 3-1/4 in.	4	ad
-63	AN960-416L	Washer - Plain 1/4 in.	4	ad
-64	AN936A416	Washer - Lock internal tooth 1/4 in.	4	ad
-65	352069	Gasket - Accessory case	1	ad
		- x - x -		
-66	AN932D5	. Plug - Countersunk hex head pipe aluminum 1/2 in. ANPT	1	ad
-67	AN932C4	. Plug - Countersunk hex head pipe brass 3/8 in. ANPT .	1	bd
-68	AN932-2	. Plug - Countersunk hex head pipe steel 1/8 in. ANPT. .	1	ad
-69	AN932-2	. Plug - Countersunk hex head pipe steel 1/8 in. ANPT .	1	ad
-70	530551	. Bushing - Oil pump	2	cd
-71	2389	. Stud - Right side accessory drive pad 5/16-18 x 5/16-24 x 1-1/4 in.	4	ad
	2389P003	. Stud - 5/16-18 x 5/16-24 x 1-1/4 in., .003 in. OS on PD	AR	ad
	2389P006	. Stud - 5/16-18 x 5/16-24 x 1-1/4 in., .006 in. OS on PD	AR	ad
	2389P009	. Stud - 5/16-18 x 5/16-24 x 1-1/4 in., .009 in. OS on PD	AR	ad
-72	2465	. Stud - Starter pad 5/16-18 x 5/16-24 x 1-3/8 in.	3	ad
-72A	531005	. Stud - 5/16-18 x 5/16-24 x 1.69 in.	3	ad
	531005P003	. Stud - 5/16-18 x 5/16-24 x 1.69 in., .003 in. OS on OD.	AR	ad
	531005P006	. Stud - 5/16-18 x 5/16-24 x 1.69 in., .003 in. OS on OD.	AR	ad
	531005P009	. Stud - 5/16-18 x 5/16-24 x 1.69 in., .003 in. OS on OD.	AR	ad
-73	2465	. Stud - Fuel pump pad	4	ae

For application code, see page 25.

* Indicates non-procurable parts.

O-470-7 ACCESSORY CASE (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
12-74	2465	.	Stud	-	Generator pad	.	.	.	3	ad
	2465P003	.	Stud	-	5/16-18 x 5/16-24 x 1-3/8 in., .003 in. OS on PD	.	.	.	AR	ad
	2465P006	.	Stud	-	5/16-18 x 5/16-24 x 1-3/8 in., .006 in. OS on PD	.	.	.	AR	ad
	2465P009	.	Stud	-	5/16-18 x 5/16-24 x 1-3/8 in., .009 in. OS on PD	.	.	.	AR	ad
-75	22195	.	Stud	-	Magneto pads 5/16-18 x 5/16-24 x 1-1/2 in. . .	.	.	.	4	ad
	22195P003	.	Stud	-	5/16-18 x 5/16-24 x 1-1/2 in., .003 in. OS on PD	.	.	.	AR	ad
	22195P006	.	Stud	-	5/16-18 x 5/16-24 x 1-1/2 in., .006 in. OS on PD	.	.	.	AR	ad
	22195P009	.	Stud	-	5/16-18 x 5/16-24 x 1-1/2 in., .009 in. OS on PD	.	.	.	AR	ad
-76	530479	.	Stud	-	Fuel pump drive pad 1/4-20 x 1/4-28 x 1-9/16 in.	.	.	.	4	ad
	530479P003	.	Stud	-	1/4-20 x 1/4-28 x 1-9/16 in., .003 in. OS on PD	.	.	.	AR	ad
	530479P006	.	Stud	-	1/4-20 x 1/4-28 x 1-9/16 in., .006 in. OS on PD	.	.	.	AR	ad
	530479P009	.	Stud	-	1/4-20 x 1/4-28 x 1-9/16 in., .009 in. OS on PD	.	.	.	AR	ad
-77	24846	.	Dowel	-	Steel 3/16 dia x 5/8 in. long	.	.	.	2	d
-78	*6740	.	Case	-	Accessory	.	.	.	NP	ad
-79	5100-66	.	Ring	-	External retaining (Waldes Kohinoor Inc., Long Island City, N. Y.) (521649)	.	.	.	1	ad
-80	530339	.	Washer	-	Starter gear thrust	.	.	.	1	ad
-81	530338	.	Gear Assembly	-	Starter jaw	.	.	.	1	ad

For application code, see page 25.

* Indicates non-procurable parts.

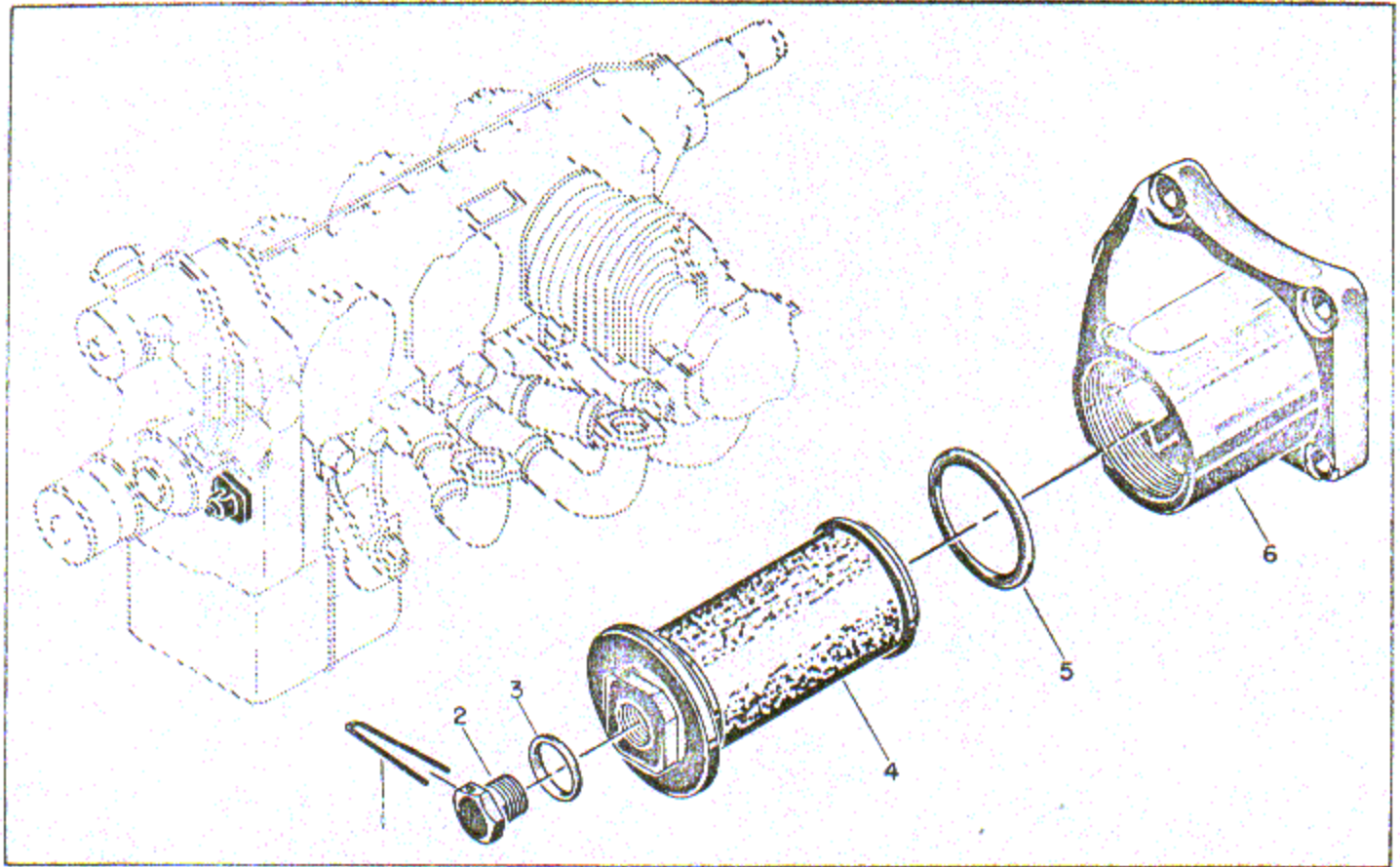


Figure 13. Exploded Parts View of O-470-7 Pressure Oil Screen and Housing Assembly

O-470-7 PRESSURE OIL SCREEN AND HOUSING ASSEMBLY

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A, O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
13	*40660-A1	Screen and Housing Assembly - Pressure oil (See figure 12-2) (For attaching parts see figure 12)							Ref	ab
-1	535011	. Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713							AR	ab
-2	905B10	. Plug - Hex head drilled for locking 5/8-18							1	ab
-3	AN900-10	. Gasket - Copper-asbestos annular 5/8 in. ID							1	ab
-4	A35996	. Screen Assembly - Pressure oil							1	ab
-5	AN900-29	. Gasket - Copper-asbestos annular 1-13/16 in. ID							1	ab
-6	40660	. Housing - Pressure oil screen							1	ab

* Indicates non-procurable parts.

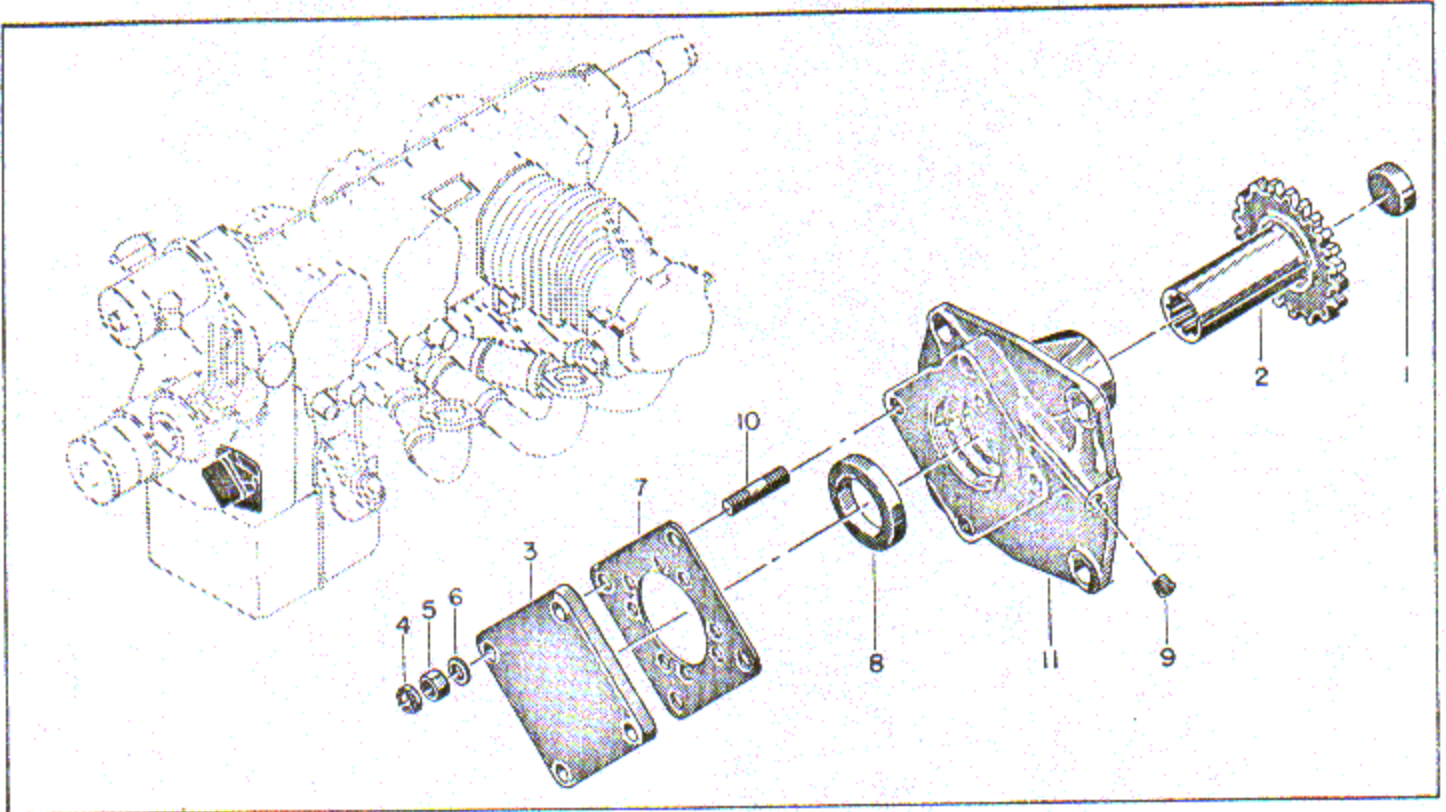


Figure 14. Exploded Parts View of O-470-7 Right Side Accessory Drive Assembly

O-470-7 RIGHT SIDE ACCESSORY DRIVE

Coding Explanation

Application Code	Model Designation	All Numbers
a	O-470-7	All
b	O-470-7A, O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
14	*A36055-A1	Drive Assembly - Right side accessory (See figure 12-8) (For attaching parts see figure 12).....							Ref	ab
	A25004	. Shaftgear Assembly - Vacuum pump drive							1	ab
-1	*25003	. Plug - Cup .72 OD x .25 in. deep.							NP	ab
-2	*352015	. Shaftgear - Vacuum pump drive							NP	ab
-3	25005	. Cover - Vacuum pump adapter							1	ab
ATTACHING PARTS										
-4	356-428	. Lock - Nut 1/4-28							4	ab
-5	AN121502	. Nut - Plain 1/4-28							4	ab
-6	AN960-416L	. Washer - Plain 1/4 in.							4	ab
-7	AN4045-1	. Gasket - Vacuum and hydraulic power pumps							1	ab
- x - x -										
-8	25001	. Seal - Oil 7/8 shaft dia x 1.38 OD x .31 in.							1	ab
	A36055	. Adapter Studding Assembly - Vacuum pump drive							1	ab
-9	AN932-1	. Plug - Countersunk hex head pipe 1/16 in. ANPT.							1	ab
-10	25008	. Stud - Vacuum pump pad 1/4-20 x 1/4-28 x 1-3/8 in. .							4	ab
	25008P003	. Stud - 1/4-20 x 1/4-28 x 1-3/8 in., .003 in. OS on PD.							AR	ab
	25008P006	. Stud - 1/4-20 x 1/4-28 x 1-3/8 in., .006 in. OS on PD.							AR	ab
	25008P009	. Stud - 1/4-20 x 1/4-28 x 1-3/8 in., .009 in. OS on PD.							AR	ab
-11	*50403	. Adapter - Vacuum pump drive							NP	ab

* Indicates non-procurable part.

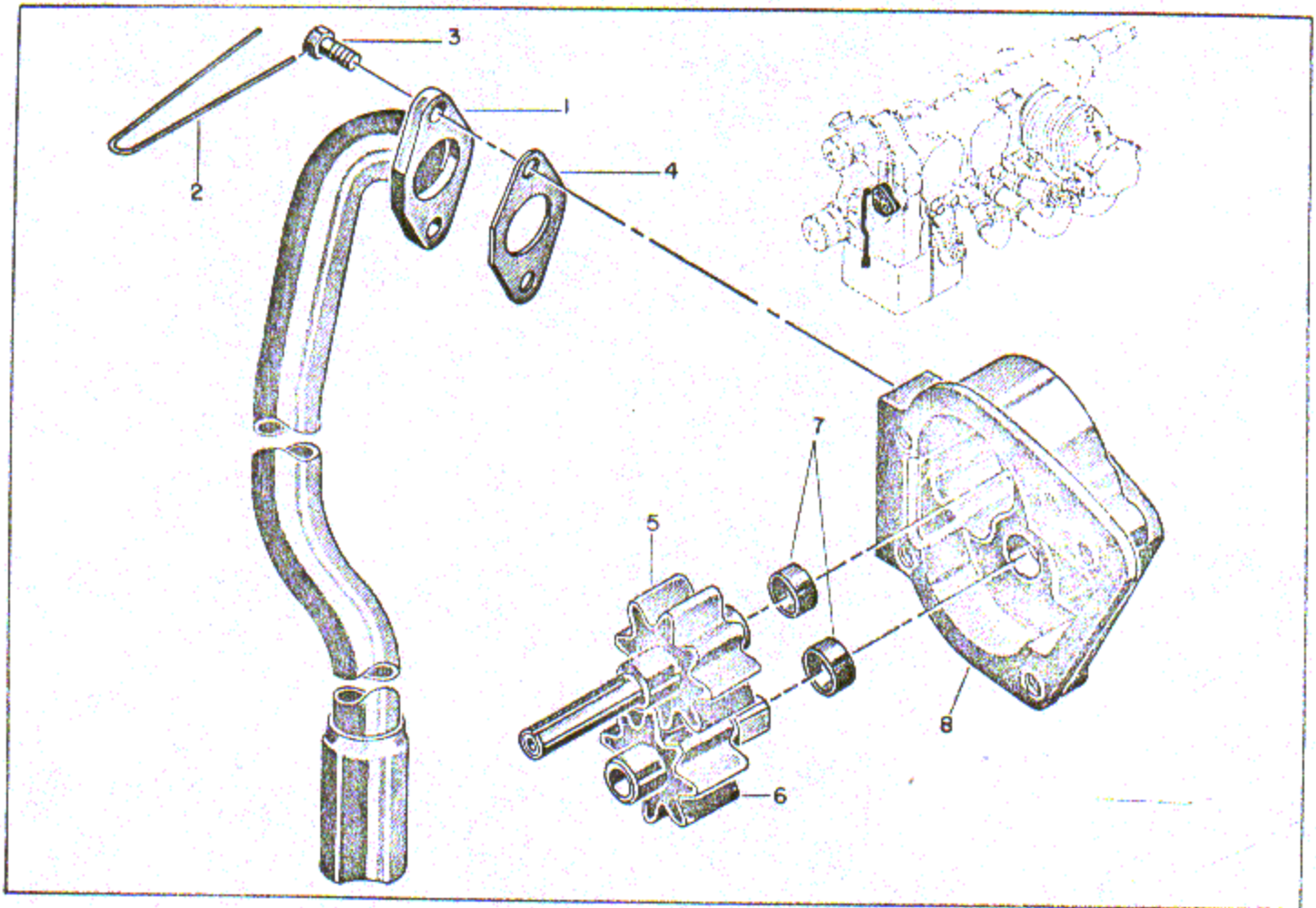


Figure 15. Exploded Parts View of O-470-7 Oil Pump Assembly

O-470-7 OIL PUMP

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
15	*No Number	Pump Assembly - Oil (See figure 12-32) (For attaching parts see figure 12)							Ref	abc
-1	520054	. Tube and Screen Assembly - Oil pump suction							1	abc
ATTACHING PARTS										
-2	535011	. Wire - Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713							AR	abc
-3	AN74A5	. Bolt - Aircraft drilled hd 1/4-20 x 9/16 in.							2	abc
-4	24856	. Gasket - Oil pump suction tube							1	abc
- x - x -										
-5	530692	. Impeller - Oil pump driven (8 teeth) (for No. 530549 housing)							1	ab

* Indicates non-procurable part.

O-470-7 OIL PUMP (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
15	530694	.	Impeller — Oil pump driven (7 teeth) (for No. 530696 housing)						1	c
-6	530693	.	Impeller — Oil pump driving (8 teeth) (for No. 530549 housing)						1	ab
	530695	.	Impeller — Oil pump driving (7 teeth) (for No. 530696 housing)						1	c
	530549	.	Housing and Bushing Assembly — Oil pump						1	ab
	531569	.	Housing and Bushing Assembly — Oil pump (for accessory cases with dowels No. 24846)						1	c
-7	530551	.	Bushing — Oil pump						2	abc
-8	*50365	.	Housing — Oil pump (part of No. 530549)						NP	ab
	*530696	.	Housing — Oil pump (part of No. 531569)						NP	c

For application code, see page 30.

* Indicates non-procurable part.

O-470-11 ACCESSORY CASE

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
16	533055	.	Retainer Assembly — Oil cap						1	a
-1	AN430A4-4	.	Rivet — Round head, iron, 1/8 dia x 1/4 in. long.						1	a
-2	533054	.	Chain — Oil cap retainer						1	a
-3	533053	.	Ring — Oil cap retainer						1	a
	352111	.	Cap Assembly — Oil filler						1	a
-4	533355	.	Gasket — Oil filler cap (furnished with 352111)						1	a
-5	*No Number	.	Cap — Oil filler						NP	a
	532540	.	Spout Assembly — Oil filler						1	a
			ATTACHING PARTS							
-6	356-428	.	Lock — Nut 1/4-28						2	a
-7	AN121502	.	Nut — Plain 1/4-28						2	a
-8	AN960-418L	.	Washer — Plain 1/4 in.						2	a
-9	532509	.	Gasket — Oil filler spout						1	a
			- x - x -							
-10	AN435-5-4C	.	Rivet — Round head, mild steel, 5/32 dia x 1/4 in.						2	a
-11	532613	.	Clip — Spring						2	a
-12	‡535063	.	Neck — Oil filler						1	a
-13	*532632	.	Spout — Oil filler						NP	a
-14	36181	.	Cover — Governor pad						1	a
			ATTACHING PARTS							
-15	356-524	.	Lock — Nut 5/16-24						4	a
-16	AN121503	.	Nut — Plain 5/16-24						4	a
-17	AN960-516	.	Washer — Plain 1/4 in.						4	a

* Indicates non-procurable part.

