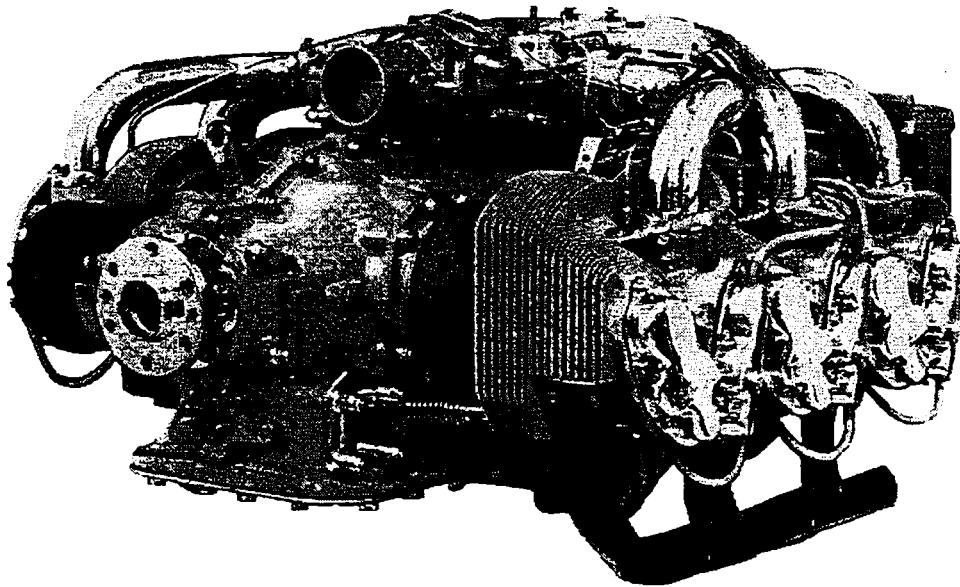


# **IO-550-N SERIES PERMOLD ENGINE**

## **PARTS CATALOG**



**Form IPC550N**

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**APRIL 1998**

## DEFINITIONS OF NOTES, CAUTIONS and WARNINGS

NOTES, *CAUTIONS* and **WARNINGS** are defined for use in this manual as follows:

**NOTE** . . . Special interest information which may facilitate performance of a procedure or operation of equipment.

*CAUTION* . . . Used to emphasize certain information or instructions which if disregarded may result in damage to engine or accessories.

### **WARNING**

Used to provide warning with respect to information and/or instructions which if disregarded will endanger personnel and/or severely damage the engine resulting in subsequent engine malfunction or failure.

Notes, *cautions* and warnings do not impose undue restrictions. They are inserted to obtain maximum safety, efficiency and performance. Abuse, misuse or neglect of equipment can cause eventual engine malfunction or failure. Compliance with instructions and provisions in this manual is mandatory.

# CURRENT STATUS OF PAGES AS OF APRIL 1998

See "Manual Revisions," in the introduction section for distribution procedure.

THE ORIGINAL DATE OF THIS PUBLICATION IS APRIL 1998. INSERT LATEST PAGES; DESTROY SUPERSEDED PAGES.

## WARNING

If the user of this manual is uncertain whether all current revisions have been incorporated into the manual, contact Teledyne Continental Motors. Do not perform any operation, maintenance, installation or other operation until the manual is confirmed current.

MODEL: IO-550-N

FORM IPC550N

PAGE	STATUS	PAGE	STATUS	PAGE	STATUS	PAGE	STATUS
ALL	ORIGINAL						

# WARNING

**BACKGROUND.** Replacement parts, materials and accessories may be sold as being of aircraft quality when actually the quality and origin of these units are unknown. Users of such units are usually unaware of potential hazards involved with replacement parts not eligible for use on certificated aircraft. Units may be deceptively advertised as "unused," "like new" or "remanufactured." This implies the quality of such units is equal to an original, repaired or overhauled unit.

Federal Aviation Regulations (FAR) 43.13 and FAR 145.57 specify performance rules for replacement of parts and materials used in maintenance and alteration of United States (US) certificated aircraft. As outlined in FAR 91.403, FAR 121.363, FAR 123.45, and FAR 135.143 (a), the owner/operator is responsible for continued airworthiness of the aircraft which includes parts replacement.

**IDENTIFICATION OF THE APPROVED PARTS.** Approved serviceable replacement parts are identified by:

- a. A Federal Aviation Administration (FAA) Form 8130-3 Airworthiness Approval Tag. An Airworthiness Approval Tag identifies a part or group of parts approved by authorized FAA representatives.
- b. An FAA Technical Standard Order (TSO) number and identification mark that indicates the part or appliance has been manufactured under the requirements of FAR 21 Subpart O.
- c. An FAA Parts Manufacturer Approval (PMA) symbol, together with the manufacturer's name, part number and make and model of the type certified product on which the part might be installed, stamped on the part. An FAA / PMA is issued under FAR 21.305. The make and model information may be on a tag attached to the part.
- d. Shipping ticket, invoice or other document which verifies the part was manufactured by a facility holding an FAA Approved Production Inspection System issued under FAR 21 Subpart F or by a manufacturer holding an FAA Production Certificate issued under FAR 21 Subpart G.
- e. Certificate of airworthiness for export issued by a foreign government under the provisions of FAR 21 Subpart N.

**KNOW YOUR SUPPLIER.** Many reproduced parts and components are available for purchase and installation on US certified aircraft. Often, an original part is used as a sample to produce duplicates. The reproduced parts appear to be as good as the original part; however, many unknown factors are not readily apparent to the purchaser such as degree of heat treating, plating, inspections, tests and calibrations. Often the faulty part is not discovered until a malfunction or an accident occurs.

**SUMMARY.** In accordance with FAR certification of materials, parts and appliances for return to service for use on aircraft is the responsibility of the person/agency who signs the approval. The owner/operator is responsible for the continued airworthiness of the aircraft. To assure continued safety in aircraft operation, great care must be used when inspecting, testing and determining the acceptability of all parts and materials. Exercise extreme discretion to identify and establish the origin of materials, parts, and accessories.

## **NOTICE TO ALL USERS**

The following publication contains parts listings introduced by general information. It is important all personnel involved with part procurement and installation thoroughly read and understand the information provided. These instructions contain the information required to obtain replacement parts for the aircraft engine and must be followed carefully.

### **Publication Format**

This publication is formatted for practical use and ease of reference. Chapter and page numbering are independent so that revisions can be made without affecting the entire publication. A list of chapter is located at the beginning of the manual and a chapter index is located at the beginning of each chapter.

This manual contains no warranties, either expressed or implied.

Prior to performing parts replacement the mechanic must meet requirements of FAR 65 and must follow FAR Parts 43, 91, and 145 as applicable. Use this manual in conjunction with Teledyne Continental Motors TCM service documents, related publications, accessory manufacturer's instructions, FAR and FAA Advisory Circulars.

## **WARNING**

**This manual, the Service Documents, the Overhaul Manual and the Parts Catalog constitute the instructions for Continued Airworthiness prepared by TCM, pursuant to FAR Part 33. As required by FAR § 43.13, each person performing maintenance, alteration or preventive maintenance on the engine or accessories must use the methods, techniques and practices prescribed in the Instructions for Continued Airworthiness. Failure to comply with the Instructions for Continued Airworthiness may result in engine malfunction, engine failure, injury or death.**

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Notice to all users .....	v

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# CHAPTER 1

## INTRODUCTION

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1-3	MANUAL REVISIONS.....	1-2
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## 1-1 INTRODUCTION

For a list of chapters contained in this manual refer to the Chapter Index on page vi. For a list of parts and figures contained in each chapter, see the first page of each chapter. The chapters, pages and figures contained in this publication are numbered consecutively.

In this edition, currently available parts are listed for IO-550-N engines. If accessories or parts attached to any engine installed in an aircraft manufactured in the United States under a production model number do not appear in this catalog, determine whether they are available from the airframe manufacturer before placing an order with a Teledyne Continental Authorized Distributor.

The system figure is followed by figures for assemblies that compose the particular system. The figures are illustrated in exploded form. Each figure has a figure index and parts listing of the components contained appearing on the same or adjacent page.

## WARNING

**The figures depicted in this publication are for illustration purposes only. They are not intended to be accurate detailed illustrations of any specific engine model, part or equipment.**

Index numbers that correspond with the numbers contained in the related figure are assigned to each part number.

In the parts listings, the first column of each system or component identifies the figure number in the top left corner and the index number (following a dash) which identifies each part in numerical order. **DO NOT ORDER PARTS BY INDEX NUMBERS.** Use the part number which appears in the second column, and use the part name which appears in the third column under DESCRIPTION. Do not order a part that has "No Number" shown with the description, or that has "NS" (not sold) shown in the QUANTITY column. To replace a part "not sold," order the next higher level assembly. Pay particular attention to the quantity of parts required per engine or per assembly. Example: 6 cylinders per engine, 12 pushrods per engine, 2 pushrods per cylinder.

Some customer specification model engines have certain part differences from the basic engine. Check the engine data plate model designation and specification number before ordering parts for the engine.

When ordering parts use the description and model designation shown with the part number. This information is necessary to ensure correct part to assembly or assembly to engine application.

Oversize parts must be ordered by the numbers listed herein with correct descriptions to avoid errors. Authorized Oversize parts are indicated by a suffix such as P003. Authorized Undersize parts are indicated by a suffix such as M005 after the part number.

Repair Parts Sets are usually requested for overhaul work and should be ordered by set part numbers. See "Repair Parts Sets and Materials," Section 1-6.

## 1-2 SCOPE

This publication contains information necessary to order factory replacement parts for the TSI0-360-SB model engines.

## 1-3 MANUAL REVISIONS

Teledyne Continental Motors Parts Catalogs are revised as necessary. Revisions to this catalog will be furnished to purchasers who fill out and return the registration post card located in the front of this catalog.

The "Current Status of Pages" on Page iii contains a record of revisions to this catalog. Each issued change to this catalog includes an updated "Current Status of Pages." Upon receipt of a revision, remove the old "Current Status of Pages" and insert the new one.

## 1-2



Each individual revised page contains the date of the change to that page. Accordingly, if the "Current Status of Pages" indicates that a page has been changed, that page in the catalog must be dated in agreement with the status page. Original pages in this catalog are not individually dated.

#### 1-4 LIST OF ABBREVIATIONS AND SYMBOLS

SYMBOL	DEFINITION	SYMBOL	DEFINITION
AR (ar)	As Required	NS	Not Sold
dia.	Diameter	\$	Parts included in a set
hd	Head	PD	Pitch diameter (thread)
hex	Hexagon(al)	RF (rf)	Reference
ID	Inside Diameter	NPT	National Pipe Tap (or thread)
in.	Inches	US	Undersize
lg.	Long	No.	Number
mm	Millimeters	†	Oversize parts available
OD	Outside diameter	††	Undersize parts available
OP	Optional	****	End of group of attaching parts
OS	Oversize		

#### 1-5 RELATED PUBLICATIONS

The following is a list of related manuals:

1. Overhaul Manual for IO-550-N Series Aircraft engine, Form OH-16.
2. Maintenance Manual for IO-550-N Series Aircraft engine, Form X30634A.
3. Operators and Installation Manual for IO-550-N Series Aircraft Engine, Form X30565.
4. Teledyne Continental Motors Aircraft Engine Service Documents (including service bulletins.)
5. Fuel Injection Manual, Form X30593A.
6. Starter Service Instructions, Form X30643-2.
7. TCM Ignition Systems Master Service Manual, Form X40000.

The above publications may be ordered through your Teledyne Continental Motors Distributor or ordered directly, if prepaid, from:

**Teledyne Continental Motors**  
**P. O. Box 90**  
**Mobile, AL 36601**  
**ATTN: Publications Sales Department**  
**Telephone:(334) 438-3411.**

For price information on the above publications see TCM Publications Index Form X-2-94, Current Publications and Form X-3-94, Optional Publications.

8. Slick Ignition Systems Master Service Manual Index and Order Form Number F-1100 order through:

**Slick Aircraft Products  
Unison Industries.  
530 Blackhawk Park Avenue  
Rockford, Illinois 61104  
ATTN: Subscription Department  
Telephone:(815) 965-4700.**

**1-6 REPAIR PARTS SETS AND MATERIALS**

<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>SIZE</b>
EQ6925	Complete Overhaul Kit	Standard
EQ6926	Complete Overhaul Kit	.010 inch US on OD
646565A1	Gasket Set - Single Cylinder	Standard
654716	Ring Set - Single Cylinder	Standard
654716P005	Ring Set - Single Cylinder	.005 inch OS on OD
654716P015	Ring Set - Single Cylinder	.015 inch OS on OD
646592A2	Bearing Set - Crankshaft	Standard
646592A2M010	Bearing Set - Crankshaft	.010 inch US on ID
626531-1	Enamel-Gold, Engine	1 quart
626531-2	Enamel-Gold, Engine	1 gallon
535011S	Lockwire-0.032 In. Dia. Steel	Order by 1 pound Roll
641543	Silk Thread	1 Spool (260 Yd.)
642188-1	Gasket Sealant	4.0 ounce Can
646940	F/I Sealant (50 cc bottle),	1.69 ounce
646941	Adhesive/Sealant (50 cc bottle),	1.69 ounce
646942	Gasket Maker (50 cc tube),	1.69 ounce
646943	Anti-Seize Lubricant,	1/4 pound
646944	Primer	6 ounce (Aerosol Can),

**NOTES:**

- ① For chrome barrel cylinders.

## **CHAPTER 2**

### **EXHAUST SYSTEM**

#### **2-1 EXHAUST SYSTEM**

Exhaust systems for the IO-550-N series engines are supplied by the airframe manufacturer. For exhaust system and component detail parts listings refer to the appropriate airframe manufacturer's parts catalog.

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# CHAPTER 3

## IGNITION SYSTEM

FIGURE		PAGE
3-1	IGNITION SYSTEM IO-550-N1B .....	3-2
3-2	IGNITION SYSTEM IO-550-N2B .....	3-3
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3-4	IGNITION LEAD PARTS LIST .....	3-6
3-5	MAGNETO DRIVE GEAR ASSEMBLY IO-550-N1B.....	3-7
3-6	MAGNETO DRIVE GEAR ASSEMBLY IO-550-N2B.....	3-8

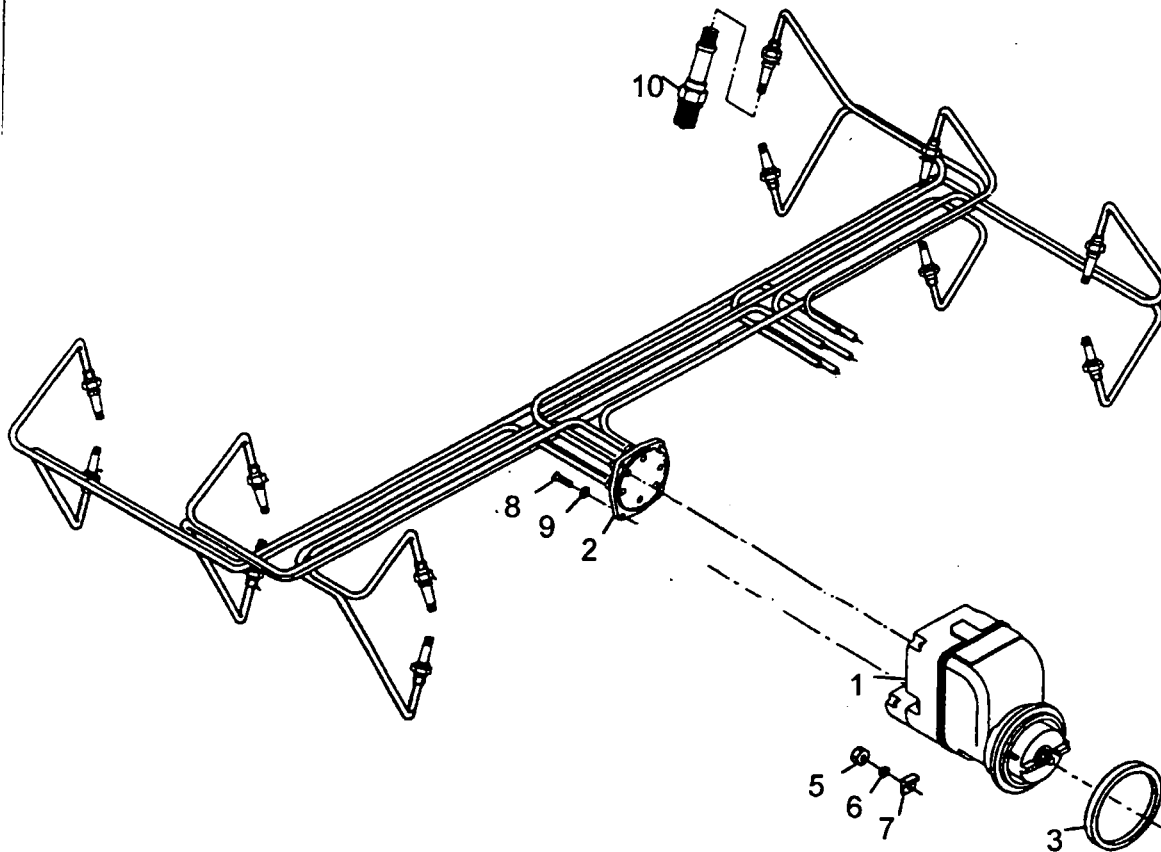


FIGURE 3-1. IGNITION SYSTEM IO-550-N1B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B

3-1

1	10-500556-1	MAGNETO.....	2	
1	BL-500556-1	MAGNETO.....	2	
2	10-823674-25	HARNES.....	1	
3	10-400613	GASKET-MAGNETO.....	2	
5	AN315-5R	NUT-PLAIN .31-24.....	4	
6	MS35338-45	WASHER-LOCK-SPRING .3125.....	4	
7	535847	WASHER MAG HOLD.....	4	
8	AN501-10-10	SCREW-FILL HD #10-32X .63.....	8	
9	MS35338-43	WASHER-LOCK-SPRING #10.....	8	
10	634675	PLUG-SPARK CHAMP RHB32E.....	12	

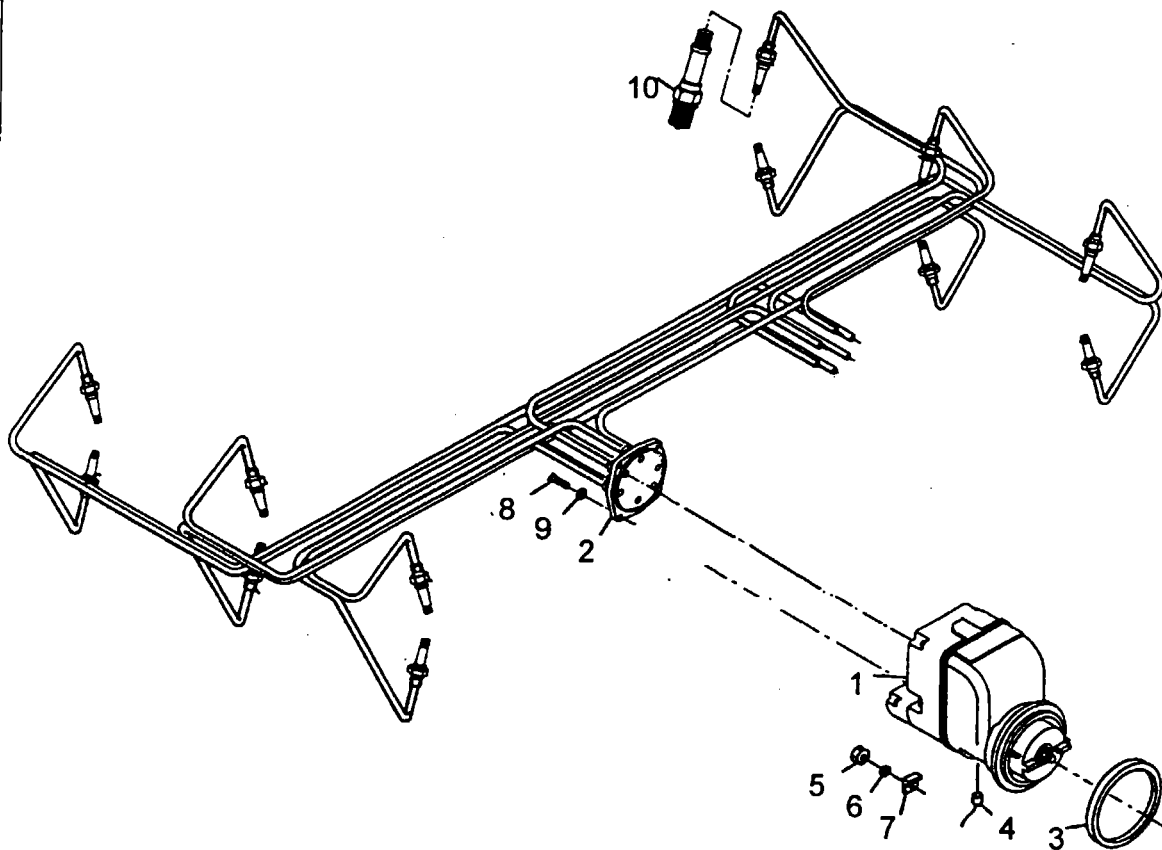


FIGURE 3-2. IGNITION SYSTEM IO-550-N2B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
3-2				
	1	10-500556-1	MAGNETO.....	2
	1	BL-500556-1	MAGNETO.....	2
	2	10-823674-25	HARNES.....	1
	3	10-400613	GASKET-MAGNETO.....	2
	4	653141	MAGNETO SENSOR.....	1
	5	AN315-5R	NUT-PLAIN .31-24.....	4
	6	MS35338-45	WASHER-LOCK-SPRING .3125.....	4
	7	535847	WASHER MAG HOLD.....	4
	8	AN501-10-10	SCREW-FILL HD #10-32X .63.....	8
	9	MS35338-43	WASHER-LOCK-SPRING #10.....	8
	10	634675	PLUG-SPARK CHAMP RHB32E.....	12

