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ATOMIC FOUR

PARTS LIST

P/N 200150

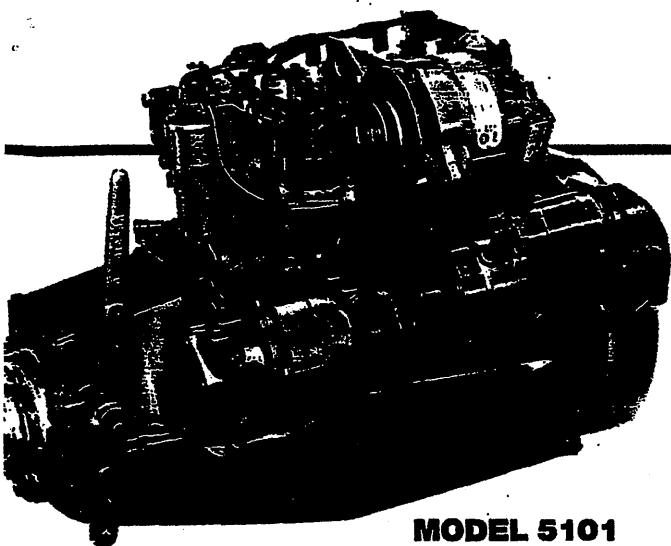
Edition 92

July 2010



WESTERBEKE CORPORATION
MYLES STANDISH INDUSTRIAL PARK
150 JOHN HANCOCK ROAD, TAUNTON, MA 02780-7319

UNIVERSAL ATOMIC 4 GASOLINE 30 H.P.



MODEL 5101

The Universal Atomic-4 a 100% marine engine, designed and engineered exclusively for powering the world's finest sailboats. Gasoline engines with stamina, service and reliability equal to diesel power.

Why select the Atomic-4?

- Complies with all current U.S.C.G. regulations.
- Safely powers over 40,000 sailboats.
- Universal assurance of excellence.
- Lower cost and fuel consumption.
- Long life and service when and where ever needed.
- U.S. built and comprehensive dynamometer tested.

Smoothness you only enjoy from the wind, no noise, no smell, no problems. The ultimate in "Power for sail", Universal Atomic... there is no other.

Features

STANDARD EQUIPMENT Propeller coupling, hand sump pump, U.S.C.G. approved flame arrestor, lifting ring, water pump, electric fuel pump, oil level gauge, crankcase breather, built-in reversing gear, automatic temperature control, instruction manual, threaded exhaust flange, and shifting lever.

CYLINDER BLOCK Cast en-block with crankcase of marine chrome nickel alloy iron. Full length water jackets.

CYLINDER HEAD Marine chrome nickel alloy iron. Head is detachable. Combustion chamber designed to obtain maximum power and economy from regular grade gasoline.

CRANKSHAFT High carbon steel. Fully counterweighted, statically and dynamically balanced for smooth operating. Has insert bearings.

CONNECTING RODS Drop forged, high carbon steel, insert bearings, and floating type piston pin.

OIL PAN One piece true marine type extending the full length of engine provides extreme rigidity.

MANIFOLD Water jacketed exhaust and intake manifold incorporated into one casting. Exhaust flange tapped 1 1/4" I.P.S.

LUBRICATION Full pressure to main, connecting rod, idler gear stud, and camshaft bearings. Outside oil pressure adjustment. Large area oil suction screen.

HAND SUMP PUMP Separate, for easy removal of crankcase oil.

WATER JACKET COVER Removable clean out and water distributing plate on the side of cylinder block.

COOLING Rubber impeller water circulating pump standard. Water pump inlet 3/8" I.P.S.

REVERSING GEAR Oversize ball bearing type, pressure lubricated. Large radial end thrust ball bearing for propeller thrust. Reverse gear band with molded lining, provides longer life.

REDUCTION GEAR Single step, internal helical and pinion type. Available in 2 to 1 ratio.

CARBURETOR Updraft Zenith marine safety non-drip type with upturned air horn, fitted with Zenith U.S.C.G. approved type flame arrestor and vacuum crankcase ventilator.

ELECTRICAL SYSTEM 12 volt system standard. 37 amp alternator, marine type. Transistorized voltage regulator. Starter equipped with solenoid for remote starting. Distributor has full automatic advance.

PROPELLER ROTATION Right hand propeller.

AUTOMATIC TEMPERATURE CONTROL Automatic by-pass valve to assure efficient operating temperature.

Optional

instrument panel, power take-off pulley on flywheel, on-board spare parts kit, hand starting crank, 55 ampere alternator, adjustable rubber mounts.



ATOMIC - 4

1. **PARTS AVAILABLE**
 - NO BLOCKS OR OIL PANS
2. **MAIN AND ROD BEARINGS**
 - UNDERSIZE REQUIRE SPECIAL MACHINING, COSTLY
 - REWORK CRANKSHAFT TO STANDARD
3. **ELECTRICAL**
 - CHANGED FROM PRESTOLITE TO DELCO IN 1967
4. **FUEL PUMP**
 - NO MECHANICAL PUMPS OR KITS AVAILABLE
 - PLUNGER
5. **PROPELLER DATA (GENERAL ONLY)**
 - DIRECT DRIVE (5101) 1 TO 1 RATIO
 - 90% HAVE 12D X 6P X 2 BLADE
 - DIESEL (2:1 GEAR) REQUIRES MORE PROP

M3-20 = 2 BLADE	12 X 10	OR	13 X 7
3 BLADE	12 X 8	OR	13 X 6
M4-30 = 2 BLADE	12 X 11	OR	13 X 10
3 BLADE	12 X 9	OR	13 X 8

 - 3600 R.P.M DIESELS REQUIRE LESS PITCH THAN 3200 R.P.M. MODELS
 - CRUISING RPM OF 3000 TO 3200
 - MAX PROP AT 3450 TO 3500 R.P.M
6. **REPOWERING TO DIESEL (M3-20 & M4-30)**
 - DIRECT DRIVE (5101) LIMITED MODIFICATIONS
 - REDUCTION DRIVE (5102) ADDITIONAL WORK-BEDDING
 - V-DRIVE (5103) CONSIDERABLE WORK REBEDDING DUE TO V-DRIVE ANGLE, WALTERS 22° HURTH 15°.

THERE IS NO "DIRECT REPLACEMENT" DIESEL

2" HIGHER PLUS 2" ON ALTERNATOR SIDE (CARB SIDE) FUEL PUMP

ATOMIC 4

The manufacturing of the Atomic 4 was discontinued in 1984, however with the large number still in operation, it is still a major factor for servicing in the after market. The Atomic 4 was manufactured in six different models:

5101 Direct Drive	5111 Canadian Version
5102 Reduction Drive	5112 Canadian Version
5103 V-Drive	5113 Canadian Version

The only difference between the standard model and the Canadian version was that we installed a reducer bushing in the manifold just above the carburetor. This had to be done to lower the horse power because of Canadian restrictions for a few years. The bushing can be drilled out to the size of the manifold throat which will increase the HP to the Atomic 4, which was actually twenty-five horse power.

The engine block, mechanical fuel pump, Prestolite distributors, starters, cylinder heads, Sherwood water pump, and parts for this pump are no longer available. The following is a list of interchangeable major parts:

299245 Cylinder Block	None
261104 Mechanical Fuel Pump	299250 Electric Pump Kit
261045 Auto-Lite Distributor	299098 Delco Distributor
279268 Starter	299096 Starter
261126 Starter	Flywheel & housing need to be changed
262285 Water Pump	295625 Need to open mounting holes

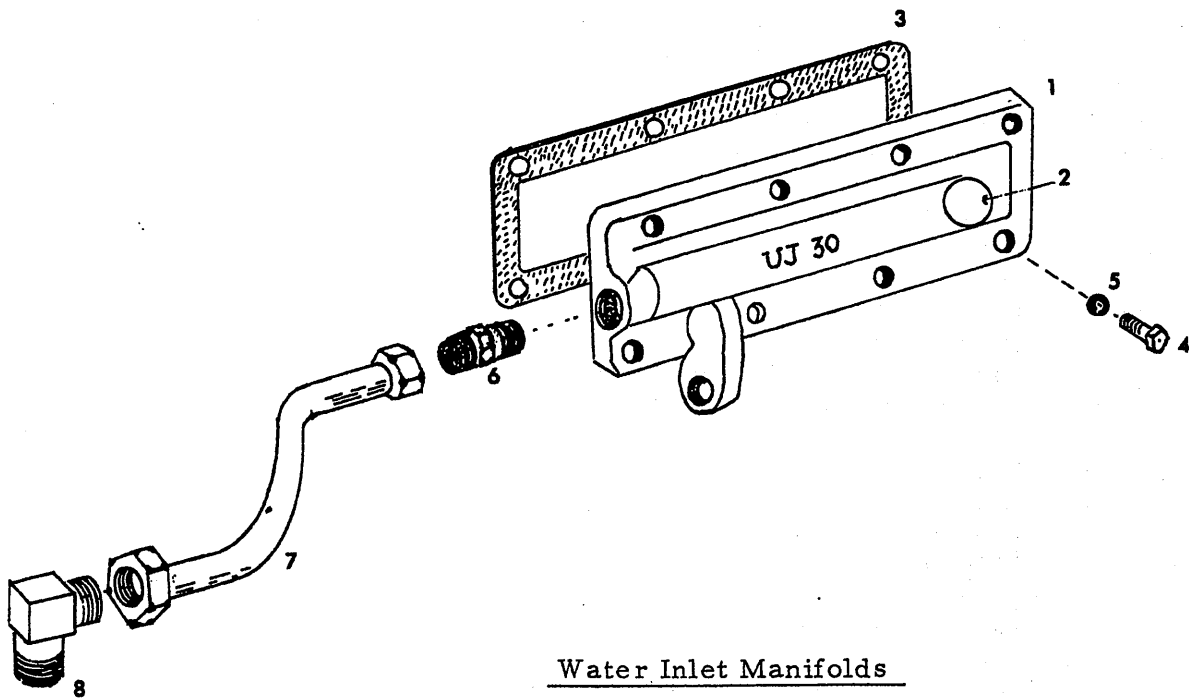
The manifold, carburetors, cylinder heads, and etc. will interchange with minor alternations. We will keep supplying the Atomic 4 parts as long as the need is still this great, but we do see an increase in parts costs coming because of lower quantities and higher costs from our vendors.

Remember the diesel replacements are M3-20, M4-30 which are the closest, but also the M25XP and the M-35 which if the compartment is large enough can also be used. The customer can be switched over to diesel a lot of the time if he is told of the cost to repair his old Atomic 4 first.

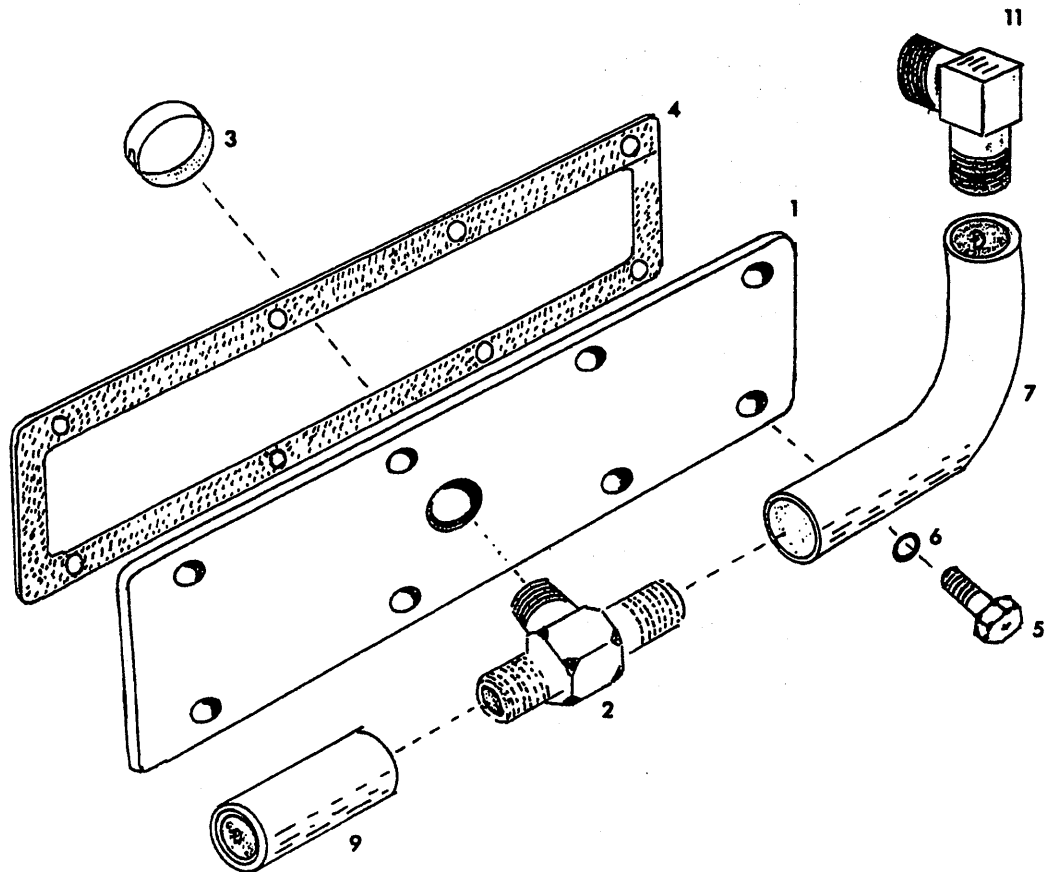
When replacing Atomic 4 with a diesel, always check the fuel tank to make sure it is not a plated type, if it is the tank will need to be changed because diesel fuel will eat off the plating and can damage the engine fuel system. The diesels should have a water retaining type muffler installed to help keep it quieter as compared to the earlier stand pipe or water jacketed.

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All illustrations are for reference only, actual parts may vary in detail. Abbreviations AR As Required NA Not Available OB Obsolete Printed in U.S.A. DFT/4-73		



Water Inlet Manifolds

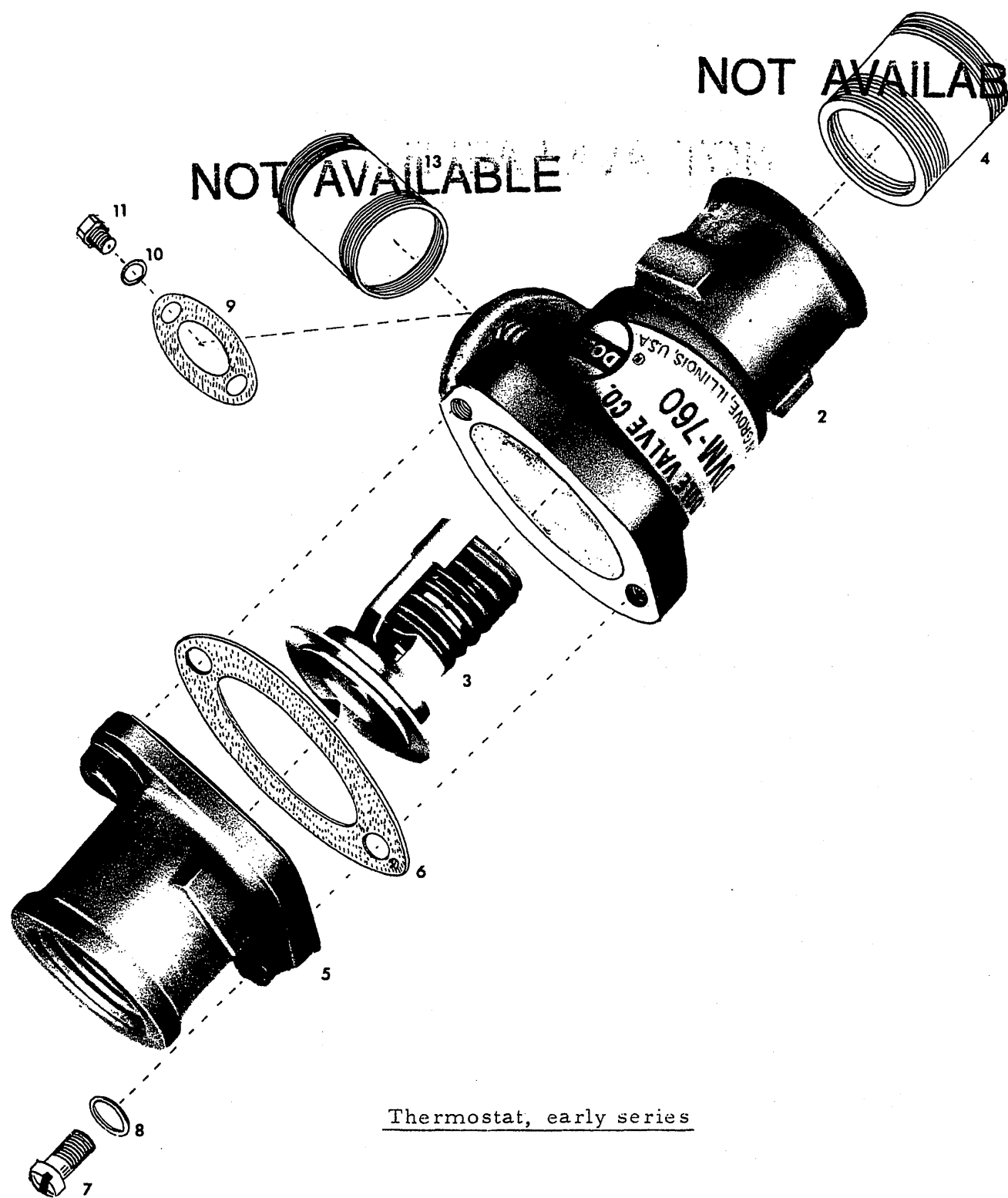


Cooling

Water Inlet Manifold

Early Style up to 1967

Code	Description	No. Used	Part	Notes
	NOT AVAILABLE			
1	Cyl. Water inlet manifold	1	261020	
2	Expansion Plug	1	280020	3/4"
3	Gasket, Water inlet manifold	1	261049	
4	Cap Screws	8	231057	5/16 - 18 x 3/4
5	Washer, copper flat	8	260703	5/16
6	Connector 1/4 IPT x 3/8 ODT	1	239342	
7	Pipe, inlet	1	261136	
8	Elbow, Water 3/8 IPT x 3/8 ODT	1	290327	
	<u>Water inlet manifold assy.</u> Late Style starting 1967		273458	
1	Cyl. Water inlet manifold •	1	259257	
2	Tee, hose inlet •	1	241022	
3	Cap, water distributor •	1	263778	Use 298428
4	Gasket, inlet manifold mounting	1	261049	
5	Cap Screw	8	231057	5/16" - 18 x 3/4
6	Washer, flat copper	8	260703	5/16"
7	Hose, inlet manifold to thermostat	1	288988	
8	Clamp, hose	2	274927	
9	Hose, water pump to inlet manifold plate	1	288987	
10	Clamp, hose	2	274927	
11	Elbow, Water bypass to thermostat Cover	1	241019	
11A	Elbow, restricted type	AR	296781	



NOT AVAILABLE¹³

NOT AVAILABLE

Thermostat, early series

Cooling

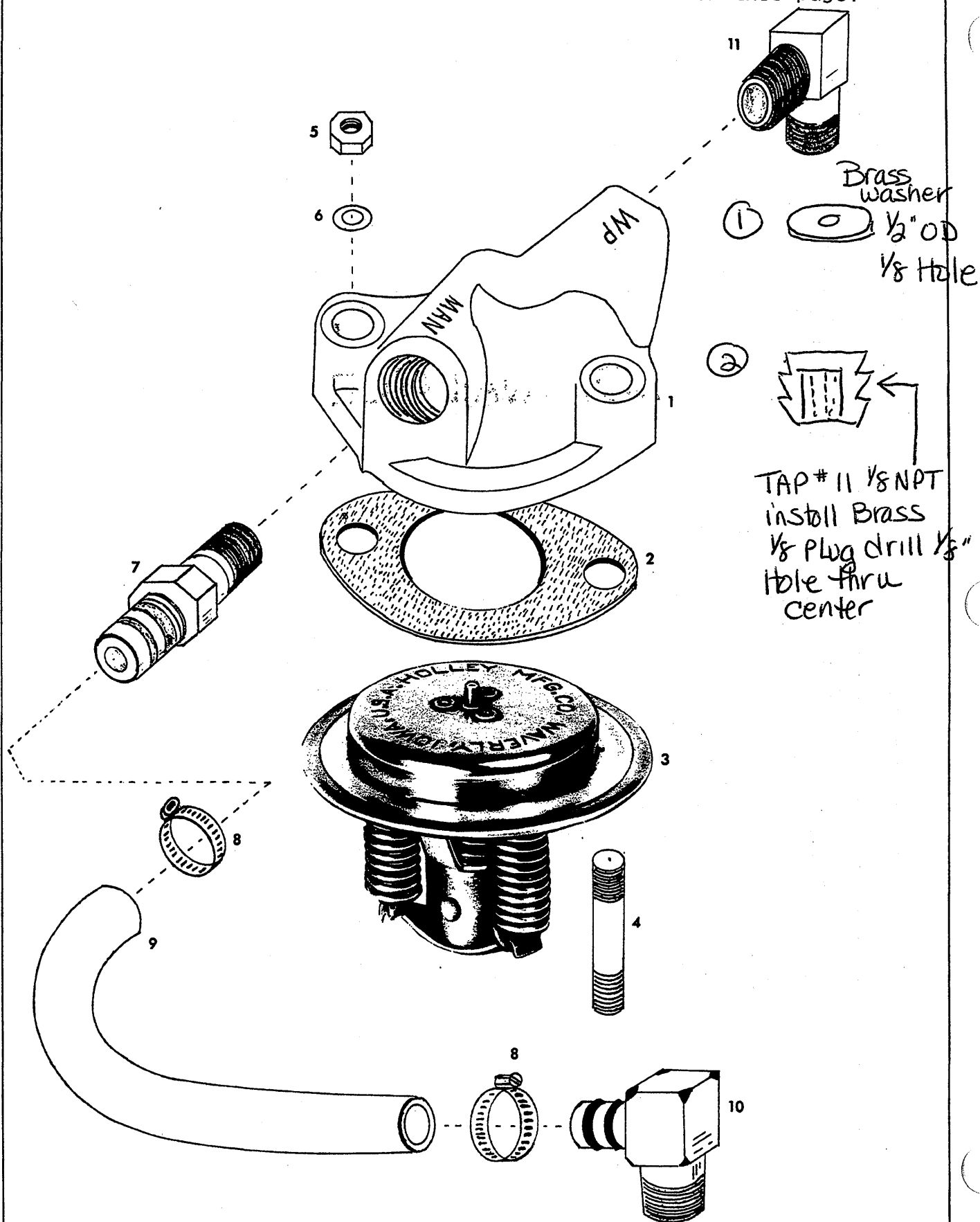
Thermostat Group

Dole Type

Up to series (before engine serial #79476)

Code	Description	No. Used	Part	Notes
1	Thermostat Unit Assy.	1	98028054	Use 261269
1A	Thermostat Assy.		261269	
3	Element, raw water 140°	1	275965	
3A	Element, for fresh water 160°	AR		
4	Close nipple	1	276043	1/2 x 1 1/8"
	Tee	1	276037	3/4 x 1/2 x 1/2
5	Outlet housing	1	261139	
6	Gasket, outlet housing	1	261144	
13	Close nipple	1	1550014	3/4 x clo
14	Nipple, special restricted w/1/8" hole	1	274731	
15	Pipe Plug	1	207779	1/2" IPT
Dole Thermostat, later series before serial #79476				
1	Thermostat Assy. w/flange mount 140°	1	261269	
1A	Thermostat Assy. w/flange mount 160°	AR		
2	Thermo housing	1	261138	
3	Element 143°	1	275965	
3A	Element 160°	AR		
5	Outlet housing	1	261139	
6	Gasket, outlet housing	1	261144	
7	Cap Screws slotted	2	294376	1/4 - 20 x 5/8
8	Lock Washer	2	231894	1/4"
9	Gasket, mounting to manifold	1	260687	
10	Cap Screw, thermostat to manifold	2	294474	5/16 - 18 x 5/8
11	Lock Washer, thermostat to manifold	2	231891	5/16
12	Plug	1	290317	1/4" IPT
13	Kit, Thermostat (consists of 275965 & 261144)	1	200207	

Note: if engine is running hot, restrict by-pass elbow (#11)
inlet from water plate to 1/8 hole. see 1 & 2 on this page.



Cooling

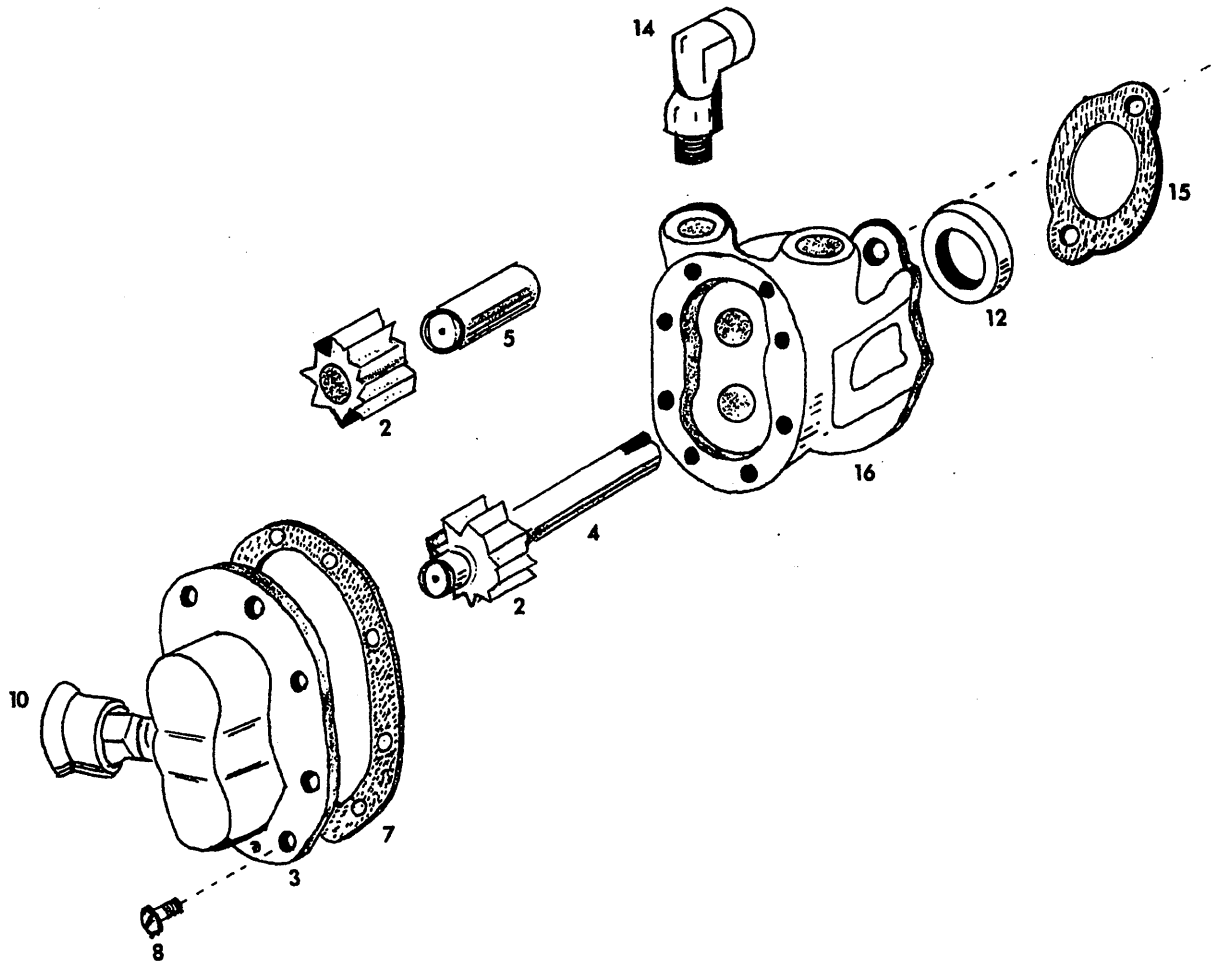
Thermostat System

Late Style
Starting in 1967 w/Serial #79476

Code	Description	No. Used	Part	Notes
1	Outlet housing	1	262556	
2	Gasket	1	261601	
3	Thermostat, Holley 145°	1	262278	145°
4	Stud SAE to USS	2	262390	
5	Nut	2	230147	3/8 NF
6	Lock Washer	2		3/8
7	Connector, Housing to hose	1	241021	
8	Clamp, hose	2	274927	
9	Hose	1	288989	
10	Elbow - hose to exh. manifold	1	241019	
11	Elbow - Water bypass inlet	1	241019	
11A	Elbow, Water bypass restricted type	AR	296781	
12	Thermostat Kit consists of 262278 and 261601	1	200206	

Standard water pump used to 1965

NOT AVAILABLE



Water Pump, first series

Cooling

Std pump used to 1965

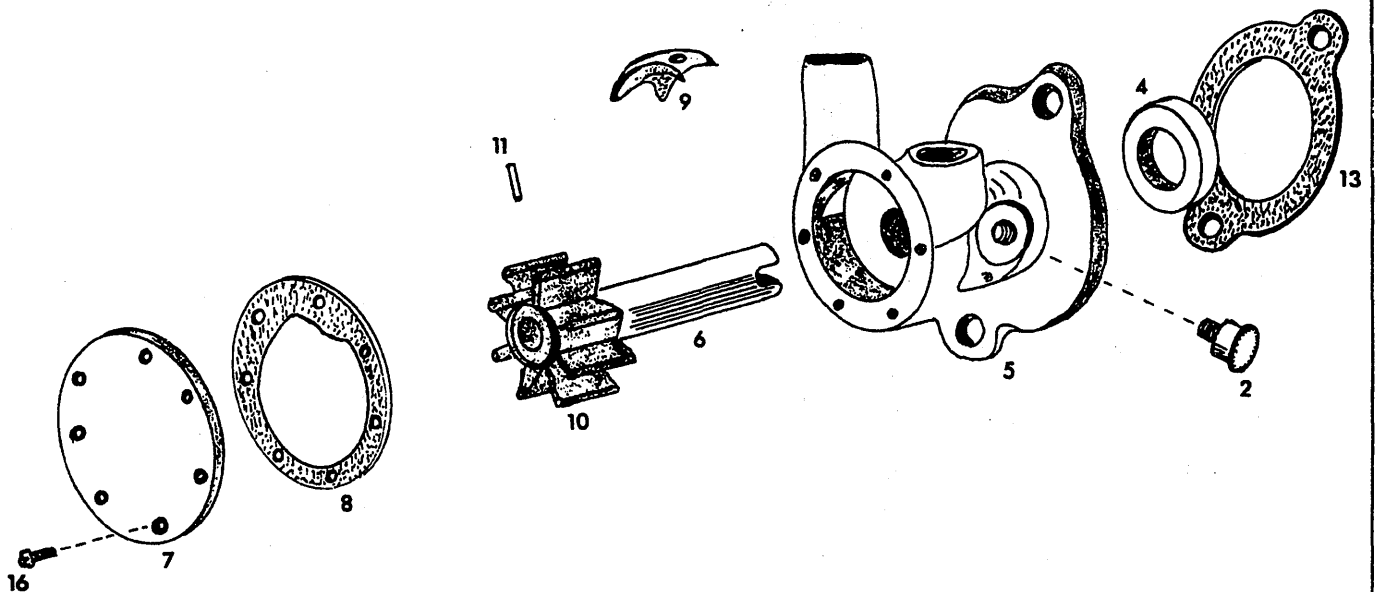
Water Pump

Universal Motor Co.
Bronze Gear Type

Code	Description	No. Used	Part	Notes
	Water Pump Assy.		261249	Use 261134
	Repair Kit	1	287693	
1	Packing Nut	1	261297	
2	*Pump Gears	2	261122	
3	Water Pump Cover	1	261041	
4	*Drive shaft	1	261037	
5	Idler shaft	1	261038	
6	*Key, Woodruff type	2	240920	
7	*Cover Gasket	1	260680	
8	Machine Screw, Cover R.H.	8	230629	10-24 x 1/2RH
9	Lock washer, cover	8	231890	#10
10	Grease Cup	1	240921	1/8 IPT
11	Pipe plug	1	239136	1/8 IPT
12	*Seal, drive shaft	1	261054	
13	*Packing	1	287387	
14	Elbow, water line to cyl. block 3/8x3/8ODT	1	290327	
15	Mounting Gasket	1	261044	Use 300253
16	Body	1		
	*All Parts included in Kit			
17	Mounting Screws	2	231080	3/8 - 16 x 1"
18	Mounting Lock Washers	2	260704	3/8"

Optional water pump used from 1962 to 1965

NOT AVAILABLE



Water Pump, second series

Cooling

Optional from 1962-1965

Water Pump

Sherwood
Rubber Impeller Type

Code	Description	No. Used	Part	Notes
	Water Pump Assy.	1	273360	L9960
	Repair Kit		287696	
1	*Pipe Plug	1	239136	
2	Grease Cup	1	240921	
3	Nipple Washer	1	287452	
4	*Oil Seal	1	287451	
5	Body	1	287453	
6	*Shaft	1	287533	
7	Cover Plate	1	287455	
8	*Gasket	1	287456	
9	*Stop (Cam)	1	287457	
10	*Impeller	1	262285	
11	Screw	1	287458	
12	*Seal	1	287459	
13	*Mounting Gasket	1	261044	Use 300253
14	Mounting Screws	2	231080	3/8"-16 x 1"
15	Mounting Lock Washers	2	260704	3/8"
16	Screws, end cover 6-32x $\frac{1}{4}$ " *All Parts included in Repair Kit	7	231189	
	Water inlet elbow, V-drive	1	241019	
	Water outlet elbow	1	289770	



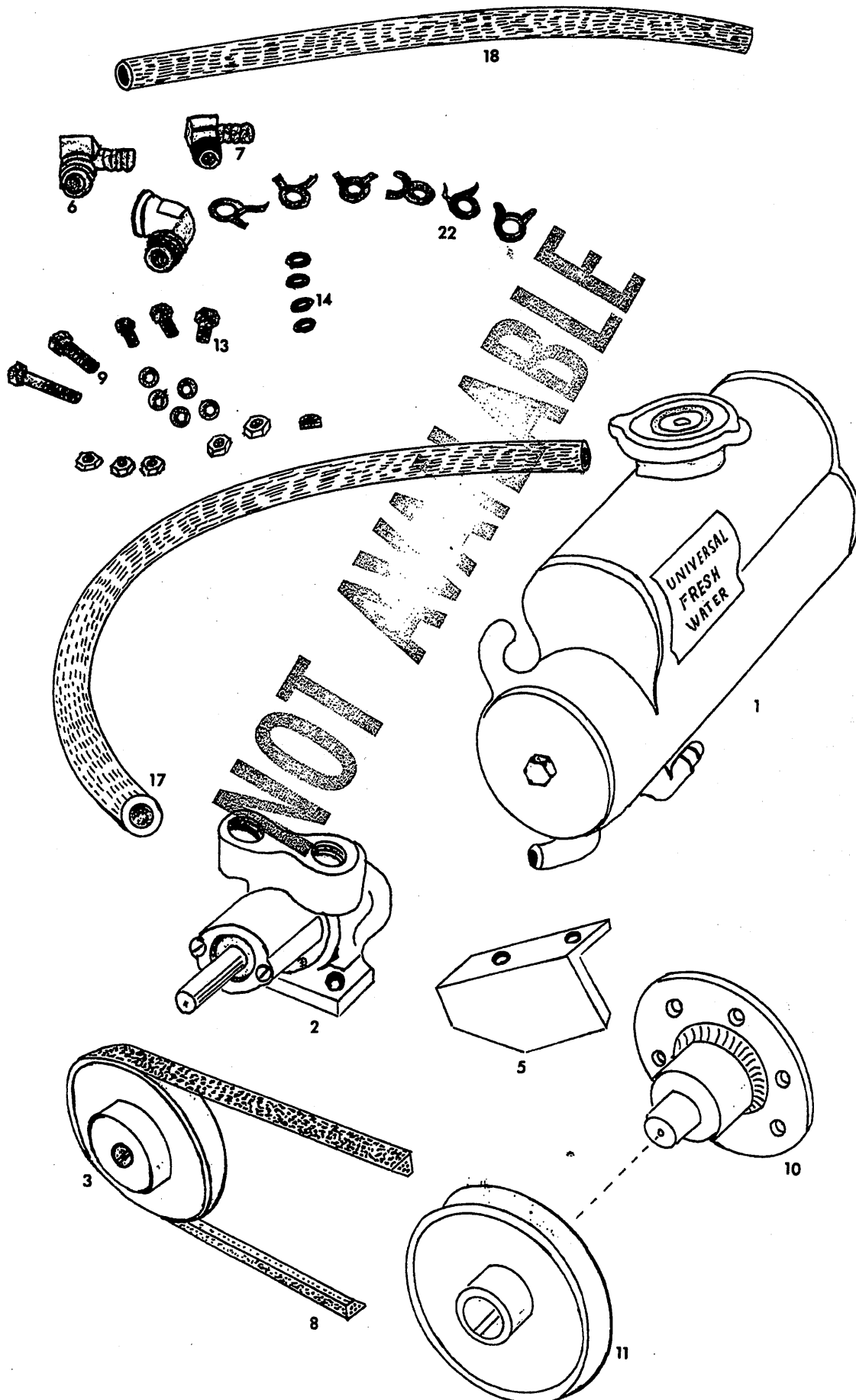
Cooling

Fresh Water System

Early Series Type

Before Serial #79476 1967

Code	Description	No. Used	Part	Notes
	Heat exchanger Kit	1	274842	Use 256184
	Raw water pump	1		1673
	Street elbow, brass	1	288928	1/2IPS x 45°
	Brass nipple, raw water pump	2	276469	1/2NPT x clo
	Hose, raw water pump to exchanger	1	288924	3/4ID x 19"
	Hose clamps	2	275830	#10
	Pipe nipple, brass, engine pump inlet	1	288930	3/8NPT x 2 1/2"
	Pipe elbow, brass	1	288929	3/8NPT x 90°
	Pipe nipple, brass	1	276027	3/8NPT x short
	Hose, engine pump to water drain	1	288925	5/8 x 26"
	Clamps, engine pump to water drain	2	266809	#10
	Water drain assy.	1	288915	
	Drain tube	1	288910	
	Drain cock	1	239138	
	Hose water drain to exhaust outlet	1	288926	5/8"ID x 2 1/4"
	Hose clamp drain to exhaust outlet	2	266809	#10
	Nipple	1	239264	1/2 NPT x clo
	Elbow, reducing	1	286966	3/8 x 1/2
	Pipe nipple	1	276027	3/8 NPT x clo
	Hose	1	288927	5/8 ID x 7 5/8"
	Hose clamps	2	266809	
	Hose elbow, special manifold inlet	1	288909	1/2" hose x 1/2IPT
	Drain cock	1	239138	
	Heat Exchanger Kit for UJVD before Serial #79476, 1967 above kit includes the following extra parts	1	256195	
	Bushing, reducing	1	208106	1/2" x 3/8" NPT
	Fitting, straight	1	241021	3/8" NPT
	Tee	1	239776	3/8" x 3/8" NPT
	Thermostat Assy.	1	294384	
	Thermostat element, Dole	1	275965	
	Hose	1	290025	35" Long
	Hose	1	290646	14" Long
	Hose	1	288989	4 3/4" Long
	Hose	1	294418	30" Long
	Hose	1	289487	12" Long



Cooling

Fresh Water System

New Style
After Serial #79476

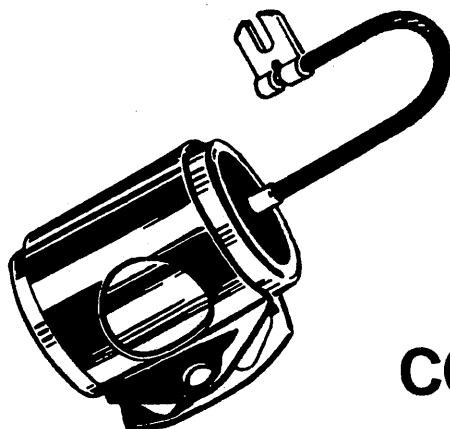
Code	Description	No. Used	Part	Notes
	Cooling Kit Assy. UJ & UJR engine	1	256184	
	Cooling Kit Assy. for V. Drive engine	1	256190	Use 256185
1	Heat exchange w/integral tank	1	290564	
2	Raw water pump	1	290644	E05
3	Pulley, raw water pump	1	257567	
4	Set screw, pulley to water pump shaft	1		1/4" USS
5	Bracket, raw water pump mounting	1	290643	
6	Elbow 90° hose to pipe	2	241020	1/2" hose x 1/2IPS
7	Elbow 90° fresh water pump inlet	1	289770	1/2" hose x 3/8IPS
8	Belt	1	204013	
9	Bolt, belt tightener	1	231063	
10	Power take off shaft	1	289314	
11	Pulley, flywheel drive	1	289315	
12	Key #16 3/16 x 5/8" long	1	289318	1/2 round
13	Cap Screw	3	231057	5/16 - 18 x 3/4
14	Lock Washer	3	231891	5/16"
15	Plain Washer	1	238991	5/16"
16	Street elbow, raw water pump inlet	1	290132	1/2 NPT x 90°
17	Hose, raw pump to heat exchange	1	290646	1/2" x 15"
18	Hose, exhaust manifold to heat exchanger	1	290645	1/2" x 8"
19	Hose, heat exchanger to fresh water pump	1	290647	1/2" x 30"
20	Hose, V-drive to raw water pump	1	290025	1/2" x 35"
21	Lock Washer, and nuts flywheel stub	6		3/8"
22	Clamp, hose	6	274927	
	Cooling Systems, fresh water conversion kits, see Page 144			
23	zinc pencil	1	299760	

