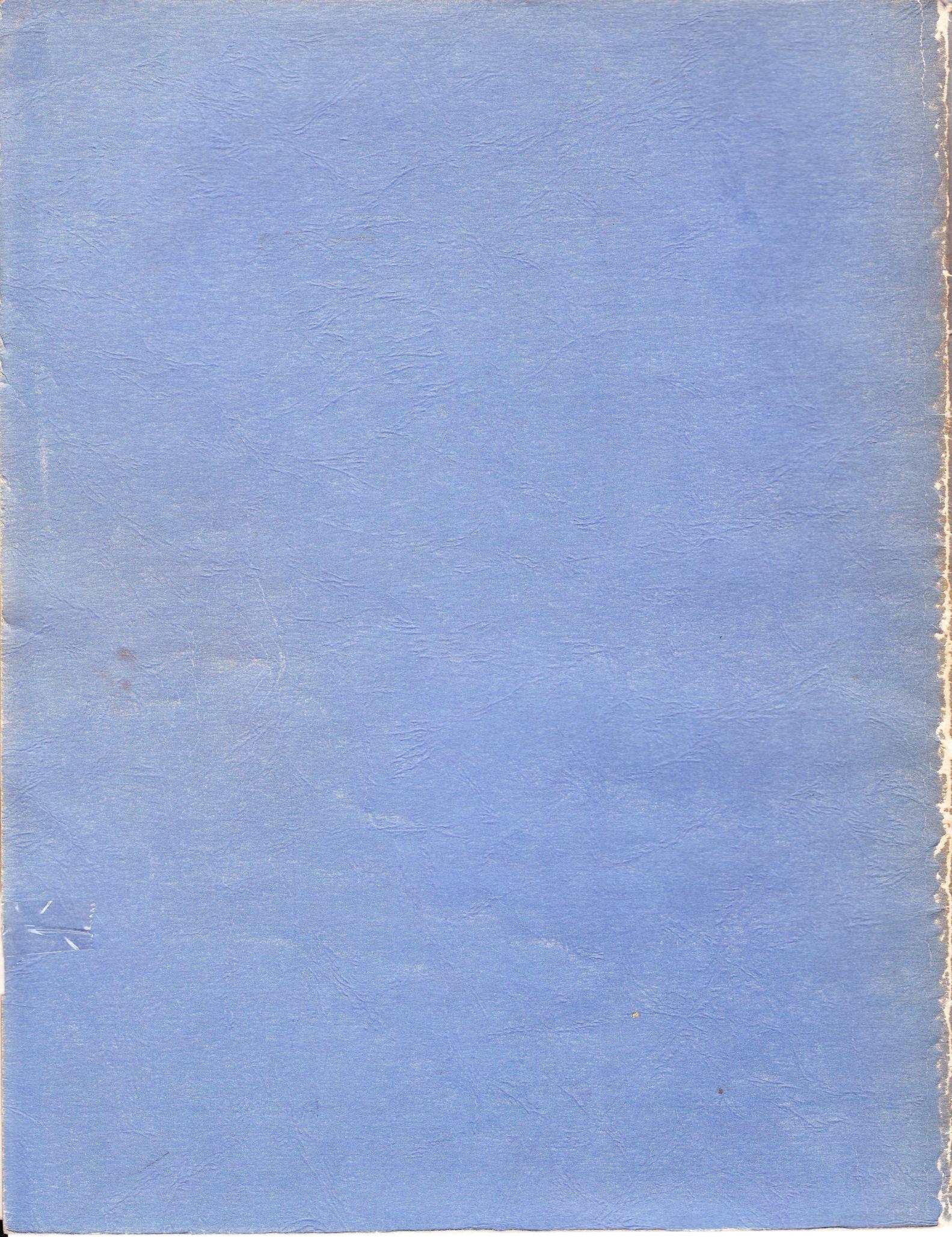




WILLYS-OVERLAND

CJ-2A and 3A
Models

jeep
PARTS LIST



PARTS LIST



Jeep

Models

CJ-2A and CJ-3A

THE JEERSTERMAN
Ratner-572 Ramtown Rd.
Howell, N.J. 07731
201-458-3966

THIRD EDITION

WILLYS-OVERLAND MOTORS

TOLEDO, OHIO, U. S. A.

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MAKERS OF AMERICA'S MOST USEFUL VEHICLES

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GENERAL INFORMATION

This parts list contains a complete list of all serviceable items for the Civilian Jeep Models CJ-2A and CJ-3A arranged to the best of our ability and experience for your convenience in locating parts.

FLAG INDEX: This is an abbreviated index located on fly leaf under front cover. When part to be located is known to belong to a particular major group this group may be found quickly by locating the group in the index then bend back pages until a companion flag appears along the edge which will be the location of group being sought.

GROUP INDEX: Each major group carries a group number which is divided into sub-groups covering important units included in the major group.

As example: GROUP 10-11A

Group 10 covers the entire Engine Assembly. Sub-group 11A covers Cam-shaft and Timing Gears.

This index may be found in front section of book following preface.

ALPHABETICAL INDEX: This index has been carefully arranged indicating descriptions by "Noun" in alphabetical order followed by the group number and page number making it possible to locate a part when only the descriptive identity is known. This index is incorporated in rear section of the book and precedes the numerical index.

NUMERICAL INDEX: All part numbers are listed in their numerical order in the rear section of this book. The group and page numbers are incorporated following the part number thus locating the part when only the part number is available.

ILLUSTRATIONS: All illustrations are inserted as near as possible to the group or sub-group they illustrate with a reference legend below indicating reference number, part number, description and group number in which the part is listed.
An index of illustrations and abbreviations may be found with other indexes in the front section of the book.

ATTACHING PARTS: Screws, nuts, washers, rivets, cotter pins, etc. may be found with description inset in the same group with part they attach. A notation is associated with such parts advising of function they perform.

SPECIAL EQUIPMENT and ACCESSORIES: This group represents special equipment and accessories available through the Parts Department for installation on vehicles in the field.

SERIAL NUMBERS: Chassis number may be found on plate fastened on outside of left frame side rail at front end or at left of the driver's seat on floor riser on first CJ-2A. Then it was re-located on the upper right corner of the dash panel under hood on the later CJ-2A and all CJ-3A.

These numbers started at serial 10,001.

Engine number may be found stamped on the top water pump boss at front end of cylinder block.

These numbers started at serial 10,001.

Engines equipped with .010" undersize main and connecting rod bearings may be identified by the letter "A" following the number (10,001-A). Engines having blocks with .002" oversize bores may be identified by the letter "B" following the serial number -10,001-B).

Engines equipped with .010" undersize bearings and .002" oversize bores may be identified by the letters "AB" following the serial number (10,001-AB).

WARRANTY

The only Warranty under which Willys-Overland motor vehicles are sold is that of the Manufacturer, being the standard warranty recommended by the Automobile Manufacturers' Association, which is hereby reproduced and made a part hereof:

"This is to certify that we, WILLYS-OVERLAND MOTORS, Inc., Toledo, Ohio, U.S.A., warrant each new passenger automobile and truck or other motor vehicle manufactured by us, to be free from defects in material and workmanship under normal use and service, our obligation under this Warranty being limited to making good at our factory any part or parts thereof, including all equipment or trade accessories (except tires) supplied by the Car Manufacturer, which shall, within ninety (90) days after making delivery of such vehicle to the original purchaser or before such vehicle has been driven 4,000 miles, whichever event shall first occur, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied and of all other obligations or liabilities on our part, and we neither assume nor authorize any other person to assume for us any liability in connection with the sale of our vehicles.

"This warranty shall not apply to any vehicle which shall have been repaired or altered outside of an Authorized Willys-Overland Service Station in any way so as, in the judgment of the Manufacturer to affect its stability or reliability, nor which has been subject to misuse, negligence or accident.

Manufacturer makes no warranty against, nor assumes any liability for any defect in metal or other material in any part, device or trade accessory which cannot be discovered by ordinary factory inspection.

WILLYS-OVERLAND MOTORS, INC.

Note:—Willys-Overland Motors, Inc., reserves the right at any time or times to revise, modify, discontinue or change any model or models of its automobiles, or any part or parts thereof, without notice; and, without it or the Seller, incurring any liability or obligation to the Purchaser.

IMPORTANT

1. It is always desirable to order parts from the nearest Willys-Overland Distributor or Dealer.
2. All parts will be shipped COD if by Express or Parcel Post and sight draft Bill of Lading if by Freight; excepting where credit terms have been previously arranged and cases in which order is accompanied by cash remittance.
3. The entering of a parts order shall not be construed as acceptance of such order at any particular price or discount. All orders will be billed at the current factory prices and discounts in effect at time of shipment or delivery.
4. All shipments are properly packed and in good order when delivered to the transportation company. Our responsibility ends with such delivery.
5. All Parcel Post insurance charges are included in our invoice. We insure without instructions and at buyer's expense any shipment by Parcel Post valued at \$25.00 or over. Parcel Post shipments of less value, and on which insurance is not requested, are at purchaser's risk.
6. When a damaged shipment is received, claims should be filed immediately against the carrier making delivery. All claims for shortage or errors in packing must be made within 10 days from receipt of shipment and must be accompanied by the original packing slip with proper notation of damage or shortage signed by the transportation company at destination.

The Reputation Of A Vehicle Is Often Injured By The Installation Of Parts Not Manufactured Or Approved By The Car Manufacturer.

USE NO SUBSTITUTES FOR WILLYS-OVERLAND APPROVED PARTS.

DIRECTIONS FOR ORDERING DOMESTIC PARTS

Adherence to the following instructions when ordering parts will greatly facilitate the handling of orders and aid in rendering prompt and efficient service.

1. Dealers should order parts from their Distributors; Individual Car Owners and Repairmen should order parts from the Distributor or Dealer in whose territory they are located.
2. Do not order parts in a letter treating on some other subject.
3. All orders should be entered in accordance with instructions and on order forms supplied by the factory without charge. For Emergency Orders use Form Parts-126 and for Stock Orders-Form 127.
4. State definite shipping instructions—Express, Air Express, Parcel Post or Freight.
5. Never order parts in sets except when listed in this manner. Specify exactly the quantity of parts desired.
6. If in doubt as to the parts needed, send the broken part with your order, transportation charges prepaid. Write your name and address plainly on the package so that it can be identified when received.
7. Write, stating what you are shipping and the purpose for which it is returned, regardless of any previous correspondence. All parts are held until letter of advice is received.
8. When ordering parts by telegram, be sure the message is prepaid and confirm by regular order through mail, bearing notation "Confirmation Wire Order Date.....".
9. All electrical units and parts manufactured by the Electric Auto-Lite Company must be obtained from their nearest service station or direct from their factory at Toledo, Ohio, as these parts are not supplied by Willys-Overland Motors, Inc.

DIRECTIONS FOR ORDERING AND RETURNING EXPORT PARTS

ORDER PARTS:

Your orders will receive prompt handling and errors in processing will be reduced to a minimum if you will follow the instructions as outlined below:

1. All orders should be addressed to Willys-Overland Motors, Inc., Toledo 1, Ohio, U.S.A., marked "Attention: Export Parts Section".
2. **Original and two duplicate copies** of the Parts Order shall be forwarded to Willys-Overland Motors, Inc. Quadruplicate copy should be retained in your file.
3. Assign only one order number to an order regardless of the number of pages or class of material.
4. If an Import License is required in order to ship material into your territory, the following notation must appear at the top of each page of your order:
"This order is covered by Import License No. (License No.), which expires on (Date of Expiration)."
5. If import License has not been obtained, please make a statement to that effect on the order form.
6. When an order is sent via telegraph or cable, a confirming order should always be clearly marked "Confirming our cable (or telegram) of (date)". Second mail copies should also be clearly marked to avoid duplication.
7. The consignee's address and any shipping marks desired should be shown on every order.
8. Definite instructions should always be given as to method of shipment—freight, express, parcel post, air express or air mail—and any special routing desired. Please do not use the term "Regular".
9. Part numbers and proper descriptions must be supplied for each item ordered.
10. Separate orders should be entered for Auto-Lite parts. This will aid us in expediting these orders.
11. When ordering parts for specific vehicles, specify the serial and engine numbers.
12. Never order in sets except when so specified in parts list—specify the exact parts and quantities desired.
13. When the parts differ between body types, between right and left hand steering, or between the right and left hand sides of the car, specify the body type, type of steering or side of the car for which they are desired. Unless otherwise indicated, parts are common to all types and both sides of the car.
14. Orders for trim parts should always be accompanied by a sample of the material, to assure an exact match.
15. All sheet metal parts are shipped in prime.
16. When in doubt regarding a part number, be sure and specify the vehicle serial number when ordering.
17. Stock orders should be placed on a regular schedule as frequently as necessary. Orders should be dated the day they are mailed.

RETURNING PARTS:

1. No parts should be returned to us for repair or credit without first obtaining our permission. Use Form No. EX3120 Rev. 10-46 to report defective and shortage claims.

WILLYS-OVERLAND MOTORS, INC.
Toledo 1, Ohio, U.S.A.

EXPORT PAYMENT TERMS

We require cash payment in the U.S.A., in U. S. dollars, in advance of shipment, by one of the following means:

- (a) Letter of Credit issued to Willys-Overland Motors, Inc., irrevocable and confirmed by bank in the U.S.A., and allowing drafts to be drawn without recourse, covering the C.I.F. Value and permitting partial shipments; also permit payment against parcel post receipt, express receipt, or air-express receipt, covering such shipments.
- (b) Confirmation by a responsible forwarding house in the U.S.A. with payment of either f.o.b. factory value plus inland transportation charges to seaboard and other miscellaneous expenses or charges, provided against delivery of railroad bill-of-lading and commercial invoices; or, C.I.F. value if Willys-Overland Motors, Inc. is to arrange shipment to destination.
- (c) Remittance payable to Willys-Overland Motors, Inc. covering the C.I.F. value.

The entering of a parts order shall not be construed as acceptance of such order at any particular price or discount. All orders will be billed at the current factory prices and discounts in effect at time of shipment or delivery. All charges beyond the factory, such as freight, insurance, storage, etc., are for the account of the purchaser.

UNDER QUOTATION:

Seller Must:

1. Bear all costs and risks of the goods until such time as the buyer is obliged to take delivery thereof.
2. Render the buyer, at the buyer's request and expense, assistance in obtaining the documents issued in the country of origin, or of shipment, or of both, which the buyer may require either for purposes of exportation, or importation at destination.

Buyer Must:

1. Accept delivery of goods as soon as they have been made available.
2. Pay export taxes, or other fees and charges, if levied for exportation.
3. Assume all costs and charges incurred in obtaining the documents issued in the country of origin, or of shipment, or of both which may be required either for purposes of exportation or of importation at destination.

PROCEDURE FOR RETURNING PARTS FOR REPAIR OR CREDIT

(a) When returning parts for duplication, or credit, a letter of instructions giving the claim number, Form Ser-145 Revised, part numbers of pieces returned and disposition desired, should be sent to Willys-Overland Motors, Inc., regardless of any previous correspondence. All parts will be held until such advice is received; if correspondence has passed on the transaction prior to return of parts, reference to same should be made.

Note:—Dealers should send claims and parts to distributor.

(b) The following forms should be used and procedure followed:

1. Claim Blank Form Ser-145 Revised, should be made out in quadruplicate covering each shipment of parts to the Factory; Original and Duplicate to be mailed to Factory (or Distributor); Triplicate (packing slip) to be enclosed with all freight or express shipments, (however, the packing slip copy of claim blank should not be included in parcel post shipments, as the United States Postal Authorities prohibit enclosures of this nature); quadruplicate to be retained for Consignor's files.

(a) All information requested on the claim blanks must be given. Claim blanks sent the Factory without owner's name, date of car sale, date of replacement, invoice reference number and date, or other information requested, will be returned to Sender and credit will be withheld until such information is received.

2. Tags, Form 144 should be securely attached to all parts submitted for credit bearing:
Part number, description and model
Name and address of Distributor or Dealer
Name and address of the owner of the car
Serial number of car, claim blank reference and any other information called for
These tags will be furnished without charge f. o. b. Factory upon request.

3. The container in which the parts are packed should be of sufficient strength to properly transport them.
4. The bills of lading should properly describe the items according to Railroad Freight Classification to insure proper freight rating; also show weight of each classification separately.
5. Have "Willys-Overland Motors, Inc., Toledo, Ohio," stenciled in two places on each package; do not use tags, unless this is done in addition to the stenciling.
6. Have Consignor's name and address appear on each package so that in the event the Consignee's name may in some way be effaced, the package will be returned to the Sender.
7. The boxes, crates, packages, etc., in each shipment should be numbered starting with number one and running the numbers consecutively thru the year to avoid at any time a duplication of numbers. The package numbers should be shown on the bills of lading, packing sheets and claim papers.
8. The original or a signed copy of bill of lading should be sent to the Traffic Department, at Toledo, as soon as possible after shipment is made.

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List Of Abbreviations Used In This Catalog

Amp.....	Ampere	Mach.....	Machined
Assy.....	Assembly	No.....	Number
Bd.....	Binding	O.D.....	Outside Diameter
C.P.....	Candle Power	O.S.....	Oversize
Crg.....	Carriage	Ov.....	Oval
Ctsk.....	Countersunk	Oz.....	Ounce
Dia.....	Diameter	R.....	Right
Ext.....	External	Rd.....	Round
Fil.....	Fillister	Req'd.....	Required
Fl.....	Flat	R.H.D.....	Right Hand Drive
Hd.....	Head	R.H.S.....	Right Hand Side
Hex.....	Hexagon	S.C.....	Single Contact
I.D.....	Inside Diameter	Sq.....	Square
In. or ".....	Inch	Std.....	Standard
Inc.....	Included	T.....	Teeth
Int.....	Internal or Intermediate	Thd.....	Thread
Int'ch'ble.....	Interchangeable	Thk.....	Thick
L.....	Left	U.S.....	Undersize
L.H.D.....	Left Hand Drive	V.....	Volt
L.H.S.....	Left Hand Side	W/O.....	Without