‡ Use neck No. 21250 until stock is depleted.

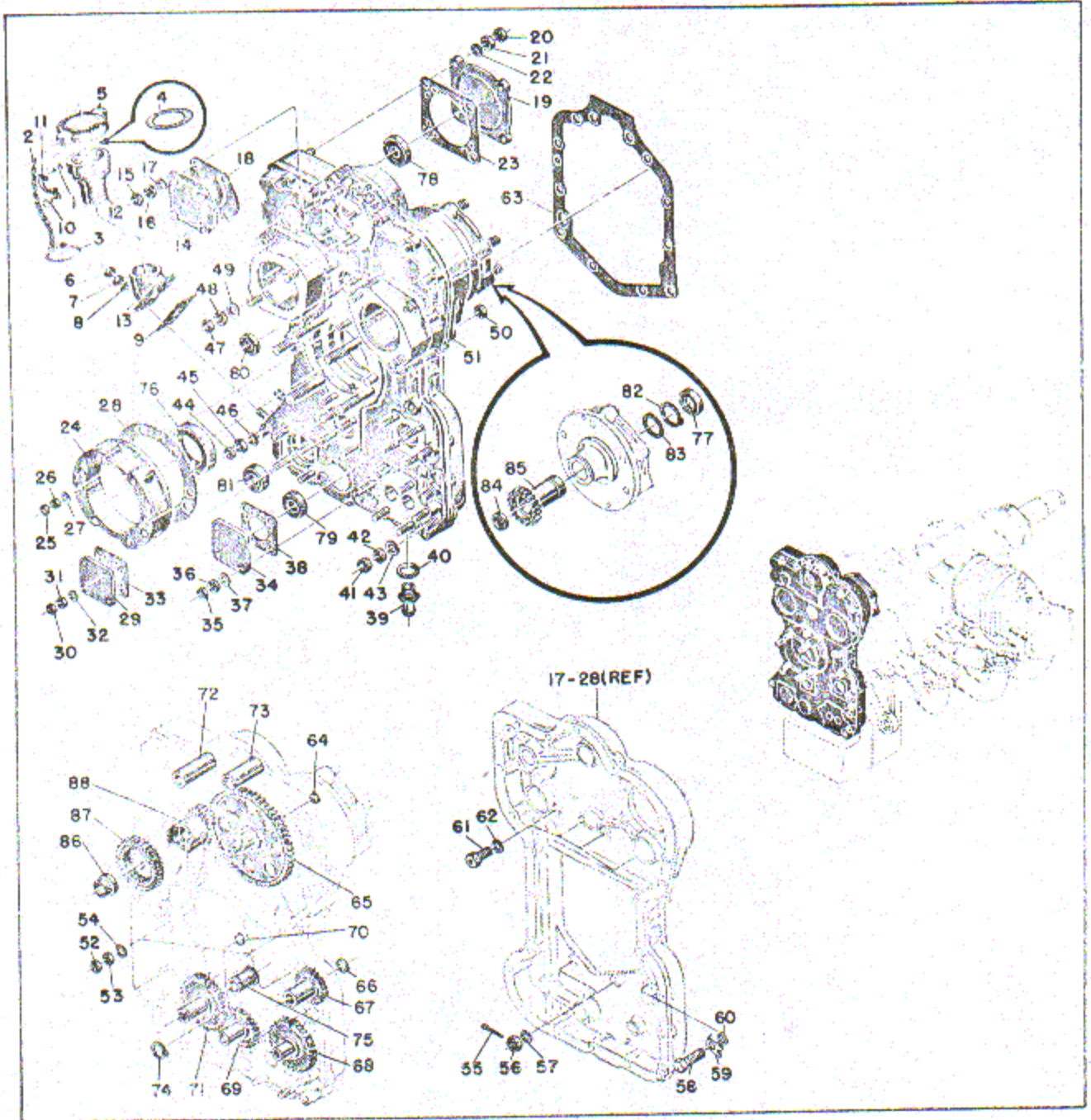


Figure 16. Exploded Parts View of O-470-11 Accessory Case

O-470-11 ACCESSORY CASE (Cont)

Figure & Index No.	Part Number	Nomenclature 1 2 3 4 5 6 7	Units	Appl-
			Per Assy	ication Code
16-18	AN100008	Gasket - Type XX engine accessory drive	1	a
		- x - x -		
-19	532532	Cover - Upper hydraulic pump pad	1	a
		ATTACHING PARTS		
-20	356-524	Lock - Nut 5/16-24	4	a
-21	AN121503	Nut - Plain 5/16-24	4	a
-22	AN960-516	Washer - Plain 5/16 in.	4	a
-23	AN4044-1	Gasket - Type XI engine accessory drive	1	a
		- x - x -		
-24	532139	Adapter - Starter	1	a
		ATTACHING PARTS		
-25	356-428	Lock - Nut 1/4-28	2	a
-26	AN121502	Nut - Plain 1/4-28	2	a
-27	AN960-416L	Washer - Plain 1/4 in.	2	a
-28	532520	Gasket - Starter adapter	1	a
		- x - x -		
-29	25005	Cover - Vacuum pump adapter	1	a
		ATTACHING PARTS		
-30	356-428	Lock - Nut 1/4-28	4	a
-31	AN121502	Nut - Plain 1/4-28	4	a
-32	AN960-416L	Washer - Plain 1/4 in.	4	a
-33	AN4045-1	Gasket - Vacuum and hydraulic power pumps	1	a
		- x - x -		
-34	25005	Cover - Vacuum pump adapter shipping (with no vacuum pump)	1	a
		ATTACHING PARTS		
-35	356-428	Lock - Nut 1/4-28	4	a
-36	AN121502	Nut - Plain 1/4-28	4	a
-37	AN960-416L	Washer - Plain 1/4 in.	4	a
-38	AN4045-1	Gasket - Vacuum and hydraulic power pumps	1	a
		- x - x -		
-39	20273	Nipple - Hose 3/4-16NF for 5/8 in. ID hose	1	a
-40	AN900-13	Gasket - Copper-asbestos annular 13/16 in. ID	1	a
-41	356-524	Lock - Nut 5/16-24	14	a
-42	AN121503	Nut - Plain 5/16-24	14	a
-43	AN960-516	Washer - Plain 5/16 in.	14	a
-44	356-524	Lock - Nut 5/16-24	1	a
-45	AN121503	Nut - Plain 5/16-24	1	a
-46	AN960-516	Washer - Plain 5/16 in.	1	a
-47	356-524	Lock - Nut 5/16-24	2	a
-48	AN121503	Nut - Plain 5/16-24	2	a
-49	AN960-516	Washer - Plain steel 5/16 in.	2	a
-50	356-524	Lock - Nut 5/16-24	2	a
-51	532820-A1	Machining Assembly - Accessory case front and rear (See figure 17.)	1	a
		ATTACHING PARTS		
-52	356-524	Lock - Nut 5/16-24	5	a
-53	AN121503	Nut - Plain 5/16-24	5	a
-54	AN960-516	Washer - Plain 5/16 in.	5	a
-55	AN381-2-7	Pin - Cotter 1/16 dia x 7/16 in.	2	a
-56	AN320-4	Nut - Castle shear 1/4-28	2	a
-57	AN960-416L	Washer - Plain 1/4 in.	2	a
-58	*AN75A17	Bolt - Aircraft drilled hd 5/16-18 x 1-59/64	1	a
-59	501868	Washer - Tab, 5/16 in.	1	a
-60	AN960-516L	Washer - Plain, 5/16 in.	1	a

For application code, see page 31.

* For serial number 100846 and higher. For earlier engines use AN75A7.

O-470-11 ACCESSORY CASE (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
16-61	AN75A7	Bolt - Aircraft drilled hd 5/16-18 x 59/64 in.							4	a
-62	AN960-516L	Washer - Plain 5/16 in.							4	a
-63	532482	Gasket - Crankcase to accessory case							1	a
		- x - x -								
	532541	Gear Assembly - Tachometer drive upper							1	a
-64	532199	. Plug - Oil .633 OD x 1/4 in. cup							1	a
-65	*532177	. Gear - Tachometer drive upper							NP	a
	532543	Gear Assembly - Hydraulic pump drive lower							1	a
-66	535527	. Plug - Oil .758 OD x 1/4 in. cup							1	a
-67	*532181	. Gear - Hydraulic pump drive lower							NP	a
-68	532174	Gear - Oil pump drive							1	a
-69	532178	Gear - Fuel pump idler							1	a
	532542	Gear Assembly - Fuel pump drive							1	a
-70	532199	. Plug - Oil .633 OD x 1/4 in. cup							1	a
-71	*532180	. Gear - Fuel pump drive							NP	a
-72	†532533	Plug - Hydraulic pump drive upper aluminum alloy .93 OD and 1.34 OD x .75 ID x 2.49 in. lg							1	a
-73	†532468	Plug - Propeller governor drive aluminum alloy .935 OD and 1.31 OD x .75 ID x 2.53 in. lg							1	a
-74	532660	Ring - Truarc external retaining							1	a
-75	532654	Plug - Lower tachometer drive aluminum alloy							1	a
-76	532467	Seal - Oil 3 OD for 2-1/4 in. dia shaft							1	a
-77	532489	Seal - Oil 1.83 OD for 1-1/8 in. dia shaft							1	a
-78	532506	Seal - Oil 1.63 OD for 15/16 in. dia shaft							1	a
-79	532508	Seal - Oil 1.503 OD for 15/16 in. dia shaft							1	a
-80	532510	Seal - Oil 1.379 OD for 9/16 in. dia shaft							1	a
-81	532534	Seal - Oil 1.503 OD for 13/16 in. dia shaft							1	a
-82	5100-112	Ring - Truarc external retaining 1.038 ID x .05 in. (Waldes-Kohinoor, Inc, Long Island City, N.Y.) (532486)							1	a
-83	532487	Washer - Thrust aluminum alloy 1.127 ID x 1.5 OD x 0.62 in.							1	a
	532536	Gear Assembly - Generator drive							1	a
-84	532202	. Plug - Oil .946 OD x 1/4 in. cup							1	a
-85	*532172	. Gear - Generator drive							NP	a
	532479	Gear Assembly - Magneto cluster							2	a
-86	531177	. Sleeve - Magneto drive gear							1	a
-87	*532478	. Gear - Magneto drive							NP	a
-88	*532477	. Gear - Magneto drive shaft							NP	a

For application code, see page 31.

* Indicates non-procurable part.

† Use No. 533406 plug in both locations when stocks of No. 532533 and No. 532468 are depleted.

O-470-11 ACCESSORY CASE STUDDING AND MACHINING ASSEMBLY

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	All
b	O-470-11	100,001-100,845
c	O-470-11	100,846 and higher
d	O-470-11	103,200 and higher

Figure & Index No.	Part Number	Nomenclature	Units Per Assy	Application Code
17	532820-A1	Machining Assembly - Accessory case front and rear (see figure 16-51) (For attaching parts see figure 16).	Ref	a
	*532528	Studding and Machining Assembly - Accessory case front half.	NP	a
ATTACHING PARTS				
-1	AN121503	Nut - Plain 5/16-24	2	a
-2	AN960-516	Washer - Plain 5/16 in.	2	a
-3	532473	Gasket - Accessory case front to rear	1	a
	532539	Adapter Assembly - Generator	1	a
ATTACHING PARTS				
-4	356-428	Lock - Nut 1/4-28	2	a
-5	AN121502	Nut - Plain 1/4-28	2	a
-6	AN960-416L	Washer - Plain 1/4 in.	2	a
-7	532519	Gasket - Generator adapter	1	a
	532515	Stud - Adapter to generator 3/8-16 x 3/8-24 x 1-3/4 in.	1	a
	532515P003	Stud - 3/8-16 x 3/8-24 x 1-3/4 in., .003 in. OS on PD	AR	a
	532515P006	Stud - 3/8-16 x 3/8-24 x 1-3/4 in., .006 in. OS on PD	AR	a
	532515P009	Stud - 3/8-16 x 3/8-24 x 1-3/4 in., .009 in. OS on PD	AR	a
-8	532484	Bushing - Bronze 1.12 in. ID	1	a
-9	*532140	Adapter - Generator	NP	a
-10	AN932C2	Plug - Countersunk hex hd pipe brass 1/8 in. ANPT	1	a
-11	AN932C3	Plug - Countersunk hex hd pipe brass 1/8 in. ANPT	2	a
-12	532316	Bushing - Upper tachometer drive front .795 ID x .81 in. lg	1	a
-13	502331	Bushing - Propeller governor drive front .92 ID x .61 in. lg	1	a
-14	532331	Bushing - Lower hyd pump drive front .92 ID x .61 in. lg	1	a
-15	532481	Bushing - Upper hyd pump drive front .92 ID x .69 in. lg	1	a
-16	533031	Pin - 0.093 dia x 0.187 in. long	2	a
-17	532485	Bushing - Magneto drive front 1.232 ID x .61 in. lg	2	a
-18	532525	Dowel - Steel .375 dia x 1.31 in. lg	1	a
-19	532525	Dowel - Steel .375 dia x 1.31 in. lg	1	a
-20	22319	Stud - Generator adapter pad 1/4-20 x 1/4-28 x 1-1/4 in.	2	a
	22319P003	Stud - 1/4-20 x 1/4-28 x 1-1/4 in., .003 in. OS on PD	AR	a
	22319P006	Stud - 1/4-20 x 1/4-28 x 1-1/4 in., .006 in. OS on PD	AR	a
	22319P009	Stud - 1/4-20 x 1/4-28 x 1-1/4 in., .009 in. OS on PD	AR	a
-21	22325	Stud - Upper hyd pump pad 5/16-18 x 5/16-24 x 1.5 in.	4	a
	22325P003	Stud - 5/16-18 x 5/16-24 x 1.5 in., .003 in. OS on PD	AR	a
	22325P006	Stud - 5/16-18 x 5/16-24 x 1.5 in., .006 in. OS on PD	AR	a
	22325P009	Stud - 5/16-18 x 5/16-24 x 1.5 in., .009 in. OS on PD	AR	a
-22	532505	Stud - Parting flange 5/16-18 x 5/16-24 x 2.75 in.	2	a
	532505P003	Stud - 5/16-18 x 5/16-24 x 2.75 in., .003 in. OS on PD	AR	a
	532505P006	Stud - 5/16-18 x 5/16-24 x 2.75 in., .006 in. OS on PD	AR	a
	532505P009	Stud - 5/16-18 x 5/16-24 x 2.75 in., .009 in. OS on PD	AR	a

* Indicates non-procurable part.

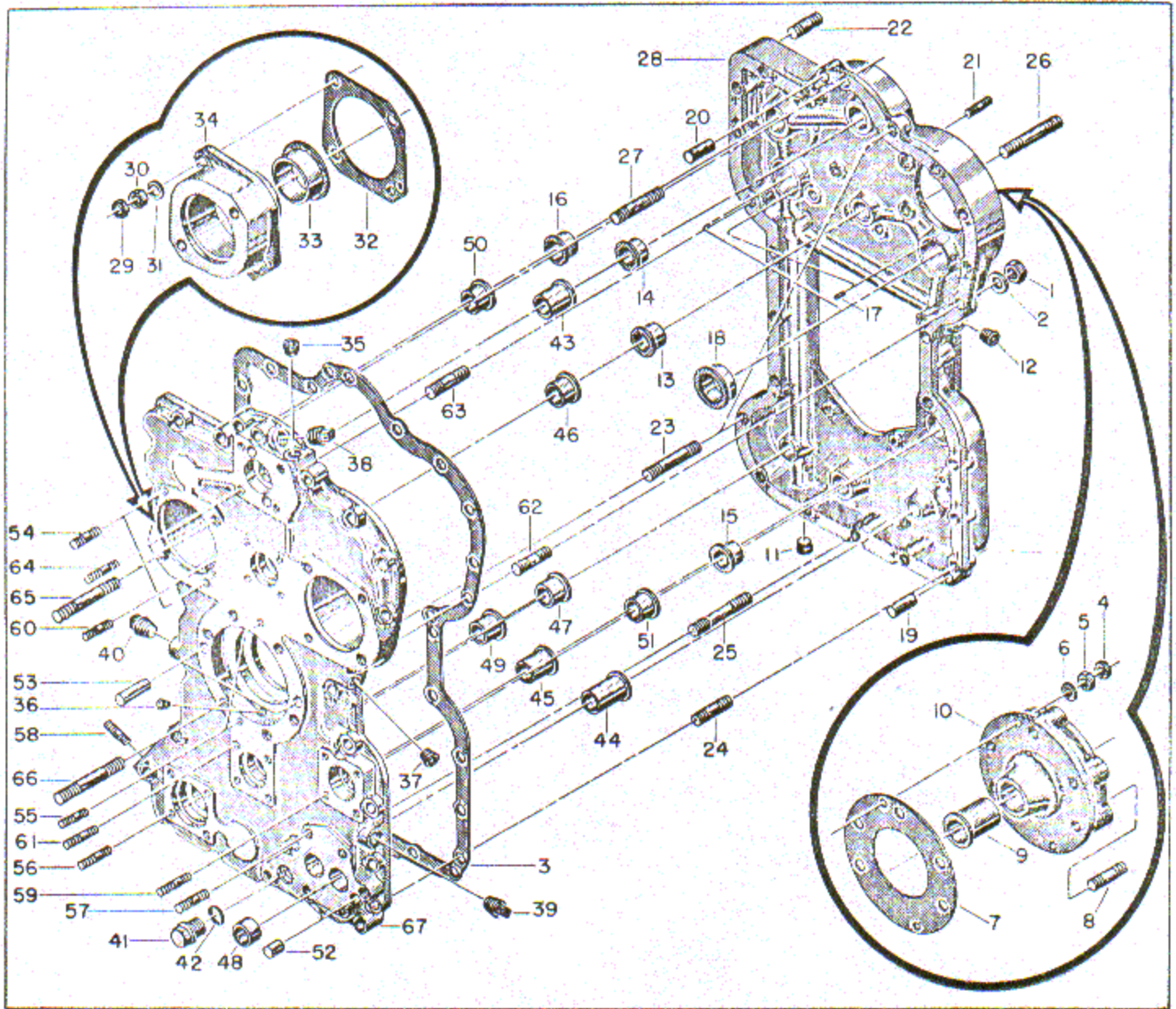


Figure 17. Exploded Parts View of O-470-11 Front and Rear Accessory Case Machining Assembly

O-470-11 ACCESSORY CASE STUDDING AND MACHINING ASSEMBLY (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
17-24	532507	.	.	Stud	-	Parting flange	5/16-18 x 5/16-24 x 1.88 in.	14	b	
	532507	.	.	Stud	-	Parting flange	5/16-18 x 5/16-24 x 1.88 in.	13	c	
	532507P003	.	.	Stud	-	5/16-18 x 5/16-24 x 1.88 in., .003 in. OS on PD .	AR	bc		
	532507P006	.	.	Stud	-	5/16-18 x 5/16-24 x 1.88 in., .006 in. OS on PD .	AR	bc		
	532507P009	.	.	Stud	-	5/16-18 x 5/16-24 x 1.88 in., .009 in. OS on PD .	AR	bc		
-25	AN126420	.	.	Bolt Stud	-	Straight	5/16-18 x 5/16-24 x 2.87 in.	1	c	
-26	532514	.	.	Stud	-	Generator adapter pad	3/8-16 x 3/8-24 x 2.94 in.	5	a	
	532514P003	.	.	Stud	-	3/8-16 x 3/8-24 x 2.94 in., .003 in. OS on PD . . .	AR	a		
	532514P006	.	.	Stud	-	3/8-16 x 3/8-24 x 2.94 in., .006 in. OS on PD . . .	AR	a		
	532514P009	.	.	Stud	-	3/8-16 x 3/8-24 x 2.94 in., .009 in. OS on PD . . .	AR	a		

For application code, see page 35.