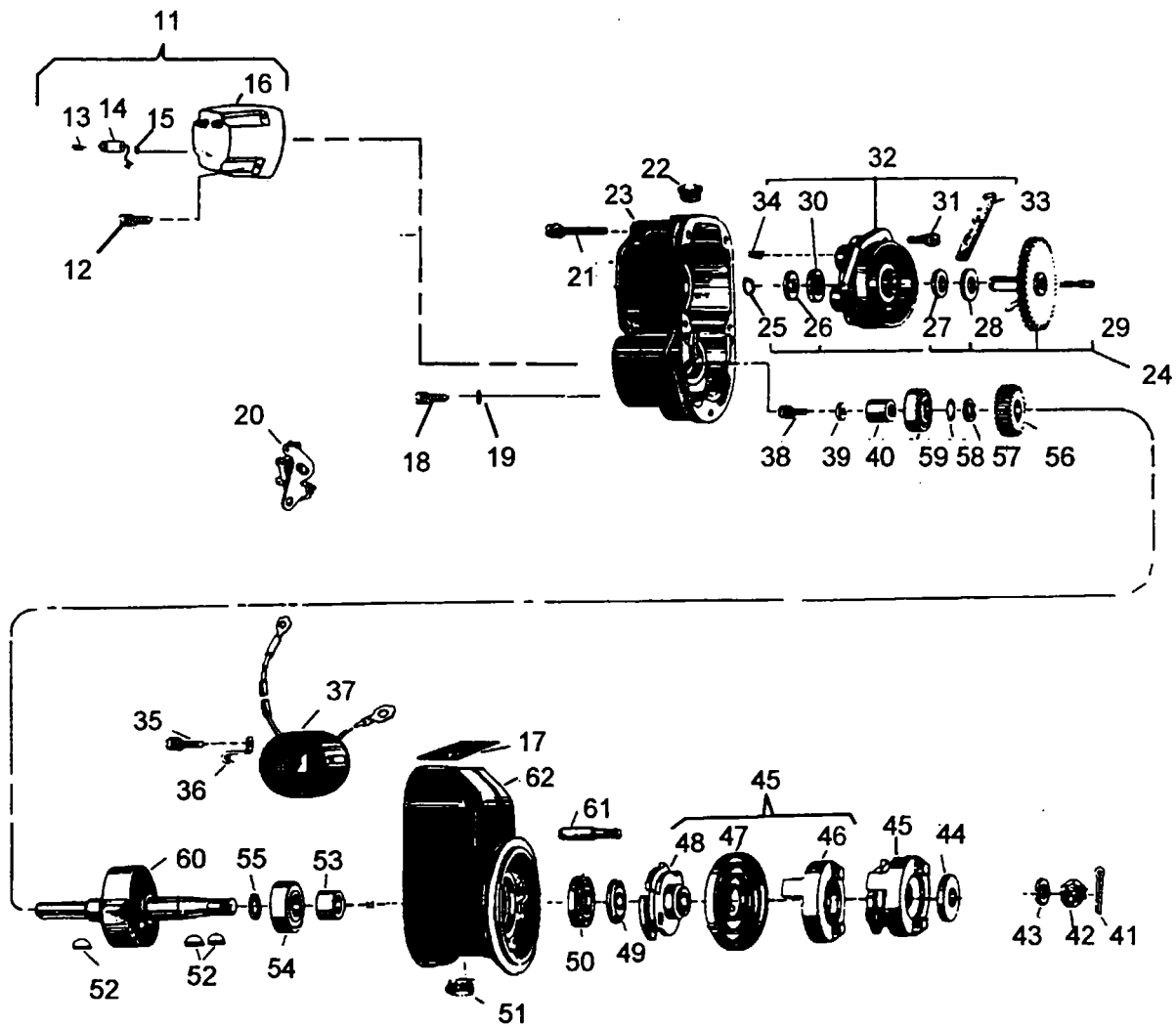
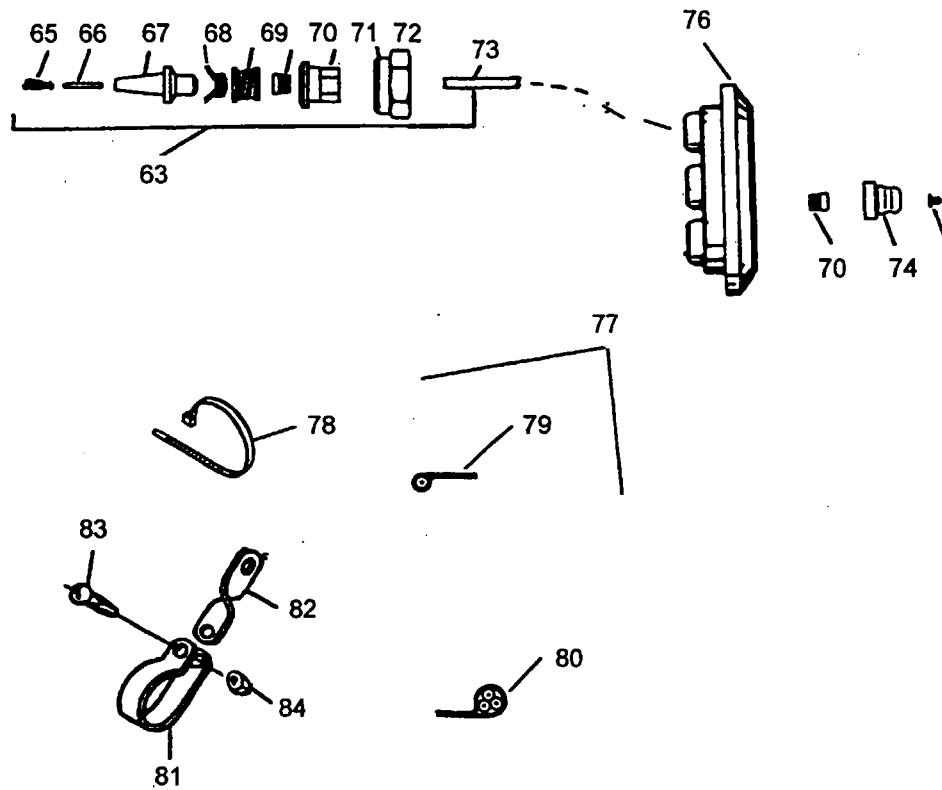


FIGURE 3-3. INTERNAL MAGNETO PARTS LIST

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
3-3				
11	10-400409	KIT, SC RETRO, STAMPED AP .....	1	1
12	10-157160	SCREW .....	4	4
13	10-35935-6	SCREW .....	2	2
14	10-400604	CAPACITOR.....	1	1
15	10-349263	PACKING.....	1	1
16	10-400160-3Y	COVER,BREAKER-SHORT MAG.....	1	1
17	10-400012	NAMEPLATE-MAG S-20/200.....	1	1
18	10-35936-7	SCREW ASSY.....	2	2
19	10-14268	WASHER.....	1	1
20	10-382584	CONTACT ASSEMBLY.....	1	1
21	10-157158	SCREW/WASHER,LOCK.....	5	5
22	10-157135	PLUG.....	1	1
23	10-106498	HOUSING.....	1	1



FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
24	10-357586	KIT-GEAR ASSY .....	1	1
25	10-92815-37	RING .....	1	1
26	10-349511	WASHER .....	1	1
27	10-606505	WASHER .....	1	1
28	10-391309	WASHER .....	1	1
29	10-160844	BRUSH ASSY .....	1	1
30	10-50752	WASHER .....	1	1
31	10-102083	SCREW .....	3	3
32	10-357426	BLOCK,DISTRIBUTOR .....	1	1
33	10-163374	FELT .....	1	1
34	10-50737	SPRING .....	6	6
35	10-35937-8	SCREW ASSY .....	2	2
36	10-50765	CLAMP-SPRING COIL RETENT .....	2	2
37	10-357165-1	COIL, MAGNETO .....	1	1
38	10-391213	SCREW/WASHER, LOCK .....	1	1
39	10-51354	WASHER .....	1	1
40	10-88543-4	CAM .....	1	1
41	10-90751-18	PIN .....	1	1
42	10-51643	NUT .....	1	1
43	10-3793	WASHER .....	1	1
44	10-52307	WASHER .....	1	1
45	10-400307	IMPULSE COUPLING ASM-CW .....	1	1
46	10-76232	BODY,IMPULSE COUPLING,CW .....	1	1
47	10-51324	SPRING .....	1	1
48	10-400166-4	CAM ASM-IMPL COUPLNG,CW .....	1	1
49	10-51678	SLINGER .....	1	1
50	10-357592	SEAL .....	1	1
51	10-157134	PLUG .....	1	1
52	10-90788-5	KEY .....	2	2
53	10-357078	B SLEEVE .....	1	1
54	10-81806	BEARING .....	1	1
55	2-161-1	WASHER .....	1	1
55	2-161-2	WASHER .....	1	1
55	2-161-3	WASHER .....	1	1
55	2-161-5	WASHER .....	1	1
55	2-161-6	WASHER .....	1	1
55	2-161-7	WASHER .....	1	1
56	10-157120Y	GEAR .....	1	1
57	10-3503	WASHER .....	1	1
57	2-161-4	WASHER .....	1	1
58	2-199-1	WASHER .....	1	1
58	2-199-2	WASHER .....	1	1
58	2-199-3	WASHER .....	1	1
58	2-199-4	WASHER .....	1	1
58	2-199-5	WASHER .....	1	1
58	2-199-6	WASHER .....	1	1
59	2-202	BEARING .....	1	1
60	10-52948	MAGNET .....	1	1
61	10-400603	PIN IMPLSE-CPLNG-STOP .....	2	2
61	10-79011	PIN-IMPULSE CPLG STOP .....	2	2
62	10-81942	HOUSING .....	1	1



**FIGURE 3-4. IGNITION LEAD PARTS LIST**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
3-4				
62	10-81942	HOUSING.....	1	1
63	10-400401-48	LEAD ASSEMBLY.....	11	11
63	10-400401-78	LEAD ASSEMBLY.....	1	1
64	10-400416	KIT-UNIVERSAL HARNESS.....	1	1
65	10-32326	SPRING.....	1	1
66	10-320467	TERMINAL.....	1	1
67	10-400099	SLEEVE-TERM INSULATING.....	1	1
68	10-400097	EYELET-BELL FLANGE .375OD.....	1	1
69	10-400195	SPRING-COMPRESSION.....	1	1
70	10-400093	EYELET-RETENTION.....	2	2
71	10-400137	FERRULE, OUTER, LEAD MAG.....	1	1
72	10-400187	NUT, HEX.....	1	1
73	10-400062-1	CABLE-SHIELDED-GOLD SEAL.....	1	1
74	10-320777	GROMMET.....	1	1
75	10-163012	EYELET.....	1	1
76	10-400116	PLATE, CABLE OUTLET.....	2	2
77	10-400223	HARNESS ACCESSORY KIT.....	1	1
78	10-620013	CABLE TIE.....	11	11
79	10-400051-2	CLAMP.....	14	14
80	10-400053-2	CLAMP.....	2	2
81	10-400056-1	CLAMP.....	3	3
82	10-400060-7	BRACKET-TWIST MOUNT.....	1	1
83	10-35937-10	SCREW ASSY.....	1	1
84	10-13799	NUT, NYLOCK.....	1	1

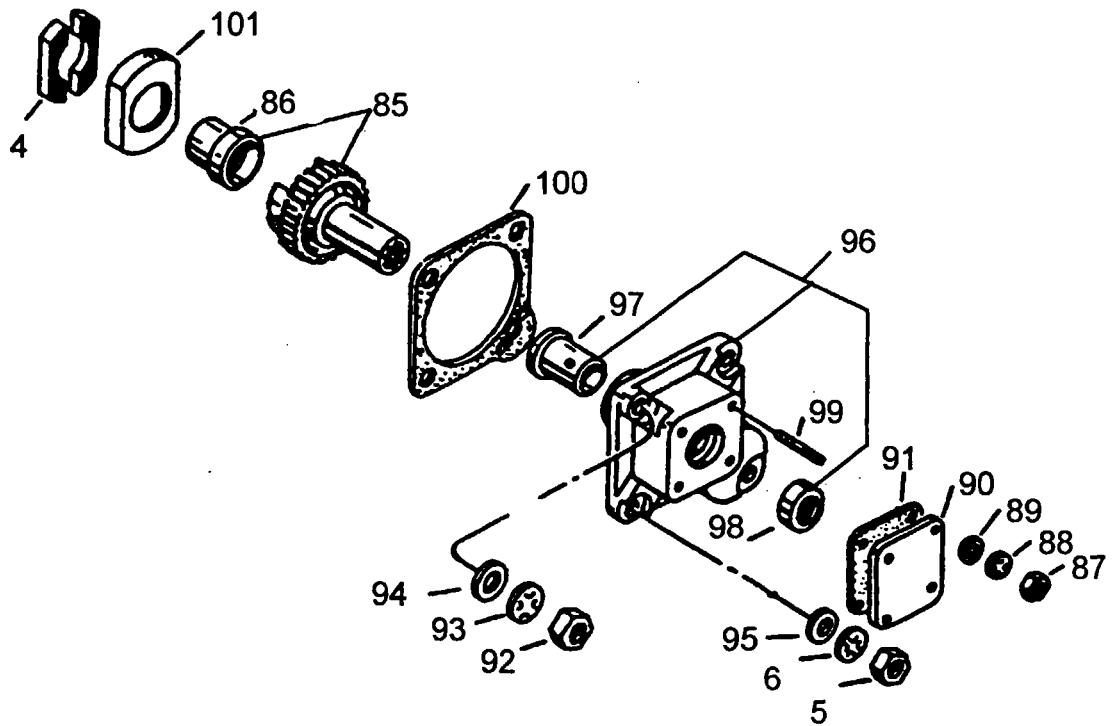


FIGURE 3-5. MAGNETO DRIVE GEAR ASSEMBLY IO-550-N1B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
3-5				
	4	BUSHING MAG.DR. COUPLING .....	4	
	85	GEAR ASM-MAG DRIVE.....	2	
	86	SLEEVE-MAG DRIVE GEAR .....	1	
	87	NUT-PLAIN.....	8	
	88	WASHER LOCK .25 DIA. ....	8	
	89	WASHER FLAT .25 DIA. ....	8	
	90	COVER-ACCESSORY .....	2	
	91	GASKET-ACCESSORY DRIVE.....	2	
	92	NUT-PLAIN HEX .38-24 .....	2	
	93	WASHER LOCK .375 DIA. ....	2	
	94	WASHER .39 ID X .08 PLAIN.....	2	
	95	WASHER-PL .31 X .032 THK.....	6	
	96	ADAPTER ASM-MAG.....	2	
	97	BUSHING-FLANGED 1.31 LG .....	1	
	98	SEAL .81 ID X 1.25 OD .....	2	
	99	STUD.25-20-28X1.41#639302 .....	4	
	99	STUD.25-20-28X1.41#401850 .....	4	
	99	STUD.25-20-28X1.41#401850 .....	4	
	100	GSKT-MAG & ACCESS DRV.....	2	
	101	RETAINER-MAG COUPLING .....	2	

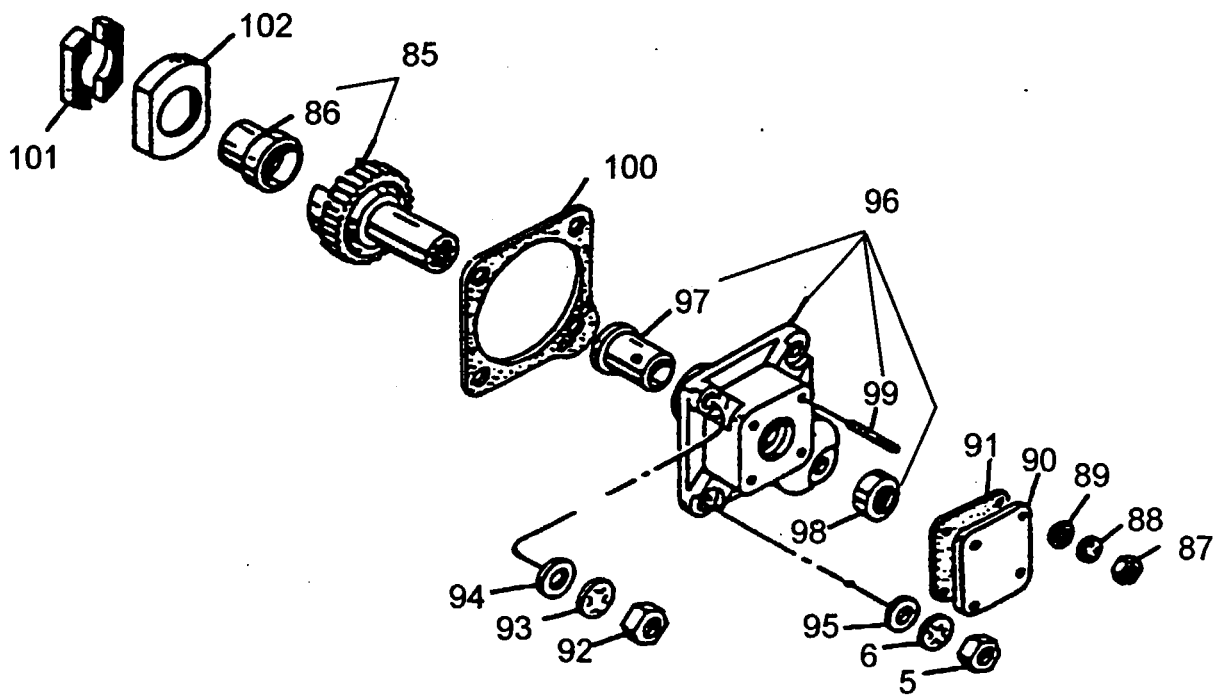


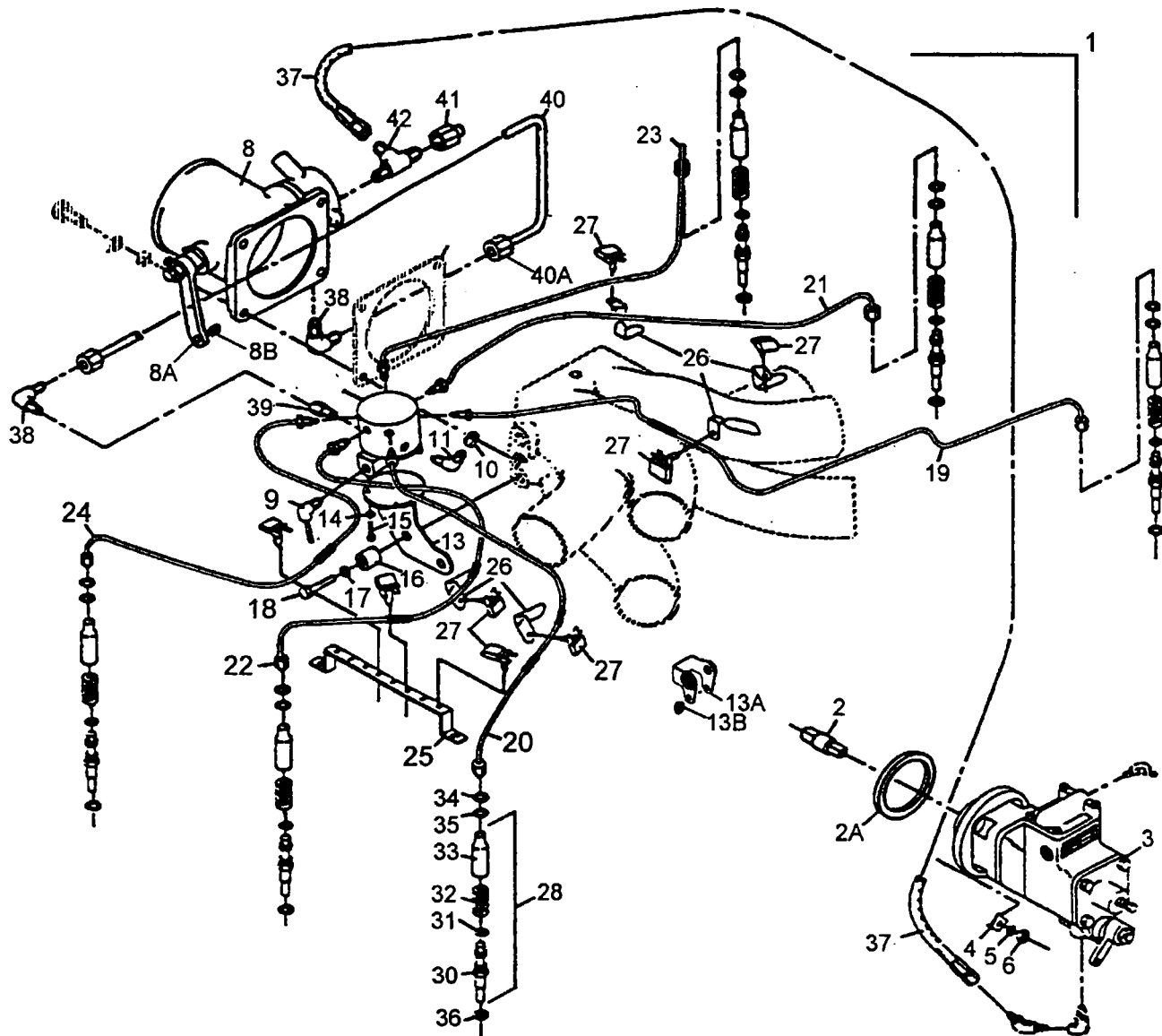
FIGURE 3-6. MAGNETO DRIVE GEAR ASSEMBLY IO-550-N2B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
3-6	85	641742 GEAR ASM-MAG DRIVE .....		2
	86	629077 SLEEVE-MAG DRIVE GEAR .....		1
	87	AN315-4R NUT-PLAIN.....		8
	88	MS35338-44 WASHER LOCK .25 DIA. ....		8
	89	AN960-416 WASHER FLAT .25 DIA. ....		8
	90	640380 COVER-ACCESSORY .....		2
	91	653487 GASKET-ACCESSORY DRIVE .....		2
	92	2441 NUT-PLAIN HEX .38-24 .....		2
	93	MS35338-46 WASHER LOCK .375 DIA. ....		2
	94	401507 WASHER .39 ID X .08 PLAIN .....		2
	95	AN960-516L WASHER-PL .31 X .032 THK.....		6
	96	654710 ADAPTER ASM-MAG.....		2
	97	632330 BUSHING-FLANGED 1.31 LG .....		1
	98	25102 SEAL .81 ID X 1.25 OD .....		2
	99	401852 STUD.25-20-28X1.41#639302 .....		4
	99	401852P003 STUD.25-20-28X1.41#401850 .....		4
	99	401852P007 STUD.25-20-28X1.41#401850 .....		4
	100	654012 GSKT-MAG & ACCESS DRV.....		2
	101	638172 BUSHING MAG.DR. COUPLING .....		4
	102	531178 RETAINER-MAG COUPLING .....		2