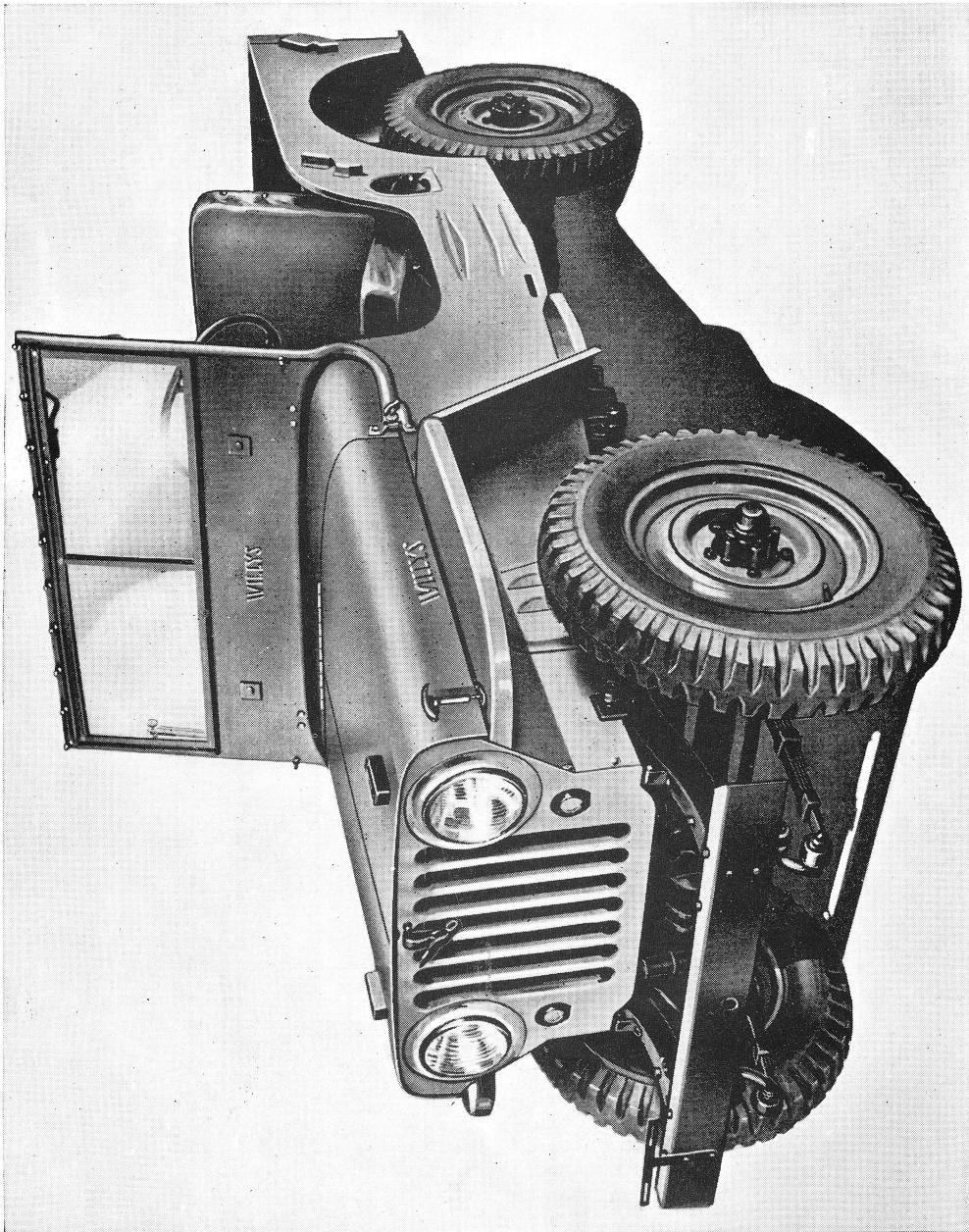


FIG. No. 1—VEHICLE COMPLETE—MODEL CJ-2A

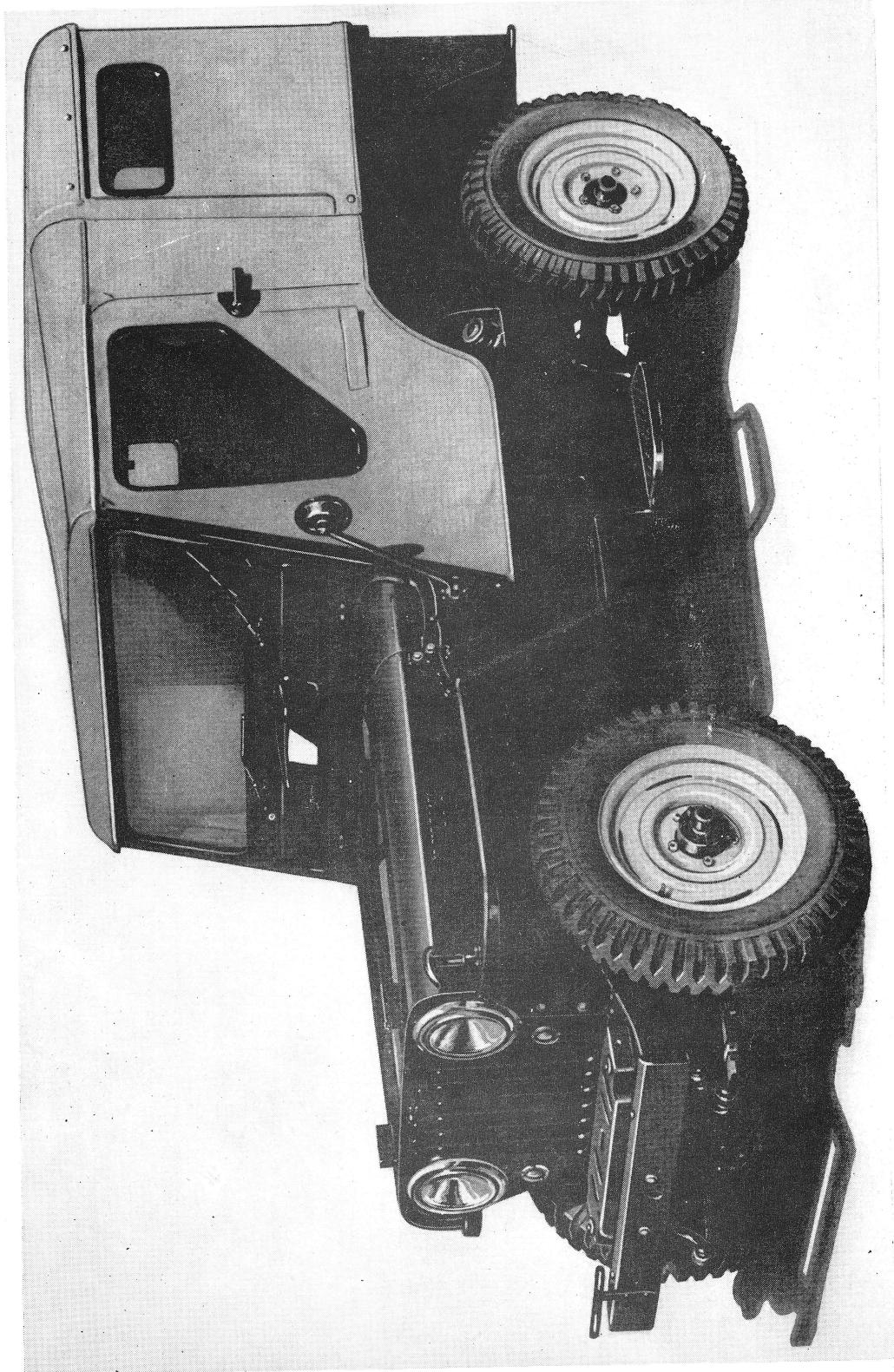


FIG. No. 2—VEHICLE COMPLETE, FRONT VIEW—MODEL CJ-3A

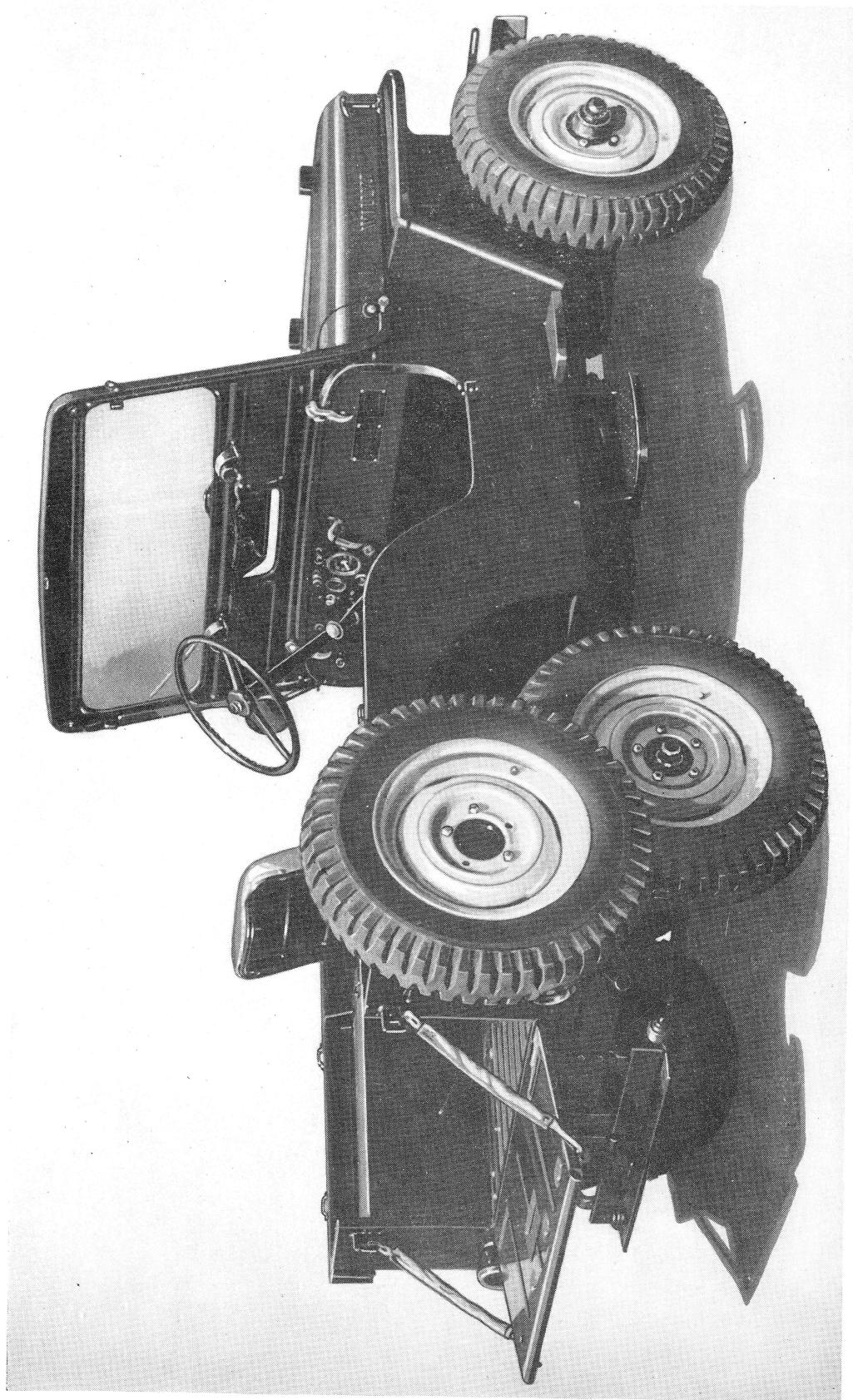


FIG. No. 3—VEHICLE COMPLETE, REAR VIEW—MODEL CJ-3A

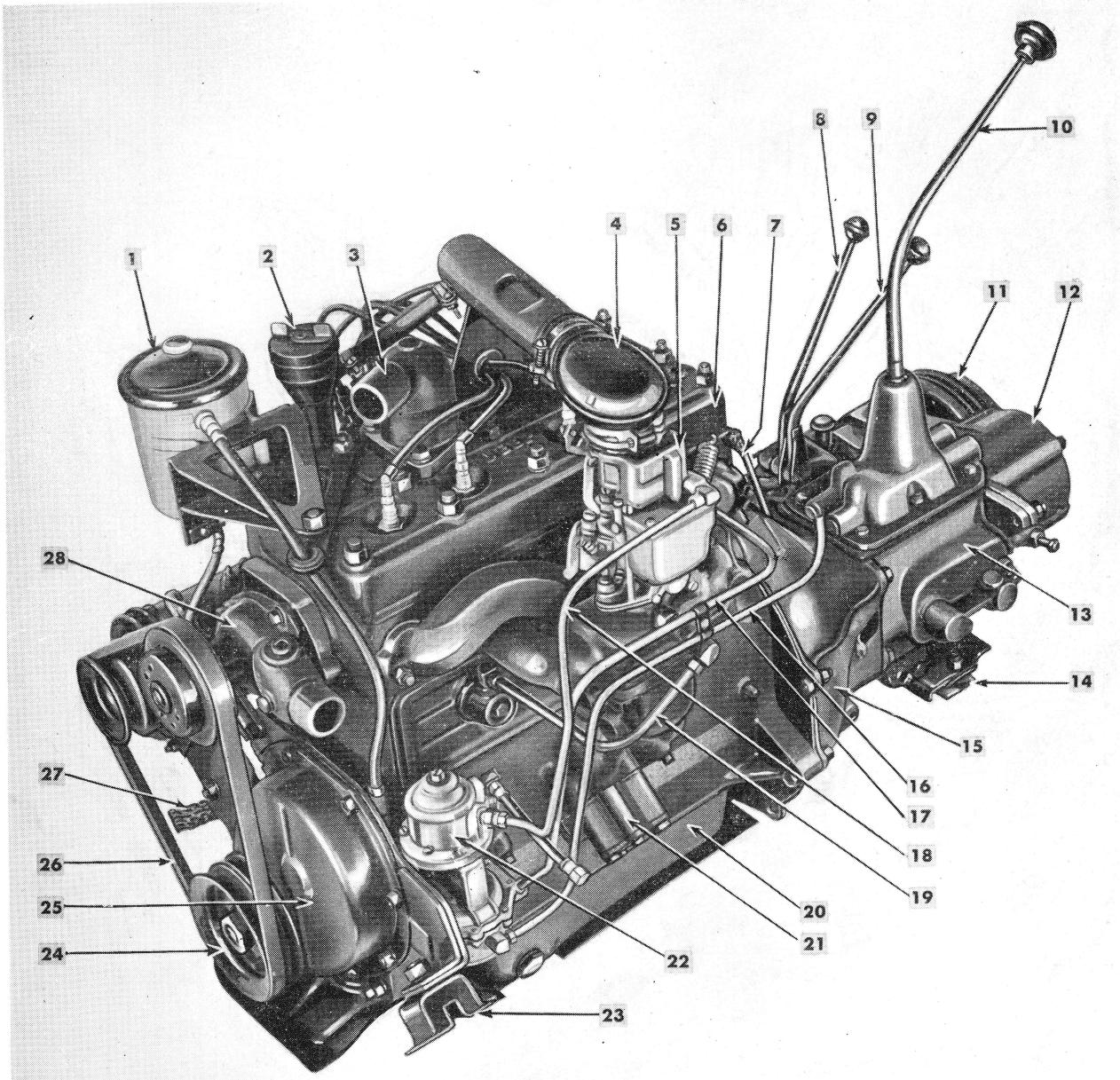


FIG. No. 4—UNIT POWER PLANT (CJ-3A)

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	647342	Filter, oil.....	10-16A	15	641421	Housing, flywheel.....	10-22
2	A-6525	Indicator and Cap, oil.....	10-16	16	647914	Tube, windshield wiper.....	12-03
3	A-1192	Elbow, water outlet.....	10-02	17	647916	Tube, manifold to pump.....	12-03
4	641918	Horn, air cleaner.....	12-05	18	648969	Tube, pump to carburetor.....	12-03
5	647744	Carburetor.....	12-04	19	641083	Tube, ventilator.....	10-18
6	640161	Head, cylinder.....	10-02	20	A-7238	Pan, oil.....	10-14
7	A-1243	Shaft with lever, accelerator.....	12-08	21	645631	Pump, oil.....	10-13B
8	A-1505	Lever, shift, direct.....	18-06	22	647911	Pump, fuel and vacuum.....	12-09A
9	648589	Lever, shift, front.....	18-06	23	643533	Insulator, front.....	10-23
10	648593	Lever, gear shift.....	17-06B	24	646698	Pulley, crankshaft.....	10-03
11	A-9332	Drum, brake.....	24-01	25	643834	Cover, gear.....	10-12
12	644318	Case, transfer.....	18-01	26	647629	Belt, fan.....	14-05
13	644315	Transmission.....	17-01	27	A-1098	Strap, engine ground.....	15-18A
14	A-6156	Insulator, rear.....	10-23	28	639992	Pump, water.....	14-04

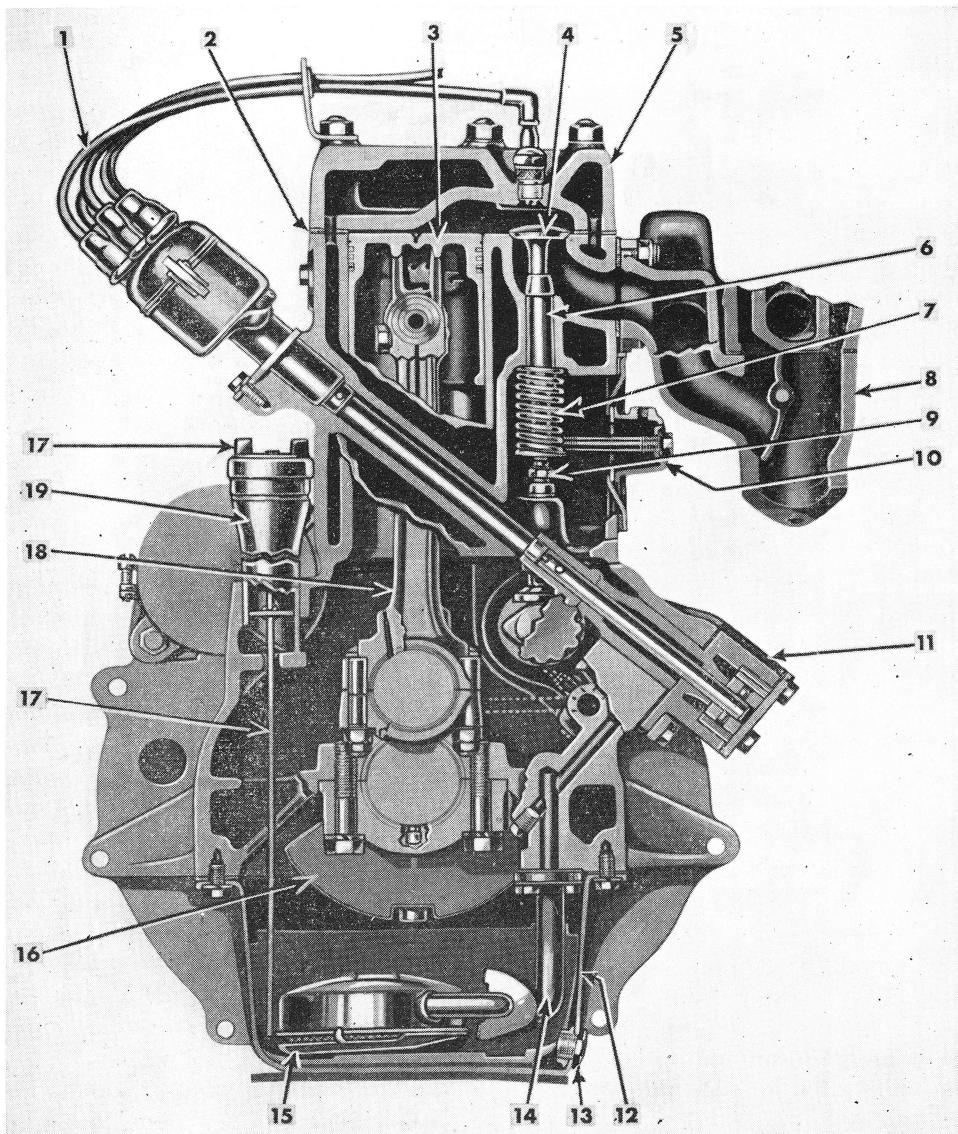


FIG. No. 5—ENGINE, END SECTIONAL VIEW

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	644403	Kit, spark plug, wiring.....	15-06	10	A-6919	Body, ventilator.....	10-18
2	638540	Gasket, cylinder head.....	10-02	11	645631	Pump, oil.....	10-13B
3	637041	Piston and Pin, Std.....	10-06	12	A-7238	Pan, oil.....	10-14
4	{637182	Valve, intake.....	10-08	13	639979	Plug, drain.....	10-14
	{637183	Valve, exhaust.....	10-08	14	630397	Support, oil float.....	10-15
5	640161	Head, cylinder.....	10-02	15	630396	Float, oil.....	10-15
6	{637045	Guide, intake valve.....	10-08	16	647078	Kit, crankshaft.....	10-03
	{375811	Guide, exhaust valve.....	10-08	17	A-6525	Indicator, oil.....	10-16
7	638636	Spring, valve.....	10-08	18	{641774	Rod, connecting, No. 1-3.....	10-05
8	645305	Manifolds, intake and exhaust.....	10-19		{641775	Rod, connecting, No. 2-4.....	10-05
9	640020	Screw, valve tappet.....	10-09	19	A-6915	Tube, oil filler.....	10-16

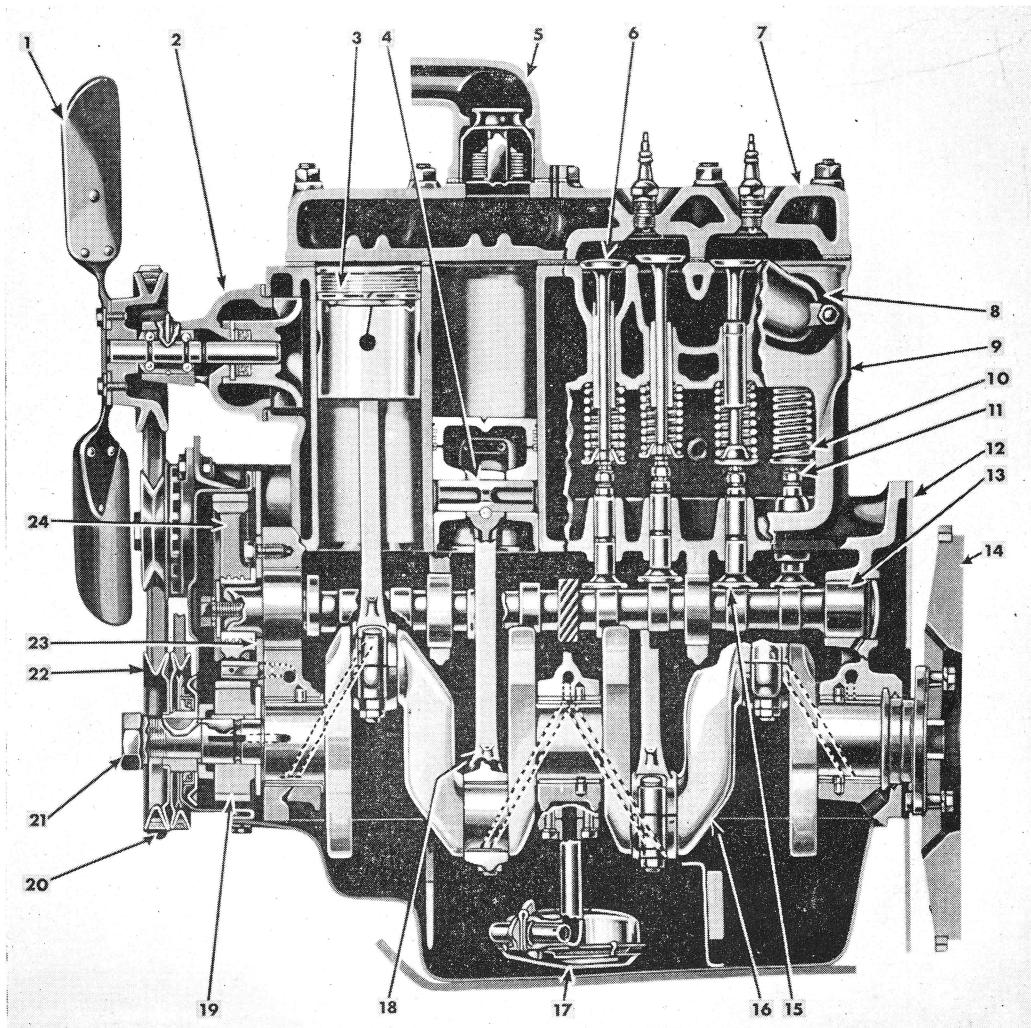


FIG. No. 6—ENGINE, SIDE SECTIONAL VIEW

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	A-447	Fan.....	14-05	13	641284	Camshaft.....	10-11A
2	639992	Pump, water.....	14-04	14	A-7503	Kit, flywheel.....	10-21
3	637041	Piston and Pin.....	10-06	15	647071	Tappet, valve.....	10-09
4	636961	Pin, piston.....	10-06	16	647078	Kit, crankshaft.....	10-03
5	A-1192	Elbow, outlet.....	10-02	17	630396	Float, oil.....	10-15
6	{637182	Valve, intake.....	10-08	18	{641774	Rod, connecting Nos. 1-3.....	10-05
	637183	Valve, exhaust.....	10-08		{641775	Rod, connecting Nos. 2-4.....	10-05
7	640161	Head, cylinder.....	10-02	19	641282	Gear, crankshaft.....	10-11A
8	A-912	Manifold, exhaust.....	10-19	20	647629	Belt, fan.....	14-05
9	641145	Block, cylinder.....	10-02	21	638513	Nut, crankshaft.....	10-03
10	638636	Spring, valve.....	10-08	22	646698	Pulley, crankshaft.....	10-03
11	640020	Screw, tappet.....	10-09	23	641143	Plate, engine, front.....	10-23
12	642237	Plate, engine, rear.....	10-23	24	641283	Gear, camshaft.....	10-11A