O-470-11 ACCESSORY CASE STUDDING AND MACHINING ASSEMBLY (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
17-27	532612	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
	532612P003	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
	532612P006	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
	532612P009	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
-28	*532350	. . .	. . .	. . .	. . .	. . .	. . .	. . .	NP	a
	*532553	. . .	. . .	. . .	. . .	. . .	. . .	. . .	NP	a
	532538	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
	532537	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
ATTACHING PARTS										
-29	356-428	. . .	. . .	. . .	. . .	. . .	. . .	. . .	4	a
-30	AN121502	. . .	. . .	. . .	. . .	. . .	. . .	. . .	4	a
-31	AN960-416L	. . .	. . .	. . .	. . .	. . .	. . .	. . .	4	a
-32	532518	. . .	. . .	. . .	. . .	. . .	. . .	. . .	2	a
-33	532684	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-34	*532300	. . .	. . .	. . .	. . .	. . .	. . .	. . .	NP	a
	*532299	. . .	. . .	. . .	. . .	. . .	. . .	. . .	NP	a
-35	AN932-2	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-36	AN932-2	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-37	AN932-2	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-38	AN913-3S	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-39	AN913-3S	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-40	AN913-4S	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	d
-41	§537744	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	d
-42	AN900-16	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	d
-43	532257	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-44	532316	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-45	532317	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-46	532318	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-47	532318	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-48	532437	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-49	532480	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-50	532481	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-51	532481	. . .	. . .	. . .	. . .	. . .	. . .	. . .	1	a
-52	532683	. . .	. . .	. . .	. . .	. . .	. . .	. . .	2	a
-53	532524	. . .	. . .	. . .	. . .	. . .	. . .	. . .	2	a
-54	22319	. . .	. . .	. . .	. . .	. . .	. . .	. . .	4	a
-55	22319	. . .	. . .	. . .	. . .	. . .	. . .	. . .	2	a
	22319P003	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
	22319P006	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
	22319P009	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
-56	22325	. . .	. . .	. . .	. . .	. . .	. . .	. . .	4	a
-57	22325	. . .	. . .	. . .	. . .	. . .	. . .	. . .	6	a
	22325P003	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
	22325P006	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
	22325P009	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a
-58	AN125964	. . .	. . .	. . .	. . .	. . .	. . .	. . .	2	a
-59	25008	. . .	. . .	. . .	. . .	. . .	. . .	. . .	4	a
	25008P003	. . .	. . .	. . .	. . .	. . .	. . .	. . .	AR	a

* Indicates non-procurable part. § Use part No. 20877 until stock is depleted.

O-470-11 ACCESSORY CASE STUDDING AND MACHINING ASSEMBLY (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
17	25008P006	.	.	Stud	-	1/4-20 x 1/4-28 x 1-3/8 in., .006 in. OS on PD.			AR	a
	25008P009	.	.	Stud	-	1/4-20 x 1/4-28 x 1-3/8 in., .009 in. OS on PD.			AR	a
-60	532501	.	.	Stud	-	Upper tachometer drive pad 1/4-20 x 1/4-28 x 1-1/4 in.			4	a
-61	532501	.	.	Stud	-	Lower tachometer drive pad 1/4-20 x 1/4-28 x 1-1/4 in.			4	a
	532501P003	.	.	Stud	-	1/4-20 x 1/4-28 x 1-1/4 in., .003 in. OS on PD.			AR	a
	532501P006	.	.	Stud	-	1/4-20 x 1/4-28 x 1-1/4 in., .006 in. OS on PD.			AR	a
	532501P009	.	.	Stud	-	1/4-20 x 1/4-28 x 1-1/4 in., .009 in. OS on PD.			AR	a
-62	532507	.	.	Stud	-	Parting flange 5/16-18 x 5/16-24 x 1.88 in.			1	a
-63	532507	.	.	Stud	-	Parting flange 5/16-18 x 5/16-24 x 1.88 in.			1	a
	532507P003	.	.	Stud	-	5/16-18 x 5/16-24 x 1.88 in., .003 in. OS on PD			AR	a
	532507P006	.	.	Stud	-	5/16-18 x 5/16-24 x 1.88 in., .006 in. OS on PD			AR	a
	532507P009	.	.	Stud	-	5/16-18 x 5/16-24 x 1.88 in., .009 in. OS on PD			AR	a
-64	532511	.	.	Stud	-	Propeller governor pad 5/16-18 x 5/16-24 x 1.62 in.			4	a
	532511P003	.	.	Stud	-	5/16-18 x 5/16-24 x 1.62 in., .003 in. OS on PD			AR	a
	532511P006	.	.	Stud	-	5/16-18 x 5/16-24 x 1.62 in., .006 in. OS on PD			AR	a
	532511P009	.	.	Stud	-	5/16-18 x 5/16-24 x 1.62 in., .009 in. OS on PD			AR	a
-65	532513	.	.	Stud	-	Magneto adapter pads 5/16-18 x 5/16-24 x 3.19 in.			4	a
	532513P003	.	.	Stud	-	5/16-18 x 5/16-24 x 3.19 in., .003 in. OS on PD			AR	a
	532513P006	.	.	Stud	-	5/16-18 x 5/16-24 x 3.19 in., .006 in. OS on PD			AR	a
	532513P009	.	.	Stud	-	5/16-18 x 5/16-24 x 3.19 in., .009 in. OS on PD			AR	a
-66	532516	.	.	Stud	-	Starter adapter pad 3/8-16 x 3/8-24 x 4 in.			6	a
	532516P003	.	.	Stud	-	3/8-16 x 3/8-24 x 4 in., .003 in. OS on PD.			AR	a
	532516P006	.	.	Stud	-	3/8-16 x 3/8-24 x 4 in., .006 in. OS on PD.			AR	a
	532516P009	.	.	Stud	-	3/8-16 x 3/8-24 x 4 in., .009 in. OS on PD.			AR	a
-67	*532349	.	.	Case	-	Accessory rear half			NP	a

For application code, see page 35.

* Indicates non-procurable part.

O-470-11 OIL PUMP

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-11	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
18-1	MS28741-10-25	Hose Assembly	-	Hydraulic and pneumatic 25 in. lg					1	a
		ATTACHING PARTS								
-2	AN365-1032	Nut	-	Self locking, No. 10-32.					1	a
-3	AN3-3A	Bolt	-	Aircraft, No. 10-32 x 15/32 in. long					1	a
-4	AN742-10C	Clamp	-	Hose.					1	a
-5	AN742-17C	Clamp	-	Hose.					1	a
		- x - x -								
-6	AN822-10B	Elbow	-	Flared tube and pipe thd 90° for 5/8 in. OD tube					1	a
-7	AN840-16	Adapter	-	Hose to pipe thd 1 in. ID hose x 3/4 ANPT.					1	a
-8	532381	Gear	-	Oil pump driven					1	a

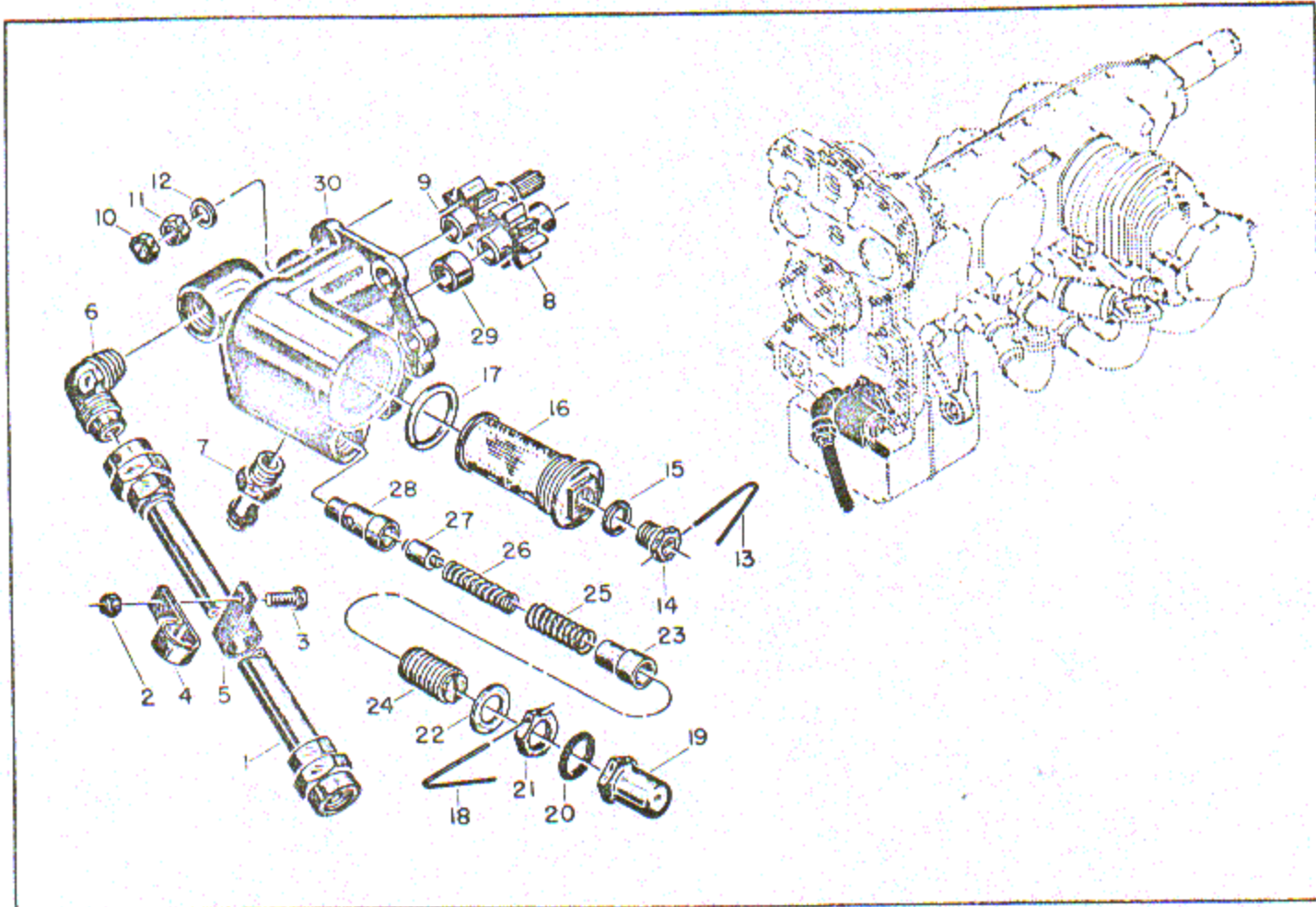


Figure 18. Exploded Parts View of O-470-11 Oil Pump

O-470-11 OIL PUMP (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
18-9	532435	Gear — Oil pump driver							1	a
	532502-A1	Body Assembly — Complete oil pump.							1	a
		ATTACHING PARTS								
-10	356-524	Lock — Nut 5/16-24							6	a
-11	AN121503	Nut — Plain 5/16-24.							6	a
-12	AN960-516	Washer — Plain 5/16 in.							6	a
		- x - x -								
-13	535011	Wire — Lock, CRES 18 ga (.0403 in. dia) annealed, Spec MIL-W-6713.							AR	a
-14	905B10	Plug — Hex hd drilled for locking brass 5/8-18							1	a
-15	AN900-10	Gasket — Copper-asbestos annular 5/8 in. ID							1	a
-16	A35996	Screen Assembly — Pressure oil							1	a
-17	AN900-29	Gasket — Copper-asbestos annular 1-13/16 in. ID							1	a
-18	535011	Wire — Lock, CRES 18 ga (.0403 in. dia) annealed Spec MIL-W-6713.							AR	a
-19	20970	Cap — Oil pressure relief valve 1-20 NEF							1	a
-20	AN900-16	Gasket — Copper-asbestos annular 1 in. ID.							1	a
-21	20968	Nut — High pressure adjusting screw lock 1-20 NEF							1	a
-22	AN900-16	Gasket — Copper-asbestos annular 1 in. ID.							1	a
	533166	Screw and Bushing Assembly — Oil pressure relief							1	a

For application code, see page 38.

O-470-11 OIL PUMP (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
18-23	*533167	.	.	Bushing	-	Oil pressure relief	.....	NP	a
-24	*532410	.	.	Screw	-	Oil pressure relief	.....	NP	a
-25	533105	.	.	Spring	-	Oil pressure relief valve outer	.....	1	a
-26	533106	.	.	Spring	-	Oil pressure relief valve inner	.....	1	a
-27	533103	.	.	Plunger	-	Oil pressure relief valve	.....	1	a
-28	533104	.	.	Sleeve	-	Oil pressure relief valve	.....	1	a
	532502	.	.	Body and Bushing Assembly	-	Oil pump	.....	1	a
-29	532437	.	.	Bushing	-	Oil pump gear bronze .795 ID x 1.002 OD x 9/16 in. lg	.....	2	a
-30	532433	.	.	Body	-	Oil pump and oil screen	.....	1	a
For application code, see page 38.										

* Indicates non-procurable part.

CYLINDER AND PISTON GROUP

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	1915-D-5755-D
b	O-470-7A	1915-D-5755-D
c	O-470-7B	All
d	O-470-11	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
19-1	22022	Nut	-	Plain hex brass	5/16-24	12	ab		
	532393	Nut	-	Self locking all metal	5/16-24	12	cd		
-2	21493	Gasket	-	Exhaust flange copper-asbestos	.....	6	All		
	530773-A1	Cylinder and Piston Assembly	-	Complete	.....	6	b		
	*No Number	Cylinder and Piston Assembly	-	Complete	.....	NP	c		
	*No Number	Cylinder and Piston Assembly	-	Complete	.....	6	d		
ATTACHING PARTS										
-3	AN380-3-3	Pin	-	Cotter 3/32 x 3/4 in.	(See figure 20-53)	Ref	ab		
-4	24810	Nut	-	Slotted hex 7/16-20	(See figure 20-56)	Ref	ab		
-5	520022	Washer	-	Plain 7/16 in. ID	.....	AR	ab		
-6	356-624	Lock	-	Nut 3/8-24	.....	36	ab		
-7	AN121504	Nut	-	Plain 3/8-24	.....	36	ab		
-8	356-720	Lock	-	Nut 7/16-20	.....	36	cd		
-9	531001	Nut	-	Flanged 7/16-20	.....	36	cd		
-10	§ 35969	Packing	-	Cylinder base syn. rubber ring	4.98 ID x 1/8 in.	6	All			
	532200	Packing	-	Cylinder base syn. rubber ring	4.98 ID x 1/8 in.	6	All			
- x - x -										
	A6738-A2	Cylinder Assembly	-	Complete	.....	1	a		
	520114	Cylinder Assembly	-	Complete	.....	1	b		
	538610-A2	Cylinder Assembly	-	Complete	.....	1	c		
	538567-A2	Cylinder Assembly	-	Complete	.....	1	d		
-11	§ 50411	Cover	-	Valve rocker	.....	1	ab		
	520127	Cover	-	Valve rocker	.....	1	ab		
	532450	Cover	-	Valve rocker	.....	1	cd		
ATTACHING PARTS										
-12	AN500-416-12	Screw	-	Fillister head 1/4-20 x 3/4 in.	.....	7	All		

§ Use until stock is depleted. * Indicates non-procurable part.

CYLINDER AND PISTON GROUP (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
19-13	AN960-416L	.	.	.	.	.	.	.	7	All
-14	AN936A416	.	.	.	.	.	.	.	7	All
-15	352056	.	.	.	.	.	.	.	1	ab
	532451	.	.	.	.	.	.	.	1	cd
		- x - x -								
-16	24797	.	.	.	.	.	.	.	1	All
	24797P005	.	.	.	.	.	.	.	AR	All
	24797P020	.	.	.	.	.	.	.	AR	All
	A24814	.	.	.	.	.	.	.	1	All
-17	*40631	.	.	.	.	.	.	.	NP	All
-18	530367	.	.	.	.	.	.	.	1	All
-19	AN535-2-2	.	.	.	.	.	.	.	2	All
	A24815	.	.	.	.	.	.	.	1	All
-20	*40634	.	.	.	.	.	.	.	NP	All
-21	530367	.	.	.	.	.	.	.	1	All
-22	AN535-2-2	.	.	.	.	.	.	.	1	All
	A6738-A1	.	.	.	.	.	.	.	1	a
	520113-A1	.	.	.	.	.	.	.	1	b
	538610-A1	.	.	.	.	.	.	.	1	c
	538567-A1	.	.	.	.	.	.	.	1	d
-23	24802	.	.	.	.	.	.	.	4	All
-24	35971	.	.	.	.	.	.	.	2	All
-25	†35989	.	.	.	.	.	.	.	2	ab
	520105	.	.	.	.	.	.	.	2	All
-26	†35988	.	.	.	.	.	.	.	2	ab
	520106	.	.	.	.	.	.	.	2	All
-27	24799	.	.	.	.	.	.	.	2	All
-28	†520023	.	.	.	.	.	.	.	2	ab
-29	40651	.	.	.	.	.	.	.	1	d
	539449	.	.	.	.	.	.	.	1	abc
-30	40652	.	.	.	.	.	.	.	1	All
	A-6738	.	.	.	.	.	.	.	1	a
	520113	.	.	.	.	.	.	.	1	b
	538610	.	.	.	.	.	.	.	1	c
	538567	.	.	.	.	.	.	.	1	d
-31	AN932-2	.	.	.	.	.	.	.	1	ab
-32	2389	.	.	.	.	.	.	.
	2389P003	.	.	.	.	.	.	.	2	All
	2389P006	.	.	.	.	.	.	.	AR	All
	2389P009	.	.	.	.	.	.	.	AR	All
-33	24869	.	.	.	.	.	.	.	2	a
	24869P005	.	.	.	.	.	.	.	AR	a
-34	401619	.	.	.	.	.	.	.	4	a
-35	C2-52	.	.	.	.	.	.	.	2	bcd
-36	MS122121	.	.	.	.	.	.	.	2	bcd
-37	†515152	.	.	.	.	.	.	.	2	
	515152P005	.	.	.	.	.	.	.	AR	All
	515152P010	.	.	.	.	.	.	.	AR	All
	515152P015	.	.	.	.	.	.	.	AR	All
	515152P020	.	.	.	.	.	.	.	AR	All

For application code, see page 40

* Indicates non-procurable part. † Valve springs Nos. 520105 and 520106 must be installed together and Nos. 35988 and 35989 must be installed together. Use spacer No. 520023 only with springs Nos. 35988 and 35989.
† Use No. 515152 guides and oversizes when stocks of No. 35975 and same oversizes are depleted.

CYLINDER AND PISTON GROUP (Cont)

Figure & Index No.	Part Number	1	2	3	4	5	6	7	Nomenclature	Units Per Assy	Application Code
19-38	35966	.	.	.	.	.	.	.	Insert - Intake valve seat	1	
	35966P005	.	.	.	.	.	.	.	Insert - Intake valve seat 0.005 in. OS on OD	AR	
	35966P010	.	.	.	.	.	.	.	Insert - Intake valve seat 0.010 in. OS on OD	AR	
	35966P015	.	.	.	.	.	.	.	Insert - Intake valve seat 0.015 in. OS on OD	AR	
	35966P020	.	.	.	.	.	.	.	Insert - Intake valve seat 0.020 in. OS on OD	AR	
	35966P030	.	.	.	.	.	.	.	Insert - Intake valve seat 0.030 in. OS on OD	AR	
-39	35967	.	.	.	.	.	.	.	Insert - Exhaust valve seat	1	
	35967P005	.	.	.	.	.	.	.	Insert - Exhaust valve seat 0.005 in. OS on OD	AR	
	35967P010	.	.	.	.	.	.	.	Insert - Exhaust valve seat 0.010 in. OS on OD	AR	
	35967P015	.	.	.	.	.	.	.	Insert - Exhaust valve seat 0.015 in. OS on OD	AR	
	35967P020	.	.	.	.	.	.	.	Insert - Exhaust valve seat 0.020 in. OS on OD	AR	
	35967P030	.	.	.	.	.	.	.	Insert - Exhaust valve seat 0.030 in. OS on OD	AR	
-40	No Number	.	.	.	.	.	.	.	Head and Barrel Assembly	NP	All
	§50399-A1	.	.	.	.	.	.	.	Piston Assembly - Complete	1	ab
-41	+§530845	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston	1	ab
-42	539467	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston	1	ab
	539467P005	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston 0.005 in. OS on OD	AR	
	50399-A2	.	.	.	.	.	.	.	Piston and Ring Assembly	1	ab
-43	§40668	.	.	.	.	.	.	.	Ring - Piston compression top groove	1	ab
	40668P005	.	.	.	.	.	.	.	Ring - Piston compression top groove .005 in. OS on OD	AR	ab
	40668P015	.	.	.	.	.	.	.	Ring - Piston compression top groove .015 in. OS on OD	AR	ab
-44	+§40669	.	.	.	.	.	.	.	Ring - Piston compression 2nd groove	1	ab
	40669P005	.	.	.	.	.	.	.	Ring - Piston compression 2nd groove .005 in. OS on OD	AR	ab
	40669P015	.	.	.	.	.	.	.	Ring - Piston compression 2nd groove .015 in. OS on OD	AR	ab
-45	†§40670	.	.	.	.	.	.	.	Ring - Piston oil control 3rd groove	1	ab
	40670P005	.	.	.	.	.	.	.	Ring - Piston oil control 3rd groove .005 in. OS on OD	AR	ab
	40670P015	.	.	.	.	.	.	.	Ring - Piston oil control 3rd groove .015 in. OS on OD	AR	ab
-46	§50399	.	.	.	.	.	.	.	Piston - Cast 7:1 compression ratio	1	ab
	50399P015	.	.	.	.	.	.	.	Piston - Cast 7:1 compression ratio .015 in. OS on OD	AR	ab
	534895-A1	.	.	.	.	.	.	.	Piston Assembly - Complete	6	ab
-42	539467	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston	1	ab
	539467P005	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston 0.005 in. OS on OD	AR	ab
	534895-A2	.	.	.	.	.	.	.	Piston and Ring Assembly	1	ab
-43	536938	.	.	.	.	.	.	.	Ring - Piston compression, top groove	1	ab
-44	536938	.	.	.	.	.	.	.	Ring - Piston compression, second groove	1	ab
	536938P005	.	.	.	.	.	.	.	Ring - Piston compression, top and 2nd grooves, 0.005 in. OS on OD	AR	ab
	536938P015	.	.	.	.	.	.	.	Ring - Piston compression top and 2nd grooves, 0.015 in. OS on OD	AR	ab
-45	536939	.	.	.	.	.	.	.	Ring - Piston oil control 5 in. OD x 0.155 in. wide	1	ab
	536939P005	.	.	.	.	.	.	.	Ring - Piston oil control 5 in. OD, 0.005 in. OS on OD	AR	ab
	536939P015	.	.	.	.	.	.	.	Ring - Piston oil control 5 in. OD, 0.015 in. OS on OD	AR	ab
-46	534895	.	.	.	.	.	.	.	Piston - 5.00 in. dia (7:1 compression ratio)	1	ab
	534895P015	.	.	.	.	.	.	.	Piston - 5.00 in. dia (7:1 compression ratio) 0.015 in. OS on OD	AR	ab
	531510-A1	.	.	.	.	.	.	.	Piston Assembly - Complete	1	cd
-41	†§530845	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston	1	cd
-42	539467	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston	1	cd
	539467P005	.	.	.	.	.	.	.	Pin and Plug Assembly - Piston 0.005 in. OS on OD	AR	
	531510-A2	.	.	.	.	.	.	.	Piston and Ring Assembly	1	cd
-43	536938	.	.	.	.	.	.	.	Ring - Compression top groove	1	cd
-44	536938	.	.	.	.	.	.	.	Ring - Compression 2nd groove	1	cd
	536938P005	.	.	.	.	.	.	.	Ring - Compression .005 in. OS on OD	AR	cd
	536938P015	.	.	.	.	.	.	.	Ring - Compression .015 in. OS on OD	AR	cd

For application code, see page 40.