# CHAPTER 4

## FUEL INJECTION SYSTEM

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4-3	FUEL PUMP DETAIL .....	4-5
4-4	FUEL METERING UNIT .....	4-7
4-5	FUEL MANIFOLD VALVE .....	4-9

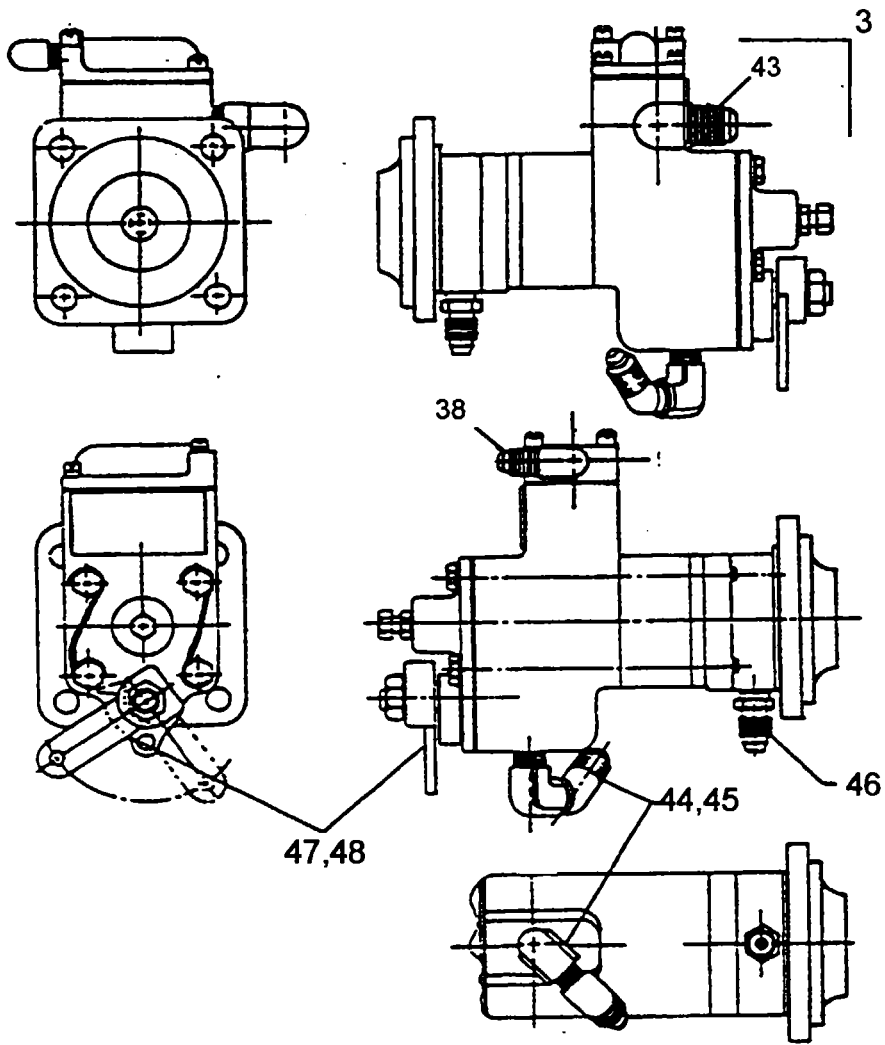


**FIGURE 4-1. FUEL INJECTION SYSTEM**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>4-1</b>	649053A5	FUEL INJ SERVICE KIT.....	1	1
2A	649982	GASKET-FUEL PUMP ADAPTER.....	1	1
2	653359	COUPLING-CRKSH GEAR.....	1	1
3	649364-4A1	PUMP ASM-FUEL W/FITTINGS.....	1	1
4	535847	WASHER MAG HOLD.....	2	2
5	MS35338-45	WASHER-LOCK-SPRING .3125.....	2	2
6	AN315-5R	NUT-PLAIN .31-24.....	2	2
7	628306	PROTECTOR-INJ LINE .13ID.....	6	6
8B	632554-1	BUSHING .12 LG.....	1	1
8A	632555-55	LEVER ASM-THROTTLE.....	1	1
8	653353-1	THROTTLE & METER ASM.....	1	1
9	AN844-4	ELBOW 45 DEG PIPE/HOSE.....	1	1
10	AN929-2J	CAP ASSY FLARE YUBE.....	1	1

**FIGURE 4-1. FUEL INJECTION SYSTEM (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>4-1</b>				
11	MS20823-2	ELBOW-FITTING 45 DEG .....	1	1
12	646433-3M	MANIFOLD VLV ASM-FUEL .....	1	1
12	646433-3P	MANIFOLD VLV ASM-FUEL .....	1	1
13	646299	BRACKET ASM-MANIFOLD VLV .....	1	1
13A	646402	BRKT ASM-MANIFOLD LOCATOR.....	1	1
13B	646414	BUMPER-RUBBER, BUTTON.....	2	2
14	AN960-8	WASHER-PL #8 X .032 THK .....	4	4
15	AN500-10-5	SCREW-FILL HD #10-24X .31.....	2	2
16	646382	SPACER.....	2	2
17	AN960-516	WASHER-PL .31 X .063 THK .....	2	2
18	MS20074-05-10	BOLT-MACH DRILLED HD .....	2	2
19	646421	TUBE BEND ASM-INJ LINE #1.....	1	1
20	646422	TUBE BEND ASM-INJ LINE #2.....	1	1
21	646423	TUBE BEN ASM-INJ LINE #3 .....	1	1
22	646424	TUBE BEND ASM-INJ LINE #4.....	1	1
23	646425	TUBE BEND ASM-INJ LINE #5.....	1	1
24	646426	TUBE BEN ASM-INJ LINE #6.....	1	1
25	632080	BRACKET-FUEL DIST TUBE .....	1	1
26	641559	BRACKET-FUEL INJ LINE.....	6	6
27	652436-1	CLAMP ASSY-TUBE.....	6	6
28	652312-12D	NOZZLE ASSY - FUEL INJ.....	6	6
28	652312-12E	NOZZLE ASSY. - FUEL INJ.....	6	6
30	639322	*M* NOZZLE-FUEL INJECTION .....	1	1
31	630979-9	SEAL-"O" RING.....	2	2
32	625921	SCREEN-FUEL INJ NOZZLE .....	1	1
33	625919	SHIELD-FUEL INJ NOZZLE .....	1	1
34	640612	WASHER-.50 O.D.X.31 I.D.....	6	6
35	628556	WASHER .31ID X .03 THK.....	6	6
36	X1473	WASHER-COP.3125 X .3125 .....	1	1
37	646644S4S36.00	HOSE ASM.....	1	1
38	628437	ELBOW-FTG 90 DEG .13NPTF .....	1	1
39	630119	ADAPTER-.13 NPT .....	1	1
40	652337	TUBE ASM-THR BODY TO M/V .....	1	1
40A	MS51533B4	SLEEVE-37DEGREE FLR TUBE.....	2	2
41	639494	*M* CAP-FLARE TUBE.....	1	1
42	636349	TEE-FITTING .....	1	1



**FIGURE 4-2. FUEL PUMP FITTINGS**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
4-2				
	43	628475 ELBOW-FITTING 90 DEG .....	1	1
	44	627119 ELBOW 90 DEG .12 PIPE THD .....	1	1
	45	628436 ELBOW-FTG 45 DEG .13NPTF .....	1	1
	46	628438 FITTING-CONN .13 NPTF .....	1	1
	47	632555-34 LEVER ASM-THROTTLE .....	1	1
	48	MS21042-5 NUT-SELF LOCKING .....	2	2



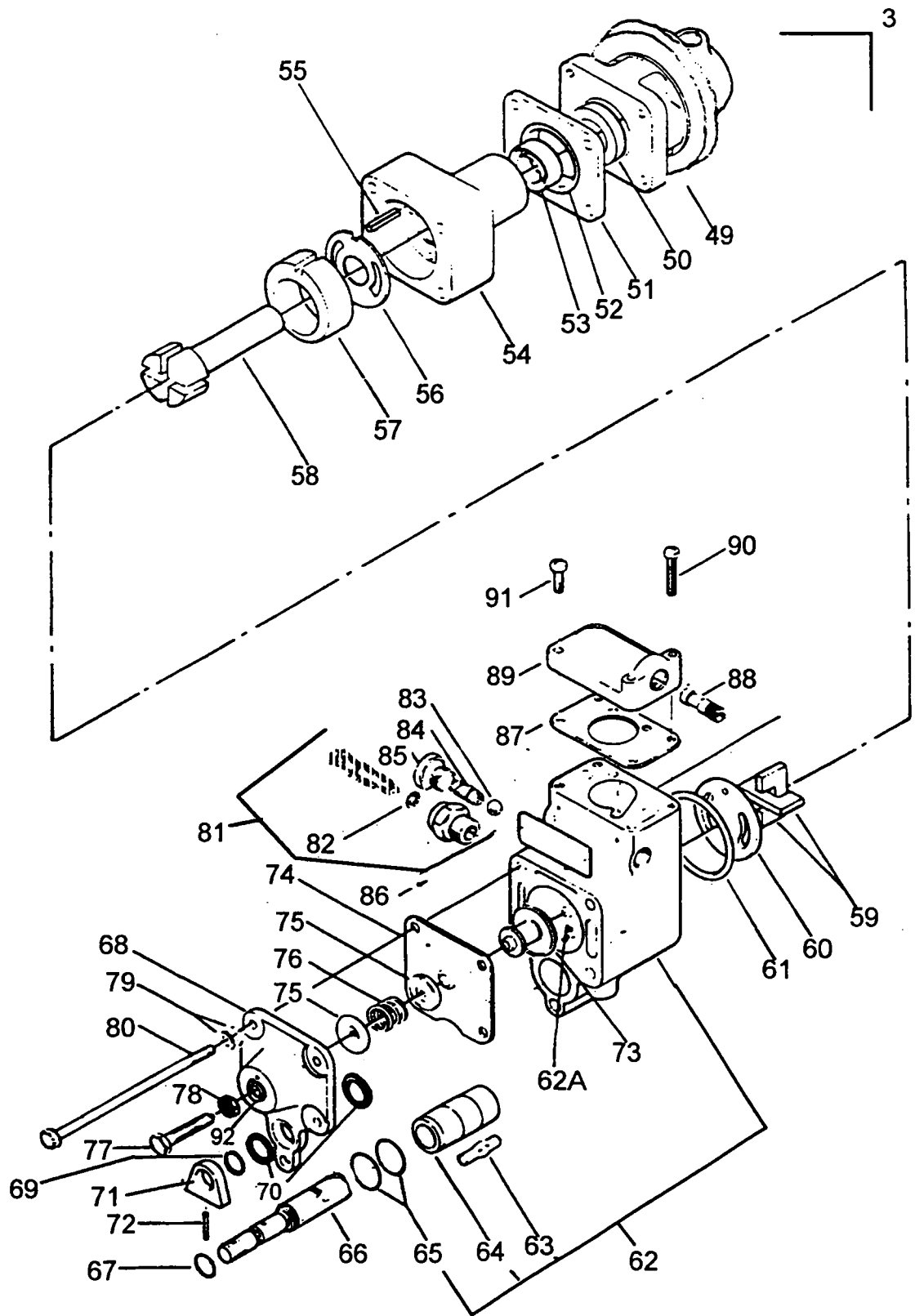


FIGURE 4-3. FUEL PUMP DETAIL

**FIGURE 4-3. FUEL PUMP DETAIL**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>4-3</b>				
49	642236	ADAPTER-FUEL PUMP.....	1	1
50	628178	SEAL .50 SHAFT.....	1	1
51	632816	INSULATOR-FUEL PUMP.....	1	1
52	632741	BUSHING 1.06 ID X .28.....	1	1
53	649198	SEAL-.500 SHAFT .88 BORE.....	1	1
54	646182-1	HSG ASM-FUEL PUMP.....	1	1
55	MS9047-104	PIN-FUEL PUMP.....	1	1
56	646177	PLATE-THRUST.....	1	1
57	643697	LINER-FUEL PUMP (16753).....	1	1
58	646176	SHAFT-FUEL PUMP.....	1	1
59	635549	BLADE-FUEL PUMP 1ST.....	2	2
60	646180	PLATE - END.....	1	1
61	630979-14	SEAL-"O"RING.....	1	1
62A	628334	PIN-REL VLV PLUNGER.....	1	1
62	649323-1	HSG ASM-VAP SEP & REL VLV.....	1	1
63	630383-2	PIN-GROOV .75LG #2 MATL.....	1	1
64	630213	INSERT-MIXTURE CONTROL.....	1	1
65	MS9021-016	SEAL-"O" RING .614 ID.....	2	2
66	649191	SHAFT MIXTURE CONTROL.....	1	1
67	630979-3	SEAL-"O" RING.....	1	1
68	630494	COVER & NUT ASM.....	1	1
69	625457-1	WASHER-PLAIN .02.....	1	1
70	635835-1	WASHER .39 ID X .61 OD.....	1	1
71	630215	COLLAR-MIX CONTROL STOP.....	1	1
72	626813	PIN-TUBULAR DIM .72.....	1	1
73	628333	PLUNGER-RELIEF VALVE.....	1	1
74	642644	DIAPHRAGM-F/INJ REL VLV.....	1	1
75	637784	PLATE-DIAPHRAGM.....	2	2
76	628311	SPRING-COMPRESSION.....	1	1
77	631883	SCREW 10-32X.88 LG.....	1	1
78	AN121501	NUT-PLAIN #10-32.....	1	1
79	646448-1	WASHER .20ID-BELL.....	8	8
80	628321A3.72	BOLT-10-24NC3 3.72 LG.....	4	4
81	649345	ORIFICE ASM-ADJ.....	1	1
82	630979-19	SEAL-"O" RING .109-.119.....	1	1
83	628249-7	BALL .22 DIA (RA7763).....	1	1
84	630167	SPRING-COMPRESSION.....	1	1
85	629974	PLUG-FP BY-PASS VALVE.....	1	1
86	24764	SCREW-NO. 0-.19 DRV.....	4	4
87	652090	GASKET-COVER F/P SEP VAP.....	1	1
88	625901	EJECTOR-FP VAPOR.....	1	1
89	625900	COVER-FP VAPOR SEPR.....	1	1
90	AN500-8-12	SCREW-FILL #8-32X.75 LG.....	2	2
91	AN500-8-7	SCREW-FILL #8-32X.44 LG.....	2	2
92	630156	NUT-FLARED SHK 10-32.....	1	1

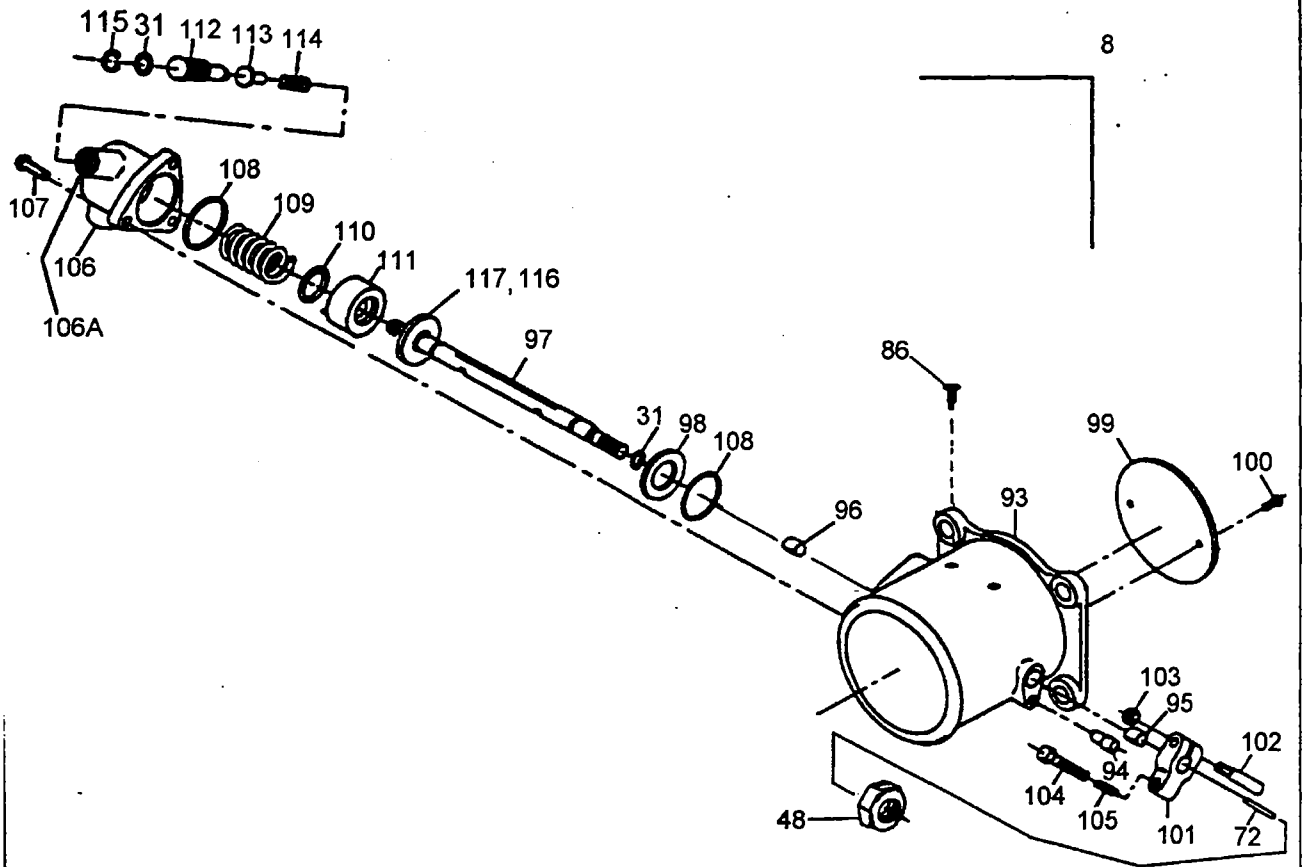


FIGURE 4-4. FUEL METERING UNIT

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
4-4				
	93	652183 BODY ASM-AIR THROTTLE .....	1	1
	94	626812 PIN-THROTTLE STOP .....	1	1
	95	630455 BUSHING AIR THROTTLE .....	1	1
	96	631183-3 BUSHING-CONTROLLER .....	1	1
	97	634864-16 SHAFT ASM-THROTTLE & MET .....	1	1
	98	635835-2 WASHER .39 ID X .75 OD .....	1	1
	99	625601 PLATE-THROTTLE.....	1	1
	100	539942 SCREW-THROTTLE PLATE .....	2	2
	101	639497 LEVER-THR IDLE CONTROL .....	1	1
	102	AN565E8H16 SCREW SET-HEX HEAD .....	1	1
	103	13XX18130 NUT #8-32 X .12 HIGH HEX.....	1	1
	104	639479 SCREW-ADJ .10-56X1.00 .....	1	1
	105	626634 SPRING-COMPRESSION.....	1	1
	106	A 637159 INSERT-LOCK .250-56X.38.....	1	1
	106	642709 COV ASM-METERING.....	1	1
	107	MS35265-63 SCREW .....	3	3
	108	630979-10 SEAL-"O" RING.....	2	2
	109	630274 SPRING-COMPRESSION.....	1	1
	110	630979-6 SEAL-"O" RING .24 ID .....	1	1
	111	A 629884-2 PIN-IDLE ADJUSTMENT .....	1	1
	111	646017 PLUG ASM-FUEL METERING .....	1	1
	112	646044 SCREW-IDLE ADJUSTMENT .....	1	1
	113	633298 BUSHING-IDLE ADJ SPR.....	1	1