1



CONTACT SETS

2



CONDENSERS

4



DISTRIBUTOR CAPS

3



ROTORS

Electrical

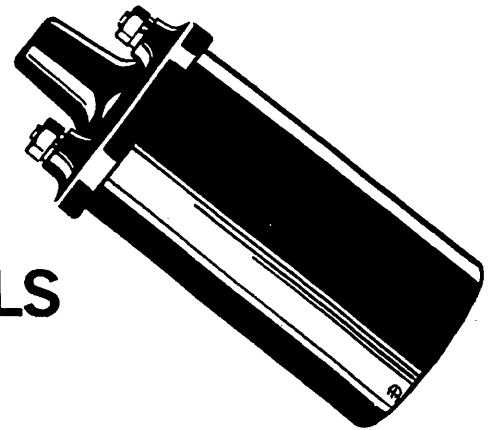
Ignition Group

Early Series 1948-1969 Prestolite
Late Series 1969 on Delco

Code	Description	No. Used	Part	Notes
1	Contact Points, Prestolite distributor	AR	262283	
	Contact Points, Delco distributor	AR	288701	
2	Condensor, Prestolite distributor	AR	262282	
	Condensor, Delco distributor	AR	288700	
3	Rotor, Prestolite distributor	AR	262284	
	Rotor, Delco distributor	AR	288702	
4	Cap, Prestolite distributor	AR	262281	
	Cap, Delco distributor	AR	288699	
5	Coil, 6 volt Prestolite ignition	AR	276114	
	Coil, 12 volt Prestolite ignition	AR	288559	
	Coil, 12 volt Delco ignition	AR	288559	
6	Bracket, coil	1		32-1
7	Spark plugs	4	273276	
8	Wire set, ignition Delco	1	295149	
	Wire Set, Prestolite ignition	1	277051	

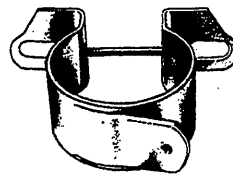
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IGNITION COILS



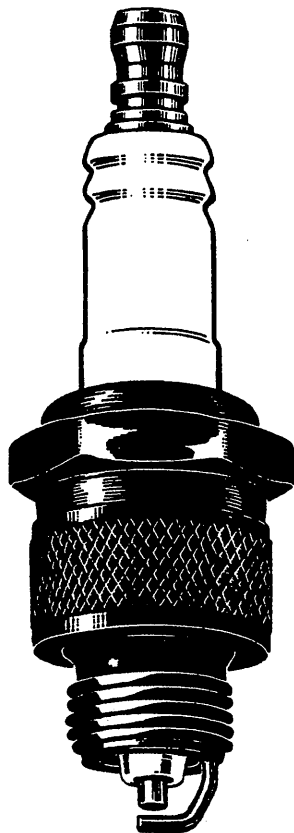
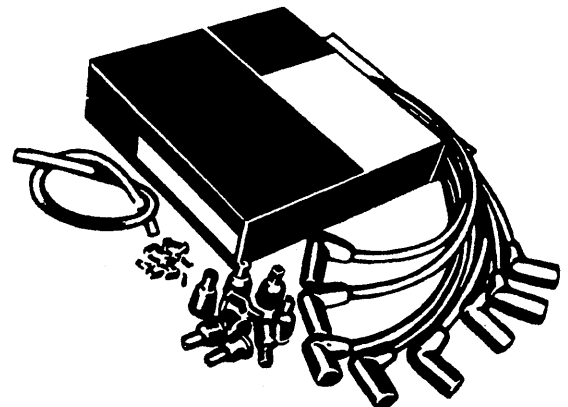
BRACKET

6



70R9

SPARK PLUG CABLE SETS



8

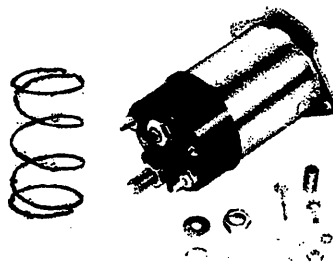
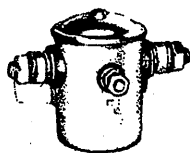
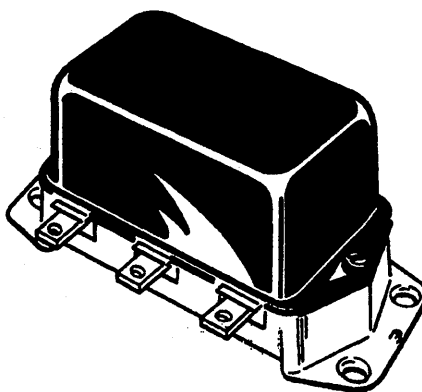
SPARK PLUGS

Electrical

Coils, Spark Plugs

Code	Description	No. Used	Part	Notes
5	Coil, 12 volt	1	288559	
	Coil, 6 volt	1	276114	
6	Bracket, coil mounting	1		32-1
	Screws, coil bracket mounting	2	231055	
	Lockwashers, coil bracket mounting	2	231891	
	Wire, coil to distributor	1	16 gauge	6" long
7	Wire set, ignition - Delco	1	295149	
8	Spark plugs, champion	4	273276	
	Ground Wire- alternator to engine	1	PULL 382	
	Terminal, alternator to engine	1	262079	
	Terminal, alternator to engine	1	261552	
	Wire, alternator to coil, Motorola	1	16 gauge	12" long
	Wire, alternator to coil, Prestolite	1	16 gauge	16" long
9	Wire Set, Prestolite ignition	1	277051	

VOLTAGE REGULATORS



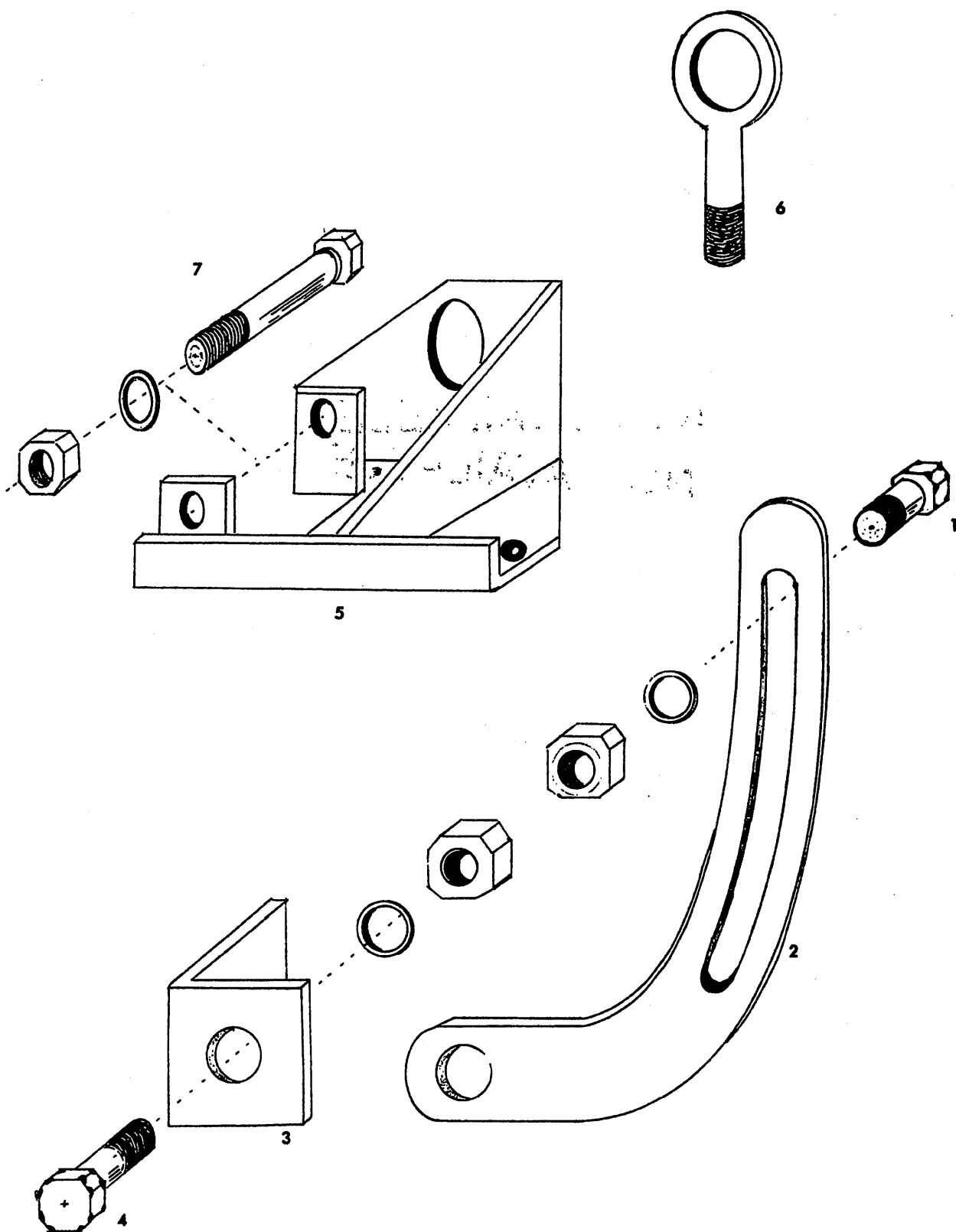
STARTER SOLENOIDS

Electrical

Regulators & Switches

Note: Regulators must be matched to correct generator unit

Code	Description	No. Used	Part	Notes
1	Generator, 6 volt GAS-4196, Use regulator	1	295211	
	Generator, 12 volt GEF-5001 " "	1	276644	
	Generator, 12 volt GJU-7204S " "	1	273735	
	Generator, 12 volt 110511 NOT AVAILABLE		273477	
1A	Alternator, 12 volt 601411 NOT AVAILABLE		276642	
	Alternator, 12 volt ALE5202 " "	1	261128	
	Alternator, 12 volt ALE5204S " "	1	261153	
	Alternator, 12 volt ALK6204A " "	1	261128	1966
	Alternator, 12 volt ALK6204A " "	1		VSH6201N 1967-1968
	Alternator, 12 volt MR12N451D 37 amp	1	289172	
	Alternator, 12 volt MR12N600 55 amp	1	289172	
	Starter Solinoid Switches match to correct starter			
2	6 volt starter up to 1962 MZ4152	1	295378	
2A	12 volt starter up to 1969 MBG4129	1	290237	
3	12 volt starter after 1969 1107678	1	298289	1114376



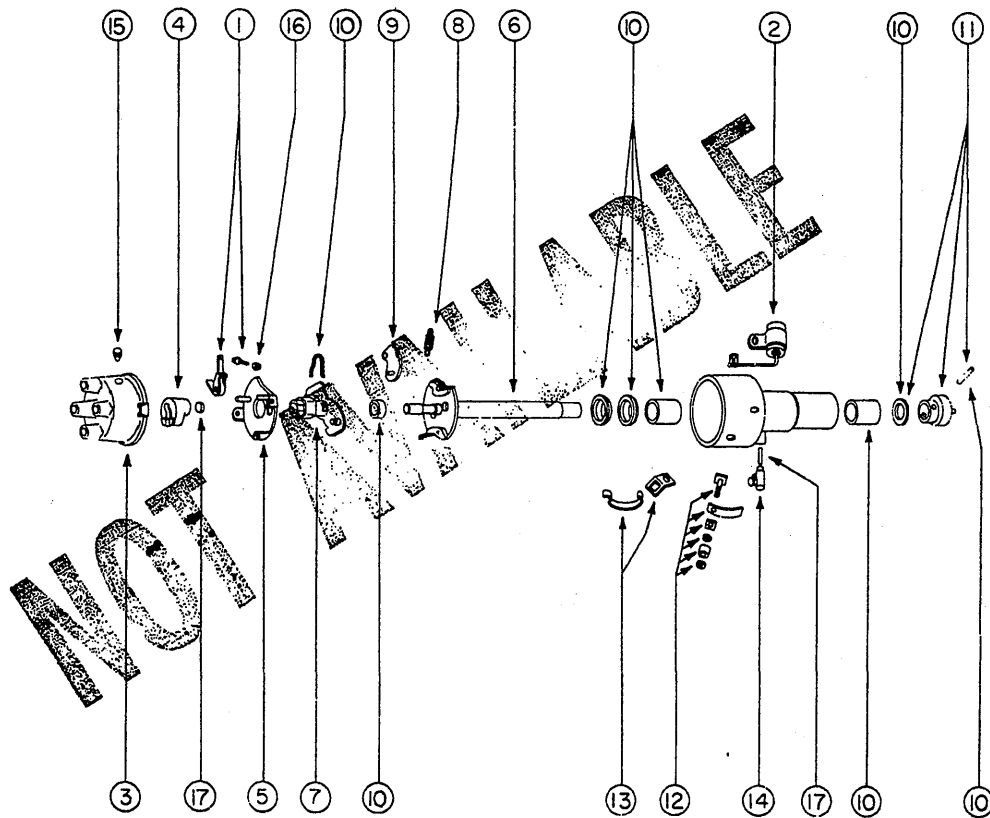
Alternator Mounting Hardware

Electrical

Generators & Alternators

Mounting Hardware

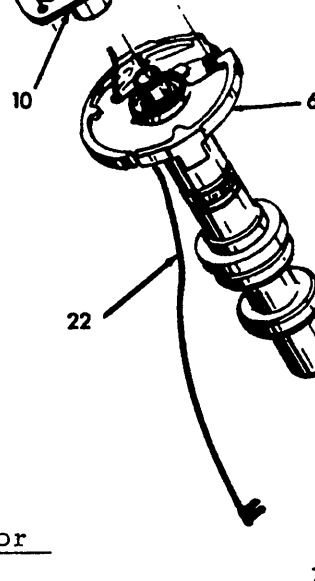
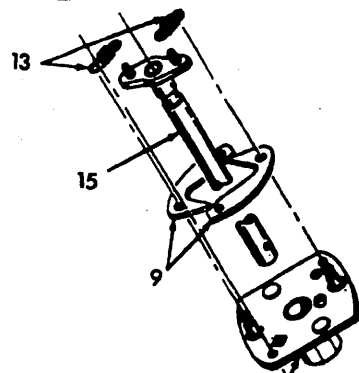
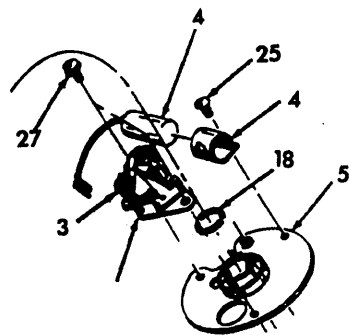
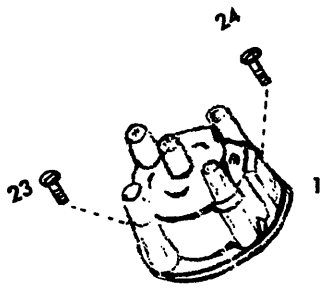
Code	Description	No. Used	Part	Notes
1	Cap Screw arm tightner	1	231059	5/16 x 1"
	Lock Washer arm tightner	2	231891	5/16
	Washer, Plain arm tightner	1	231856	5/16
	Nut arm tightner	1	230141	5/16 NC
	Spacer, alternator LeeceNeville only	1	261121	
2	Strap or arm use w/generator	1	261077	
2	Strap or arm use w/LeeceNeville	1	261077	
2	Strap or arm use w/Prestolite 40 amp	1	261130	
2	Strap or arm use w/Prestolite 55 amp	1	261150	
2	Strap or arm use w/Motorola alternator	1	261150	
	Cap Screw, alternator to bracket	1	231089	3/8-16 x 2 3/4
	Lock Washer, alternator to bracket	1	231910	3/8"
	Nut, alternator to bracket	1	230144	3/8-16
3	Bracket,	1	259259	
4	Cap Screw for Prestolite alternator	2	231081	3/8-16 x 1 1/4"
	Lock Washer for Prestolite alternator	1	231910	3/8"
	Nut for Prestolite alternator	1	230144	3/8 NC
	Cap Screw for Motorola alternator	1	231057	5/16-18 x 3/4
5A	Lifting eye & alternator bracket	1	261133	up to #76591
5B	Lifting eye & alternator bracket	1	261141	after #76591
6	Lifting eye, used w/generator	1	260603	
7	Cap Screw, alternator mounting hinge	1	231089	3/8-16 x 2 3/4"



Exploded View of Typical

Distributor

Code	Description	No. Used	Part	Notes
	Distributor Assy.	1	261045	
	Distributor w/drive gear	1	261268	
1	Points	1	262283	
2	Condensor	1	262282	
3	Cap	1	262281	
4	Rotor	1	262284	
11	Drive Gear	1	262422	
	O Ring	1	239391	
10	Pin, drive gear	1	260920	
5	Breaker Plate Assy.	1		P7-154
6	Drive Shaft	1		P28-115
7A	Cam & Stop Plate 6003-2D	1		P29-174
7B	Cam & Stop Plate 6003-2E	1		P29-185
8	Spring Weight Set	1		P50-160
9	Gov. Weight Set	1		P31-217
10	Bearing & Parts Set Pkg.	1		P90-740
12	Terminal Stud Pkg	1		P90-330
13	Cap Spring Set Pkg	1		P31-207
14	Oiler	1		P31-2
17	Wick Pkg	1		P90-832
11	Gear & Parts Pkg.	1		P90-517
15	Cap Plug Pkg.	1		P31-253
16	Lock Nut	1		P31-17
	Advance Arm, distributor	1	261301	



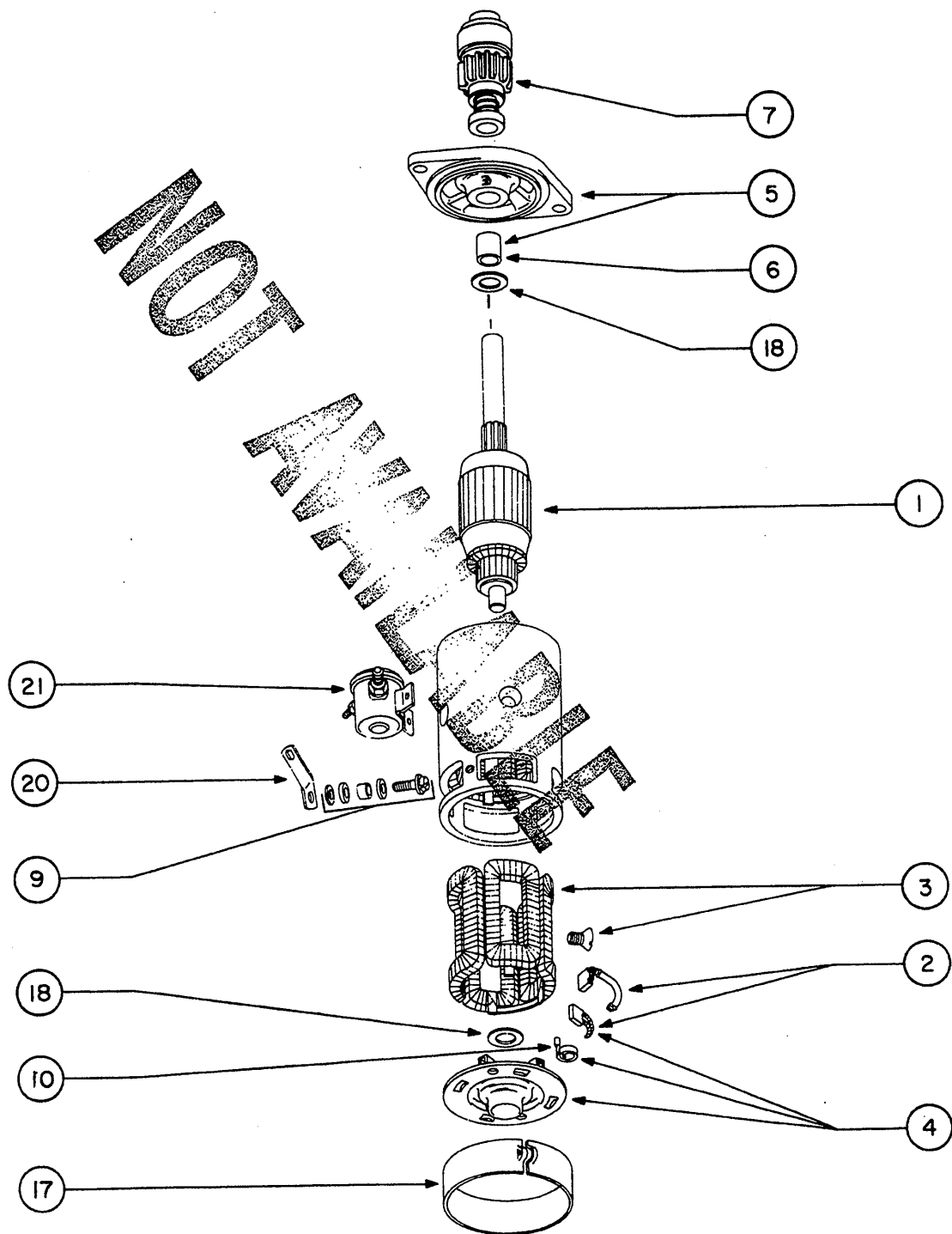
Delco Distributor

Electrical

Delco - Starting 1969

Distributor

Code	Description	No. Used	Part	Notes
	Distributor w/drive gear		288307	USE 299098
	Distributor only		288306	USE 299097
1	Cap	1	288699	
2	Rotor	1	288702	
3	Points	1	288701	
4	Condensor	1	288700	
5	Breaker Plate Assy.	1		1960814
6	Housing	1		1964208
7	Drive Gear	1	262422	
8	Roll Pin	1	230357	
	Clamp, hold down	1	288294	
	Clamp, cap screw	1	231058	5/16-18 x 7/8
	Clamp, Lock Washer	1	231891	5/16
9	Plate, weight hold	1		1954548
10	Cam	1		1971953
13	Spring Weight	1		1939381
14	Weight	1		1880902
15	Shaft	1		800054
18	Seal Housing	1		1950569
22	Lead, Primary	1		1954563
23	Screw	1		1954571
24	Screw	1		1957573
25	Screw	1		454458
26	Screw	1		453461
27	Screw	1		1914916
28	Screw	1		453647
31	Shim Washer .005	1		810074
32	Shim Washer .010	1		1912129
33&36	Washer	1		811912



Starter

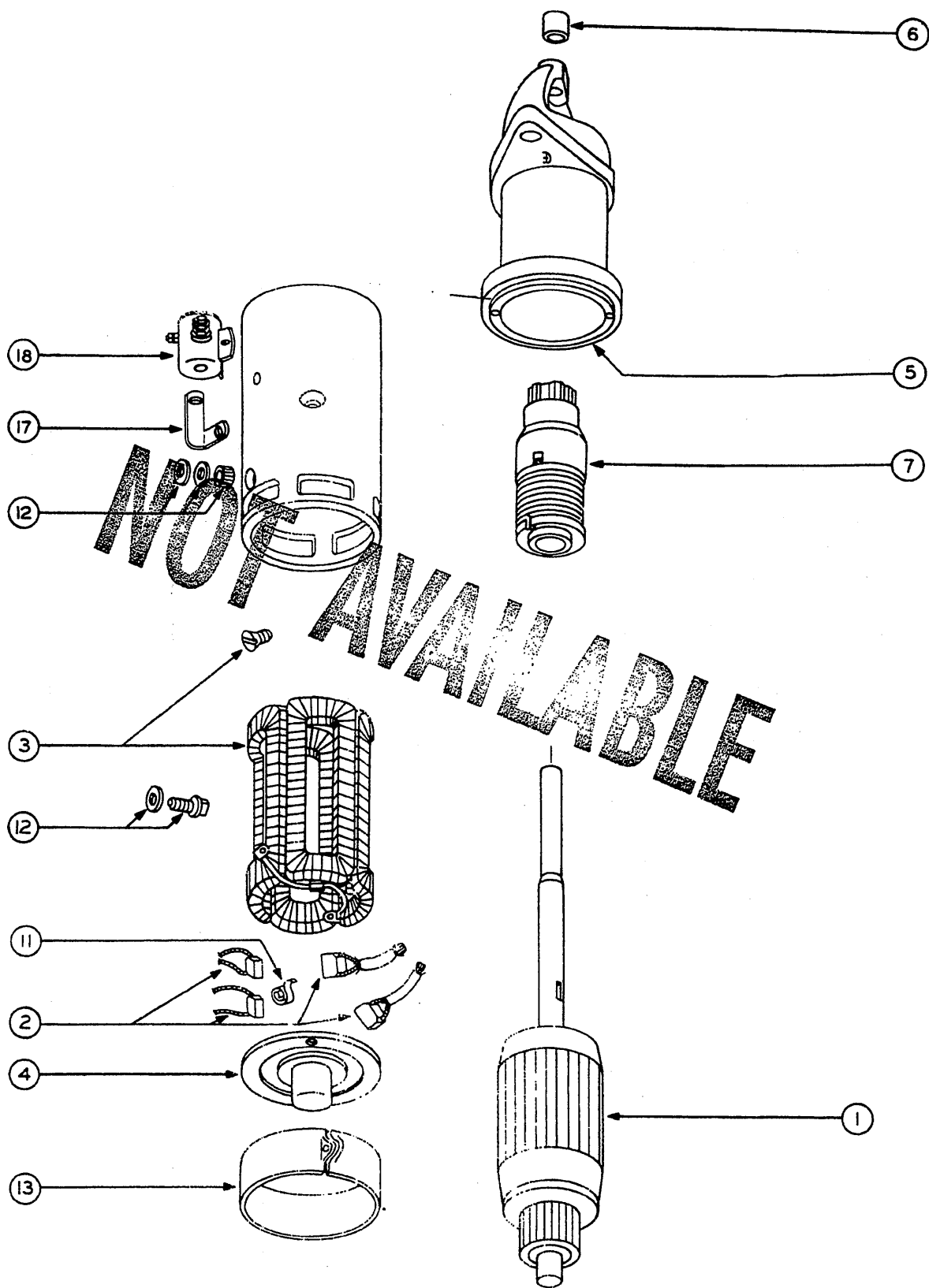
Electrical

6 Volt Auto-lite
MZ-4153 Not Used After 1962

Starter Motor

1963 went to 12 volts

Code	Description	No. Used	Part	Notes
	Starter Motor Assy.	1	279268	
1	Armature	1	287107	
2	Brush Pkg	1	287148	
3	Field Coil Pkg	1		P20-357
4	C.E. end plate	1		P19-26
5	D.E. end plate	1		P22-38
6	D.E. brg.	1		P24-12
7	Bendix Drive Assy.	1	287779	
9	Terminal Stud Pkg	1		P90-716
10	Brush Spring Set	1		P50-263
17	Cover Band	1		P36-583
18	Thrust Washer Pkg	1		P90-679
20	Strap or Connector	1		P26-104
21	Soloid Switch	1	295378	
	12 Volt Starter Resistance Coil	*	261109	



Starter

Replaces 6 Volt

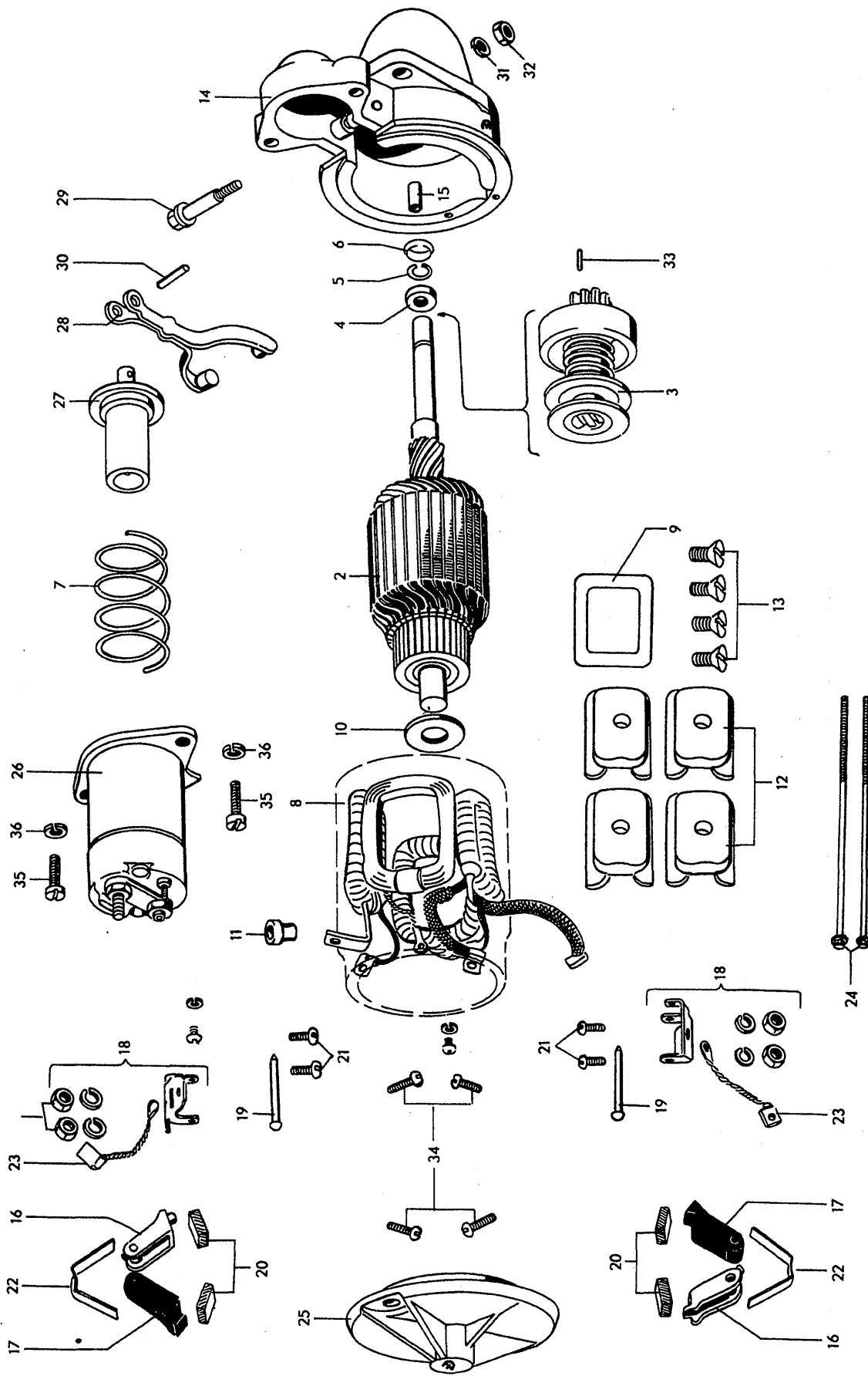
Electrical

Starter Motor

12 Volt Prestolite
MBG-4129 Used up to 1968

Code	Description	No. Used	Part	Notes
	Starter Assy.	1	261126	
1	Armature	1	287107	
2	Brush Set	1	287149	
3	Field Coil Pkg	1		P20-14
4	Comm. End Head	1		P19-27
5	Pinion or bendix housing	1		P22-38
6	D.E. Brg. bendix housing	1		P24-12
7	Bendix Drive	1	287779	
8	Not Used			
9	Not Used			
10	Not Used			
11	Brush Spring Set	1		P50-263
12	Terminal Stud Pkg	1		P90-743
13	Band Cover	1		P36-583
14	Not Used			
15	Not Used			
16	Thrust Washer Pkg	1		P90-679
17	Connector	1		P26-104
18	Switch	1	290237	
	Cap screws, mounting	2	231079	3/8-16 x 7/8"
	Lock washers, mounting	2	231895	3/8"

①

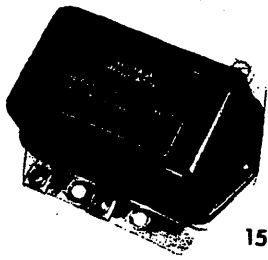


Electrics

Delco, Used After 1969

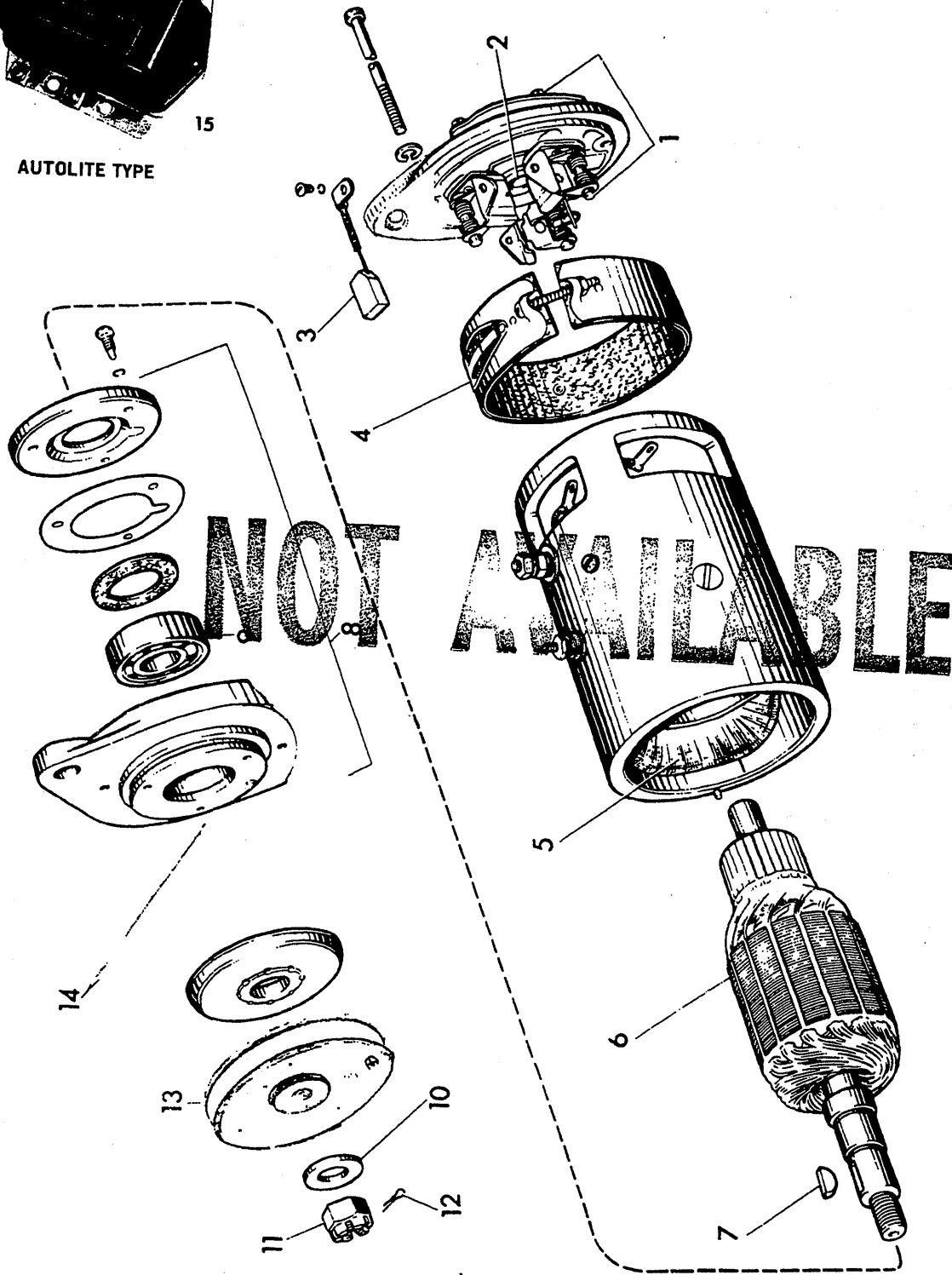
Starter Motor

Code	Description	No. Used	Part	Notes
1	Starter Motor Assy.	1	262937	USE 299096
2	Armature	1		1932185
3	Bendix Drive	1		1937975
4	Washer	1		1927849
5	Lock Ring	1		1927848
6	Thrust Washer	1		1927850
7	Return Spring	1	150433	1958679
8	Coil Shunt	1		1935131
9	Insulating Plate	1		1927853
10	Washer	1		818265
11	Sleeve	1		1966391
12	Pole Shoe	4		1931129
13	Screw	4		1913960
14	Housing	1		1955325
15	Bushing	1		Not Used
16	Brush Holder	2		1940477
17	Holder, insulated	2		1926618
18	Brush Holder Set	2		1928015
19	Pin	2		1966923
20	Brush	4	150328	1906945
21	Screw	4		274738
22	Spring	2		1926622
23	Cable, ground	2		1962605
24	Bolt	2		1939970
25	Frame, C. E.	1		1928966
26	Solenoid Switch D. 969	1	298289	1114356
27	Plunger	1		1941113
28	Fork	1		1951567
29	Bolt	1		1932197
30	Pin	1		455106
31	Lock	1		9421424
32	Nut	1		1926640
33	Pin	1		809593
34	Screw	4		1913960
35	Cap Screw	2		132255
36	Lock Washer	2		9431423



15

AUTOLITE TYPE



Generator

1963 changed to 12 volts

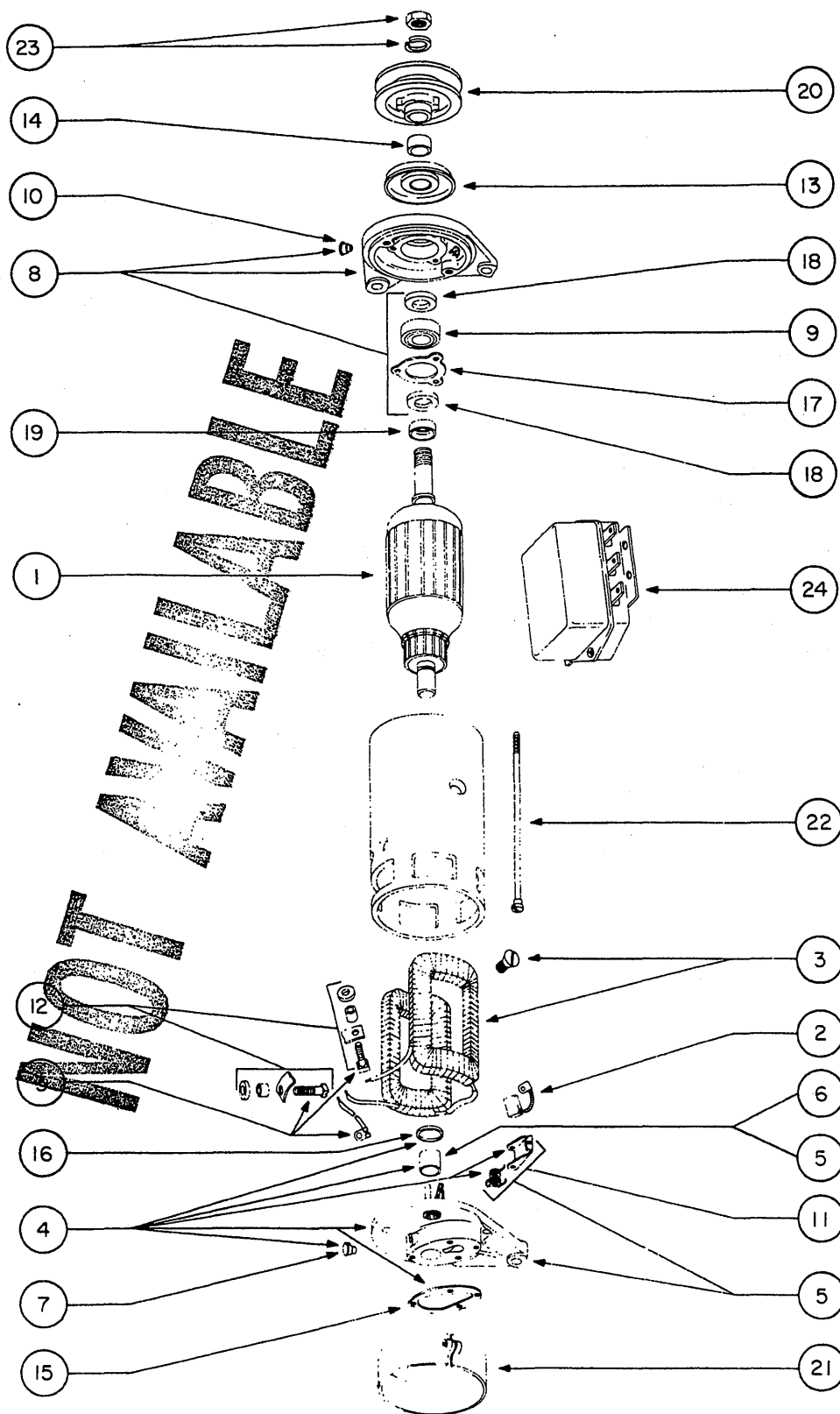
Electrical

Generator

6 Volt Auto-lite w/Cut Out
Not Used After 1962

Code	Description	No. Used	Part	Notes
	Generator Assy. w/pulley		285446	GAS-4196
	Generator only	1	279011	
6	Armature	1	287108	
3	Brush Set	1	287146	
1	C. E. Head Assy. Pkg.	1	287719	
	Plate Assy. -Main Brush Pkg.	1		P35-147
5	Field Coil	1	287704	
2	C. E. Brg. #201	1		P25-16
14	D. E. Head Assy.	1		P14-157
9	D. E. Brg #203	1		P25-6
13	Pulley	1	261070	
15	Regulator or cut out	1	295211	CB-4014
4	Cover Band	1		P35-508
	Lead Assy. Pkg.	1		P90-370
	Drive Belt	1	261069	
	Belt tightner arm	1	261077	
	Cap Screw - arm to head	1	294477	5/16-18 x 1 1/4"
	Cap Screw, nut	1	230141	5/6 - 18
	Cap Screw, lock	1	285304	5/16
	Cap Screw - arm to generator	1	231057	5/16-18 x 3/4"
	Washer lock	1	285304	5/16
	Generator hinge stud	1	280058	5/16 - 24
	Nut, Castle-hinge	2	230279	5/16 x 24
	Cotter Pin	2	230279	1/16 x 3/4"
	Stud, generator hinge	1	280058	
	Nut	2	295153	5/16 - 24 castte
	Plain washer	1	231856	5/16