* Indicated non-procurable part. § Use until stock is depleted. + Use part No. 536938 when stock is depleted. † No. 530845 interchangeable individually with assemblies of No. 35977 and 352034. ‡ Use part No. 536939 when stock is depleted.

CYLINDER AND PISTON GROUP (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
19-45	537064	.	.	.					1	cd
	537064P005	.	.	.					AR	cd
	537064P015	.	.	.					AR	cd
-46	531510	.	.	.					1	cd
	531510P015	.	.	.					AR	cd
-47	†537490								12	All
-48	24923								12	ab
-49	531183								12	cd
-50	§352033								24	All
	535057								24	All
-51	530635								12	cd
-52	530462								AR	All

For application code, see page 40.

§ Use until stock is depleted.

† Installed on O-470-11 Engines Serial No. T-104086 and higher. Older engines were equipped with part No. 520047.

CRANKCASE

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-11	All
d	O-470-7B	All
e	O-470-11	103210 and higher

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
20-1	25024								8	ab
-2	25026								8	ab
-3	531433								1	c
	*530686								NP	ab
	*532530								NP	c
	*532223								NP	d
-4	530470								1	All
		ATTACHING PARTS								
-5	356-428								2	All
-6	AN121502								2	All
-7	AN960-416L								2	All
-8	25164								2	All
-9	AN4-13A								2	All
-10	AN960-416L								2	All
		- x - x -								
-11	AN932-2								1	c

* Indicates non-procurable part.

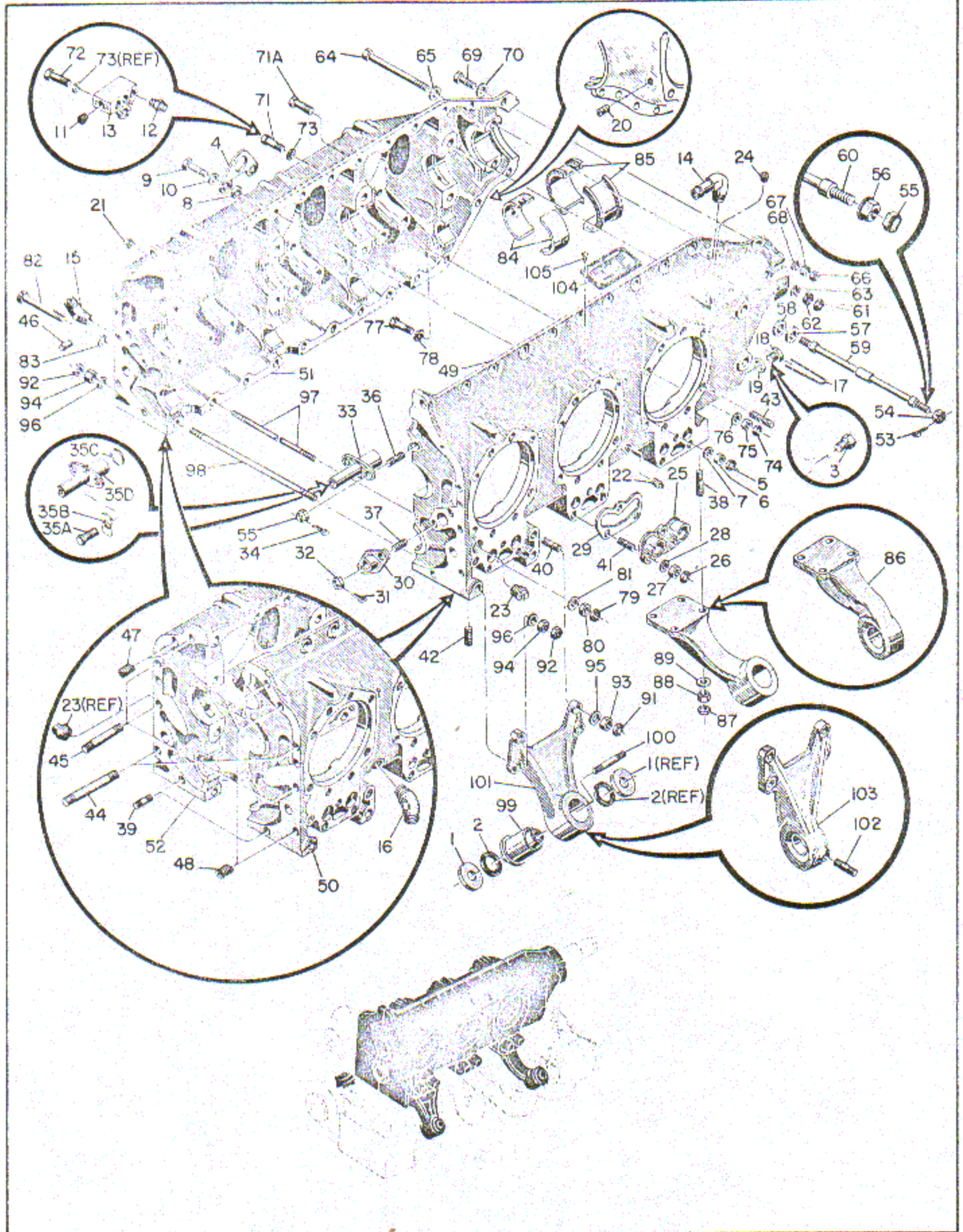


Figure 20. Exploded Parts View of Crankcase

CRANKCASE (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code							
		1	2	3	4	5	6	7									
20-12	AN780-2	.	Nipple	-	Union	for	1/8	OD	tube	5/16-32	x	1/8	in.	ANPT	6	c	
-13	532676	.	Distributor	-	Primer	(For	attaching	parts	see	index	Nos.				1	c	
-14	AN842-10	.	Elbow	-	Pipe	thread	and	hose	90°	copper	alloy	x	5/8	ID	hose	1	All
-15	AN823-10B	.	Elbow	-	Flared	tube	and	pipe	thd	45°	copper	alloy	for	5/8	OD	1	abd
-16	AN823-10B	.	Elbow	-	Flared	tube	and	pipe	thd	45°	copper	alloy	for	5/8	OD	1	abd
-17	535011	.	Wire	-	Lock	CRES	18	ga	(.0403	in.	dia)	annealed	Spec	MIL-W-6713	AR	All	
-18	905B10	.	Plug	-	Hex	head	5/8-18								2	abd	
	905B10	.	Plug	-	Hex	head	5/8-18								1	c	
-19	AN900-10	.	Gasket	-	Copper-asbestos	annular	5/8	in.	ID						2	abd	
	AN900-10	.	Gasket	-	Copper-asbestos	annular	5/8	in.	ID						1	c	
-20	AN932C4	.	Plug	-	Countersunk	hex	head	pipe	3/8	in.					1	c	
-21	AN913-1S	.	Plug	-	Square	head	pipe	thread	steel	1/8	in.	ANPT			1	All	
-22	AN913-1S	.	Plug	-	Square	head	pipe	thread	steel	1/8	in.	ANPT			1	e	
-23	AN913-4	.	Plug	-	Square	head	pipe	thread	brass	1/2	in.	ANPT			1	All	
-24	AN932-2	.	Plug	-	Countersunk	hex	head	pipe	1/8	in.	ANPT				1	All	
-25	36028	.	Flange	-	Pushrod	housing	for	part	No.	24923	housing				6	ab	
	531186	.	Flange	-	Pushrod	housing	for	part	No.	531183	housing				6	cd	
ATTACHING PARTS																	
-26	356-428	.	Lock	-	Nut	1/4-28									18	All	
-27	AN121502	.	Nut	-	Plain	1/4-28									18	All	
-28	AN960-416L	.	Washer	-	Plain	1/4	in.								18	All	
-29	352058	.	Gasket	-	Pushrod	housing	flange								6	All	
-30	352035	.	Support	-	Magneto	gear									2	abd	
ATTACHING PARTS																	
-31	AN380-2-2	.	Pin	-	Cotter	1/16	dia	x	1/2	in.					4	abd	
-32	AN310-5	.	Nut	-	Castellated	airframe	steel	5/16-24							4	abd	
-33	35976	.	Pivot	-	Starter	pinion									1	abd	
ATTACHING PARTS																	
-34	AN380-2-2	.	Pin	-	Cotter	1/16	dia	x	1/2	in.					2	abd	
-35	AN310-5	.	Nut	-	Castellated	airframe	steel	5/16-24							2	abd	
	530343	.	Pivot	-	Assembly	-	Starter	pin							1	abd	
ATTACHING PARTS																	
-35A	530346	.	Screw	-	5/16-18	x	.88								2	abd	
-35B	530878	.	Washer	-	Special	tab	lock								2	abd	
-35C	530344	.	Plug	-	Hubbard	5/8	in.	dia							1	abd	
-35D	530335	.	Pivot	-	Starter	jaw	gear								1	abd	
	530653	.	Studding	-	Assembly	-	Crankcase								1	ab	
	532529	.	Studding	-	Assembly	-	Crankcase								1	c	
	531152	.	Studding	-	Assembly	-	Crankcase								1	d	
-36	2390	.	Stud	-	Starter	pinion	pivot	drilled	5/16-18	x	5/16-24	x	1	in.	2	abd	
-37	2390	.	Stud	-	Magneto	gear	support	drilled	5/16-18	x	5/16-24	x	1	in.	4	abd	
	2390P003	.	Stud	-	5/16-18	x	5/16-24	x	1	in.,	.003	in.	OS	on	PD	AR	abd
	2390P006	.	Stud	-	5/16-18	x	5/16-24	x	1	in.,	.006	in.	OS	on	PD	AR	abd
	2390P009	.	Stud	-	5/16-18	x	5/16-24	x	1	in.,	.009	in.	OS	on	PD	AR	abd
-38	20100	.	Stud	-	Front	mount	bracket	3/8-16	x	3/8-24	x	1.62	in.		8	abd	
	20100P003	.	Stud	-	3/8-16	x	3/8-24	x	1.62	in.,	.003	in.	OS	on	PD	AR	abd
	20100P006	.	Stud	-	3/8-16	x	3/8-24	x	1.62	in.,	.006	in.	OS	on	PD	AR	abd
	20100P009	.	Stud	-	3/8-16	x	3/8-24	x	1.62	in.,	.009	in.	OS	on	PD	AR	abd
	532515	.	Stud	-	Front	mount	bracket	3/8-16	x	3/8-24	x	1.75	in.		8	c	
	532515P003	.	Stud	-	3/8-16	x	3/8-24	x	1.75	in.,	.003	in.	OS	on	PD	AR	c
	532515P006	.	Stud	-	3/8-16	x	3/8-24	x	1.75	in.,	.006	in.	OS	on	PD	AR	c
	532515P009	.	Stud	-	3/8-16	x	3/8-24	x	1.75	in.,	.009	in.	OS	on	PD	AR	c
-39	21167	.	Stud	-	Accessory	case	front	1/4-20	x	1/4-28	x	1	in.		2	c	
	21167P003	.	Stud	-	1/4-20	x	1/4-28	x	1	in.,	.003	in.	OS	on	PD	AR	c
	21167P006	.	Stud	-	1/4-20	x	1/4-28	x	1	in.,	.006	in.	OS	on	PD	AR	c
	21167P009	.	Stud	-	1/4-20	x	1/4-28	x	1	in.,	.009	in.	OS	on	PD	AR	c

For application code, see page 44.

CRANKCASE (Cont)

Figure & Index No.	Part Number	Nomenclature	Units Per Assy	Appli- cation Code
		1 2 3 4 5 6 7		
20-40	22145	. . Stud - Rear mount bracket 5/16-18 x 5/16-24 x 1.38 in.	4	All
	22145P003	. . Stud - 5/16-18 x 5/16-24 x 1.38 in., .003 in. OS on PD . .	AR	All
	22145P006	. . Stud - 5/16-18 x 5/16-24 x 1.38 in., .006 in. OS on PD . .	AR	All
	22145P009	. . Stud - 5/16-18 x 5/16-24 x 1.38 in., .009 in. OS on PD . .	AR	All
-41	AN125964	. . Bolt Stud - .025-20 x .025-28 x 1.062 in.	18	All
-42	25030	. . Stud - Oil sump 5/16-18 x 5/16-24 x 1.06 in.	6	All
	25030P003	. . Stud - 5/16-18 x 5/16-24 x 1.06 in., .003 in. OS on PD . .	AR	All
	25030P006	. . Stud - 5/16-18 x 5/16-24 x 1.06 in., .006 in. OS on PD . .	AR	All
	25030P009	. . Stud - 5/16-18 x 5/16-24 x 1.06 in., .009 in. OS on PD . .	AR	All
-43	530362	. . Stud - Cylinder flange stepped 7/16-14 x 3/8-24 x 1.86 in.	36	ab
	530362P003	. . Stud - 7/16-14 x 3/8-24 x 1.86 in., .003 in. OS on PD . .	AR	ab
	530362P006	. . Stud - 7/16-14 x 3/8-24 x 1.86 in., .006 in. OS on PD . .	AR	ab
	530362P009	. . Stud - 7/16-14 x 3/8-24 x 1.86 in., .009 in. OS on PD . .	AR	ab
	531145	. . Stud - Cylinder flange 7/16-14 x 7/16-20 x 1.86 in.	36	cd
	531145P003	. . Stud - 7/16-14 x 7/16-20 x 1.86 in., .003 in. OS on PD . .	AR	cd
	531145P006	. . Stud - 7/16-14 x 7/16-20 x 1.86 in., .006 in. OS on PD . .	AR	cd
	531145P009	. . Stud - 7/16-14 x 7/16-20 x 1.86 in., .009 in. OS on PD . .	AR	cd
-44	532517	. . Stud - Accessory case through 5/16-18 x 5/16-24 x 4.25 in.	2	c
	532517P003	. . Stud - 5/16-18 x 5/16-24 x 4.25 in., .003 in. OS on PD . .	AR	c
	532517P006	. . Stud - 5/16-18 x 5/16-24 x 4.25 in., .006 in. OS on PD . .	AR	c
	532517P009	. . Stud - 5/16-18 x 5/16-24 x 4.25 in., .009 in. OS on PD . .	AR	c
-45	532522	. . Stud - Accessory case through 5/16-18 x 5/16-24 x 3.31 in.	3	c
	532522P003	. . Stud - 5/16-18 x 5/16-24 x 3.31 in., .003 in. OS on PD . .	AR	c
	532522P006	. . Stud - 5/16-18 x 5/16-24 x 3.31 in., .006 in. OS on PD . .	AR	c
	532522P009	. . Stud - 5/16-18 x 5/16-24 x 3.31 in., .009 in. OS on PD . .	AR	c
-46	21080	. . Dowel - Steel 1/4 dia x 9/16 in. lg	2	All
-47	1185-5CNx5/8	. . Insert - Helicoil carbon steel 5/16-18 (Heli-Coil Corp, Danbury, Conn.) (24323-5C-2)	2	c
-48	1185-5CNx5/8	. . Insert - Helicoil carbon steel 5/16-18	3	c
	*530537-A1	. . Machining Assembly - Crankcase	NP	ab
	*A532367	. . Manufacturing Assembly - Crankcase	NP	c
	*A532271	. . Manufacturing Assembly - Crankcase	NP	d
-49	*530537	. . Crankcase - Cylinders 1, 3, 5 half	NP	ab
-50	*532367	. . Crankcase - Cylinders 1, 3, 5 half	NP	c
	*532271	. . Crankcase - Cylinders 1, 3, 5 half	NP	d
-51	*530538	. . Crankcase - Cylinders 2, 4, 6 half	NP	ab
-52	*532347	. . Crankcase - Cylinders 2, 4, 6 half	NP	c
	*532272	. . Crankcase - Cylinders 2, 4, 6 half	NP	d
ATTACHING PARTS				
-53	AN380-3-3	. . Pin - Cotter steel 3/32 dia x 3/4 in.	16	ab
-54	24810	. . Nut - Slotted hex 7/16-20	16	ab
-55	356-720	. . Lock - Nut 7/16-20	16	cd
-56	531001	. . Nut - Flanged 7/16-20	16	cd
-57	25171	. . Spacer - Crankcase thru bolt .45 ID x .85 OD x .16 in.	4	All
-58	20202	. . Washer - Plain steel 29/64 ID x 7/8 OD x 1/8 in.	4	All
-59	‡35974	. . Bolt - Crankcase thru drilled 7/16-20 x 10.69 in.	8	ab
-60	531205	. . Bolt - Crankcase thru 7/16-20 x 10.69 in.	8	cd
-61	356-624	. . Lock - Nut 3/8-24	2	abd
-62	531003	. . Nut - Flanged hex 3/8-24	2	c
	AN121504	. . Nut - Plain 3/8-24	2	c
-63	24239	. . Washer - Plain 1/8 thick for 3/8 in. dia bolt	2	All
-64	AN6-47A	. . Bolt - Hex head 3/8-24 x 4.95 in.	2	All
-65	24239	. . Washer - Plain 1/8 thick for 3/8 in. dia bolt	2	All
-66	356-428	. . Lock - Nut 1/4-28	12	All
-67	AN121502	. . Nut - Plain 1/4-28	12	All

For application code, see page 44.

* Indicates non-procurable part.

‡ Use part No. 531205 with part Nos. 531001 and 356-720 in lieu of part Nos. 35974, 24810 and AN380-3-3 when stock of No. 35974 is depleted.