**FIGURE 4-4. FUEL METERING UNIT (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>4-4</b>				
114	635063	SPRING-COMPRESSION.....	1	1
115	521693-3	RING-INT RETAIN REF522100 .....	1	1
116	MS9021-020	SEAL-"O" RING .864 ID .....	1	1
117	643093	PLUG FUEL INJECTION.....	1	1

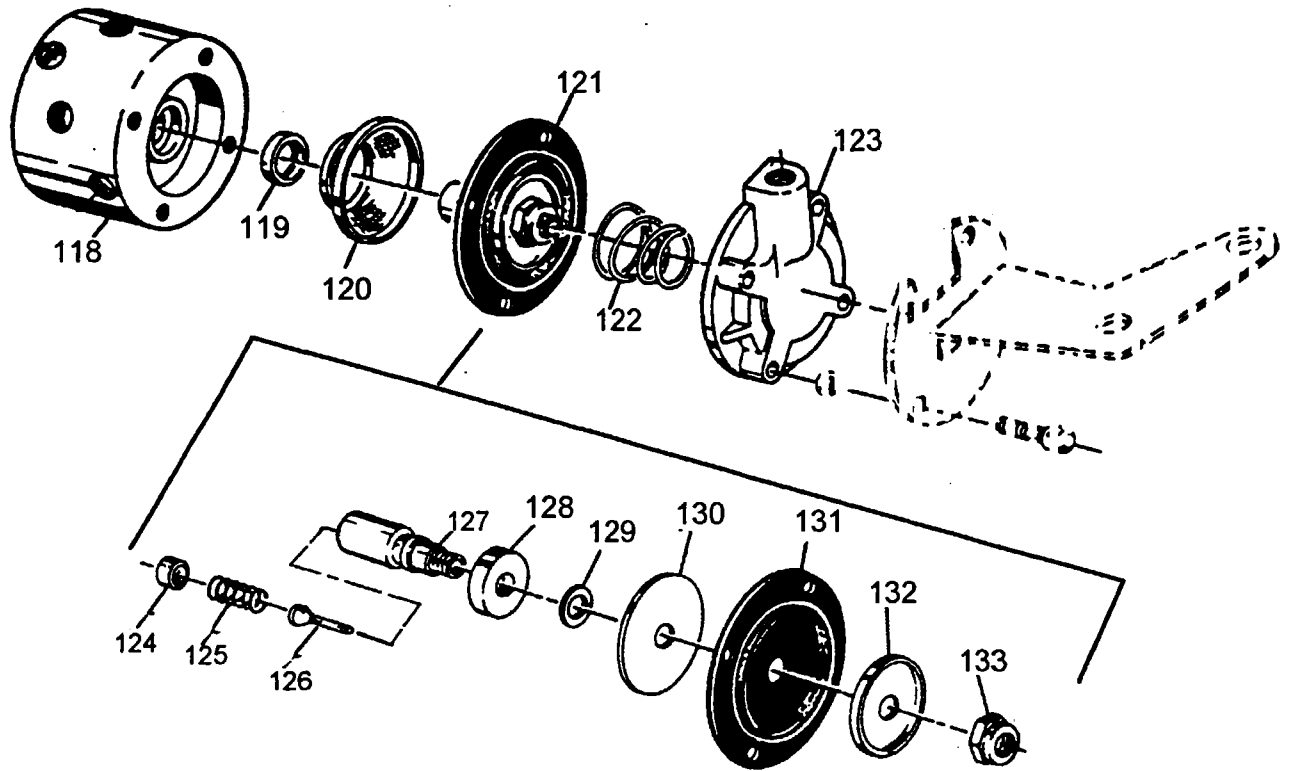


FIGURE 4-5. FUEL MANIFOLD VALVE

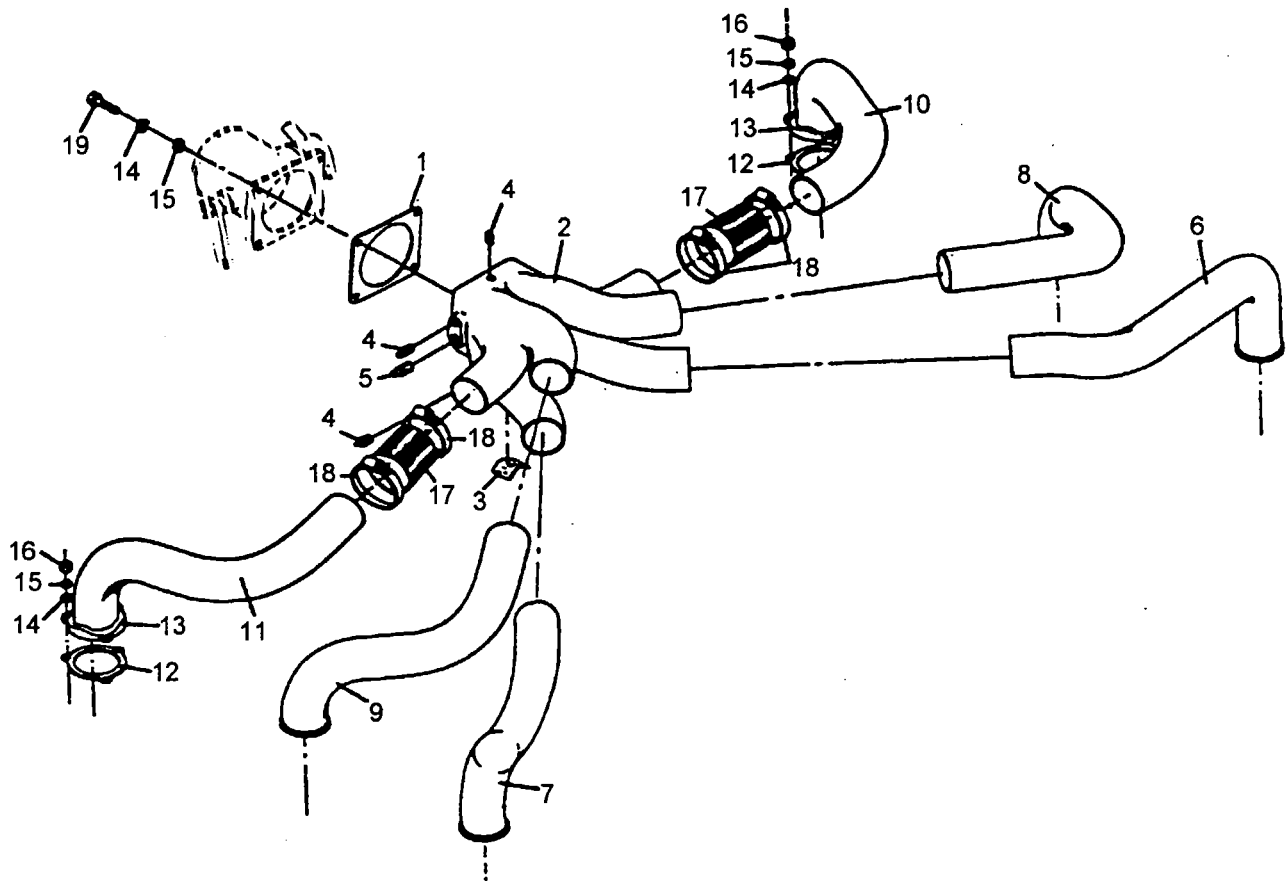
FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
4-5				
118	641030	BODY-FUEL MANIF VLV .....	1	1
119	631330	SEAL-PLUNGER FUEL MAN.....	1	1
120	626557	SCREEN-FUEL MAN VALVE.....	1	1
121	632425	DIAPHRAGM & PLUNGER ASM .....	1	1
122	630184	SPRING-COMPRESS CONICAL.....	1	1
123	634325	COVER-FUEL MAN VALVE.....	1	1
124	632394	RETAINER-PLUNGER SPRING.....	1	1
125	631331	SPRING-COMPRESSION.....	1	1
126	634619	NEEDLE-MAN VLV F INJ.....	1	1
127	631282	PLUNGER-FUEL MANIF.....	1	1
128	631350	SPACER-PLUNGER-MAN VLV .....	1	1
129	627124	GASKET .....	1	1
130	627123	PLATE-DIAPHRAGM .....	1	1
131	626536	DIAPHRAGM-FUEL MAN VLV.....	1	1
132	626556	PLATE-DIAPHRAGM .....	1	1
133	AN315-4R	NUT-PLAIN.....	1	1

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# CHAPTER 5

## INDUCTION SYSTEM

FIGURE		PAGE
5-1	INDUCTION SYSTEM IO-550-N1B.....	5-2
5-2	INDUCTION SYSTEM IO-550-N2B.....	5-3



**FIGURE 5-1. INDUCTION SYSTEM**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
5-1				
	1	GASKET-THROTTLE BODY.....	1	
	2	MANIFOLD ASM-INDUCTION .....	1	
	3	BUMPER-RUBBER .....	1	
	4	PLUG .125C'SUNK HD PIPE .....	4	
	5	PLUG .25 PIPE.....	1	
	6	TUBE-INTAKE MANIF #1 CYL.....	1	
	7	TUBE-INTAKE MANIF #2 CYL.....	1	
	8	TUBE-INTAKE MANIF #3 CYL.....	1	
	9	TUBE-INTAKE MANIF #4 CYL.....	1	
	10	TUBE-INTAKE MANIF #5 CYL.....	1	
	11	TUBE-INTAKE MANIF #6 CYL.....	1	
	12	GSKT-INT. MAN. 3.12X O.D. ....	6	
	13	FLANGE-INT MAN TUBE.....	6	
	14	WASHER-.250X.03125 .....	22	
	15	WASHER LOCK .25 DIA. ....	18	
	16	NUT-PLAIN.....	18	
	17	HOSE 2.00 ID X 2.50 LG.....	6	
	18	CLAMP-HOSE.....	12	
	19	SCREW.25-20X.69 PLAIN .....	4	



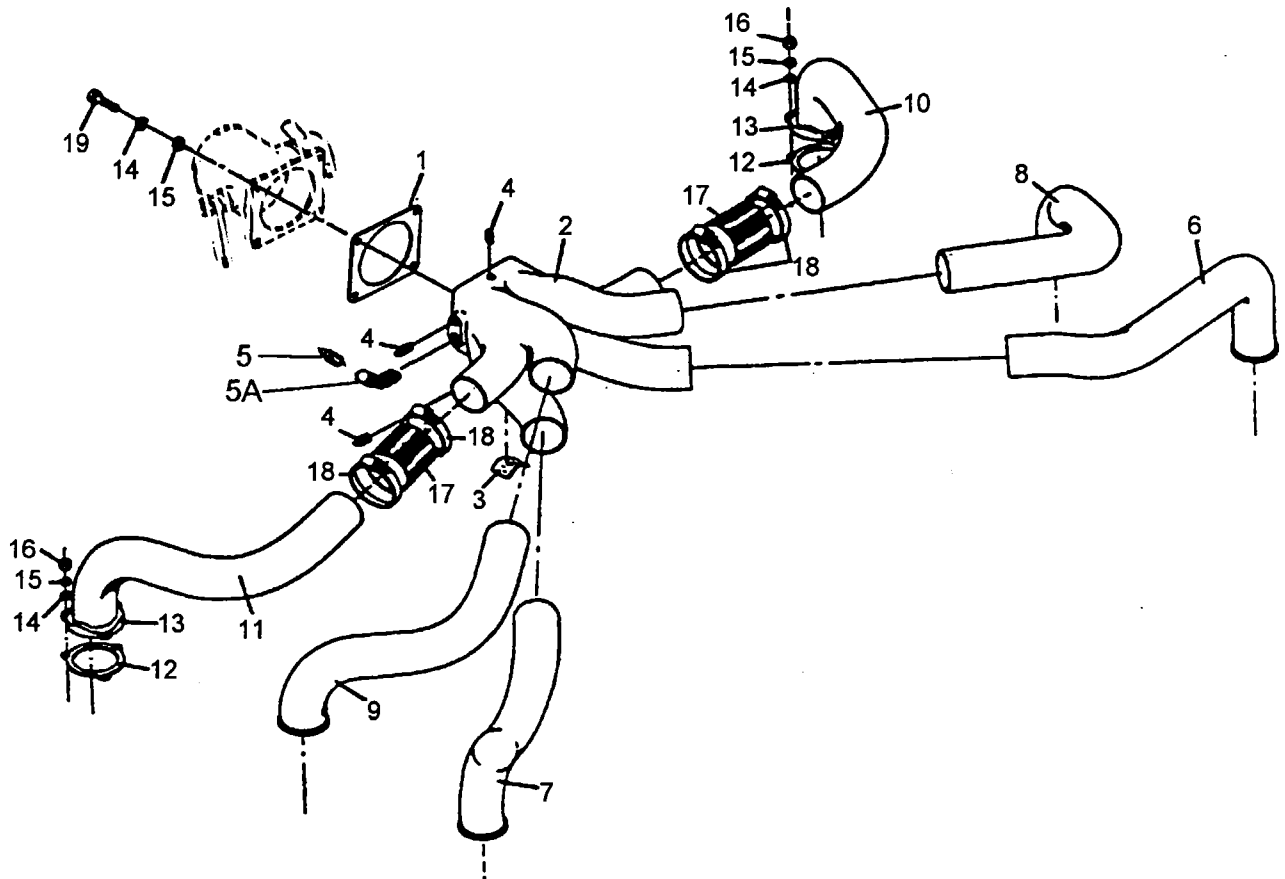


FIGURE 5-2. INDUCTION SYSTEM IO-550-N2B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
5-2				
1	652094	GASKET-THROTTLE BODY .....		1
2	646440	MANIFOLD ASM-INDUCTION .....		1
3	646416	BUMPER-RUBBER .....		1
4	2024	PLUG .125C'SUNK HD PIPE .....		4
5	2026	PLUG .25 PIPE.....		1
5A	633121	ELBOW FITTING .....		1
6	646198	TUBE-INTAKE MANIF #1 CYL.....		1
7	646199	TUBE-INTAKE MANIF #2 CYL.....		1
8	646204	TUBE-INTAKE MANIF #3 CYL.....		1
9	646205	TUBE-INTAKE MANIF #4 CYL.....		1
10	646206	TUBE-INTAKE MANIF #5 CYL.....		1
11	646207	TUBE-INTAKE MANIF #6 CYL.....		1
12	649950	GSKT-INT. MAN. 3.12X O.D.....		6
13	633730	FLANGE-INT MAN TUBE .....		6
14	20522	WASHER-.250X.03125.....		22
15	MS35338-44	WASHER LOCK .25 DIA.....		18
16	AN315-4R	NUT-PLAIN.....		18
17	642917-2	HOSE 2.00 ID X 2.50 LG.....		6
18	MS35842-13	CLAMP-HOSE.....		12
19	537629	SCREW.25-20X.69 PLAIN .....		4

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## **CHAPTER 6**

### **AIR CONDITIONING**

#### **6-1 AIR CONDITIONING**

This chapter is reserved for engines utilizing freon compressor mounting components supplied on some engine models by Teledyne Continental Motors.

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# CHAPTER 7

## ELECTRICAL CHARGING SYSTEM

FIGURE	PAGE
7-1 ELECTRICAL CHARGING SYSTEM.....	7-2

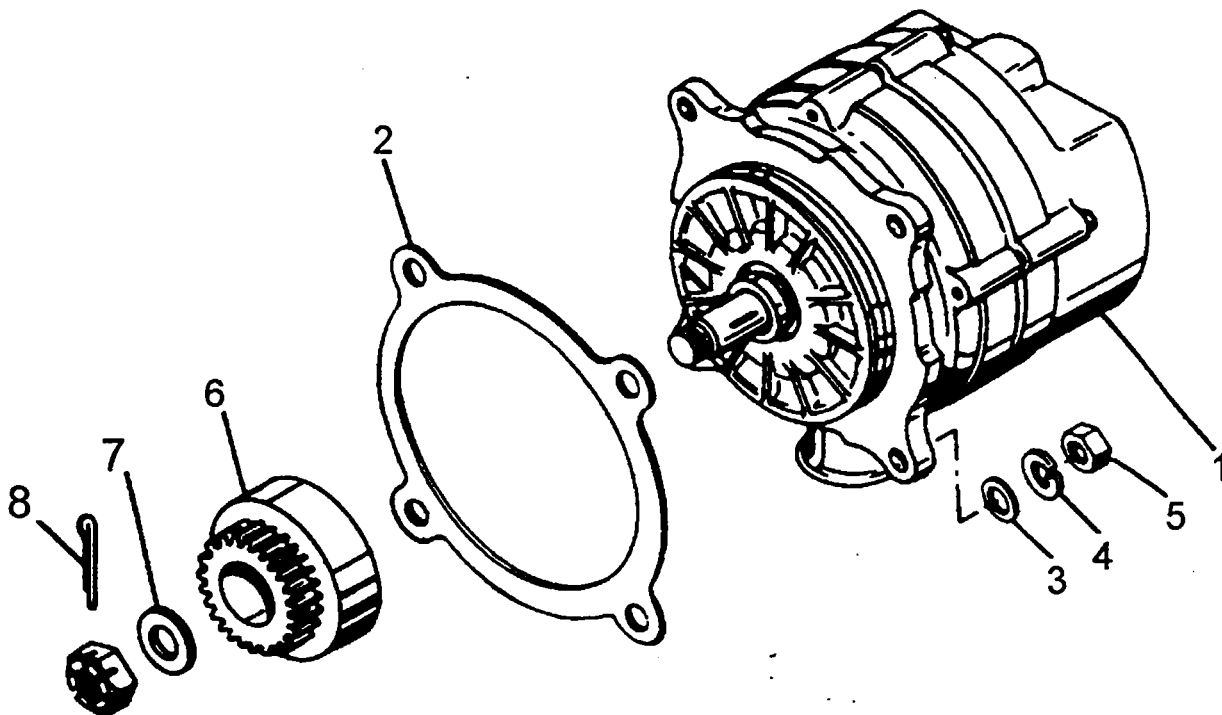


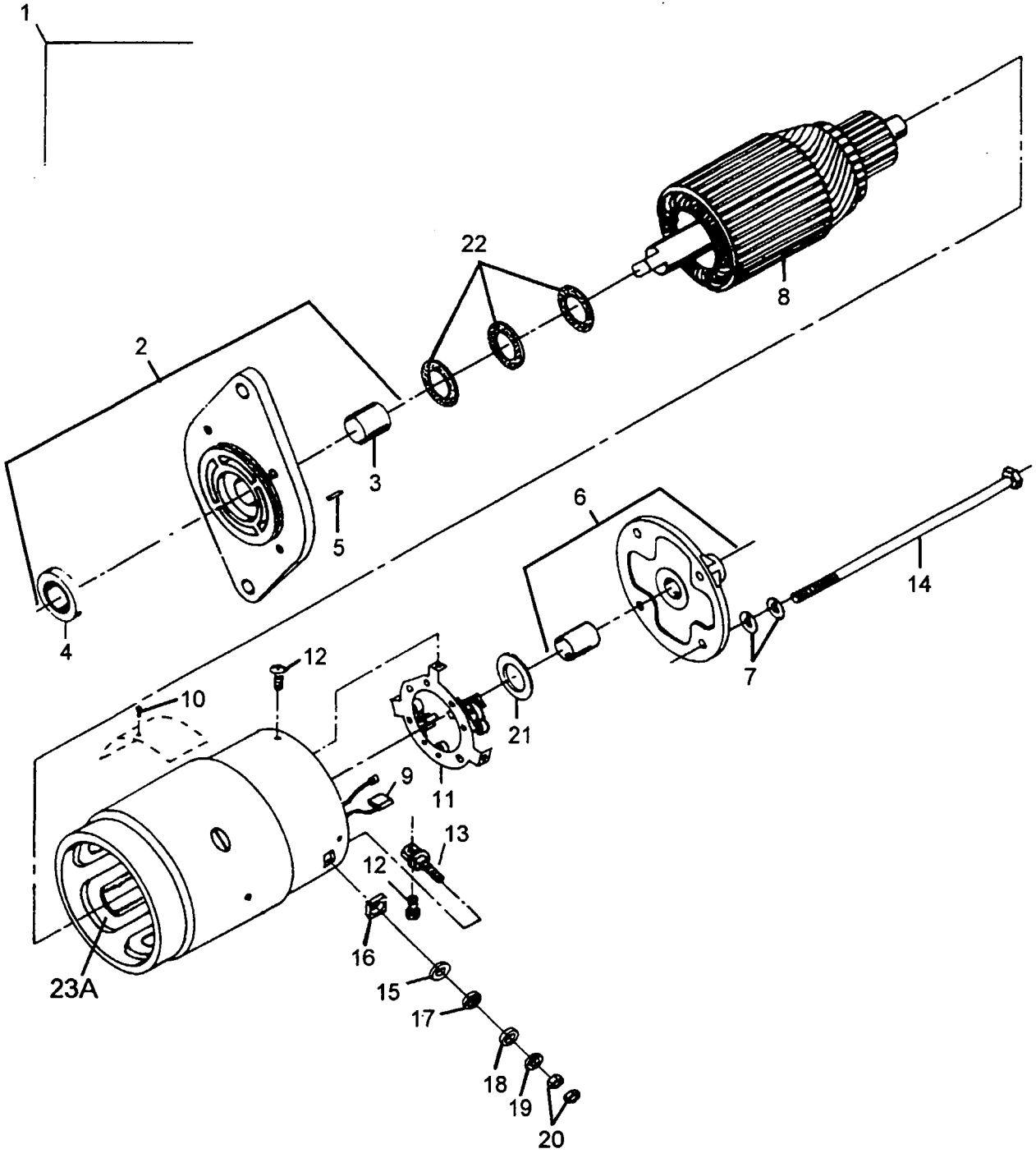
FIGURE 7-1. ELECTRICAL CHARGING SYSTEM

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
7-1	1	ALT-ALX-9424 12V.....	1	1
	2	GASKET-GENERATOR.....	1	1
	3	WASHER-PL .31 X .063 THK.....	4	4
	4	WASHER-LOCK-SPRING .3125.....	4	4
	5	NUT-PLAIN .31-24.....	4	4
	6	HUB ASSEMBLY.....	1	1
	7	WASHER-ALT DR HUB ASM.....	1	1
	8	PIN-COTTER .09 X 1.00 LG.....	1	1