NOT AVAILABLE



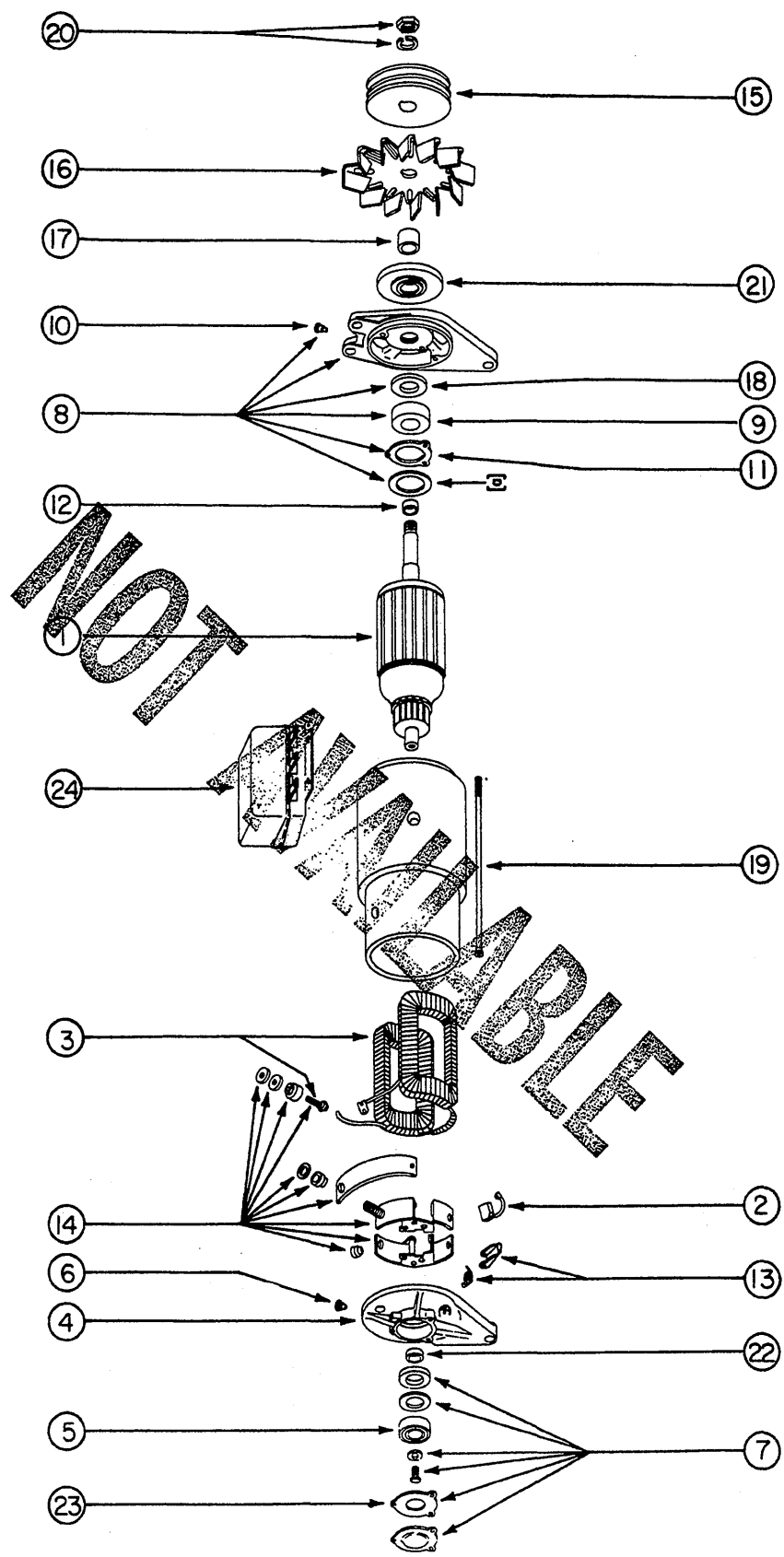
Generator

Electrical

12 Volt Prestolite
GEF-5001

Generator

Code	Description	No. Used	Part	Notes
	Generator Assy. w/pulley	1	285451	
	Generator	1	273031	
1	Armature	1	276053	
2	Brush Set	1	275895	
3	Field Coil	1	287682	
4	C.E. Head Assy.	1	287684	
5	Partial C.E. Head Assy.	1		P24
6	C.E. brg	1		P24-5
7	C.E. Oiler	1		P35-1
8	D.E. Head Assy.	1		P14-154
9	D.E. brg	1		P25-13
10	Oiler			
11	Brush Arm Spring Pkg.	1		P90-255
12	Terminal Stud Pkg	1		P90-336
13	Oil Slinger	1		P35-125
14	Spacer	1	273032	
15	Gasket C.E.			
16	Gasket, oil guard			
17	Gasket	1		P35-226
18	Felt Washer			
19	Felt Washer retainer			
20	Pulley	1	273033	
21	Cover band	1		P35-466
22	Thru bolt pkg	1		P36-554
23	Nut & Washer Pkg	1		P90-986
24	Regulator	1	276644	VBO-4201-M
	<u>Belt</u>	1	262124	
26	Generator mount clamp	1	277939	
	Cap screw, arm to clamp	1	231058	5/16 - 18 x 7/8
	lock washer	2	285304	5/16
	Nut	2	295988	5/16 - 24 SAE



Generator

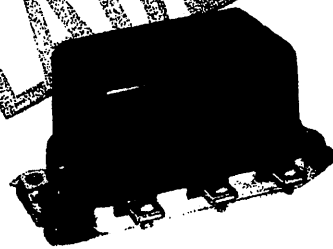
Electrical

12 Volt Auto-lite 15 Amp
GJU 7204-S

Generator

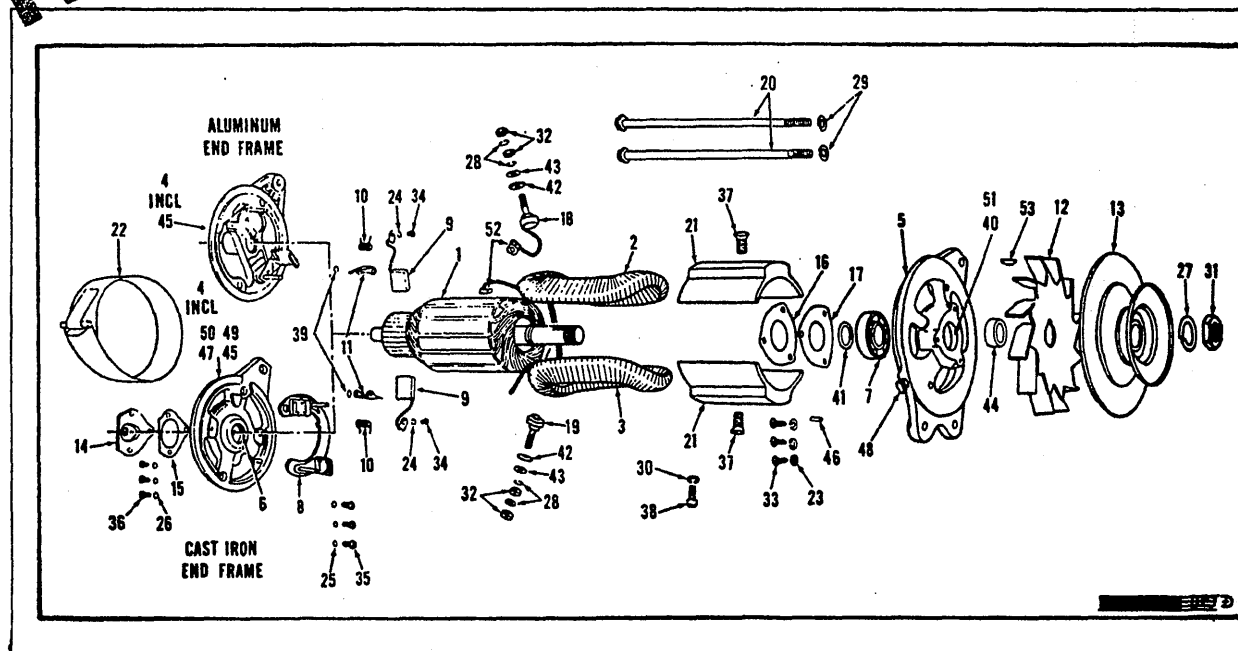
Code	Description	No. Used	Part	Notes
	Generator Assy. w/pulley		285455	
	Generator		277685	
1	Armature	1	290152	
2	Brush Set	1	287147	
3	Field Coils	1	296510	
4	Commutater head	1	287720	
5	Commutater head Brg C.E.	1		P24-9
6	C.E. Oiler	1		P35-45
7	Not Available			
8	D.E. Head	1		P14-49
9	D.E. Brg	1		P25-32
10	See Item 8			
11	Gasket	1		P35-226
12	D.E. Retainer	1		P35-53
13	Spring Pkg	1		P90-32
14	Stud Pkg	1		P90-341
15	Pulley	1	278348	
16	Fan	1		
17	Spacer	1		P35-52
18	See Item 8			
19	Bolt Pkg	1		P35-426
20	Nut & Washer	1		P90-33
21	-			
22	-			
23	See Item 7			
24	Regulator	1	273735	VBO-6201-F
	<u>Belt</u>	1	262124	

NOT AVAILABLE



DELCO TYPE

55



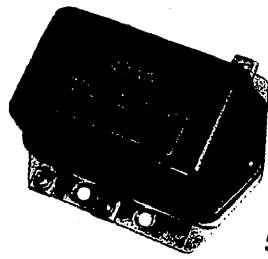
Generator 24 Amp

Electrical

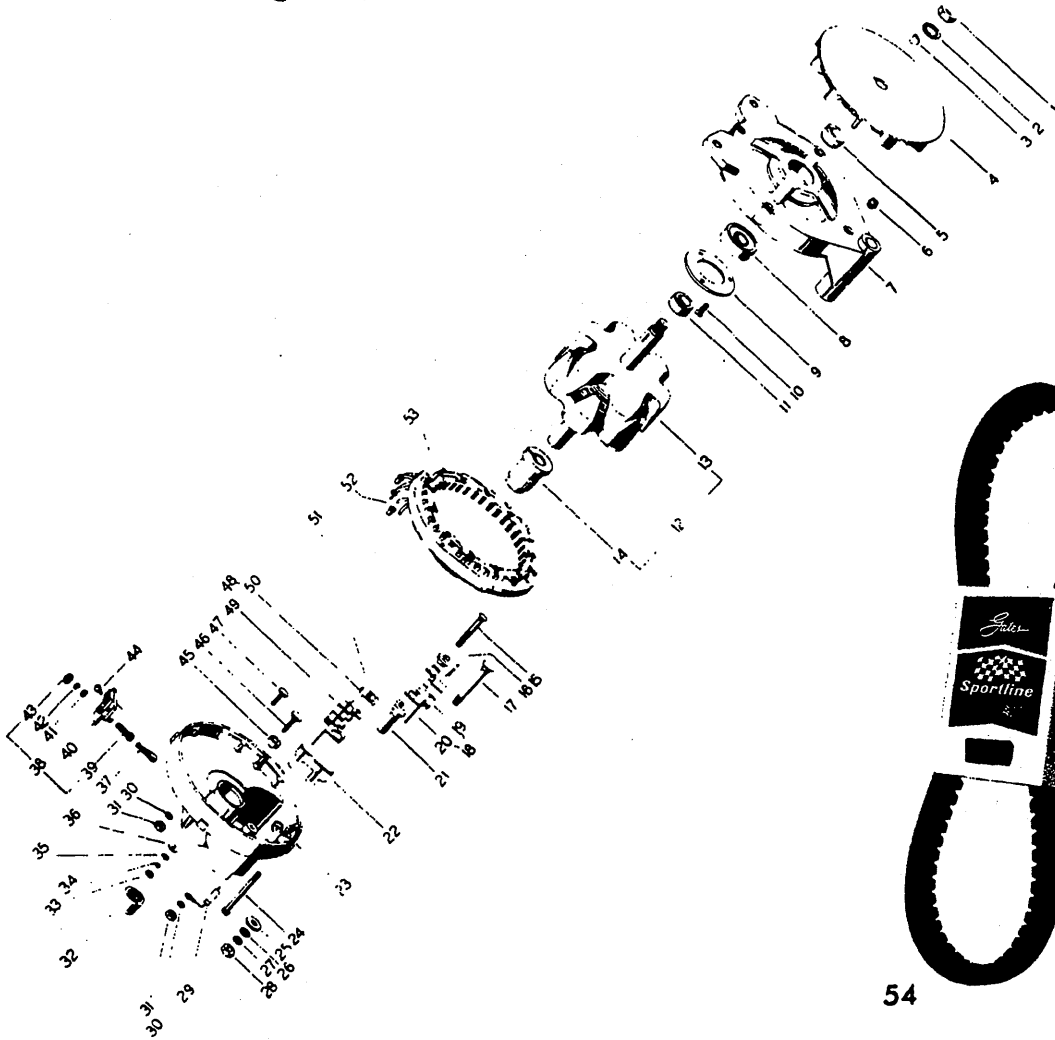
Generator

12 Volt Delco Remy 24 Amp
Use Up to 2500 PPM

Code	Description	No. Used	Part	Notes
	Generator Assy. w/pulley	1	285454	
	Generator only	1	273412	
1	Armature	1	11372003	
9	Brush Set	1	287145	
2	Field Coils	1	98030103	
3	Field Coils	1		1923473L
	C.E. Brg	1		900529
7	D.E. Brg	1		900529
12	Fan	1		1937227
5	D.E. Plate	1		1911263
13	Pulley	1	261070	
	Belt	1	273397	
22	Cover Band	1		1879530
55	Regulator	1	273477	
	Mounting Clamp	1	277932	
	Cap Screw	1	231058	5/16-18 x 7/8"
	Nut	2	295988	5/16-18
	Lock Washer	2	285304	5/16
	Spring	1		1903870
	Spring Brush	1		1944373



55



54

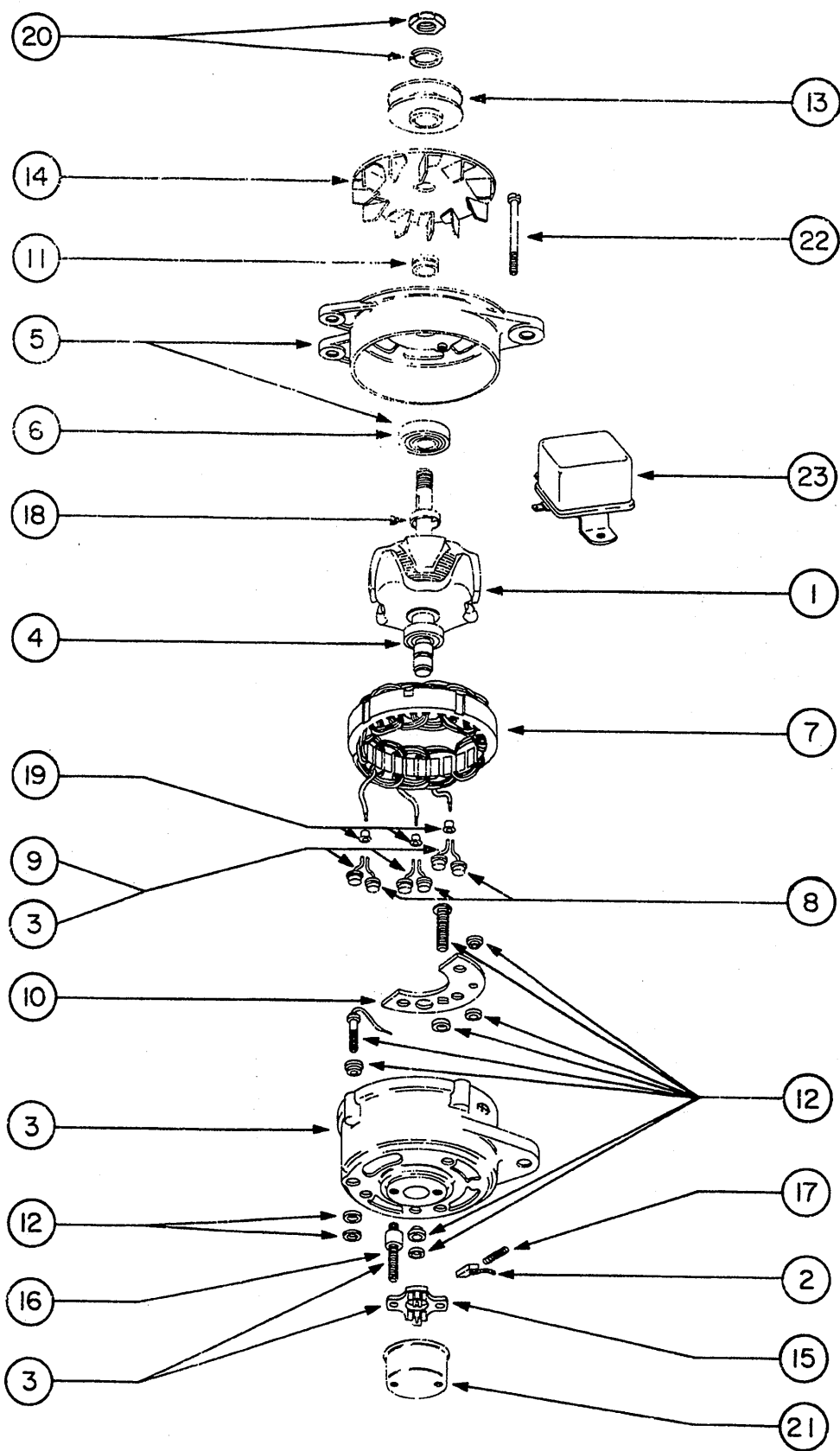
Alternator, First series

Electrical

Alternator

12 Volt Leece-Neville 1962

Code	Description	No. Used	Part	Notes
0	Pulley	1	261113	
1	Nut	1		28464
2	Washer	1		1613
3	Key	1		
4	Fan	1		58797
5	Spacer	1		58801
6	Spline Nut	1		57629
7	Housing D. E.	1		59107
8	Bearing D. E.	1		26853
11	Spacer	1		58766
13	Rotor Assy.	1		58972
19	Silicon Rectifier	1		59668
35	Brush Spring Assy	1		58732
46	Silicon Rectifier	1		59667
50	Stator Assy.	1		59616
51	Recifier Assy.	1		59454
52	Recifier Assy.	1		59453
55	Regulator - 12 Volt - 40 Amp	1	276643	
54	Belt		239387	
	Arm		261077	
	Spacer		261121	
	Bracket		261133	
	Pulley-engine drive		261113	
	Alternator Assy.	1	277584	obsolete
	Alternator, less pulley	1	276251	6014A
	Lock Washer, alternator hinge	1	231895	3/8
	Cap Screw, arm to alternator	1	295951	5/16 - 18 x 1 1/8"
	Wire, ground to engine	1	275204	
	Terminal, wire	1	262088	
	Terminal, wire	1	262090	



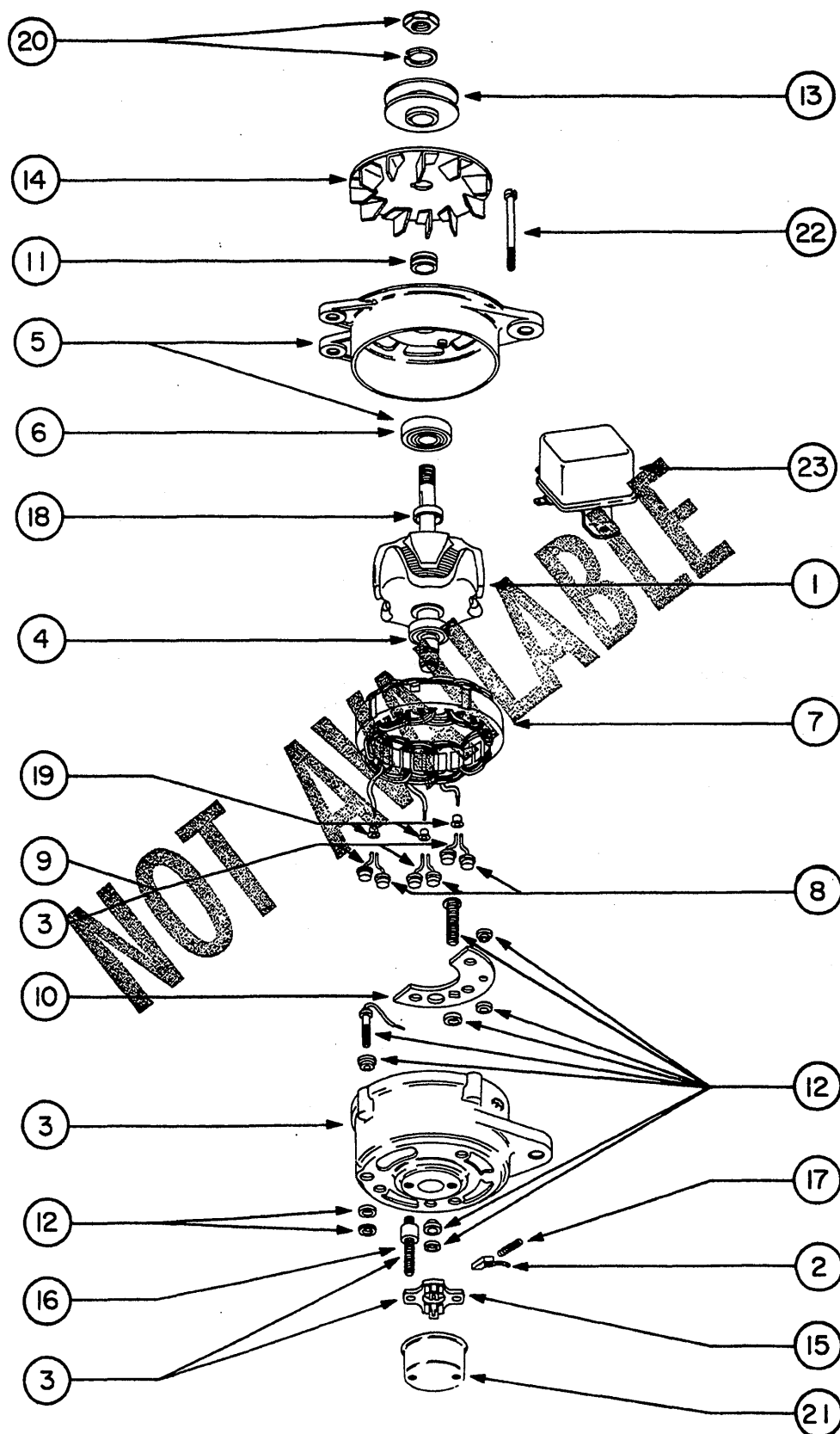
Alternator

Electrical

12 Volt - Prestolite - 40 Amp

Alternator

Code	Description	No. Used	Part	Notes
	Alternator Assy., Complete	1	AUF-63	Use 277584
	Alternator w/Fan Only	1	275753	ALE5202
1	Rotor Assy.	1		P10-108
2	Brush Set	1		P11-40
3	End Head Assy.	1		P12-177
5	Drive End Head	1		P14-75
6	D.E. Brg	1		P25-1
7	Stator	1		P13-51
13	Drive Pulley	1	261129	
14	Vent Fan	1		P34-126
16	Terminal Stud Pkg	1		P90-403A
17	Brush Spring Pkg	1		P50-273
20	Nut & Washer Pkg	1		P90-33
23	Regulator	1	261128	VBV-6201-C
21	Cover			P35-338
	<u>Belt</u>	1	239387	
	Support Bracket	1	UJ-314	NA
	Support Bracket Flange	1	261115	
	Spacer	1	261127	
	Arm, belt tightner	1	261130	
	Mounting Clamp Assy.	1	277939	



Alternator

Electrical

12 Volt - Prestolite - 35 Amp

Alternator

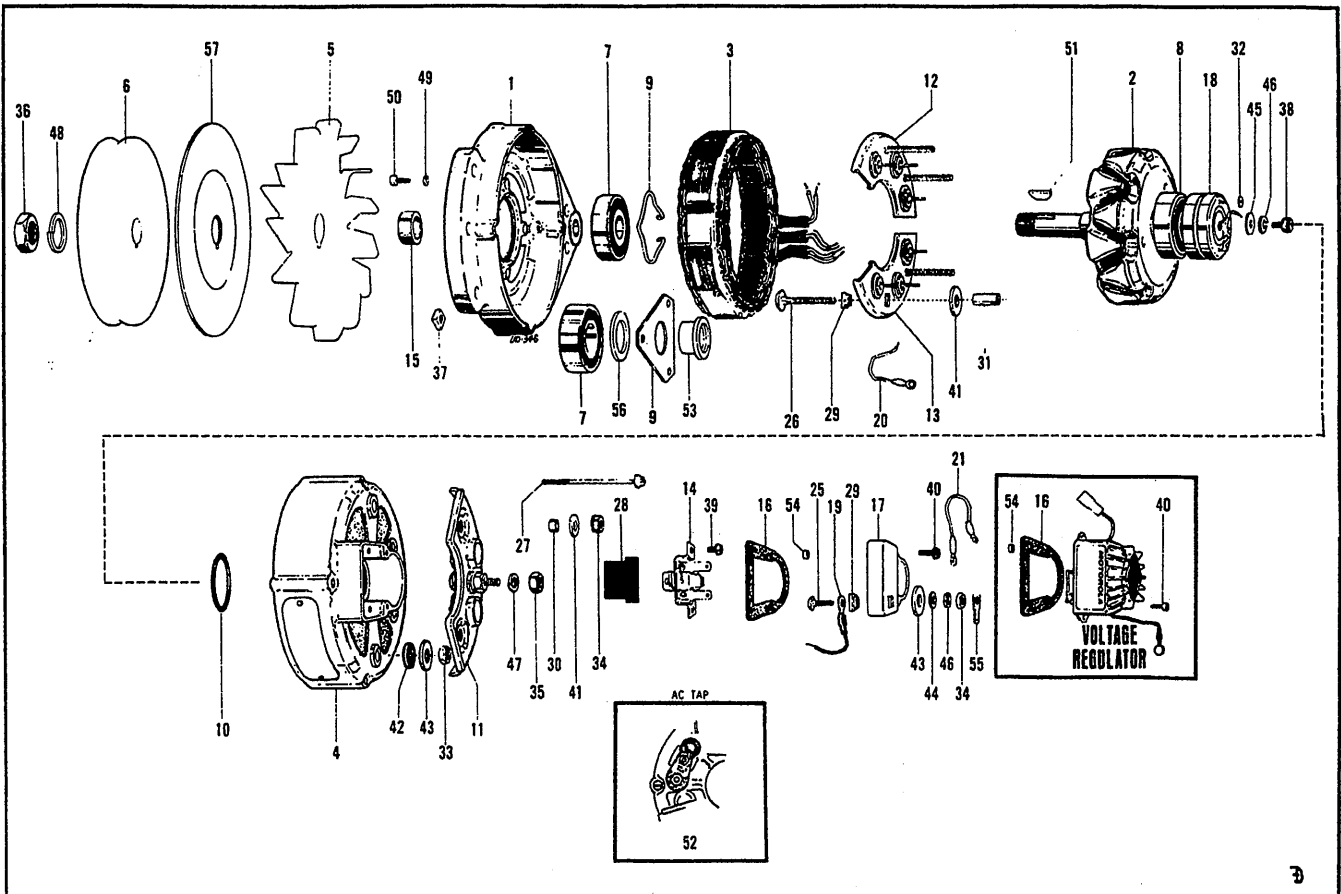
Code	Description	No. Used	Part	Notes
	Alternator Assy.	1	277584	ALE-5204S
	Alternator Only	1		
1	Rotor Assy.	1		P10-108
2	Brush Set	1		P11-40
3	End Head Assy.	1		P12-70
5	Drive End Head	1		P14-175
7	Stator Assy.	1		P13-51
16	Terminal Stud Pkg.	1		P90-403A
14	Vent Fan	1		P34-126
2	Brush Spring Set	1		P50-273
13	Pulley	1		P34
6	Brg, Drive End	1		P25-1
23	Regulator	1	261153	VSC-6202-E
20	Nut and Washer Pkg			P90-33
	<u>Belt</u>	1	239387	
	Alternator Bracket	1	261141	
	Arm, Belt Tightner	1	261150	
21	Cover	1		P35-338
	Bracket for regulator	1	259622	

NOT AVAILABLE



MOTOROLA

service parts



Alternator

Electrical

12 Volt Motorola - 35 AMP

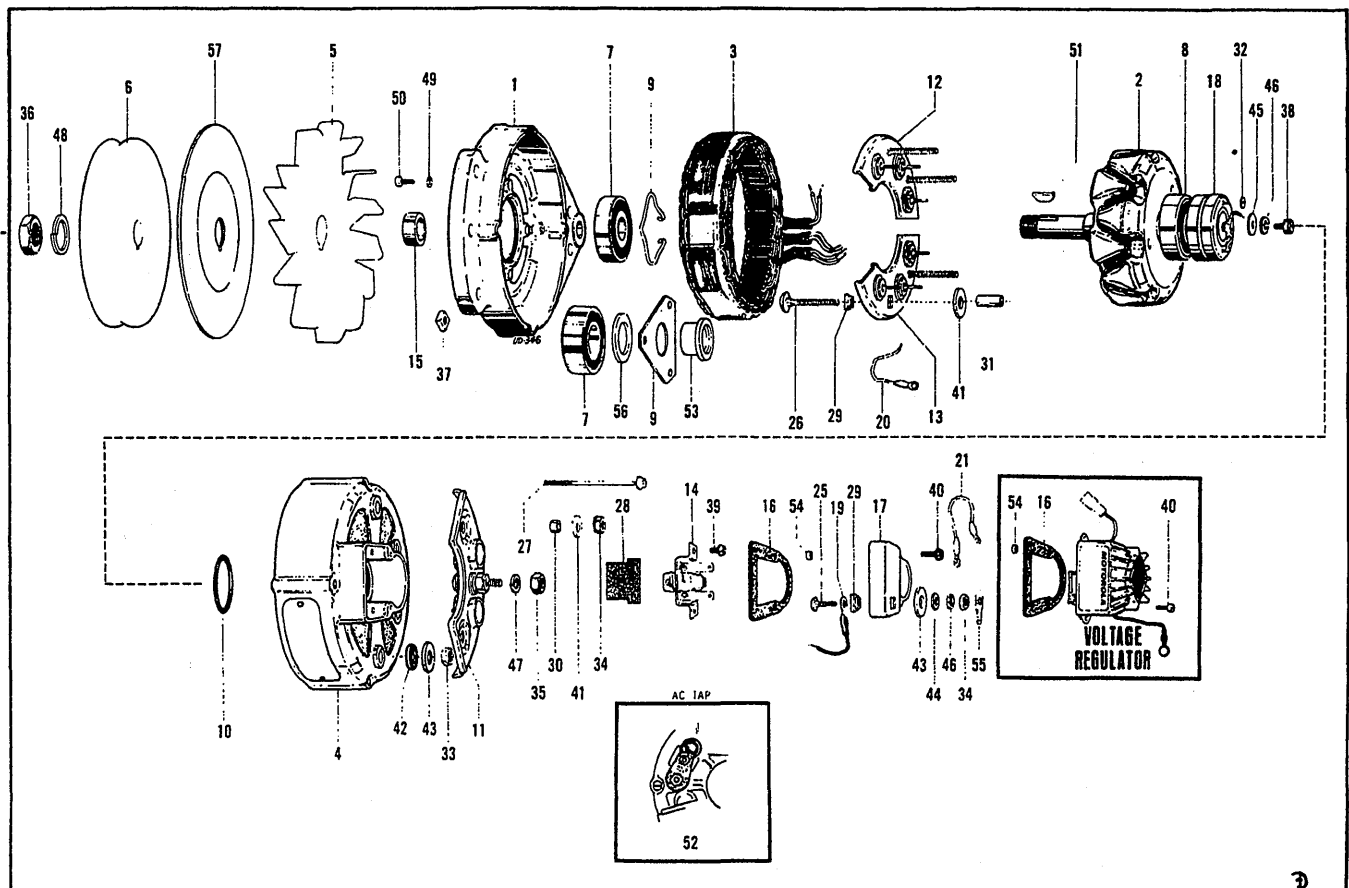
Alternator

Code	Description	No. Used	Part	Notes
	Alternator w/regulator & Pulley	1	288182	301008
	Alternator w/regulator and bracket assy.	1	288184	
1	Cover, front	1		14-24
2	Rotor Assy.	1		12-13
3	Stator Assy.	1		13-1
4	Rear Housing	1		14-68
5	Fan	1		7-68
6	Pulley	1	296885	
7	Bearing, Drive end front	1		11-21
8	Bearing, rear	1		11-21
9	Retainer, Front Brg	1		11-3
10	Retainer, Rear Brg	1		11-26
11	Isolation Diode	1	150278	298888
12	Negative Rectifier Diode	1		1-59
13	Positive Rectifier Diode	1		1-66
14	Brush Assy.	1		3-15
15	Spacer, Fan & Pulley	1		20-152
16	Gasket, Regulator Mounting	1		3-14
18	Slip Ring Assy.	1		12-22
	<u>Regulator, Voltage</u>	1	289172	
19	Belt	1	239387	



MOTOROLA

service parts



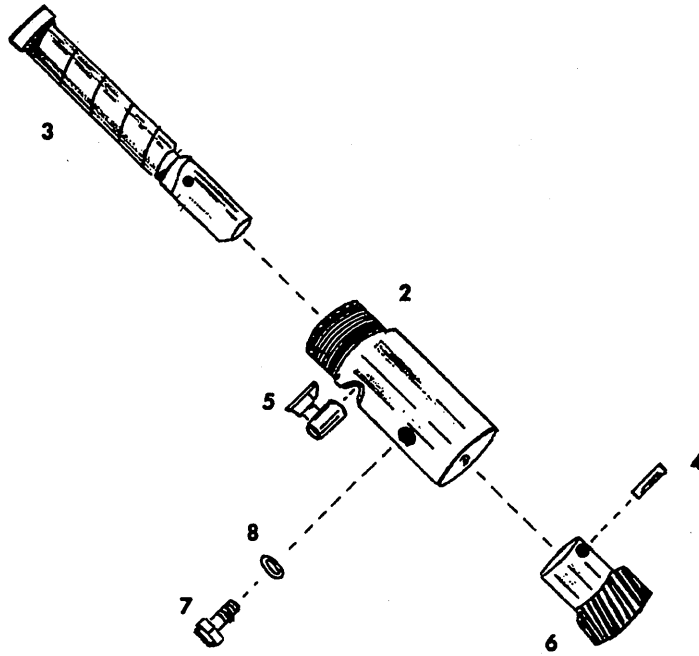
Alternator

Electrical

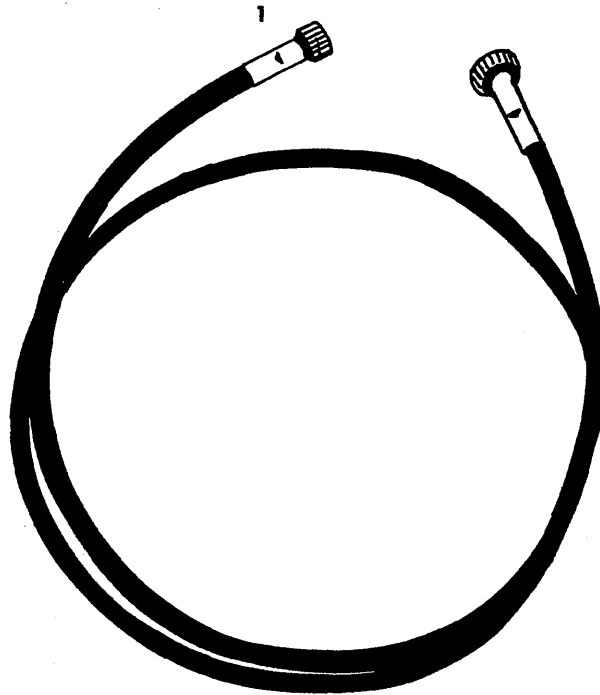
12 Volt - Motorola - ~~55 Amp~~
51 AMP

Alternator

Code	Description	No. Used	Part	Notes
	Alternator w/regulator & Pulley	1	288759	use 302280
	Alternator w/regulator and bracket assy.	1	289283	
1	Front Housing	1		14-24
2	Rotor Assy	1		12-7
3	Stator Assy.	1		13-3
4	Rear Housing	1		14-68
5	Fan	1		7-68
6	Pulley	1		7-1
7	Front Bearing	1		11-21
8	Rear Bearing	1		11-21
9	Front Bearing Retainer	1		11-3
10	Rear Bearing Retainer	1		11-26
14	Brush Assy.	1		3-15
11	Isolation Diode	1		1-30
13	Positive Rectifier Diode	1		1-66
12	Negative Rectifier Diode	1		1-59
16	Gasket, regulator mounting	1		3-14
	<u>Voltage Regulator</u>	1	289172	
	Bracket, alternator mounting	1	261141	
	Arm, belt tightner	1	261150	
19	Belt	1	239387	
18	Slip Ring Assy.	1		12-22



NOT AVAILABLE



Tachometer Drive, mechanical type

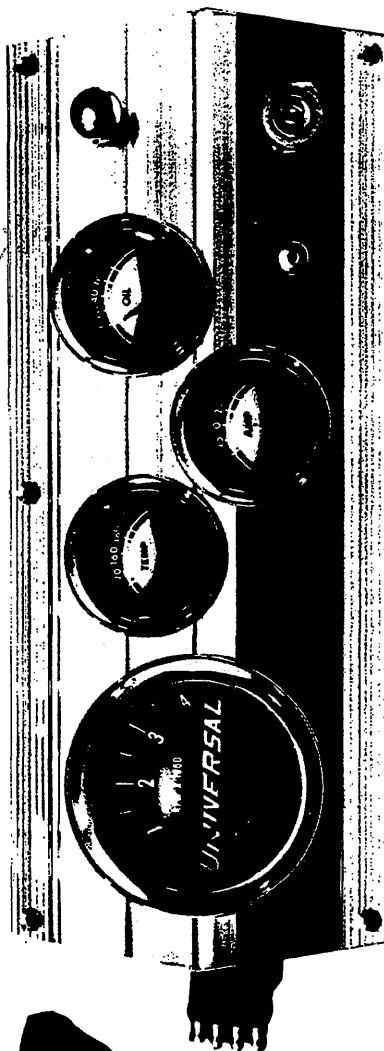
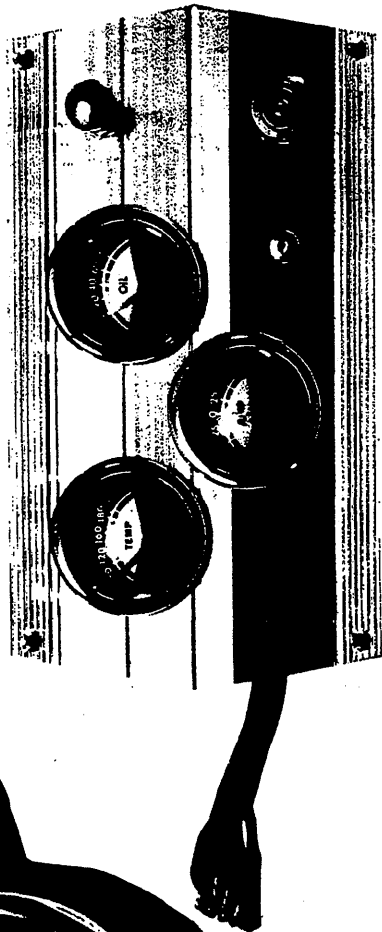
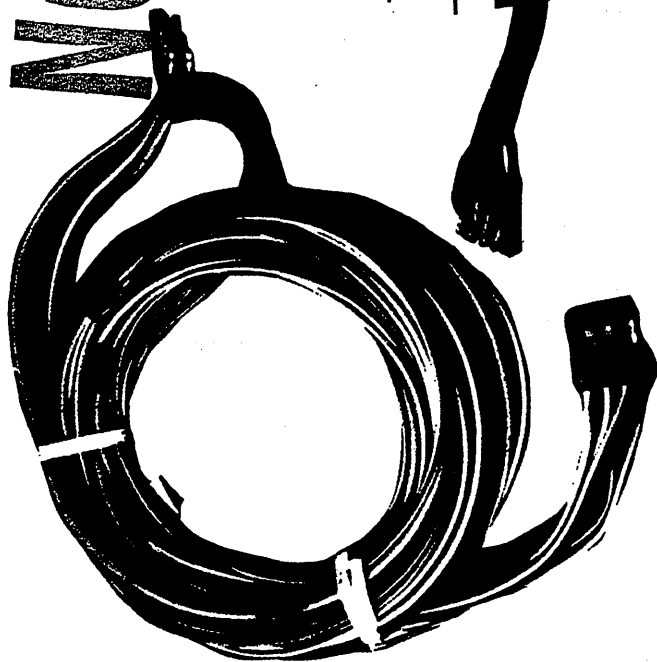
Electrical

Tachometer Drive System

For Use With Mechanical Tachometers

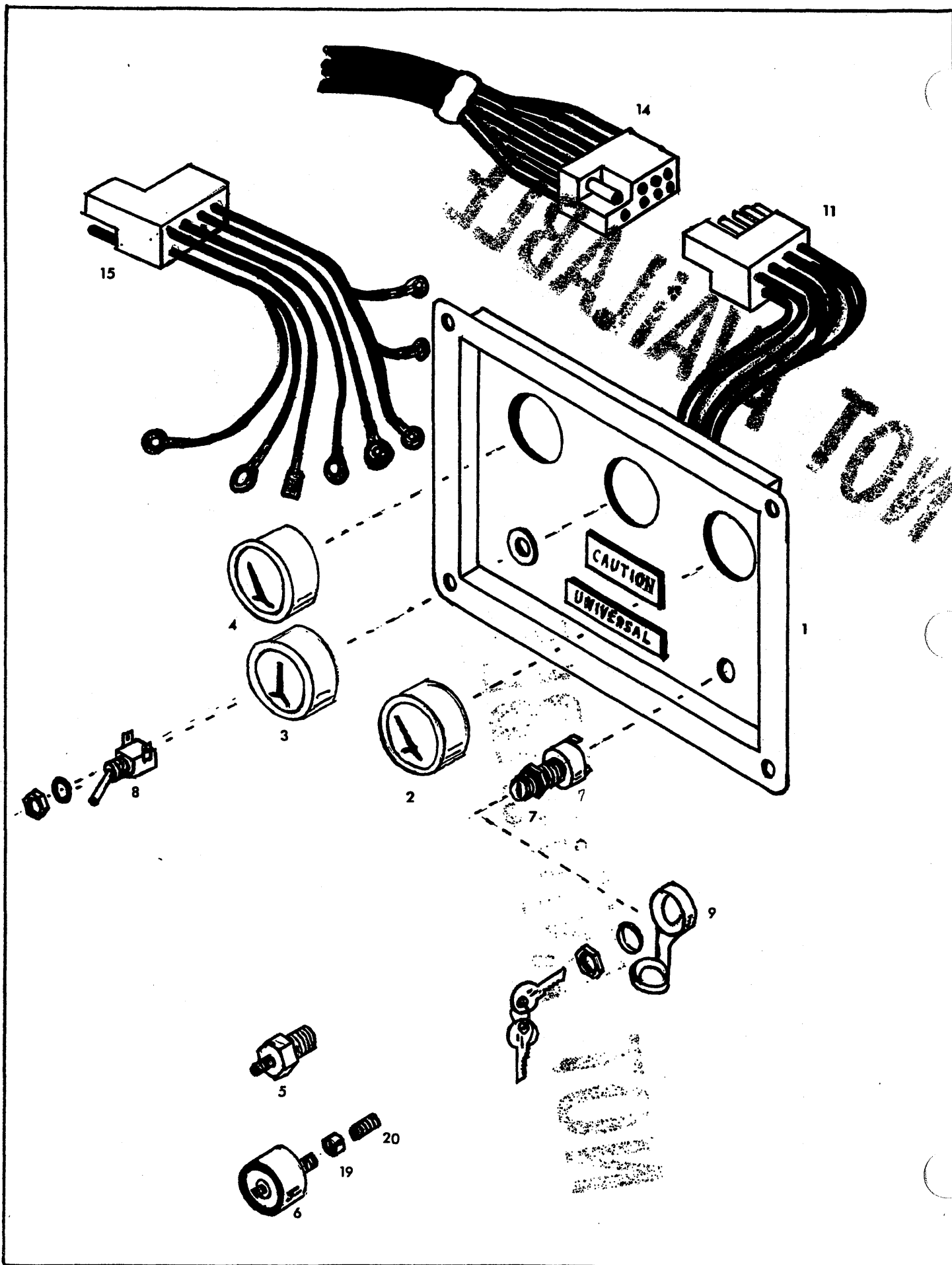
Code	Description	No. Used	Part	Notes
1	Tachometer Drive Assy. -mechanical	1	261258	
2	Sleeve, Tach. Drive	1	261083	
3	Shaft, Tach. Drive	1	261084	
4	Pin, Tach. Drive	1	230357	
5	Outer, Tach. Drive	1	261086	
6	Gear, Tach. Drive	1	262422	
7	Lock Screw, Tach Drive Housing	1	261085	
8	Lock Washer	1	231909	5/16"
	<u>Tachometer Drive Cable Assy.</u>			
1	6' in length	AR	288807	
	9' in length	AR	261088	
	10' in length	AR	239730	
	12' in length	AR	275863	
	14' in length	AR	239731	
	16' in length	AR	275862	
	18' in length	AR	239732	
	22' in length	AR	239733	