CRANKCASE (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
20-68	AN960-416L	.	.	.	.	.	.	.	12	All
-69	AN4-11A	.	.	.	.	.	.	.	11	c
	AN4-11A	.	.	.	.	.	.	.	9	abd
-70	AN960-416L	.	.	.	.	.	.	.	11	All
-71	AN4-11A	.	.	.	.	.	.	.	1	abd
-71A	AN4-13A	.	.	.	.	.	.	.	2	abd
-72	AN4-14A	.	.	.	.	.	.	.	1	c
-73	AN960-416L	.	.	.	.	.	.	.	1	All
-74	356-524	.	.	.	.	.	.	.	7	All
-75	AN121503	.	.	.	.	.	.	.	7	All
-76	AN960-516L	.	.	.	.	.	.	.	7	All
-77	AN5-14A	.	.	.	.	.	.	.	7	All
-78	AN960-516L	.	.	.	.	.	.	.	7	All
-79	356-524	.	.	.	.	.	.	.	1	All
-80	AN121503	.	.	.	.	.	.	.	1	All
-81	AN960-516L	.	.	.	.	.	.	.	1	All
-82	AN5-32A	.	.	.	.	.	.	.	1	All
-83	AN960-516L	.	.	.	.	.	.	.	1	All
		- x - x -								
-84	530380	Insert - Crankshaft main bearing intermediate and rear	.	.	.	.	.	.	8	All
-85	40644	Insert - Crankshaft main-thrust bearing	.	.	.	.	.	.	2	All
-86	40759	Bracket - Engine mount front 1, 3, 5 side	.	.	.	.	.	.	1	c
	40760	Bracket - Engine mount front 2, 4, 6 side	.	.	.	.	.	.	1	c
	530824	Bracket Assembly - Engine mount front 1, 3, 5 side	.	.	.	.	.	.	1	abd
	530823	Bracket Assembly - Engine mount front 2, 4, 6 side	.	.	.	.	.	.	1	abd
		ATTACHING PARTS								
-87	356-624	Lock - Nut 3/8-24	.	.	.	.	.	.	8	All
-88	AN121504	Nut - Plain 3/8-24	.	.	.	.	.	.	8	All
-89	AN960-616L	Washer - Plain 3/8 in.	.	.	.	.	.	.	8	All
		- x - x -								
	25025	Mount - Lord tube form 1-1/2 in. OD	.	.	.	.	.	.	1	abd
-90	40638	Bracket - Engine mount front 1, 3, 5 side for 530824	.	.	.	.	.	.	1	abd
	40639	Bracket - Engine mount front 2, 4, 6 side for 530823	.	.	.	.	.	.	1	abd
	†530818	Bracket Assembly - Engine mount rear 1, 3, 5 side	.	.	.	.	.	.	1	abd
	†536792	Bracket Assembly - Engine mount rear 1, 3, 5 side	.	.	.	.	.	.	1	abd
	†530817	Bracket Assembly - Engine mount rear 2, 4, 6 side	.	.	.	.	.	.	1	abd
	†536791	Bracket Assembly - Engine mount rear 2, 4, 6 side	.	.	.	.	.	.	1	abd
		ATTACHING PARTS								
-91	†356-524	Lock - Nut 5/16-24	.	.	.	.	.	.	8	abd
	†356-524	Lock - Nut 5/16-24	.	.	.	.	.	.	6	abd
-92	†356-624	Lock - Nut 3/8-24	.	.	.	.	.	.	2	abd
-93	†AN121503	Nut - Plain 5/16-24	.	.	.	.	.	.	8	abd
	†AN121503	Nut - Plain 5/16-24	.	.	.	.	.	.	6	abd
-94	†AN121504	Nut - Plain 3/8-24	.	.	.	.	.	.	2	abd
-95	†AN960-516L	Washer - Plain 5/16 in.	.	.	.	.	.	.	8	abd
	†AN960-516L	Washer - Plain 5/16 in.	.	.	.	.	.	.	6	abd
-96	†AN960-616L	Washer - Plain 3/8 in.	.	.	.	.	.	.	2	abd
-97	†538931-11.00	Bolt - Crankcase through 5/16-24 x 11.00 in.	.	.	.	.	.	.	2	abd
	†538931-11.00	Bolt - Crankcase through 5/16-24 x 11.00 in.	.	.	.	.	.	.	1	abd
-98	†539738-11.06	Bolt - Crankcase through 3/8-24 x 11.06 in.	.	.	.	.	.	.	1	abd
		- x - x -								
-99	25025	Mount - Lord tube form 1-1/2 in. OD	.	.	.	.	.	.	2	abd
	†A40747	Bracket Studding Assy - Engine mount rear 1, 3, 5 side.	.	.	.	.	.	.	1	abd
	†536790	Bracket Studding Assy - Engine mount rear 1, 3, 5 side.	.	.	.	.	.	.	1	abd

For application code, see page 44.

† These parts to be installed together on crankcases with 0.4062 inch dia bottom rear through bolt hole.
 ‡ These parts to be installed only when crankcase bottom rear through bolt hole is 0.3437 in. dia. If this hole is 0.4062 in. dia. install brackets marked (†) or ream existing brackets of this type to 0.4062 in. dia. at rear through bolt hole only. Locate hole to match crankcase hole, and use No. 539738-11.06 bolt and matching attaching parts.

CRANKCASE (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
20-	†A40748	.	Bracket Studding Assembly — Engine mount rear 2,4, 6 side						1	abd
	†536786	.	Bracket Studding Assembly — Engine mount rear 2,4, 6 side						1	abd
-100	20092	.	Stud — Oil sump bracket 5/16-18 x 5/16-24 x 2 in.						2	abd
	20092P003	.	Stud — 5/16-18 x 5/16-24 x 2 in., .003 in. OS on PD						AR	abd
	20092P006	.	Stud — 5/16-18 x 5/16-24 x 2 in., .006 in. OS on PD						AR	abd
	20092P009	.	Stud — 5/16-18 x 5/16-24 x 2 in., .009 in. OS on PD						AR	abd
-101	†*50435	.	Bracket — Engine mount rear 1, 3, 5 side						NP	abd
	†*536708	.	Bracket — Engine mount rear 1, 3, 5 side						NP	abd
	†*50436	.	Bracket — Engine mount rear 2, 4, 6 side						NP	abd
	†*536708	.	Bracket — Engine mount rear 2, 4, 6 side						NP	abd
	536914	.	Bracket Studding Assembly — Engine mount rear 1,3,5, side						1	c
	536913	.	Bracket Studding Assembly — Engine mount rear 2,4,6 side						1	c
ATTACHING PARTS										
	356-524	.	Lock — Nut 5/16-24						6	c
	356-624	.	Lock — Nut 3/8-24						2	c
	AN121503	.	Nut — Plain 5/16-24						6	c
	AN121504	.	Nut — Plain 3/8-24						2	c
	AN960-516L	.	Washer — Plain 5/16 in.						6	c
	AN960-616L	.	Washer — Plain 3/8 in.						2	c
	538931-11.00	.	Bolt — Crankcase through 5/16-24 x 11.00 in.						1	c
	539738-11.06	.	Bolt — Crankcase through 3/8-24 x 11.06 in.						1	c
- x - x -										
-102	25030	.	Stud — Oil sump bracket 5/16-18 x 5/16-24 x 1.06 in.						1	c
	25030P003	.	Stud — 5/16-18 x 5/16-24 x 1.06 in., .003 in. OS on PD						AR	c
	25030P006	.	Stud — 5/16-18 x 5/16-24 x 1.06 in., .006 in. OS on PD						AR	c
	25030P009	.	Stud — 5/16-18 x 5/16-24 x 1.06 in., .009 in. OS on PD						AR	c
-103	*536709	.	Bracket — Engine mount rear 1,3,5, side						NP	c
	*536710	.	Bracket — Engine mount rear 2,4,6, side						NP	c
-104	*520055	.	Plate — Identification						NP	a
	*532526	.	Plate — Identification						NP	c
	531424	.	Plate — Identification						NP	bd
ATTACHING PARTS										
-105	AN535-2-2	.	Screw — Round head drive No. 2 x 1/8 in.						6	All
- x - x -										
For application code see page 44.										

* Indicates non-procurable parts.

† These parts to be installed together on crankcases with 0.4062 inch dia. bottom rear through bolt hole.

‡ These parts to be installed only when crankcase bottom rear through bolt hole is 0.3437 inch dia. If this hole is 0.4062 inch dia. install brackets marked (†) or ream existing brackets of this type to 0.4062 inch dia. at rear through bolt hole only, locate to match crankcase, and use part No. 539738-11.06 bolt and matching attaching parts.

CRANKSHAFTS AND CONNECTING RODS

Coding Explanation

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
21-1	530859	.	Seal — Oil 3.757 OD x 2.937 ID x .5 in.						1	ab
	536570	.	Seal and Spring Assy — Crankshaft Oil (2.375 in. dia shaft)						1	c
-2	*536579	.	Seal Assy						NP	c

* Indicates non-procurable part.

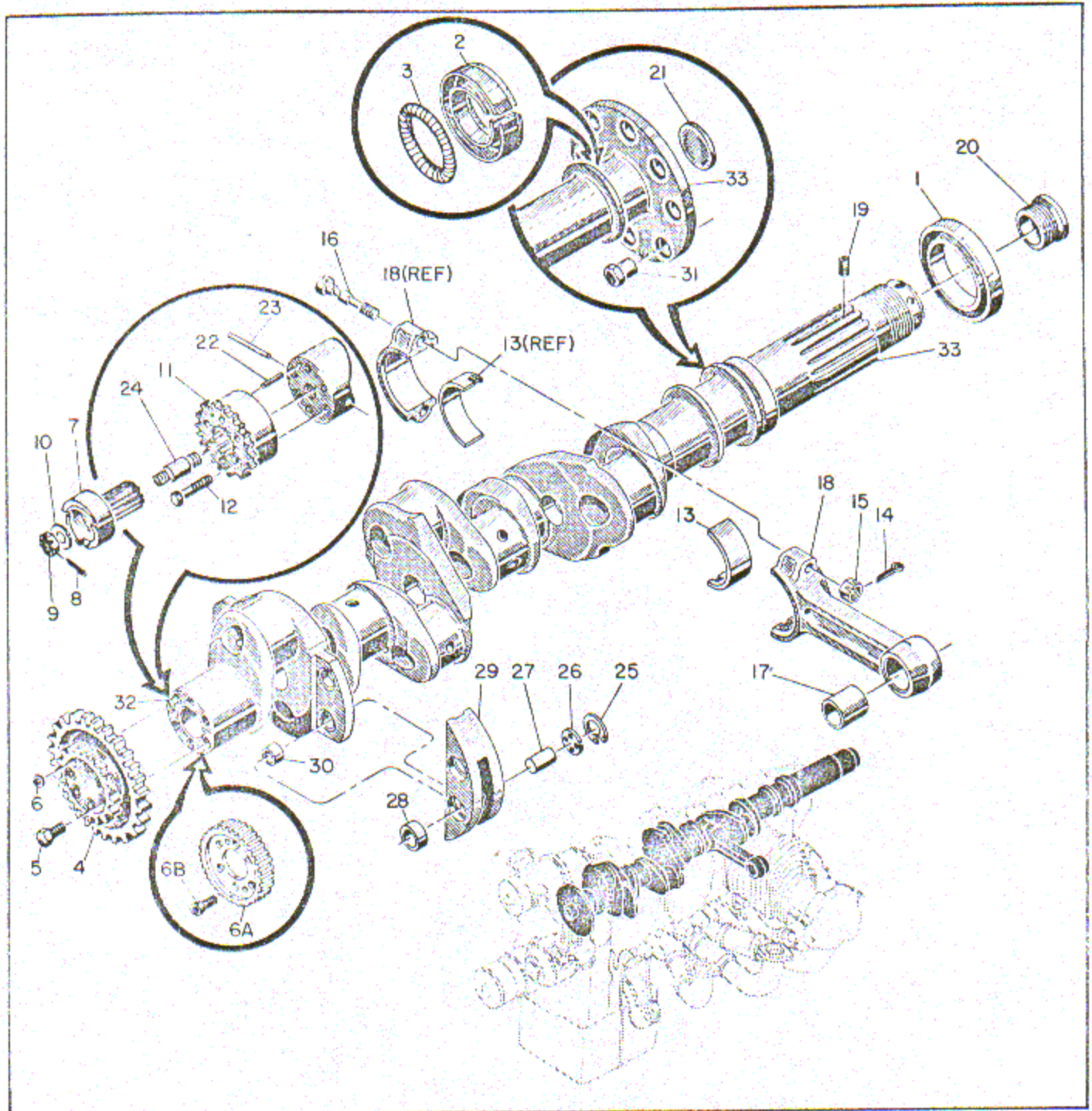


Figure 21. Exploded Parts View of Crankshafts and Connecting Rods

CRANKSHAFTS AND CONNECTING RODS (Cont)

Figure & Index No.	Part Number	Nomenclature	Units Per Assy							Appli- cation Code
			1	2	3	4	5	6	7	
21-3	533261	. Spring							1	c
-4	536374	Gear - Accessory drive (part of 536372)							1	ab
	†40650	Gear - Accessory drive (use with 532372 or 350995)							1	ab
	‡531435	Gear - Accessory drive (use with 532372 or 350995)							1	ab
		ATTACHING PARTS								
-5	536379	Screw - Drilled head, 5/16-24 x 0.94 in. (part of 536372)							6	ab
-6	X1454	Washer - Plain, 0.32 x 0.62 in., dowel retainer (part of 536372)							1	ab
	‡534904	Bolt - Drilled head 1/4-28 x 13/16 in. (use with 532372 or 350995)							6	ab
		- x - x -								
-6A	530342	Gear - Accessory drive							1	ab
		ATTACHING PART								
-6B	25167	Screw - Socket head drilled 1/4-28 x 3/4 in. long							6	ab
		- x - x -								
-7	532138	Jaw - Starter							1	c
		ATTACHING PARTS								
-8	AN380-3-4	Pin - Cotter 3/32 dia x 1 in.							1	c
-9	AN320-9	Nut - Castle shear 9/16-18							1	c
-10	AN960-916	Washer - Plain 9/16 in.							1	c
		- x - x -								
-11	536375	Gear - Pinion (part of 536373)							1	c
	§532171	Gear - Pinion (use with 532372)							1	c
		ATTACHING PARTS								
-12	536378	Screw - Drilled head, 5/16-24 x 1.75 in. (part of 536373)							6	c
	§536259	Screw - Drilled head 1/4-28 x 1-21/32 in. (use with 532334)							6	c
		- x - x -								
	A36121-A2	Rod Assembly - Complete connecting							6	All
-13	530383	. Insert - Crankpin bearing tri-metal							2	All
	A36121	. Rod Machining Assembly - Connecting							1	All
-14	AN381-2-2	. Pin - Cotter 1/16 dia x 1/2 in.							2	All
-15	24804	. Nut - Slotted hex 3/8-24 x .33 in. high							2	All
-16	35972	. Bolt - Connecting rod							2	All
-17	530658	. Bushing - Piston pin, split							1	All
-18	*40744	. Rod and Cap - Connecting							NP	All
	537561	Crankshaft and Damper Assembly - Complete							1	ab
	§352174-A1	Crankshaft and Damper Assembly - Complete							1	ab
	§**532749	Crankshaft and Damper Assembly - Complete							1	ab
	536580	Crankshaft and Damper Assembly - Complete							1	c
	§532531	Crankshaft and Damper Assembly - Complete							1	c
-19	22366	. Screw - Special headless No. 10-32 x .34 in.							1	ab
-20	520013	. Plug - Crankshaft front oil slotted 1-1/2-12 NF							1	ab
-21	520012	. Plug - Crankshaft front oil Hubbard 1-7/8 in. dia							1	c
-22	532523	. Dowel - Steel .283 dia x 1.62 in. lg (use with 532531)							1	c
	536583	. Dowel - Steel .028 dia x 0.69 in. lg, (part of 532580)							1	c
	536563P005	. Dowel - Steel .028 dia x 0.69 in. lg, 0.005 in. OS on dia							AR	c
-23	23513	. Dowel - Brass, 3/16 dia x 1.968 in. long							1	c
-24	532303	. Stud - Starter jaw retaining							1	c
	*352117	. Counterweight Assembly - Crankshaft damper							NP	All
		ATTACHING PARTS								
-25	352116	. Ring - Counterweight plate retaining							8	All
-26	352115	. Plate - Crankshaft damper counterweight pin retaining							8	All
-27	350999	. Pin - Crankshaft damper counterweight							4	All
		- x - x -								
-28	350997	. Bushing - Crankshaft damper counterweight							4	All
-29	*351000	. Counterweight - Crankshaft damper							NP	All
	*537562	. Crankshaft Assembly (part of 537561)							NP	All

For application code, see page 49.

* Indicates non-procurable part. § Use until stock is depleted.
 ** When stock of No. 352174-A1 is depleted, use No. 532749.
 † Use until stock is depleted but only with crankshafts indicated.

CRANKSHAFTS AND CONNECTING RODS (Cont)

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Appli- cation Code
		1	2	3	4	5	6	7		
21-	§ *350995	.	.	.	.	.	.	.	NP	ab
	§ *532372	.	.	.	.	.	.	.	NP	ab
	*536373	.	.	.	.	.	.	.	NP	c
	*532334	.	.	.	.	.	.	.	NP	c
-30	350998	.	.	.	.	.	.	.	4	All
-31	24978	.	.	.	.	.	.	.	8	c
	535779	.	.	.	.	.	.	.	AR	c
-32	536563	.	.	.	.	.	.	.
		.	.	.	.	.	.	.	1	ab
	536563P005	.	.	.	.	.	.	.	AR	ab
	22386	.	.	.	.	.	.	.	1	ab
	22386P005	.	.	.	.	.	.	.	AR	ab
-33	No Number	.	.	.	.	.	.	.	NP	All

* Indicates non-procurable part.
§ Use until stock is depleted.

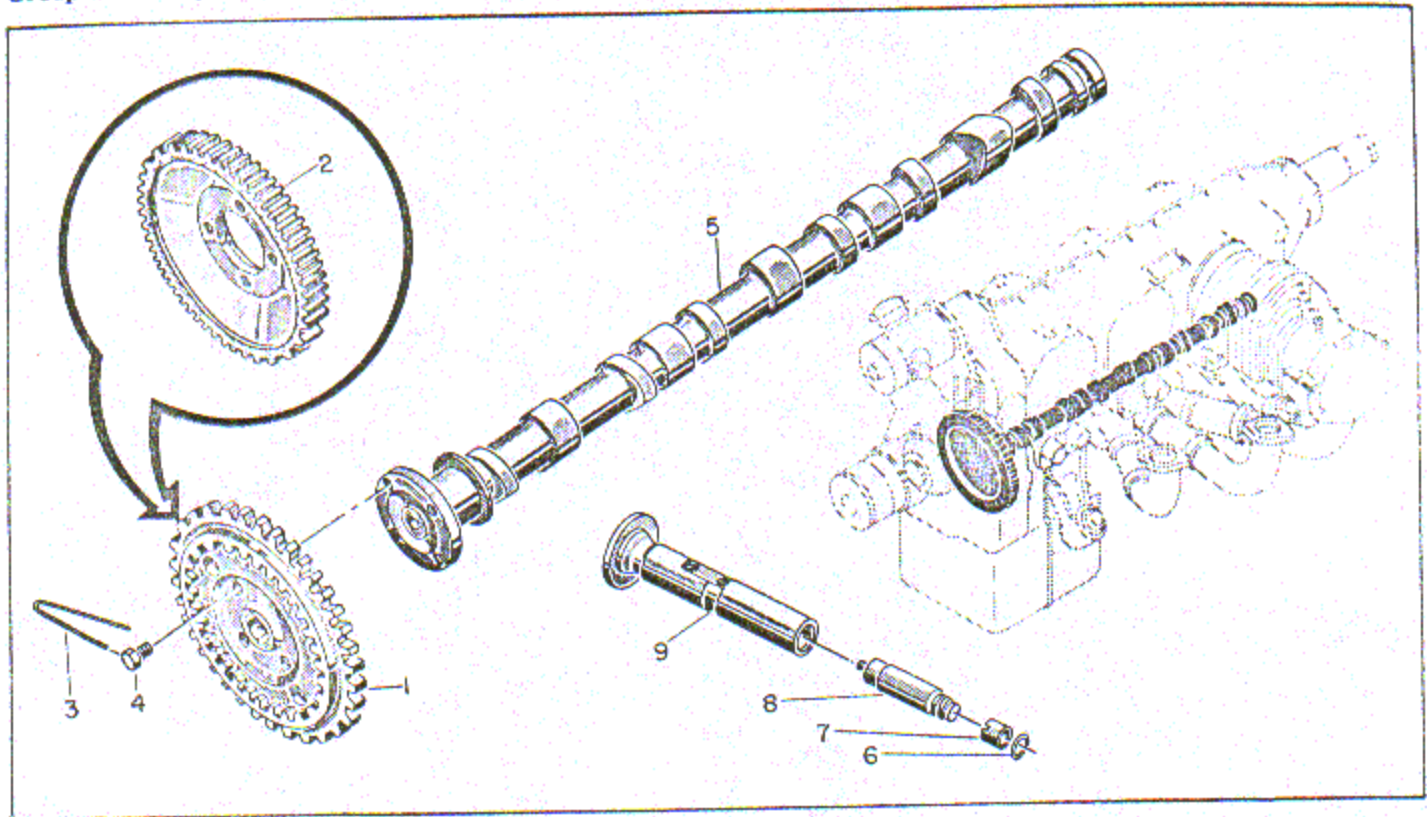


Figure 22. Exploded Parts View of Camshaft and Valve Lifters

CAMSHAFT AND VALVE LIFTERS

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-11	All
d	O-470-7B	All

Figure & Index No.	Part Number	Nomenclature							Units Per Assy	Application Code
		1	2	3	4	5	6	7		
22	*536877-A1	Camshaft Assembly							NP	abd
	†*530808-A1	Camshaft Assembly							NP	abd
	*536877-A2	Camshaft Assembly							NP	c
	†*530808-A2	Camshaft Assembly							NP	c
-1	352012	. Gear - Camshaft (part of 530808-A1)							1	abd
-2	536879	. Gear - Camshaft (part of 536877-A2)							1	c
	536888	. Gear - Camshaft (part of 536877-A1)							1	abd
	†532176	. Gear - Camshaft (part of 530808-A2)							1	c
ATTACHING PARTS										
-3	535011	. Wire - Lock, CRES 18 ga (0.403 in. dia) annealed Spec MIL-W-6713							AR	All
-4	21079	. Screw - Hex drilled head 1/4-28 x 1/2 in. long Parkerized (part of 530808-A1)							4	abd

* Indicates non-procurable part.
† Use until stock is depleted.