# CHAPTER 8

## STARTING SYSTEM

FIGURE		PAGE
8-1	STARTER MOTOR.....	8-2
8-2	STARTER ADAPTER.....	8-4



**FIGURE 8-1. STARTER MOTOR**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY		
			1B	2B	
8-1	1	646238-2	MOTOR-STARTER, 12V.....	1	1
	2	646326	FLANGE ASSY. - DRIVE END.....	1	1
	3	646327	BUSHING - .750 I.D.....	1	1
	4	646328	SEAL - OIL .75 SHAFT DIA.....	1	1
	5	MS16562-21	PIN-SPRING.....	1	1

8-2



**FIGURE 8-1. STARTER MOTOR (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>8-1</b>				
6	646502	COVER ASSY-COMMUTATOR END.....	1	1
7	MS35338-44	WASHER LOCK .25 DIA.....	6	6
8	646333	ROTOR ASSY. 12 VOLT.....	1	1
9	646348	BRUSH - STARTER POSITIVE.....	2	2
10	24764	SCREW-NO. 0-19 DRV.....	4	4
11	646340	HOLDER ASSY. BRUSH.....	1	1
12	646349	SCREW SELF THREADING.....	4	4
13	646357	STUD - TERMINAL.....	1	1
14	646365	BOLT - HEX FLANGE.....	1	1
15	646359	WASHER - INSULATOR.....	2	2
16	646360	INSULATOR - SQUARE.....	1	1
17	646361	WASHER - INSULATOR.....	1	1
18	646362	WASHER - FLAT.....	1	1
19	MS35338-45	WASHER-LOCK-SPRING .3125.....	2	2
20	646364	NUT - HEX .312-18.....	2	2
21	646367	WASHER.....	1	1
22	646368	WASHER - FIBER.....	3	3

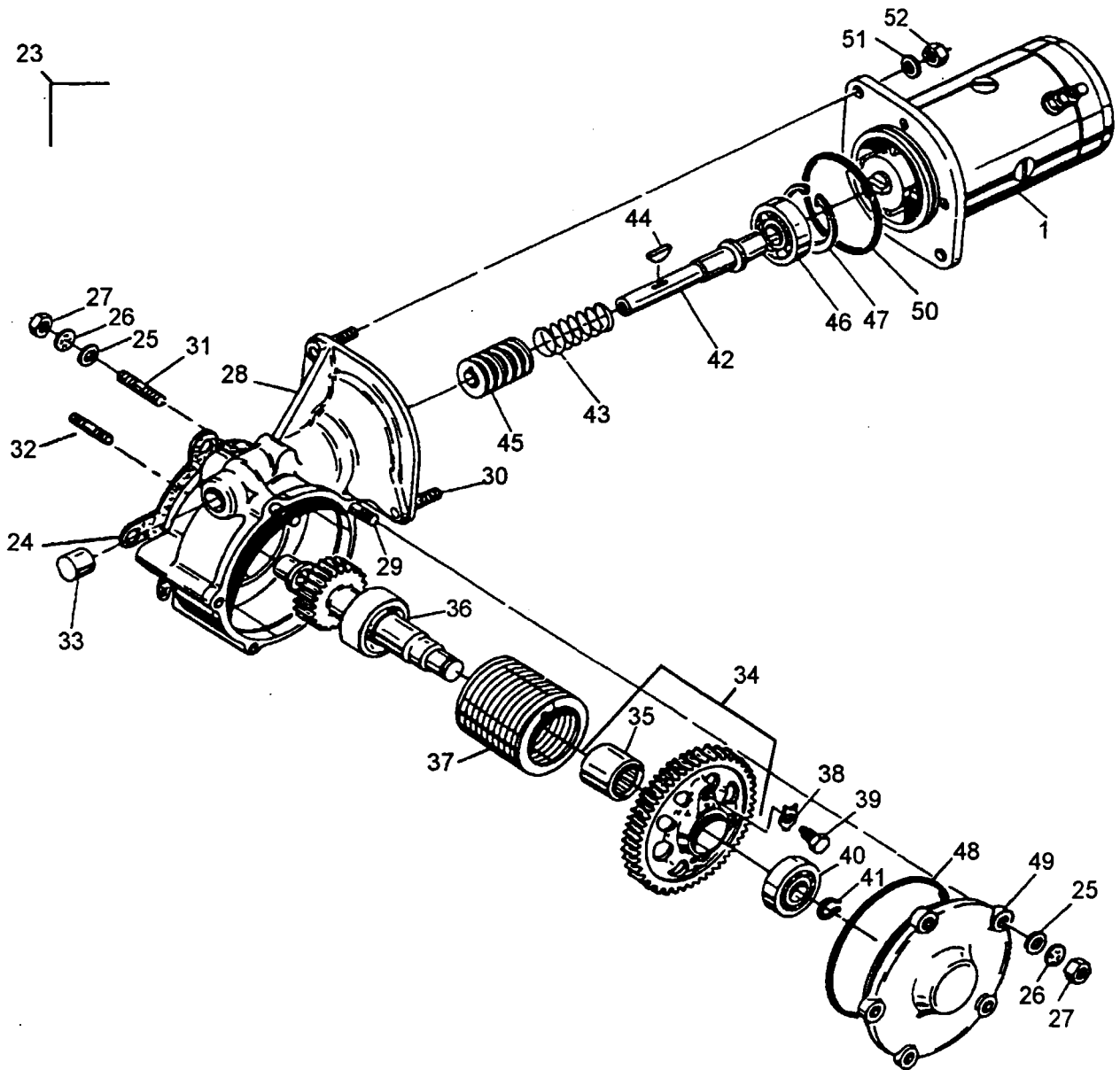


FIGURE 8-2. STARTER ADAPTER

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
8-2				
23	642083A10	ADAPTER ASM-STARTER.....	1	1
24	653470	GASKET-S/ADAPTER TO C/C.....	1	1
25	AN960-516	WASHER-PL .31 X .063 THK.....	10	10
26	MS35338-45	WASHER-LOCK-SPRING .3125.....	7	7
27	AN315-5R	NUT-PLAIN .31-24.....	10	10
28	642083	ADAPTER ASM-STARTER.....	1	1
29	402151	STUD .31-18-401851.....	3	3
30	402127	STUD .38-16-24 #639302.....	2	2
30	402127P003	STUD .38-16-24X1.53.....	2	2
30	402127P007	STUD .38-16-24X1.53.....	2	2

**FIGURE 8-2. STARTER ADAPTER (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>8-2</b>				
31	401814	STUD .31-18-401851 .....	1	1
32	401971	STUD .31-18-401851 .....	1	1
33	641368	BEARING NEEDLE .....	1	1
34	653732	GEAR-ASM-STARTER .....	1	1
35	630680	BEARING-ROLLER.....	1	1
36	629435	GEAR-SHAFT STARTER .....	1	1
37	654565	SPRING-CLUTCH.....	1	1
37	654565M015	SPRING - CLUTCH.....	1	1
38	501867	WASHER-TAB .26 DIA ID.....	1	1
39	633845	SCREW-.25-20 X.41 LG .....	1	1
40	534685	BEARING-BALL .....	1	1
41	521649-3	RING-EXT RETAIN REF522108.....	1	1
42	631252	SHAFT-WORM DRIVE .....	1	1
43	536552	SPRING-STARTER.....	1	1
44	MS35756-8	KEY WOODRUFF .125X.625.....	1	1
45	539805	GEAR-STARTER WORM .....	1	1
46	X13041	BEARING-BALL-RADIAL .....	1	1
47	502287-3	RING-RETAINING-INT 522100.....	1	1
48	630979-24	SEAL- "O" RING.....	1	1
49	629668	COVER STARTER ADAPTER.....	1	1
50	MS9021-038	SEAL-"O" RING 2.614 ID .....	1	1
51	539058	WASHER .39IDX.08 PLAIN .....	2	2
52	2441	NUT-PLAIN HEX .38-24.....	2	2
53	630899	BEARING-ROLLER .62 LG.....	1	1
54	633039	SLEEVE-SPRING CLUTCH.....	1	1
55	533285	DOWEL .13 DIA X .36LG.....	3	3

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# CHAPTER 9

## LUBRICATION SYSTEM

FIGURE		PAGE
9-1	OIL PUMP IO-550-N1B .....	9-2
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9-3	OIL COOLER .....	9-6
9-4	OIL SUMP .....	9-7

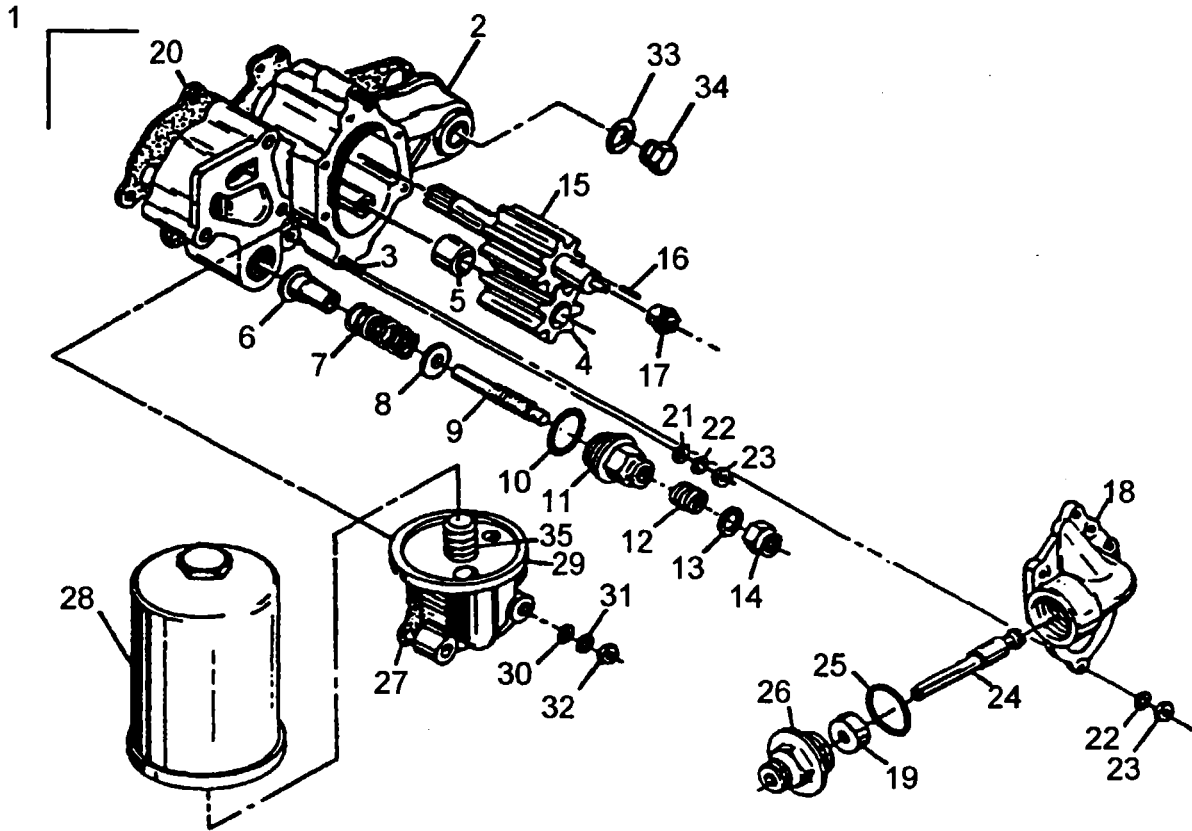


FIGURE 9-1. OIL PUMP IO-550-N1B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
9-1	632977A6	PUMP-OIL & TACH DR ASM .....	1	
	2	632977 HOUSING & SHAFT-OIL PUMP .....	1	
	3	401801 STUD.25-20-28X1.19#639302 .....	2	
		401801P003 †STUD.25-20-28X1.19#401850.....	2	
		401801P007 †STUD.25-20-28X1.19#401850.....	2	
	4	631016 GEAR & BUSHING ASM.....	1	
	5	23024 BUSHING-TACH & FP DRV.....	2	
	6	642336 PLUNGER - OIL PRESS.....	1	
	7	634150 SPRING OIL PRES REL.....	1	
	8	631653 SEAT-SPEC .74 ODX.53 ID.....	1	
	9	642335 SCREW - ADJ.....	1	
	10	MS35769-26 GASKET-COPPER.....	1	
	11	642224 HSG ASM-PRES REL VLV.....	1	
	12	MS124657 HELI-COIL.....	1	
	13	X1473 WASHER-COP.3125 X .3125.....	1	
	14	632762 NUT-ELASTIC STOP .31-24.....	1	
	15	631014 SHAFT GEAR ASM.....	1	
	16	535634 PIN-DOWEL .09DIA X.31.....	1	
	17	535008 GEAR-BEVEL TACH DRIVE.....	1	
	18	646237 COVER-TACH DR. O/P.....	1	
	19	642714 SEAL OIL-FLANGE.....	1	
	20	649949 GSKT-O/PUMP 8.82X3.84.....	1	
	21	AN960-416L WASHER-PL .25 X .032.....	8	
	22	MS35338-44 WASHER LOCK .25 DIA.....	8	

**FIGURE 9-1. OIL PUMP IO-550-N1B (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>9-1</b>				
23	AN315-4R	NUT-PLAIN.....		8
24	631650	SHAFT ASM TACH DR.....		1
25	632085	GASKET-TACH DR HSG.....		1
26	21208A2	HOUSING TACH DR ASM.....		1
27	649991	GSKT-O/FILTER 2.78X3.04.....		1
28	649923	FILTER ASSY-OIL.....		1
29	653491	ADAPTER ASM-OIL FILTER.....		1
30	AN960-616L	WASHER-PL .38 X .032 THK.....		3
31	MS35338-46	WASHER LOCK .375 DIA.....		3
32	2441	NUT-PLAIN HEX .38-24.....		3
33	MS35769-12	GASKET-COPPER.....		1
34	532432	PLUG.63-18 HEX HD.....		1
35	653490	STUD ADAPTER.....		1

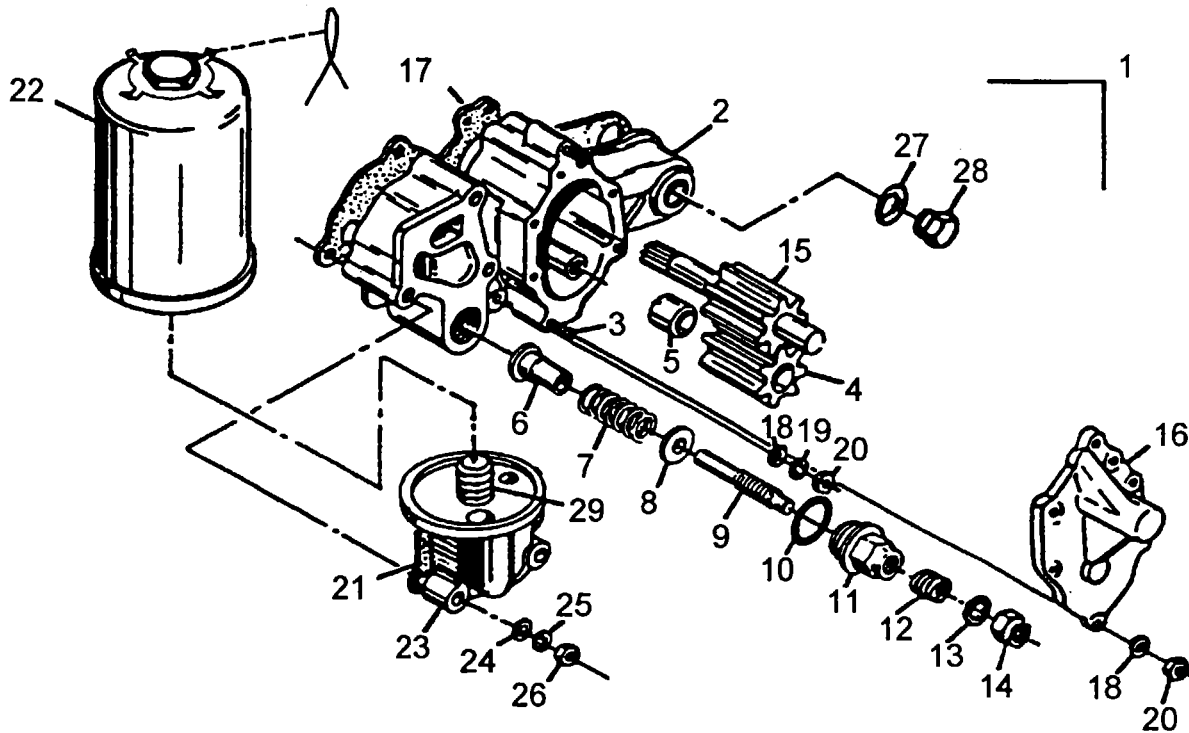


FIGURE 9-2. OIL PUMP IO-550-N2B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
9-2	632977A7	PUMP-OIL ASSEMBLY .....		1
2	632977	HOUSING & SHAFT-OIL PUMP .....		1
3	401801	STUD.25-20-28X1.19#639302 .....		2
	401801P003	†STUD.25-20-28X1.19#401850 .....		2
	401801P007	†STUD.25-20-28X1.19#401850 .....		2
4	631016	GEAR & BUSHING ASM .....		1
5	23024	BUSHING-TACH & FP DRV .....		2
6	642336	PLUNGER - OIL PRESS .....		1
7	634150	SPRING OIL PRES REL .....		1
8	631653	SEAT-SPEC .74 ODX.53 ID .....		1
9	642335	SCREW - ADJ .....		1
10	MS35769-26	GASKET-COPPER .....		1
11	642224	HSG ASM-PRES REL VLV .....		1
12	MS124657	HELI-COIL .....		1
13	X1473	WASHER-COP.3125 X .3125 .....		1
14	632762	NUT-ELASTIC STOP .31-24 .....		1
15	631014	SHAFT GEAR ASM .....		1
16	535634	PIN-DOWEL .09DIA X.31 .....		1
17	535008	GEAR-BEVEL TACH DRIVE .....		1
18	646237	COVER-TACH DR. O/P .....		1
19	642714	SEAL OIL-FLANGE .....		1
20	649949	GSKT-O/PUMP 8.82X3.84 .....		1
21	AN960-416L	WASHER-PL .25 X .032 .....		8
22	MS35338-44	WASHER LOCK .25 DIA. ....		8
23	AN315-4R	NUT-PLAIN .....		8
24	631650	SHAFT ASM TACH DR .....		1
25	632085	GASKET-TACH DR HSG .....		1
26	21208A2	HOUSING TACH DR ASM .....		1



**FIGURE 9-2. OIL PUMP IO-550-N2B (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>9-2</b>				
27	649991	GSKT-O/FILTER 2.78X3.04.....		1
28	649923	FILTER ASSY-OIL.....		1
29	653491	ADAPTER ASM-OIL FILTER.....		1
30	AN960-616L	WASHER-PL .38 X .032 THK.....		3
31	MS35338-46	WASHER LOCK .375 DIA.....		3
32	2441	NUT-PLAIN HEX .38-24.....		3
33	MS35769-12	GASKET-COPPER.....		1
34	532432	PLUG.63-18 HEX HD.....		1
35	653490	STUD ADAPTER.....		1