NOT AVAILABLE



Six Unit, Medallion from 1967

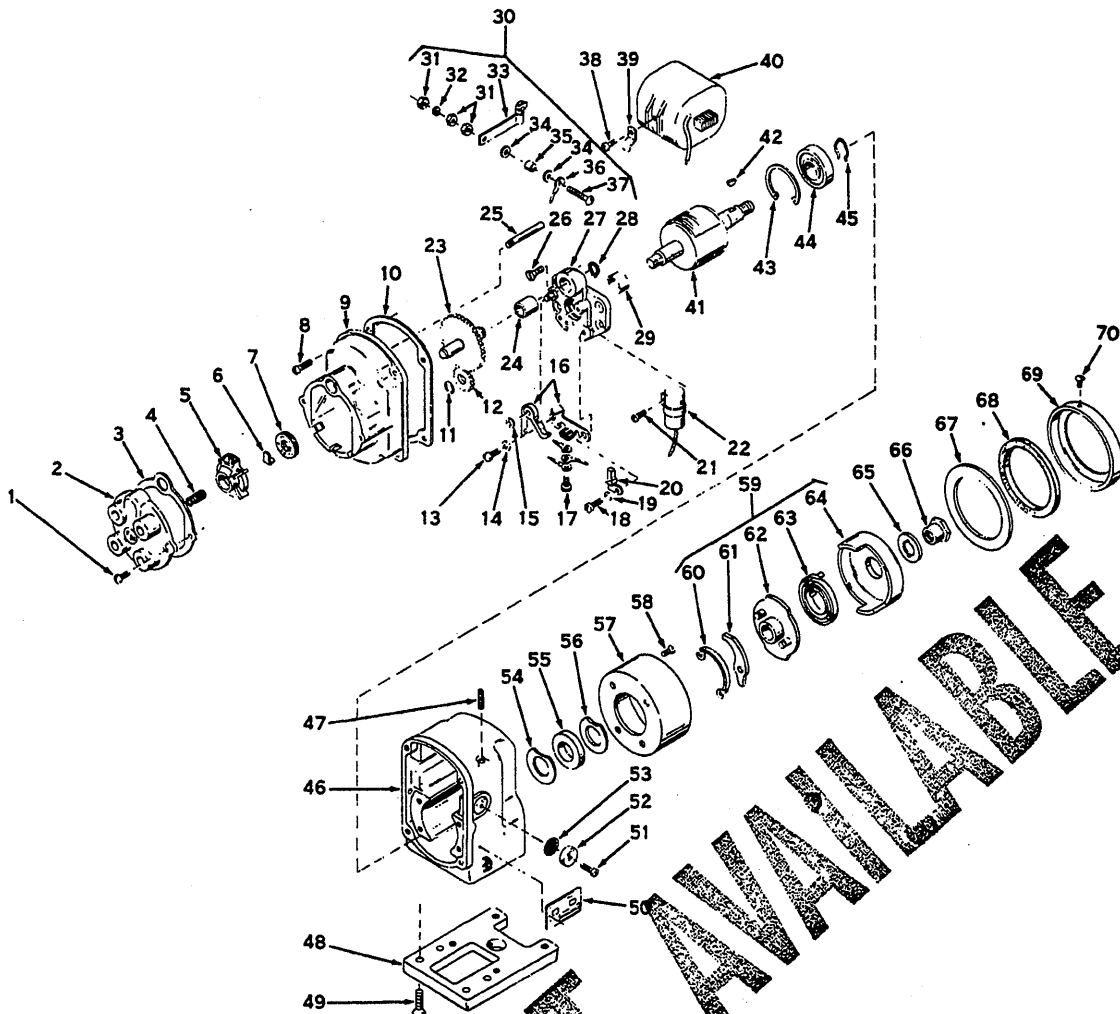
Code	Description	No. Used	Part	Notes
1	Panel Assy. - six unit	1	289293	Use 255972
2	Tachometer	1	289294	Use 299263
3	Ammeter 60-0-60	1	289296	
4	Temperature Gauge 10° - 240°	1	289297	
5	Temperature Sender	1	289299	
6	Oil Pressure Gauge 0-80	1	289300	
7	Oil Sender 1/2" NPT	1	289301	Use 298387
8	Ignition Switch	1	289302	
9	Blower Switch	1	289303	
10	Pipe Nipple	1	207805	1/8 NPT x 1 1/2"
11	Pipe Coupling	1	208073	1/8"
12	Engine Harness	1	289304	
13	Wire Harness 10' long	1	289306	Not Available
14	Wire Harness 20' long	1	289307	
<u>5 Unit Instrument Panel, Medallion</u>				
1	Panel Assy.	1	294682	use 256210 NLA
2	Ammeter	1	289296	
3	Temperature Gauge	1	289297	
4	Temperature Sender	1	289299	
5	Oil Gauge	1	289300	Use 298384
6	Oil Sender	1	289301	Use 298387
7	Ignition Switch	1	289302	
8	Blower Switch	1	289303	
	Engine harness w/terminals	1	289304	
	Wire harness for 5 unit panel, same as six unit			
	Pipe nipple	1	207805	1/8 NPT x 1 1/2"
	Pipe coupling	1	208073	1/8"



ELECTRICAL

INSTRUMENT PANEL
Less TachometerINSTRUMENTS
After 1978

Code	Description	No. Used	Part	Notes
	Panel Assembly	1	299626	
1	Panel only	1	298572	
2	Ammeter Guage	1	298385	
3	Oil Pressure Guage	1	298384	
4	Temperature Guage	1	298383	
5	Sending Unit Temp	1	298386	$\frac{1}{2}$ "
6	Sending Unit Oil	1	298387	
7	Ignition Switch	1	299190	
8	Toggle Switch	1	299650	
9	Cover Protector	1		
10	Bulb, Panel Light 12 Volt	1		GE53R
11	Panel Harness	1	298404	
12	Fuse, Panel Harness 10 Amp	1		
13	Fuse, Panel Harness 20 Amp	1		
14	Harness, 10' extension	1	298585	Use 300675
15	Harness, engine	1	299652	
16	Fuse, engine harness, SC 40 Amp time delay	1		
17	Fuse, Blower 10 Amp	1	299651	
18	Logo	1	298348	
19	Pipe Coupling	1	208073	
20	Pipe Nipple	1	239198	
21	Wire Diagram	1	299269	
	Tachometer	1	299263	



NOT AVAILABLE

Note,
Complete Model & serial needed
on this unit for service. Order
from factory.

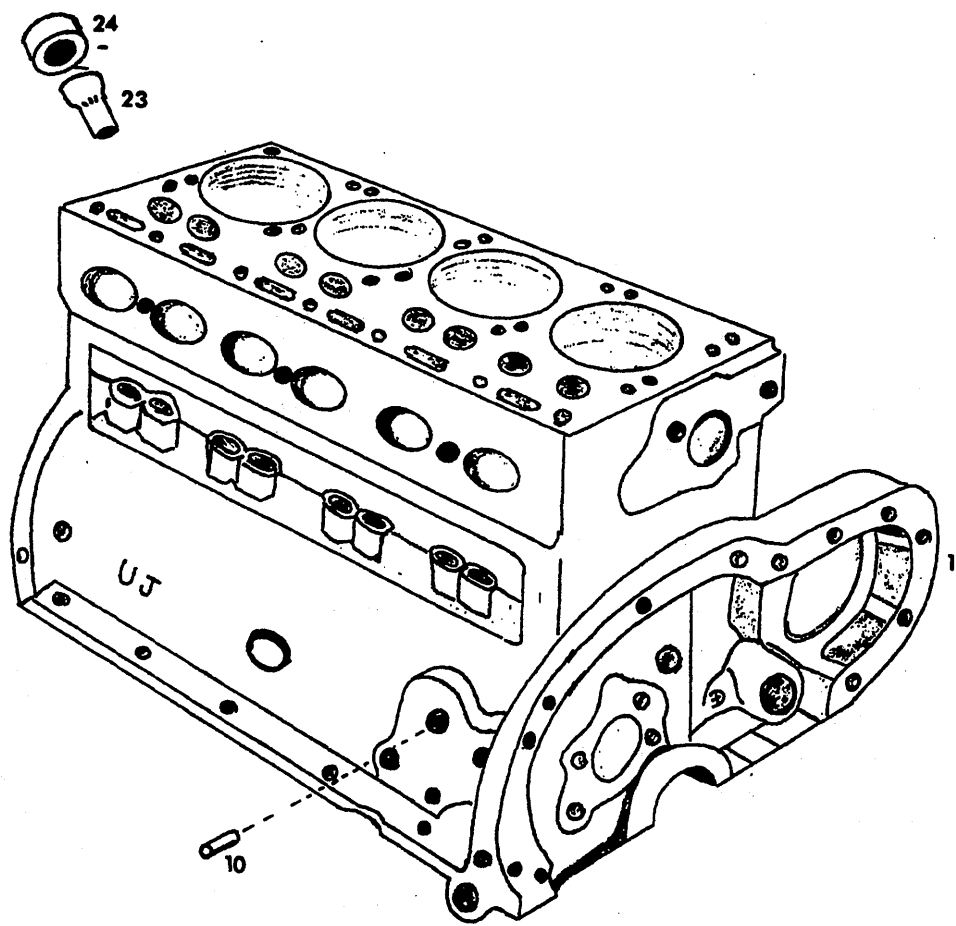
Electrical

Fairbanks Morse

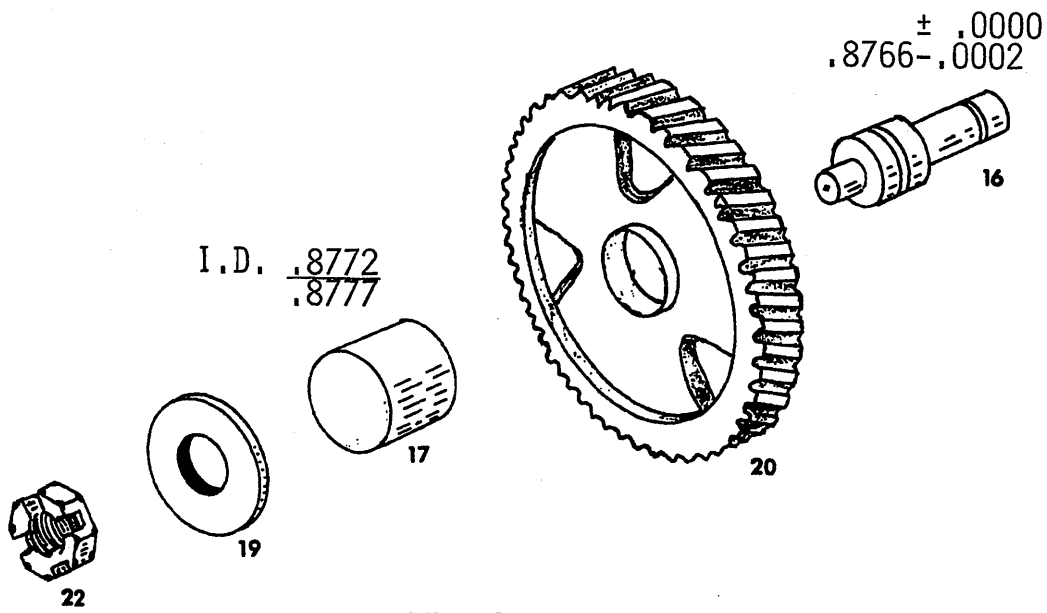
Magnito

Code	Description	No. Used	Part	Notes
	Magnito and bracket assy.	1	285445	
	Magnito bracket & bushing assy.	1	285440	
	Magnito bracket	1	281142	
	Magnito drive shaft bushing	1	279841	
	Screw, drive bushing	1	2950002	#6 x 5/16
	Magnito drive shaft	1	279840	
	Key, accessory drive gear	1	240929	
	Gear, accessory drive	1	261061	
	Pin, water pump drive	1	280054	
	Woodruff key	1	239155	#6
	Magnito	1	273878	Use 260820
	Cap Screw	2	231080	3/8 - 16 x 1"
	3/8" Lockwasher - shakeproof	2	231910	#1120
	Pipe Nipple	1	207805	1/8IPT x 1 1/2
	Pipe Coupling	1	1520071	1/8 IPT
	High tension ignition wire #1	1	284100	
	High tension ignition wire #2	1	284096	
	High tension ignition wire #3	1	284099	
	High tension ignition wire #4	1	284102	
	Ignition Wire Carrier	1	260894	
	Starter Pad blank cover	1	272405	
	Cap Screw	2	294484	3/8 - 16 x 5/8
	Lockwasher	2	231895	3/8
	Flywheel only, used with magnito	1	261001	

NOT AVAILABLE



Cylinder Block



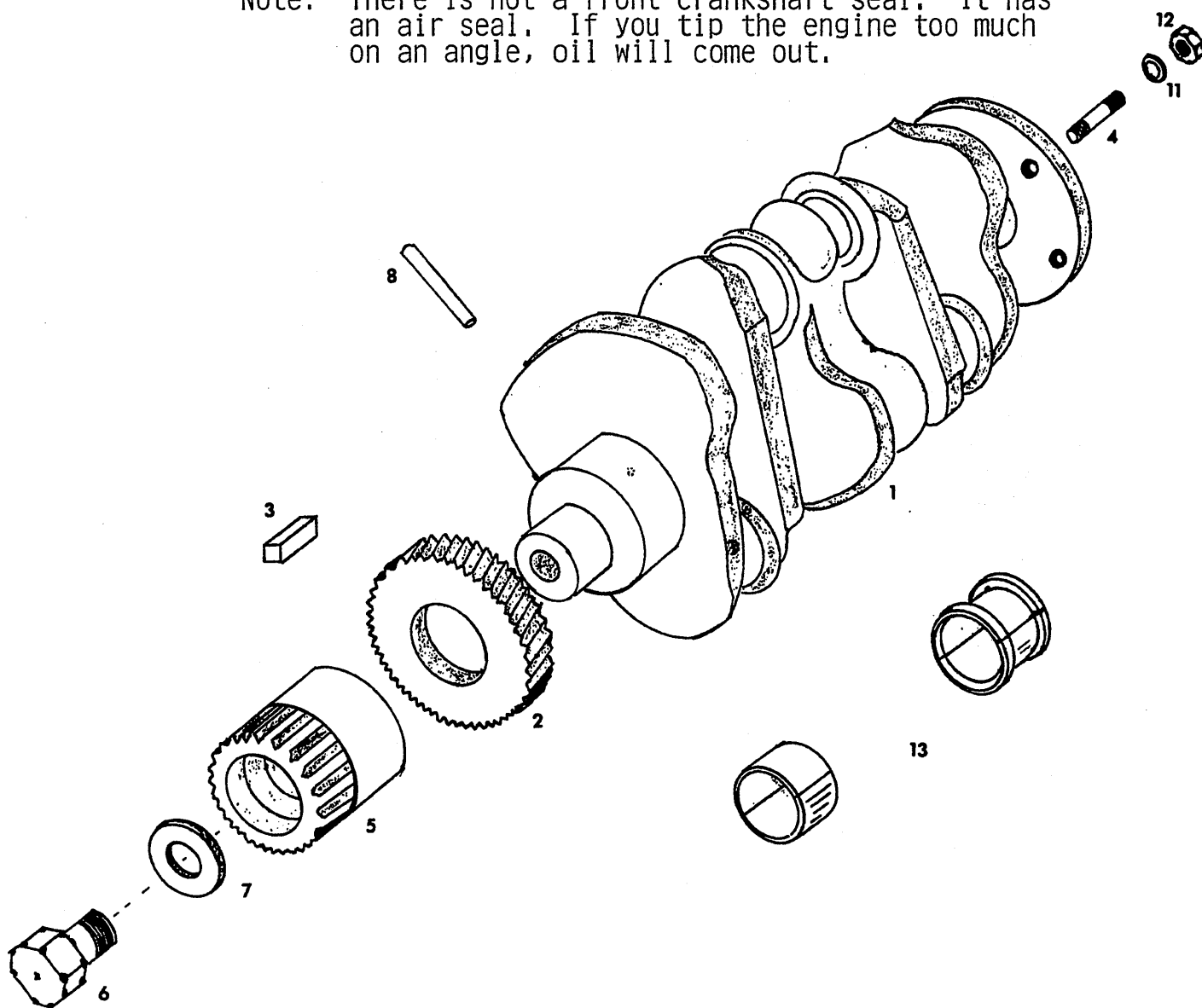
Idler Gear Assy.

Engine Group

Cylinder Block

Code	Description	No. Used	Part	Notes
	Bare block only	1	289453	
	Short Block - new style w/head thermo.	1	289455	
	Short Block w/Dole Thermostat	1	289456	
	Block w/valve guides-m/Brgs-Cam Brgs	1	289457	up to #79475
	Block w/valve guides-m/Brgs-Cam Brgs	1	289458	after #79475
1	Cyl. block only	1	260993	
2	Brg. Cap, flywheel end	1	261005	
3	Brg Cap, drive end	1	261006	
4	Stud, Brg Cap fly end	2	261033	
5	Stud, Brg Cap drive end	2	261032	
6	Nut, main brg cap stud	4	238763	
7	Dowel Pin, Brg Cap	4	230320	
8	Expansion Plug, Brass	2	241024	
9	Pipe Plug 1/8 slotted head	4	207772	
10	Bushing, fuel pump push rod	1	263759	
11	Nipple, water drain	1	207819	1/8 IPT x 5 1/2
12	Cap, nipple water drain	1	289287	1/8 IPT
13	Pipe Plug 1/8 IPT slotted head	1	207770	
14	Connector 1/8 IPT x 1/4" ODT	1	239137	
	Water Drain cock	1	239138	
15	Idler gear shaft assy.	1	289454	
16	Idler shaft	1	261064	
17	Bushing, idler shaft	1	261067	
18	Plug, idler shaft oil hole	1	263760	
19	Thrust washer	1	260972	
20	Gear, idler & bushing assy	1	261244	use 261066
21	Set Screw	2	231573	5/16-18 x 5/16"
22	Stop Nut, elastic - new style	1	239858	1/2 - 20 thd.
23	Tube oil filler on front of block	1	288337	
24	Cap, oil fill	1	288338	use 295536
	Note; Short block assy. includes crankshaft and gear assy., camshaft and gear assy., pistons and connecting rods and idler gear unit.			

*** Note: There is not a front crankshaft seal. It has an air seal. If you tip the engine too much on an angle, oil will come out.

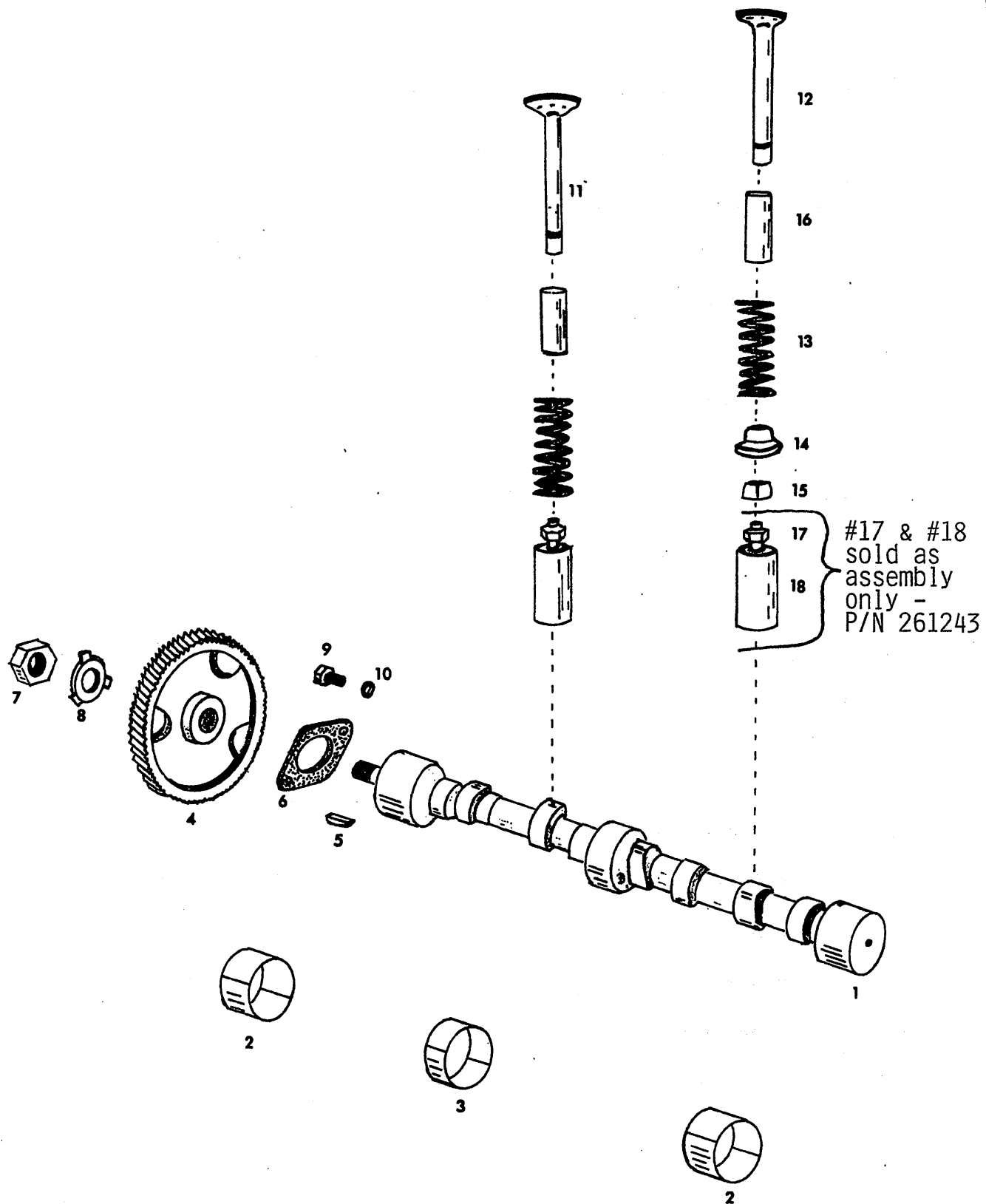


Crankshaft Group

Engine

Crankshaft Group

Code	Description	No. Used	Part	Notes
	*Crankshaft Assy.	1	261259	
	Crankshaft Sub Assy.	1	287217	
1	Crankshaft only	1	260997	
2	*Gear, timing	1	261016	
3	*Key, timing gear	1	239143	1/4 x 1 1/16"
4	*Studs USS to SAE	6	261072	
5	*Sleeve or drive gear	1	285982	
6	*Bolt, sleeve draw bolt	1	261089	1/2"
7	*Lockwasher, shakeproof	1	239144	
8	*Pin, hand start crank	1	230393	
11	Lockwasher	6	231895	3/8
12	Nut	6	230147	3/8 - 24
	*Parts included in assembly			
13	Main Bearing Set Std.	1	287753	
	Main Bearing Set .010	AR	287833	
	Main Bearing Set .020	AR	287834	
	Main Bearing Set .030	AR	287835	
13A	Main Bearing only - forward end	2	261022	
13B	Main Bearing only - drive end	2	261023	



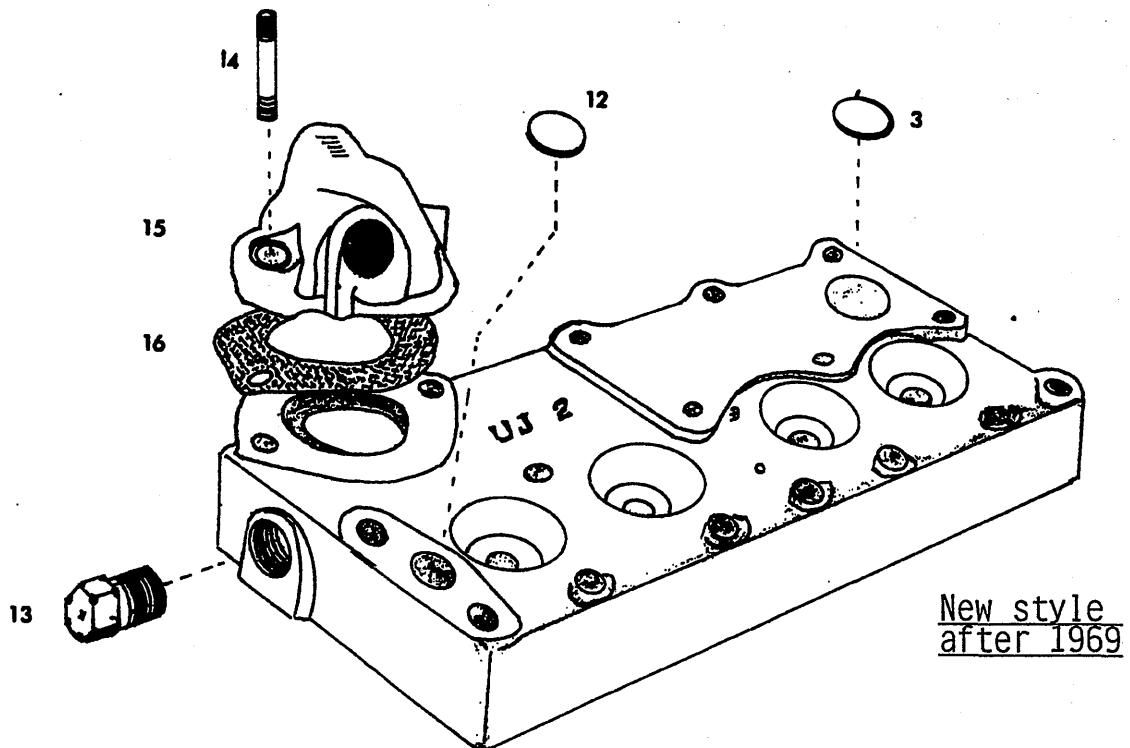
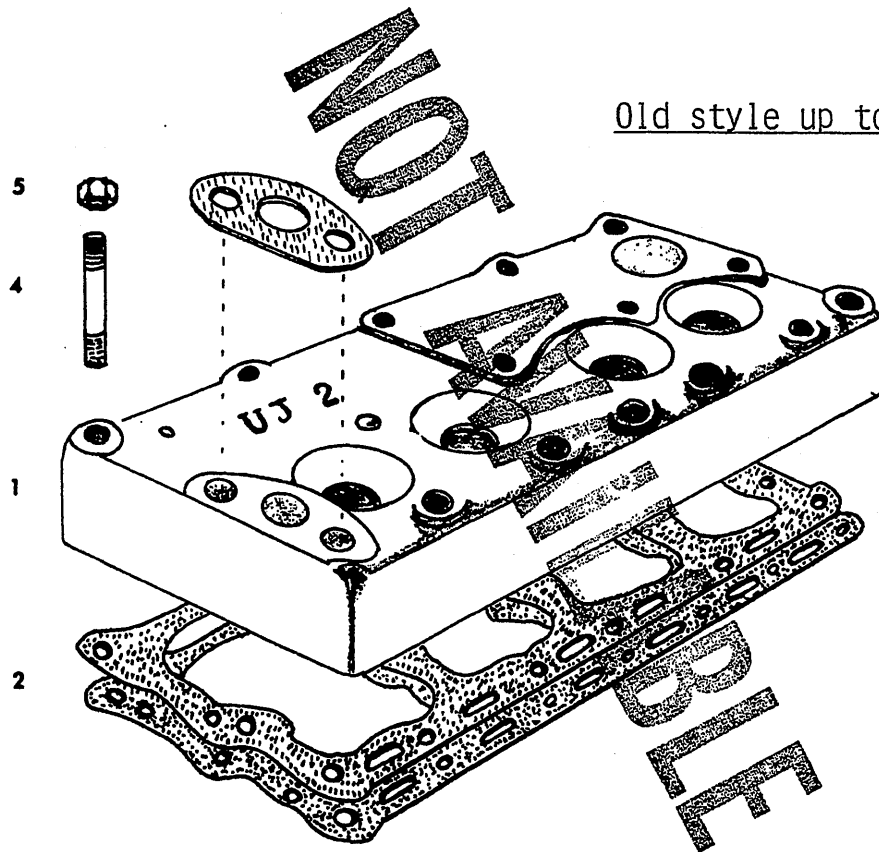
Camshaft Group

Engine Block

Camshaft - Valves

Code	Description	No. Used	Part	Notes
	Camshaft Assy.	1	261245	Use 289460
1	Camshaft only	1	260998	
2	Brg., Camshaft	2	261024	
3	Brg., Camshaft	1	261025	
4	Gear, timing	1	261017	
5	Key, woodruff	1	239155	#6
6	Trust Plate	1	261068	
7	Nut, special type	1	263761	3/4 - 16
8	Lockwasher	1	263762	Special
9	Cap Screw, thrust plate	2	231033	1/4 - 20 x 1/2
10	Lockwasher, thrust plate	2	231894	1/4"
11	Intake Valve	4	295623	
12	Exhaust Valve	4	295624	
13	Valve Spring	8	295665	
14	Retainer	8	261080	
15	Lock	16	261027	
16	Guide, standard size	8	261030	
16A	Guide, .010 oversize	AR	289106	Not Available
17	Screw	8	259610	Use 261243
18	Tappett	8	261243	
	Tappett .010 over size	AR	295521	Not Available
	Note: cam brgs. must be reamed for proper clearance after installation in cyl. block.			

Old style up to 1969

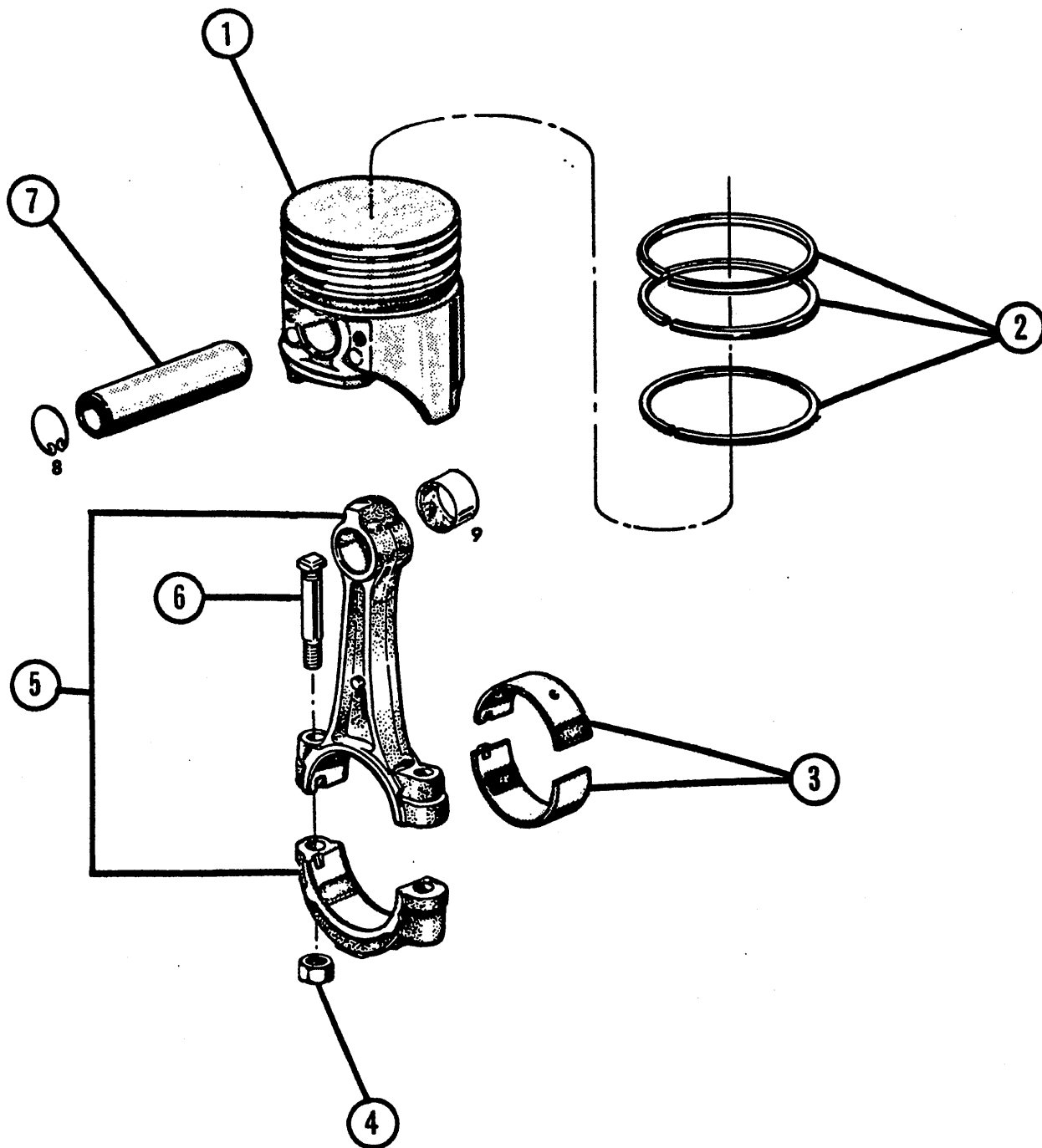


New style
after 1969

Engine Block

Cylinder Head Group

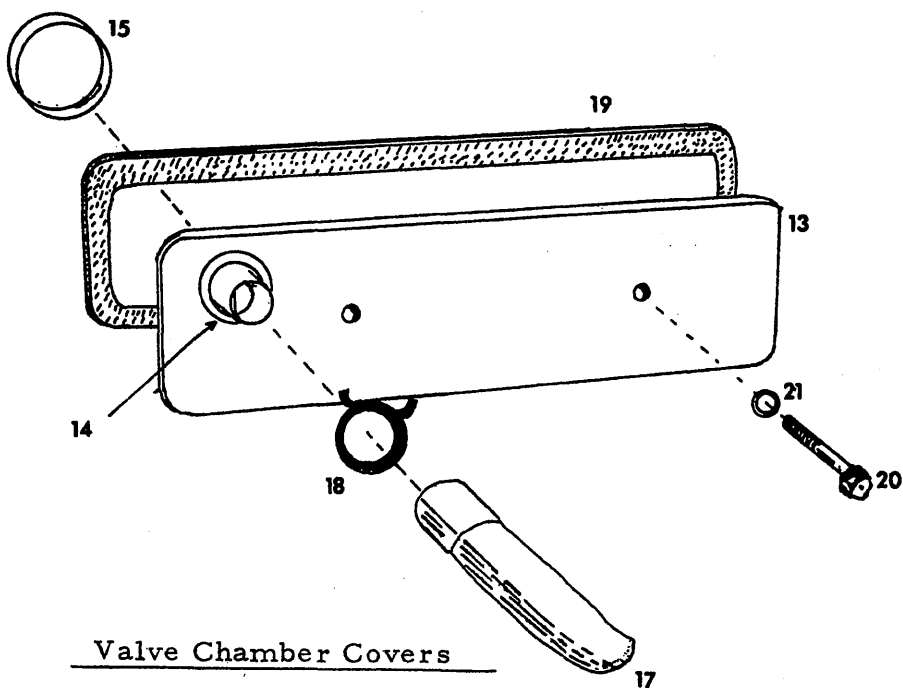
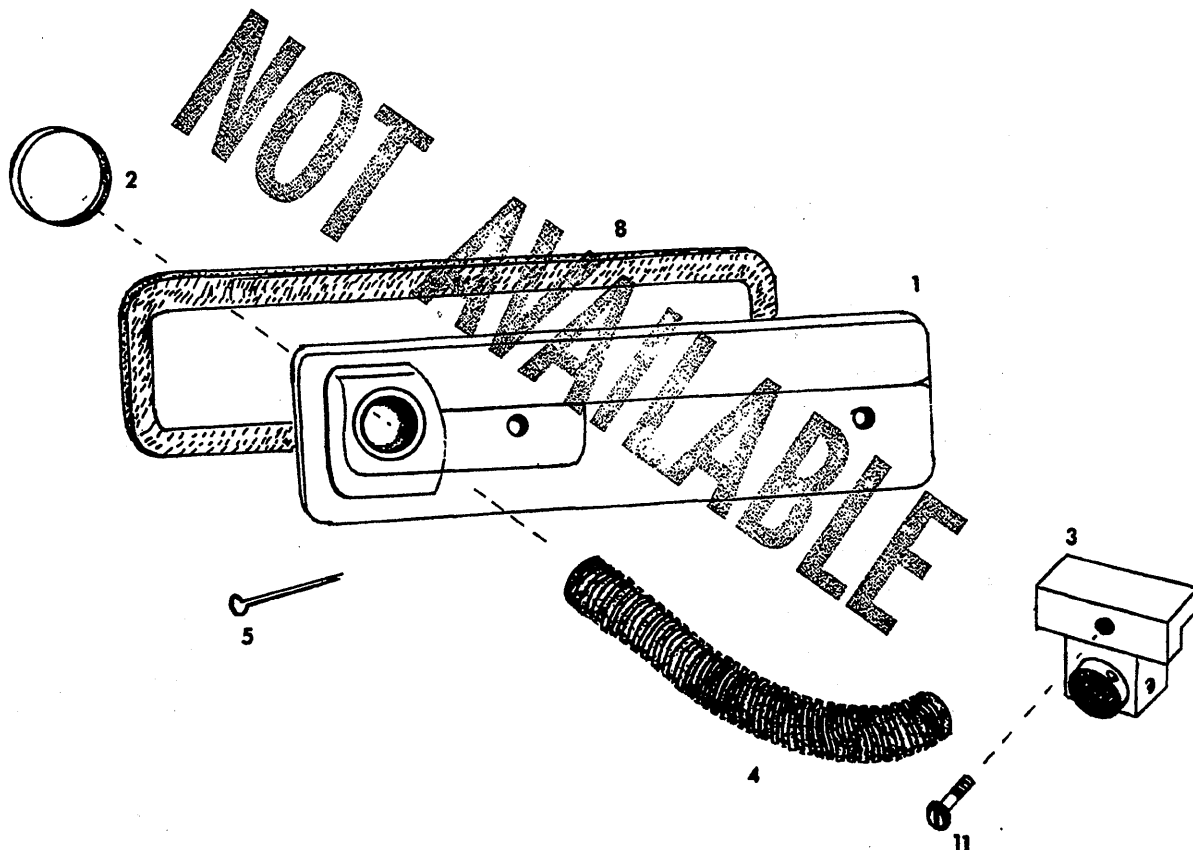
Code	Description	No. Used	Part	Notes
	<u>Early Type Up to 1969</u>			
1	Cyl head w/generator mounting ears	1	260994	Use 259603
	Cyl head for generator	1	256178	Not Available
	Cyl head for alternator	1	256177	Not Available
2	Gasket, cyl head	2	263776	
3	Expansion Plug	1	241024	
4	Studs, cyl head SAE x USS	13	261036	
	Studs, lifting eye bracket	2	260723	
	Studs, water outlet flange	2	260794	
5	Nut, cyl head	13	260725	
6	Pipe, water outlet	1	261052	Not Available
7	Gasket, water outlet	1	261053	
8	Lifting eye only	1	260603	
9	Lifting eye and alternator bracket	1	261133	for Prestolite
10	Lifting eye and alternator bracket	1	261141	for Motorola
	<u>Late Type Cyl. Head After 1969</u>			
11	Cyl Head	1	259603	
12	Expansion Plug Use 260802	1	241028	7/8"
13	Pipe Plug	1	207779	1/2" IPT
14	Stud, thermo housing outlet	2	262390	
15	Housing, thermostat outlet	1	262556	
16	Gasket, thermostat outlet	1	261601	
17	Nut, thermostat outlet housing	2	230147	
18	Stud, Cylinder Head	3	261542	
18-1	Stud, Cylinder Head	13	261036	
	all other Parts same as early type			



Engine Block

Pistons - Rings - Rods

Code	Description	No. Used	Part	Notes
1	Piston w/pin std	4	260999	
	Piston w/pin +010	4	262197	
	Piston w/pin +020	4	262198	
	Piston w/pin +030	4	262199	
7	Pin, Piston std	4	261031	Use 299302
	Pin, Piston .005	4	287951	
	Pin, Piston .010	4	287952	
	Pin, Piston .015	4	287953	
8	Piston Pin Lock	8	239169	
2	Rings, Set std	1	287761	
	Rings, Set .010	1	287873	
	Rings, Set .020	1	287874	
	Rings, Set .030	1	287875	
	Rings, Compression only std	8	261090	Use 287761
	Rings, Oil only std	4	261091	Use 287761
9	Bushing, Piston Pin	4	283919	Use 261143 (NL)
5	Connecting Rod Assy.	4	288332	
6	Bolt, Con. Rod	8	261094	
4	Nut, Con. Rod bolt	8	239167	
3	Brg Set, Con. Rod std	1	287756	
	Brg Set, Con. Rod.010	1	287842	
	Brg Set, Con. Rod.020	1	287843	
	Brg Set, Con. Rod.030	1	287844	
	Brg, one half shell	8	261026	
3A	Brg, one half shell .010	8	274723	
	Brg, one half shell .020	8	274722	
	Brg, one half shell .030	8	274721	