SECTION III
NUMERICAL PARTS LIST

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ARTICLE	MICRO-FILM INDEX
6HTF 4718-25440	A-21844		7-13	12	
	A-22184		7-14	9	
	A-22524		7-11	12	
	A-24735		7-15	3	
	A-25440		7-16	12	
	A-25649		7-12	12	
	A-25984		7-5	4	
			7-6		
			8-2		
			7-3	2	
5340-598-0882	A-25985		7-4		
			6-4	12	
			19	6	
	0231	A-8738	16-18	1	
	4004	AN100008	10-3	3	
	5306-282-3275	AN103006	3-5	4	
	5306-281-9574	AN103042	4-3	54	
	5310-282-4778	AN121502	3-J	88	
	5310-268-6042	AN121503	4-8	44	
	5310-282-4775	AN121504	9-26	3	
5340-598-0670	AN123870		17-58	20	
	5307-637-6755	AN125664	17-25	1	
	5307-637-5217	AN129420	18-3	1	
	5306-150-9221	AN3 3A	8-10	6	
		AN302-20-3	20-32	6	
	5310-167-1286	AN310-5	8-13	12	
	4716	AN3104-1	16-56	2	
	5310-176-8108	AN320-4	21-9	1	
	5310-176-8113	AN320-9	18-2	1	
	5310-275-1994	AN366-1032	5-4	4	
5310-285-7085	AN365-440		3A-1	3	
	5310-515-9365	AN365-524	3A-4	1	
	5315-252-5989	AN380-2-2	19-3	16	
	5315-252-5983	AN380-3-3	21-8	1	
	5315-252-5982	AN380-3-4	21-14	2	
		AN381-2-2	16-55	2	
		AN381-2-7	20-69	11	
	5315-282-1225	AN4-11A	20-9	2	
	5306-151-1423	AN4-13A	20-72	1	
	5306-151-1421	AN4-14A	11-56	4	
4730-287-0456	AN4022-1		11-57	2	
	4730-030-7817	AN4023-1	16-23	1	
	4804	AN4044-1	4-5	6	
	5330-776-7519	AN4045-1			
		AN4046-2			
	6105-512-6649	AN4047-1	4-10	2	
		AN4059-1	11-11	1	
		AN4118-R1	4-6	1	
	4716	AN4164-2	8-11	6	
	5320-117-7106	AN430A4-4	16-1	1	
5306-151-1284	AN435-404		6-12	8	
		AN435-5-4C	16-10	2	
		AN5-14A	20-77	7	
	5306-151-0911	AN5-32A	20-82	1	
	5305-151-1961	AN500-416-12	19-12	42	
	5305-144-3899	AN500A416-10	12-15	2	
	5305-150-9157	AN501-10-10	6-2	16	
	5305-151-3577	AN515-4-5	5-5	4	
	5305-167-2337	AN530-10-20	12-33	1	
	5305-207-5491	AN530-10-6	11-44	4	
5305-175-3229	AN535-2-2		19-19	24	
	AN5547-2		4-1	Opt.	
			4		
		AN6-47A	20-64	2	
		AN6271-10-23			
	5340-205-6311	AN737-55	9-2	2	
	5306-151-0421	AN74A5	15-3	2	
	5340-200-3014	AN742-10C	18-4	1	
	5340-598-0261	AN742-17C	18-5	1	
	5340-597-6166	AN742D-9C	8-5	2	
5306-150-9246	AN745-2A		10-26	2	
		AN745-3A	10-23	3	
		AN75A17	16-58	1	
	5306-282-0941	AN75A21	11-25	2	
	5306-151-0860	AN75A7	16-61	4	
	6600-474006	AN780-2	11-58	6	
	4730-278-0833	AN800C2	11-53	2	
	4730-278-5453	AN805-2	11-54	2	
	4730-189-3022	AN822-10B	18-6	1	
	4730-287-1028	AN822-10D	12-1	1	

Superseded by AN100008

Superseded by MS28741-10-25

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ARTICLE	MICRO-FILM INDEX
4730-169-3019	AN823-10B		20-15	2	
4730-287-1880	AN840-16		18-7	1	
4730-231-3918	AN842-10		20-14	1	
6700-264850	AN900-10		9-10	4	
5330-599-5506	AN900-13		16-40	1	
5330-199-5978	AN900-14		12-42	2	
5330-514-3289	AN900-16		10-21	4	
5330-171-8229	AN900-29		13-5	1	
5330-141-2453	AN900-3		12-34	1	
4730-322-7641	AN913-1D		10-22	1	
4730-221-2136	AN913-1S		11-39	3	
4730-221-2138	AN913-3S		17-38	2	
4730-188-3515	AN913-4		12-55	2	
4730-289-5493	AN913-4S		17-40	1	
4730-278-2968	AN932-1		12-23	2	
4730-278-2978	AN932-2		12-66	9	
4730-188-3504	AN932C2		17-11	3	
4730-188-3506	AN932C4		12-67	1	
4730-188-3495	AN932D5		12-66	1	
5310-209-0961	AN935-10		6-5	8	
	AN935A616		3-15	1	
5310-167-0719	AN936A416		11-20	63	
5310-167-0835	AN960-416L		4-4	124	
5310-167-0820	AN960-516		9-14	40	
5310-167-0838	AN960-516L		3-4	43	
5310-167-0821	AN960-616		4-9	12	
5310-167-0837	AN960-616L		20-89	8	
5310-167-0824	AN960-916		21-10	1	
5310-167-0814	AN960C516L		3A-8	1	
	A1873		5-15	12	
			6-9		
			See A1873		
0231	A22886		19	6	
0231	A24814		19	6	
0231	A25004		14	1	
0231	A25010		Superseded by 530470		
0231	A35996		13-4	1	
			18-16		
0231	A36055		14	1	
	A36055-A1		12-8	NP	
			14		
0231	A36068		See H-13604		
0231	A36114		9-24	1	
			10-18		
2910-210-5219	A36121		21	6	
6ACM	A36121-A2		21	6	
2995-478-8296	A40747		20	1	
2995-478-8297	A40748		20	1	
	A532271		20-	NP	
	A532367		20-	NP	
0231	A6738-A1		19	6	
2990-536-3124	A6738-A2		19	6	
5340-598-5653	C1779-10Z-1		11-45	4	
6HAA-865500	C2-52		19-35	12	
	C27S		7-35	12	
			8-28		
	C430-3624-67		Superseded by C1779-10Z-1		
	D32611		7	1	
	E-80		3-8	1	
	H-13804		22	12	
	H-23077		Superseded by H-23179		
6AUZ	H-23176		22	12	
	H-3714		Superseded by H-3614		
0231	H-3614		22-8	12	
	H-5445		22-9	12	
0231	H-5576		22	12	
6AUZ	H-7392		22-7	12	
5340-025-8319	H-7397		22-6	12	
	H26-748		5-16	12	
	H27-725		5-21	2	
	H60-050		See AN5547-2		
	MS28741-10-25		18-1	1	
	M366		5-14	12	
			6-8		
	RD7790-N		11-2	1	

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ART-ICLE	MICRO-FILM INDEX	CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ART-ICLE	MICRO-FILM INDEX	
2915-390-8251	RG-9080		11-7	1		5310-485-9353	1345-3		4-11	1		
	RW1008	Superseded by WE1008					2-155		6-22	2		
	RW1068		8-14	12					7-30			
	RW1012	Superseded by AN4164-2							8-29			
	RW1016	Superseded by AN302-20-3						2CM9AAA-1	See AN5547-2			
	RW1120	Superseded by AN742D-96					5940-244-7498	20087		5-18	12	
	RW1122		8-9	1					6-10			
	RW1214-L-2700		8-17	1				†20092		20-100	2	
	RW1214-L-3000		8-16	1				†20100		20-38	8	
	RW1214-L-3400		8-19	1			5310-478-8337	20202		20-58	4	
	RW1214-L-3600		8-18	1				20273		16-39	1	
	RW1214-L-4000		8-21	1			4720-516-2967	20275		10-27	1	
	RW1214-L-4300		8-20	1			4730-546-5608	20877		Superseded by 537744		
	RW1214-R-2200		8-22	1			5310-637-0268	20968		18-21	1	
	RW1214-R-3000		8-24	1			0231	20970		18-19	1	
	RW1214-R-3200		8-23	1				21070		22-4	4	
	RW1214-R-3600		8-26	1			0231	21080		20-46	2	
	RW1214-R-3800		8-25	1			0231	21113		12-41	1	
	RW1214-R-4200		8-27	1			0231	21114		12-46	1	
							6ACM	21163		12-30	1	
	RW1214-2500	Superseded by RW1214-R-2200						†21167		20-39	2	
	RW1214-2700	Superseded by RW1214-L-2700						21250		Superseded by 535063		
	RW1214-3000	Superseded by RW1214-L-3000						21440		See M366		
		Superseded by RW1214-R-3000					4711	21493		16-2	6	
	RW1214-3200	Superseded by RW1214-L-3200					5330-037-3153	21512		11-52	1	
	RW1214-3400	Superseded by RW1214-L-3400						22022		19-7	12	
	RW1214-3600	Superseded by RW1214-L-3600					5310-478-8416	22115		5-19	12	
		Superseded by RW1214-R-3600						†22145		11-40	8	
	RW1214-3800	Superseded by RW1214-R-3800						†22195		12-75	4	
	RW1214-4000	Superseded by RW1214-L-4000						2220		Superseded by 535011		
	RW1214-4200	Superseded by RW1214-R-4200						†22319		17-21	8	
	RW1214-4300	Superseded by RW1214-L-4300						†22325		17-22	14	
	S3043-2703			7-18	1			22366		21-19	1	
	S3043-3200			7-20	2			†22386		21	1	
				7-27				5305-478-8439		Superseded by 21079		
				7-21	1			5315-216-3023		5-17	12	
				7-24	1			5306-478-8444		Superseded by 905B10		
				7-22	2			6ACM		22	4	
				7-23						9	NP	
	5975-280-9721	S3043-3300		7-29	1					10		
	S3043-3400		7-26	1				21-23	1			
	S3043-4000		7-25	1				9	1			
			7-19	1				10				
5975-280-9719	S3043-4100		7-26	1		5315-217-7694	23513					
	S3043-4300		7-25	1		0231	23888					
	S3043-4600		11-1	1				12-71	16			
	S3043-4800		8-12	6				20-36	6			
5975-280-9725	S3043-4900		6-23	2		5307-298-7776	†2389	5-9	1			
	TFB1100-1		6-23	2			†2390	6-13				
	WE1008		7-31				24227	20-63	4			
	X1454		8-30					24323-5C-2				
5310-209-4539	10-37688		6-26	2				24461				
4704			7-34					24645				
			6-33					†2465	12-72	10		
8850-795000	10-37689		6-8	2		4711		2472				
			7-9					†24797	19-16	6		
4704	10-50771		6-7					24799	19-27	12		
			7-10					24801	Superseded by 530367			
			6-8					24802	19-23	24		
4704	10-50777		6-27	2				24804	20-15	12		
			7-36					24810	19-4	16		
			8-34					24823	12-43	1		
			7-8	12				24826	11-37	6		
5310-733-8645	10-51677		6-6					24827	11-23	7		
			6	2					11-36			
4704	10-52305		6-24	2				5305-478-8512	12-62	4		
5940-243-4420	10-7028		7-32					5305-478-8513	11-18	12		
			6-31					5305-478-8515	12-37	1		
			6-25	2				5305-478-8516	12-27	2		
			7-33					5305-478-8517	12-60	2		
			8-32					5315-297-7871	12-77	2		
			6-5	12				0231	15-4	1		
5310-485-9315	10-8735		3A-14	1				0231	†24869	19-33		
6115-186-2200	1101880		3A-15	1				5305-478-8522	24872			
	1101887		3-1	1				0231	24873			
	1109660		19-36	12				5340-478-8528	24908			
	1185-4CNx3/8		20-47	5				0231	24923			
	1185-5CNx5/8		20-48									

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ARTICLE	MICRO-FILM INDEX	CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ARTICLE	MICRO-FILM INDEX
0231	24078		21-32	8		4711	352085		5	1	
	25001		14-8	1		4711	352086		5	1	
	25003		14-1	NP		4711	352087		5	1	
0231	25005		14-3	3		0231	352088		9-1	1	
			16-29				352091		Superseded by 533724		
			16-34			0231	352092		9-25	1	
	†25008		14-10	8		0231	352093		9-18	1	
5310-478-8536	25024		20-1	8			352100		10-9		
	25025		20	3			352106		9	NP	
			20-99			5305-478-8583	352100		12-56	1	
	25026		20-2	8		5305-478-8584	352107		12-57	3	
	25027		12-35	1		0231	352111		12	1	
	†25030		20-42	8			352114		16		
0231	25042	See H-7392	12-21	1		0231	352115		Superseded by 21250		
	25102		11-17	1		0231	352116		21-26	8	
0231	25135		5-8	1		5340-598-1424	352117		21-25	8	
5340-239-1377	25145		6-14	1			352117		21	NP	
			5-7	1		0231	352174-A1		21	1	
4711	25146		6-15	1		0231	352178		12	1	
5340-239-1372	25147		5-8	1		0231	352179		3-7	1	
			6-16			0231	356-428		4-2	54	
5310-478-8546	25164		20-8	2		5310-449-3577	356-440		5-4	4	
5305-478-8547	25167		21-6B	6			356-524		3-2	66	
0231	25171		20-57	4		5310-262-8127	356-624		4-7	46	
5310-331-9479	25307		6-11	12		5310-489-5657	356-720		19-8	52	
6HCY	25312	See 10-50777				0231	35966		19-38	1	
	25314	See 2-155				0231	35966P005		19-	AR	
	25316	See 10-7029				0231	35966P010		19-	AR	
	25317	See 10-7030				0231	35966P015		19-	AR	
	25318	See 10-37669				0231	35966P020		19-	AR	
	25387	See A-4				0231	35966P030		19-	AR	
5310-641-9052	25388	See 10-8785					35967		19-39	1	
4730-037-3160	2832		10-20	1		0231	35967P005		19-	AR	
	39NTE-064		3A-6	1		0231	35967P010		19-	AR	
4310-474-4600	3P-194-F		4	Opt.		0231	35967P015		19-	AR	
	350395		21	NP		0231	35967P020		19-	AR	
0231	350397		21-28	4		0231	35967P030		19-10	6	
0231	350398		21-30	4			35968		19-24	12	
5315-286-8386	350399		21-27	4		5306-478-8616	35972		21-16	12	
	351000		21-26	NP		5306-478-8617	35974		20-59	8	
	352006	See 1109660				0231	35975		Superseded by 515152		
0231	352012		22-1	1		0231	35976		20-33	1	
0231	352014		12-18	1		0231	35978		12-31	NP	
	352015		14-2	NP		0231	35978-A1		12	1	
0231	352018		12-24	1		0231	35979		12-47	2	
	352024	See 10-52305				0231	35985		11-16	1	
0231	352029		3A-12	1		0231	35988		19-26	12	
0231	352030		3A-11	1		0231	35989		19-25	12	
0231	352031	Superseded by 530997				0231	35993		12-13	1	
5330-171-7569	352033		19-50	24		5306-478-8623	36007		Superseded by 538931-11.00		
0231	352035		20-30	2		5310-478-8624	36025		12-61	2	
6ACM	352037		5-29	NP		0231	36027		12-12	1	
			6-35			0231	36028		20-25	6	
0231	352039	Superseded by 530859					36060		See H-3714		
	352040	Superseded by 533025					36069		See H-5445		
0231	352056		19-15	6			36102		See H2T-725		
0231	352057	Superseded by 535324					36114		9	NP	
0231	352058		20-29	6			36115		9	NP	
0231	352059		9-7	2		0231	36161-E		10		
			11-28						11-22	14	
			11-32						11-34		
0231	352060		11-33	1		0231	36161		11-35		
0231	352061		11-25	1			36219		16-14	1	
0231	352062		12-29	1			380212-1		See 10-50771		
6ACM	352065		12-51	2			380230		Superseded by 380230		
	352066		3A-3	1		2915-326-1156	380230		11-12	1	
0231	352067		12-7	1		2915-293-6424	391316		11-	1	
0231	352068		3A-13	1		5310-478-8657	401506		5-24	4	
0231	352069		12-65	1		5305-478-8658	401507		3A-7	1	
0231	352071		9-27	1		0231	401619		19-34	24	
5340-200-6797	352078		5-3	1			40631		19-17	NP	
2910-386-9238	352079		5-10	1			40632		Superseded by 530383		
			6-17				40633		Superseded by 530386		
5340-239-1381	352080		5-11	1			40634		19-20	NP	
5340-598-4395	352081		5-12	1		2995-478-8669	40636		20-90	1	
			6-18			2995-478-8670	40639		20	1	
4711	352083		5	1		0231	40640-C		11-36	6	
4711	352084		5	1		0231	40644		20-85	2	
						0231	40650		21	1	
						6ACM	40651		19-29	6	

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ARTICLE	MICRO-FILM INDEX
0231	40652		19-30	6	
0231	40660		13-8	1	
	40660-A1		12-2	NP	
			13-		
0231	140688		19-43	6	
0231	140669		19-44	6	
0231	140670		19-45	6	
	40744		21-18	NP	
0231	40759		20-86	1	
0231	40760		20-	1	
5340-329-1657	49162		7-7	1	
			8-1		
5310-209-2629	501868		16-59	1	
0231	50385		15-8	NP	
0231	↑50389		19-46	6	
	50389-A1		16-	6	
	50389-A2		19-	6	
	50403		14-11	NP	
0231	50411		19-11	6	
	50435		20-101	NP	
	50436		20-	NP	
	50444				
5340-200-7301	5100-112		16-82	1	
	5100-86		12-79	1	
6ACM	↑515152		19-37	12	
0231	520004		12-17	1	
0231	520005		9-11	1	
0231	520006		9-	1	
5340-037-3507	520012		21-21	1	
0231	520013		21-20	1	
5310-478-8703	520014		12-11	4	
5310-478-8704	520022		19-5	AR	
0231	520023		19-28	12	
4711	520028				
4711	520028-A2				
	520029				
	520031				
0231	520041				
0231	520043				
0231	520044				
0231	520054		15-1	1	
	520055		20-104	NP	
	520058				
5340-239-1376	520084		5-13	1	
2915-478-8708	520087		11-42	1	
0231	520105		19-	12	
0231	520106		19-	12	
0231	520112				
0231	520113		19-	6	
	520113-A1		19-	6	
	520114		19-	6	
0231	520127		19-	6	
	520129				
	521649				
	530156				
	530203				
	530334		3-18	NP	
	530335		20-35D	1	
0231	530336		12-81	1	
0231	530339		12-80	1	
0231	530340		3-12	1	
0231	530341		3-19	1	
0231	530342		21-8A	1	
0231	530343		20-	1	
0231	530344		20-35C	1	
0231	530346		20-35A	2	
0231	530347		3-16	2	
	↑530362		20-43	36	
0231	530367		19-18	12	
			19-21		
0231	530371		12-19	1	
0231	530383		21-13	12	
0231	530386		20-84	8	
5310-478-8735	530412		3A-5	1	
0231	530443		12-22	1	
	530455				
	530462		19-52	AR	
6ACM	530470		20-4	1	
1730-478-8738	↑530479		12-76	4	
	530486				
	530506				
	530537		20-49	NP	
	530537-A1		20	NP	
	530538		20-51	NP	
0231	530549		15-	1	

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ARTICLE	MICRO-FILM INDEX
0231	530551		12-70	4	
			15-7		
0231	530635		19-51	12	
0231	530653		20-	1	
0231	530658		21-17	6	
5310-478-8752	530671		12-16	2	
	530688		20-	NP	
0231	530692		15-5	1	
0231	530693		15-6	1	
0231	530694		15-	1	
0231	530695		15-	1	
	530696		15-	NP	
	530743				
0231	530773-A1		19-	6	
	530791				
0231	530808		22-	1	
	530808-A1		22-	NP	
	530808-A2		22-	NP	
0231	530809				
	530817		20-	1	
	530818		20-	1	
	530823		20-	1	
	530824		20-	1	
0231	530838		12-45	1	
0231	530845		19-41	6	
0231	530859		21-1	1	
5310-209-6476	530878		20-35B	2	
	530886		6-20	1	
	530897		9-9	1	
	530940				
	530946		3A-	1	
	530992		9-16	3	
			9-20		
0231	530997		3A-9	1	
0231	530998		3A-10	2	
5310-208-5878	531001		19-9	52	
5310-285-9304	531003		20-62	2	
	531005		12-72A	3	
	531006		3-17	2	
0231	531007		3-	1	
	531115		6-19	1	
	531128				
	531132-1				
	531139				
	↑531145		20-	36	
0231	531152		20-	1	
6ACM	531176		5-30	NP	
			8-38		
0231	531177		5-26	2	
			6-34		
0231	531178		16-86		
			5-27	2	
			6-33		
			7-42		
			8-40		
0231	531179		5-26	4	
			6-32		
			7-41		
			8-39		
0231	531180		5-	2	
			6-		
0231	531183		19-49	12	
0231	531186		20-	6	
5307-206-8911	531205		20-60	8	
6ACM	531231				
0231	531424		20-	NP	
0231	531433		20-3	1	
	531435		21-	1	
5330-290-4863	531442				
	531445-A		9-3	1	
0231	↑531510		19-46	6	
	531510-A2		19-	6	
0231	↑531530				
0231	↑531531				
	531569		15-	1	
	531676				
	531857				
0231	532136		21-7	1	
0231	532139		16-24	1	
	532140		17-10	NP	
0231	532150-A1		19-	6	
0231	532171		21-	1	
	532172		16-85	NP	
0231	532174		16-88	1	
0231	532176		22-	1	