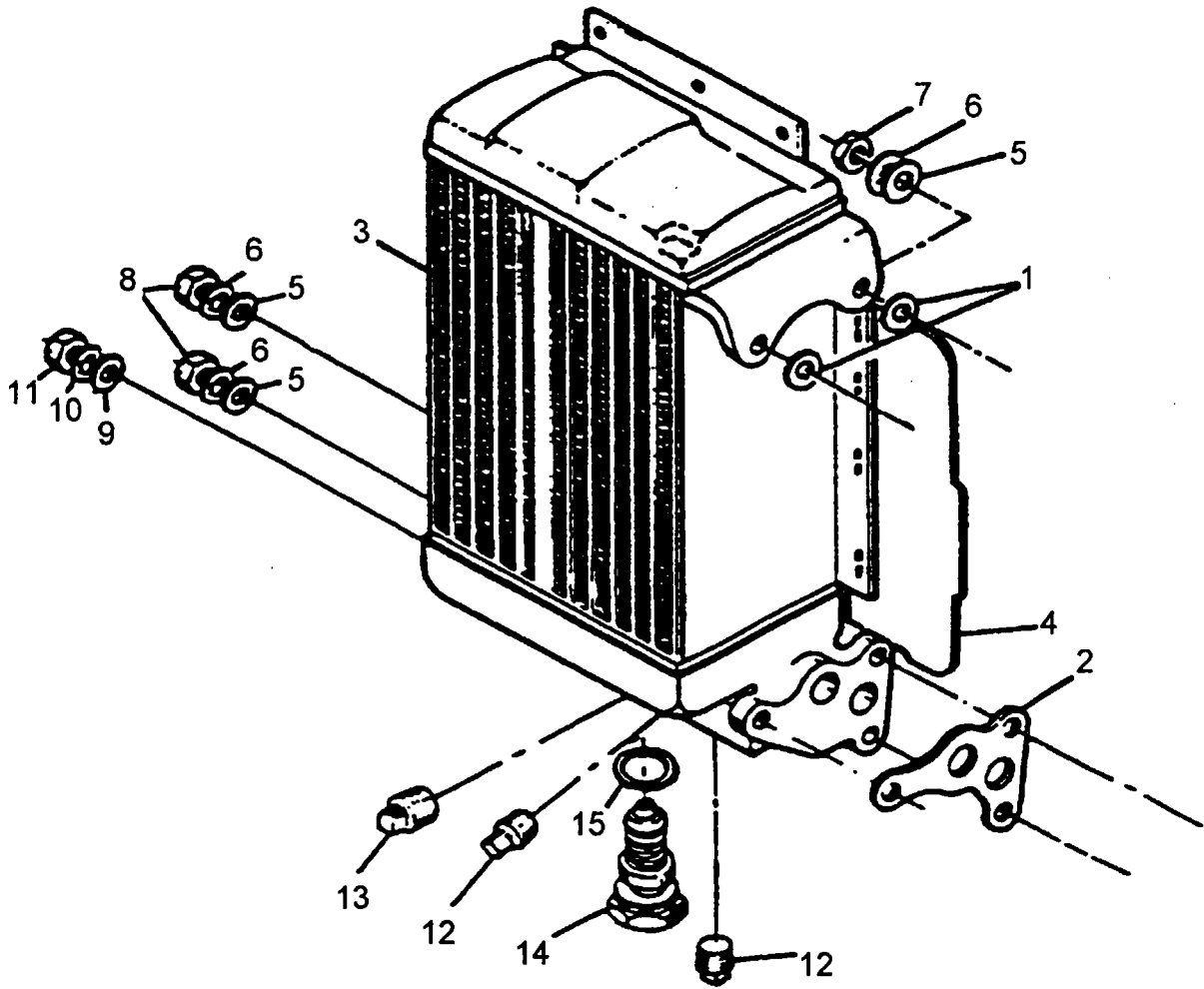


FIGURE 9-3. OIL COOLER

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
9-3				
1	649961	GSKT-WASHER .88 O.D. ....	2	2
2	649989	GSKT-O/COOL 3.44X2.41 ....	1	1
3	649791	COOLER-OIL & BAFFLE ASM.....	1	1
3	654585	COOLER-ENG OIL.....	1	1
4	632224	BAFFLE-OIL COOLER.....	1	1
5	AN960-616L	WASHER-PL .38 X .032 THK.....	4	4
6	MS35338-46	WASHER LOCK .375 DIA.....	4	4
7	2441	NUT-PLAIN HEX .38-24.....	2	2
8	652421	NUT-.375-24 FLANGED.....	2	2
9	AN960-516	WASHER-PL .31 X .063 THK.....	1	1
10	MS35338-45	WASHER-LOCK-SPRING .3125.....	1	1
11	AN315-5R	NUT-PLAIN .31-24.....	1	1
12	2024	PLUG.125C'SUNK HD PIPE.....	2	2
13	629518-3	PLUG-.38-18 NPTF.....	1	1
14	649369	VERNATHERM VALVE ASM.....	1	1
15	627496	GASKET-DET C TA-21029.....	1	1

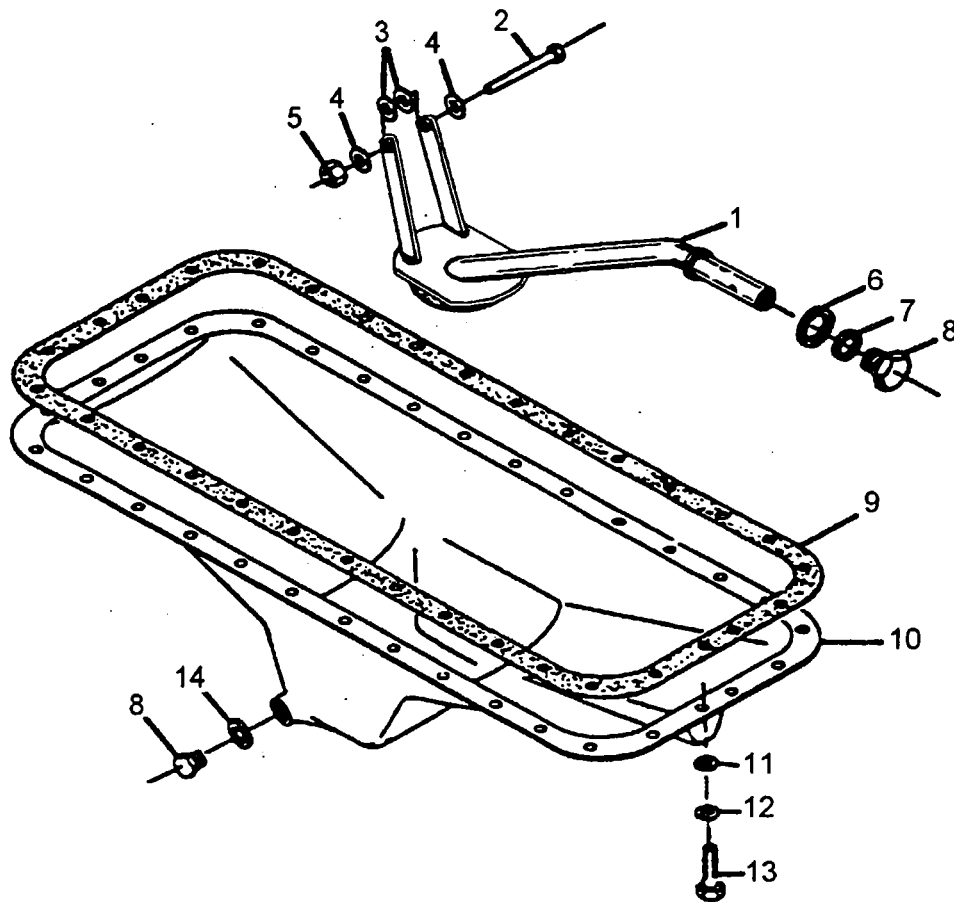


FIGURE 9-4. OIL SUMP

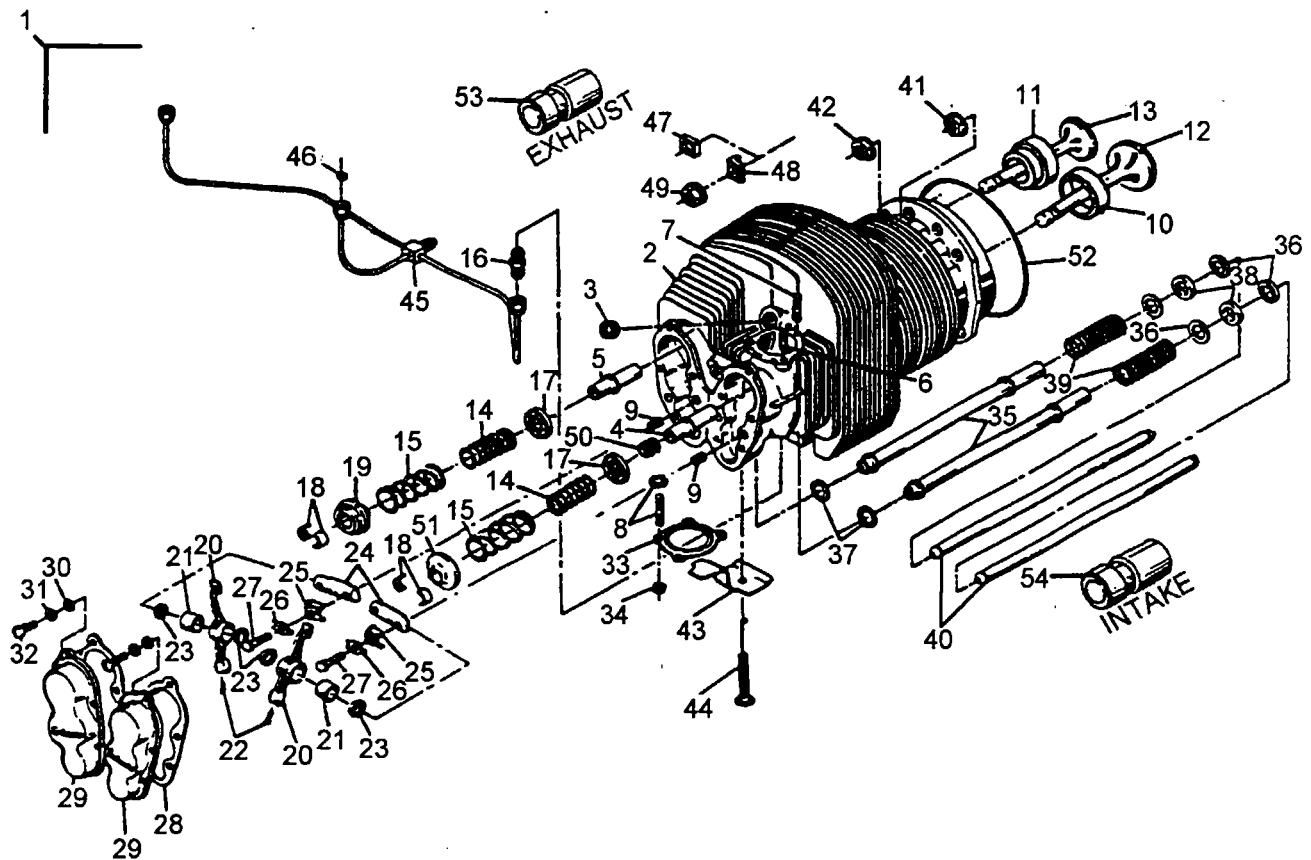
FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
9-4				
1	649807	TUBE ASM-OIL SUCTION.....	1	1
2	AN4-17A	BOLT-MACH .25-28X1.91.....	1	1
3	22139	WASHER-.28 ID X.12 PLAIN.....	2	2
4	20522	WASHER-.250X.03125.....	2	2
5	646605	NUT-PLAIN.....	1	1
6	MS35769-15	GASKET-COPPER.....	1	1
7	MS35769-12	GASKET-COPPER.....	1	1
8	532432	PLUG.63-18 HEX HD.....	3	3
9	653528	GASKET-OIL SUMP.....	1	1
10	652423	SUMP ASM-OIL.....	1	1
11	AN960-516	WASHER-PL .31 X .063 THK.....	32	32
12	MS35338-45	WASHER-LOCK-SPRING .3125.....	32	32
13	530346	SCREW-.31-18X.88 HEX.HD.....	32	32
14	MS35769-11	GASKET-COPPER.....	2	2

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# CHAPTER 10

## CYLINDERS AND PISTONS

FIGURE		PAGE
10-1	CYLINDER ASSEMBLY .....	10-2
10-2	INTER - CYLINDER BAFFLE .....	10-5
10-3	PISTON & RING ASSEMBLY.....	10-6



**FIGURE 10-1. CYLINDER ASSEMBLY**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
10-1	654928A1	CYL VLV ASM .....	6	6
2	654928	CYL ASSY-MACH.....	6	6
3	520112-3	HELICOIL .....	12	12
4	643766	GUIDE VALVE.....	6	6
	643766P005	†GUIDE VALVE .....	6	6
	643766P010	†GUIDE VALVE .....	6	6
	643766P015	†GUIDE VALVE .....	6	6
	643766P020	†GUIDE VALVE .....	6	6
	643766P030	†GUIDE VALVE .....	6	6
5	643767	GUIDE-VLV,EXH,PREFINISHED.....	6	6
	643767P005	†GUIDE-VLV,EXH,PREFINISHED .....	6	6
	643767P010	†GUIDE - EXHAUST VALVE .....	6	6
	643767P015	†GUIDE-EXHAUST VALVE .....	6	6
	643767P020	†GUIDE - EXHAUST VALVE .....	6	6
	643767P030	†GUIDE - EXHAUST VALVE .....	6	6
6	401852	STUD.25-20-28X1.41#639302 .....	6	6
	401852P003	†STUD.25-20-28X1.41#401850.....	6	6
	401852P007	†STUD.25-20-28X1.41#401850.....	6	6
7	401893	STUD.25-20-28X1.25#639302 .....	12	12
8	640482	STUD-RING LOCKED.....	24	24
9	MS122122	INSERT-HELICOIL .31-18.....	24	24
10	653928	INSERT-VLV SEAT,INTAKE .....	6	6

**FIGURE 10-1. CYLINDER ASSEMBLY (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>10-1</b>				
11	654567	INS EXH VLV SEAT .....	6	6
	654567P002	†INSERT-EXH VLV.....	6	6
	654567P005	†INSERT-EXH VLV.....	6	6
	654567P010	†INSERT-EXH VLV.....	6	6
	654567P020	†INS-EXH VLV.....	6	6
	654567P030	†INSERT-EXH VLV.....	6	6
12	646283	VALVE-INTAKE.....	6	6
13	652956	VALVE-EXHAUST.....	6	6
14	654442	SPRING-VALVE, INNER.....	12	12
15	654441	SPRING-VALVE, OUTER.....	12	12
16	632068	SLEEVE-IMPERIAL #35923F.....	6	6
17	625393	RETAINER VLV SPRING INNER.....	12	12
18	24802	KEY-VLV SPR OUTER RET.....	24	24
19	652112	ROTOCOIL ASSY.....	6	6
20	652966	ROCKER VALVE ASM.....	12	12
21	652963	BUSHING-.875 OD X .75 ID.....	12	12
22	21007	SCREW-DRIVE #2.....	12	12
23	653188	WASHER-ROCKER THRUST.....	24	24
	653188P010	†WASHER-ROCKER-THRUST.....	24	24
	653188P020	†WASHER-ROCKER THRUST.....	24	24
	653188P030	†WASHER-ROCKER THRUST.....	24	24
24	653826	SHAFT-VALVE ROCKER.....	12	12
25	646032	RETAINER-ROCKER THRUST.....	24	24
26	501868	WASHER-TAB .33 DIA ID.....	24	24
27	537750	SCREW .31-18 NC3X1.12.....	24	24
28	653380	GASKET-ROCKER COVER.....	12	12
29	631814	COVER-VALVE ROCKER.....	12	12
30	AN960-416	WASHER FLAT .25 DIA.....	60	60
31	MS35338-44	WASHER LOCK .25 DIA.....	60	60
32	649353-.62	SCREW.....	60	60
33	652458	GASKET ASSY-EXH FLANGE.....	6	6
34	643967	NUT-SPECIAL .25-28 UNJF.....	24	24
35	632485	HOUSING-PUSH ROD.....	12	12
36	534609	WASHER-PUSH ROD HOUSING.....	24	24
37	630286	SEAL-"O"RING.....	12	12
38	534610	PACKING-PUSH ROD HOUSING.....	12	12
39	626147	SPRING-PUSH ROD HSG.....	12	12
40	652451-7	PUSH ROD ASM.....	12	12
	652451-7P030	†PUSH ROD ASM.....	12	12
41	652422	NUT .4375-20 UNF-3B FLGD.....	36	36
42	652541	NUT-.50-20 UNJF-3B FLANGE.....	12	12
43	649243	BAFFLE-CYL HEAD.....	6	6
44	632907	SPRING-SPECIAL .25 OD.....	6	6
45	643584	TUBE ASM-CYL DRAIN.....	2	2
46	633958-2	SEAL-COMP .15IDX.21THK.....	6	6
47	646297	BRACKET-CYL,HOLD DOWN.....	4	4
48	646298	BRACKET-CYL HOLD DOWN.....	2	2
49	646312	NUT-HEX, SELF ALIGNING.....	6	6
50	646985	SEAL-VLV GUIDE, INTAKE.....	6	6
51	35971	RET-VALVE SPR OUTER.....	6	6
52	641066	SEAL"O"RING.103X4.99X5.19.....	6	6
53	653877	LIFTER ASM-HYDRAULIC.....	6	6

**FIGURE 10-1. CYLINDER ASSEMBLY (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>10-1</b>				
54	653888	LIFTER ASM-HYDRAULIC.....	6	6
55	22671	PLUG-SPARK PLUG HOLE.....	12	12
56	646565A1	GASKET SET GT-S/CYL.....	6	6



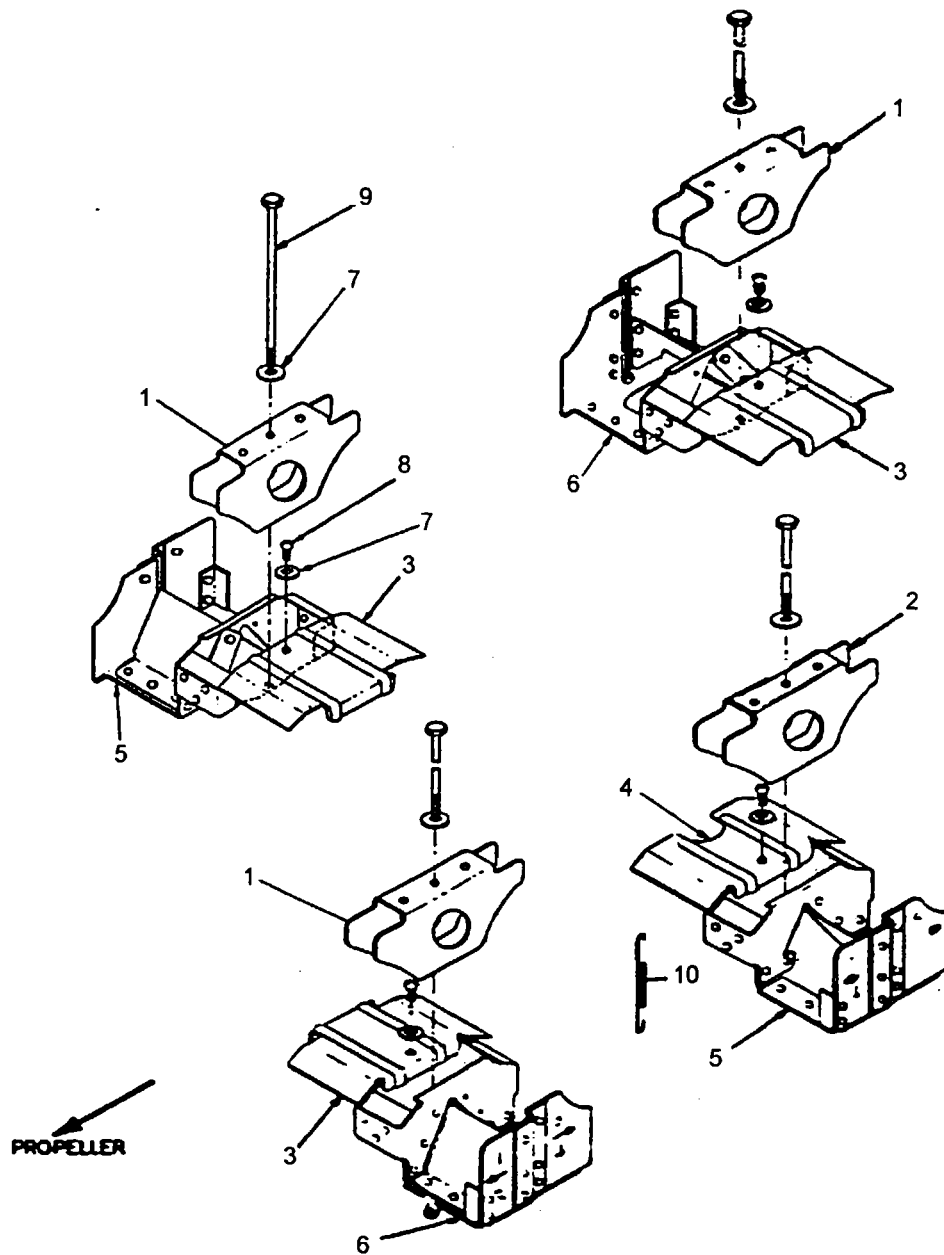


FIGURE 10-2. INTER - CYLINDER BAFFLE

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
10-2				
1	643359	BAFFLE-SUPP (5050103-12) .....	3	3
2	646868	BAFFLE-SUPPORT .....	1	1
3	643364	BAFFLE-BASE (5050103-2).....	3	3
4	643358	BAFFLE-BASE .....	1	1
5	643353	BAFFLE ASM (5050108-2).....	2	2
6	643352	BAFFLE ASM (5050108-1).....	2	2
7	AN960-10L	WASHER-FLAT #10 THD .....	8	8
8	MS35207-262	SCREW-PAN H. 10-32X7/16" .....	4	4
9	AN3-80A	BOLT-#10-32 X 8.03 LG .....	4	4
10	533210	SPRING-BAFFLE TIE 2.60 LG .....	1	1