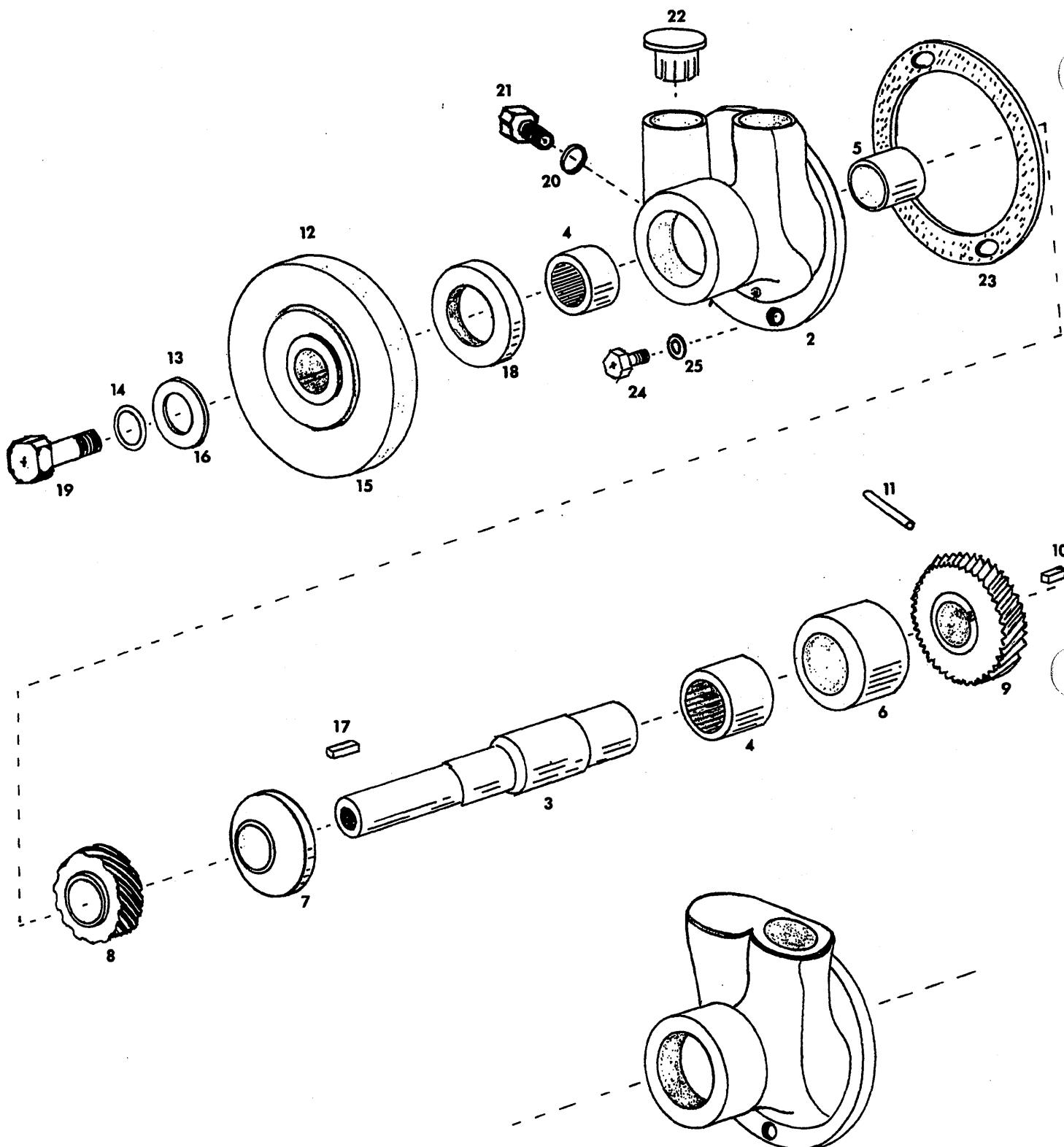
Valve Chamber Covers

Engine Block

Early Type Up to 1967

Valve Cover Group

Code	Description	No. Used	Part	Notes
	Valve cover and breather Assy.	1	261246	Use 265544
1	Valve Cover only	1	261021	
2	Baffel, valve cover	1	261092	
3	Connector, breather pipe	1	261212	
4	Tube, breather	1	260784	
5	Cotter Pin	1	294612	3/32 x 1 1/4"
6	Machine Screw	2	231198	8/32 x 1/4" RH
7	Lockwasher	2	231889	#8 - 32
8	Gasket, valve cover	1	261039	
9	Cap Screw	2	231044	1/4-20 x 2 3/4"
10	Washer, copper	2	260718	
11	Screw, breather pipe attaching	1	2840611	10/32 x 1 1/2 RH
12	Lockwasher	1	231890	#10
<u>Late Type After 1967</u>				
	Valve Cover Assy.	1	265544	
13	Valve Cover only	1	257213	
14	Connector, breather hose	1	265538	
15	Baffle	1	265530	
16	Pipe Plug 1/8" slotted head	1	207770	
17	Hose, breather	1	288546	
18	Clamp, hose	1	261152	
19	Gasket	1	261039	
20	Cap Screw	2	231043	1/4-20 x 2 1/2
21	Copper Washer	2	260718	
<u>Valve Chamber Oil Pipe, See Page 97</u>				



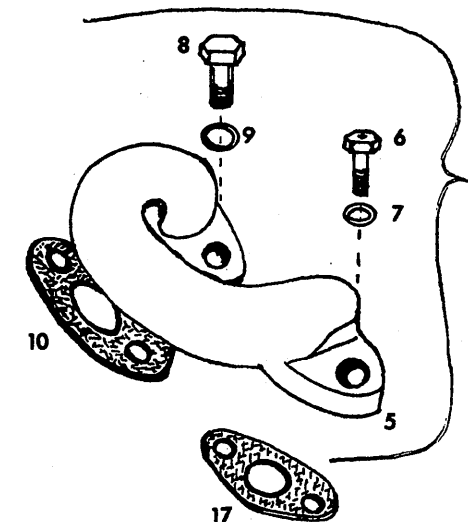
Accessory Drive Unit

See Note 2A

Engine Block

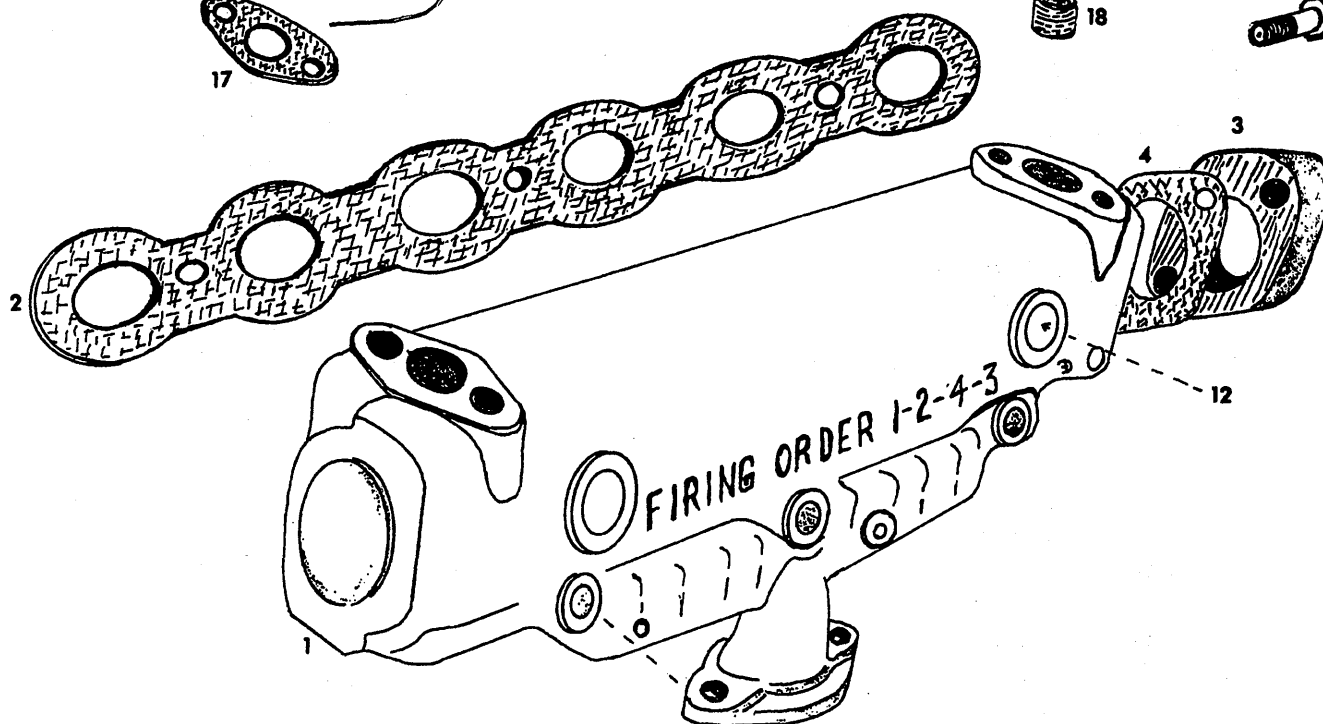
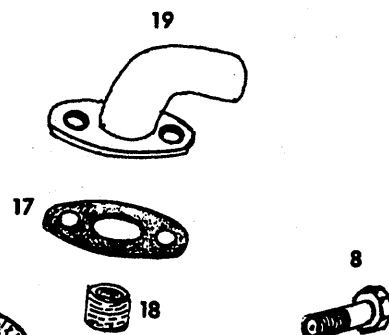
Accessory Drive

Code	Description	No. Used	Part	Notes
1	Drive Assy for generator	AR	261263	Obsolete
1A	Drive Assy for alternator	AR	261266	
2	Housing only - up to June 1972	1	261087	Not Available
2A	Housing only - after June 1972	1	297471	
3	Drive shaft	1	259647	
4	Roller Bearings	2	239549	
5	Inner Race, roller brg at pulley end	1	239550	Use 297594
6	Bushing, brg mounting	1	261058	
7	Thrust Collar	1	261057	
8	Drive Gear, distributor	1	261059	
9	Gear, driven	1	261061	
10	Key, driven gear	1	240929	
11	Pin, water pump drive	1	273712	
12	Pulley, generator drive	1	261056	Obsolete
13	Washer, drive pulley	1	280055	
14	Lockwasher, drive pulley	1	231891	5/16
15	Pulley, alternator drive	1	261113	
16	Washer, alternator drive pulley	1	231856	3/8" plain
17	Key, woodruff	2	206508	
18	Oil Seal, pulley drive	1	279694	
19	Cap Screw	1	231057	5/16-18 x 3/4"
20	Lockwasher	1	231909	5/16
21	Screw, tach drive sleeve	1	261085	
22	Plug, tach hole	AR	239307	
23	Gasket, accessory drive to block	1	260959	
24	Screw, accessory drive mounting	2	231089	3/8-16 x 2 3/4
25	Lock, accessory drive mounting	2	260704	3/8
Note: Part 2A housing is not bored for tach. drive sleeve unit				
2A	Drive housing assy., late type	1	259644	



Early Type:
No Longer Available

Use:
2 - 241019 90° elbow
1 - 241040 Hose 12"
2 - 274927 Clamps



3/8 -16

16

3/8-24

15



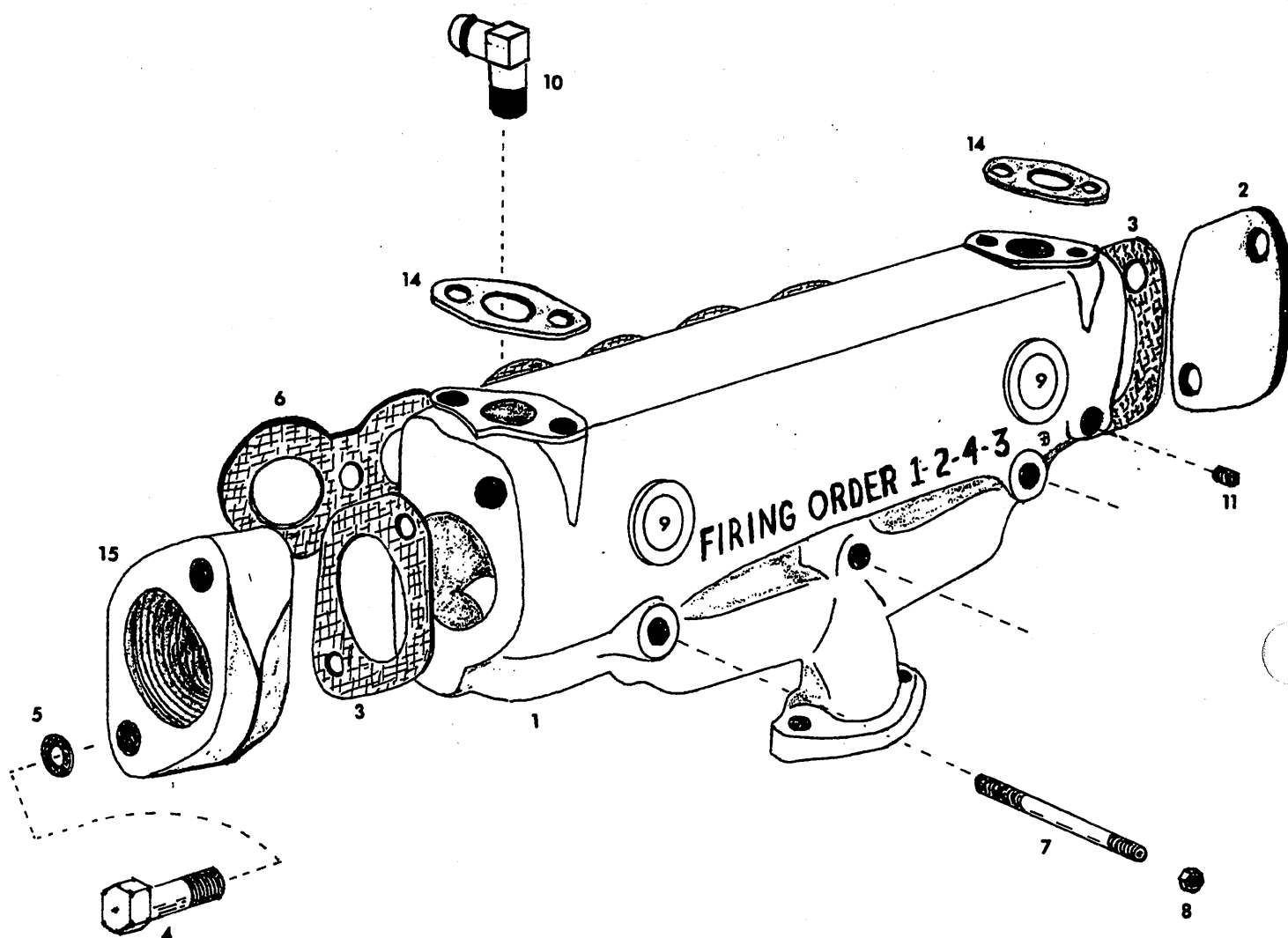
Exhaust Manifold, rear outlet

Engine

Used on UJ & UJR Engines

Manifold Group

Code	Description	No. Used	Part	Notes
1	Manifold, intake and exhaust	AR	261002	Up to 79476
1A	Manifold, intake and exhaust	AR	259624	After 79476
2	Gasket, manifold to block	1	261050	
3	Flange, exhaust outlet	1	260458	1 1/4" IPT
4	Gasket, exhaust flange	1	260459	
5	Pipe, water outlet cold head to manifold	1	261052	Early type
6	Cap Screw	2	231058	5/16" - 18 x 7/8"
7	Lockwasher	2	285304	5/16"
8	Cap Screw	2	241039	3/8" - 16 x 1 1/2"
9	Lockwasher	2	231895	3/8"
10	Gasket, water outlet	1	261053	
11	Pipe Plug 1/8 IPT	1	239136	
12	Expansion Plug	2	241028	7/8"
13	Elbow, late style 1/8 IPT x 1/4 ODT	AR	239312	
14	Elbow, early style 90°	AR	288551	
15	Nut, manifold stud to block	3	260725	3/8" SAE
16	Stud, manifold attaching SAE to USS	3	261542	
17	Gasket, water inlet , when used	1	260687	
18	Bushing, water outlet, when used	1	208106	1/2" x 3/8" IPT
19	Water Outlet Elbow, early type	1	AB-65	obsolete
20	Elbow, hose to pipe	AR	241020	1/2" x 1/2" IPT



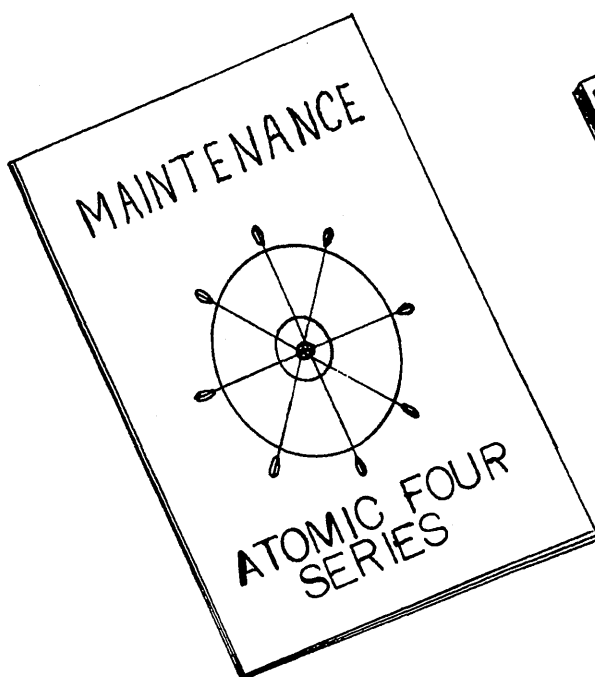
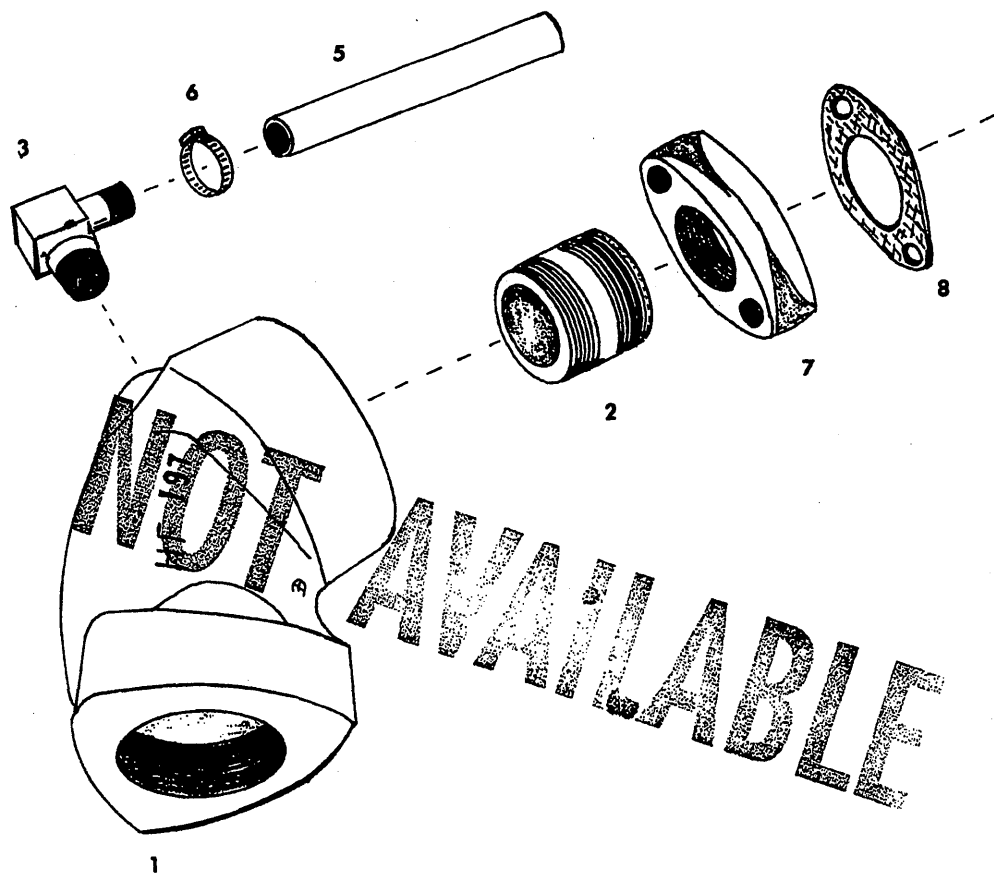
Exhaust Manifold, front outlet

Engine

Used with V. Drive Engine

Manifold Group

Code	Description	No. Used	Part	Notes
1	Manifold, intake and exhaust	AR	263331	Up to 79746
1A	Manifold, intake and exhaust	AR	262208	After 79746
2	Cover - manifold end	1	262209	
3	Gasket	1	260459	
4	Cap Screw	2	231080	3/8 - 16 x 1"
5	Lockwasher	2	231895	3/8
6	Gasket, manifold to block	1	261050	
7	Stud, SAE to USS	3	261542	
8	Nut	3	260725	
9	Plug, welch	2	241028	7/8"
10	Elbow, hose to pipe (when used)	1	241020	1/2" hose 1/2" IPT
11	Pipe Plug 1/8"	1	239136	
12	Elbow, hose to pipe (when used)	1	241019	1/2" hose 3/8" IPT
13	Bushing, water inlet (when used)	1	208106	1/2" x 3/8" IPT
14	Gasket, water inlet, (when used)	1	260687	
15	Flange, exhaust outlet	1	260458	1 1/4" IPT



9

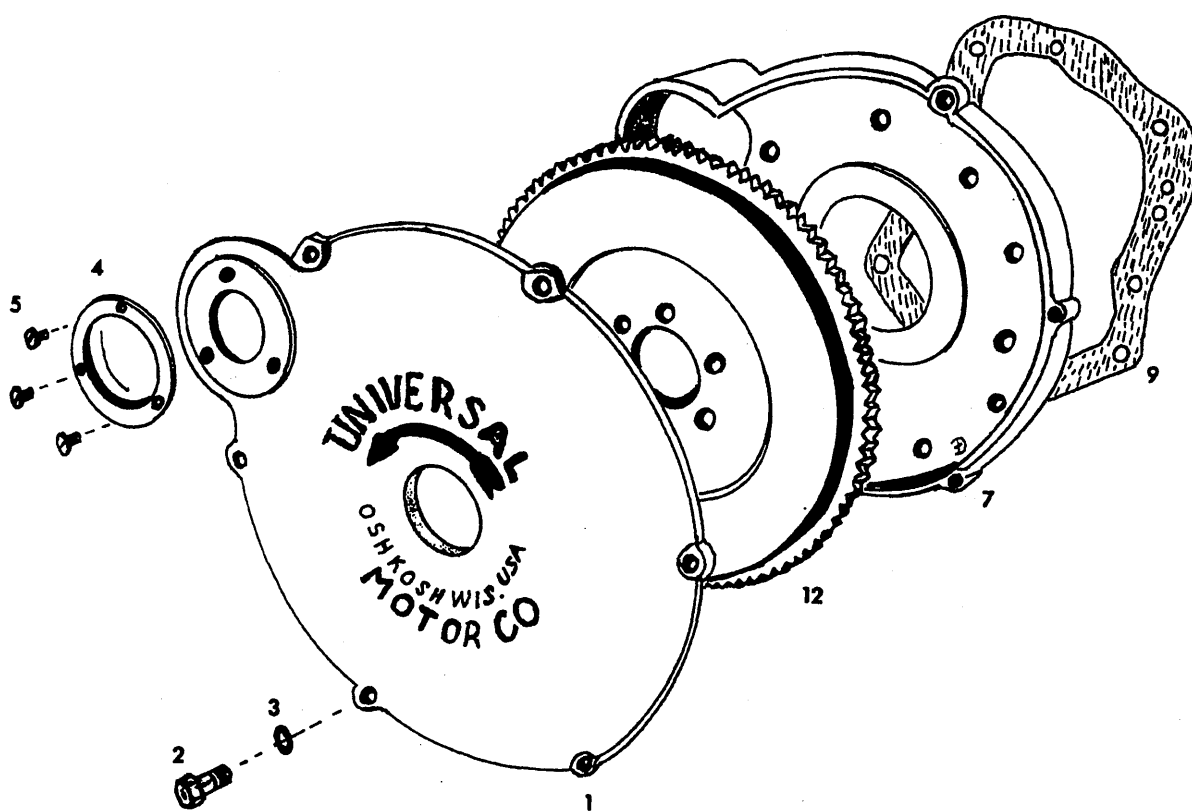


10

Exhaust

Outlet Elbow - Manuals

Code	Description	No. Used	Part	Notes
1	Water Cooled Exhaust Elbow	1	261112	Not Availab
2	Nipple, close	1	207921	1 1/4" IPT
3	Elbow, water inlet elbow	1	241019	1/2" x 3/8" IPT
4	Elbow, manifold outlet	1	241020	1/2" x 1/2" IPT
5	Hose	1	241040	1/2" x 4 1/2"
6	Hose Clamp	2	274927	
7	Flange	1	260458	
8	Gasket, flange	1	260459	
	Exhaust elbow Group, item 1 thru 8	1	255188	
	<u>Service Book</u>			
9	Owners Manual, Brown or blue	1	AAC-M-11	Not Available
10	Shop Manual, Green or orange	1	ITM-6	Not Available

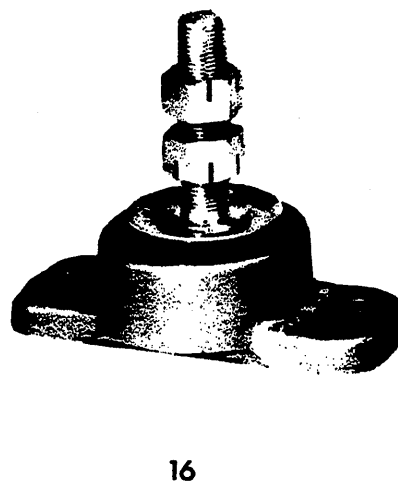
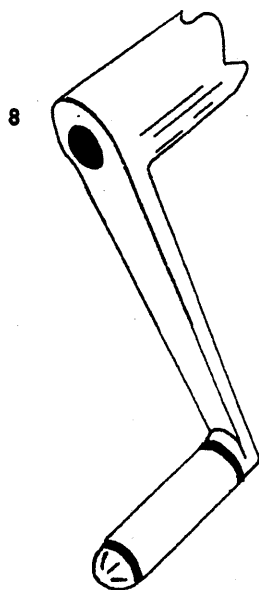
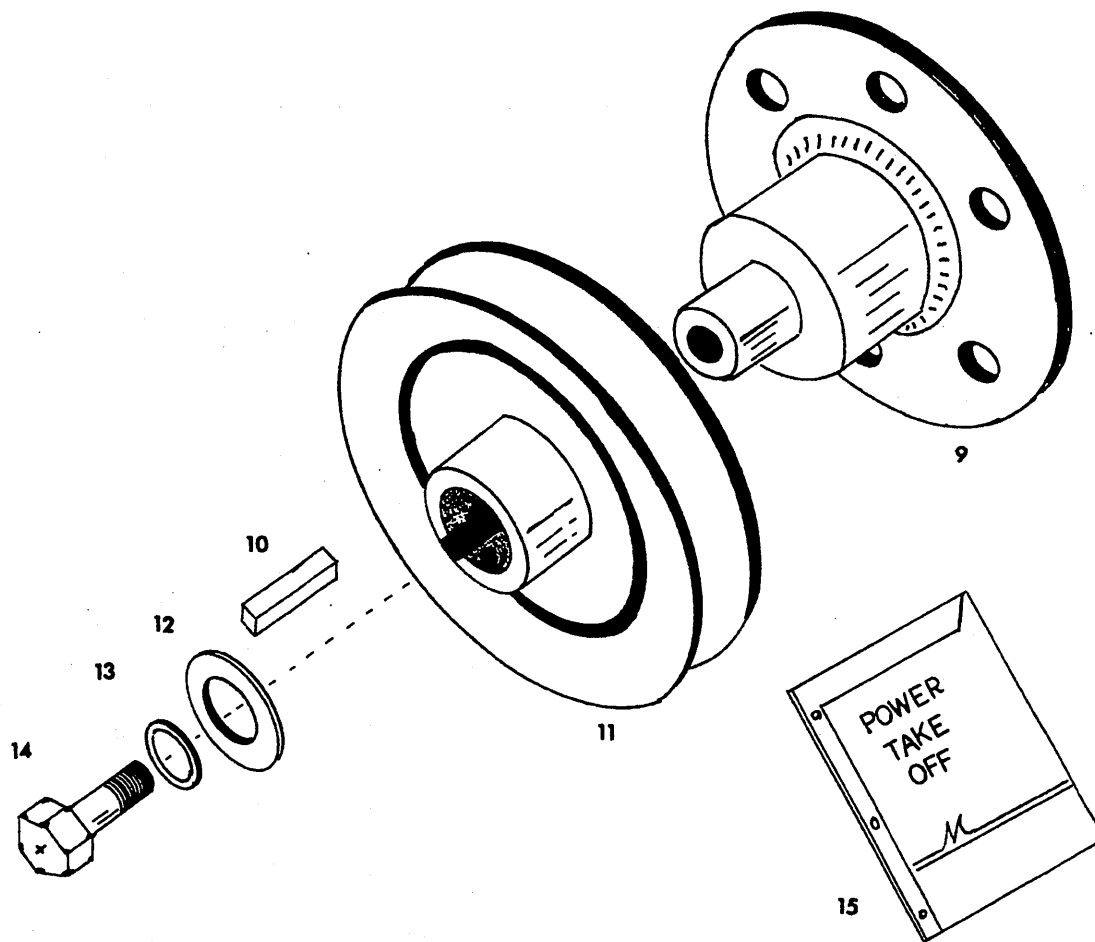


Flywheel Group

Engine

Flywheel Group

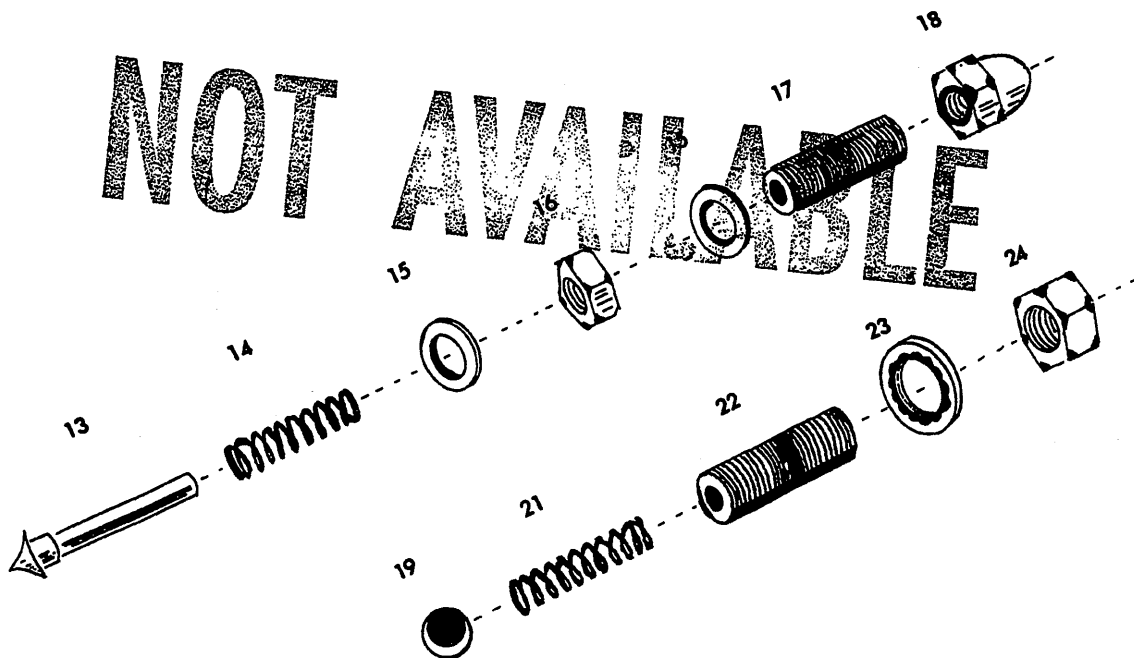
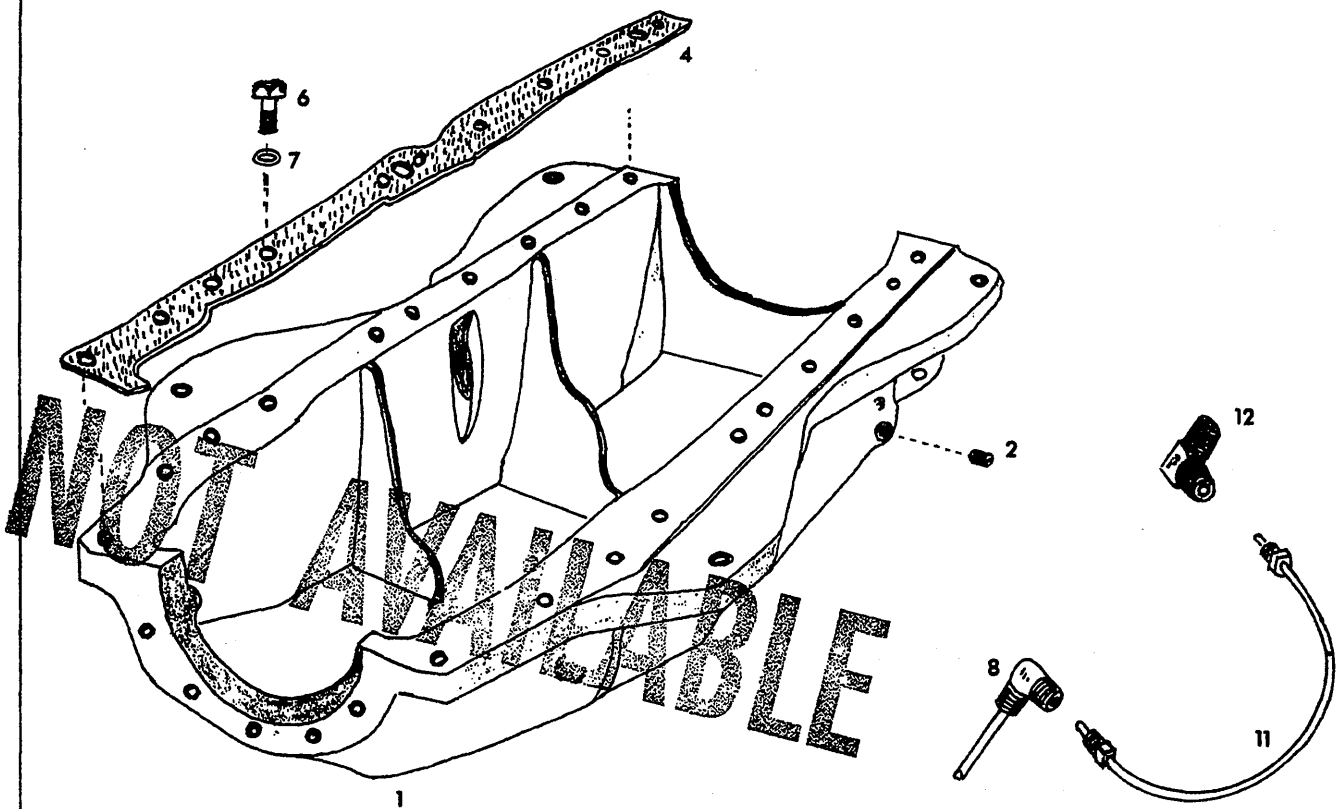
Code	Description	No. Used	Part	Notes
1	Cover, Flywheel Housing	1	261004	Use 297563
2	Screw, flywheel cover Use 31883	6	231035	1/4" - 20 x 3/4"
3	Lockwasher, flywheel cover Use 31752	6	231894	1/4"
4	Cover, Bendix Starter	1	260849	
5	Screw	3	231207	10/32 x 1/4"RH
6	Lockwasher	3	231890	10/32-1/4"
7	Housing, flywheel - Up to 1969 Not Available...	1	261003	Prestolite starter
7A	Housing, flywheel - after 1969	1	288315	Delco starter
8	Dowel, flywheel housing	2	279844	
9	Gasket, flywheel housing	1	261042	
10	Cap Screw	11	231078	3/8" - 16 x 3/4"
11	Lockwasher - shakeproof E. T.	11	231910	3/8"
12	Flywheel Assy. up to 1969 Not Available...	1	261256	Prestolite
12A	Flywheel Assy. after 1969 Use 297565	1	288316	Delco
12B	Flywheel only	1	261001	
13	Ring Gear only up to 1969 Not Available...	1	261018	Prestolite
13A	Ring Gear only after 1969	1	262939	Delco
14	Nut, hex, flywheel att	6	230147	3/8" - 24
15	Lockwashers, flywheel att	6	231895	3/8"
Note: Prestolite Starter used up to 1969 Delco Starter used after 1969				



Engine

Power Take Off

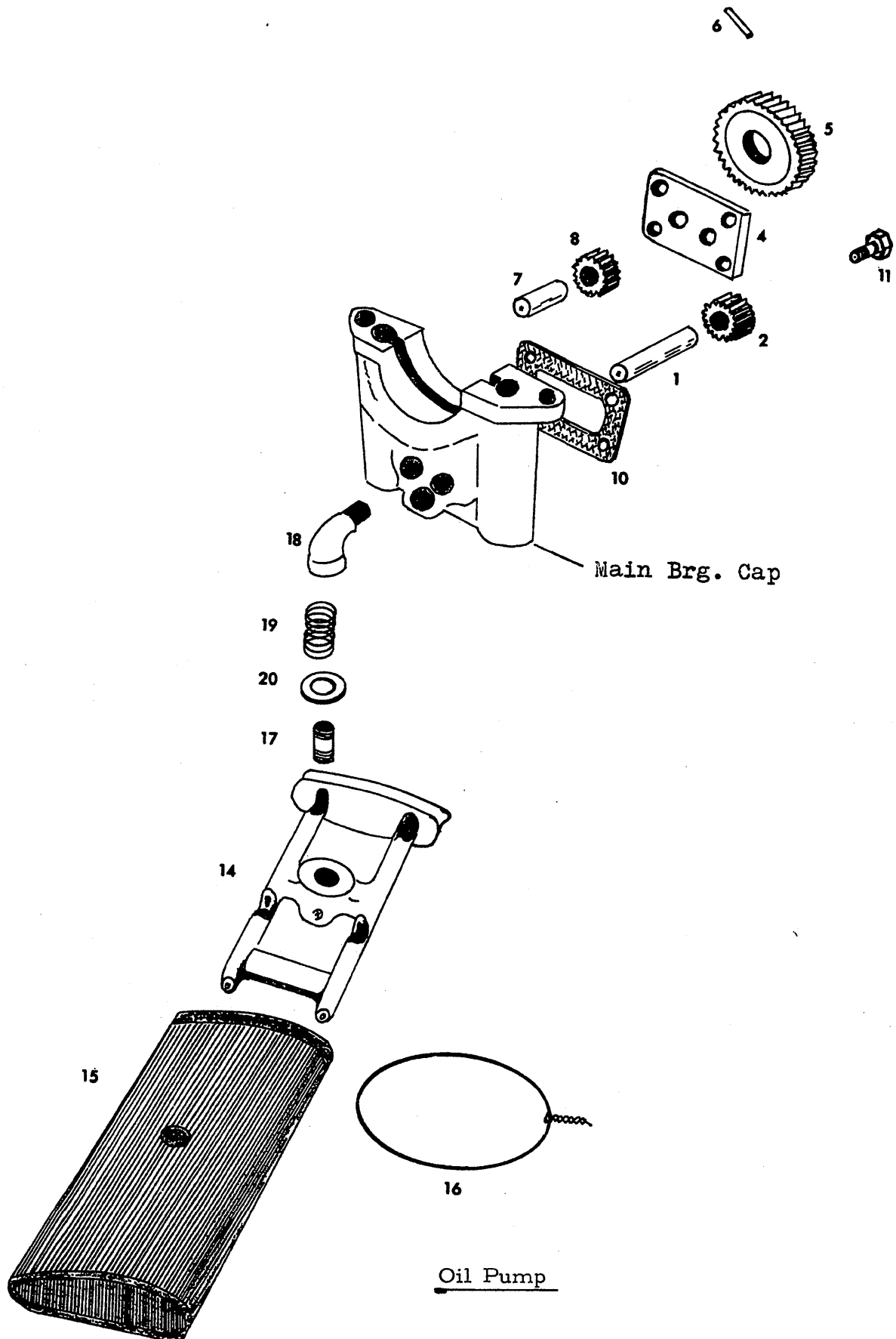
Code	Description	No. Used	Part	Notes
1	Stub Shaft	1	261098	
2	Pulley	1	261193	
3	Studs	6	261099	
4	Set Screw	1	231602	3/8 - 16 x 3/8
5	Cover, flywheel housing	1	261100	
6	Pin, crank	1	273778	
7	Key	1	260724	1/4 x 1/4 x 1 5/16
8	Hand Crank	1	260752	
	Complete Kit (includes above)	1	283908	Obsolete
	<u>Note:</u> Above Kit no longer available use the following			
9	Power Take Off Shaft	1	289314	
10	Key, woodruff	1	289318	#61
11	Pulley	1	289315	
12	Washer, Plain	1	238991	5/16
13	Lockwasher	1	231891	5/16
14	Cap Screw	1	231057	5/16 - 18 x 3/4
15	Installation Instructions	1	239316	
	NOT AVAILABLE			
	Power take off group parts, item 9 thru 15	1	255971	
	<u>"Rubber mounts"</u>			
16	Front RH	1	262247	Use 289233
	Front LH	1	262248	Use 289234
	Rear	2	262246	Use 289232
	Installation Instructions	1	262245	
	Rubber mounts, set	1	255189	