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ART-ICLE	MICRO-FILM INDEX
0231	532177		16-65	NP	
	532178		16-69	2	
	532180		16-71	NP	
	532181		16-67	NP	
5340-664-6125	532192		See 1345-3		
	532197		See AN4116-R1		
	532199		16-64	2	
0231	532200		16-70	2	
	532202		19	6	
5340-664-6124	532223		16-84	1	
	532257		20	NP	
0231	532271		17-43	1	
	532271-A1		20	NP	
6307-513-3456	532272		Superseded by A532271		
	532299		20	NP	
	532300		17	NP	
	532303		17-34	NP	
	532316		21-24	1	
	532317		17-44	1	
	532318		17-45	1	
	532331		17-13	3	
	532334		17-46		
	532347		17-47		
0231	532349		17-14	2	
	532350		17-15		
	532357		21	NP	
	532367		20-52	NP	
	532367-A1		17-67	NP	
	532372		17-28	NP	
	532381		20-50	NP	
	532387		Superseded by A532387		
	532388		21	NP	
	532393		18-8	1	
0231	532402		19	12	
	532410		See RG-9080		
	532433		18-24	NP	
	532435		18-30	1	
	532437		18-9	1	
	532450		17-48	2	
	532451		18-29		
	532453		19	6	
	532453-A1		19	6	
	532453-A2		Superseded by 538567		
0231	532458		Superseded by 538567-A1		
	532461		Superseded by 538567-A2		
	532461-A1		10-25	1	
	532467		10-28	1	
	532468		10	NP	
	532473		16-76	1	
	532477		16-73	1	
	532478		17-3	1	
	532479		16-88	NP	
	532480		16-87	NP	
0231	532481		16	2	
	532482		17-49	1	
	532484		17-16	3	
	532485		17-50		
	532486		17-51		
	532487		16-63	1	
	532488		17-9	1	
	532489		17-18	2	
	532490		See 5100-112		
	532491		16-83	1	
0231	532498		See D32611		
	532499		16-77	1	
	532500		10-24	1	
	532501		20	1	
	532502		Superseded by 25008		
	532502-A1		17-60	8	
	532505		17-61		
	532506		16	1	
	532507		18	1	
	532508		17-23	2	
5307-036-2016	532509		18-78	1	
	532510		17-24	16	
	532511		18-79	1	
	532512		16-9	1	
	532513		16-80	1	
532514		17-84	4		

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ART-ICLE	MICRO-FILM INDEX
5307-297-8287	7532513		17-65	4	
	7532514		17-26	5	
	7532515		17-8	9	
0231	7532516		17-66	6	
	7532517		20-44	2	
	532518		17-32	2	
	532519		17-7	1	
	532520		16-28	1	
	532522		20-45	3	
	532523		21-22	1	
	532524		17-53	2	
	532525		17-19	2	
	532526		17-20		
0231	532526		20	NP	
	532528		17	NP	
	532529		20	1	
	532530		20	NP	
	532531		21	1	
	532532		16-19	1	
	532533		16-72	1	
	532534		16-81	1	
	532536		16	1	
	532537		17	1	
0231	532538		17	1	
	532539		17	1	
	532540		16	1	
	532541		16	1	
	532542		16	1	
	532543		16	1	
	532553		17	NP	
	532612		17-27	1	
	532613		16-11	2	
	532632		16-13	NP	
0231	532654		16-75	1	
	532660		16-74	1	
	532676		11-59	1	
	532683		20-13		
	532684		17-52	2	
	532685		17-33	1	
	532686		11	2	
	532687		11	2	
	532688		11-55	NP	
	532689		11	NP	
0231	532700		11	NP	
	532701		See 1101887		
	532749		21	1	
	532820-A1		16-51	1	
	532843		17		
	532844		11	1	
	532845		11-51	1	
	532846		11-46	2	
	532847		11	1	
	533025		11-47	1	
0231	533026		10-1	2	
	533031		See 901-9B		
	533053		17-17	2	
	533054		16-3	1	
	533055		16-2	1	
	533067		16	1	
	533103		See 49162		
	533104		18-27	1	
	533105		16-28	1	
	533106		18-25	1	
0231	533166		18-26	1	
	533167		18	1	
	533224-3		18-23	NP	
	533224-4		See RW1120		
	6ACM		See RW1122		
	533261		21-3	1	
	533355		12-52	1	
	533399		16-4		
	533400		See H-3814		
	533406		See H-23179		
0231	533724		See 532533		
	533730		11-27	1	
	534204		3A	1	
	534204		11	NP	

CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ART- ICLE	MICRO- FILM INDEX	CLASS CODE OR STOCK NO.	PART NO.	SOURCE CODE	FIG. AND INDEX NO.	QTY PER ART- ICLE	MICRO- FILM INDEX
	534204-A1		11	1			536877-A1		22	NP	
	534204-A2		11	NP		0231	536877-A2		22	NP	
	534694		19	NP			536879		22-2	1	
6ACM	†534895		19-46	6			536888		22	1	
6ACM	534895-A1		19	6			536913		20	1	
	534895-A2		19	6			536914		20	1	
5306-638-2758	534904		21	6		0231	†536938		19-43	12	
	535011		9-4	AR					19-44		
5330-171-8527	535057		19	24		6ACM	†536939		19-45	6	
0231	535063		12-54	1		0231	537019		22	4	
			16-12			0231	537064		19-45	6	
0231	†535145		Superseded by 539467				537316		See A-25984		
	535291		Superseded by 538610			0231	537400		19-47	12	
	535291-A1		Superseded by 538610-A1				537561		21	1	
	535291-A2		Superseded by 538610-A2				537562		21	NP	
0231	535324		5-25	2		0231	537744		17-41	1	
			6-31				538567		19	6	
			7-40				538567-A1		19	6	
			8-38				538567-A2		19	6	
	535527		16-66	1			538610		19	6	
0231	535779		21	AR			538610-A1		19	6	
	536043		8	1			538610-A2		19	6	
	536043-1		8	1			538931-11.00		20-97	2	
	536043-2		8	1		0231	539449		19	1	
0231	536259		21	6		0231	†539467		19-42	6	
	536372		Superseded by 537562				539738-11.06		20-98	1	
	536373		21	NP			539748		6	2	
	536374		21-4	1			539749		8	2	
0231	536375		21-11	1			6740		12-78	NP	
0231	536378		21-12	6			6755		Superseded by 530537		
5306-638-1904	536379		21-5	6			6756		Superseded by 530538		
5315-141-6868	†536563		21	2			6756-A1		Superseded by 530537-A1		
0231	536570		21	1			6757		11-41	NP	
	536579		21-2	NP		0231	6757-A1		11	1	
0231	536580		21	1			6757-A2		11	NP	
	536657		Superseded by 537561				706-S		5	12	
	536708		20	NP					6-1		
	536708		20	NP		4708	707-SR		5-1	12	
	536709		20-103	NP					6		
	536710		20	NP			83602-892-2		4-16	1	
0231	536740		11-21	6			844		5-20	AR	
	536786		20	1					6-21		
	536790		20	1					4	Opt.	
	536791		20	1					13-2	4	
	536792		20	1							
0231	536877		22-5	1							

Section III
Numerical Parts List

T.O. 2R-0470-4

Part Number	Figure & Index No.	Total Quantity	Part Number	Figure & Index No.	Total Quantity
533104	18-28	1	536709	20-103	NP
533105	18-25	1	536710	20	NP
533106	18-26	1	536740	11-21	6
533166	18	1	536786	20	1
533167	18-23	NP	536790	20	1
533224-3	See RW1120		536791	20	1
533224-4	See RW1122		536792	20	1
533261	21-3	1	536877	22-5	1
533355	12-52	1	536877-A1	22	NP
	16-4		536877-A2	22	NP
533399	See H-3814		536879	22-2	1
533400	See H-23179		536888	22	1
533406	See 532533		536913	20	1
533724	11-27	1	536914	20	1
533730	3	1	†536938	19	12
534204	11	NP	†536939	19	6
534204-A1	11	1	537019	22-4	4
534204-A2	11	NP	537064	19	1
534894	19	NP	537316	See A25984	
†534895	10	6	537400	19-45	12
534895-A1	10	6	537501	21	1
534895-A2	10	6	537502	21	NP
534904	21-6	6	537744	17-41	1
535011	3-5	AR	538438	19	1
535057	19	24	538567	19	1
535063	12-54	1	538567-A1	19	1
	16-12		538567-A2	19	1
†535145	Superseded by 539467		538610	19	1
535291	Superseded by 538610		538610-A1	19	1
535291-A1	Superseded by 538610-A1		538610-A2	19	1
535291-A2	Superseded by 538610-A2		538931-11.00	20-97	2
535324	5-25	2	539449	19	1
	6-31		539467	19-40	1
	7-40		539467P005	19	AR
	8-38		539738-11.06	20-98	1
5325537	16-66	1	539748	6	1
536043	8	1	539749	6	1
536043-1	8	1	6740	12-78	NP
536043-2	8	1	6755	Superseded by 530537	
536259	21-13	6	6756	Superseded by 530538	
536372	Superseded by 537562		6756-A1	Superseded by 530537-A1	
536373	21	NP	6757	11-41	NP
536374	21-4	1	6757-A1	11	1
536375	21-11	1	6757-A2	11	NP
536378	21-12	6	706-S	5	12
536379	21-5	6		6-1	
†536563	21-32	2	707-SR	5-1	12
536570	21	1		6	
536579	21	1	83802-692-2	4-16	1
536657	Superseded by 537561		844	5-20	AR
536580	21	1		6-21	
536706	20	NP	901-9B	4	Opt.
536708	20	NP	905B10	13-2	4

SECTION IV
SPECIAL SERVICE TOOLS LIST

SERVICE TOOLS

Coding Explanation

Application Code	Model Designation	Serial Numbers
a	O-470-7	All
b	O-470-7A	All
c	O-470-11	All

Figure & Index No.	Tool Number	Tool Name							Qty per Kit	Appli- cation Code
		1	2	3	4	5	6	7		
23-1	J-2864	Pilot - Crankshaft oil seal installing							1	ab
-2	J-2843	Tool Assembly - Rocker arm removal pressure relieving . .							1	All
-3	J-2882	Wrench - Cylinder base nut							1	All
24-1	J-2850	Gauge - Piston ring							1	All
-2	J-2858	Fixture Assembly - Cylinder and valve holding							1	All
-3	J-2861	Fixture Assembly - Cylinder head holding							1	All
25-1	J-2840	Puller - Magneto driver gear support							1	ab
	J-2848	Set - Valve guide stem hole gauge							1	All
-2	*J-2848-1	. Gauge - Intake valve guide stem hole							NP	All
-3	*J-2848-2	. Gauge - Exhaust valve guide stem hole							NP	All
-4	J-2844	Gauge - Cam bearing							1	All
-5	J-2845	Wrench - Accessory drive gear-to-crankshaft							1	ab
-6	J-2849	Gauge - Cylinder head valve guide bore .005 in. OS							1	All
-7	J-2842	Driver - Valve guide installing							1	All
-8	J-2881-2	Block - Rocker arm bearing support							1	All
-9	J-2881-1	Remover-Replacer - Rocker arm bearing							1	All
-10	J-2854-1	Gauge - Connecting rod bushing							1	All
-11	J-2853-1	Gauge - Piston pin hole (standard size)							1	All
-12	J-2852	Gauge - Magneto drive gear bushing							1	ab
-13	J-2851	Kit Assembly - Rocker arm bearing and rocker arm shaft gauges							1	All
	*J-2851-1	. Gauge - Rocker arm bearing and rocker arm shaft (standard size)							NP	All
	*J-2851-2	. Gauge - Rocker arm bearing and rocker arm shaft .005 in. OS							NP	All
	*J-2851-3	. Kit - Rocker arm bearing and rocker arm shaft gauges . .							NP	All
-14	J-2856	Set - Cylinder head fin repair							1	All
	*J-2856-1	. Guide - Drill							NP	All
	*No Number	. Drill - Standard straight shank							NP	All
26	J-2872	Set - Crankshaft plug removing and replacing							1	ab
-1	*J-2872-1	. Cup - Crankshaft plug removing and replacing							NP	ab
-2	*J-2872-2	. Driver - Crankshaft plug removing and replacing							NP	ab
-3	J-2887	Set - Gauge							1	All
	*J-2887-A	. Gauge - Exhaust valve seat blueing							NP	All
	*J-2887-B	. Gauge - Intake valve seat blueing							NP	All
-4	J-2874	Remover - Valve guide							1	All
-5	J-5008	Reamer - Connecting rod bushing							1	All
-6	J-2891	Reamer - Cylinder head rocker shaft bore .005 in. OS							1	All
-7	J-2892	Kit - Rocker arm bearing reamer							1	All
	*J-2892-1	. Reamer - Rocker arm bearing (standard)							NP	All

* Indicates non-procurable part.

Figure & Index No.	Tool Number	Tool Name							Qty per Kit	Appli- cation Code
		1	2	3	4	5	6	7		
26-	*J-2892-2	.	.	.	.	.	.	.	NP	All
	*J-2892-3	.	.	.	.	.	.	.	NP	All
27-1	J-2859	Gauge	-	Valve	lifter	bearing			1	All
-2	J-2860	Gauge	-	Cylinder	head	rocker	shaft	bore	1	All
-3	J-2885	Holder	Assembly	-	Crankshaft				1	All
-4	J-5006-1	Reamer	-	Cylinder	head	valve	guide	hole 0.005 in. OS	1	All
	J-5006-2	Reamer	-	Cylinder	head	valve	guide	hole 0.010 in. OS	1	All
-5	*J-2847-1	Broach	-	Intake	valve	guide	stem	hole (Standard size)	NP	All
-6	*J-2847-2	Broach	-	Exhaust	valve	guide	stem	hole .005 in. OS	NP	All
-7	J-2879	Remover-Replacer	-	Connecting	rod	bushing			1	All
-8	KMO-656	Set	-	Oversize	tap				1	All
	*KMO-656-1	Tap	-	No. 1/4-20	.003	in. OS			NP	All
	*KMO-656-2	Tap	-	No. 1/4-20	.006	in. OS			NP	All
	*KMO-656-3	Tap	-	No. 1/4-20	.009	in. OS			NP	All
	*KMO-656-4	Tap	-	No. 5/16-18	.003	in. OS			NP	All
	*KMO-656-5	Tap	-	No. 5/16-18	.006	in. OS			NP	All
	*KMO-656-6	Tap	-	No. 5/16-18	.009	in. OS			NP	All
	*KMO-656-7	Tap	-	No. 3/8-16	.003	in. OS			NP	All
	*KMO-656-8	Tap	-	No. 3/8-16	.006	in. OS			NP	All
	*KMO-656-9	Tap	-	No. 3/8-16	.009	in. OS			NP	All
	*KMO-656-10	Tap	-	No. 7/16-14	.003	in. OS			NP	All
	*KMO-656-11	Tap	-	No. 7/16-14	.006	in. OS			NP	All
	*KMO-656-12	Tap	-	No. 7/16-14	.009	in. OS			NP	All
	*KMO-656-13	Kit	-	Leatherette					NP	All
28-1	J-5129	Set	-	Rocker	arm	support	shaft	boss reamer	1	All
	J-5129-1	Reamer	-	Rocker	arm	support	shaft	boss	1	All
	J-5129-2	Reamer	-	Rocker	arm	support	shaft	boss	1	All
	J-5129-3	Reamer	-	Rocker	arm	support	shaft	boss	1	All
	J-5129-4	Kit	-	Cloth					1	All
-2	J-5130	Reamer	-	Rocker	shaft	bushing			1	All
29-1	J-2877-1	Remover	-	Exhaust	valve	seat			1	All
-2	J-2877-2	Remover	-	Intake	valve	seat			1	All
-3	J-2877-28	Syringe	-	Rubber	(4 oz. capacity)				1	All
-4	J-2882-1	Replacer	-	Exhaust	valve	seat			1	All
-5	J-2882-2	Replacer	-	Intake	valve	seat			1	All

* Indicates non-procurable part.