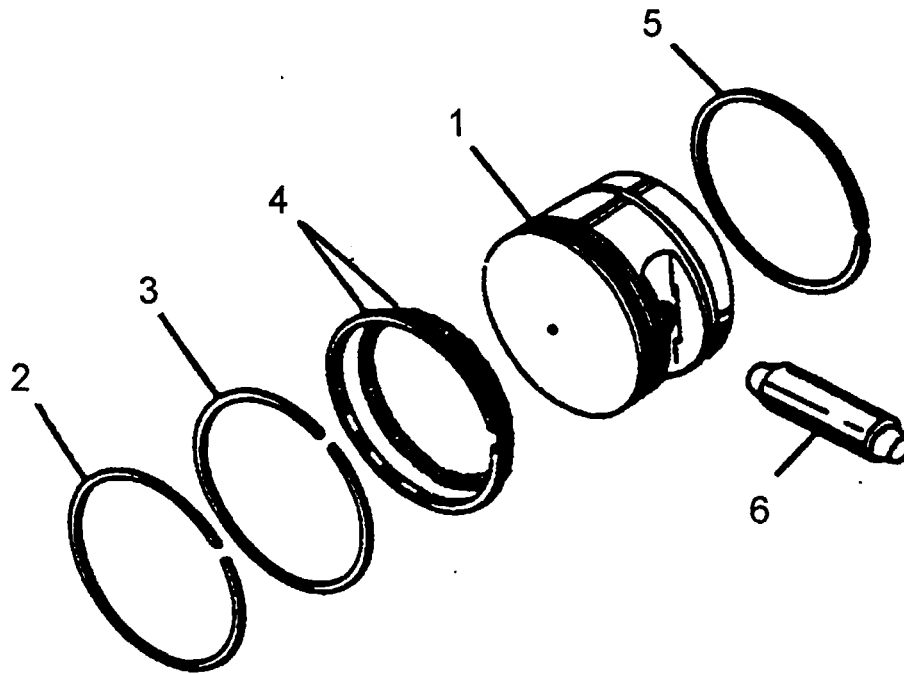


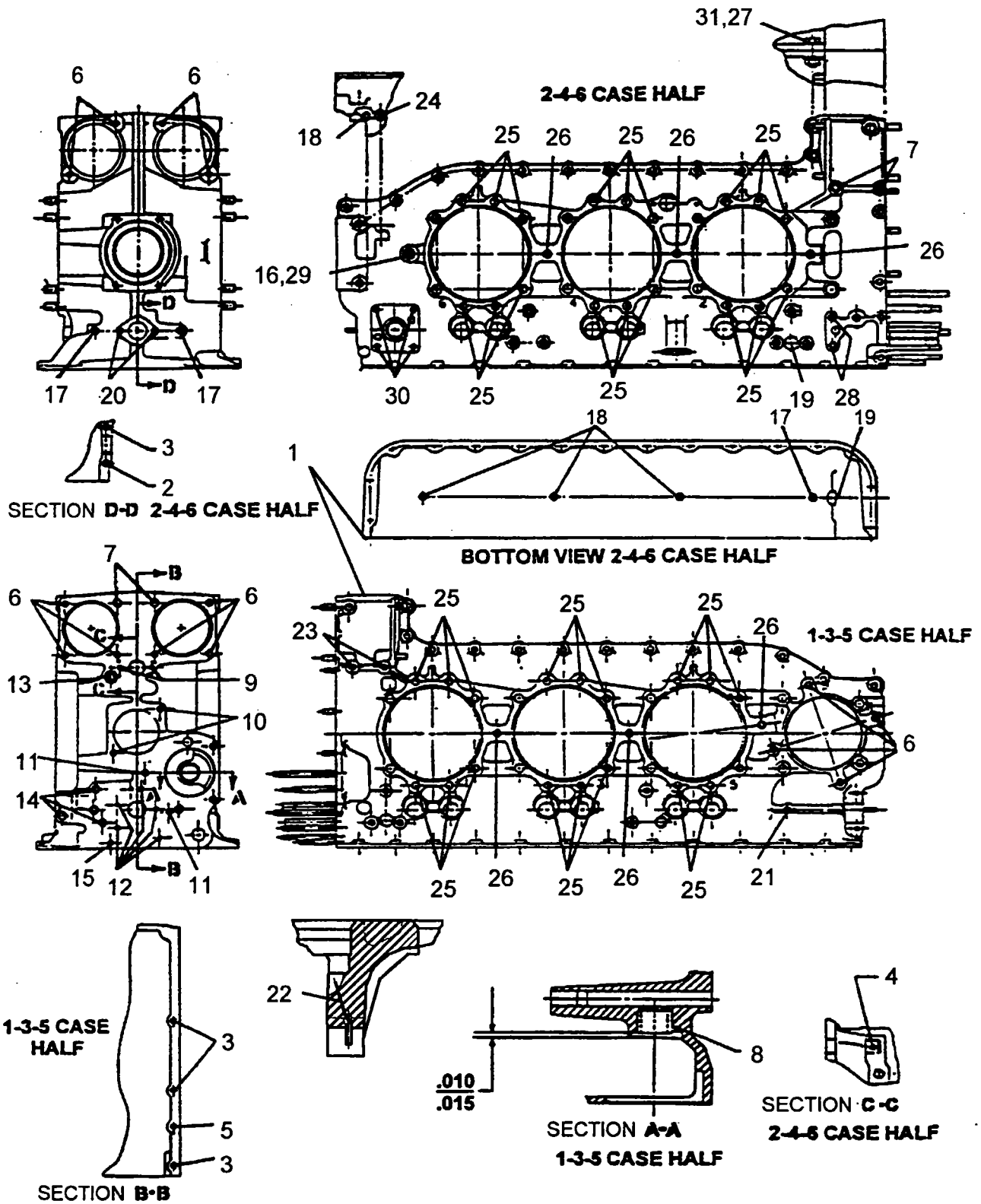
FIGURE 10-3. PISTONS

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
10-3				
1	654726	PISTON-5.25 DIA .....	6	6
	654726BP	PISTON SET-BALANCED .....	1	1
	654726P010	†PISTON .....	1	1
	654726P010BP	†PISTON BALANCED .....	1	6
2	648005	RING-PISTON .....	6	6
3	654719	RING - PISTON 5.25 #2 .....	6	6
4	654717	RING ASSY-PISTON .....	6	6
5	648008	RING-PISTON .....	6	6
6	630046	PIN & PLUG ASM-PISTON .....	6	6
7	654716A1	RING SET-PISTON-6 CYL .....	1	1
8	654716	RING SET (SINGLE CYL) .....	6	6
	654716P005	†RING SET .....	6	6
	654716P010	†RING SET .....	6	6
	654716P015	†RING SET .....	6	6

# CHAPTER 11

## CRANKCASE

FIGURE		PAGE
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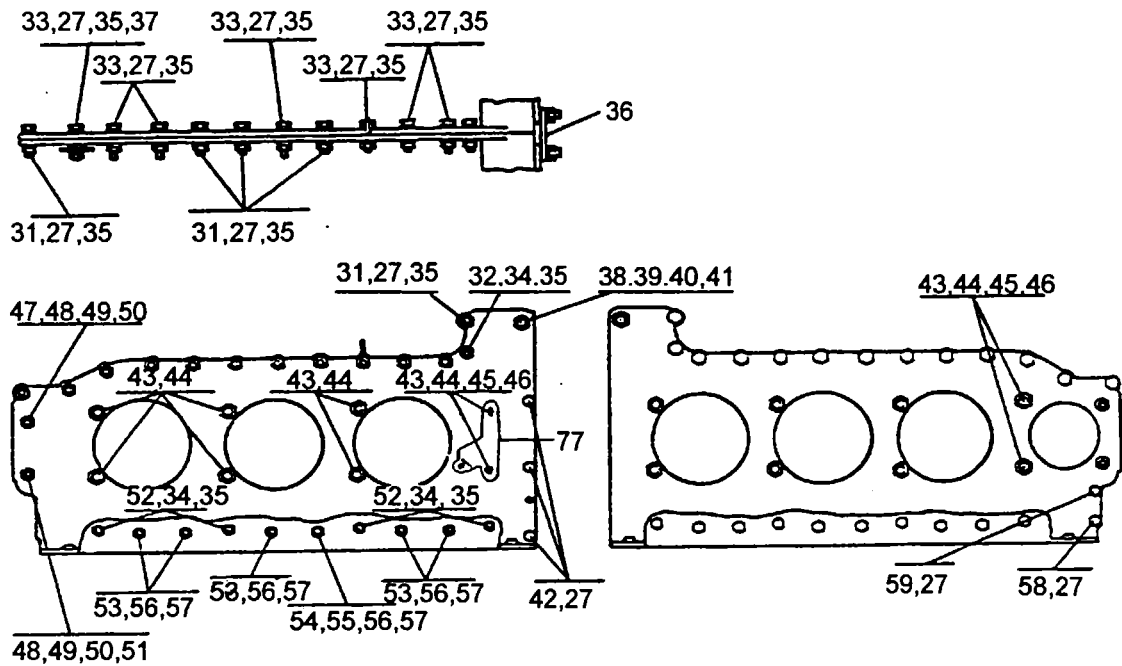
**FIGURE 11-1. CRANKCASE WITH ASSOCIATED PARTS**

**FIGURE 11-1. CRANKCASE WITH ASSOCIATED PARTS**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
11-1				
1	652542-3	CCASE STUD-SERV>>654130-3 .....	1	1
1	652542-3A1	CRANKCASE & BEARING SET .....	1	1
	652542-3A1M010 ††	CRANKCASE & BEARING SET .....	1	1
2	MS122122	INSERT-HELICOIL .31-18.....	2	2
3	MS122162	INSERT-HELICOIL .31-18.....	2	2
4	630873	PIN-DOWEL .19 X .50 LG.....	1	1
5	402034	STUD .31-18-401851 .....	1	1
	402034P003	†STUD .31-18-24X6.00.....	1	1
	402034P007	†STUD .31-18-24X6.00.....	1	1
6	401885	STUD .31-18-401851 .....	14	14
	401885P003	†STUD .31-18-24X1.31.....	14	14
	401885P007	†STUD .31-18-24X1.31.....	14	14
	401885P012	†STUD .31-18-24X1.31.....	14	14
7	401965	STUD.38-16-24X1.41#401859.....	2	2
	401965P003	†STUD.38-16-24X1.41#401859.....	2	2
	401965P007	†STUD.38-16-24X1.41#401859.....	2	2
8	630899	BEARING-ROLLER .62 LG.....	1	1
9	401963	STUD.25-20-28X1.00#639302.....	2	2
	401963P003	†STUD.25-20-28X1.00#401850.....	2	2
	401963P007	†STUD.25-20-28X1.00#401850.....	2	2
	401963P012	†STUD .25-20-28X1.00.....	2	2
10	402151	STUD .31-18-401851 .....	2	2
	402151P003	†STUD .31-18-24X1.25.....	2	2
	402151P007	†STUD .31-18-24X1.25.....	2	2
	402151P012	†STUD .31-18-24X1.25.....	2	2
11	401952	STUD 401851.....	2	2
	401952P003	†STUD .....	2	2
	401952P007	†STUD .....	2	2
12	401936	STUD.25-20-28X3.88#401850.....	5	5
	401936P003	†STUD.25-20-28X3.88#401850.....	5	5
	401936P007	†STUD.25-20-28X3.88#401850.....	5	5
13	2025	PLUG .375PIPE.....	1	1
14	401927	STUD.38-16-24X3.50#401859.....	3	3
	401927P003	†STUD.38-16-24X3.50#401859.....	3	3
15	401962	STUD.25-20-28X2.19#639302.....	1	1
16	MS35769-11	GASKET-COPPER.....	1	1
17	401752	PLUG-PIPE .13-27 #401751 .....	3	3
18	402941	PLUG-PIPE .06 X 27 .....	4	4
19	MS27769C2	PLUG-.125-27 NPTF .....	2	2
20	401804	STUD.25-20-28X1.06#401850.....	2	2
	401804P003	†STUD.25-20-28X1.06#401850.....	2	2
	401804P007	†STUD .....	2	2
	401804P012	†STUD.25-20-28X1.06#401850.....	2	2
21	629518-1	PLUG-.13-27 NPTF .....	1	1
22	633874	NOZZLE-SQUIRT.....	6	6
23	MS122163	INSERT-HELICOIL .38-16.....	2	2
24	629518-1H	PLUG-.13-27 NPTF .....	1	1
25	646140-1	STUD .44-14 X .44-20.....	36	36
26	646140-2	STUD .44-14 X .44-20.....	6	6
27	AN960-516	WASHER-PL .31 X .063 THK .....	40	40

**FIGURE 11-1. CRANKCASE WITH ASSOCIATED PARTS (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>11-1</b>				
28	402127	STUD .38-16-24 #639302.....	2	2
	402127P003	†STUD .38-16-24X1.53.....	2	2
	402127P007	†STUD .38-16-24X1.53.....	2	2
	402127P012	†STUD .38-16-24X1.53.....	2	2
29	532432	PLUG.63-18 HEX HD.....	1	1
30	401814	STUD .31-18-401851.....	4	4
	401814P003	†STUD .31-18-24 X 1.88.....	4	4
	401814P007	†STUD .31-18-24 X 1.88.....	4	4
	401814P012	†STUD .31-18-24 X 1.88.....	4	4
31	AN5-13A	BOLT .31-24X1.47 LG.....	10	10



**FIGURE 11-2. CRANKCASE ATTACHING PARTS IO-550-N1B**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
11-2				
32	AN5-12A	BOLT .31-24X1.34 LG.....	1	
33	AN5-14A	BOLT .31-24X1.59 LG.....	1	
34	AN960-516L	WASHER-PL .31 X .032 THK.....	12	
35	AN315-5R	NUT-PLAIN .31-24.....	13	
36	646620	EYE-LIFTING.....	1	
37	652935	EYE-LIFTING, ENGINE.....	1	
38	630693-10.44	BOLT .38-24X10.44 LG.....	1	
39	AN123862	*N* SEAL "O" RING .36 ID.....	2	
40	24239	WASHER-.375 PLAIN.....	2	
41	2441	NUT-PLAIN HEX .38-24.....	2	
42	630966-4.00	BOLT-.31-18X4.00.....	3	
43	641931-10.75	BOLT .50-20 X 10.75.....	8	
44	630979-9	SEAL-"O" RING.....	16	
45	632120	WASHER .51 ID X .25 THK.....	4	
46	634511	NUT .50-20 PLAIN.....	4	
47	630943-5.31	BOLT-THRU .44-20 X 5.31.....	1	
48	20202	WASHER-.880DX .453 ID.....	1	
49	646256	WASHER .45 ID X .08 PLAIN.....	2	
50	652422	NUT .4375-20 UNF-3B FLGD.....	6	
51	630943-6.19	BOLT-THRU .44-20 X 6.19.....	1	
52	654563	BOLT - .3125-24UNF-3A.....	4	
53	24878	SCREW-.25-28 X 1.63 HEX.....	5	
54	AN4-17A	BOLT-MACH .25-28X1.91.....	1	
55	22139	WASHER-.28 ID X .12 PLAIN.....	2	
56	20522	WASHER-.250X.03125.....	12	
57	646605	NUT-PLAIN.....	5	
58	537750	SCREW .31-18 NC3X1.12.....	1	
59	649206	SCREW HEX .3125-18X1.38.....	1	
77	646385	BAFFLE SUPPORT-CYL #2.....	1	

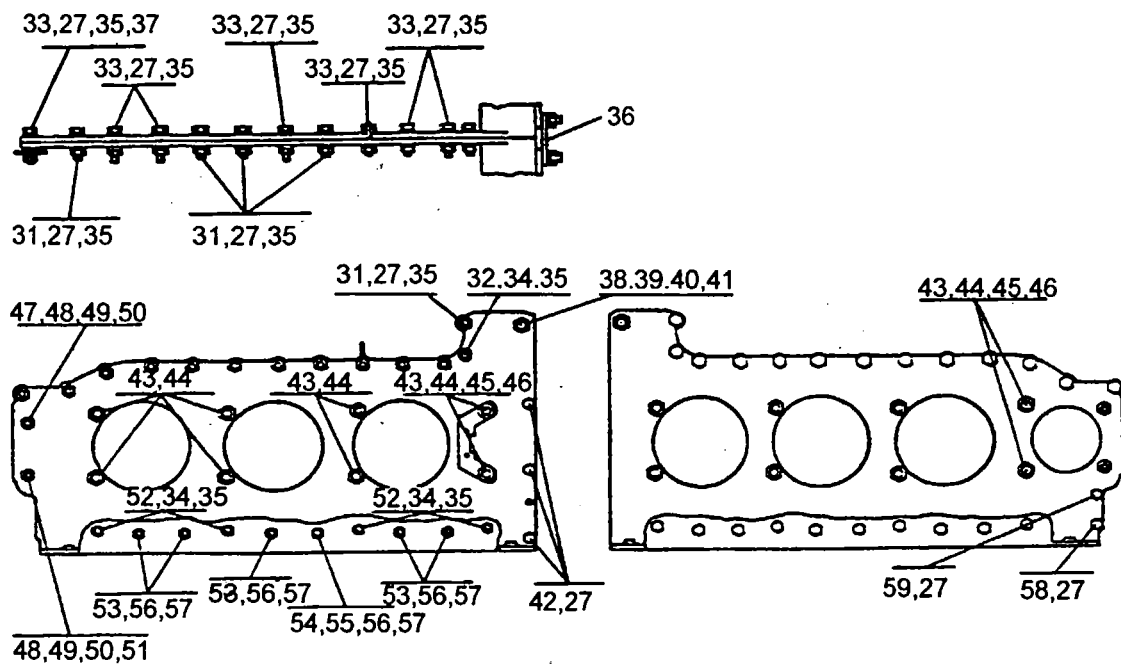


FIGURE 11-3. CRANKCASE ATTACHING PARTS IO-550-N2B

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
11-3				
32	AN5-12A	BOLT .31-24X1.34 LG.....		1
33	AN5-14A	BOLT .31-24X1.59 LG.....		1
34	AN960-516L	WASHER-PL .31 X .032 THK.....		12
35	AN315-5R	NUT-PLAIN .31-24.....		13
36	646620	EYE-LIFTING.....		1
37	652935	EYE-LIFTING, ENGINE.....		1
38	630693-10.44	BOLT .38-24X10.44 LG.....		1
39	AN123862	*N* SEAL "O" RING .36 ID.....		2
40	24239	WASHER-.375 PLAIN.....		2
41	2441	NUT-PLAIN HEX .38-24.....		2
42	630966-4.00	BOLT-.31-18X4.00.....		3
43	641931-10.75	BOLT .50-20 X 10.75.....		8
44	630979-9	SEAL-"O" RING.....		16
45	632120	WASHER .51 ID X .25 THK.....		4
46	634511	NUT .50-20 PLAIN.....		4
47	630943-5.31	BOLT-THRU .44-20 X 5.31.....		1
48	20202	WASHER-.880DX .453 ID.....		1
49	646256	WASHER .45 ID X .08 PLAIN.....		2
50	652422	NUT .4375-20 UNF-3B FLGD.....		6
51	630943-6.19	BOLT-THRU .44-20 X 6.19.....		1
52	AN5-23A	BOLT - .31-24 X 2.47 LG.....		4
53	24878	SCREW-.25-28 X 1.63 HEX.....		5
54	AN4-17A	BOLT-MACH .25-28X1.91.....		1
55	22139	WASHER-.28 ID X .12 PLAIN.....		2
56	20522	WASHER-.250X.03125.....		12
57	646605	NUT-PLAIN.....		5
58	537750	SCREW .31-18 NC3X1.12.....		1
59	649206	SCREW HEX .3125-18X1.38.....		1