Oil Group

Oil Pan - Relief Valve

Code	Description	No. Used	Part	Notes
1	Oil Pan Assy. NOT AVAILABLE	1	261254	
2	Oil Pan only NOT AVAILABLE	1	260995	
3	Pipe Plug	1	241029	3/8" sq. head
4	Pipe Plug	1	207782	3/4" sq. head
5	Gasket, oil pan	2	261048	
6	Pin, locating	2	239208	
7	Cap Screw	12	231058	5/16 - 18 x 7/8'
8	Lockwasher	12	231891	5/16 SAE
9	Valve chamber oil pipe assy.	1	261262	
10	Oil pipe only, valve chamber	1	263573	Use 261262
11	Elbow, valve chamber oil pipe	1	272413	
12	Oil Pipe, crankcase to oil chamber	1	261101	
12	Elbow 90° 1/8 IPT x 1/8 ODT	1	290328	
NOT AVAILABLE				
<u>EARLY Style Up To 1967</u>				
13	Plunger	1	261103	Use 295157
14	Spring	1	284743	Use 239131
15	Washer	2	260455	
16	Nut	1	230154	
17	Screw	1	260842	
18	Nut, Locking	1	260727	
NOT AVAILABLE				
<u>LATE Style After 1967</u>				
-	Oil Pressure relief Valve Assy.	1	263094	
19	Ball, Standard Size	1	202843	3/8" Stainless
20	Ball, Over Size	Use 248681	AR 248681	7/16 Stainless
21	Spring	1	239131	
22	Screw	1	265515	1/2 - 20 Special
23	Thread Seal	1	290614	
24	Nut	1	230154	1/2 - 20 Special
<u>Oil Gallery Outlet</u>				
	Pipe Plug, 1/8" Square head	1	239136	
	Connector, 1/8" IPT x 1/4" ODT	1	239137	
	Elbow, Oil Line 1/8" IPT x 1/8" ODT	1	239135	

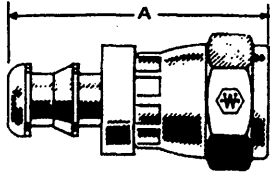


Oil Group

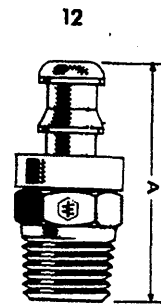
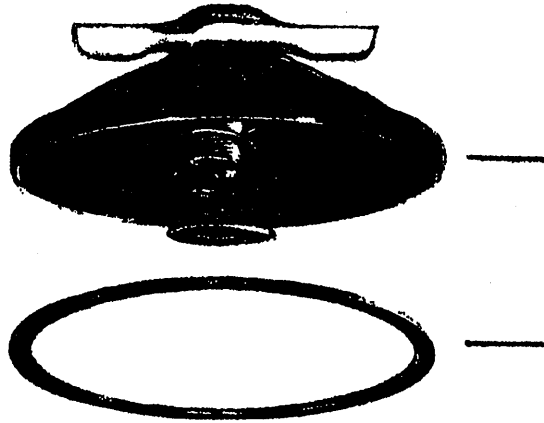
Oil Pump & Screen

For Complete Oil Pump
Use Items A & B

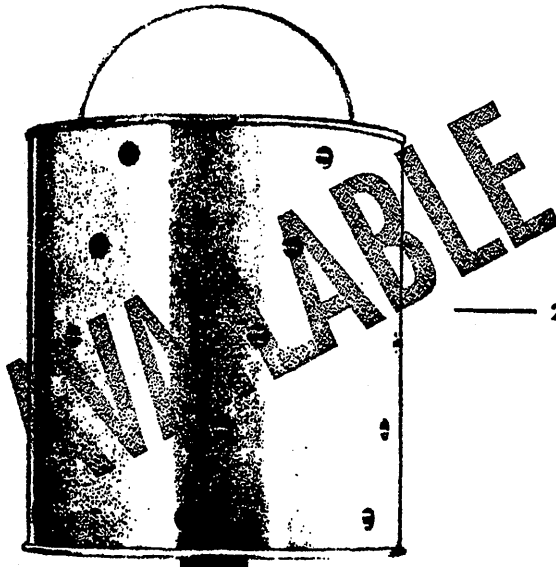
Code	Description	No. Used	Part	Notes
A	Oil Pump Drive Shaft assy.	1	261251	
B	Oil Pump Idler Shaft Assy.	1	261252	
1	Oil Pump Drive Shaft only	1	261011	
2	Oil Pump Drive Gear	1	261008	
3	Oil Pump Drive Key	1	239170	#2
4	Oil Pump Drive Cover	1	261007	
5	Oil Pump Drive Spiral Gear	1	261013	
6	Oil Pump Drive Roll Pin	1	230358	
7	Oil Pump Idler Shaft only	1	261010	
8	Oil Pump Idler Gear	1	261008	
9	Oil Pump Idler Key	1	239170	#2
10	Cover Gasket	1	261009	
11	Socket Head Cap Screw	4	231342	1/4 - 20 x 5/8"
12	Lockwasher	4	231907	1/4 IT
13	Screen Assy.	1	261253	
14	Frame only	1	261012	
15	Screen only	1	261014	
16	Lockwire	1	298373	9" long x .045
17	Nipple	1	261015	1/8 - 27 x 15/16
18	Street elbow	1	239199	1/8 - 27
19	Spring	1	261097	
20	Plain Washer	1	231859	3/8



11

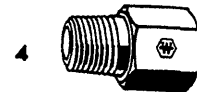


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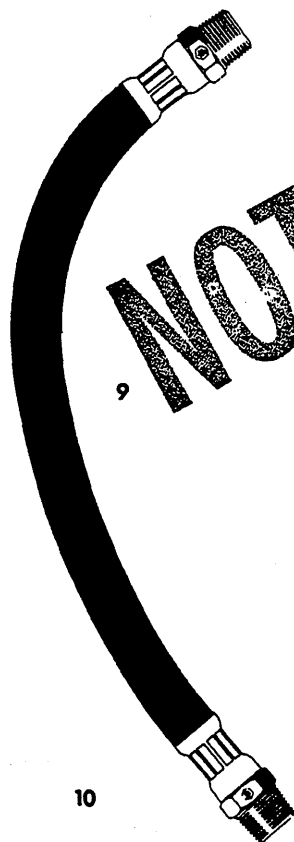


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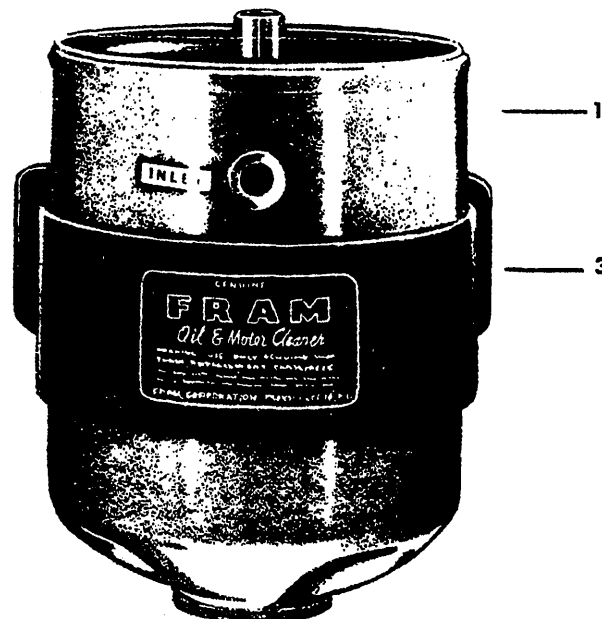
RESTRICTION
PIPE ADAPTER



4

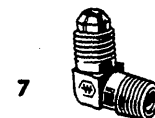


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6

Oil Filter

Oil Group

Not Standard Equipment

Oil Filter

Code	Description	No. Used	Part	Notes
1	Oil Filter	1	276237	
2	Element or Cartridge	1	276236	
3	Mounting Bracket	1	272297	
4	Restrictor Fitting	1	290388	
5	Fitting, Oil return on gear cover	1		4738-2-4
6	Fitting, Oil filter outlet	1		400 x 4
7	Fitting, Oil filter inlet	1		49 x 4
8	Fitting, cyl. block outlet	1		WH400 x 4
9	Flexible oil line cyl. block to filter	1	10"	2556-4
10	Flexible oil line filter to gear cover	1	7"	2556-4
11	1/4" Swivel hose end	2		4797-4B
12	1/4 inverted flare hose end	1		4740-4
13	1/8 Pipe hose end	1		4738-2-4



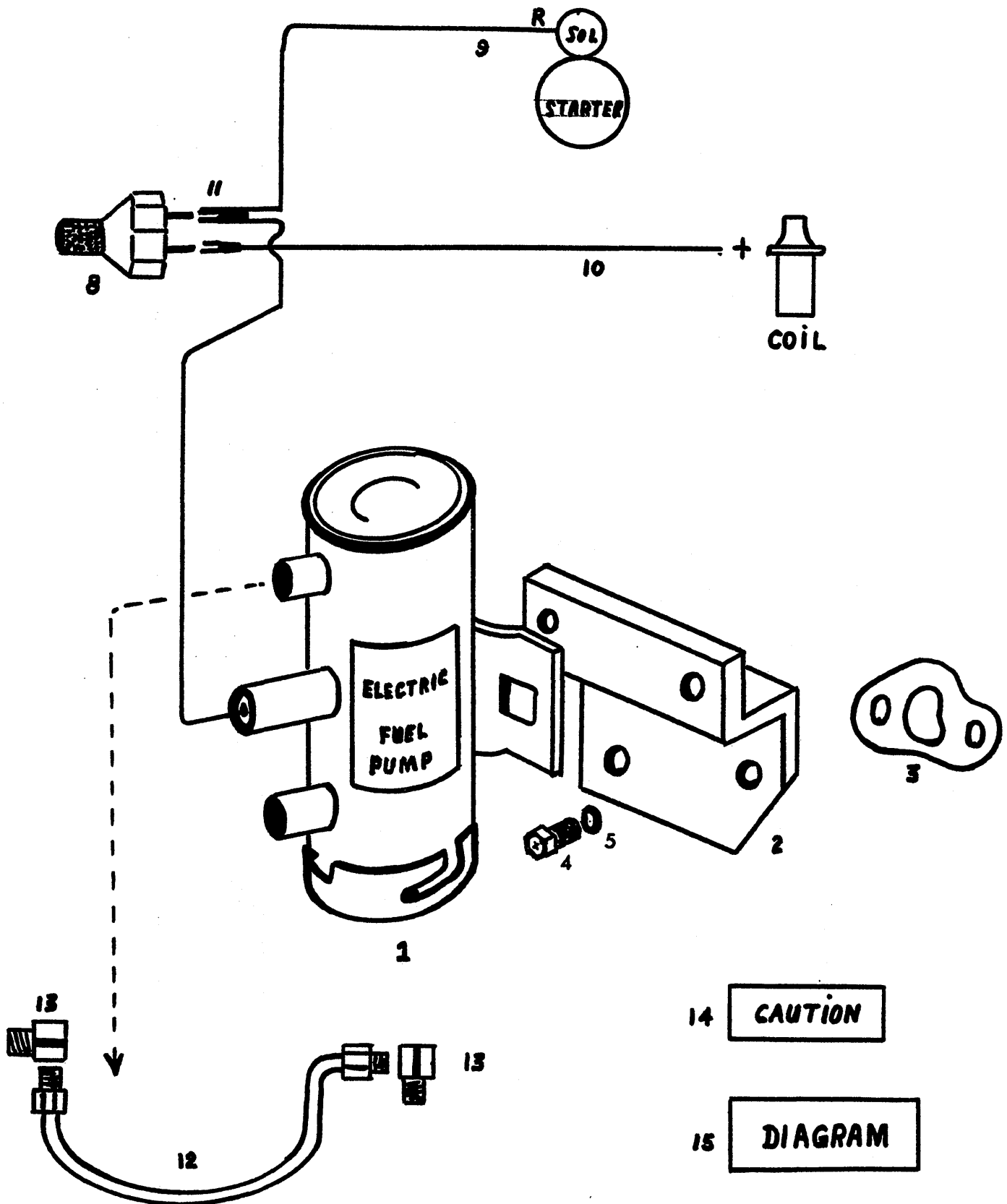
Fuel Pump

Fuel Group

Fuel Pump

Code	Description	No. Used	Part	Notes
1	Fuel Pump	1	261104	Use 299250
2	Mounting Gasket	1	261562	
3	Push Rod	1	261081	
4	Bushing, Push Rod	1	263759	
5	Lockwasher, mounting	2	231891	5/16
6	Cap Screw, mounting	2	231057	5/16-18x 3/4"
7	Fuel Line, pump to carb.	2	261096	
8	Elbow, 90° 1/8 IPT x 1/4 ODT	2	239312	
9	Repair Kit NOT AVAILABLE	1	276694	
10	Diaphragm Kit NOT AVAILABLE	1	273275	
11	Pump bail assy.	1	283193	
12	Pump Glass Bowl	AR	283199	
13	Pump Metal Bowl	1	283206	
14	Strainer Element	1	297340	
15	Bowl Gasket	1	297339	
16	Repair Kit w/o rocker arm NOT AVAILABLE	1		
17	Cork Gasket NOT AVAILABLE	1	283251	

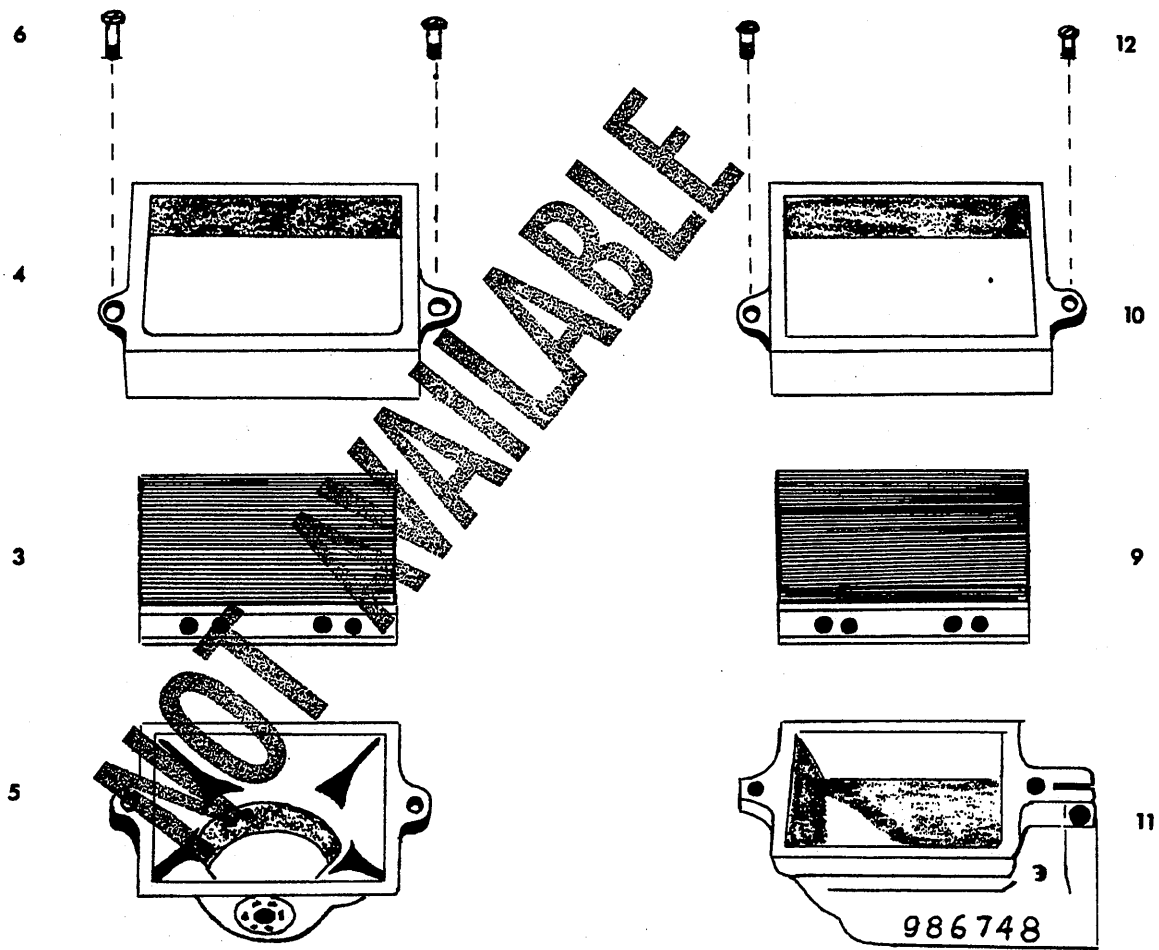
299250 Conversion Kit



FUEL GROUP

FUEL PUMP

Code	Description	No. Used	Part	Notes
1	Fuel Pump, Electric	1	299228	Use 299876
2	Bracket, Fuel Pump Mounting	1	299195	
3	Gasket, Bracket Mounting	1	299246	
4	Bolt, Bracket Attaching	2		5/16 X $\frac{1}{2}$ " USS
5	Washer, Lock	2		5/16
6	Bolt, Pump Attaching	2		$\frac{1}{4}$ X $\frac{1}{2}$ " USS
7	Lock, Pump Attaching	2		$\frac{1}{4}$ "
	Nut, Pump Attaching	2		$\frac{1}{4}$ " USS
8	Switch, Pressure	1	299303	
9	Wire, Switch to Starter Solenoid	1	299257	32" Long
10	Wire, Switch to Coil	1	299258	19" Long
11	Adapter, Wire Connector	1	299311	
12	Pipe, Fuel Pump to Carburetor	1	299196	
13	Elbow	2		$\frac{1}{4}$ tube X 1/8 pipe
14	Decal "caution"	1	288890	
15	Wiring Diagram	1	288192	
16	Electric Fuel Pump Conversion Kit	1	299250	
Note: The conversion kit is used to convert from the old style mechanical fuel lift pump to the new style electric pump. Part number 299250 contains all the parts necessary to convert to this pump and the lift pump.				

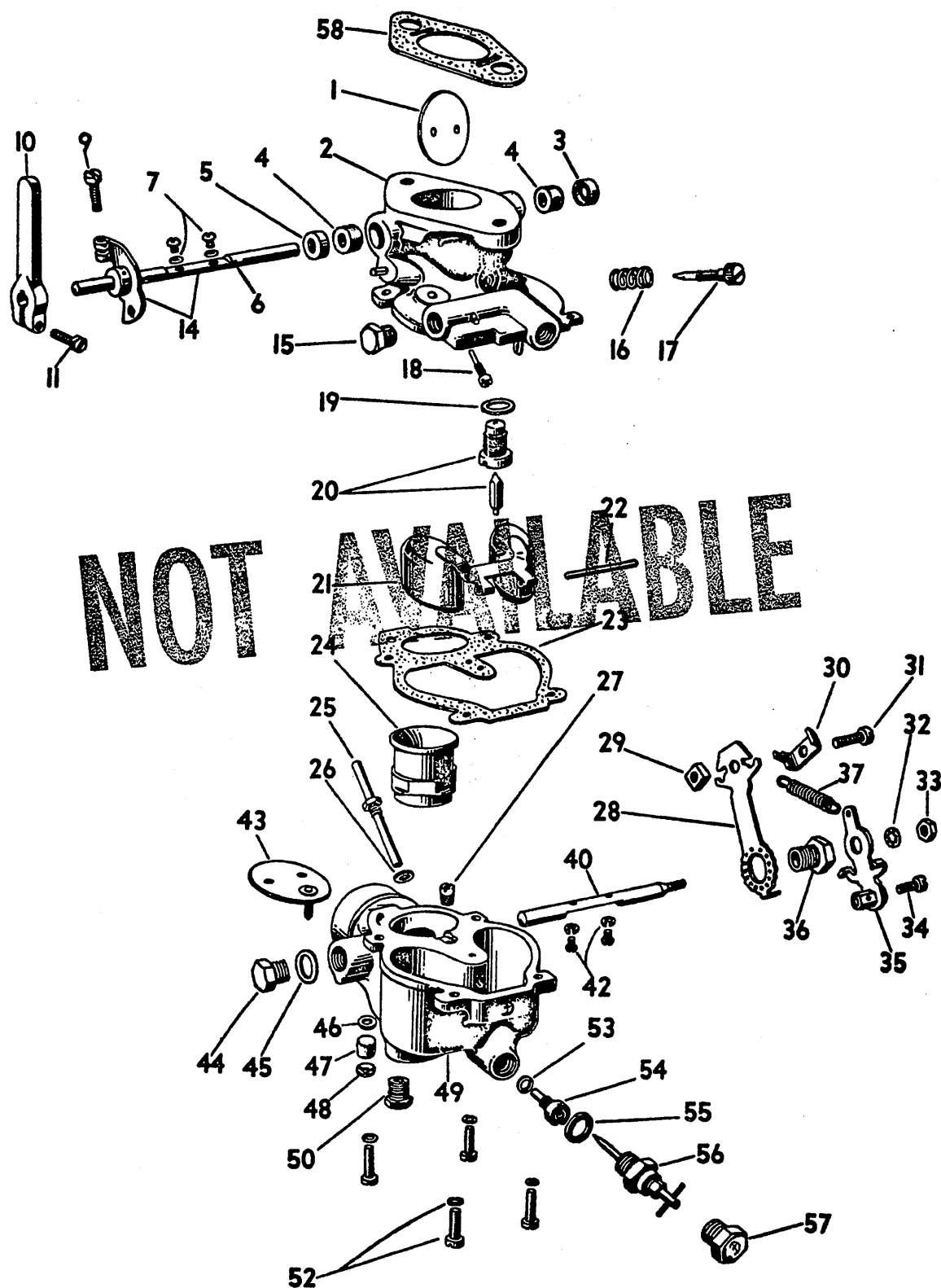


Flame Arrestors

Fuel Group

Flame Arrestor

Code	Description	No. Used	Part	Notes
	<u>Early Type up to 1968</u>			
1	Flame Arrestor Assy.	1	285099	
2	Flame Arrestor	1	261210	
3	Screen only	1	288488	
4	Frame only	1	288489	
5	Body	1		
6	Frame Screws	2	231223	10/32 x 3/8" RH
7	Clamp Screw	1		10/32 x 1/2" RH
	<u>Late Series after 1968</u>			
8	Flame Arrestor Assy.	1	288661	
9	Screen only	1	288488	Use 303073
10	Frame only	1	288489	
11	Body	1	263914	
12	Frame Screws	2	284067	10/32 x 3/8" RH
13	Clamp Screws	1	231224	10/32 x 1/2" RH
14	Lockwasher	3	231890	#10



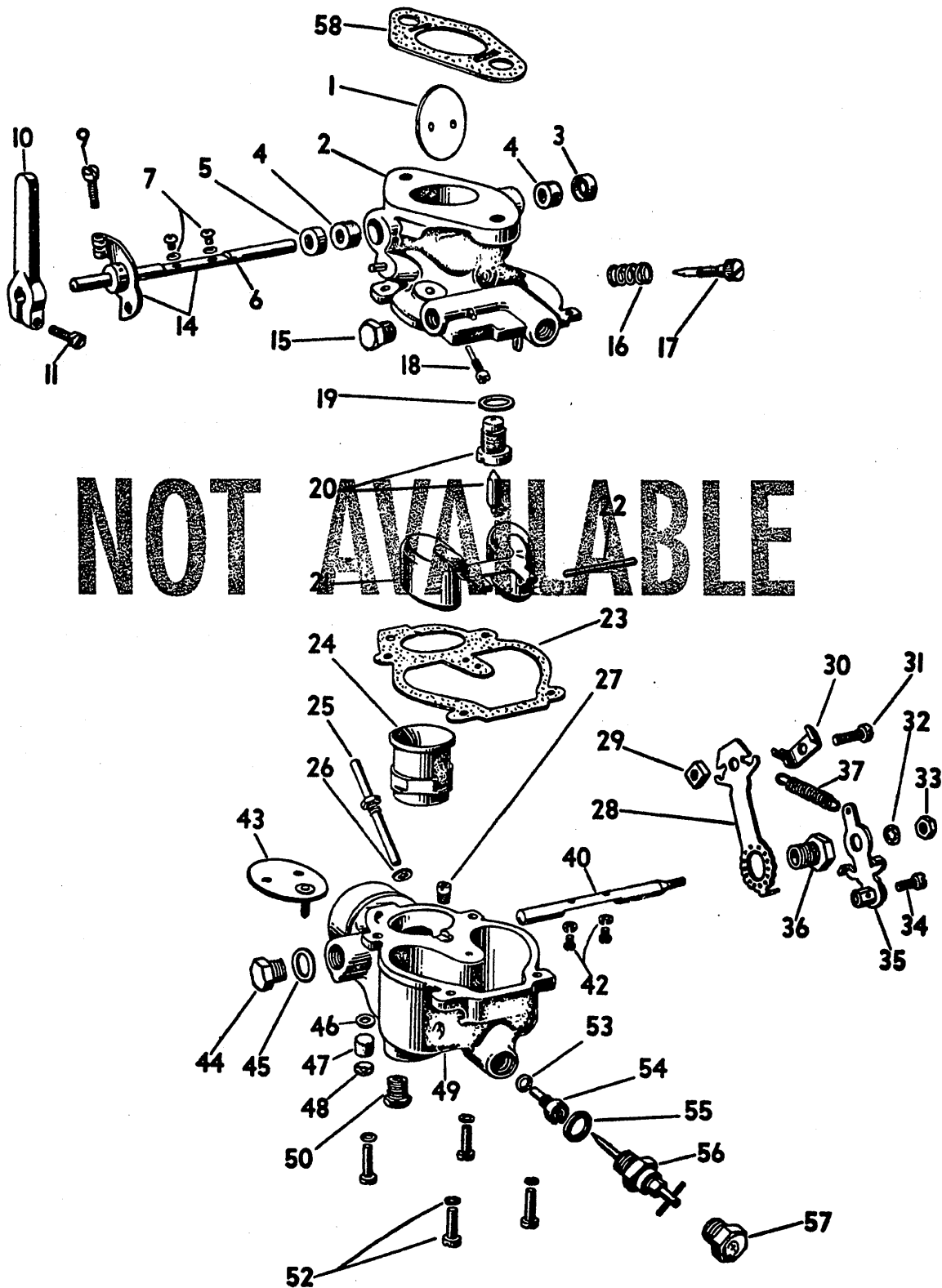
Carburetor, up to 1969

Fuel Group

Zenith 10621
Up to 1969

Carburetor

Code	Description	No. Used	Part	Notes
	Carburetor Assy.	1	261093	10621
1	Plate	1		C21-47
2	Body (not sold separate)	1		NA
3	Plug	1		CR37-1X1
4	Washer	1		CT57-4
4	Seal	4		CT-48-9
5	Retainer	1		C131-4X2
5	Washer	1		CT52-53
7	Screw, throttle plate	2		T315B5-4
9	Screw, throttle stop	1		T858-10
10	Lever	1		C24-54HX2
10A	Lever - special on pearson yachts	1	261124	C24
11	Screw	1		T8S10-9
14	Lever & Shaft - throttle	1		C29-572
15	Plug, fuel inlet	1		CT91-3
16	Spring	1		C111-9
17	Needle, idle adjusting	1	290523	C46-25
18	Jet idle	1	290521	C55-6-10
19	Washer	1		T56-20
20	Valve & Seat, fuel	1	283211	C81-17-30
21	Float	1		C85-28
22	Axel, float	1		C120-4
23	Gasket, body	1	284957	C142-16
24	Venturi	1		C38-21-16
25	Jet, discharge	1		C66-26-1-50
26	Washer	1		T56-60
27	Vent	1		C77-18-22
28	Bracket, choke	1		C109-2-5
29	Nut	1		T21-S-8
30	Clamp	1		C110-1
31	Screw	1		T858-10
32	Lockwasher	1		T45-8
33	Nut	1		T22S8
34	Screw	1		T8S8-7
35	Lever, choke	1		C106-57
36	Screw	1		C140-2
37	Spring	1		C112-6
38	Retainer	1		C131-4 X 2
39	Washer	1		CT57-4
40	Shaft, choke	1		C105-298



NOT AVAILABLE

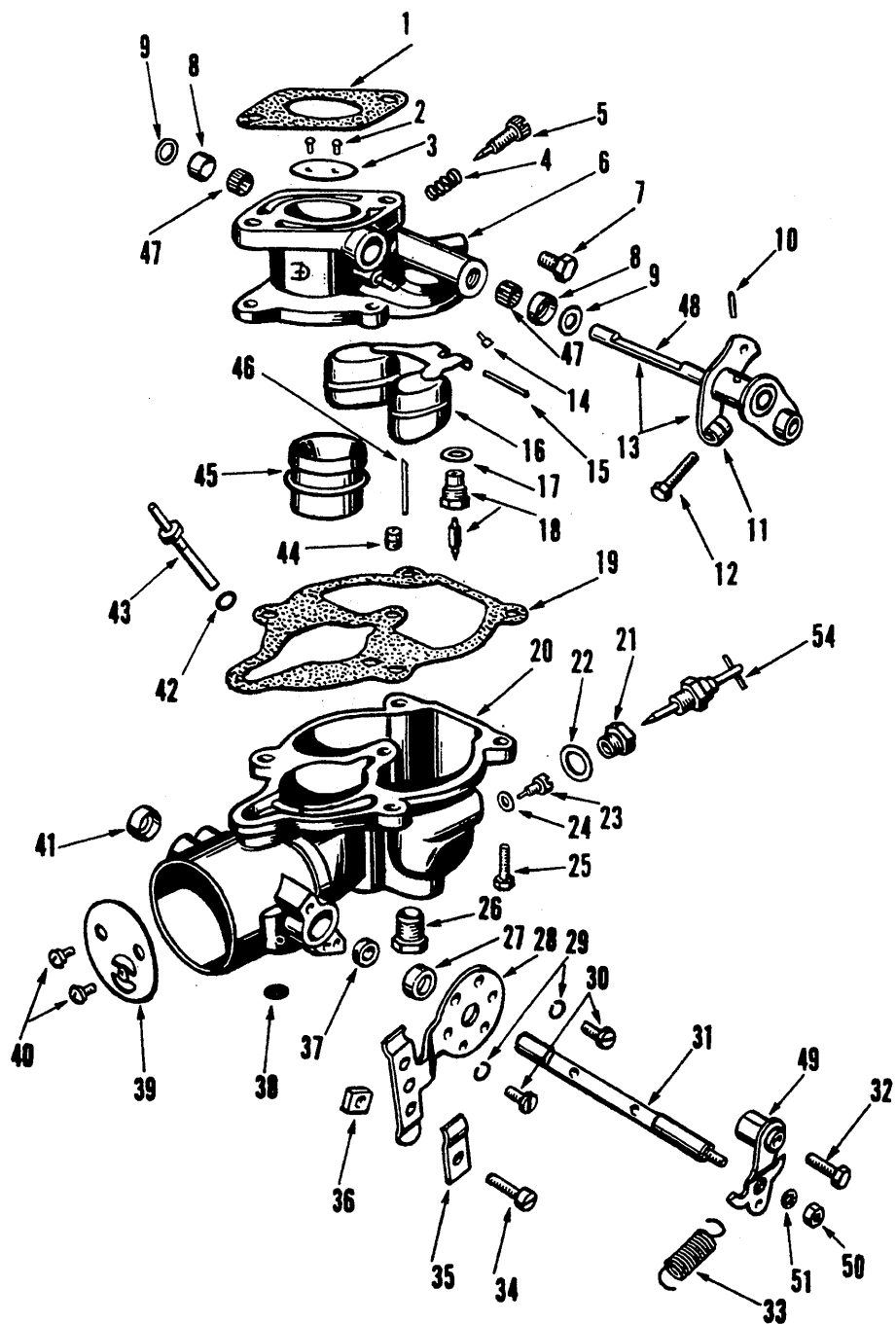
Carburetor, up to 1969

Fuel Group

Zenith 10621, Continued

Carburetor, continued

Code	Description	No. Used	Part	Notes
42	Screw	1		T315B5-4
43	Plate, choke	1		C101-17
44	Plug	1		C138-24
45	Washer	1		T56-23
46	Disc. intake drain	1		C135-29
49	Bowl, fuel	1		B3-45E
50	Plug	1		CT91-3
52	Screw	1		T301S10-10
53	Washer, main jet	1		T56-24
54	Jet, main	1	290552	C52-6-23
55	Washer, main passage plug	1		T56-23
56	Adjustment, main jet	1	283218	C71-21
57	Plug, main passage	1		C138-24
58	Gasket, mounting	1	261202	C141-4-5
59	Cap Screw, carb. mounting	2	231047	5/16"- 18 x 3/4"
	Lockwasher, carb. mounting	2	231891	5/16"



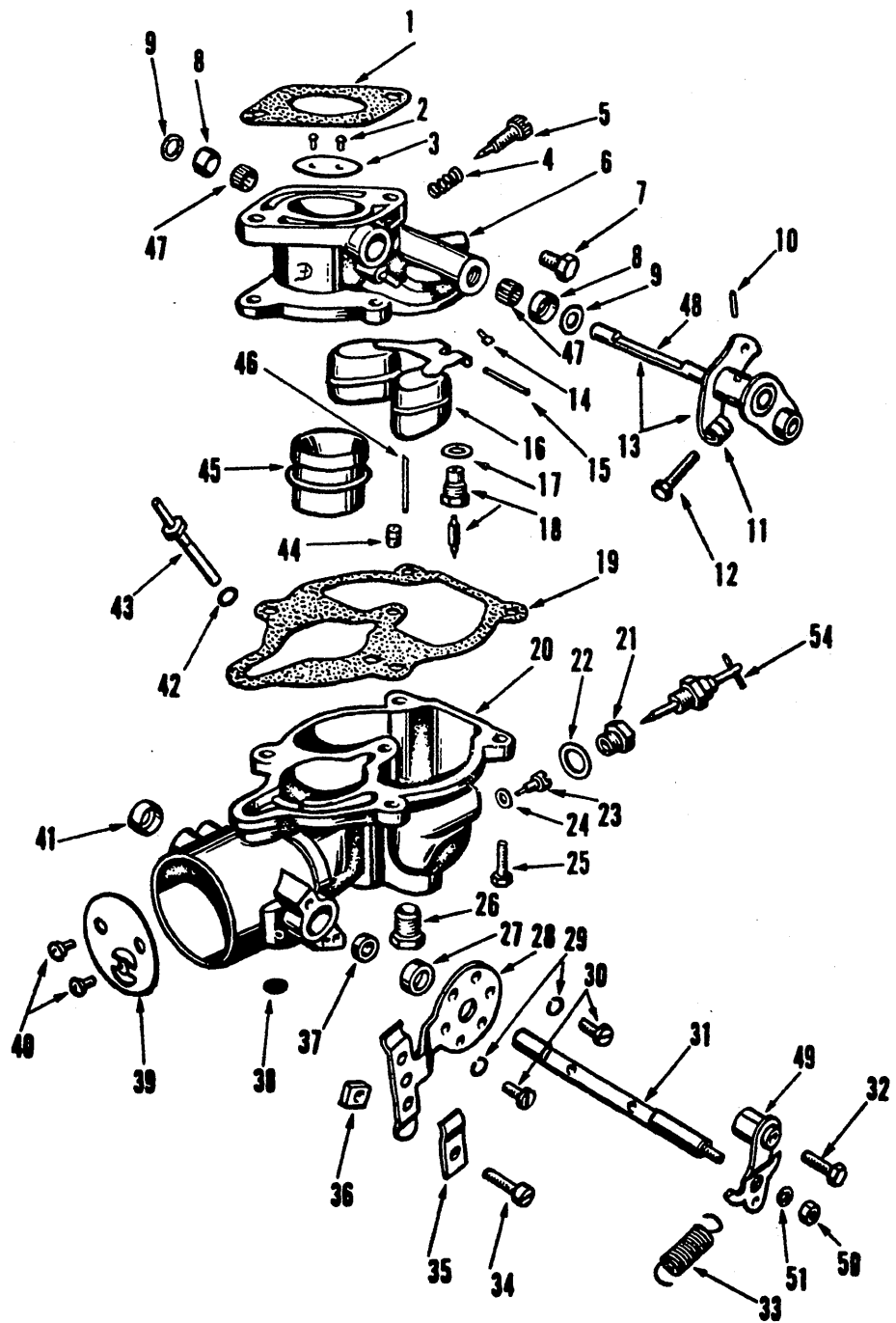
Carburetor, after 1969

Fuel Group

Bendix
After 1969

Carburetor

Code	Description	No. Used	Part	Notes
	Carburetor Assy.	1	288482	13355
1	Mounting Gasket	1	261202	C141-4-5
2	Screw, throttle plate	1		T315B5-4
3	Plate, throttle	1		C21-176
4	Spring, idle adjusting needle	1		C111-17
5	Needle, idle adjusting	1		C46-6
6	Body, not sold separately	1		NA
7	Plug fuel inlet	1		CT91-3
8	Seal, throttle shaft	1		CT48-9
9	Retainer - throttle shaft seal	1		CT52-53
10	Taper Pin	1		CT63-9
11	Lever and stop	1	295156	
12	Screw - throttle stop	1	298419	T8S8-12
13	Shaft and lever	1	295156	C29-1645
14	Jet, idle	1		C55-6-14
15	Axel, float	1		C120-4
16	Float	1		C85-103
17	Washer	1		T56-20
18	Valve & Seat	1	295440	C81-66-25
19	Gasket, body to bowl	1	297075	C142-74
20	Bowl - fuel	1		NA
21	Plug, main jet passage	1		C138-24
22	Washer, main jet passage	1		T56-23
23	Jet, main	1		C52-6-1-21
24	Washer, main jet	1		T56-24
25	Screw, body to bowl	4		T301S10-10
26	Plug, bowl drain	1		CT91-3
27	Retainer	1		C131-4-2
28	Bracket - choke	1		C109-60C
29	Lockwasher	2		T41-8
30	Screw	2		C140-58
31	Shaft - choke	1		C105-286
32	Screw - swivel	1		T8S8-7
33	Spring, choke lever	1	150359	C112-6
34	Screw, tube clamp	1		T8S8-8
35	Clamp	1		C110-7
36	Nut	1		T21S8
37	Washer	1		CT57-4
38	Disc	1		C135-29



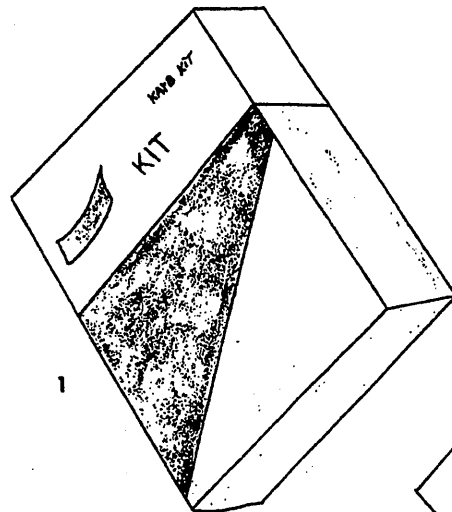
Carburetor, after 1969

Fuel Group

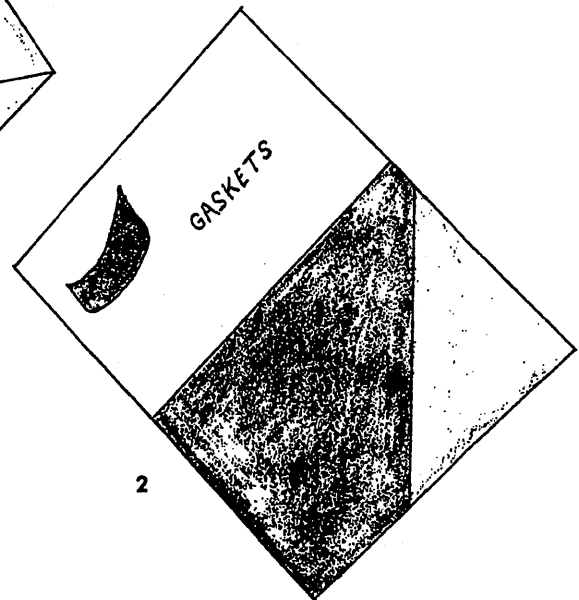
Bendix 13355
After 1969

Carburetor (Cont'd)

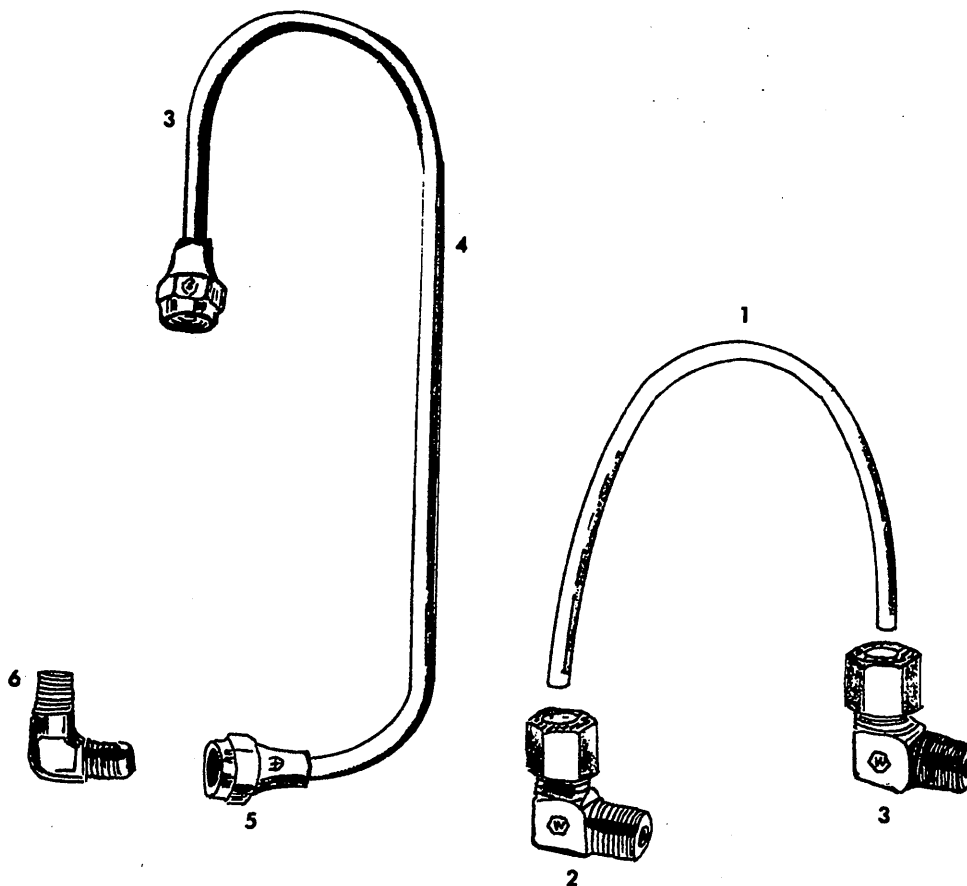
Code	Description	No. Used	Part	Notes
39	Plate	1		C101-79
40	Screw	2		T315B5-4
41	Plug, choke shaft hole	1		CR37-1X1
42	Washer, discharge jet	1		T56-48
43	Jet, discharge	1		C66-114-45
44	Jet, well vent	1		C77-18-13
45	Venturi	1		B38-74-16
46	Tube, idle channel filler	1		C63-224
47	Bushing, throttle shaft	1		C9-75
48	Shaft, throttle and lever	1	295156	C29-1645
49	Lever, choke	1		C106-2
50	Nut	1		T22S-8
51	Lockwasher	1		T45-8
52	Not used	-		-
53	Taper Pin - choke lever	1		CT63-9
54	Adjustment, main jet	1		C71-21
	Cap screw, Carburetor mounting	2	231058	5/16-18 x 7/8
	Lock Washer, Carburetor mounting	2	231891	5/16
	Throttle Control Cable brkt, Pearson Yachts	1	261125	