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10—ENGINE		
GROUP 10-01—ENGINE ASSEMBLY		
642275	Engine Assembly (Includes all units from flywheel forward, less coil)—CJ-2A.....	1
648455	Engine Assembly (Includes all units from flywheel forward, including coil)—CJ-3A.....	1
643277	Engine Assembly (Including water pump, less fan, fuel pump, carburetor and all electrical units)—CJ-2A.....	1
648456	Engine Assembly (Including water pump and oil pump, less fan, fuel pump, carburetor, oil filter and all electrical units)—CJ-3A.....	1
647711	Engine Assembly (Short) (Including all internal moving parts. Not including cylinder head, oil pan, gear cover, valve cover and manifolds).....	1
644186	Plant, Power, Assembly (Includes clutch, transfer case, transmission, air cleaner and all units from propeller shaft forward. For remote control gearshift. Engine with gear driven camshaft) (Up to Serial No. 38221)—CJ-2A.....	1
643275	Plant, Power, Assembly (Includes clutch, transfer case, transmission, air cleaner and all units from propeller shaft forward, less coil. With cane shift transmission) (After Serial No. 38221)—CJ-2A.....	1
648457	Plant, Power, Assembly (Includes clutch, flywheel housing, transmission, transfer case and air cleaner. For cane type gearshift)—CJ-3A.....	1
640634	GASKET SET, engine overhaul.....	1
	Consists of:	
A-6357	1 GASKET, carburetor insulator and diffuser	
630365	1 GASKET, chain cover	
630359	1 GASKET, cylinder block, front	
638540	1 GASKET, cylinder head	
634814	1 GASKET, exhaust pipe flange	
638737	1 GASKET, fuel pump to cylinder block	
638640	1 GASKET, intake and exhaust manifold	
634811	1 GASKET, intake to exhaust manifold	
630398	1 GASKET, oil float support	
639980	1 GASKET, oil pan	
640030	1 GASKET, oil pan drain plug	
639870	1 GASKET, oil pump cover	
630392	2 GASKET, oil pump cover	
375927	1 GASKET, oil pump shaft	
630394	1 GASKET, oil pump to cylinder block	
634813	1 GASKET, oil relief spring retainer	
334103	1 GASKET, oil slinger	
637863	4 GASKET, spark plug	
51875	2 GASKET, valve cover screw	
630305	1 GASKET, valve spring cover	
630299	1 GASKET, ventilator to valve cover	
630650	1 GASKET, water outlet elbow	
637053	1 GASKET, water pump to cylinder block	
637790	2 PACKING, bearing cap, rear	
637098	1 PACKING, crankshaft, front	
637237	2 PACKING, crankshaft, rear	
640635	GASKET SET, engine valve job.....	1
	Consists of:	
A-6357	1 GASKET, carburetor insulator and diffuser	
638540	1 GASKET, cylinder head	
634814	1 GASKET, exhaust pipe flange	
638640	1 GASKET, intake and exhaust manifold	
634811	1 GASKET, intake to exhaust manifold	
637863	4 GASKET, spark plug	
51875	2 GASKET, valve cover screw	
630305	1 GASKET, valve spring cover	
630299	1 GASKET, ventilator to valve cover	
639650	1 GASKET, water outlet elbow	
GROUP 10-02—CYLINDER BLOCK AND HEAD		
641145	BLOCK and BEARING, cylinder, assembly (For chain or gear driven camshaft).....	1
643223	BLOCK and BEARING, cylinder, assembly (.010" undersize).....	1
643276	BLOCK and BEARING with PISTON, cylinder, assembly (For chain or gear driven camshaft).....	1
A-1126	COCK, drain, cylinder block water jacket (Int'ch'ble with GM-103647).....	1
GM-103647	COCK, drain, cylinder block water jacket (Int'ch'ble with A-1126).....	1
A-1192	ELBOW, water outlet.....	1
52911	BOLT, hex, $\frac{3}{8}$ "-16 x $1\frac{1}{8}$ " Water outlet elbow to cylinder head}.....	3
5010	LOCKWASHER, $\frac{3}{8}$ "	3
638540	GASKET, cylinder head.....	1
639650	GASKET, water outlet elbow.....	1
640161	HEAD, cylinder, 6.48 ratio.....	1
639660	HEAD, cylinder (Up to Engine Serial No.	1
638539	NUT, hex, $\frac{7}{16}$ "-20 }Cylinder head to cylinder block{.....	15
349368	STUD, $\frac{7}{16}$ "-14 x $3\frac{9}{16}$ " }	15
641050	JET, oil, timing gear— After Engine Serial No. 44417	1
51091	PLUG, expansion, $1\frac{1}{4}$ in.....	5
5085	PLUG, pipe, $\frac{1}{8}$ " (Int'ch'ble with 53411).....	3
53411	PLUG, pipe, $\frac{1}{8}$ ", sq. hd. (Int'ch'ble with 5085).....	2
53354	PLUG, pipe, $\frac{1}{8}$ ", slotted (Int'ch'ble with 645256).....	1
645256	PLUG, pipe, $\frac{1}{8}$ ", slotted (Int'ch'ble with 53354).....	2

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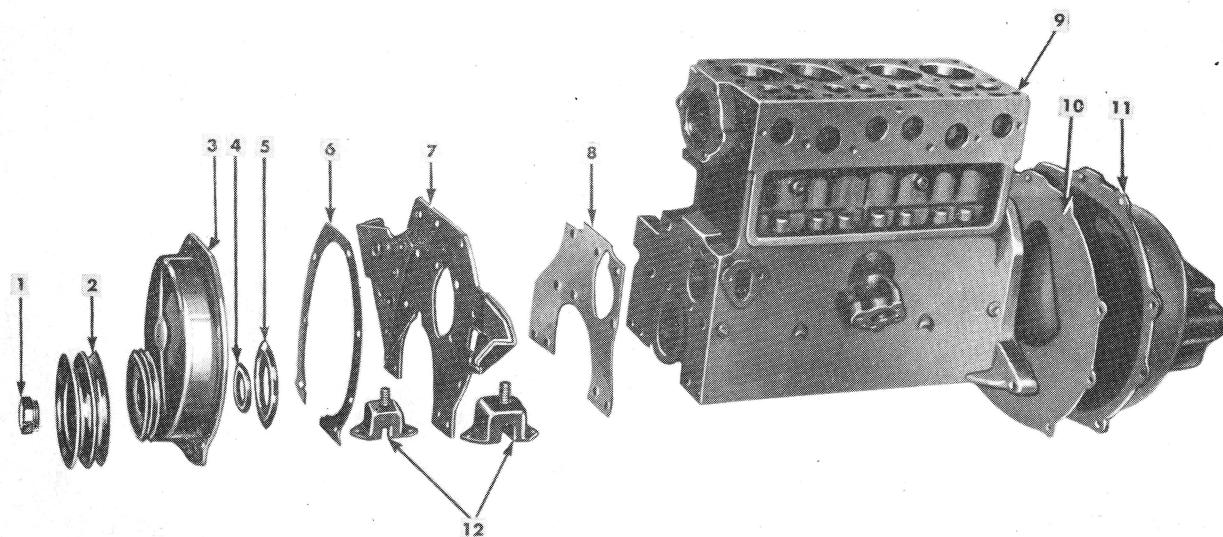


FIG. No. 7—CYLINDER BLOCK, FLYWHEEL HOUSING AND GEAR COVER (CJ-3A)

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	638513	Nut, crankshaft.....	10-03	7	647922	Plate, front.....	10-23
2	646698	Pulley, crankshaft.....	10-03	8	641096	Gasket, front plate.....	10-23
3	643834	Cover, gear.....	10-12	9	641145	Block, cylinder.....	10-02
4	647468	Seal, oil.....	10-03	10	642237	Plate, rear.....	10-23
5	375877	Slinger, oil.....	10-03	11	641421	Housing, flywheel.....	10-22
6	630365	Gasket, cover.....	10-12	12	643533	Insulator, front.....	10-23

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-02—CYLINDER BLOCK AND HEAD (Continued)		
376373	PLUG, pipe, countersunk, $\frac{3}{8}$ in.....	2
5139	PLUG, pipe, sq. hd., $\frac{3}{8}$ " (Int'ch'ble with 53408).....	1
53408	PLUG, pipe, sq. hd., $\frac{3}{8}$ " (Int'ch'ble with 5139).....	1
Note: —When the serial number is followed by the letter "A" it indicates the crankshaft and connecting rod bearings are .010 U.S. When followed by the letters "AB" it indicates crankshaft and connecting rod bearings are .010 U.S. and the cylinder bore is .002 O.S.		
GROUP 10-03—CRANKSHAFT		
381519	BOLT, crankshaft bearing cap.....	6
5009	LOCKWASHER, $\frac{1}{2}$ " (Bearing cap to crankcase bolt).....	6
635377	DOWEL, crankshaft bearing.....	5
334103	GASKET, oil slinger, crankshaft (Up to Engine Serial No. 44417).....	1
5036	KEY, Woodruff, No. 9 (Pulley to crankshaft).....	1
642969	KIT, crankshaft and dowel bolt (Counterweight Type) (For Engines with Chain Driven Camshaft).....	1
Consists of: 2 BOLT, dowel, crankshaft 1 CRANKSHAFT Assembly 2 LOCKWASHER, dowel bolt 2 NUT, dowel bolt		
116295	KIT, crankshaft and dowel bolt, .010 U.S. (For Engines with Chain Driven Camshaft).....	1
641128	Consists of: 2 BOLT, dowel, crankshaft 1 CRANKSHAFT Assembly, .010 U.S.	
52330	2 LOCKWASHER, dowel bolt	
52804	2 NUT, dowel bolt	
117373	KIT, crankshaft and dowel bolt (After Engine Serial No. 165476 with Gear Driven Camshaft).....	1
Consists of: 2 BOLT, dowel, crankshaft 1 CRANKSHAFT Assembly, .010 U.S.		
116295	2 LOCKWASHER, dowel bolt	
646316	2 NUT, dowel bolt	
52330	KIT, crankshaft and dowel bolt, .010 U.S. (For Engines with Gear Driven Camshaft).....	1
52804	Consists of: 2 BOLT, dowel, crankshaft 1 CRANKSHAFT Assembly, .010 U.S.	
117372	2 LOCKWASHER, dowel bolt	
Consists of: 2 NUT, dowel bolt		
116295	NUT and PIN, crankshaft, assembly (Starting Crank Nut) (Up to Engine Serial No. 178216).....	1
646614		
52330		
52804		

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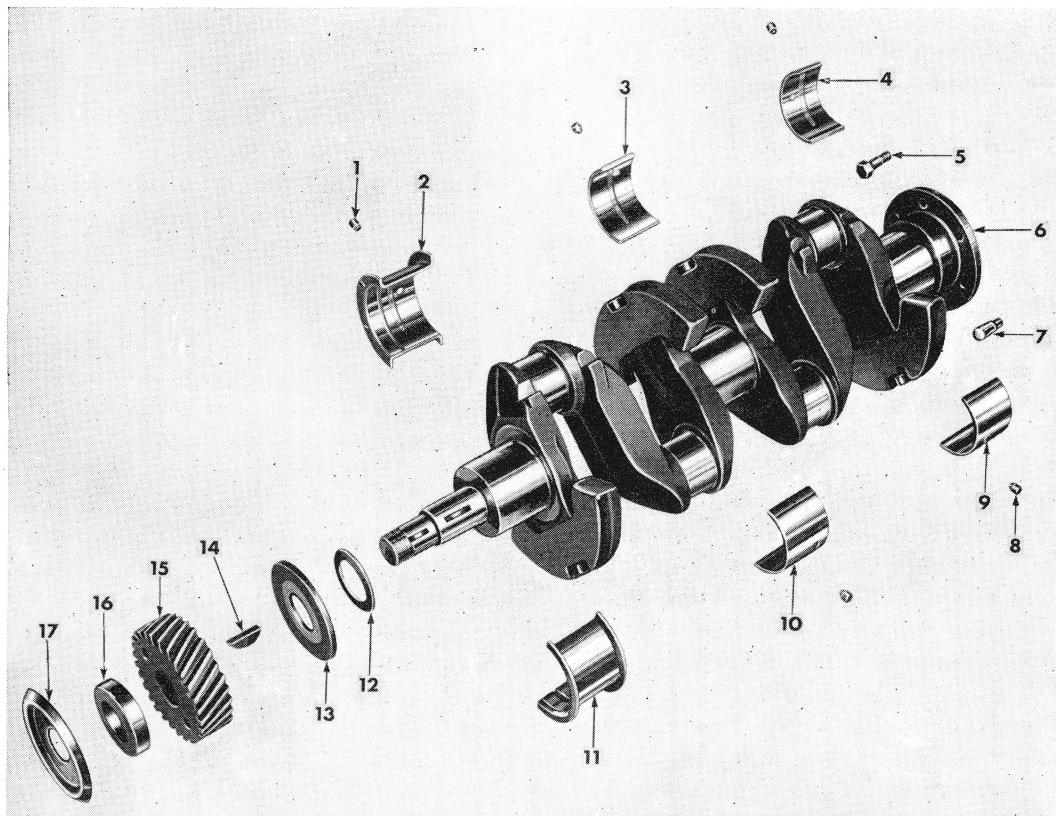


FIG. No. 8—CRANKSHAFT AND BEARINGS

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	635377	Dowel, bearing.....	10-03	10	638731	Bearing, center, lower (use set 645161)....	10-04
2	637007	Bearing, front, upper (use set 645160)....	10-04	11	637008	Bearing, front, lower (use set 645160)....	10-04
3	638730	Bearing, center, upper (use set 645161)....	10-04	12	630262	Shim, crankshaft.....	10-03
4	638732	Bearing, rear, upper (use set 645162)....	10-04	13	634796	Washer, thrust.....	10-03
5	632157	Bolt, flywheel.....	10-21	14	50917	Key, crankshaft gear.....	10-11
6	647078	Kit, crankshaft.....	10-03	15	641282	Gear, timing.....	10-11
7	632156	Dowel, flywheel.....	10-21	16	641281	Spacer, crankshaft gear.....	10-11
8	635377	Dowel, bearing.....	10-03	17	375877	Slinger, oil.....	10-03
9	638733	Bearing, rear, lower (use set 645162)....	10-04				

Part No.	Description	Quan. Req'd. Per Assy.
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GROUP 10-03—CRANKSHAFT (Continued)

638513	NUT, crankshaft pulley (After Engine Serial No. 178216).....	1
643839	OIL SEAL, crankshaft, front end (After Engine Serial No. 54100) (Int'ch'ble with 647468).....	1
647468	OIL SEAL, crankshaft, front end (Int'ch'ble with 643839).....	1
637790	PACKING, crankshaft bearing cap, rear.....	2
637098	PACKING, crankshaft, front end (Up to Engine Serial No. 54100).....	1
637237	PACKING, crankshaft, rear end.....	2
644548	PULLEY, crankshaft (twin groove) (With Polished Hub) (Use 646698).....	1
646698	PULLEY, crankshaft (twin groove) (After Engine Serial No. 190234).....	1
375920	RETAINER, crankshaft packing (Up to Engine Serial No. 54100).....	1
630262	SHIM, crankshaft, .002" thick.....	2
375877	SLINGER, oil, crankshaft.....	1
634796	WASHER, thrust, crankshaft.....	1

GROUP 10-04—CRANKSHAFT BEARINGS (Note 1)

645160	BEARING SET, crankshaft, front, std. size.....	1
	Consists of:	
637007	1 BEARING, front, upper half	
637008	1 BEARING, front, lower half	
645161	BEARING SET, crankshaft, center, std. size.....	1
	Consists of:	
638730	1 BEARING, center, upper half	
638731	1 BEARING, center, lower half	
645162	BEARING SET, crankshaft, rear, std. size.....	1

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-04—CRANKSHAFT BEARINGS (Note 1) Continued		
638732	Consists of: 1 BEARING, rear, upper half	
638733	1 BEARING, rear, lower half	
645163	BEARING SET, crankshaft, front, .010" undersize.....	1
	Consists of: 1 BEARING, front, upper half	
637724	1 BEARING, front, lower half	
637725	BEARING SET, crankshaft, center, .010" undersize.....	1
645164	Consists of: 1 BEARING, center, upper half	
639237	1 BEARING, center, lower half	
639238	BEARING SET, crankshaft, rear, .010" undersize.....	1
645165	Consists of: 1 BEARING, rear, upper half	
639239	1 BEARING, rear, lower half	
639240	BEARING SET, crankshaft, front, .020" undersize.....	1
645166	Consists of: 1 BEARING, center, upper half	
116522	1 BEARING, center, lower half	
116524	BEARING SET, crankshaft, center, .020" undersize.....	1
645167	Consists of: 1 BEARING, rear, upper half	
116526	1 BEARING, rear, lower half	
116528	BEARING SET, crankshaft, rear, .020" undersize.....	1
645168	Consists of: 1 BEARING, rear, upper half	
116530	1 BEARING, rear, lower half	
116532	BEARING SET, crankshaft, front, .030" undersize.....	1
645169	Consists of: 1 BEARING, front, upper half	
116523	1 BEARING, front, lower half	
116525	BEARING SET, crankshaft, center, .030" undersize.....	1
645170	Consists of: 1 BEARING, center, upper half	
116527	1 BEARING, center, lower half	
116529	BEARING SET, crankshaft, rear, .030" undersize.....	1
645171	Consists of: 1 BEARING, rear, upper half	
116531	1 BEARING, rear, lower half	
116533		

Note 1: When the serial number is followed by the letter "A" it indicates the crankshaft bearings are .010 U. S.

GROUP 10-05—CONNECTING RODS AND BEARINGS

641774	Rod, Connecting, Less Bearings, Nos. 1 and 3, Assembly.....	2
641775	Rod, Connecting, Less Bearings, Nos. 2 and 4, Assembly.....	2
A-7233	BEARING SET, connecting rod, std. size.....	4
	Consists of: 2 BEARINGS	
639862	BEARING SET, connecting rod, .010 U. S.....	4
A-7234	Consists of: 2 BEARINGS	
116534	BEARING SET, connecting rod, .020 U. S.....	4
A-7235	Consists of: 2 BEARINGS	
116535	BEARING SET, connecting rod, .030 U. S.....	4
A-7236	Consists of: 2 BEARINGS	
116536	BEARING SET, connecting rod, .030 U. S.....	4
640070	BOLT, connecting rod bearing cap, $\frac{7}{16}$ "-20 (Up to Engine Serial No. 89737).....	8
641768	BOLT, connecting rod bearing cap, $\frac{3}{8}$ "-24 (After Engine Serial No. 89737).....	8
636962	NUT, connecting rod cap bolt (hex., $\frac{7}{16}$ "-20) (Up to Engine Serial No. 89737).....	8
52825	NUT, connecting rod cap bolt lock (hex., $\frac{7}{16}$ "-20, stamped) (Up to Engine Serial No. 89737).....	8
641769	NUT, connecting rod cap bolt (hex., $\frac{3}{8}$ "-24) (After Engine Serial No. 89737).....	8
53864	NUT, connecting rod cap bolt lock (hex., $\frac{3}{8}$ "-24, stamped) (After Engine Serial No. 89737).....	8

Note: When engine serial number is followed by the letter "A", it indicates the crankshaft and connecting rod bearings are .010" undersize.