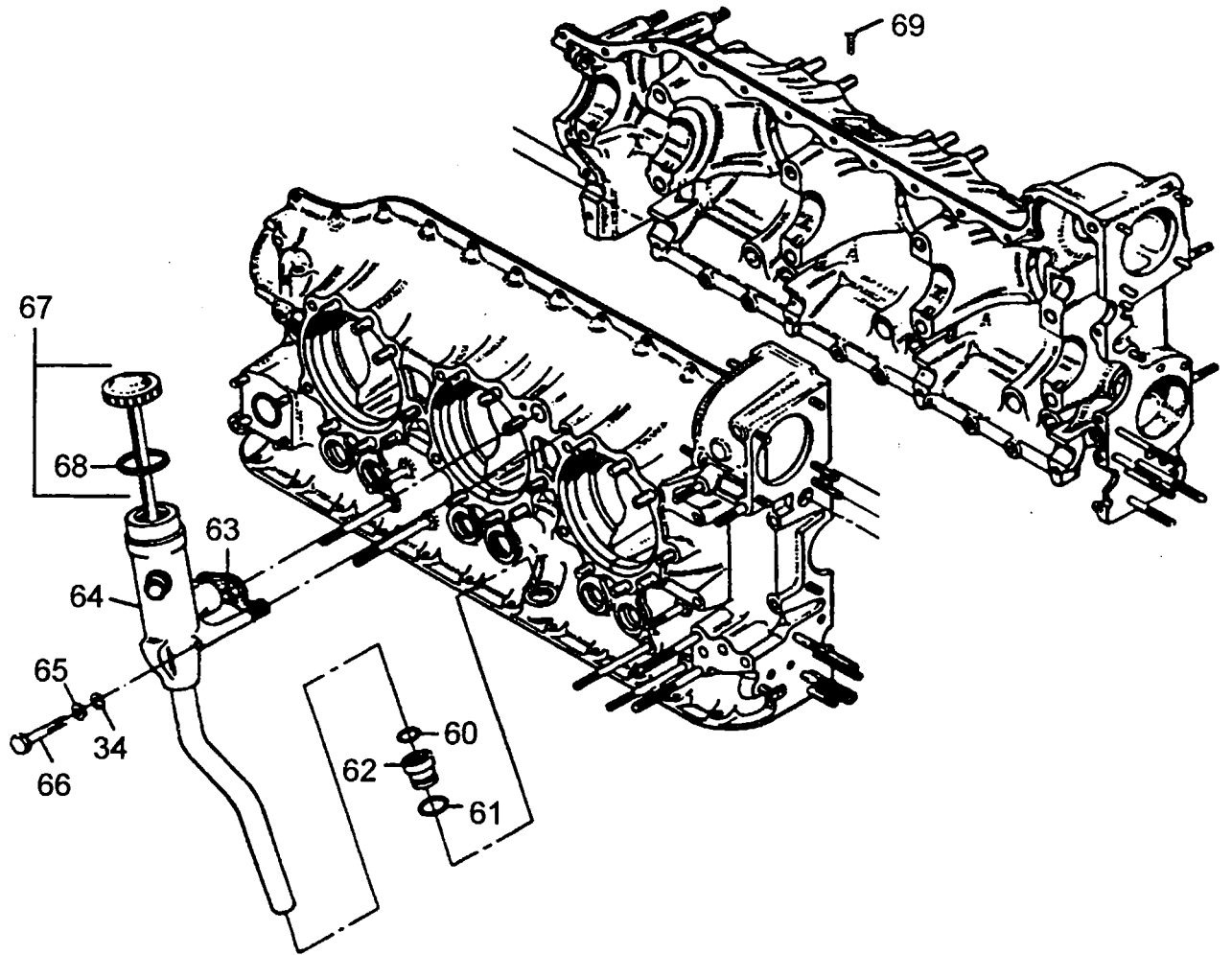
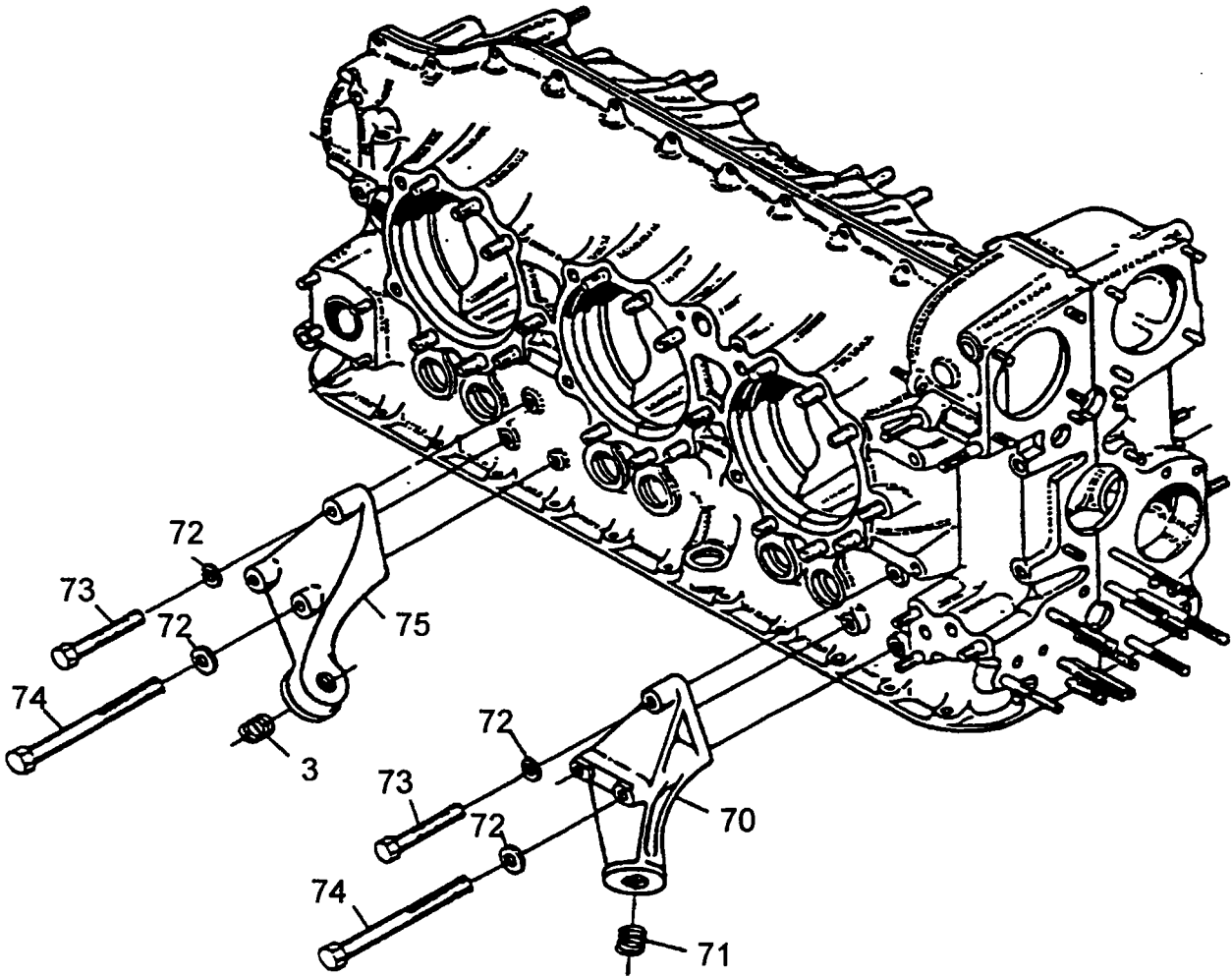


FIGURE 11-4. CRANKCASE WITH OIL FILLER

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
11-4				
60	MS9970-116	SEAL"O"RING .842 OD.....	1	1
61	MS9970-117	O-RING .903 O.D.....	1	1
62	649407	ADAPTER-OIL FILLER.....	1	1
63	649965	GSKT-BREATHER 2.81X1.12.....	1	1
64	649406-2	BREATHER ASM-OIL FILLER.....	1	1
65	MS35338-45	WASHER-LOCK-SPRING .3125.....	2	2
66	537742-1	SCREW .31-18NC3X2.63.....	2	2
67	652171-8	ROD & CAP ASM-OIL GAGE.....	1	1
68	642892	GSKT-O/FILLER 2.28 O.D.....	1	1
69	24764	SCREW-NO. 0-.19 DRV.....	6	6



**FIGURE 11-5. CRANKCASE WITH ENGINE MOUNTS**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>11-5</b>				
	70	BRACKET ASM-ENG MOUNT.....	2	2
	71	INSERT-SCREW LOCK .88 LG.....	4	4
	72	WASHER FLAT .38 DIA.....	12	12
	73	SCREW,CAP HEX HD. 1.75 LG.....	4	4
	74	SCREW-HEX HD. 3.50 LG.....	8	8
	75	BRACKET ASM-ENG MOUNT.....	2	2
*	76	KIT-ADAPTER-OIL FILLER.....	1	1

**\*INDEX # 76 NOT SHOWN ON DIAGRAM. CONSISTS OF THE FOLLOWING PARTS:**

649407	ADAPTER OIL FILLER.....	1	1
537742-1	SCREW .31-18NC3 X 2.63.....	2	2
MS9970-116	SEAL "O" RING .842 O.D.....	1	1
MS9970-117	"O" RING .903 O.D.....	1	1

# CHAPTER 12

## ENGINE DRIVE TRAIN

FIGURE		PAGE
12-1	CRANKCASE & ASSOCIATED PARTS .....	12-2
12-2	CAMSHAFT & ASSOCIATED PARTS.....	12-4

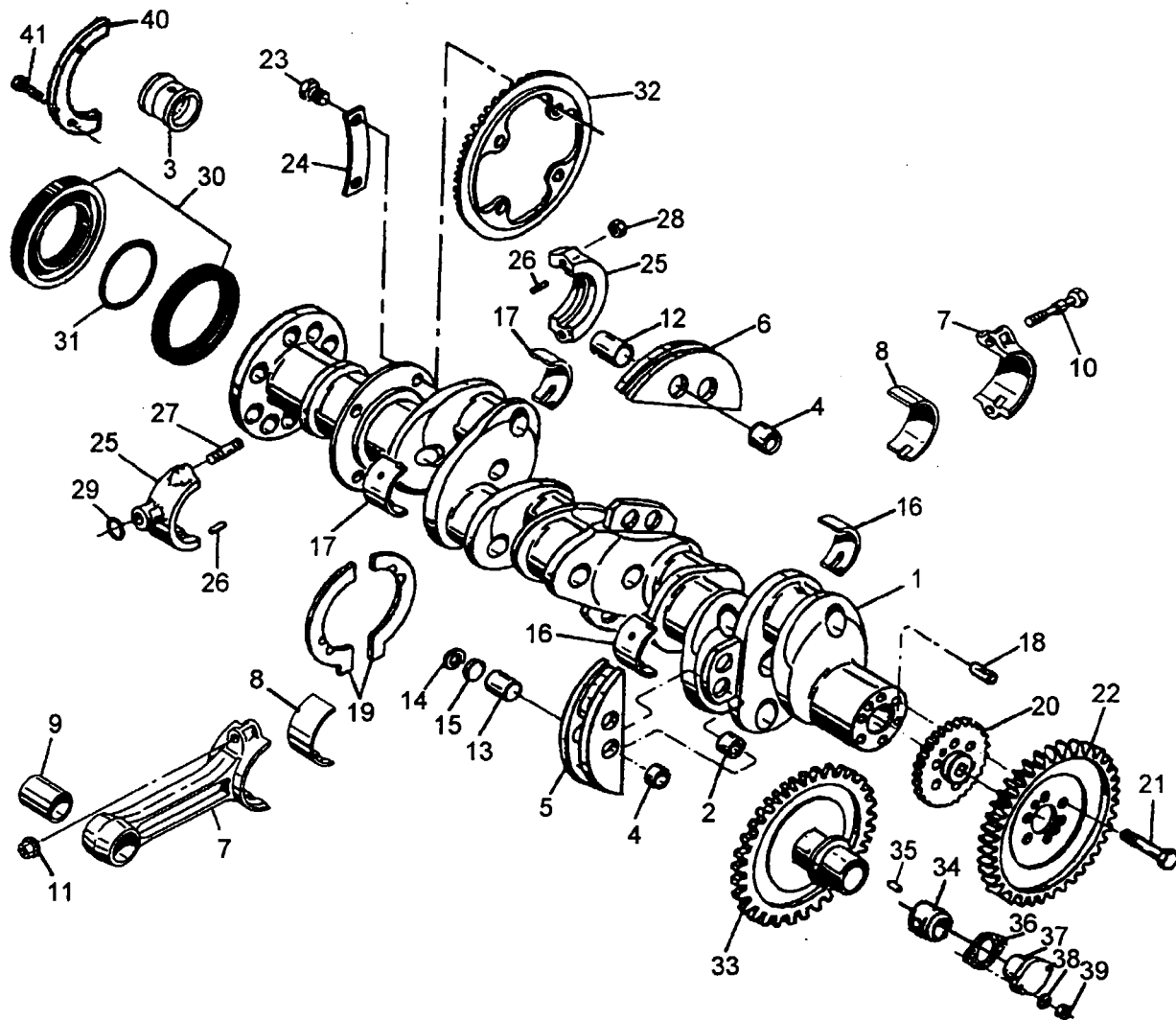


FIGURE 12-1. CRANKSHAFT & ASSOCIATED PARTS

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
12-1	649900	CRANKSHAFT & DAMPER ASM.....	1	1
2	350998	BUSHING-CRKSH DAMPER .....	8	8
	350998P0015	†BUSHING-CRKSH DAMPER.....	8	8
	350998P003	†BUSHING-CRKSH DAMPER.....	8	8
	350998P005	†BUSHING-CRKSH DAMPER.....	8	8
3	633189	PLUG-CRKSH PROP OIL TRAN .....	1	1
	633189P005	†PLUG-CRKSH PROP OIL TRAN .....	1	1
	633189P010	†PLUG CRANKSHAFT .....	1	1
4	639193	BUSHING-CRKSH DAMPER CWT.....	4	4
5	639195	COUNTERWEIGHT ASM-CRKSH.....	2	2
6	639196	COUNTERWEIGHT ASM .....	1	1
7	646482	ROD ASSY CONN>>655001 .....	6	6
8	642398	BEARING-CONN ROD.....	12	12
9	530658	BUSHING-CONN ROD-SPLIT .....	1	1
10	643112	BOLT CONNECTING ROD.....	2	2
11	643215	NUT .44-20 SPL>>654490 .....	2	2

**FIGURE 12-1. CRANKSHAFT & ASSOCIATED PARTS (cont'd)**

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
<b>12-1</b>				
12	643626-103	PIN-CRANKSHAFT CWT .....	2	2
12	643626-104	PIN-CRANKSHAFT CWT .....	2	2
13	643626-105	PIN-CRANKSHAFT CWT .....	4	4
14	629104	RING-SNAP-CWT PLATE RET .....	16	16
15	643629	PLATE-CWT RETAINING.....	16	16
16	653547	BEARING-CRANKSHAFT MAIN.....	4	4
17	634503	BEARING-MAIN-CRKSH .....	6	6
18	536563	DOWEL .28 DIA X .69.....	1	1
19	646288	WASHER-THRUST.....	4	4
	646288P001	†WASHER - THRUST .....	4	4
	646288P002	†WASHER-THRUST .....	4	4
	646288P003	†WASHER-THRUST .....	4	4
20	653652	GEAR-CRANKSHAFT.....	1	1
21	536379	SCREW.31-24X.88 LG.....	6	6
22	632893	GEAR CRKSHAFT LARGE.....	1	1
23	649205	SCREW .31-24 X .41 HEX HD.....	4	4
24	641909	PLATE-TAB LOCK.....	2	2
25	629680	COLLAR ASM-GOV OIL TRANS.....	1	1
	629680M001	†† COLLAR ASM-OIL TRANSFER.....	1	1
	629680M010	†† COLLAR ASM-OIL TRANSFER.....	1	1
	629680M011	†† COLLAR ASM-OIL TRANSFER.....	1	1
26	626889	DOWEL .12 DIA X .44.....	2	2
27	401893	STUD.25-20-28X1.25#639302.....	2	2
28	NAS1805-4	NUT-SELF LOCKING.....	2	2
29	630979-20	SEAL-"O" RING.....	1	1
30	641250	SEAL ASM NOSE .....	1	1
31	641306	SPRING-NOSE SEAL .....	1	1
32	632018	GEAR FACE.....	1	1
33	629360	GEAR-IDLER CRANK.....	1	1
34	630871	BUSHING-IDLER GEAR .....	1	1
35	630873	PIN-DOWEL .19 X .50 LG.....	1	1
36	652189	GASKET-IDLER PIN>>654828.....	1	1
37	630870	BUSHING-FLG IDLER GEAR.....	1	1
38	MS35338-44	WASHER LOCK .25 DIA.....	2	2
39	AN315-4R	NUT-PLAIN.....	2	2
40	641361	PLATE-OIL SEAL RETAINER.....	2	2
41	628321-.38	BOLT-10-24NC3 .38 LG.....	4	4
42	646592A2	BEARING SET .....	1	1

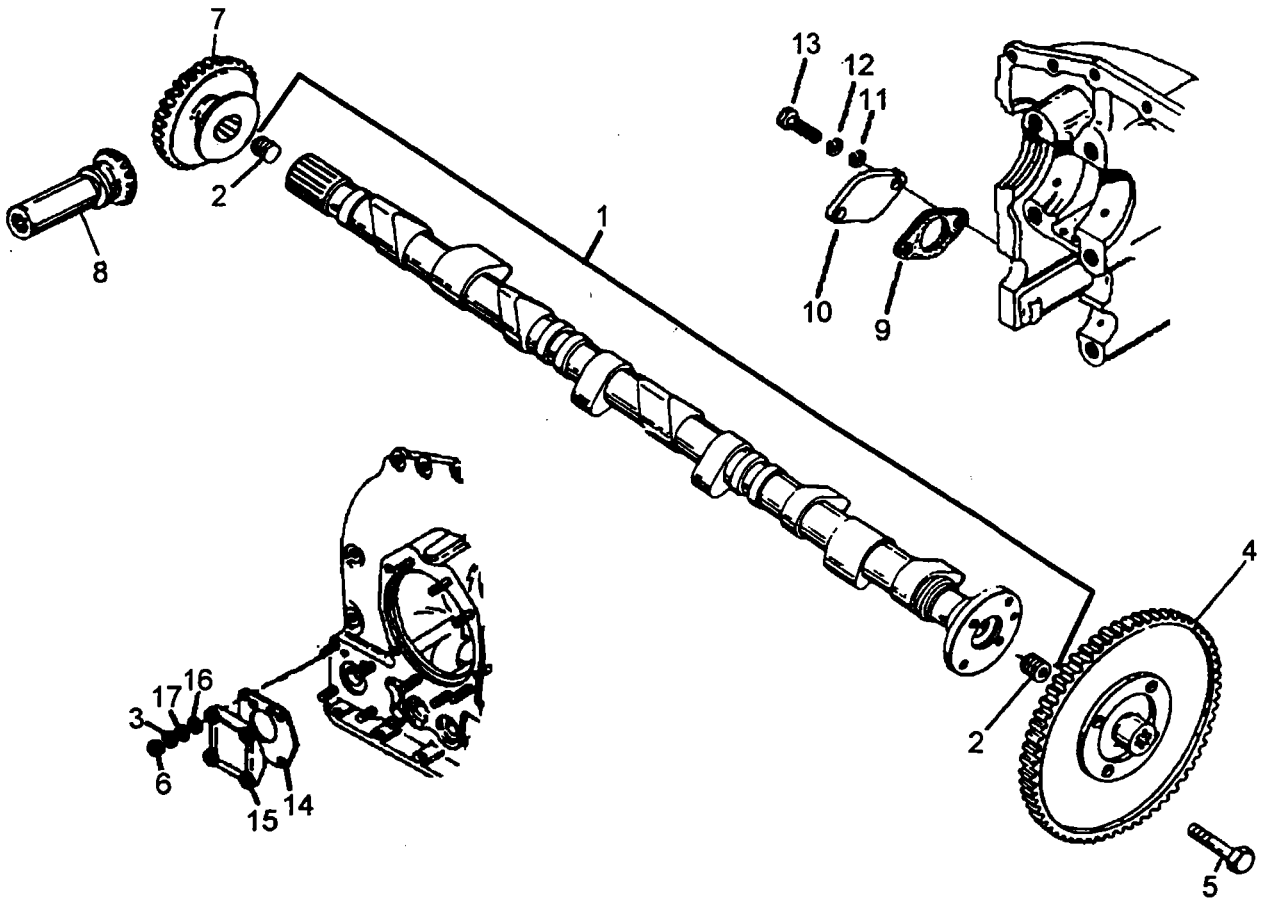


FIGURE 12-2. CAMSHAFT & ASSOCIATED PARTS

FIGURE & INDEX	PART NUMBER	DESCRIPTION	QUANTITY	
			1B	2B
12-2				
1	654837A1	CAMSHAFT ASM-SERVICE .....	1	1
2	524818	PLUG-.25-18 X .44 #401751 .....	2	2
3	MS35338-45	WASHER-LOCK-SPRING .3125.....	4	4
4	631845	GEAR CAM.....	1	1
5	654587-.44	BOLT-.3125-24 UNF3A.....	4	4
6	AN315-5R	NUT-PLAIN .31-24.....	4	4
7	654085	GEAR-BEVEL-GOV DRIVE.....	1	1
8	629747	GEAR-BEVEL GOV DRIVEN .....	1	1
9	653415	GASKET-CAM-HOLE COVER.....	1	1
10	629201	COVER-CAM HOLE.....	1	1
11	MS35338-44	WASHER LOCK .25 DIA.....	2	2
12	AN960-416L	WASHER-PL .25 X .032.....	2	2
13	AN315-4R	NUT-PLAIN.....	2	2
14	649981	GSKT-GOV. PAD 2.76X3.03.....	1	1
15	639997	COVER-GOVERNER PAD.....	1	1
16	22535	SPACER-.33 ID X.25.....	8	8
17	AN960-516L	WASHER-PL .31 X .032 THK.....	3	3