1



2

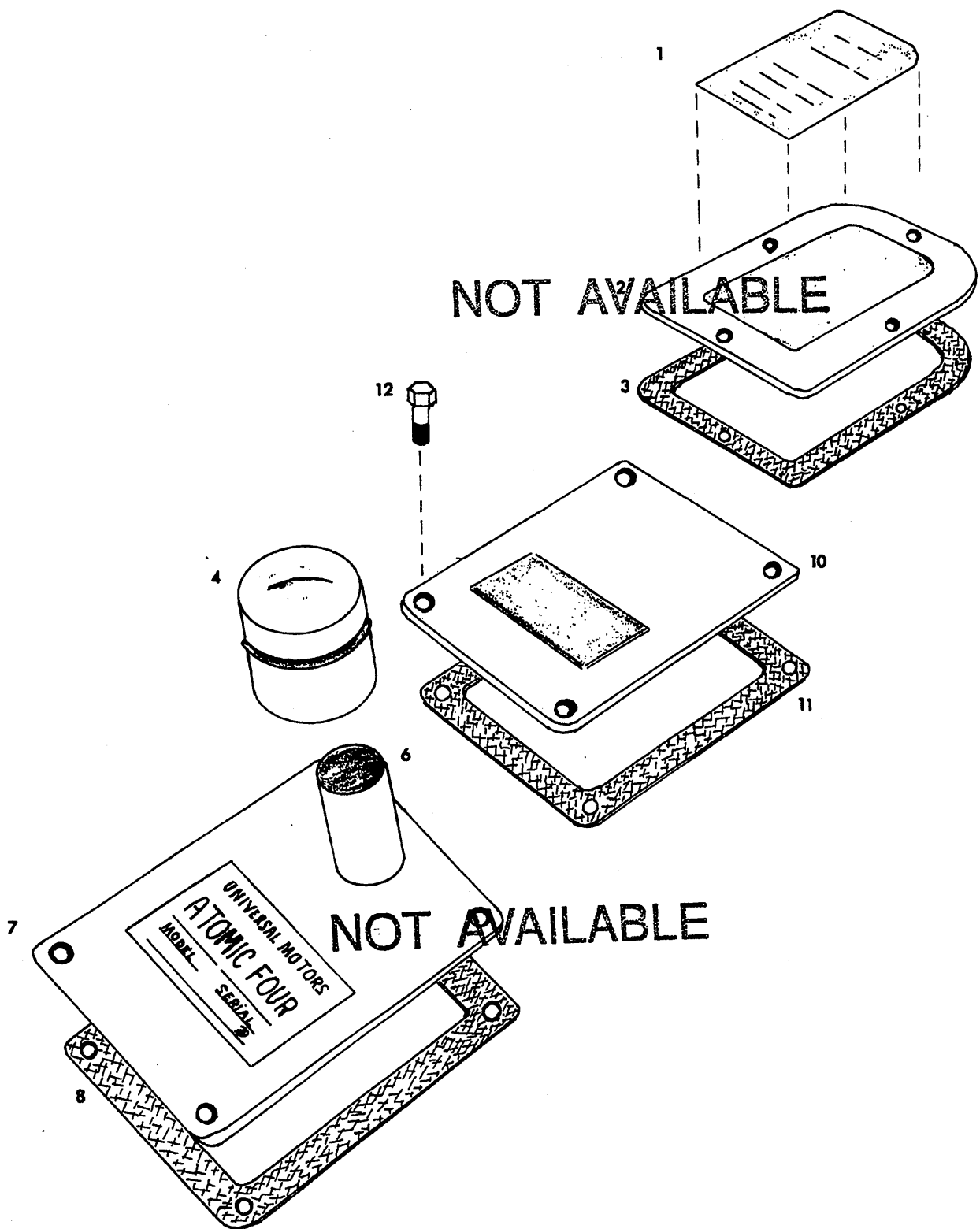


Fuel Lines

Fuel Group

Carburetor

Code	Description	No. Used	Part	Notes
1	Up to 1969-Carburetor repair kit for 261093	1	290241	
	Up to 1969-Carburetor gasket set for 261093	1	287293	
2	After 1969-Carburetor repair kit for 288482	1	290629	
	After 1969-Carburetor gasket set for 288482	1	294379	
3	Pick-up tube assy - used on 13355 carburetor	1	288549	
4	Tube only, carburetor pick-up "	1	288545	
5	Tube Nut 1/8 "	2	288550	
6	Elbow 90° 1/8 IPT x 1/8 Tube "	2	288551	
	<u>Fuel line, Pump to Carburetor</u>			
1	Early Style on Carb. 261093	1	261096	Use 298235 & 211015
1A	Late Style on Carb. 288482	1	261096	
2	Elbow, on fuel pump 1/8 IPT x 1/4 ODT	1	239312	
3	Elbow, on carb. 1/8 IPT x 1/4 ODT	1	239312	
4	Cap Screw, carb. mounting	2	231058	5/16" - 18 x 7/8"
5	Lockwasher, carb. mounting	2	231891	5/16"

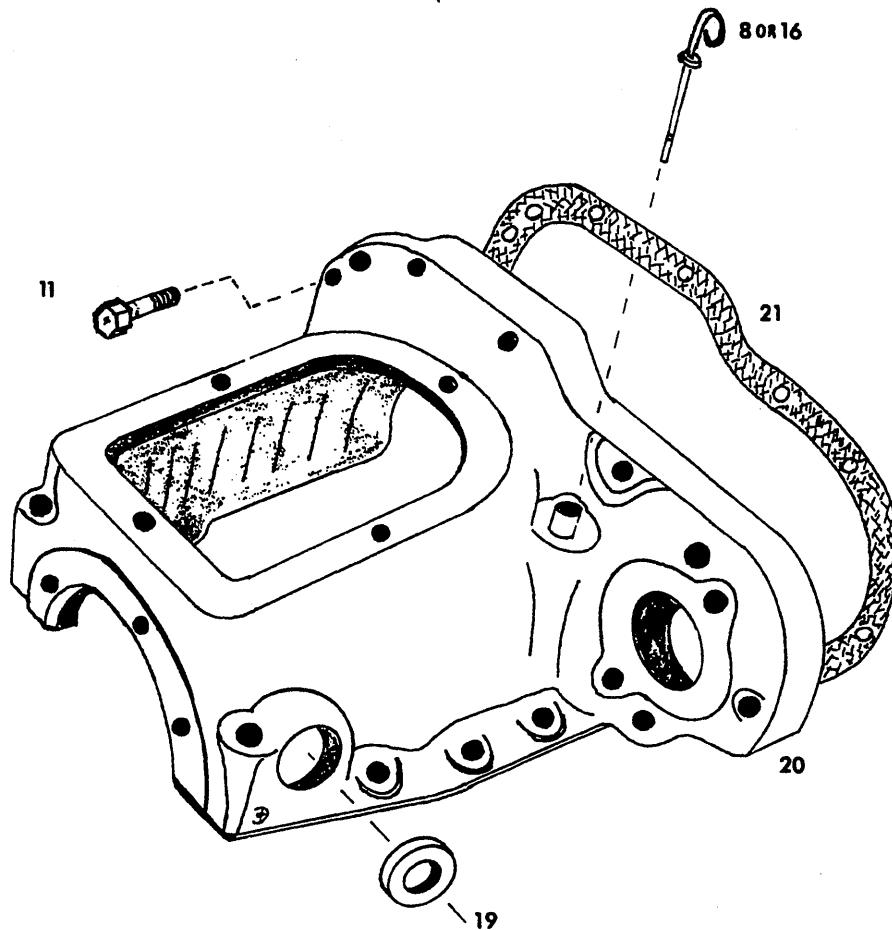
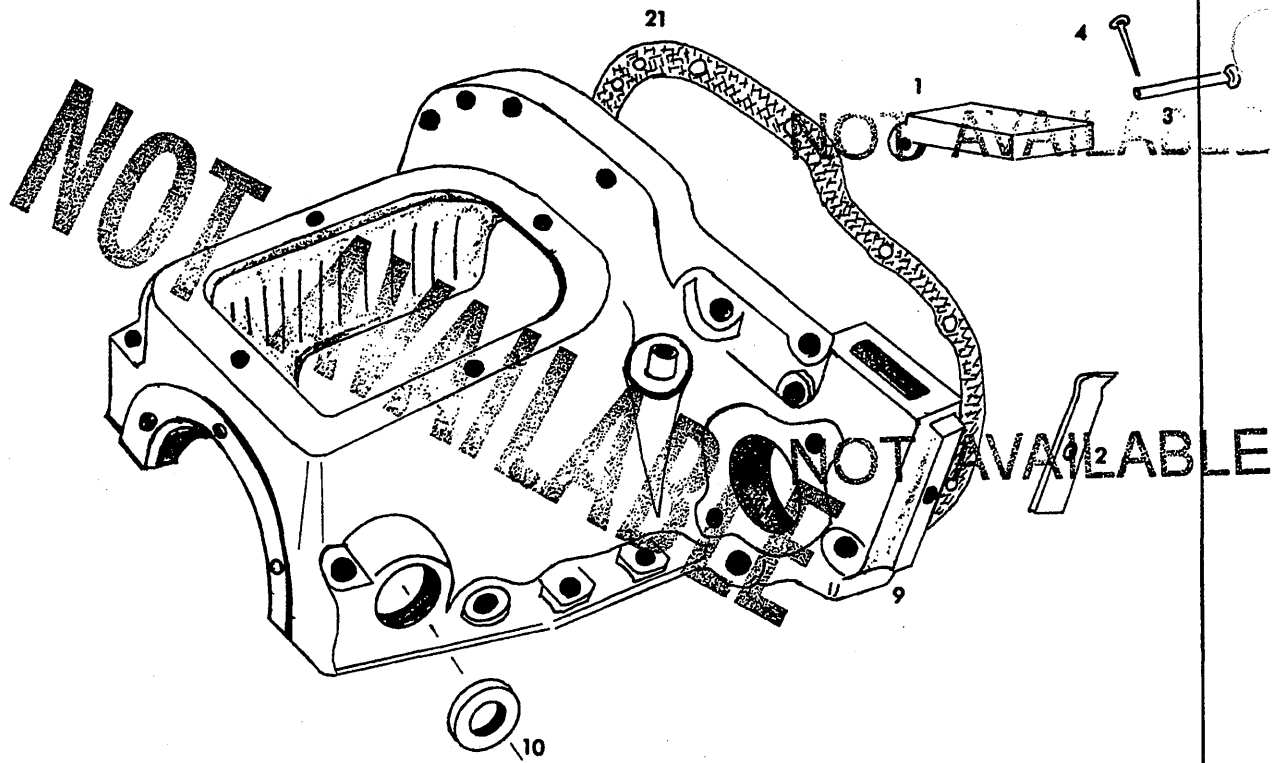


Reverse Gear Covers

Reverse Gear Case

Cover Group

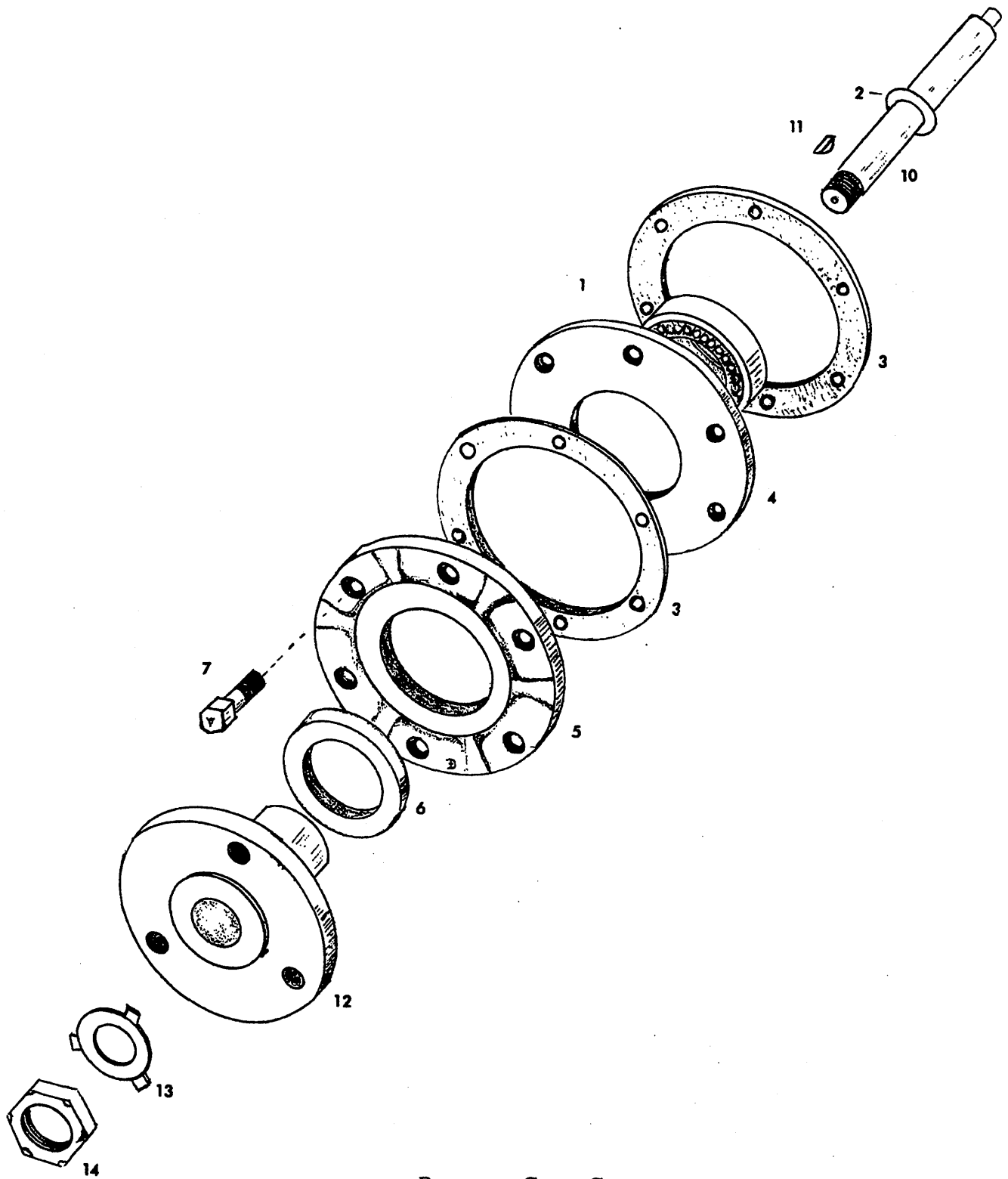
Code	Description	No. Used	Part	Notes
	<u>Early Type up to 1967</u>			
1	Name Plate NOT AVAILABLE	1	279562	
2	Cover NOT AVAILABLE	1	260761	
3	Gasket, Cover NOT AVAILABLE	1	260762	
	<u>Used Approx. 1967 to 1968</u>			
	Cover and Filler Tube Assy.	1	259256	
4	Breether Cap	1	259260	Use 295536
5	Baffell Spring NOT AVAILABLE	1	263163	
6	Tube, oil fill NOT AVAILABLE	1	259255	
7	Cover, reverse gear NOT AVAILABLE	1	257212	
8	Gasket, cover	1	260040	
	<u>Used After 1968</u>			
9	Decal	1		
10	Cover, reverse gear	1	288339	
11	Gasket, cover	1	260040	
12	Gap Screw	4	231056	5/16" - 18 x 5/8"
13	Lock	4	231891	5/16"



Reverse Gear

Housing Group

Code	Description	No. Used	Part	Notes
	<u>Early Style</u>			
	Housing Assy.	1	261250	
1	Oil Fill Cover	1	261074	
2	Spring, cover	1	261075	
3	Pin, cover hinge	1	261071	
4	Cotter Pin, hinge	1	230277	1/16 x 1/2"
5	Screws, hinge spring	2	231238	1/4 - 20 x 3/8"
6	Lockwashers	2	231894	1/4"
7	Tube, oil gauge	1	260701	
8	Rod, oil gauge	1	261149	
9	Housing, only	1	260996	
10	Oil Seal, cross shaft	2	239389	
11	Cap Screw, mounting	6	231062	5/16 - 18 x 1 3/4"
12	Cap Screw, mounting	6	231057	5/16 - 18 x 3/4"
13	Cap Screw, mounting	2	231065	5/16 - 18 x 2 1/2"
14	Pin, housing to block	2	230444	
15	Lockwasher	14	231891	5/16
	<u>Late Style Housing</u>			
16	Oil Gauge Rod	1	263758	
17	Tube, oil gauge	1	260701	
18	Housing Assy.	1	259627	
19	Oil Seal	2	239389	
20	Housing only, reverse	1	260996	
21	Gasket, mounting	1	261047	
	<u>Oil Dip Sticks</u>			
	Early Series UJ and UJR		261149	Use 263758
	Late Series UJ and UJR	1	263758	
	V-Drive Engines UJVD	1	263940	

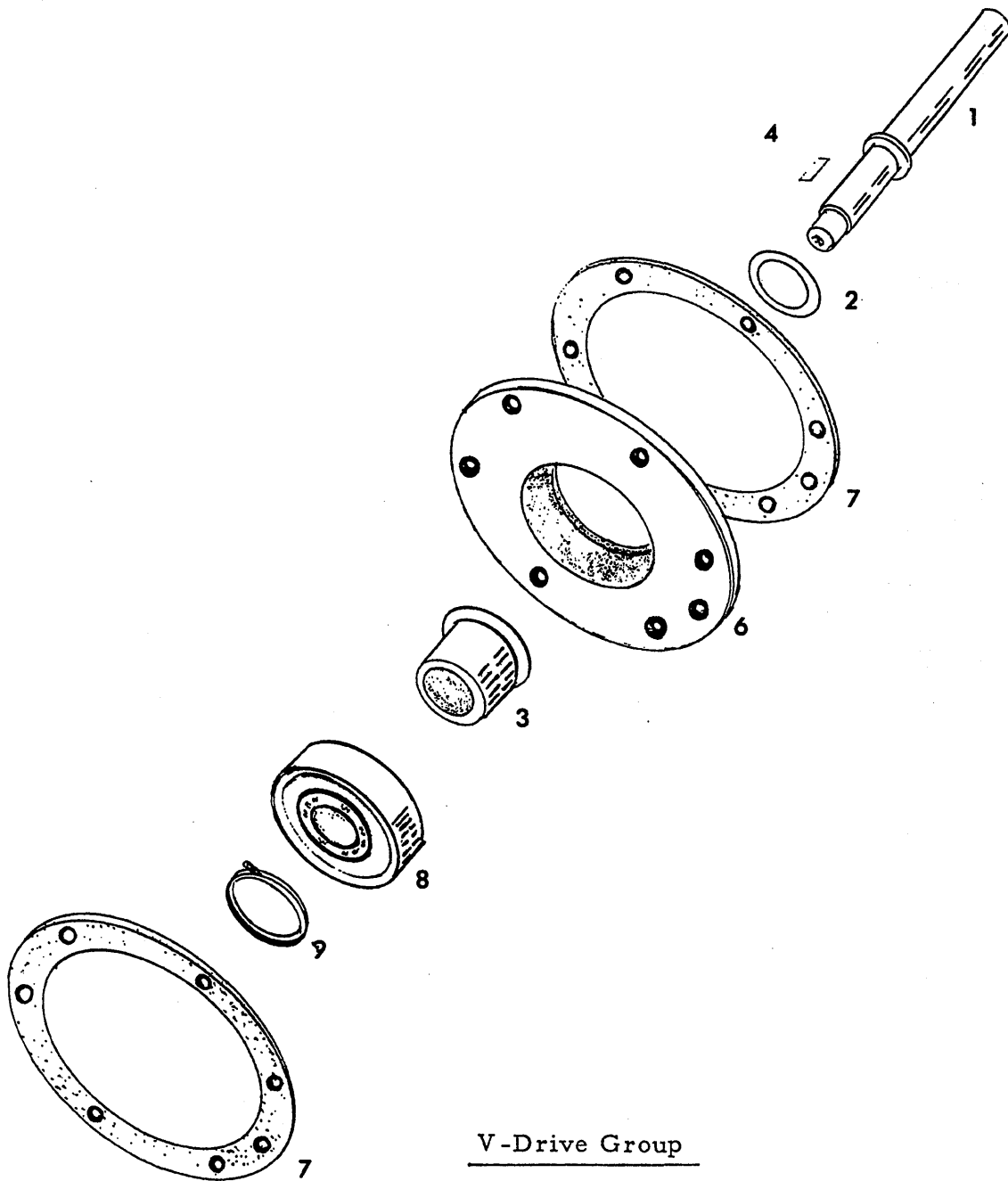


Reverse Gear Group

Reverse Gear

Tail Shaft Group

Code	Description	No. Used	Part	Notes
1	Bearing	1	203032	
2	Spacer, rear bearing	1	261034	
3	Gasket, bearing housing	2	261065	
4	Housing, bearing	1	261060	
5	Retainer, oil seal	1	261062	
6	Oil Seal (Rear)	1	239919	
7	Cap Screw	6	231059	5/16 - 18 x 1"
8	Lockwasher	3	231891	5/16
9	Copper washer	3	260703	5/16
10	Shaft, direct drive	1	261035	
11	Key, tail shaft - Woodruff	2	206511	#9
12	Coupling, direct drive	1	261040	Special
13	Lockwasher	1	263762	Special
14	Nut 3/4-16	1	263761	
15	Key, engine coupling	1	263641	
	Reverse Gear and Tailshaft Assy.	1	259626	

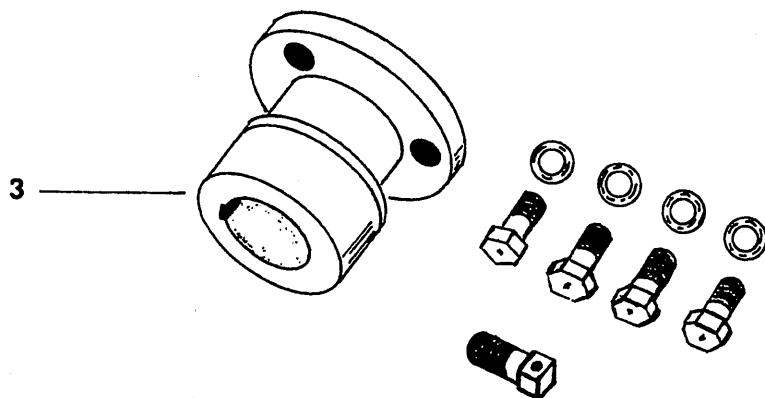
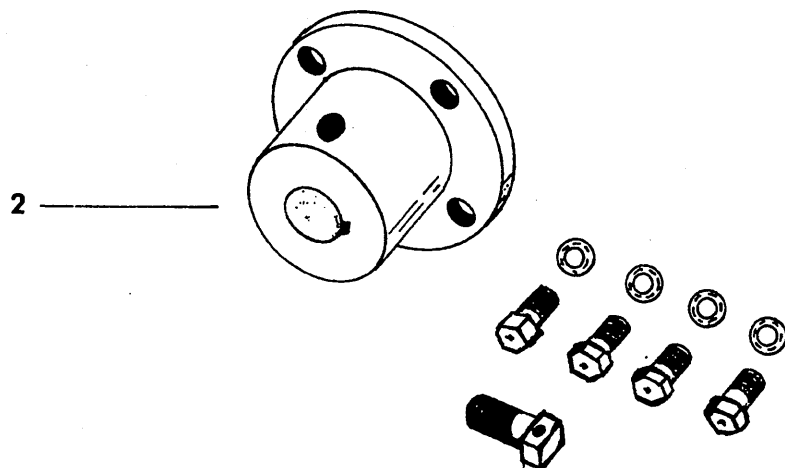
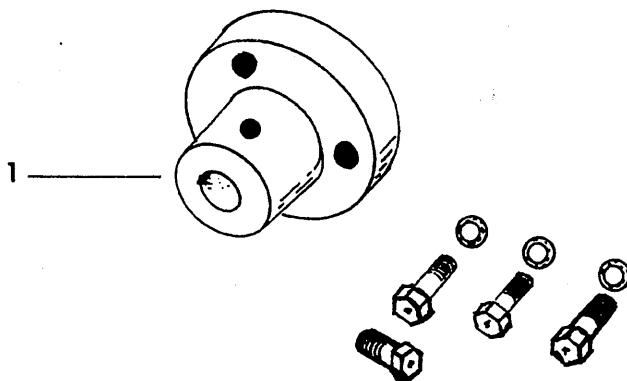


V-Drive Group

Reverse Gear

Main Shaft Group

Code	Description	No. Used	Part	Notes
	<u>Used with V-Drive only</u>			
	Reverse Gear & tail shaft Assy.	1	285449	
	Reverse Gear	1	261046	
	Tail Shaft & Brg. Sleeve Assy. (No Bearing Included)	1	262211	
1	Tail Shaft	1	261107	
2	Washer	1	239639	
3	Brg. Sleeve	1	262210	
4	Key, Woodruff	2	206511	#9
5	Oil Dip Stick, used with V-Drive	1	263940	
6	Reverse Gear Brg. Housing	1	261060	
7	Gasket, Brg. Housing	2	261065	
8	Ball Brg.	1	239638	
9	Retaining Ring	1	239637	
	Oil Seal - located in V-Drive (upper)	1	286869	

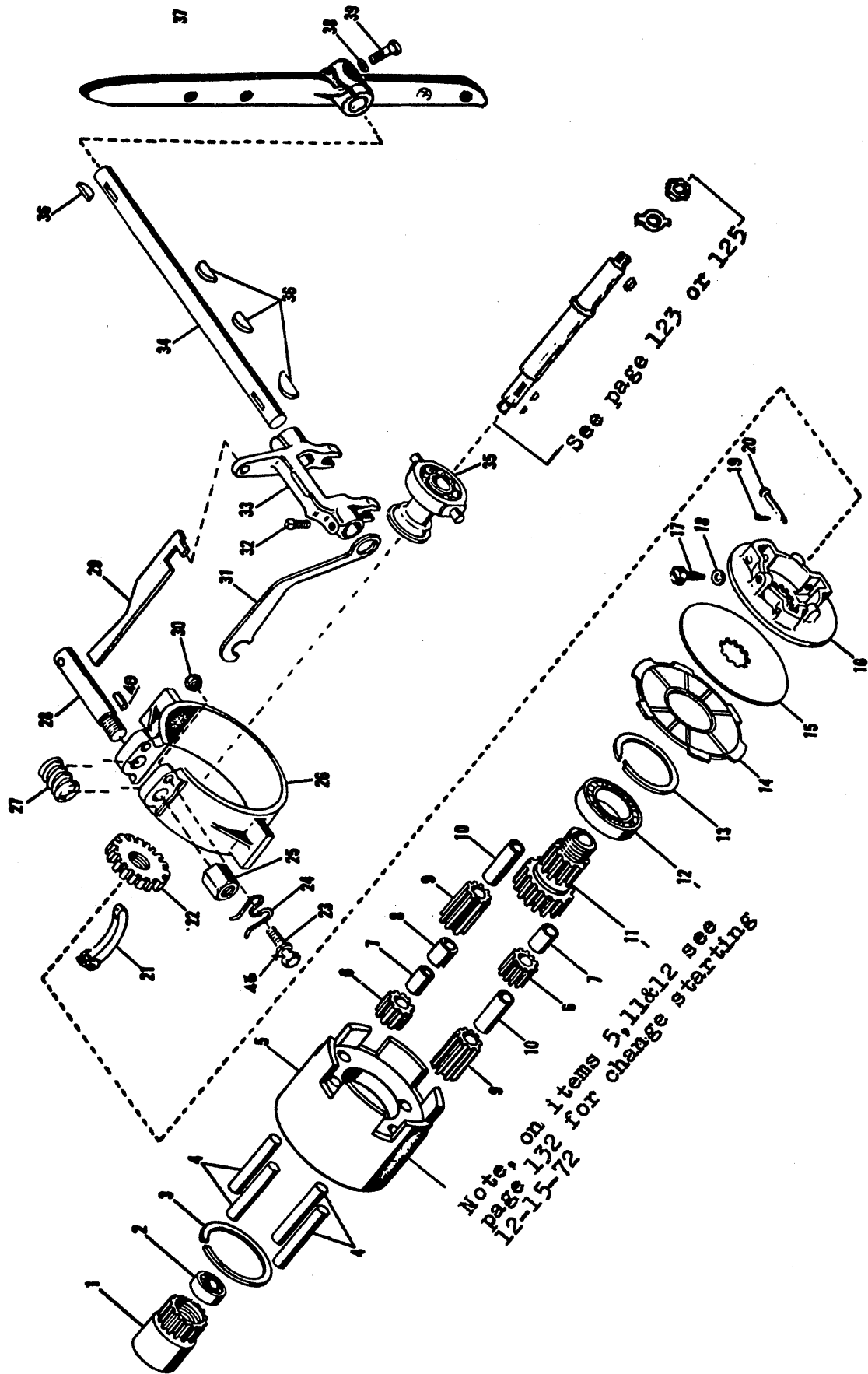


Shaft Couplings

Reverse Gear

Shaft Couplings

Code	Description	No. Used	Part	Notes
	<u>Direct Drive Coupling</u> (Paragon)			
1	Shaft Coupling, Bore 7/8"	AR	261063	
	Shaft Coupling, Bore 3/4"	AR	263392	
	Shaft Coupling, Bore 1"	AR	263393	
	Key	1		
	Lockwasher	3	231895	3/8"
	Cap Screws	3	239548	3/8 - 24 x 1 1/4"
	Set Screw	1	238162	3/8 - 10 x 3/4"
	<u>Reduction Gear Coupling</u> (UJR)			
2	Shaft Coupling, Bore 7/8"	AR	275814	
	Shaft Coupling, Bore 1"	AR	275813	
	Shaft Coupling, Bore 1 1/8"	AR	275812	
	Shaft Coupling, Bore 1 1/4"	AR		
	Key	1		
	Lockwasher	4	285305	3/8
	Cap Screw	4	294508	3/8 NF x 3/4
	Set Screw	1	231710	3/8 NC x 1"
	Shaft Coupling, Bore 3/4"	1	275815	
	<u>V-Drive Couplings</u>			
3	Coupling, Bore 7/8"	AR	264056	
	Coupling, Bore 1"	AR	264055	
	Lockwasher	3	VDP-224	5/16
	Cap Screws	3	VDP-227	5/16 x 1" SAE
	Set Screw	1	286946	3/8" x 5/8" USS
	Key	1	286947	1/4 x 1 3/4"
	Coupling, Bore 3/4"	1	295286	



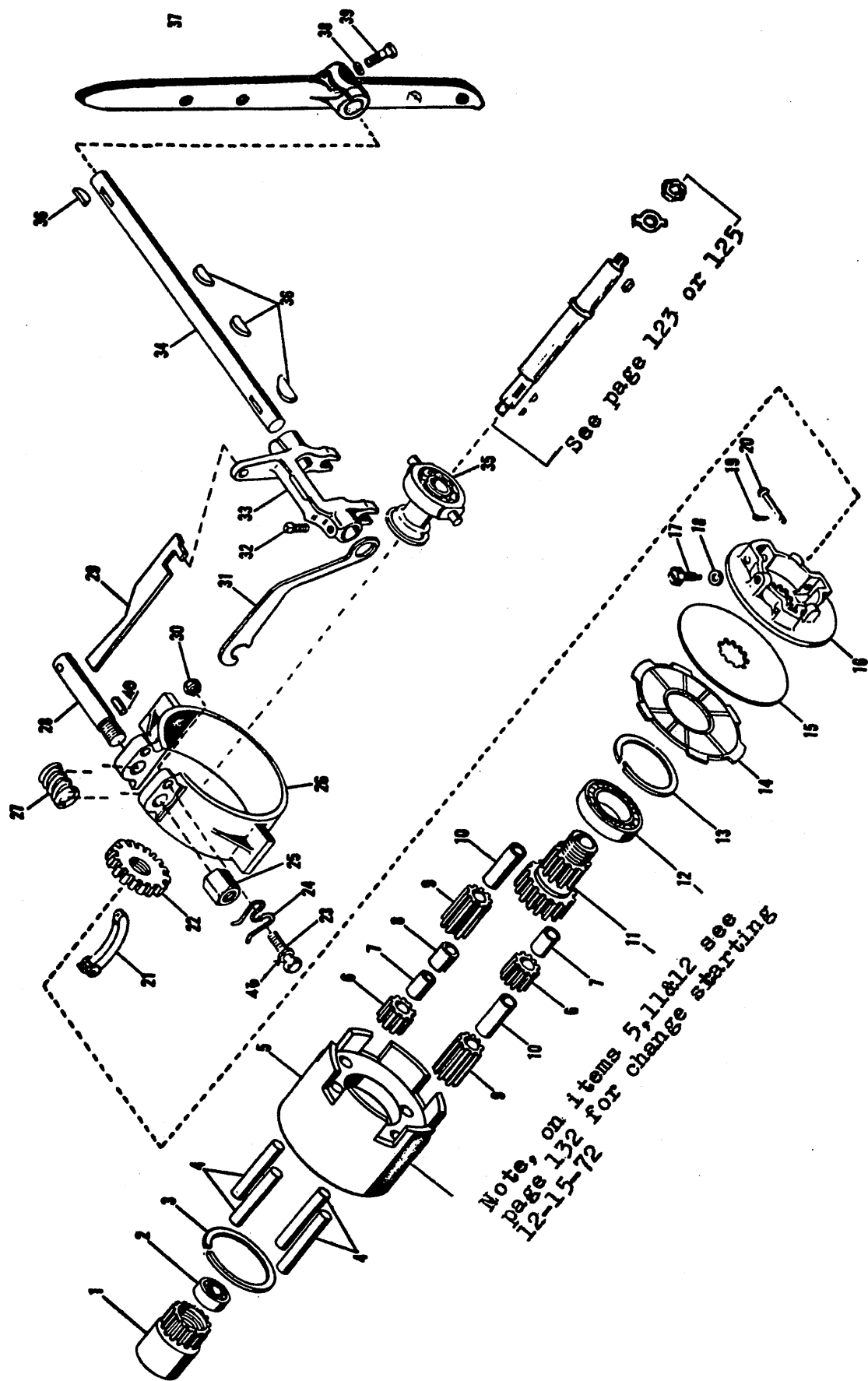
Reverse Gear

OXK Paragon

Gear Group

Code	Description	No. Used	Part	Notes
	Reverse Gear and Tail Shaft Assy.	1	259626	
	Reverse Gear Assy. Only	1	261046	
1	Crankshaft Gear	1	285982	
2	Pilot Brg ND3201	1	285983	
3	Retaining Ring	1	285984	
4	Pinion Stud	4	285985	
5	Gear Case - See note on page 132	1	285986	use 286230
6	Short Pinion Gear	2	285987	
7	Short Bushing	2	285988	
8	Spacer, pinion gear	2	285966	
9	Pinion Gear w/bushing, long	2	285989	
10	Bushing, long pinion gear	2	286229	
11	Gear, propeller - See note on page 132	1	285990	
12	Brg gear cage - See note on page 132	1	285945	
13	Ring, retaining	1	285991	
14	Clutch disc. outer	3	285992	
15	Clutch disc. inner	3	285993	
16	Plate, finger	1	285994	
17	Screw, lock	1	285995	
18	Lockwasher 1/4"	1	231894	
19	Pin, cotter 1/8 x 1/2"	3	284969	
20	Pin, finger	3	285996	
21	Finger	3	285997	
22	Collar, screw	1	285998	
23	Cap Screw	1	231058	
24	Spring, lock	1	285999	
25	Nut	1	290453	
26	Band w/lining	1	286079	
27	Spring, band	1	290415	
28	Adjusting Bolt	1	286000	
29	Locking Bar	1	285975	
30	Nut	1	230141	
31	Brace	1	285976	
32	Set Screw, square head	1	231681	5/16 - 18 x 1 1/2
33	Yoke	1	285979	
34	Cross Shaft	1	285980	
35	Operating Cone	1	286080	
36	Key	4	285981	
37	Shift Lever	1	260909	
37A	Shift Lever - Special on Pearson Yachts	AR	261123	Use 290666
39	Set Screw	1	231684	
40	Shaft - direct drive only	1	261035	

NOT AVAILABLE

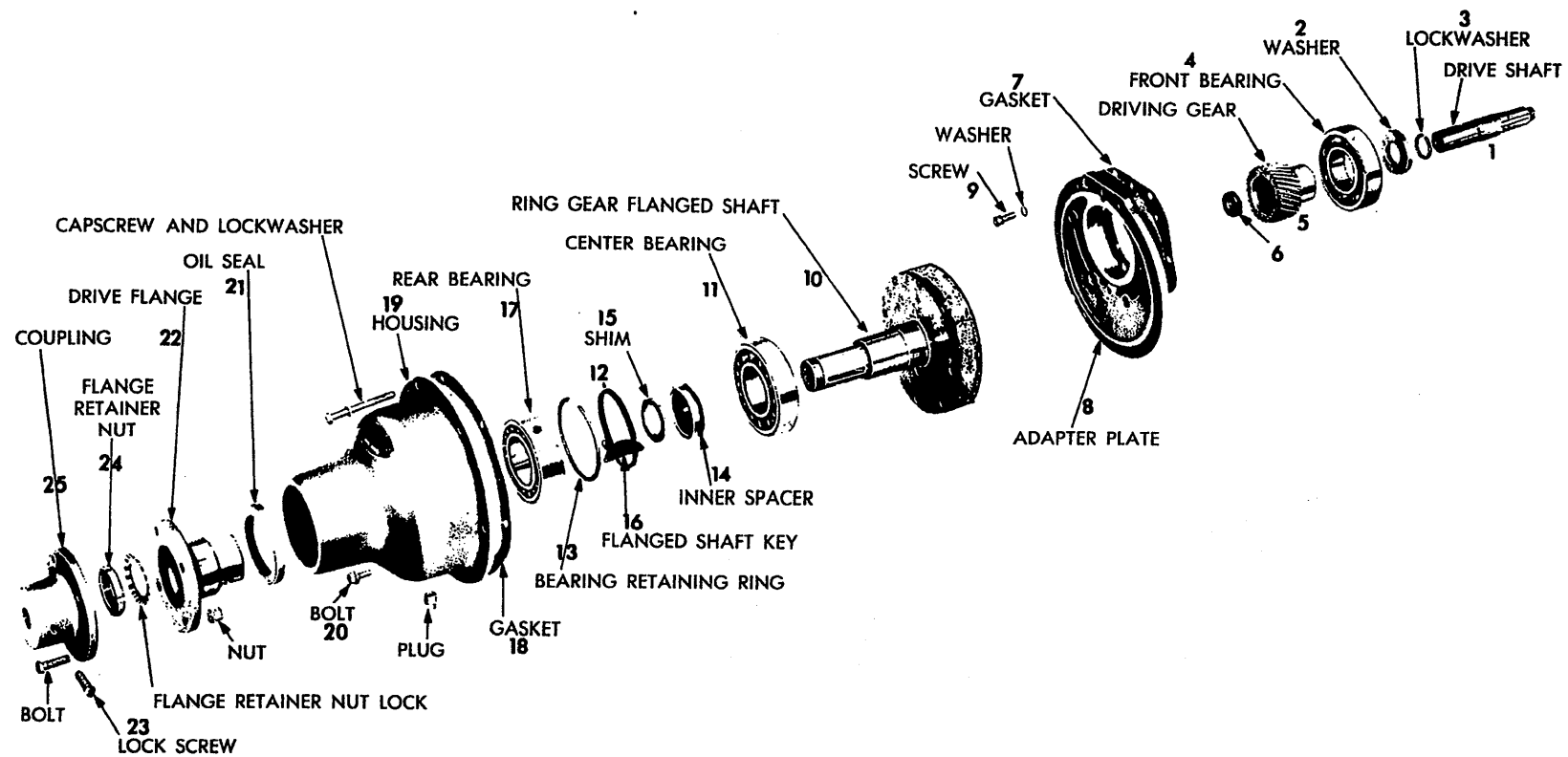


Reverse Gear

OXK Paragon

Gear Group (Cont'd)

Code	Description	No. Used	Part	Notes
41	Coupling	1	261040	
42	Lockwasher, tail shaft	1	263762	
43	Locknut, tail shaft	1	263761	
44	Key, coupling & shaft	1	263641	
	Woodruff Key	2	206511	#9
48	Pin Band Brace	1	RGP-6267	
46	Lock Washer	1	285304	
NOT AVAILABLE <u>Note</u> Starting 12-15-72 use the following after serial # 178800				
5	Case, Gear	1		
11	Gear, Propellor	1		
12	Bearing, Gear Case	1		