GROUP 10-06—PISTONS AND PINS

636961	PIN, piston, Std.....	4
632157	SCREW, lock, piston pin.....	4
5010	LOCKWASHER, $\frac{3}{8}$ " (Piston pin lock screw).....	4
637041	PISTON and PIN, less RINGS, assembly, Std. (Grade "G").....	4
115995	PISTON and PIN, less RINGS, assembly, .005 O.S.....	4
640904	PISTON and PIN, less RINGS, assembly, .015 O.S.....	4
640905	PISTON and PIN, less RINGS, assembly, .025 O.S.....	4
640906	PISTON and PIN, less RINGS, assembly, .035 O.S.....	4
640907	PISTON and PIN, less RINGS, assembly, .045 O.S.....	4

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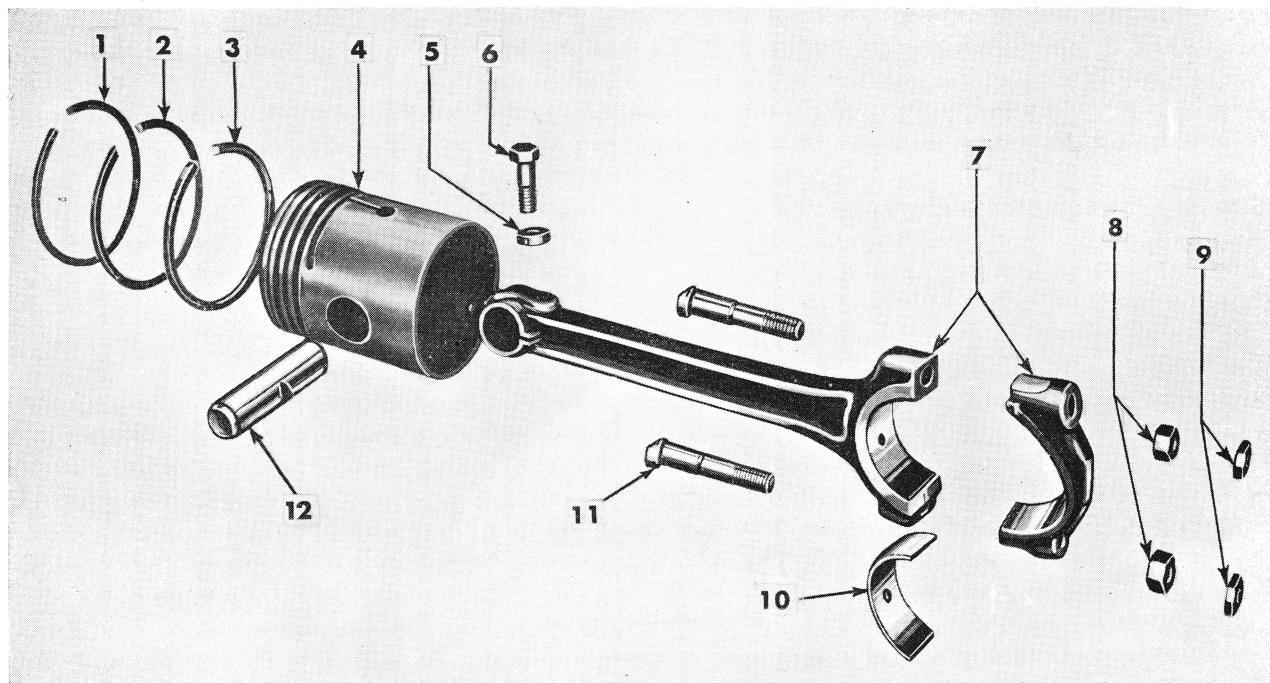


FIG. No. 9—CONNECTING ROD, PISTON AND RINGS

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	639864	Ring, top groove.....	10-07	7	641774	Rod, connecting, No. 1 and 3.....	10-05
2	637042	Ring, center groove.....	10-07	8	641775	Rod, connecting, No. 2 and 4.....	10-05
3	116616	Ring, lower groove.....	10-07	9	641769	Nut, cap bolt.....	10-05
4	637041	Piston and Pin.....	10-06	10	53864	Nut, lock.....	10-05
5	5010	Lockwasher.....	10-06	11	A-7233	Bearing Set, standard.....	10-05
6	632157	Screw, lock, pin.....	10-06	12	641768	Bolt, rod cap.....	10-05
					636961	Pin, piston.....	10-06

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-07—PISTON RINGS		
Conventional Type		
639864	RING, compression, top groove, std.....	4
116500	RING, compression, top groove, .005 O. S.....	4
640912	RING, compression, top groove, .015 O. S.....	4
640913	RING, compression, top groove, .025 O. S.....	4
640914	RING, compression, top groove, .035 O. S.....	4
640915	RING, compression, top groove, .045 O. S.....	4
637042	RING, compression, second groove, std.....	4
115999	RING, compression, second groove, .005 O. S.....	4
640916	RING, compression, second groove, .015 O. S.....	4
640917	RING, compression, second groove, .025 O. S.....	4
640918	RING, compression, second groove, .035 O. S.....	4
640919	RING, compression, second groove, .045 O. S.....	4
116616	RING, oil regulating, third groove, std.....	4
116114	RING, oil regulating, third groove, .005 O. S.....	4
640920	RING, oil regulating, third groove, .015 O. S.....	4
640921	RING, oil regulating, third groove, .025 O. S.....	4
640922	RING, oil regulating, third groove, .035 O. S.....	4
640923	RING, oil regulating, third groove, .045 O. S.....	4
A-6794	RING SET, std.....	1
116759	RING SET, .005 O. S.....	1
640924	RING SET, .015 O. S.....	1
640925	RING SET, .025 O. S.....	1
640926	RING SET, .035 O. S.....	1
640927	RING SET, .045 O. S.....	1
GROUP 10-07A—PISTON RINGS		
Re-Ring Type		
116110	RING and SPRING SET, std. to .009 O. S.....	1
116111	RING and SPRING SET, .010 to .019 O. S.....	1
116112	RING and SPRING SET, .020 to .029 O. S.....	1
116113	RING and SPRING SET, .030 to .039 O. S.....	1
116706	RING and SPRING SET, .040 to .049 O. S.....	1

Conventional type for use with new or refinished bores

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-08—VALVES, VALVE GUIDES AND SPRINGS		
375811	GUIDE, engine exhaust valve.....	4
637045	GUIDE, engine intake valve.....	4
375994	LOCK, engine valve spring lower retainer.....	16
637044	RETAINER, engine valve spring, lower	8
638636	SPRING, engine valve.....	8
637183	VALVE, engine exhaust.....	4
637182	VALVE, engine intake.....	4
GROUP 10-09—VALVE TAPPETS		
640020	SCREW, adjusting, valve tappet (self-locking)	8
637047	TAPPET, engine valve, (Use 647071 or 647072).....	8
647071	TAPPET, engine valve (Int'ch'ble with 647072).....	8
647072	TAPPET, engine valve, (Int'ch'ble with 647071).....	8
115948	TAPPET, engine valve, .004 O. S.....	8
GROUP 10-10—VALVE SPRING COVER AND GASKETS		
630303	Cover, Valve Spring.....	1
632158	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $4\frac{1}{8}$ " (Valve cover to cylinder block, front) {	1
639052	'BOLT, hex. hd., $\frac{5}{16}$ "-18 x $3\frac{1}{16}$ " (Valve cover to cylinder block, rear) {	1
645093	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $3\frac{11}{16}$ " (Valve cover to cylinder block, long) {	1
645094	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $2\frac{9}{16}$ " (Valve cover to cylinder block, short) {	1
630305	GASKET, valve spring cover.....	1
51875	GASKET, valve spring cover screw.....	2

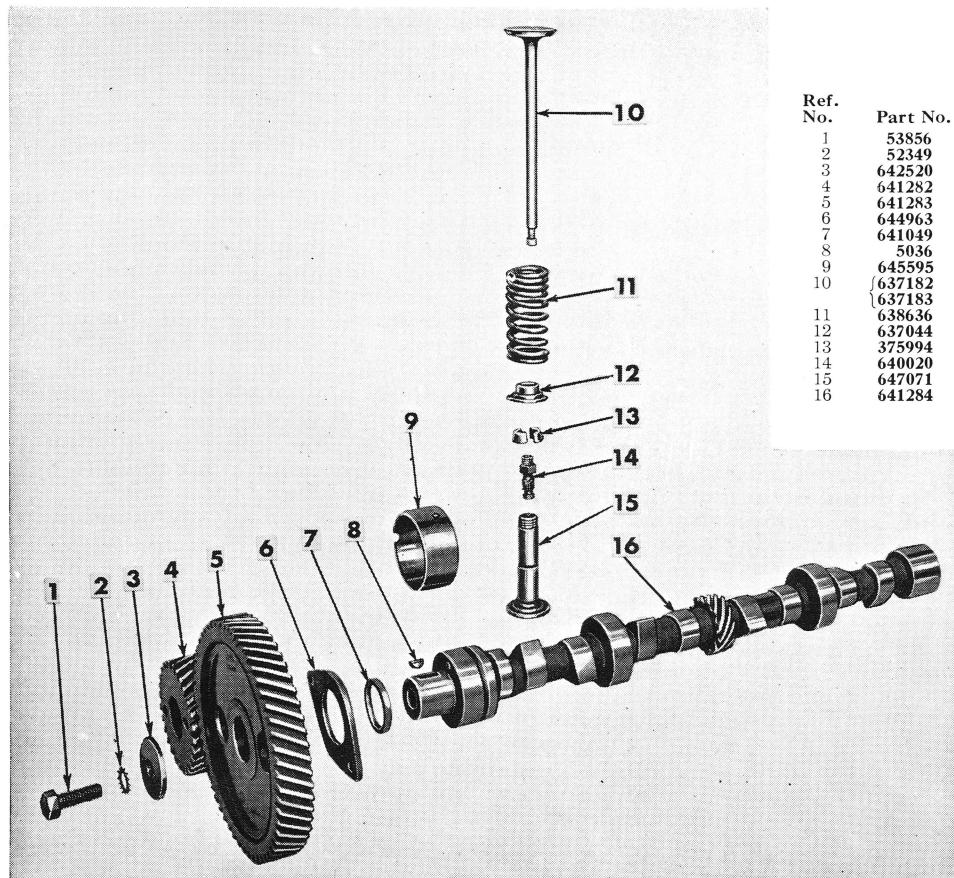


FIG. 10—CAMSHAFT, TIMING GEARS AND VALVES

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-11—CAMSHAFT, CHAIN AND SPROCKETS—Up to Engine Serial No. 44417 (CJ-2A and all CJ-3A)		
645595	BUSHING, camshaft, front	1
637065	CAMSHAFT	1
638457	CHAIN, drive, camshaft	1
50917	KEY, Woodruff, No. 13 (Sprocket to crankshaft)	1
51460	PLUG, expansion, $1\frac{3}{4}$ " (Camshaft rear bearing)	1
375907	PLUNGER, thrust, camshaft	1
630727	SPACER, crankshaft sprocket	1
375908	SPRING, camshaft thrust plunger	1
638458	SPROCKET, camshaft (36 teeth)	1
634850	BOLT, hex. hd., $\frac{3}{8}$ "-24 x $1\frac{1}{4}$ " } Sprocket to camshaft	4
315932	LOCKWASHER, $\frac{3}{8}$ " }	4
638459	SPROCKET, crankshaft (18 teeth)	1
375900	WASHER, thrust, camshaft	1
GROUP 10-11A—CAMSHAFT AND TIMING GEARS (After Engine Serial No. 44417)		
645595	BUSHING, camshaft, front	1
641284	CAMSHAFT (Gear Driven)	1
641283	GEAR, timing, camshaft (56 teeth)	1
53856	BOLT, hex. hd., $\frac{7}{16}$ "-14 x $1\frac{1}{8}$ " } Gear to camshaft	1
52349	LOCKWASHER, $\frac{7}{16}$ " }	1
641282	GEAR, timing, crankshaft (28 teeth)	1
5036	KEY, Woodruff, No. 9 (Gear to camshaft)	1
50917	KEY, Woodruff, No. 13 (Gear to crankshaft)	1
644963	PLATE, thrust, camshaft	1
6412	BOLT, hex. hd., $\frac{3}{8}$ "-16 x $\frac{3}{4}$ " } Thrust plate to block	2
52378	LOCKWASHER, $\frac{3}{8}$ " }	2
51460	PLUG, expansion, $1\frac{3}{4}$ " (Camshaft rear bearing)	1
641049	SPACER, camshaft thrust plate	1
641281	SPACER, crankshaft	1
641048	WASHER, camshaft gear (Use 642520)	1
642520	WASHER, camshaft gear	1
GROUP 10-12—CHAIN AND GEAR COVER		
644425	COVER, timing chain, assembly (chain driven camshaft)—Up to Engine Serial No. 44417	1
643932	COVER, gear, assembly, Complete (Includes Oil Seal 643839)—After Engine Serial No. 44417	1
643834	COVER, gear, assembly, After Engine Serial No. 44417	1
50163	BOLT, hex. hd., $\frac{3}{8}$ "-24 x $\frac{3}{4}$ "	1
5919	BOLT, hex. hd., $\frac{3}{8}$ "-24 x $1\frac{1}{4}$ " } Front cover to engine plate	3
5901	NUT, hex., $\frac{3}{8}$ "-24	1
5010	LOCKWASHER, $\frac{3}{8}$ " }	4
5901	NUT, hex., $\frac{3}{8}$ "-24	4
5010	LOCKWASHER, $\frac{3}{8}$ " } Front cover and engine plate to block	6
384958	STUD, $\frac{3}{8}$ "-16 x $1\frac{5}{16}$ "	6
630365	GASKET, timing chain cover	1
375917	RING, retaining, gear cover packing	1
630364	STUD, camshaft thrust plunger—Up to Engine Serial No. 44417	1
GROUP 10-13—OIL PUMP (Up to Engine Serial No. 44417)		
637636	Pump, Oil, Assembly (Use 647234)	1
641293	Pump, Oil, Assembly (Use 647234)	1
	All components for pump 641293 same as listed under Group 10-13A except driven gear.	
647234	Pump, Oil, Assembly	1
	All components for pump 647234 are same as listed for pump 645631 (Group 10-13B) except driven gear.	
5910	NUT, hex., $\frac{5}{16}$ "-24	1
51833	LOCKWASHER, $\frac{5}{16}$ " } Oil pump to cylinder block	3
375981	STUD, $\frac{5}{16}$ "-24 x $2\frac{3}{4}$ "	3
630384	BODY, oil pump	1
630387	COVER Assembly	1
51819	SCREW, fil. hd., No. 12-24 x $\frac{5}{8}$ " (Cover to body)	1
636600	DISC, rotor	1
630392	GASKET, cover (paper)	1
639870	GASKET, cover (vellumoid)	1
380197	GASKET, cover to body screw (copper)	1
630394	GASKET, oil pump to cylinder block	1
634813	GASKET, oil relief spring retainer	1
375927	GASKET, shaft	1
A-6750	GASKET SET, oil pump	1
	Consists of:	
639870	1 GASKET, cover	
630392	4 GASKET, cover	
380197	1 GASKET, cover to body screw	
630398	1 GASKET, oil float support	
630394	1 GASKET, oil pump to cylinder block	
634813	1 GASKET, oil relief spring retainer	

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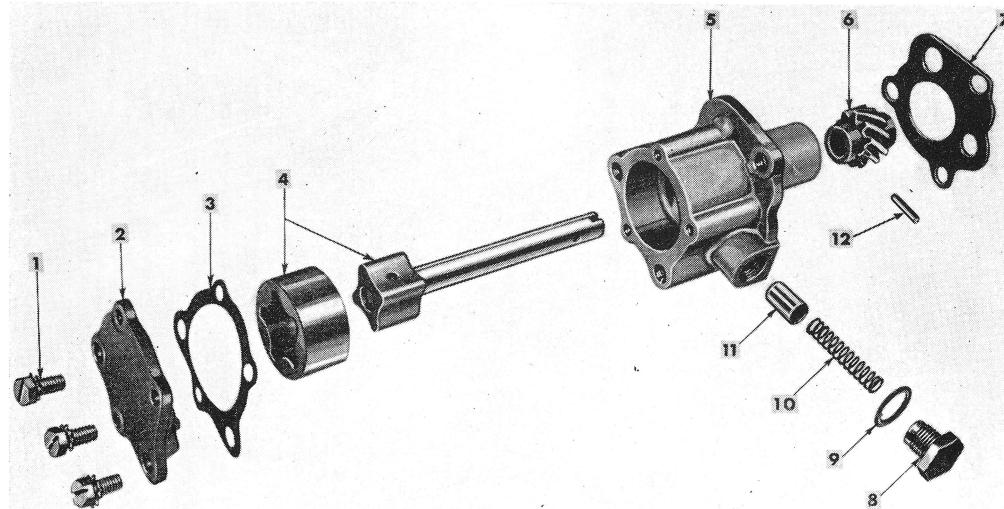


FIG. No. 11—OIL PUMP

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	641740	Screw and lockwasher.....	10-13A	7	630394	Gasket, pump to block.....	10-13A
2	641479	Cover.....	10-13A	8	630390	Retainer, relief spring.....	10-13A
3	641482	Gasket, cover.....	10-13A	9	634813	Gasket, retainer.....	10-13A
4	641742	Shaft and Rotors.....	10-13A	10	645628	Spring, relief.....	10-13A
5	645630	Body with bushing.....	10-13A	11	630518	Plunger, relief.....	10-13A
6	641047	Gear, driven.....	10-13A	12	330964	Pin, gear.....	10-13A

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-13—OIL PUMP (Up to Engine Serial No. 44417) (Continued)		
375927	1 GASKET, shaft	
630299	1 GASKET, ventilator to valve spring cover	
630389	4 SHIM, oil relief spring	
637425	GEAR, driven (12 teeth).....	1
A-6749	KIT, repair, oil pump.....	1
	Consists of:	
636600	1 DISC, rotor	
637425	1 GEAR, driven	
330964	1 PIN, driven gear	
343306	1 PINION	
636599	1 SHAFT and ROTOR Assembly	
330964	PIN, driven gear	1
343306	PINION, oil pump (7 teeth).....	1
52525	PLUG, cover.....	1
5085	PLUG, pipe, $\frac{1}{8}$ ", sq. hd. (Use for oil filter hole in cylinder block).....	1
630518	PLUNGER, oil relief.....	1
630390	RETAINER, oil relief spring.....	1
636599	SHAFT and ROTOR Assembly.....	1
630389	SHIM, oil relief spring.....	4
356155	SPRING, oil relief plunger.....	1

**GROUP 10-13A—OIL PUMP (Eaton)
(After Engine Serial No. 44417) (Up to Engine Serial No. 163075)**

641046	Pump, Oil, Assembly (Use with gear driven camshaft) (Use 645631).....	1
51486	BOLT, hex. hd., $\frac{5}{16}$ "-18 x 1"	1
51858	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $2\frac{1}{2}$ " }Oil pump to cylinder block	2
52510	LOCKWASHER, $\frac{5}{16}$ "	3

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-13A—OIL PUMP (Eaton) (Continued)		
641478	BODY, oil pump (Use 645630).....	1
641479	COVER, body.....	1
641740	SCREW, hex. hd., $\frac{1}{4}''$ -20 x $\frac{5}{8}''$ (Cover to body).....	3
641482	GASKET, cover.....	1
630394	GASKET, oil pump to cylinder block.....	1
634813	GASKET, oil relief spring retainer.....	1
641047	GEAR, driven (For gear driven camshaft).....	1
643362	KIT, repair, oil pump.....	1
	Consists of:	
641482	1 GASKET, cover	
641047	1 GEAR, driven	
330964	1 PIN, driven gear	
641742	1 SHAFT and ROTORS, inner and outer, assembly	
330964	PIN, driven gear.....	1
630518	PLUNGER, oil relief.....	1
630390	RETAINER, oil relief spring.....	1
641742	SHAFT and ROTORS, inner and outer, assembly	1
630389	SHIM, oil relief spring	4
356155	SPRING, oil relief plunger	1
GROUP 10-13B—OIL PUMP WITH ALUMINUM BODY (After Engine Serial No. 163075)		
All Items Not Indicated Are Same As Listed In Group 10-13A.		
645631	Pump, Oil, Assembly	1
645630	BODY with BUSHING Assembly	1
645629	BUSHING, body.....	1
645628	SPRING, oil relief plunger	1
GROUP 10-14—OIL PAN		
A-7238	Pan, Oil, Assembly	1
51485	BOLT, hex. hd., $\frac{5}{16}''$ -18 x $\frac{5}{8}''$ } Pan and pulley shield to block{.....	20
51833	LOCKWASHER, $\frac{5}{16}''$	20
314338	GASKET, drain plug.....	1
639980	GASKET, oil pan to cylinder block.....	1
A-1538	GASKET SET, oil pan	1
	Consists of:	
314338	1 GASKET, drain plug	
630398	1 GASKET, oil float support	
639980	1 GASKET, oil pan to cylinder block	
639979	PLUG, drain.....	1
GROUP 10-15—OIL FLOAT		
630396	Float, Oil, Assembly	1
5108	PIN, cotter, $\frac{1}{8}''$ x $1\frac{1}{4}''$ (Oil float to support).....	1
630398	GASKET, oil float support	1
630397	SUPPORT, oil float	1
636796	BOLT, hex. hd., $\frac{5}{16}''$ -18 x $\frac{3}{4}''$ (Use 51523)	2
51523	BOLT, hex. hd., $\frac{5}{16}''$ -18 x $\frac{3}{4}''$	2
51833	LOCKWASHER, $\frac{5}{16}''$	2
GROUP 10-16—OIL FILLER TUBE AND LEVEL INDICATOR		
A-5105	BRACKET, support, oil filler tube.....	1
A-6525	CAP and LEVEL INDICATOR, oil, assembly.....	1
A-7280	GASKET, oil filler tube cap	1
A-6915	TUBE, oil filler, assembly.....	1
GROUP 10-16A—OIL FILTER		
A-1230	Filter, Oil, Assembly (Up to Engine Serial No. 40352)	1
645638	Filter, Oil, Assembly (Purolator Products) (After Engine Serial No. 40352).....	1
643147	Filter, Oil, Assembly (After Engine Serial No. 40352) (Up to Engine Serial No.)	1
647342	Filter, Oil, Assembly (Fram F3-P2) (After Engine Serial No.)	1
A-1247	BRACKET, mounting, oil filter, assembly (Use 648861)	1
648861	BRACKET, oil filter, assembly	1
117114	BRACKET, oil filter (Purolator Products)	1
51396	BOLT, hex. hd., $\frac{5}{16}''$ -24 x $\frac{3}{4}''$	4
52274	WASHER, plain, $\frac{5}{16}''$	3
51833	LOCKWASHER, $\frac{5}{16}''$	4
117115	CLAMP, oil filter bracket (Purolator Products)	4
A-1251	CLAMP, oil filter to cylinder block.....	1
A-1231	COVER, oil filter, assembly	1
A-1232	BOLT, $\frac{1}{16}''$ -20 x $2''$ (Oil filter cover)	1
A-1236	ELEMENT, oil filter, assembly (Up to Engine Serial No. 40352)	1
645637	ELEMENT, oil filter (After Engine Serial No. 40352)	1
645636	ELEMENT and GASKET, oil filter (Purolator Products) (After Engine Serial No. 40352)	1