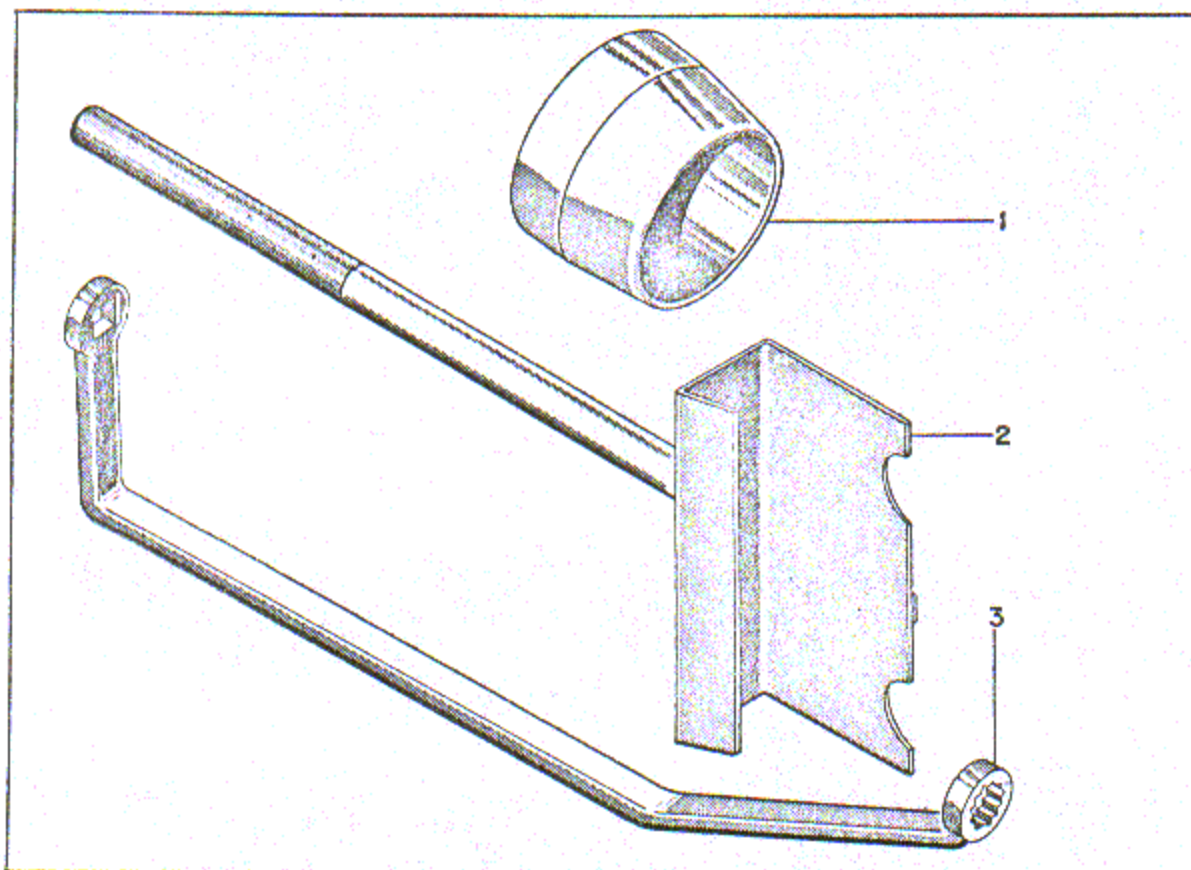


Figure 23. Special Service Tools

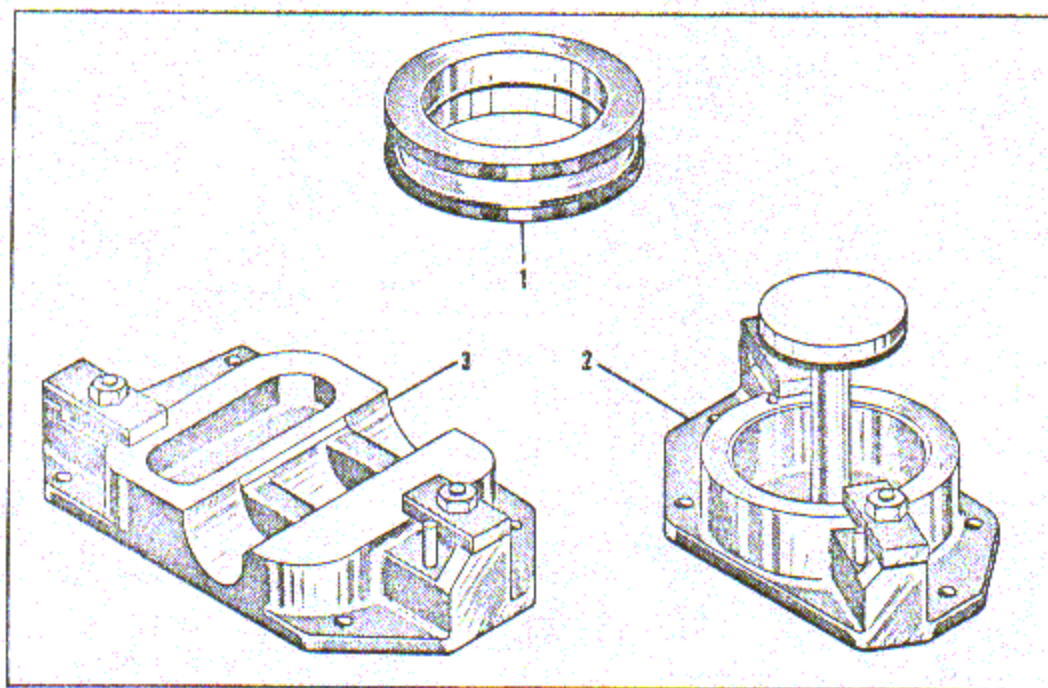


Figure 24. Special Overhaul Tools

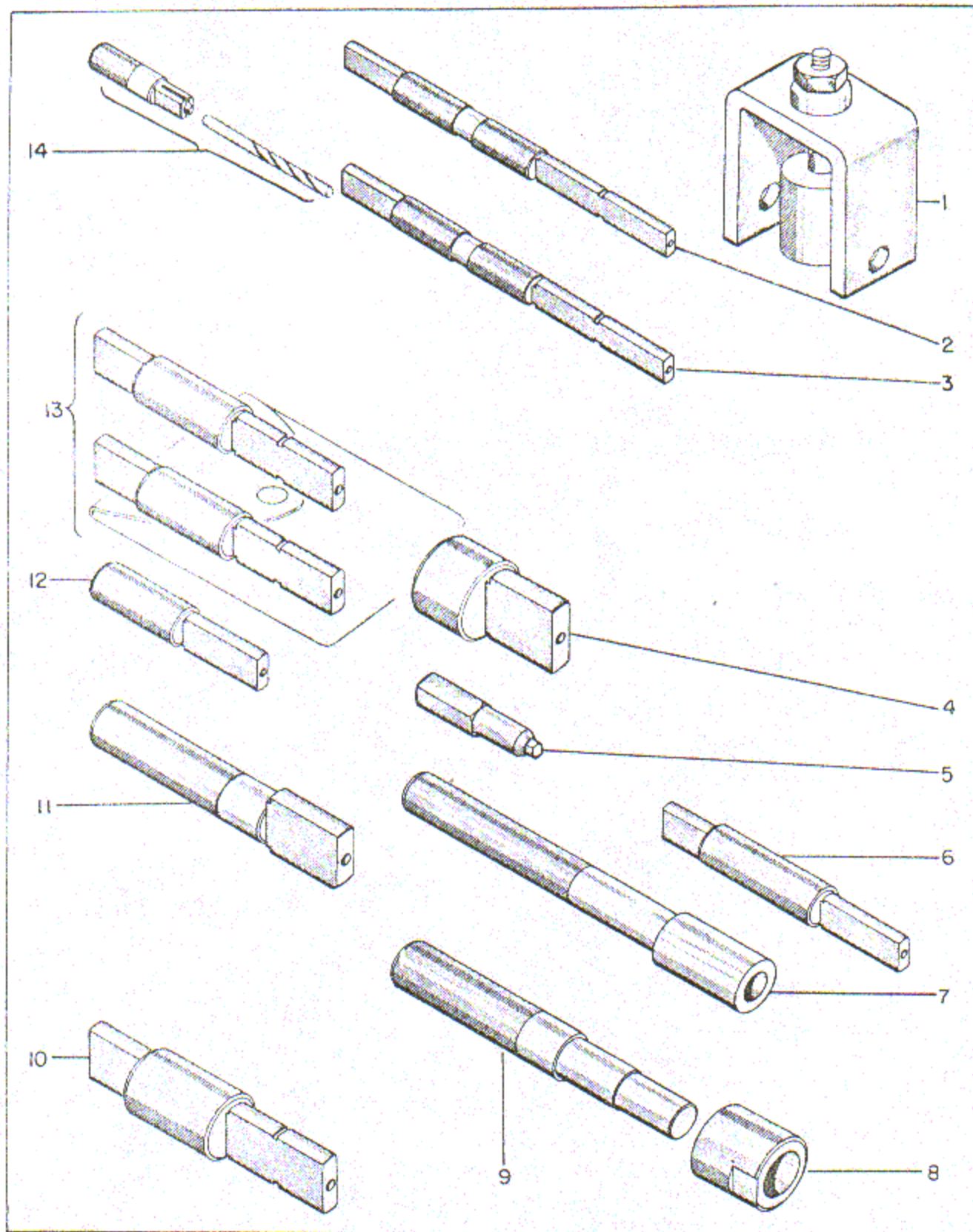


Figure 25. Special Overhaul Tools

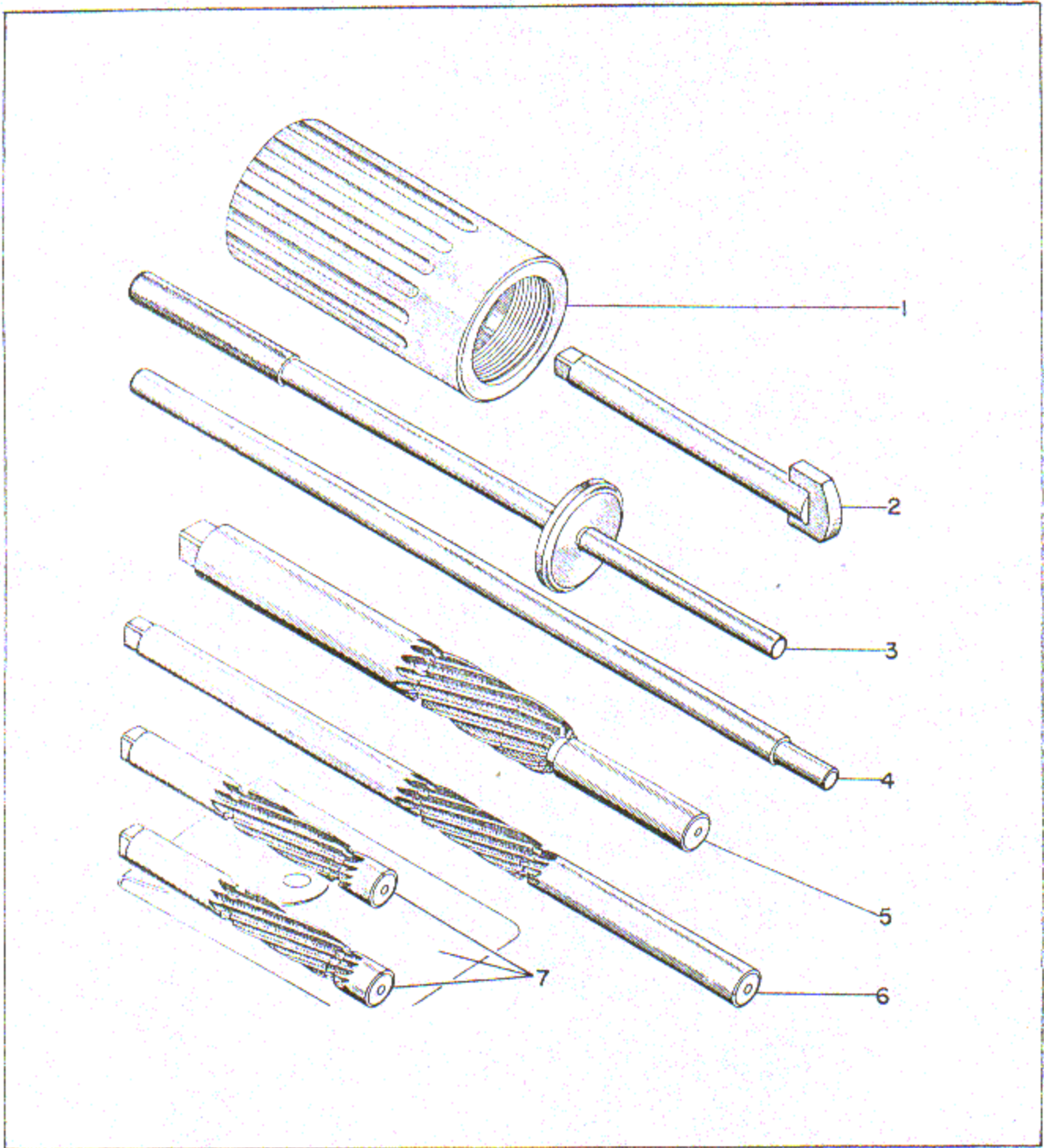


Figure 26. Special Overhaul Tools

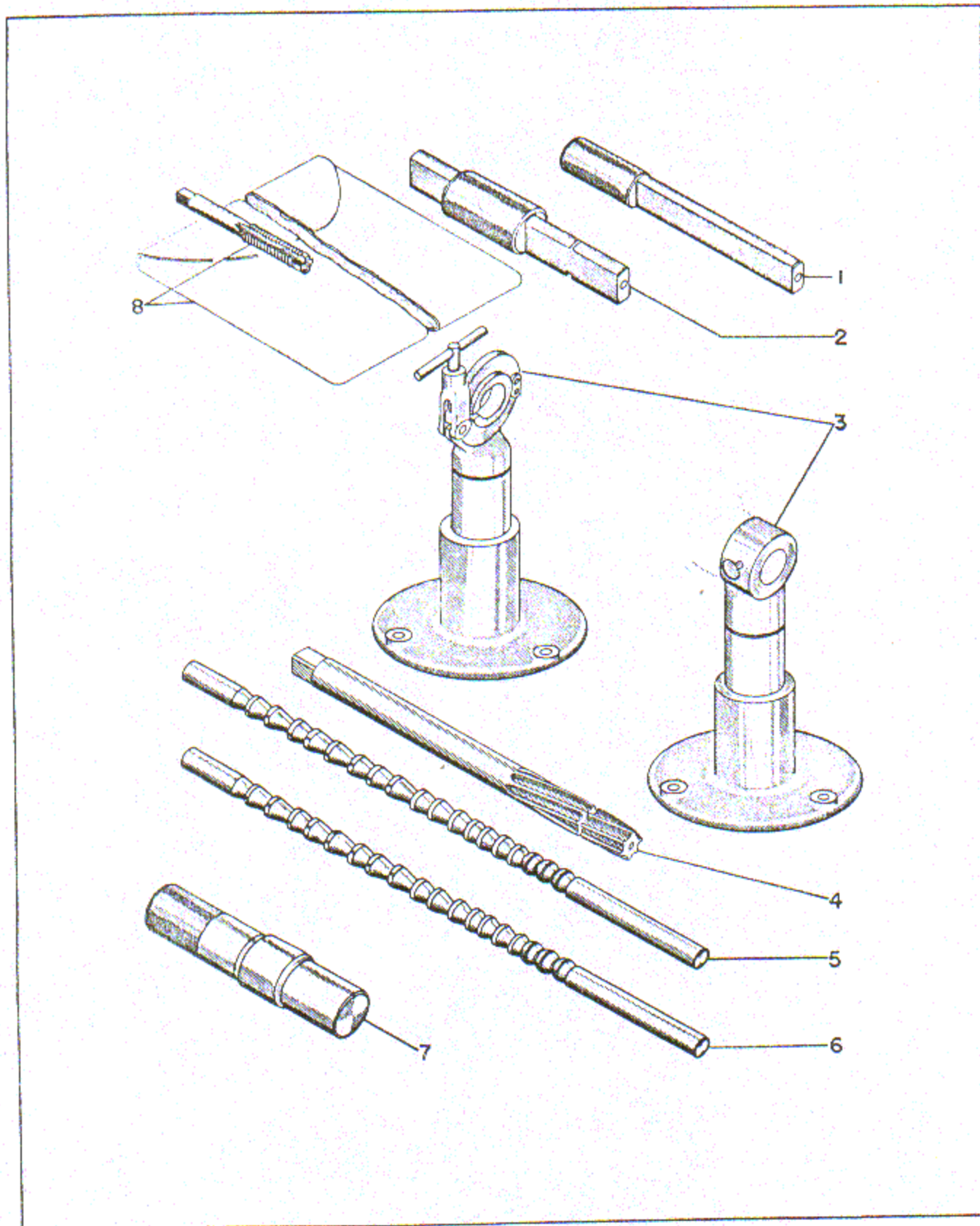
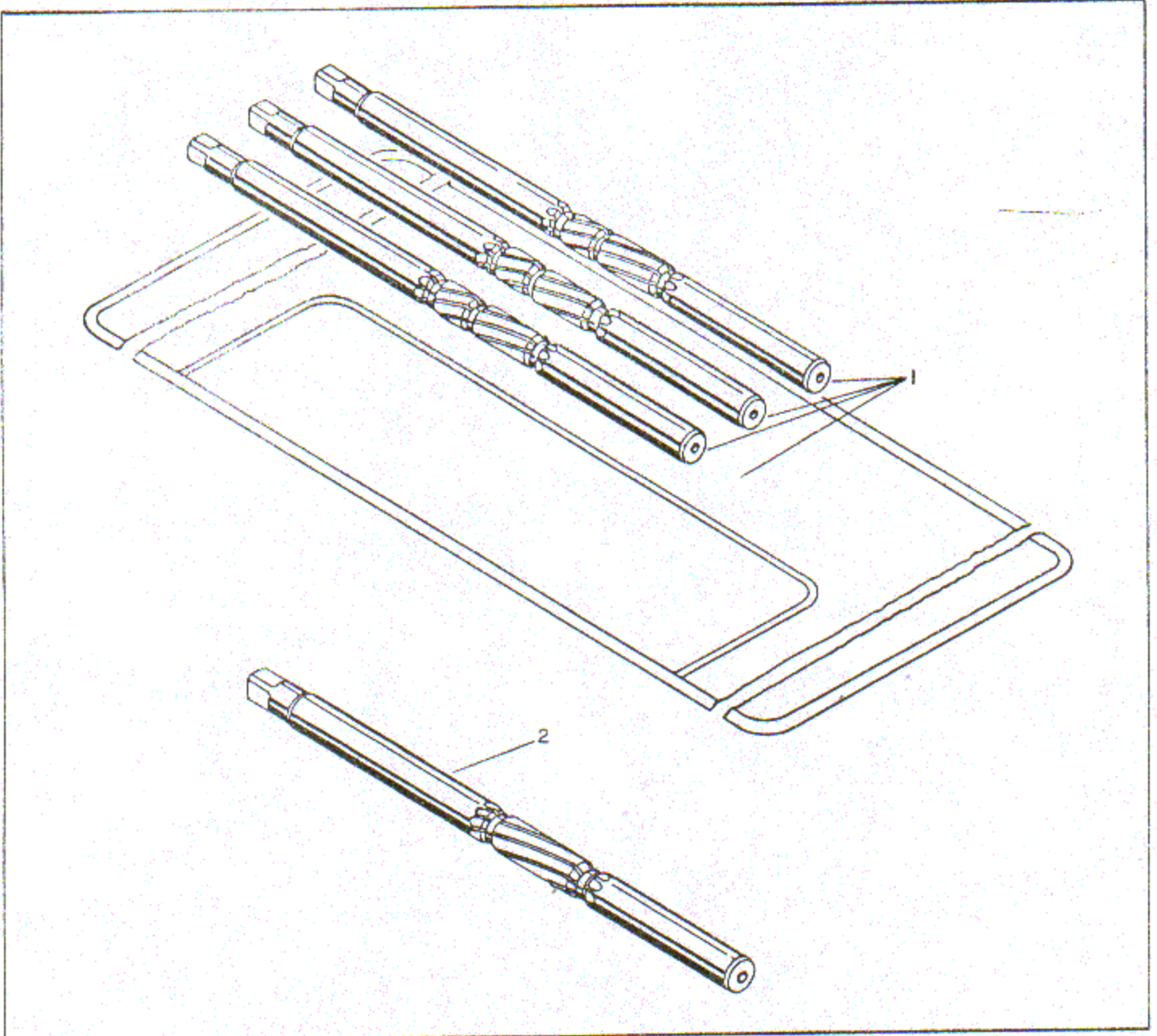
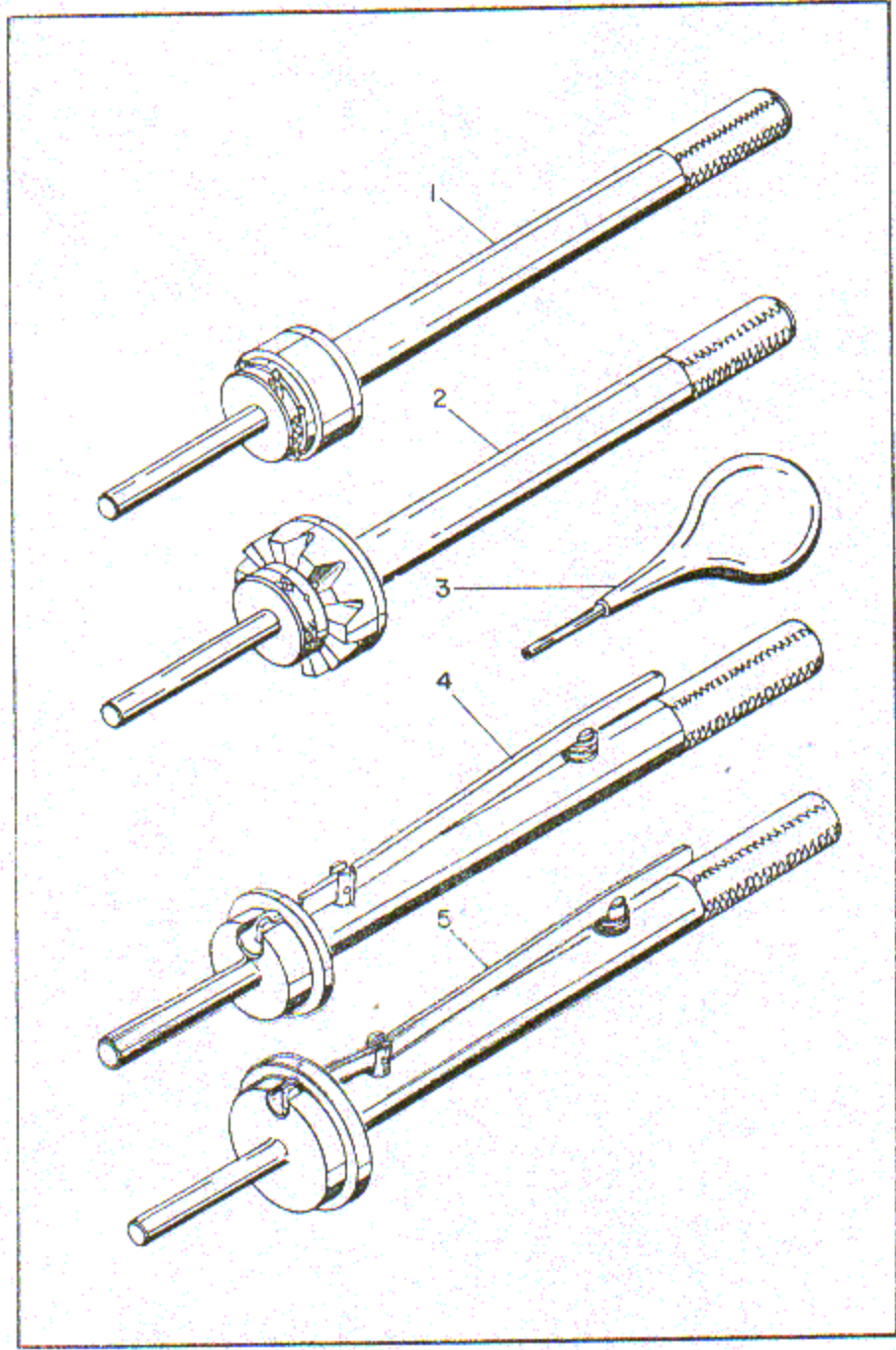


Figure 27. Special Overhaul Tools



■ Figure 28. Special Overhaul Tools



■ Figure 29. Special Overhaul Tools