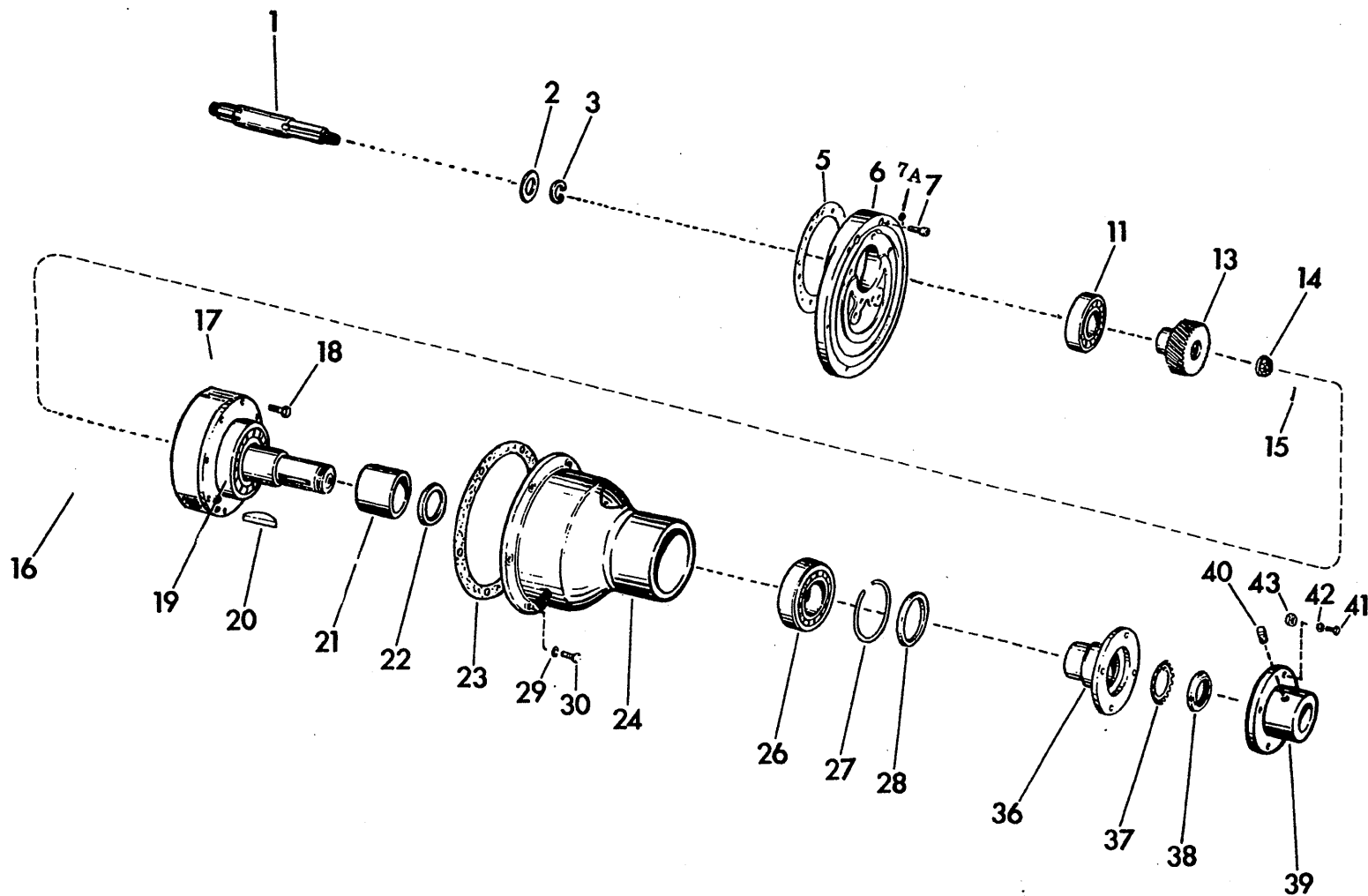


Reduction Gear

Gear Group

2-1 RatioReduction Gear
(UJR)

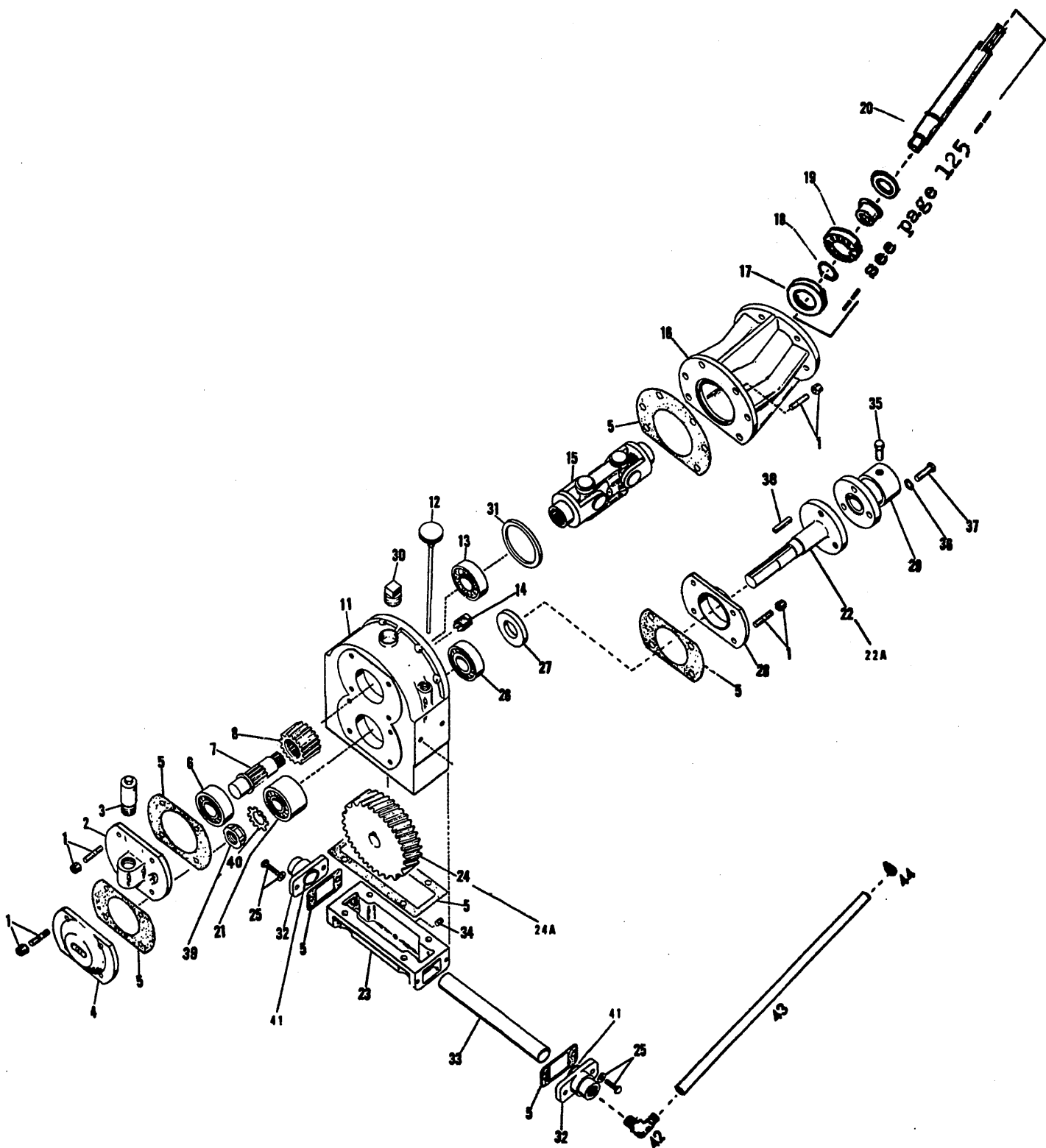
Code	Description	No. Used	Part	Notes
	Reduction Gear Assy.		261082	
1	Shaft, Pinion Drive	1	286228	
2	Ring, spacer	1	295399	
3	Ring, retainer	1	286211	
4	Bearing, forward	1	286213	
5	Gear, Pinion Drive	1	286203	
6	Nut, lock drive gear	1	287372	
	Cotter Pin	1	RGP-6242	
7	Gasket, adapter Plate	1	261065	
8	Plate, adapter	1	286201	
9	Screw, socket head	6	231503	
10	Shaft, output	1	286205	
11	Bearing, center	1	285038	
12	Spacer - outer	1	286208	
13	Ring, snap	1	286211	
14	Spacer	1	286206	
15	Washer, seal cork	1	286207	
16	Key	1		
17	Bearing, rear	1	285038	
18	Gasket	1	286204	
19	Housing	1	286202	
20	Screws, mounting	6	231080	3/8 - 16 x 1"
	Lock	6	231859	3/8
21	Seal	1	286212	
22	Coupling, gear half	1	286209	
23	Lock	1	287652	
24	Nut	1	287381	
25	Coupling, shaft half - See Page 128			



Gear Group

Reduction Gear

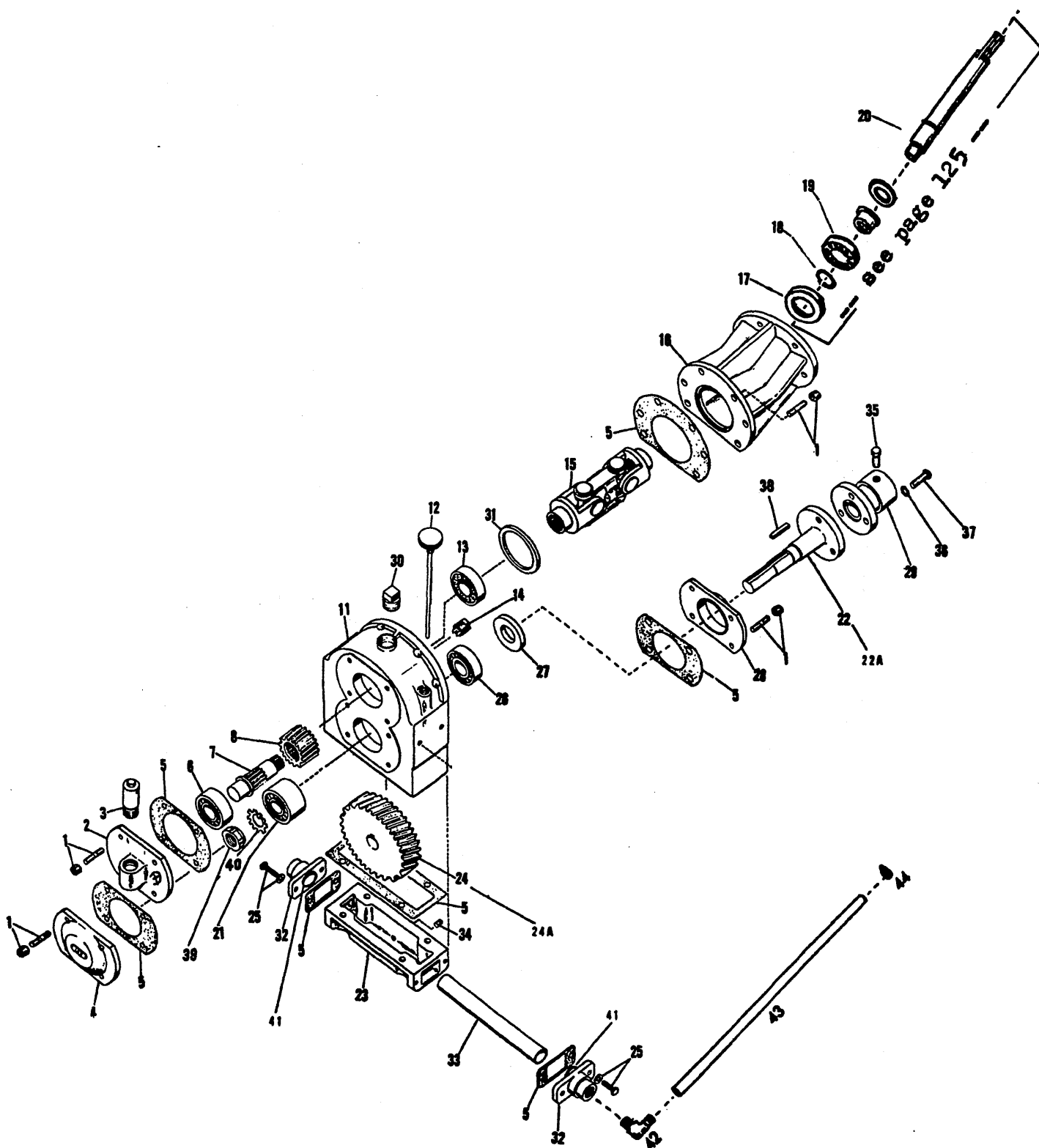
Code	Description	No. Used	Part	Notes
	<u>3-1 Reduction</u>	1	UJ123	
1	Shaft, pinion	1		
2	Spacer, collar	1		
3	Ring, retainer	1	286224	
5	Gasket	1	261065	
6	Plate, adapter	1		
7	Screw, adapter Plate	6		
11	Bearing, pinion	1	286213	
12	Not Used	-	-	
13	Pinion Gear, driving	1		
14	Nut	1	286218	
15	Key 1/8" x 2"	1		
17	Shaft, output	1	286219	
19	Bearing	1	286214	
20	Key	1		
21	Spacer	1	286220	
22	Washer, seal	1	286221	
23	Gasket	1	286204	
24	Housing	1	286217	
27	Snap Ring	1		
26	Bearing	1	286214	
28	Oil Seal	1	286212	
30	Screw 3/8 - 16 x 1" NC	6	231080	
36	Coupling	1	286222	
37	Lock	1	286215	
38	Nut	1	286216	
39	See Page 128			



Gear Group

V-Drive

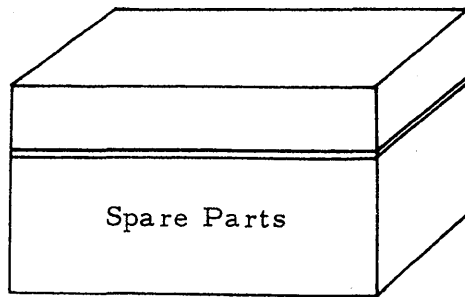
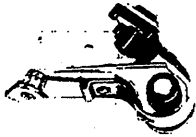
Code	Description	No. Used	Part	Mfg No.	Notes
	Assembly - 1.1 ratio		262214		
	Assembly - 1.29 reduction		262215		
	Assembly - 1.67 reduction		262216		
	Assembly - 2.1 reduction		261105		
1	Stud & Nut	2	286862		
2	Cover	1	286841		
3	Cap, breather	1	286856		
4	Cover	1	VDP104		
5	Gasket Set	1	286857		
6	Bearing	1	286859		
7	Shaft, pinion	1	286845		
8	Pinion 1.1 ratio	AR	286846		
8	Pinion 1.29:1	AR	286847		
8	Pinion 1.67:1	AR	286848		
8	Pinion 2:1	AR	286849		
11	Housing	1	286840		
12	Oil dip stick	1	286864		
13	Bearing	1	286858		
14	Plug, magnetic	1	286865		
15	Universal Joint	1	286868		
16	Angle housing	1	286867		
17	Oil Seal	1	286869		
18	Ring, snap	1	239637		
19	Ball Bearing	1	239638		
20	Shaft assembly	1	262211		
21	Ball Bearing	1	286860		
22	Shaft, gear	1	286855		
23	Cover, water cooled	1	286843		
24	Gear 1:1 ratio w/spline	AR	286850		
	Gear 1:29:1 ratio w/spline	AR	286851		
	Gear 1:67:1 ratio w/spline	AR	286852		
	Gear 2:1 ratio w/spline	AR	286853		
25	Screw, upper & lower cover	4	286863		
26	Ball Bearing	1	286861		
27	Seal, lower shaft	1	286844		
28	Cover	1	286842		
29	Coupling, prop shaft	AR	264056		7/8" Bore
	Coupling, prop shaft	AR	264055		1" Bore



Gear Group

V-Drive (Cont'd)

Code	Description	No. Used	Part	Mfg No.	Notes
30	Pipe Plug	1	VDP207		1/4" IPT
31	Plate, retainer	1	286943		
32	Plate, end cooler	1	286944		
33	Tube	1	286945		
34	Plug	1	VDP218		1/8" IPT
35	Set Screw	1	286946		3/8 x 5/8 USS
36	Lockwasher	1	VDP224		5/16"
37	Cap Screw	1	VDP227		5/16 x 1" SAE
38	Key	1	286947		
39	Nut	1	286948		
40	Star washer	1	286949		
41	O Ring	1	286952		7/8"
42	Water outlet elbow to engine pump	1	241019		1/2" hose x 3/8 IP
43	Hose V-drive to engine pump	1	288986		1/2" x 18"
44	Clamp, hose	2	274927		
45	Cap Screw, V-drive mounting	6	231060		5/16-18 x 1 1/4"
46	Lock Washer, V-drive mounting	6	231891		5/16"
	Note				
	Keywayed pinion and gears are obsolete - replace with splined type, new style splined shaft must also be replaced to match new style splined gears.				



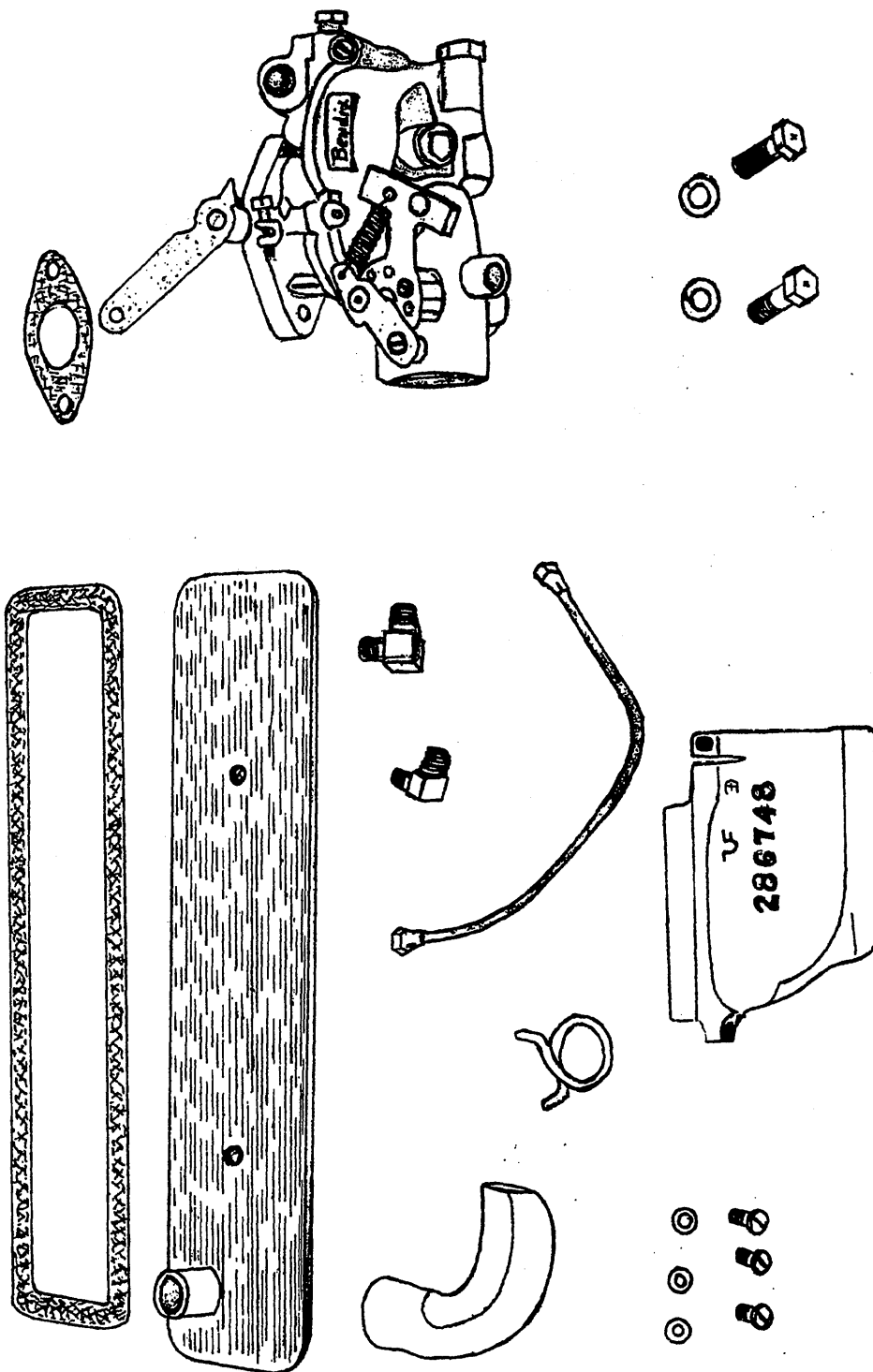
DAMPING



Accessories

Kits and Paint

Code	Description	No. Used	Part	Notes
	<u>Spare Parts Kits</u>			
	Alternator & Rubber Impeller pump	1	255211	
	Alternator & Gear type water pump	1	255212	
	12 Volt Generator Gear type pump	1	255213	
	12 Volt Generator Rubber type pump	1	255214	
	6 volt Generator & Gear type pump	1	255215	
	Alternator & Delco distributor	1	255461	Sherwood W. P.
	Spare Parts Kit A	1	256224	Delco ignition
	<u>Paint</u>			
	Copper Metallic	2	285193	
	Tan Epoxy		302889	
	Aqua Blue		302981	
	Green			

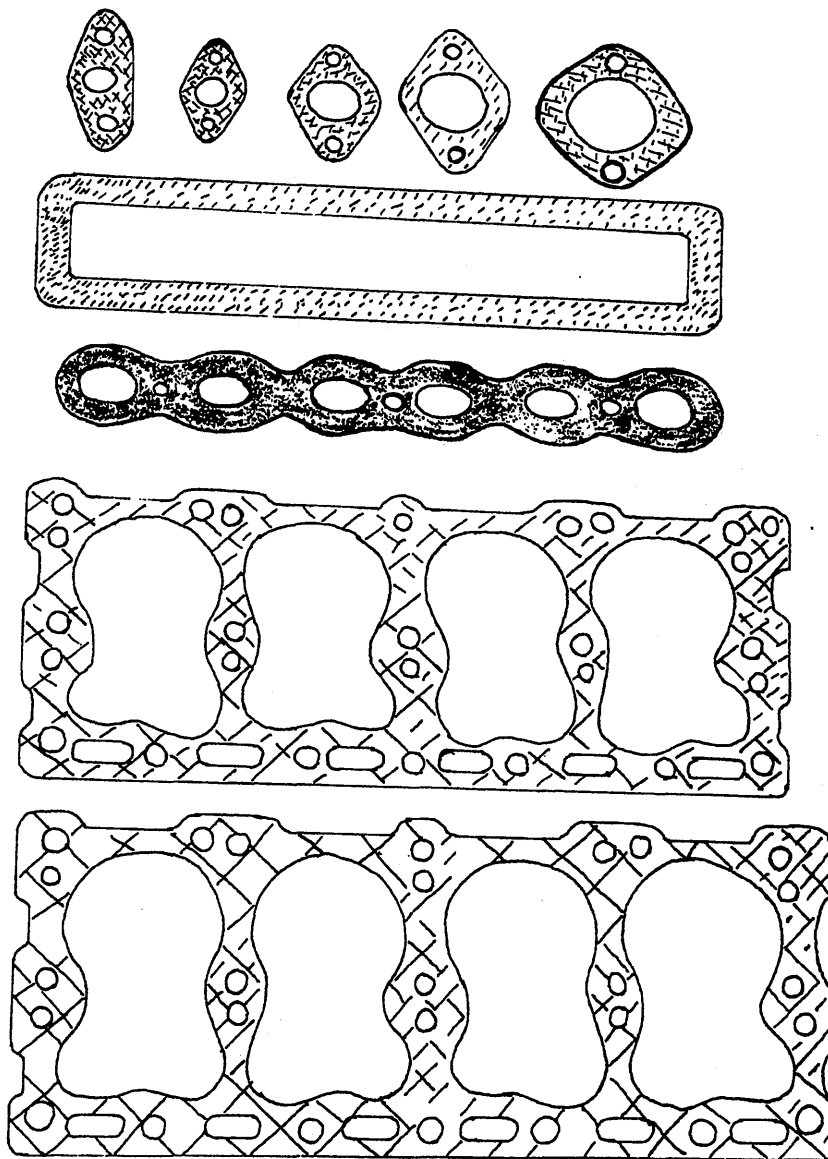


Carburetor Kit

Accessories

Kits

Code	Description	No. Used	Part	Notes
	<u>For updating Engines</u>			
	Alternator to convert 6 Volt System to 12 Volt - 35 amp	1	255937	
	Alternator to convert 12 Volt generator to 12 Volt 35 amp	1	255938	
	Carburetor - convert from early UF143 to late 288482 carburetor includes flame arrestor	1	255981	
	Reduction gear to convert from direct drive to 2-1 <u>Note</u> mounting gasket 261065 and shaft coupling not included	1	261082	
	Fresh water cooling system UJ and UJR	1	256189	Use 256184
	Fresh water cooling system V-Drive engines	1	256190	Use 256185
	Hose V-Drive to raw water pump inlet	1	290025	1/2" x 35"
	Oil Filter Kit	1		Not available
	Radio Shielding - auto-lite dist.	AR		
	Radio Shielding - Delco dist.	AR		26000-261
	<u>Conversion Kits, Cooling</u>			
	Fresh water system for UJVD w/Holley Thermostat System	1	256185	
	Fresh water system for UJ or UJR with Dole Thermostat	1	256194	
	Fresh water system for UJVD with Dole Thermostat	1	256195	
	Fresh water system, UJ & UJR - Holley	1	256184	

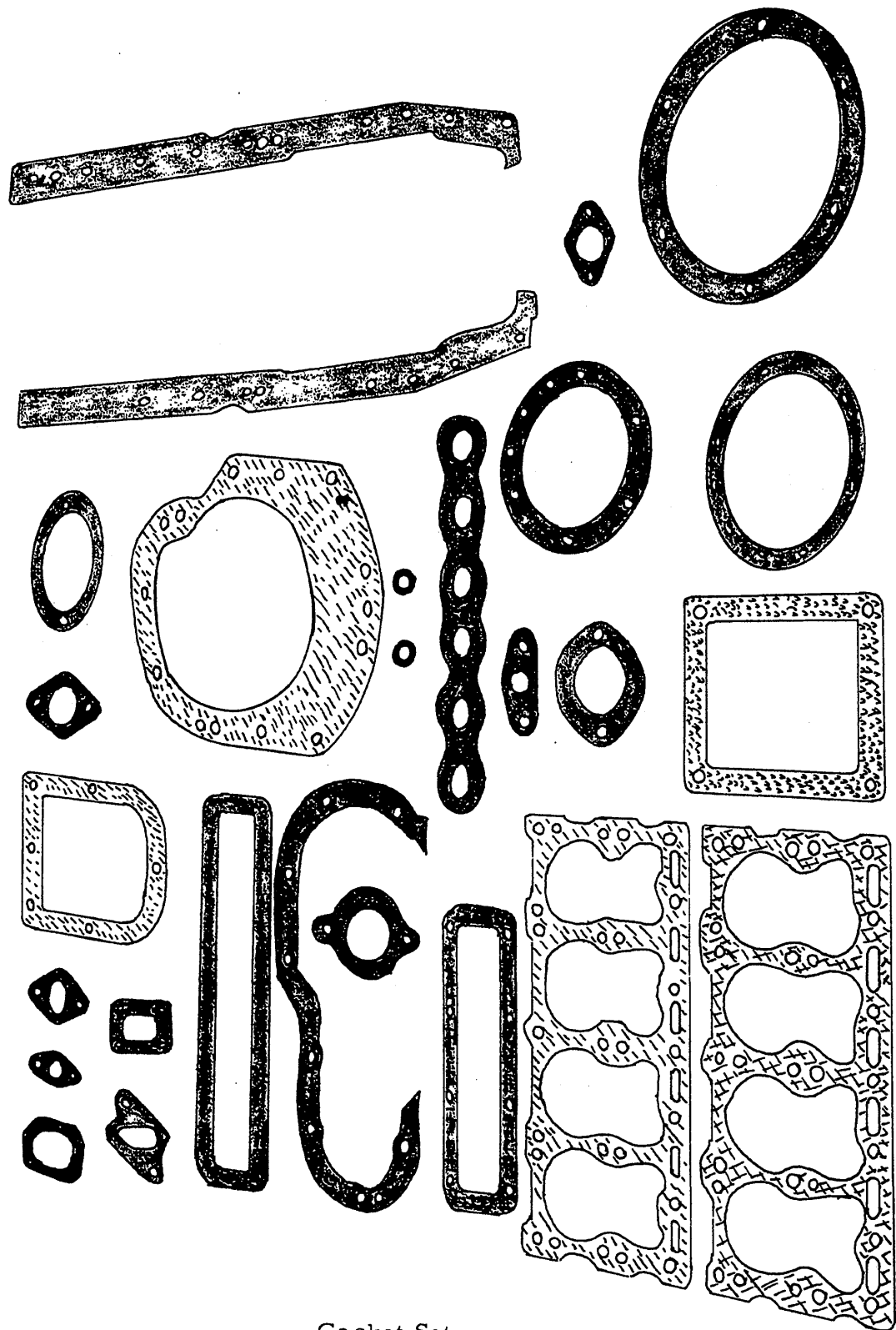


Gaskets, Valve Grind

Gaskets

Upper Partial Set

Code	Description	No. Used	Part	Notes
	<u>Valve Grind Set</u>	1	285517	
	Consists of			
1	Gasket, exhaust flange	1	260459	
2	Gasket, water pipe flange	1	260687	
3	Gasket, valve cover	1	261039	
4	Gasket, manifold to block	1	261050	
5	Gasket, cyl. head outlet	1	261053	
6	Gasket, carburetor mounting	1	261202	
7	Gasket, Thermostat housing	1	261601	
8	Gasket, head gaskets	2	263776	

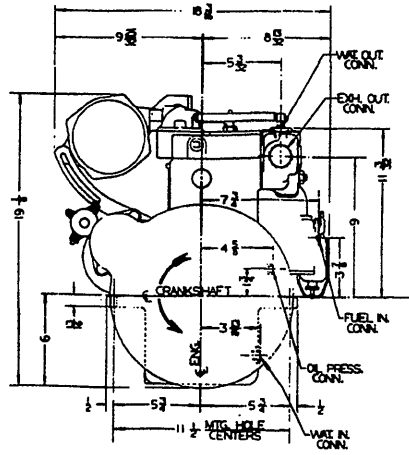
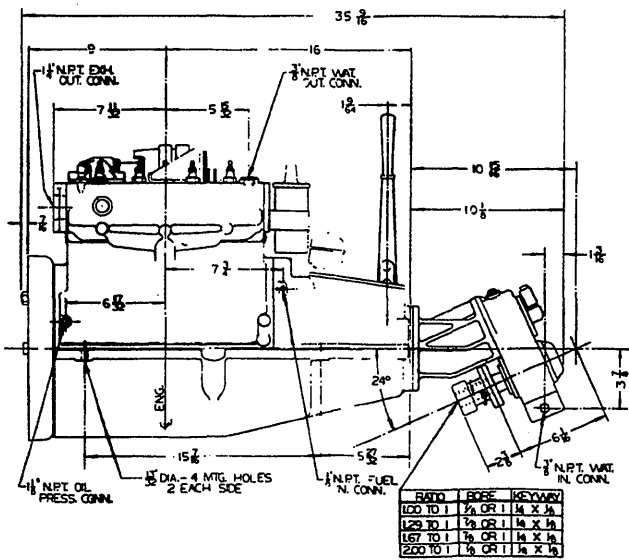
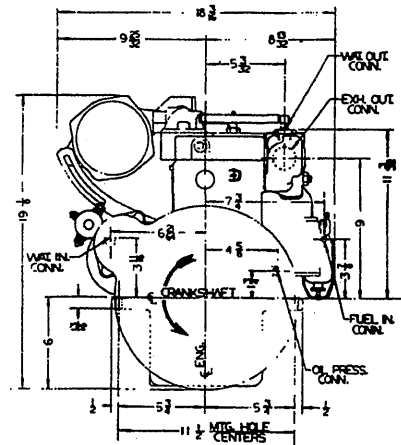
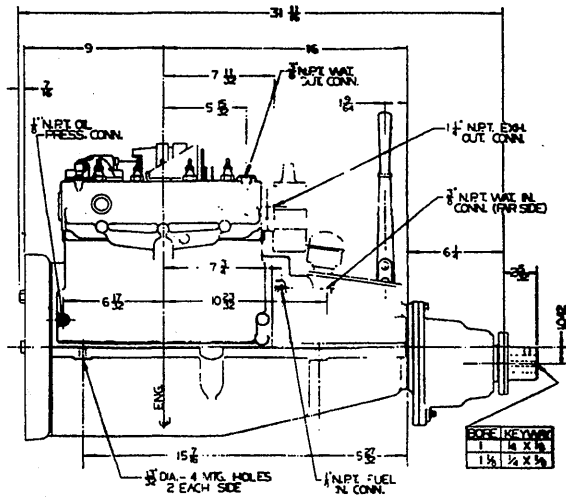
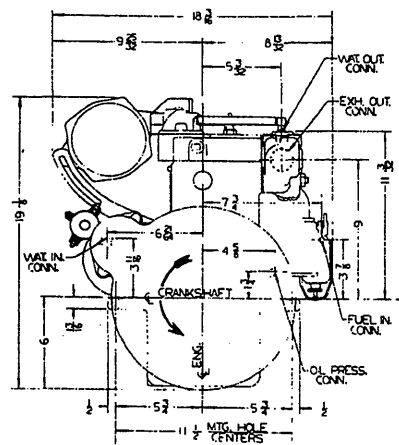
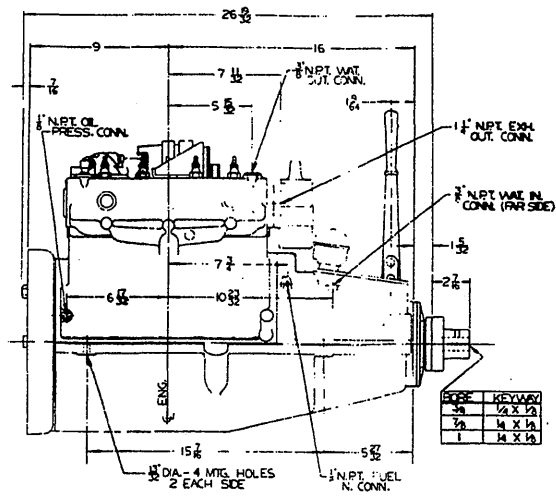


Gasket Set

Gaskets

Complete Set

Code	Description	No. Used	Part	Notes
	<u>Overhaul Engine Package</u>	1	285608	
	Consists of following			
1	Gasket, reverse gear cover	1	260040	
2	Gasket, exhaust flange	1	260459	
3	Gasket, water pump cover	1	260680	
4	Gasket, water inlet on manifold	1	260687	
5	Gasket, reverse gear cover - early	1	260762	
6	Gasket, accessory drive	1	260959	
7	Gasket, oil pump cover	1	261009	
8	Gasket, valve cover	1	261039	
9	Gasket, flywheel housing	1	261042	
10	Gasket, water pump mounting	1	261044	
11	Gasket, reverse gear housing	1	261047	
12	Gasket, oil pan	2	261048	
13	Gasket, water inlet plate	1	261049	
14	Gasket, manifold to cyl block	1	261050	
15	Gasket, cyl head outlet - early	1	261053	
16	Gasket, reverse gear brg housing	2	261065	
17	Gasket, thermostat early type	1	261144	
18	Gasket, carburetor mounting	1	261202	
19	Gasket, thermostat housing - late	1	261601	
20	Gasket, fuel pump mounting	1	261562	
21	Gasket, cyl head	2	263776	
22	Gasket, reduction gear 2-1 ratio	1	286204	
23	Gasket, water pump	1	287456	



GENERAL SPECIFICATIONS

MODEL DESIGNATION - - - - - UJ UJS UJR UJSR UJVD
 ENGINE TYPE - - - - - Vertical, 4 Cycle, L-Head
 NUMBER OF CYLINDERS - - - - - Four
 BORE AND STROKE - - - - - 2-9/16" x 3-1/8"
 TOTAL PISTON DISPLACEMENT - 64.46 CUBIC INCHES
 COMPRESSION RATIO - - - - - 6.3:1
 ENGINE ROTATION - - - - - Counter-Clockwise (From Flywheel
 End)
 REDUCTION GEAR RATIO - - - - - 2.04:1
 V-DRIVE REDUCTION RATIOS - - 1:1, 1.29:1, 1.67:1, 2:1
 MAXIMUM OPERATING ANGLE - - Appx. 12° to 15° Maximum

BRAKE HORSEPOWER: @

	RPM	600	1000	1500	2000	2500	3000	3500
UJS-UJSR	BHP	4	7.1	11	15	18	--	--
UJ-UJR-UJVD	BHP	5	7.3	11.9	16.2	20	25	30

FUEL - - - - - Regular Grade Gasoline 92-94 Octane

LUBRICATION OIL - - - - - Engine - SAE 30
 V-Drive 80-90-140 Gear Lube --
 90 Hypoid Lube -- SAE 10-W-30

WATER PUMP GREASE - - - - - Any Good Grade Water Pump Grease

<u>SUGGESTED OIL LEVELS</u>	<u>Angle of Installation</u>	<u>Amount of Oil at Full</u>	<u>Amount of Oil at Low</u>
<u>MODELS UJ - UJVD</u> - -	0° Angle	5-3/4 Quarts	5 Quarts
	5° Angle	4-3/4 Quarts	4 Quarts
	10° Angle	3-1/2 Quarts	2-3/4 Quarts
	15° Angle	2-3/4 Quarts	2-1/4 Quarts
<u>MODEL UJR</u> - -	0° Angle	6 Quarts	5-1/2 Quarts
	5° Angle	5-1/4 Quarts	3-3/4 Quarts
	10° Angle	4 Quarts	2-3/4 Quarts
	15° Angle	3-1/4 Quarts	2-1/2 Quarts

ADJUSTMENT DATA

IGNITION:

SPARK PLUG - - - - - Champion J-8 14M/M
 Gap Clearance .035

IGNITION TIMING - - - - - Breaker Points Just Starting to
 Open - TDC (Top Dead Center)

DISTRIBUTOR POINT GAP

CLEARANCE - - - - - Prestolite - .018 to .020
 Delco - .025

DWELL ANGLE - - Prestolite - 38°
 Delco - 31° to 34°

MAGNETO POINT GAP

CLEARANCE - - - - - .014 to .018

ADJUSTMENT DATA -Continued

VALVES:

FIRING ORDER - - - - -	No. 1 on Flywheel End 1-2-4-3	
VALVE SEQUENCE - - - - -	Exh. -Int. -Exh. -Exh. -Int. - Int. -Exh.	
INLET VALVE OPENS - - - - -	5° before TDC	
CLOSES - - - - -	50° after LDC	
EXHAUST VALVE OPENS - - - - -	45° before LDC	
CLOSES - - - - -	10° after TDC	
VALVE SEAT ANGLE - - - - -	45°	
VALVE SEAT WIDTH - - - - -	1/32"	
VALVE STEM SIZE - - - - -	.3120 to .3115 (Tolerance)	
VALVE STEM CLEARANCE - - - - -	.002 to .003	
VALVE GUIDE CLEARANCE-		
REAM TO - - - - -	.3145 to .3150	
VALVE TAPPET CLEARANCE-		
Intake - - - - -	.008-Hot;	.010 - Cold
Exhaust - - - - -	.010-Hot;	.012 - Cold
SUGGESTED VALVE LIFTER		
TOOL - - - - -	SNAP-ON TOOL CF-19	
MAIN BEARING JOURNAL - - - - -	1.9880	+ .0005 - .0000
CONNECTING ROD JOURNAL - - - - -	1.5625	+ .0000 - .0005
MAIN BEARING CLEARANCE -		
On Crkshft - - - - -	.001 to .0025	
CONN. ROD BEARING CLEARANCE	.001 to .0025	
CRANKSHAFT END PLAY - - - - -	.002 to .003 (At Front Bearing Only)	
CONNECTING ROD END PLAY - - - - -	.004 to .008	
(Install w/No. on Rod Toward Camshaft)		
CAMSHAFT BEARING JOURNAL-	1.3745	+ .0005 - .0000
CAMSHAFT BEARING CLEARANCE	.0015 to .0025 (REAMED AFTER INSTALLATION IN BLOCK)	
CYLINDER BORE - - - - -	2.562 to 2.563 Diameter (HONE FINISH)	
(Install Pistons w/Arrow Pointing to Reverse Gear End. Slot will be on left side - facing rear. Install Piston Rings - Compression - with Groove Side Up (Top of Piston)		
PISTON RING SIDE CLEARANCE (Width)		
Compression Ring Top - - - - -	.0015 to .003	
Compression Ring Center - - - - -	.001 to .0025	
Oil Ring - - - - -	.001 to .0025	
PISTON RING GAP CLEARANCE-	.007 to .015	
PISTON SKIRT CLEARANCE - - - - -	.0015 Feeler to 5 Lbs Pull	
PISTON PIN SIZE - - - - -	.6880" - Standard	

ADJUSTMENT DATA -Continued

PISTON PIN CLEARANCE

IN PISTON - - - - -	.001 - .002
OIL PUMP DRIVE END PLAY - -	.001 to .003
OIL PUMP GEAR BACK LASH - -	.003 to .005
CAMSHAFT GEAR BACK LASH -	.002 to .004
IDLER GEAR BACK LASH - - -	.002 to .004
ACCESSORY GEAR BACK LASH -	.002 to .004
ALTERNATOR BELT TENSION -	3/8" Maximum depression between centers.

TORQUE WRENCH TENSION

CYLINDER HEAD STUD NUTS - -	35 Ft. Lbs - (Engine Hot)
CONNECTING ROD BOLT NUTS -	33 Ft. Lbs
FLYWHEEL STUD NUTS - - - -	35 Ft. Lbs
MAIN BEARING NUTS - Front & Rear - -	60 Ft. Lbs
MANIFOLD STUD NUTS - - - -	35 Ft. Lbs - (Engine Hot)
SPARK PLUG - - - - -	30 Ft. Lbs

GENERAL INFORMATION

EXHAUST FLANGE - - - - -	1 - 1/4" NPT (National Pipe Thread Size)
WATER INLET - - - - -	3/8" NPT
WATER OUTLET - - - - -	3/8" NPT
FUEL PUMP CONNECTION - - -	1/8" NPT
FUEL LINE - Copper Tubing - -	5/16" OD

SIGNIFICANT ENGINE CHARACTERISTICS

Up to Serial No. 79475	All parts interchangeable - -Dole Thermostat System (On Manifold) -Prestolite Ignition
Serial No. 79475 thru 170508	New Style - Not interchangeable w/above- -Holley Thermostat System (Cyl. Head) -Delco Remy Ignition System
Serial 170509 and up Serial 170509	-Bendix 288482 Carburetor System -First Motorola Alternator (Interchange- able)
Serial 171514	-First Engine less Valve Chamber Oil line
Serial 174340	-First Engine with Oberdorfer Water Pump
Serial 174802	-First Engine with New Style Valves
Serial 175503	-First Engine with New Style Block - (Front Oil Fill)
Serial 176500	-First Engine with Guide Tolerances .3150