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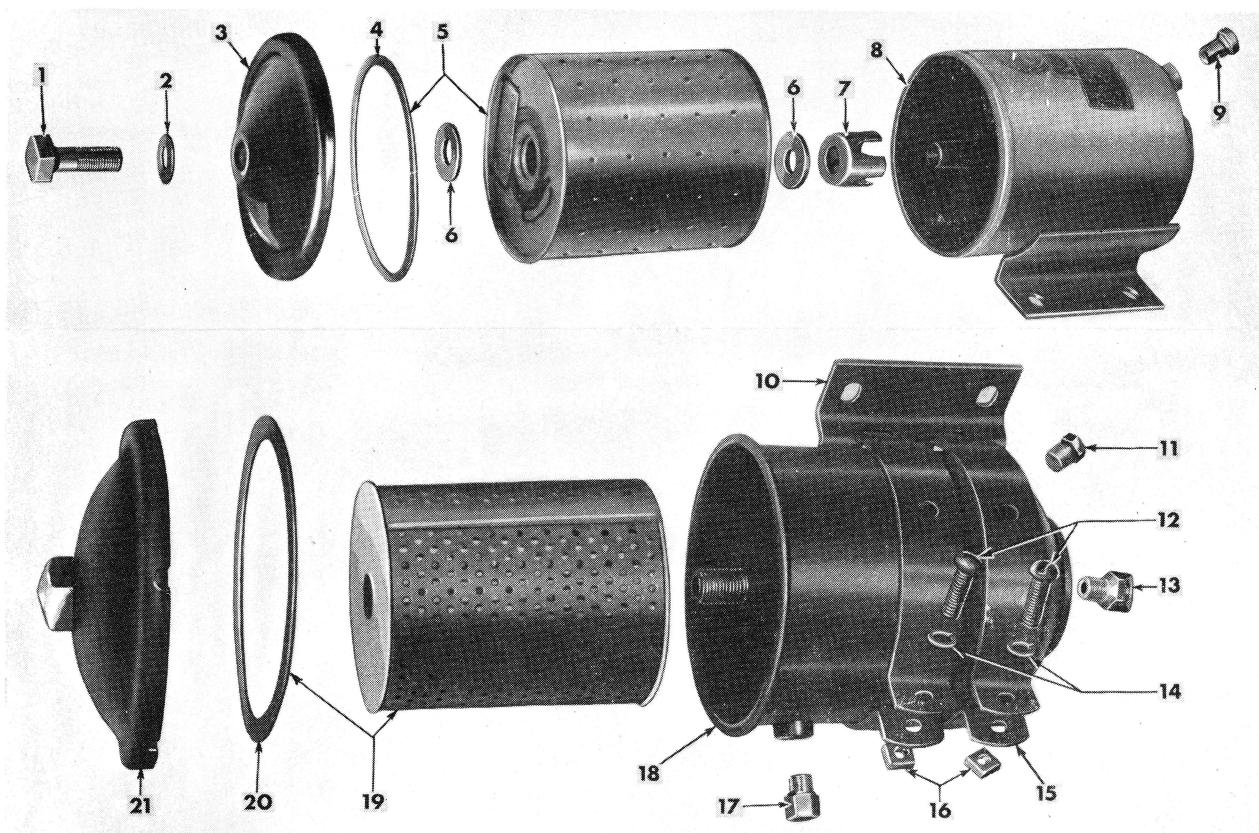


FIG. No. 12—OIL FILTER

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	Not supplied			12	Not supplied		
2	Not supplied			13	54006	EII.....	10-17
3	Not supplied			14	Not supplied		
4	647343	Gasket, cover.....	10-16A	15	117115	Clamp.....	10-16A
5	647345	Element and Gasket.....	10-16A	16	Not supplied		
6	Not supplied			17	387891	Connector.....	10-17
7	Not supplied			18	Not supplied		
8	Not supplied			19	645636	Element and Gasket.....	10-16A
9	Not supplied			20	645634	Gasket.....	10-16A
10	117114	Bracket.....	10-16A	21	Not supplied		
11	Not supplied						

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-16A—OIL FILTER (Continued)		
A-1235	GASKET, oil filter cover (Up to Engine Serial No. 40352).....	1
643181	GASKET, oil filter cover (After Engine Serial No. 40352).....	1
645634	GASKET, oil filter cover (Purolator Products) (After Engine Serial No. 40352).....	1
A-1233	GASKET, oil filter cover bolt.....	1
345961	GROMMET, oil filter bracket.....	1
647345	KIT, element and gasket, oil filter (After Engine Serial No.)	1
	Consists of:	
647344	1 ELEMENT, oil filter (Fram C-3P2).....	
647343	1 GASKET, oil filter cover (Fram 10611).....	
A-1237	PLUG, drain, oil filter.....	1
A-1234	SPRING, oil filter cover bolt.....	1

**GROUP 10-17—OIL DISTRIBUTION SYSTEM
(For OIL GAUGE see INSTRUMENTS)**

A-5449	CLIP, $\frac{5}{16}$ ", $\frac{7}{32}$ " hole (Oil gauge tube to dash).....	1
52869	SCREW, rd. hd., No. 10-24 x $\frac{3}{8}$ " (Tube to dash clip).....	1
52221	LOCKWASHER, No. 10 }	1
A-1289	CLIP, $\frac{7}{16}$ " (Oil filter tube to engine plate).....	1
387891	CONNECTOR, flared tube (Tube to oil filter).....	1
384569	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Brass) (Flexible tube to engine) (Int'ch'ble with 647311) (Up to Engine Serial No. 57294).....	1
647311	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 384569).....	1

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-17—OIL DISTRIBUTION SYSTEM (Continued)		
54006	ELL, inverted flared tube, $\frac{1}{4}''$ -45° (Flexible tube to filter) (After Engine Serial No. 57294).....	1
662420	GROMMET, rubber, $\frac{3}{16}''$	1
A-1450	TUBE, $\frac{1}{4}''$, oil gauge, assembly.....	1
A-1197	TUBE, oil filter, inlet (Int'ch'ble with 647584).....	1
647584	TUBE, oil filter, inlet (Int'ch'ble with A-1197).....	1
A-1198	TUBE, oil filter, outlet (Flexible) (Int'ch'ble with 647583).....	1
647583	TUBE, oil filter, outlet (Int-ch'ble with A-1198).....	1
A-1456	UNION, inverted flared tube, $\frac{1}{4}''$ (Brass) (Flexible tube to oil gauge tube).....	1

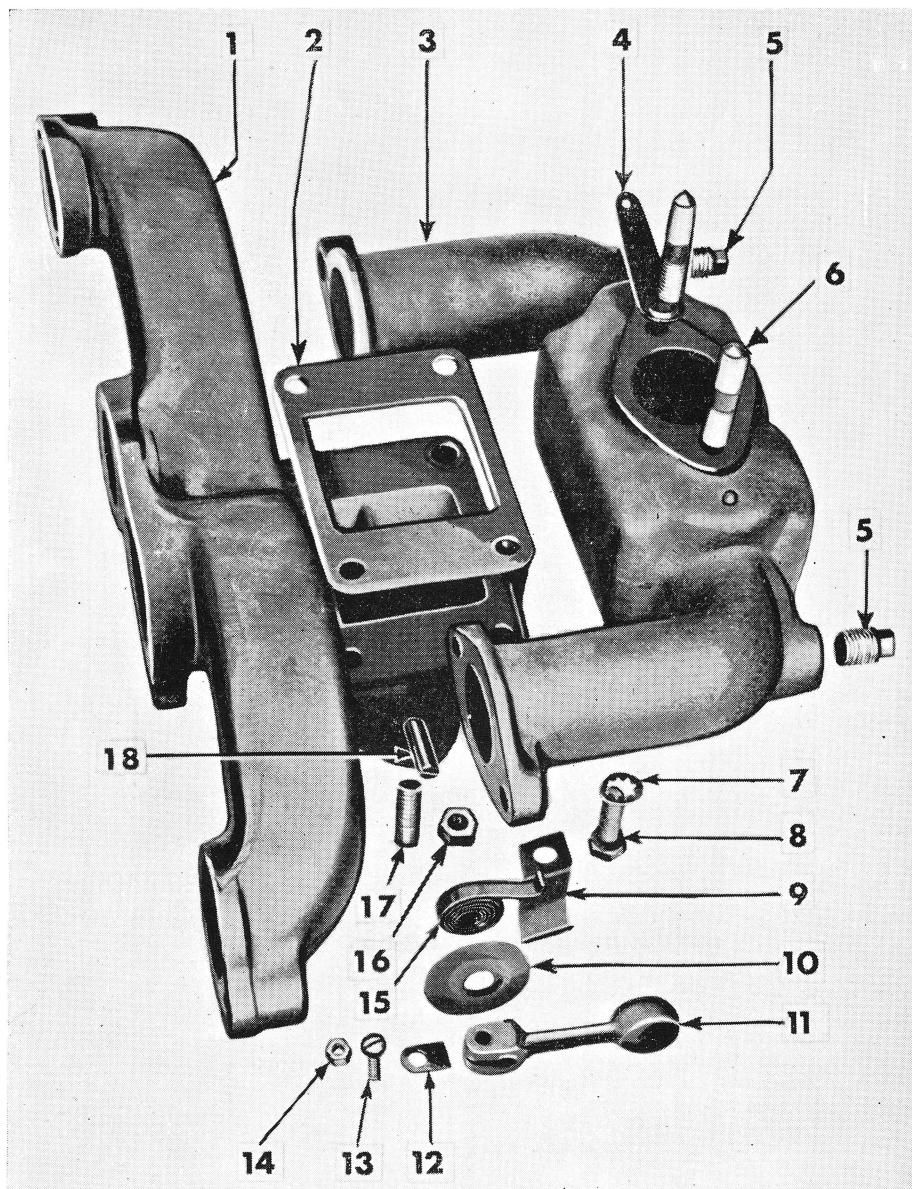


FIG. No. 18—MANIFOLDS

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	A-912	Manifold, exhaust.....	10-19	10	637209	Washer, spring.....	10-20
2	634811	Gasket.....	10-19	11	637210	Lever, counterweight.....	10-20
3	645361	Manifold, intake.....	10-19	12	637211	Key, lever.....	10-20
4	640246	Clip, accelerator spring.....	12-08	13	5272	Screw, lever.....	10-20
5	5138	Plug, pipe.....	10-19	14	6352	Nut, lever screw.....	10-20
6	632159	Stud.....	10-19	15	647042	Spring, valve.....	10-20
7	52428	Lockwasher.....	10-19	16	53287	Nut, exhaust pipe stud.....	13-01
8	51486	Bolt.....	10-19	17	332515	Stud, exhaust pipe.....	13-01
9	639743	Stop, spring.....	10-20	18	637205	Shaft, valve.....	10-20

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-18—CRANKCASE VENTILATOR		
A-6919	BODY, crankcase ventilator, assembly.....	1
384549	ELBOW, pipe, $\frac{1}{8}''$ Crankcase ventilator to tube{.....	1
A-6885	ELBOW, pipe, $\frac{1}{4}''$	1
630299	GASKET, crankcase ventilator to valve spring cover.....	1
A-6922	TUBE, crankcase ventilator valve, assembly (Use 641083).....	1
641083	TUBE, crankcase ventilator valve, assembly.....	1
A-6895	VALVE, crankcase ventilator, assembly.....	1
GROUP 10-19—MANIFOLDS		
A-1165	Manifold, Intake and Exhaust, Assembly (Up to Engine Serial No. 148679)	1
645305	Manifold, Intake and Exhaust, Assembly (After Engine Serial No. 148679)	1
A-1265	BUSHING, reducing, $\frac{1}{4}''$ to $\frac{1}{8}''$ (For windshield wiper) (Up to Engine Serial No.).....	1
638640	GASKET, intake and exhaust manifold.....	1
634811	GASKET, intake to exhaust manifold.....	1
A-7835	GASKET SET, manifold.....	1
	Consists of:	
634814	1 GASKET, exhaust pipe flange	
638640	1 GASKET, intake and exhaust manifold	
634811	1 GASKET, intake to exhaust manifold	
A-912	MANIFOLD, exhaust, assembly.....	1
A-1166	MANIFOLD, intake, assembly (Up to Engine Serial No. 148679).....	1
645361	MANIFOLD, intake, assembly (After Engine Serial No. 148679).....	1
51486	BOLT, hex. hd., $\frac{5}{16}''$ 18 x $1\frac{1}{2}''$ Intake to exhaust manifold{.....	4
52428	LOCKWASHER, $\frac{5}{16}''$	4
5138	PLUG, sq. hd., $\frac{1}{4}''$ (Intake manifold) (Up to Engine Serial No.).....	2
300143	STUD, $\frac{3}{8}''$ -24 x $1\frac{1}{2}''$	3
632159	STUD, $\frac{3}{8}''$ -24 x $1\frac{3}{4}''$ (Up to Engine Serial No.) } Manifold to block{.....	2
A-564	STUD, $\frac{3}{8}''$ -24 x $2\frac{1}{8}''$	2
53287	NUT, hex., $\frac{3}{8}''$ -24 } Manifold to block stud{.....	7
344732	WASHER, clamp, manifold{.....	2
332515	STUD, exhaust pipe to manifold.....	1
GROUP 10-20—MANIFOLD HEAT CONTROL		
636438	BEARING, heat control valve shaft.....	2
637211	KEY, heat control lever.....	1
646089	KIT, valve, heat control, manifold.....	1
	Consists of:	
636438	2 BEARING, valve shaft	
637211	1 KEY, control lever	
637210	1 LEVER, counterweight	
5272	1 SCREW, rd. hd., No. 10-24 x $\frac{3}{4}''$	
6352	1 NUT, hex., No. 10-24	
637206	1 SHAFT, control valve	
647042	1 SPRING, bi-metal	
639743	1 STOP, bi-metal spring	
636439	1 VALVE, heat control	
637209	1 WASHER, bi-metal spring	
637210	LEVER, counterweight, heat control valve.....	1
5272	SCREW, rd. hd., No. 10-24 x $\frac{3}{4}''$ Lever clamp to shaft{.....	1
6352	NUT, hex., No. 10-24{.....	1
637206	SHAFT, heat control valve.....	1
637208	SPRING, heat control valve (Up to Engine Serial No. 200201).....	1
647042	SPRING, bi-metal, heat control valve (After Engine Serial No. 200201).....	1
639743	STOP, heat control valve spring.....	1
636439	VALVE, heat control.....	1
637209	WASHER, heat control valve spring.....	1
GROUP 10-21—FLYWHEEL AND RING GEAR Model CJ-2A		
116295	BOLT, $\frac{1}{2}''$ -20 x $1\frac{1}{16}''$ (flywheel to crankshaft dowel).....	2
639578	RUSHING, clutch shaft.....	1
632156	DOWEL, flywheel to crankshaft.....	1
635394	GEAR, ring, flywheel (97 teeth).....	1
A-7503	KIT, flywheel and dowel bolt.....	1
	Consists of:	
A-1443	1 FLYWHEEL	
116295	2 BOLT, dowel	
52804	2 NUT, dowel bolt	
52330	2 LOCKWASHER, dowel bolt nut	
632157	BOLT, hex. hd., $\frac{3}{8}''$ -24 x $1\frac{5}{8}''$ } Flywheel to crankshaft{.....	4
5901	NUT, hex., $\frac{3}{8}''$ -24{.....	6
52378	LOCKWASHER, $\frac{3}{8}''$, ext.{.....	6

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Quan. Req'd.
Per Assy.

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-21—FLYWHEEL AND RING GEAR (Continued)		
Model CJ-3A		
639578	BUSHING, flywheel clutch shaft.....	1
632156	DOWEL, flywheel to crankshaft.....	2
641955	GEAR, ring, flywheel.....	1
643562	KIT, flywheel and dowel bolt.....	1
Consists of:		
641960	1 FLYWHEEL Assembly	
116295	2 BOLT, flywheel to crankshaft dowel	
52804	2 NUT, dowel bolt	
52330	2 LOCKWASHER, dowel bolt nut	
A-7696	1 TAG, instruction	
632157	BOLT, hex. hd., $\frac{3}{8}''$ -24 x $1\frac{5}{8}''$	4
5901	NUT, hex., $\frac{3}{8}''$ -24	6
52378	LOCKWASHER, $\frac{3}{8}''$, ext.	6

Note: Parts numbered 116295, 52804 and 52330 are required for straight doweling of flywheel to crankshaft. Eliminates need of special tapered reamer.

GROUP 10-22—FLYWHEEL HOUSING

A-439	Housing, Flywheel, with Starting Motor Bushing, Assembly (CJ-2A).....	1
Housing, Flywheel, Assembly (CJ-3A)		
6606	BOLT, hex. hd., $\frac{3}{8}''$ -24 x $1\frac{1}{8}''$	3
52379	BOLT, hex. hd., $\frac{3}{8}''$ -24 x $1\frac{1}{8}''$	2
630101	BOLT, hex. hd., $\frac{3}{8}''$ -24 x $2\frac{1}{8}''$ (dowel)	2
5901	NUT, hex., $\frac{3}{8}''$ -24	7
5010	LOCKWASHER, $\frac{3}{8}''$	7
6184	BOLT, hex. hd., $\frac{7}{16}''$ -14 x $1\frac{1}{4}''$	4
5059	LOCKWASHER, $\frac{7}{16}''$	4
639734	BUSHING, starting motor shaft (In flywheel housing).....	1
630103	COVER, inspection, transmission case.....	1
51763	BOLT, hex. hd., $\frac{1}{4}''$ -20 x $\frac{1}{2}''$	2
52706	LOCKWASHER, $\frac{1}{4}''$	2
375217	COVER, timing hole, flywheel housing.....	1
52036	SCREW, rd. hd., $\frac{1}{4}''$ -20 x $\frac{3}{8}''$	1
52706	LOCKWASHER, $\frac{1}{4}''$	1
51921	PLUG, expansion, $\frac{3}{4}''$ diam. (Flywheel housing).....	1

GROUP 10-23—ENGINE MOUNTINGS

A-420	BRACKET, engine front left support, lower half.....	1
A-418	BRACKET, engine front left support, upper half.....	1
A-421	BRACKET, engine front right support, lower half.....	1
A-419	BRACKET, engine front right support, upper half.....	1
50769	RIVET, rd. hd., $\frac{3}{8}''$ x $\frac{3}{4}''$ (Front support bracket to frame).....	9
A-146	BRACKET, engine mounting, rear.....	1
52189	BOLT, hex. hd., $\frac{3}{8}''$ -16 x $\frac{5}{8}''$	4
5010	LOCKWASHER, $\frac{3}{8}''$	4
640206	BRACKET, engine stay cable.....	1
5267	RIVET, rd. hd., $\frac{3}{16}''$ x $\frac{3}{4}''$ (Bracket to cross member).....	1
640348	CABLE, engine stay, assembly.....	1
5901	NUT, hex., $\frac{3}{8}''$ -24	2
52909	NUT, hex., $\frac{3}{8}''$ -24 (stamped)	1
52101	WASHER, plain, $\frac{3}{8}''$	1
5010	LOCKWASHER, $\frac{3}{8}''$	1
5901	NUT, hex., $\frac{3}{8}''$ -24	2
5010	LOCKWASHER, $\frac{3}{8}''$	2
630359	GASKET, cylinder block, front (Up to Engine Serial No. 44417—CJ-2A).....	1
641096	GASKET, cylinder block, front (After Engine Serial No. 44417—CJ-2A—All CJ-3A).....	1
A-7498	INSULATOR, engine support, front, assembly (Use 643533).....	2
643533	INSULATOR, engine support, front, assembly (After Engine Serial No. 41780) (CJ-2A).....	1
638629	INSULATOR, engine support, front, assembly—CJ-3A).....	2
5934	BOLT, hex. hd., $\frac{5}{16}''$ -24 x $1''$	4
5910	NUT, hex., $\frac{5}{16}''$ -24	4
52274	WASHER, plain, $\frac{5}{16}''$	4
51833	LOCKWASHER, $\frac{5}{16}''$	4
5916	NUT, hex., $\frac{1}{2}''$ -20	2
5009	LOCKWASHER, $\frac{1}{2}''$	2
A-6156	INSULATOR, engine support, rear.....	1
5901	NUT, hex., $\frac{3}{8}''$ -24	4
52101	WASHER, plain, $\frac{3}{8}''$	2
5010	LOCKWASHER, $\frac{3}{8}''$	4
647951	KIT, adapter, engine mounting (Use with engine plate 641143 to mount engine in frame 647910) (After Engine Serial No.).....	1
Consists of:		
647913	1 ADAPTER, engine mounting bracket	
5934	2 BOLT, hex. hd., $\frac{5}{16}''$ -24 x $1''$	
51308	1 BOLT, hex. hd., $\frac{5}{16}''$ -24 x $2''$	

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 10-23—ENGINE MOUNTINGS (Continued)		
5910	3 NUT, hex., $\frac{5}{16}$ "-24	
52274	3 WASHER, plain, $\frac{5}{16}$ "	
51833	3 LOCKWASHER, $\frac{5}{16}$ "	
642272	PLATE, engine, front, assembly (Use 641143) (Up to Engine Serial No. 44417—CJ-2A)	1
641143	PLATE, engine, front, assembly (After Engine Serial No. 44417—CJ-2A)	1
6412	BOLT, hex, hd., $\frac{3}{8}$ "-16 x $\frac{3}{4}$ "	3
52378	LOCKWASHER, $\frac{3}{8}$ " } Front engine plate to cylinder block—CJ-2A {	5
384958	STUD, $\frac{3}{8}$ "-24 x $1\frac{5}{16}$ " }	2
647922	PLATE, engine, front, assembly—CJ-3A	1
6412	BOLT, hex, hd., $\frac{3}{8}$ "-16 x $\frac{3}{4}$ " } Front engine plate to cylinder block—CJ-3A {	3
52378	LOCKWASHER, $\frac{3}{8}$ ", ext. }	3
A-5121	PLATE, engine, rear, assembly (Use 642280) (Up to Engine Serial No. 49297—CJ-2A)	1
642280	PLATE, engine, rear, assembly (After Engine Serial No. 49297) (Up to Engine Serial No. —CJ-2A)	1
642237	PLATE, engine, rear (After Engine Serial No. —CJ-2A—All CJ-3A)	1

GROUP 11—CLUTCH**GROUP 11-01—CLUTCH ASSEMBLY**

642622	Clutch Assembly (Less Driven Plate and Hub) (Auburn) (Use 648432 or 648539)	1
648432	Clutch Assembly (Less Driven Plate and Hub) (Atwood) (Int'ch'ble with 648539)	1
648539	Clutch Assembly (Less Driven Plate and Hub) (Rockford) (Int'ch'ble with 648432)	1
	(Orange spot painted on Clutch Cover for identification of 648539).	
630129	BOLT, hex, hd., $\frac{5}{16}$ "-18 x $1\frac{1}{16}$ " } Clutch to flywheel {	6
5051	LOCKWASHER, $\frac{5}{16}$ " }	6
640636	FACING SET, clutch driven plate	1
	Consists of:	
640361	1 FACING, clutch driven plate, front	
640360	1 FACING, clutch driven plate, rear	
641695	20 RIVET, clutch facing to driven plate	
642918	PLATE and HUB, driven, clutch, assembly (The plates have a spot of blue paint on the long end of the splined hub and springs are painted lavender for identification)	1

Components for Clutch 642622 (Auburn)—CJ-2A only

640578	BRACKET, clutch	1
638157	CUP, clutch pressure spring	3
640112	LEVER, release, clutch	3
638155	NUT, lock, clutch adjusting screw	3
638159	PIN, pivot, clutch release lever	3
640296	PLATE, pressure, clutch	1
638154	SCREW, adjusting, clutch	3
638993	SPRING, pressure plate (Up to Serial No. 14126)	3
638156	SPRING, pressure, clutch (After Serial No. 14126)	3
638153	SPRING, return, clutch pressure plate	3
638305	WASHER, clutch adjusting screw	3

Components for Clutch 648432 (Atwood)—CJ-2A and CJ-3A

648406	BRACKET, clutch	1
648429	CLIP, anti-rattle, clutch release lever	3
638157	CUP, clutch pressure spring	3
648436	LEVER, release, clutch	3
638155	NUT, lock, clutch adjusting screw	3
638159	PIN, pivot, clutch release lever	3
648405	PLATE, pressure, clutch	1
638154	SCREW, adjusting, clutch	3
638156	SPRING, pressure, clutch	3
638153	SPRING, return, clutch pressure plate	3
648431	STRIP, neoprene, anti-rattle clip	3
638305	WASHER, clutch adjusting screw	3

Components for Clutch 648539 (Rockford)—CJ-2A and CJ-3A

117485	LEVER, release, clutch	3
117484	LEVER, release, clutch, assembly (Includes screw, pin, ring and spring)	3
117487	PIN, clutch release lever	6
117482	PLATE, back, clutch, assembly	1
117483	PLATE, pressure, clutch	1
117353	RING, retaining, release lever pin	6
117486	SCREW, adjusting, clutch lever	3
117488	SPRING, clutch release lever	3
117367	SPRING, pressure, clutch	6

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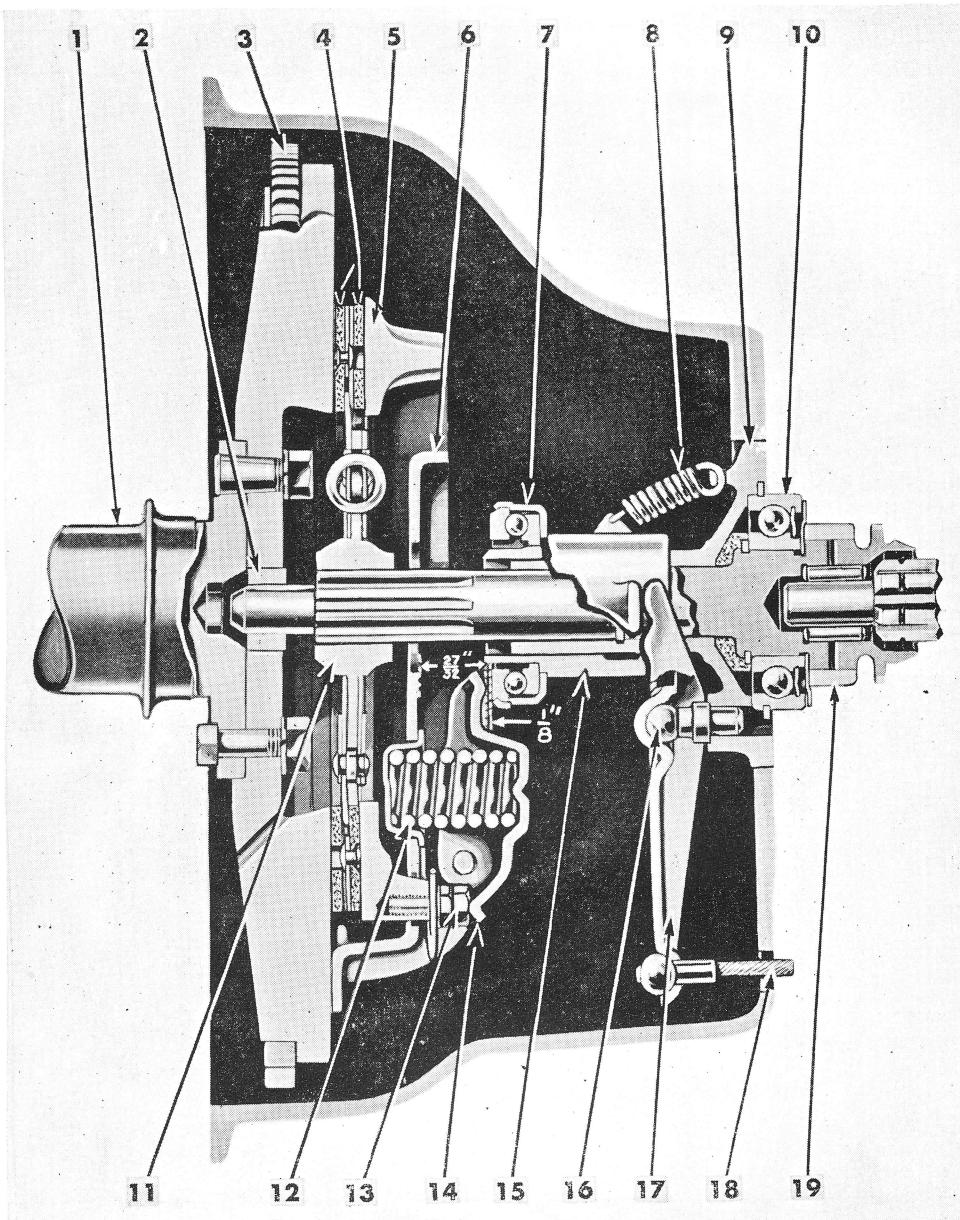


FIG. No. 14—CLUTCH, SECTIONAL VIEW

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	642969	Crankshaft.....	10-03	11	642918	Plate and Hub, driven.....	11-01
2	639578	Bushing, flywheel.....	10-21	12	638156	Spring, pressure.....	11-01
3	635394	Gear, flywheel.....	10-21	13	638154	Screw, adjusting.....	11-01
4	640636	Facing Set.....	11-01	14	646112	Lever, release.....	11-01
5	640296	Plate, pressure.....	11-01	15	644366	Carrier, bearing.....	11-02
6	640578	Bracket, clutch.....	11-01	16	630068	Fulcrum, release lever.....	11-02
7	635529	Bearing, release.....	11-02	17	630112	Lever, control.....	11-02
8	630117	Spring, carrier.....	11-02	18	640124	Cable, control.....	11-02
9	640422	Retainer, bearing.....	17-02	19	640428	Gear, main drive.....	17-02
10	643721	Bearing, main drive gear.....	17-02				

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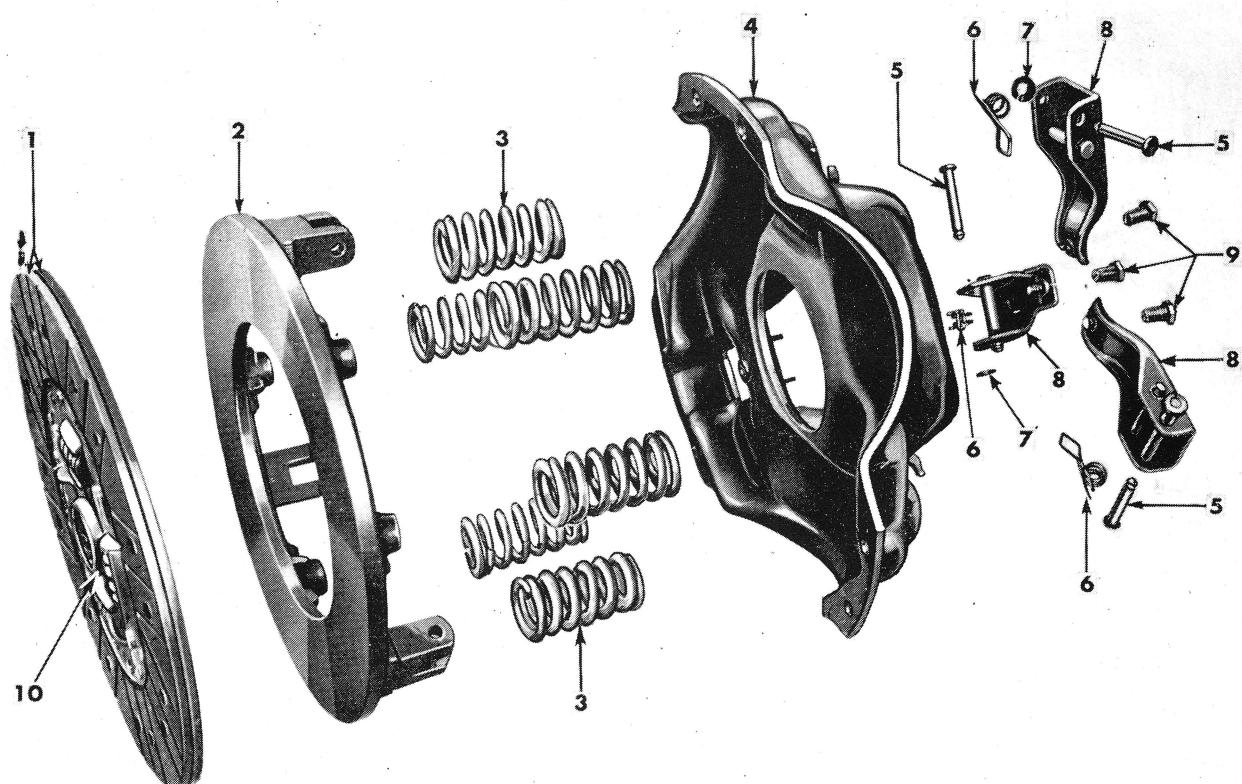


FIG. No. 15—CLUTCH ASSEMBLY (ROCKFORD)

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	640361	Facing, front.....	11-01	6	117488	Spring, release lever.....	11-01
	640360	Facing, rear.....	11-01	7	117353	Ring, pin retaining.....	11-01
2	117483	Plate, pressure.....	11-01	8	117485	Lever, release.....	11-01
3	117367	Spring.....	11-01	9	117486	Screw, lever adjusting.....	11-01
4	117482	Plate, back.....	11-01	10	642918	Plate and Hub, driven.....	11-01
5	117487	Pin, release lever.....	11-01				

Part No.	Description	Quan Req'd. Per Assy.
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GROUP 11-02—CLUTCH CONTROL PARTS

635529	BEARING, release, clutch.....	1
645249	BEARING, release, clutch (Use 635529).....	1
A-180	BRACKET, clutch control frame.....	1
52132	BOLT, hex. hd., $\frac{5}{16}''$ -24 x $\frac{5}{8}''$	2
5910	NUT, hex., $\frac{5}{16}''$ -24 } Bracket to frame.....	2
51833	LOCKWASHER, $\frac{5}{16}''$ }	2
639578	BUSHING, clutch shaft (In flywheel).....	1
640124	CABLE, clutch control lever.....	1
639654	CARRIER, clutch release bearing (Use 644366).....	1
644366	CARRIER, clutch release bearing.....	1
647686	COVER, clutch control lever, hole, assembly—CJ-3A.....	1
647679	COVER and CLIP, clutch control lever, hole, assembly—CJ-3A.....	1
52868	BOLT, rd. hd., No. 10-24 x $\frac{3}{4}''$ } Hole cover to flywheel housing—CJ-3A.....	1
647465	NUT, speed, No. 10-24 }	1
638792	FITTING, lubricating, pedal shaft.....	1
630068	FULCRUM, clutch release lever.....	1
5036	KEY, Woodruff, No. 9 (Clutch pedal to shaft).....	1
630112	LEVER, clutch control.....	1
A-1355	LEVER and TUBE, clutch control, assembly (Up to Serial No. 14126).....	1
642624	LEVER and TUBE, clutch control, assembly (After Serial No. 14126).....	1
5108	PIN, cotter, $\frac{1}{8}''$ x $1\frac{1}{4}''$ (Clutch control lever and tube).....	2
A-8440	PAD, clutch pedal, assembly (Use 645582).....	1
641931	PAD, clutch pedal, assembly (Use 645582).....	1
645582	PAD, clutch pedal, assembly (After Serial No. 179770).....	1
A-6359	PAD, draft, clutch pedal.....	1
A-176	PAD, felt, clutch control tube.....	2
A-405	PEDAL, clutch, assembly (Int'ch'ble with A-10269).....	1

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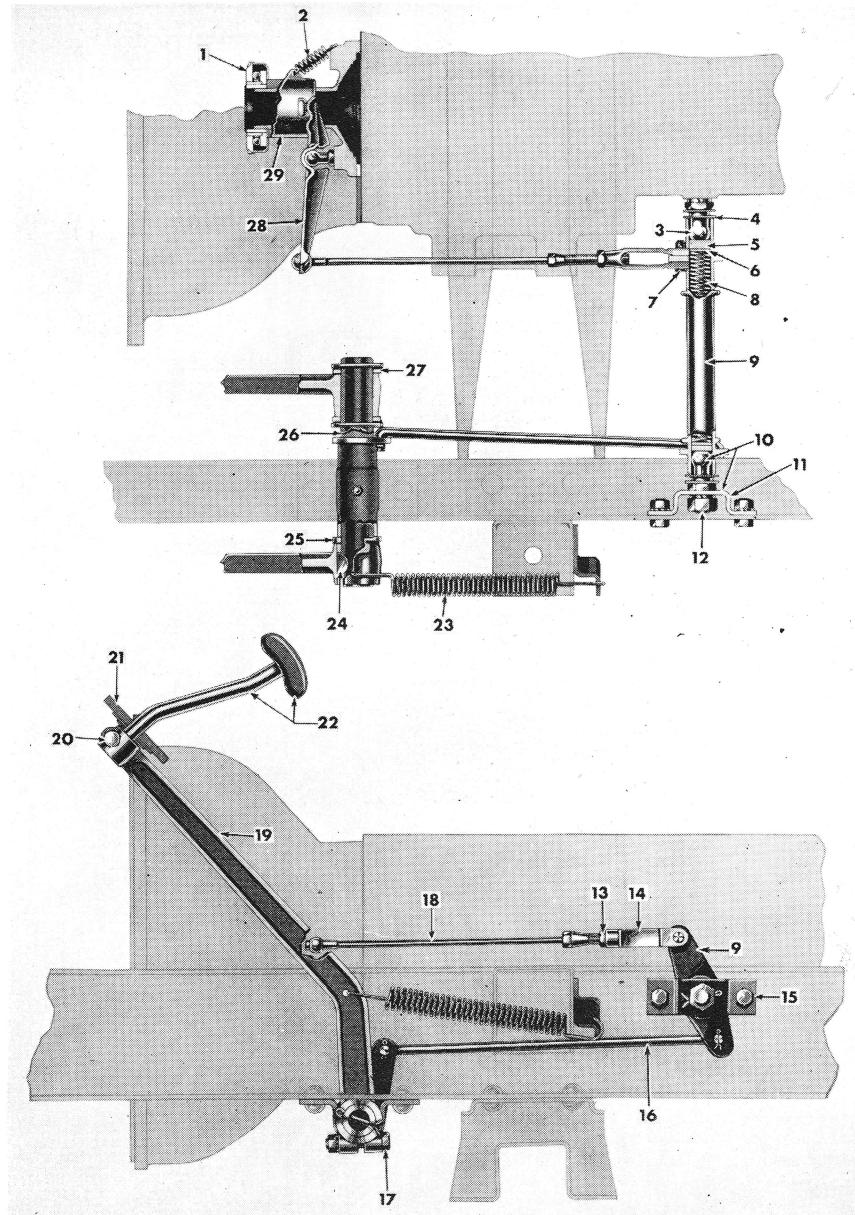


FIG. No. 16—CLUTCH LINKAGE (CJ-3A)

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	645249	Bearing, release	11-02	16	640123	Rod, release, pedal	11-02
2	630117	Spring, carrier	11-02	17	50992	Bolt, pedal clamp	11-02
3	A-181	Stud ball	11-02	18	640124	Cable, control	11-02
4	A-887	Seal, dust	11-02	19	A-10269	Pedal, clutch	11-02
5	A-176	Pad	11-02	20	6157	Bolt, pedal pad clamp	11-02
6	A-177	Retainer, control tube	11-02	21	A-6359	Pad, draft	11-02
7	339043	Pin, clevis, yoke	11-02	22	645582	Pad and Shank, clutch pedal	11-02
8	A-178	Spring, control tube	11-02	23	630593	Spring, retracting	11-02
9	642624	Lever and Tube, control	11-02	24	5036	Key, pedal to shaft	11-02
10	A-179	Stud and Bracket, control ball	11-02	25	A-498	Washer, pedal shaft	11-02
11	A-180	Bracket, frame	11-02	26	A-495	Shaft, pedal	24-08
12	5336	Nut, ball stud	11-02	27	647592	Bar, tie, master cylinder	24-06
13	5910	Nut, lock, yoke	11-02	28	630112	Lever, control	11-02
14	632177	Yoke, adjusting	11-02	29	644366	Carrier, bearing	11-02
15	52132	Bolt, bracket to frame	11-02				

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 11-02—CLUTCH CONTROL PARTS (Continued)		
A-10269	PEDAL, clutch, assembly (Int'ch'ble with A-405).....	1
50992	BOLT, hex. hd., $\frac{5}{16}$ "-.24 x $1\frac{3}{4}$ "	1
5910	NUT, hex., $\frac{5}{16}$ "-.24	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
6157	BOLT, hex. hd., $\frac{5}{16}$ "-.18 x $1\frac{1}{4}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
339043	PIN, clevis, $\frac{5}{16}$ " x $2\frac{1}{32}$ " (Yoke to control lever).....	1
5354	PIN, cotter, $\frac{3}{32}$ " x $1\frac{1}{2}$ " (Yoke to control lever clevis pin).....	1
52944	PIN, cotter, $\frac{5}{32}$ " x $1\frac{3}{8}$ " (Up to Serial No. 141458).....	1
A-177	RETAINER, clutch control tube.....	2
640123	ROD, clutch release pedal.....	2
5354	PIN, cotter, $\frac{3}{32}$ " x $1\frac{1}{2}$ " (Pedal rod).....	1
A-887	SEAL, dust, clutch control tube.....	2
A-178	SPRING, clutch control tube.....	1
650684	SPRING, clutch pedal shank draft pad.....	1
630117	SPRING, clutch release bearing carrier.....	1
630593	SPRING, retracting, clutch pedal.....	1
A-181	STUD, ball, clutch control.....	1
5336	NUT, hex., $\frac{5}{16}$ "-.14	1
5059	LOCKWASHER, $\frac{5}{16}$ "	1
A-179	STUD and BRACKET, ball, clutch control, assembly.....	1
A-6360	WASHER, clutch pedal shank draft pad.....	1
A-498	WASHER, flat, $1\frac{1}{2}$ " O.D. x $1\frac{1}{32}$ " I.D. x $\frac{1}{32}$ " (Pedal shaft) (Up to Serial No. 141458).....	3
632177	YOKE, adjusting end, $\frac{5}{16}$ " (Clutch control lever).....	1
5910	NUT, hex., $\frac{5}{16}$ "-.24 (Adjusting end yoke lock).....	1

GROUP 12—FUEL**GROUP 12-01—FUEL TANK**

640685	Tank, Fuel, Assembly.....	1
640682	ANTI-SQUEAK, fuel tank ($1 \times 6\frac{3}{8}$ in.).....	1
640171	ANTI-SQUEAK, fuel tank (1×9 in.).....	1
640681	ANTI-SQUEAK, fuel tank ($1 \times 18\frac{1}{16}$ in.).....	1
640170	ANTI-SQUEAK, fuel tank ($1 \times 23\frac{7}{16}$ in.).....	3
640704	ANTI-SQUEAK, fuel tank hold down clamp.....	1
663074	BRACKET, anchor, fuel tank hold down, outer.....	1
663075	BRACKET, fuel tank hold down, front, inner.....	2
52168	BOLT, hex-hd., $\frac{1}{4}$ "-.20 x $\frac{5}{8}$ "	1
52031	LOCKWASHER, $\frac{1}{4}$ "	2
640594	CAP, fuel tank, assembly.....	1
640696	CLAMP, fuel tank hold down.....	1
640166	CLAMP, fuel tank hold down, outer.....	2

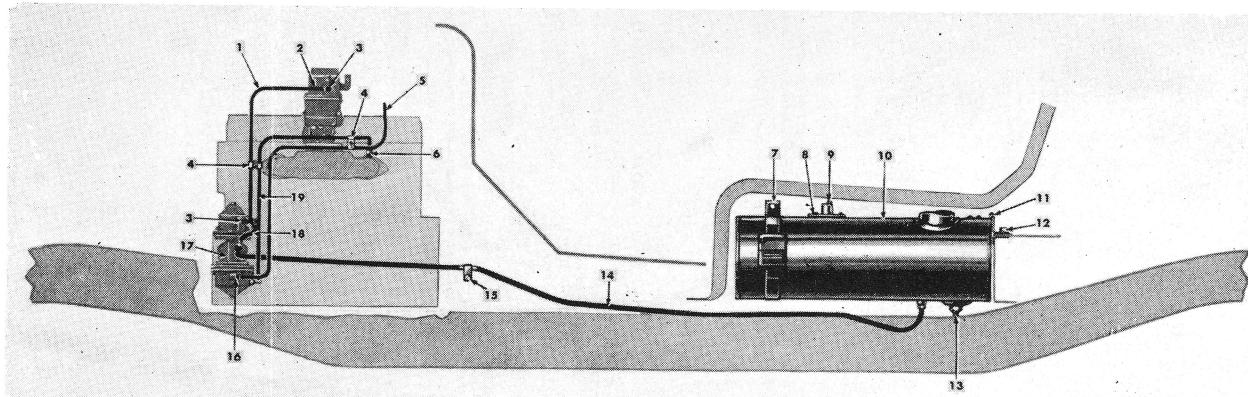


FIG. No. 17—FUEL SYSTEM (CJ-3A)

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	648969	Tube, pump to carburetor.....	12-03	11	640696	Clamp, hold down.....	12-01
2	647744	Carburetor.....	12-04	12	53931	Bolt, hold down.....	12-01
3	384569	Elbow, carburetor.....	12-03	13	5138	Plug, drain.....	12-01
4	78316	Clip, tube.....	12-03	14	647917	Tube, fuel tank.....	12-03
5	647914	Tube, pump to windshield wiper.....	12-03	15	A-5449	Clip, fuel line.....	12-03
6	387891	Union.....	12-03	16	647311	Elbow.....	12-03
7	640692	Strap, hold down.....	12-01	17	647911	Pump, fuel and vacuum.....	12-09
8	A-1293	Gasket, fuel gauge.....	12-02	18	640308	Connection, flexible.....	12-03
9	640694	Gauge, tank unit.....	12-02	19	647916	Tube, manifold to pump.....	12-02
10	640685	Tank, fuel.....	12-01				

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-01—FUEL TANK (Continued)		
641954	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{3}{4}$ "	1
52626	NUT, hex., $\frac{5}{16}$ "-24	1
53923	NUT, stamped, $\frac{5}{16}$ "-24	1
53931	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $\frac{7}{8}$ "	1
53047	LOCKWASHER, $\frac{5}{16}$ "	1
663502	GROMMET, fuel tank filler neck	1
5138	PLUG, pipe, $\frac{1}{4}$ ", sq. hd. (Fuel tank drain)	1
640692	STRAP, fuel tank hold down, assembly	1
GROUP 12-02—FUEL GAUGES		
640763	Gauge, Fuel, Assembly (Dash Unit)	1
640694	Gauge, Fuel, Assembly (Tank Unit)	1
5556	SCREW, rd. hd., No. 8-32 x $\frac{3}{8}$ " Fuel gauge to tank	5
52705	LOCKWASHER, No. 8	5
5253	SCREW, rd. hd., No. 8-32 x $\frac{1}{4}$ " Fuel gauge wire to tank unit	1
52705	LOCKWASHER, No. 8	1
A-8132	BRACKET, mounting, fuel gauge to dash	1
52216	NUT, hex., No. 10-32	4
A-8129	LOCKWASHER, No. 10	2
A-1293	GASKET, fuel gauge tank unit	1
Note: For wiring relative to these instruments, see Electrical Group.		
GROUP 12-03—FUEL LINES		
A-5449	CLIP, fuel line, $\frac{5}{16}$ " (1 used fuel line to dash bracket, 1 used fuel line to fender splasher)	2
A-1694	CLIP, tube, $\frac{1}{4}$ " (Fuel line to front floor sill) (Use 78316) (After Serial No. 49991)	1
52889	SCREW, sheet metal, No. 10 x $\frac{5}{8}$ " (Clip to cross sill)	2
5113	SCREW, rd. hd., No. 10-24 x $\frac{1}{2}$ "	2
6352	NUT, hex., No. 10-24	2
5168	LOCKWASHER, No. 10	2
78316	CLIP, $\frac{1}{4}$ "	4
5113	SCREW, rd. hd., No. 10-24 x $\frac{1}{2}$ "	2
6352	NUT, hex., No. 10-24	2
5168	LOCKWASHER, No. 10	2
	clip to vacuum and windshield wiper tube and clip to gasoline and vacuum tube	
640308	CONNECTION, fuel line to fuel pump (flexible, $\frac{1}{4}$ ") (Int'ch'ble with 647586)	1
647586	CONNECTION, fuel line to fuel pump (Int'ch'ble with 640308)	1
384569	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 647311)	3
647311	ELBOW, inverted flared tube, $\frac{1}{4}$ " (I t'ch'ble with 384569)	3
640168	LINE, fuel tank to flexible connection, assembly (51 $\frac{1}{8}$ " length)	1
384568	NUT, inverted flared tube, $\frac{1}{4}$ "	5
640309	TUBE, fuel pump to carburetor, assembly ($\frac{1}{4}$ ")	1
647917	TUBE, fuel tank to flexible connection, assembly—CJ-3A	1
648969	TUBE, fuel and vacuum pump to carburetor—CJ-3A	1
647916	TUBE, vacuum, intake manifold to vacuum pump—CJ-3A	1
647914	TUBE, windshield wiper, assembly—CJ-3A (Vacuum pump to flexible connection)	1
387891	UNION, flared tube, $\frac{1}{4}$ "—CJ-3A (Vacuum tube to intake manifold)	1
GROUP 12-04—CARBURETOR (Up to Serial No. 69589)		
640304	Carburetor Assembly (Use only with King-Seeley and Monarch Governors) (Use one (1) each 647744 carburetor, 384569 elbow and 53411 pipe plug)	1
640303	ARM, throttle shaft, assembly	1
116181	ARM and COLLAR, pump, assembly	1
116197	ARM and SCREW, throttle shaft, assembly	1
116205	CHECK, intake ball, assembly	1
116204	CHECK and PLUG, discharge disc, assembly	1
116587	CLAMP, tube, assembly	1
116208	COVER and PIN, bowl, assembly	1
116206	DISC, metering rod	1
384569	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 647311)	1
647311	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 384569)	1
640679	FLANGE, body, assembly	1
116172	FLOAT and LEVER Assembly	2
116202	GASKET, body flange	1
116203	GASKET, bowl cover	1
116169	GASKET, metering rod jet and plug	3
116168	GASKET, needle seat and plug	3
116171	GASKET, nozzle	1
116170	GASKET, strainer plug	1
A-6837	GASKET SET, carburetor (Use 647746)	1
116202	Consists of:	
116203	2 GASKET, body flange	
116199	1 GASKET, bowl cover	
116168	3 GASKET, metering rod jet and plug	
116171	3 GASKET, needle seat and plug	
A-6357	1 GASKET, nozzle	
116544	1 GASKET and BAFFLE, insulator, assembly	
	HORN, air, assembly	1

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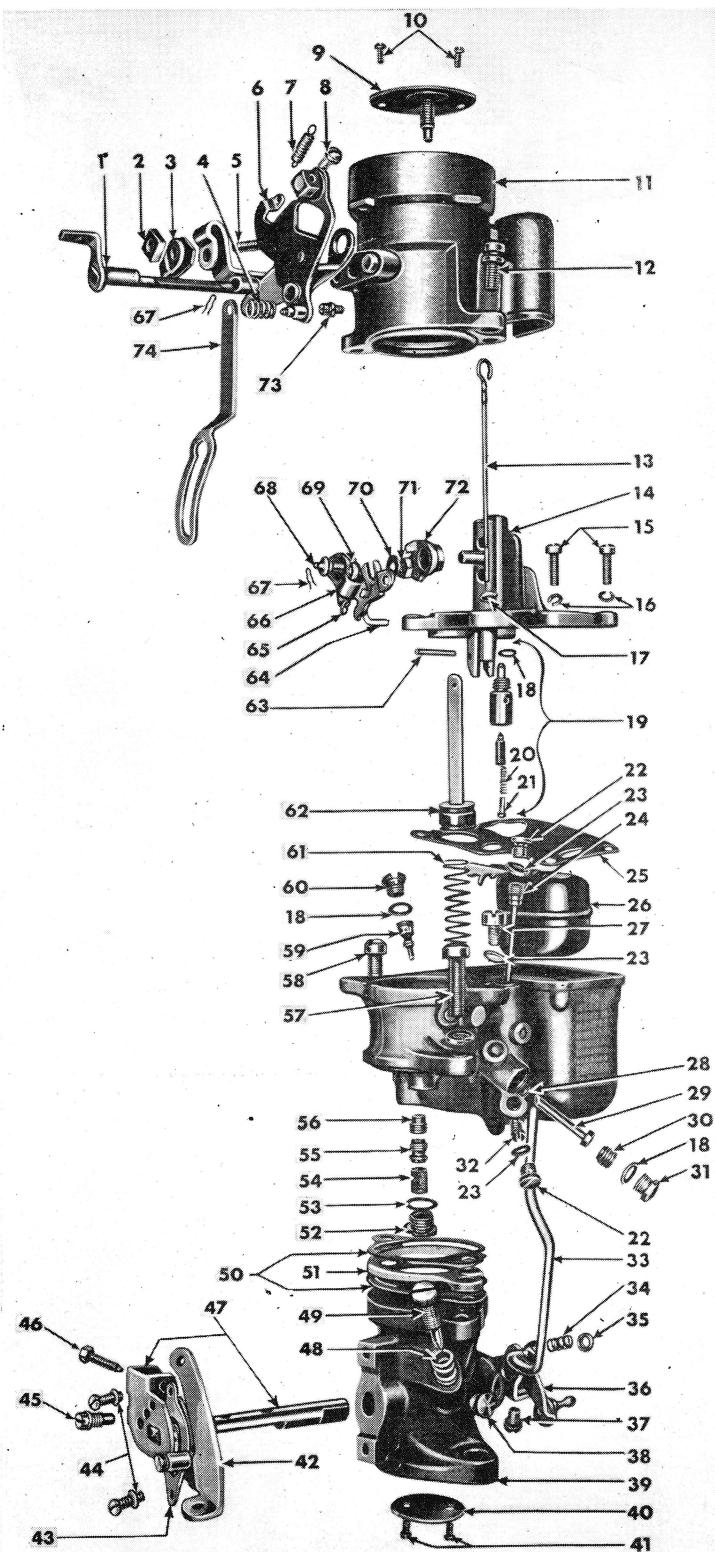


FIG. No. 18—CARBURETOR

Ref. No.	Part No.	Description	Group No.
1	116545	Shaft and Lever, choke	12-04
2	116219	Nut, clamp screw	12-04
3	116587	Clamp, choke tube	12-04
4	116189	Spring, connector link	12-04
5	116588	Screw, tube clamp	12-04
6	116586	Lever, choke	12-04
7	116184	Spring, choke	12-04
8	116211	Screw, wire clamp	12-04
9	116157	Valve, choke	12-04
10	116216	Screw, choke valve	12-04
11	116544	Horn, air	12-04
12	116385	Screw, air horn	12-04
13	116540	Rod, metering	12-04
14	116208	Cover, bowl	12-04
15	117122	Screw and washer	12-04
16	6330	Lockwasher	12-04
17	116206	Disc, metering rod	12-04
18	116168	Gasket, seat and plug	12-04
19	116174	Needle, seat and spring	12-04
20	116191	Spring, intake needle	12-04
21	116177	Pin, intake needle	12-04
22	116165	Plug, low speed and idle well	12-04
23	116169	Gasket, metering rod jet	12-04
24	117109	Jet, low speed	12-04
25	116203	Gasket, bowl cover	12-04
26	116172	Float	12-04
27	116541	Jet, metering rod	12-04
28	116785	Gasket, nozzle	12-04
29	117369	Nozzle, carburetor	12-04
30	117368	Plug, nozzle retainer	12-04
31	116164	Plug, passage	12-04
32	116179	Jet, idle well	12-04
33	116198	Rod, connector, throttle	12-04
34	116185	Spring, connector rod	12-04
35	116925	Retainer, spring	12-04
36	640303	Arm, control	12-04
37	52290	Screw, arm clamp	12-04
38	116647	Plug, idle port	12-04
39	116846	Flange, throttle body	12-04
40	116154	Valve, throttle	12-04
41	116217	Screw, throttle valve	12-04
42	116849	Lever, throttle	12-04
43	645829	Plate, lever, retainer	12-04
44	640676	Screw, retainer	12-04
45	116848	Screw, throttle lever	12-04
46	116651	Screw, adjusting	12-04
47	116847	Shaft, throttle	12-04
48	116183	Spring, idle screw	12-04
49	116176	Screw, adjusting, idler	12-04
50	116202	Gasket, body flange	12-04
51	116210	Insulator, carburetor body	12-04
52	116163	Plug, strainer passage	12-04
53	116170	Gasket, strainer plug	12-04
54	116175	Strainer, check, pump	12-04
55	116205	Check, ball, intake	12-04
56	116204	Plug, discharge check	12-04
57	116769	Screw, flange to body	12-04
58	116769	Screw, flange to body	12-04
59	116180	Jet, pump	12-04
60	116164	Plug, jet and nozzle	12-04
61	116188	Spring, pump	12-04
62	116195	Plunger, pump	12-04
63	116173	Pin, float lever	12-04
64	116199	Link, connector, pump	12-04
65	116187	Spring, pump arm	12-04
66	116537	Lever, operating, pump	12-04
67	116178	Pin, spring	12-04
68	116209	Pin, metering rod	12-04
69	116538	Spring, metering rod	12-04
70	116207	Washer, pin	12-04
71	53062	Nut, metering rod pin	12-04
72	116181	Arm and collar, pump	12-04
73	116384	Screw, choke bracket	12-04
74	116542	Link, choke	12-04

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-04—CARBURETOR (Up to Serial No. 69589) (Continued)		
116210	INSULATOR, carburetor to choke valve.....	1
116179	JET, idle well.....	1
116539	JET, low speed, assembly (Use 117109).....	1
117109	JET, low speed, assembly.....	1
116180	JET, pump.....	1
116541	JET and GASKET, metering rod, assembly.....	1
647004	KIT, repair, carburetor (Use 647745).....	1
116537	LEVER, pump operating, assembly.....	1
640675	LEVER, throttle, assembly.....	1
640677	SCREW and WASHER, No. 8-32 x $\frac{3}{16}$ ".....	1
116586	LEVER and BRACKET, choke, assembly.....	1
116542	LINK, choke.....	1
116199	LINK, pump connector.....	1
116174	NEEDLE, SPRING and SEAT Assembly.....	1
116166	NOZZLE, carburetor.....	1
50922	NUT, flange stud.....	1
52615	NUT, metering rod pin.....	1
116219	NUT, tube clamp screw.....	1
116173	PIN, float lever.....	1
116177	PIN, intake needle.....	1
116209	PIN, metering rod.....	1
640678	PLATE, retainer, carburetor lever (Up to Serial No. 146344).....	1
645829	PLATE, retainer, carburetor lever (After Serial No. 146344).....	1
640676	SCREW and WASHER, No. 8-32 x $\frac{3}{8}$ ".....	2
116161	PLUG, nozzle retainer.....	1
116160	PLUG, rivet.....	1
116159	PLUG, rivet.....	1
116162	PLUG, rivet, idle port.....	1
116165	PLUG and GASKET, low speed jet and idle well passage, assembly.....	1
116164	PLUG and GASKET, pump jet and nozzle passage, assembly.....	2
116163	PLUG and GASKET, strainer passage, assembly.....	1
116195	PLUNGER and ROD, pump, assembly.....	1
116194	RETAINER, spring.....	1
116540	ROD, metering.....	1
116198	ROD, throttle connector.....	1
116651	SCREW, adjusting, throttle lever.....	1
116213	SCREW, attaching, bowl cover (Use 117122).....	4
116216	SCREW, attaching, choke valve.....	2
116217	SCREW, attaching, throttle valve.....	2
301232	SCREW, choke lever bracket.....	1
116176	SCREW, idler adjusting.....	1
52290	SCREW, throttle shaft arm clamp.....	1
116588	SCREW, tube clamp.....	1
116211	SCREW, wire clamp.....	1
116385	SCREW and WASHER, attaching, air horn.....	2
117122	SCREW and WASHER, attaching, bowl cover.....	4
116384	SCREW and WASHER, attaching, choke tube bracket.....	1
116769	SCREW and WASHER, attaching, flange to body.....	2
116545	SHAFT and LEVER, choke control, assembly.....	1
640674	SHAFT and LEVER, throttle, assembly.....	1
116184	SPRING, choke pull back.....	1
116189	SPRING, connector link.....	1
116185	SPRING, connector rod.....	1
116183	SPRING, idle adjustment screw.....	1
116191	SPRING, intake needle.....	1
116538	SPRING, metering rod.....	1
116178	SPRING, pin.....	1
116186	SPRING, plunger.....	1
116188	SPRING, pump.....	1
116187	SPRING, pump arm.....	1
116175	STRAINER, check, pump.....	1
116157	VALVE, choke, assembly.....	1
116154	VALVE, throttle.....	1
6330	WASHER, attaching, bowl cover.....	4
5010	WASHER, flange stud.....	1
116207	WASHER, metering rod pin.....	1

CARBURETOR

(After Serial No. 69589) (Up to Serial No. 212110—CJ-2A)

Items not listed are same as indicated for Carburetor 640304.

643337	Carburetor Assembly (Use only with Novi Governor) (Use 647744) (Use one (1) each 384569 Elbow and 53411 Pipe Plug to plug vacuum control vent if used to replace Carburetor 640304).....	1
116846	FLANGE, body, assembly.....	1
116849	LEVER, throttle, assembly.....	1
53381	LOCKWASHER, attaching, throttle lever.....	1
116647	PLUG, rivet, idle passage.....	1
116848	SCREW, attaching, throttle lever.....	1
116847	SHAFT and LEVER, throttle.....	1

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-04—CARBURETOR (Continued)		
CARBURETOR (CARTER 636-SA)		
(After Serial No. 212110—CJ-2A and All CJ-3A)		
Items not listed are same as indicated for Carburetor 640304.		
647744	Carburetor Assembly (Carter 636-SA)	1
117644	CLIP, clevis, throttle connector rod	1
384569	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 647311)	1
647311	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 384569)	1
116846	FLANGE, body, assembly	1
116785	GASKET, nozzle	1
647746	GASKET SET, carburetor	1
Consists of:		
116202	2 GASKET, body flange	
116203	1 GASKET, bowl cover	
116169	3 GASKET, metering rod jet and plug	
116168	3 GASKET, needle seat and plug	
116171	1 GASKET, nozzle (For carburetor 640304 and 643337)	
116785	1 GASKET, nozzle (For carburetor 647744)	
116170	1 GASKET, strainer plug	
A-6357	1 GASKET and BAFFLE, insulator, assembly	
117109	JET, low speed, assembly	1
647745	KIT, repair, carburetor (For carburetors 640304, 643337 and 647744)	1
Consists of:		
640303	1 ARM, throttle shaft, assembly	
116205	1 CHECK, intake ball, assembly	
116204	1 CHECK, and PLUG, discharge disc, assembly	
116202	2 GASKET, body flange	
116203	1 GASKET, bowl cover	
116785	1 GASKET, nozzle	
A-6357	1 GASKET, and BAFFLE, insulator, assembly	
116179	1 JET, idle well	
117109	1 JET, low speed, assembly	
116180	1 JET, pump	
116541	1 JET and GASKET, metering rod, assembly	
116199	1 LINK, pump connector	
116174	1 NEEDLE, SPRING and SEAT Assembly	
116162	1 PLUG, rivet, idle port	
116195	1 PLUNGER and ROD, pump, assembly	
116540	1 ROD, metering	
117645	1 ROD, throttle connector	
116217	2 SCREW, attaching, throttle valve	
116178	4 SPRING, pin	
116175	1 STRAINER, check, pump	
116849	LEVER, throttle, assembly	1
117369	NOZZLE, carburetor	1
117368	PLUG, nozzle retainer	1
53411	PLUG, pipe, $\frac{1}{8}$ " thd.	1
117645	ROD, throttle connector	1
117122	SCREW and WASHER, attaching, bowl cover, assembly	4
116847	SHAFT and LEVER, throttle, assembly	1
53381	LOCKWASHER, throttle lever attaching screw	1
53062	NUT, metering rod pin	1
GROUP 12-04A—CARBURETOR ATTACHING PARTS		
630889	GASKET, carburetor (For restrictor plate)—After Serial No. 49696	1
A-6357	GASKET and DIFFUSER, insulator, assembly	1
50922	NUT, hex., $\frac{1}{2}$ "-24, carburetor to manifold stud	2
53411	PLUG, pipe, $\frac{1}{8}$ " (To plug vacuum control vent)—After Serial No. 69589	1
632159	STUD, carburetor to manifold	2
GROUP 12-05—AIR CLEANER		
642825	Cleaner, Air, Assembly (Oakes) (After Serial No. 45984)	1
645367	Cleaner, Air, Assembly (Donaldson)	1
A-5629	BODY, air cleaner, assembly	1
642861	BODY, air cleaner, assembly (Oakes) (After Serial No. 45984) (Use 642825)	1
645368	BODY, air cleaner, assembly (Donaldson)	1
640948	BRACKET, support, air cleaner, left	1
640947	BRACKET, support, air cleaner, right	1
52721	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{5}{8}$ "	6
115905	SCREW, wing, $\frac{1}{4}$ "-20 x $\frac{3}{4}$ " } Air cleaner to bracket	4
52702	WASHER, plain, $\frac{1}{4}$ "	4
53047	LOCKWASHER, $\frac{5}{16}$ "	6
645370	CLAMP, air cleaner oil cup (Donaldson)	1
53384	CLAMP, carburetor tube	1
53108	CLAMP, hose, $\frac{3}{4}$ " diameter	2
635097	CLAMP, hose, $2\frac{1}{2}$ " diameter	2
A-281	CLAMP with BOLT and NUT, carburetor air horn, assembly (Use 641941)	1

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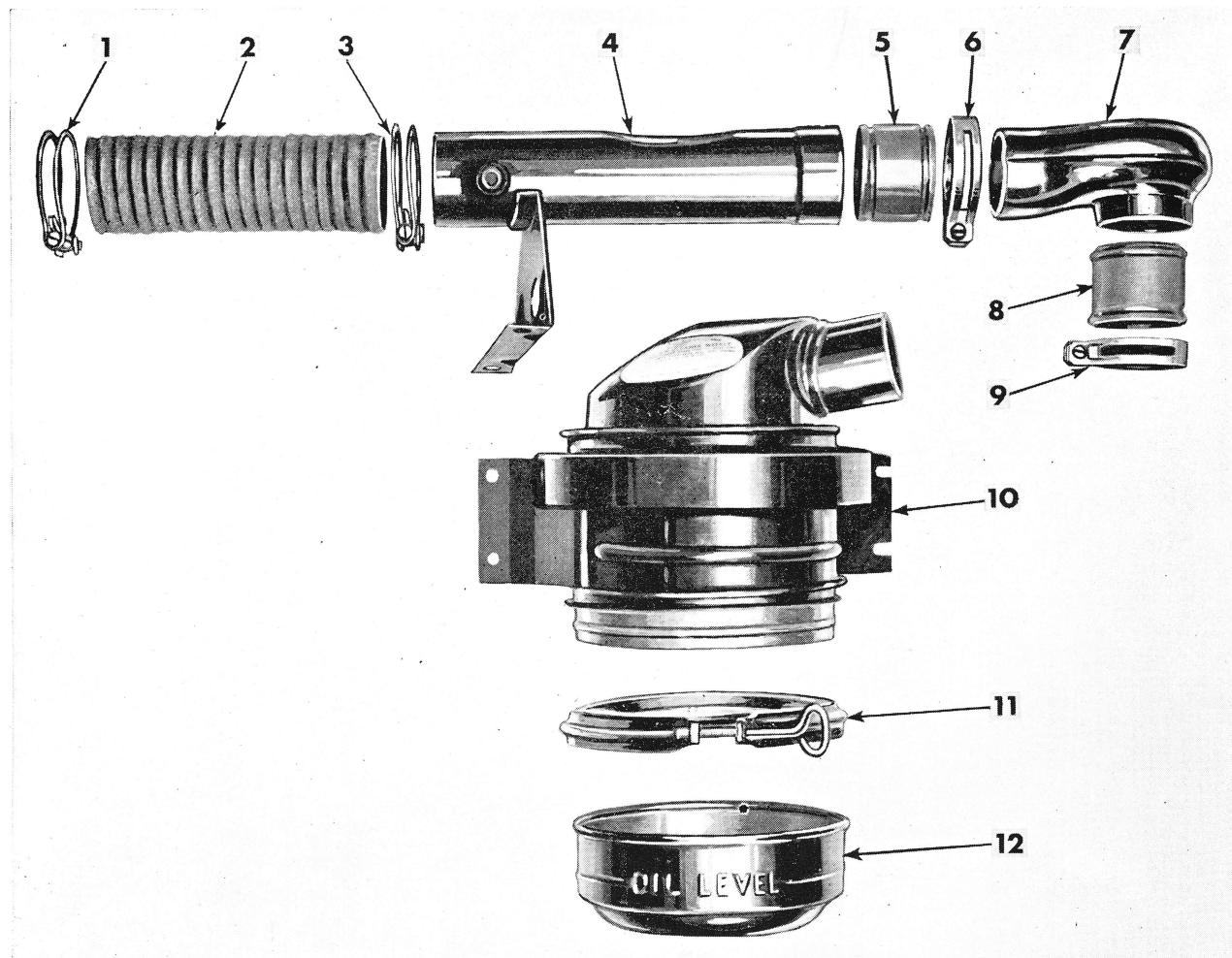


FIG. 19—AIR CLEANER

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	635097	Clamp..	12-05	7	641918	Horn, cleaner to carburetor.....	12-05
2	646753	Hose, flexible.....	12-05	8	A-17318	Seal, horn to carburetor.....	12-05
3	636097	Clamp.....	12-05	9	641941	Clamp, seal.....	12-05
4	641930	Tube and Bracket.....	12-05	10	645368	Body, air cleaner.....	12-05
5	A-17317	Seal, tube clamp.....	12-05	11	645370	Clamp, cup to body.....	12-05
6	53384	Clamp, tube.....	12-05	12	645369	Cup, oil.....	12-05

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-05—AIR CLEANER (Continued)		
641941	CLAMP, 2 $\frac{3}{8}$ " I. D. (Carburetor to Air Horn Seal).....	1
A-5631	CUP, oil, air cleaner (Up to Serial No. 45984).....	1
642863	CUP, oil, air cleaner (Oakes) (After Serial No. 45984).....	1
645369	CUP, oil, air cleaner (Donaldson).....	1
A-5630	ELEMENT, air cleaner filter, with WING BOLT, assembly (Up to Serial No. 45984).....	1
642862	ELEMENT, air cleaner filter (Oakes) (After Serial No. 45984).....	1
A-5632	GASKET, body, upper.....	1
A-5633	GASKET, oil cup, lower.....	1
A-463	HORN, air cleaner (Use 641918).....	1
641918	HORN, air cleaner (After Serial No.).....	1
640187	HOSE, air cleaner tube to air cleaner (Flexible) (Use 646753 or 648024).....	1
646753	HOSE, air cleaner tube to air cleaner (Flexible, 2 $\frac{1}{8}$ " I.D., 6 $\frac{3}{4}$ " long) (Int'ch'ble with 648024).....	1
648024	HOSE, air cleaner tube to air cleaner (Flexible) (Int'ch'ble with 646753).....	1
A-6918	HOSE, air cleaner tube to oil filler tube (Use 645824).....	1
645824	HOSE, air cleaner tube to oil filler tube.....	1
645626	HOSE, air cleaner tube to oil filler tube (Flexible, $\frac{1}{2}$ " I.D., 5 $\frac{5}{16}$ " long).....	1
A-17318	SEAL, carburetor and air cleaner horn.....	1
A-17317	SEAL, carburetor tube clamp.....	1

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-05—AIR CLEANER (Continued)		
A-642	SHIELD, air cleaner, assembly (Up to Serial No. 45984) (Use 641919)	1
641919	SHIELD, air cleaner, assembly (After Serial No. 45984)	1
51732	BOLT, hex. hd., $\frac{1}{4}$ "-28 x $\frac{1}{2}$ "	3
5914	NUT, hex., $\frac{1}{4}$ "-28	1
5121	WASHER, plain, $\frac{1}{4}$ "	2
52706	LOCKWASHER, $\frac{1}{4}$ "	3
642864	SPRING, element retainer (After Serial No. 45984)	1
A-7191	SPRING, toggle	1
A-6911	TUBE and BRACKET, air cleaner, assembly (Use 641930)	1
641930	TUBE and BRACKET, air cleaner, assembly	1

GROUP 12-06—CHOKE CONTROL

640765	Control, Choke, Assembly (Int'ch'ble with 649163)	1
5901	NUT, hex., $\frac{3}{8}$ "-24	1
52332	LOCKWASHER, $\frac{3}{8}$ ", shakeproof	1
A-1309		
640770	CONDUIT and GUIDE, choke control, assembly	1
649163	KNOB, PLUNGER and WIRE, choke control, assembly	1
649171	Control, Choke, Assembly Complete (Int'ch'ble with 640765)	1
649165	CONDUIT and GUIDE, choke control, assembly	1
	KNOB, PLUNGER and WIRE, choke control, assembly (Knob, Black Finish)	1

GROUP 12-07—THROTTLE CONTROL

640669	Control, Throttle, Assembly	1
5901	NUT, hex., $\frac{3}{8}$ "-24	1
52332	LOCKWASHER, $\frac{3}{8}$ ", shakeproof	1
345961		
640673	BUSHING, choke and throttle thru dash	1
640671	CONDUIT and GUIDE, throttle control, assembly	1
372438	KNOB, PLUNGER and WIRE, throttle control, assembly	1
51040	STOP, throttle wire	1
	SCREW, rd. hd., No. 8-32 x $\frac{1}{4}$ " (Throttle wire stop)	1

GROUP 12-08—ACCELERATOR AND LINKAGE

640721	Treadle, Accelerator, Assembly	1
51537	SCREW, fl. hd., No. 10-24 x $\frac{1}{2}$ "	2
53963	NUT, No. 10-24 (elastic stop)	2
5067	PIN, cotter, $\frac{1}{16}$ " x $\frac{1}{2}$ "	1
633013		
6352	BLOCK, adjusting, throttle rod	1
51662	NUT, hex., No. 10-24	1
5067	WASHER, flat, No. 8, special	2
639607		
53986	PIN, cotter, $\frac{1}{16}$ " x $\frac{1}{2}$ "	2
52706	BRACKET, accelerator cross shaft	1
52706	BOLT, hex. hd., $\frac{1}{4}$ "-20 x $\frac{9}{16}$ ".	2
52706	LOCKWASHER, $\frac{1}{4}$ "	2
639610	CLIP, retracting spring	1
640246	CLIP, retracting spring (at carburetor stud)	1
650482	HINGE, accelerator treadle (Female)	1
A-6710	LINK, accelerator, connector, assembly	1
650484	PIN, accelerator treadle hinge	1
641922	REST, foot, accelerator, assembly	1
52954	NUT, hex., $\frac{5}{16}$ "-24, thin (Foot rest lock nut)	1
A-1175	ROD, throttle	1
A-1273	ROD, throttle, assembly	1
52702	WASHER, flat, $\frac{1}{4}$ "	1
5433	PIN, cotter, $\frac{1}{16}$ " x $\frac{5}{8}$ "	1
643921	SEAL, floor, accelerator treadle rod	1
A-1243	SHAFT and LEVER, cross, accelerator, assembly	1
632174	SPRING, accelerator cross shaft	1
52768	WASHER, flat, $\frac{5}{16}$ ", special	1
5433	PIN, cotter, $\frac{1}{16}$ " x $\frac{5}{8}$ "	1
650483	SPRING, accelerator treadle hinge	1
644067	SPRING, retracting	1

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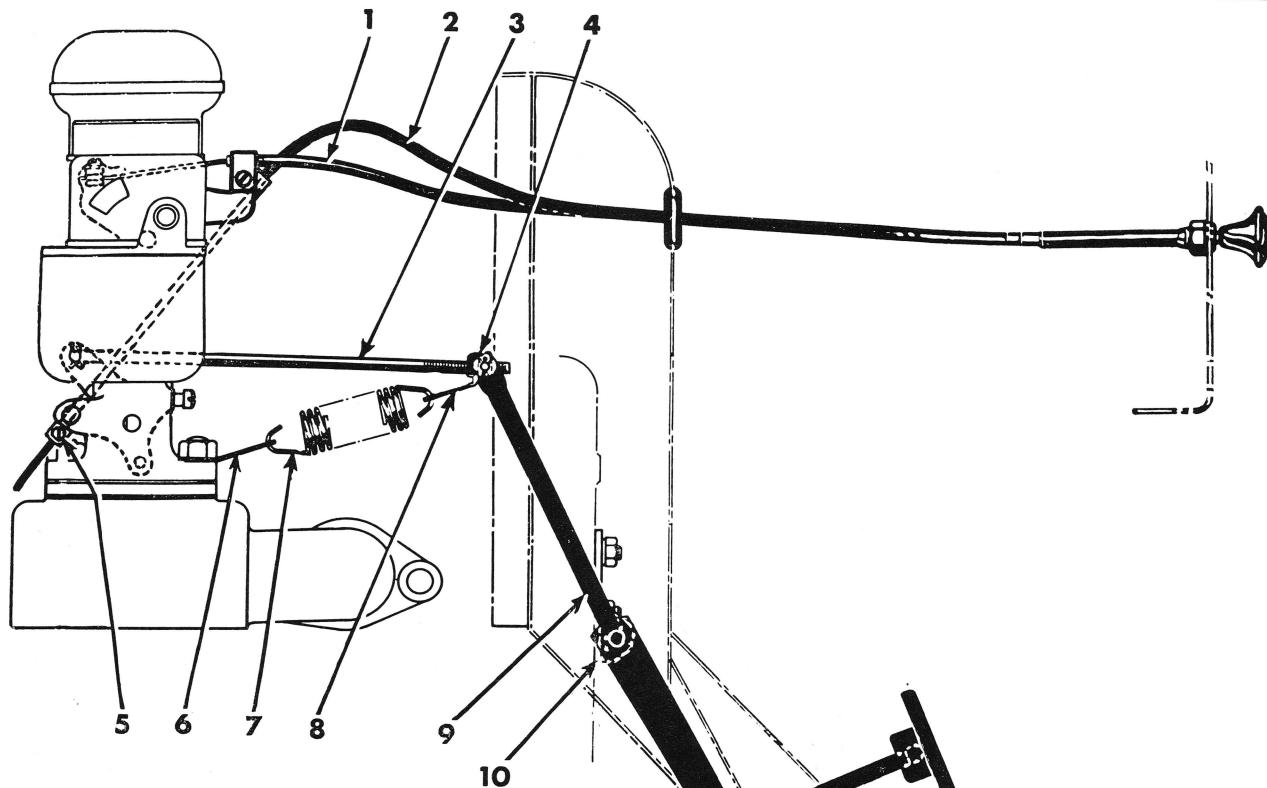
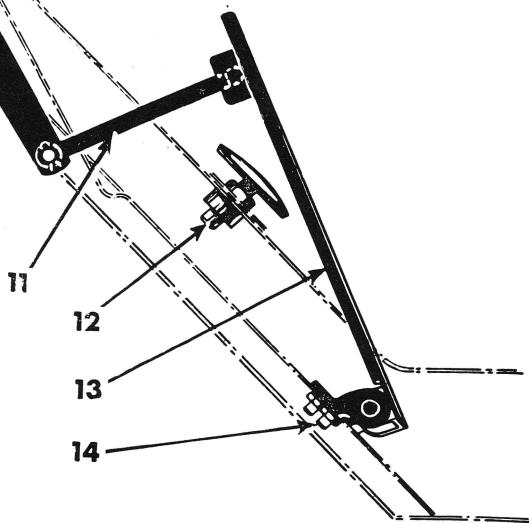


FIG. No. 20—ACCELERATOR AND CONTROLS

Ref. No.	Part No.	Description	Group No.
1	640765	Control, choke.....	12-06
2	640669	Control, throttle.....	12-07
3	A-1273	Rod, adjusting.....	12-08
4	633013	Block, adjusting rod.....	12-08
5	372438	Stop, throttle wire.....	12-07
6	640246	Clip, retracting spring.....	12-08
7	644067	Spring, retracting.....	12-08
8	639610	Clip, retracting spring.....	12-08
9	A-1243	Shaft and Lever.....	12-08
10	639607	Bracket, cross shaft.....	12-08
11	A-6710	Link, connection.....	12-08
12	641922	Rest, foot.....	12-08
13	640721	Treadle, accelerator.....	12-08
14	650482	Hinge, pedal.....	12-08



Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-09—FUEL PUMP—CJ-2A		
640160	Pump, Fuel, Assembly (Int'ch'ble with 646248).....	1
646248	Pump, Fuel, Assembly (Carter) (Int'ch'ble with 640160).....	1
115641	ARM, rocker, fuel pump, assembly.....	1
116749	BAIL and SEAT, fuel pump fuel strainer, assembly.....	1
116747	BODY, fuel pump.....	1
A-1494	BOWL, fuel pump (Metal).....	1
115653	CLAMP, valve, fuel pump.....	1
51546	SCREW, rd. hd., No. 6-32 x $\frac{5}{16}$ " (Fuel pump valve clamp).....	1
115650	COVER, top, fuel pump.....	2
113439	SCREW, fil. hd., No. 10-32 x $\frac{1}{2}$ " Cover to body{.....	1
113440	LOCKWASHER, No. 10 }.....	6
54006	ELBOW, flared tube, $\frac{1}{4}$ "-45°.....	6
384569	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 647311).....	1
647311	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 384569).....	2
115656	GASKET, fuel pump bowl.....	2
116760	GASKET, fuel pump cage.....	1
116748	GASKET, fuel pump valve.....	1
640586	KIT, fuel pump.....	2
116695	Consists of: 1 DIAPHRAGM and ROD assembly	1

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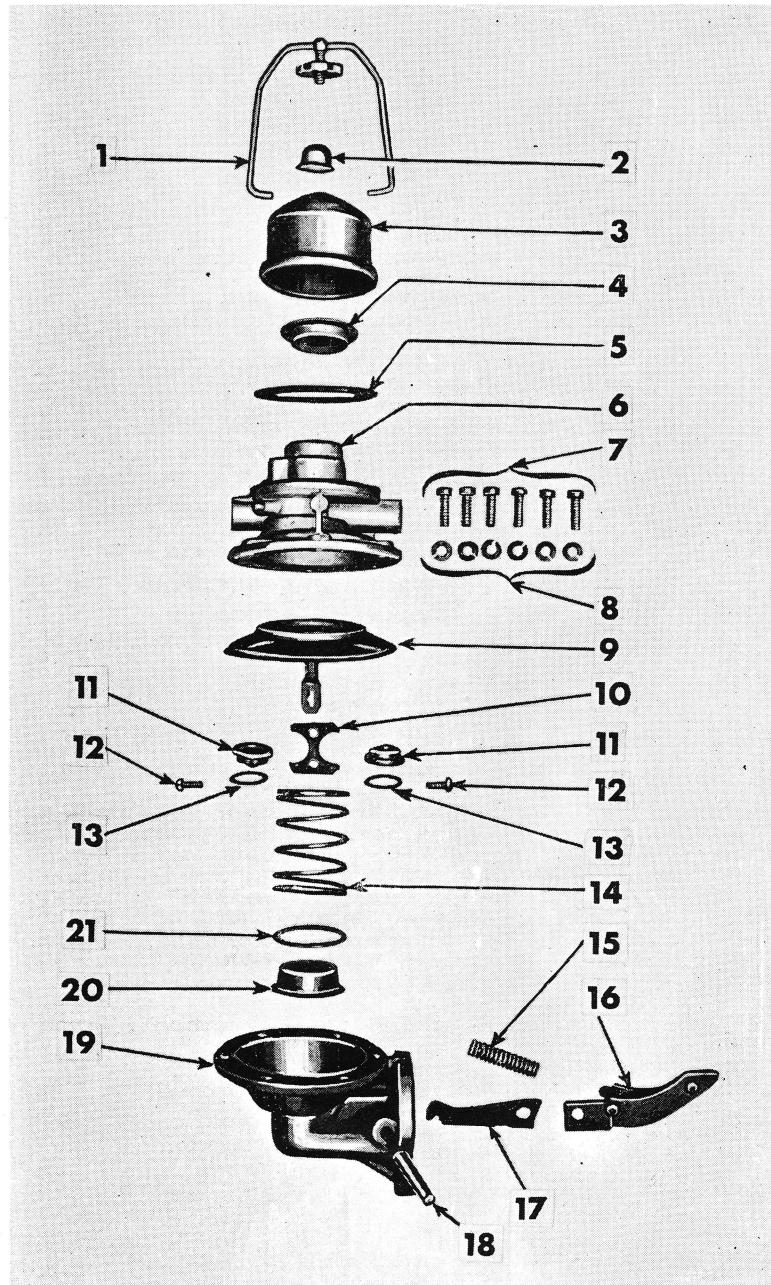


FIG. No. 21—FUEL PUMP (CJ-2A)

Ref. No.	Part No.	Description	Group No.
1 & 2	116749	Bail and seat.....	12-09
3	A-1494	Bowl.....	12-09
4	115654	Screen, filtering.....	12-09
5	115656	Gasket, bowl.....	12-09
6	115650	Cover, top.....	12-09
7	113439	Screw, cover.....	12-09
8	113440	Lockwasher.....	12-09
9	643785	Diaphragm Kit.....	12-09
10	115653	Clamp, valve.....	12-09
11	115651	Valve, pump.....	12-09
12	51546	Screw, valve clamp.....	12-09
13	116748	Gasket, valve.....	12-09
14	116694	Spring, diaphragm.....	12-09
15	115643	Spring, rocker arm.....	12-09
16	115641	Arm, rocker.....	12-09
17	115880	Link, rocker arm.....	12-09
18	{ 116761	Pin, rocker arm.....	12-09
19	116762	Washer, pin.....	12-09
20	116747	Body, pump.....	12-09
21	115870	Seal, pull rod.....	12-09
	115869	Washer, spring seat.....	12-09

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-09—FUEL PUMP—CJ-2A (Continued)		
115656	1 GASKET, bowl	
116760	2 GASKET, cage	
638737	1 GASKET, mounting	
115880	1 LINK, rocker arm	
113440	2 LOCKWASHER, cover screw	
115870	1 OIL SEAL, fuel pump	
116761	1 PIN, rocker arm	
115654	1 SCREEN, filtering	
113439	2 SCREW, cover	
53886	1 SCREW, retainer	
116694	1 SPRING, diaphragm	
115643	1 SPRING, rocker arm	
115651	2 VALVE, assembly	
116762	1 WASHER, pin	
643785	KIT, diaphragm repair.....	1

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-09—FUEL PUMP—CJ-2A (Continued)		
	Consists of:	
116695	1 DIAPHRAGM and ROD Assembly	
115656	1 GASKET, bowl	
N. P. N.	1 GASKET, diaphragm	
638737	1 GASKET, mounting	
116748	1 GASKET, valve	
115651	2 VALVE Assembly	
115880	LINK, fuel pump rocker arm	1
116761	PIN, fuel pump rocker arm	1
115654	SCREEN, filtering, fuel pump, assembly	1
53886	SCREW, fuel pump retainer	2
115870	SEAL, fuel pump pull rod (rubber)	1
116694	SPRING, fuel pump diaphragm	1
115643	SPRING, fuel pump rocker arm return	1
115651	VALVE, fuel pump, assembly	2
115869	WASHER, fuel pump diaphragm spring seat	1
116762	WASHER, fuel pump rocker arm pin	1
Attaching Parts for Fuel Pump 640160 and 646248		
6428	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $\frac{7}{8}$ " (Fuel pump to cylinder block)	2
638737	GASKET, mounting, fuel pump to cylinder block	1
51833	LOCKWASHER, $\frac{5}{16}$ " (Fuel pump to cylinder block)	2
GROUP 12-09A—FUEL AND VACUUM PUMP—CJ-3A		
647911	Pump, Fuel and Vacuum, Assembly	1
51542	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $\frac{1}{2}$ " {Fuel pump to cylinder block}	2
51833	LOCKWASHER, $\frac{5}{16}$ " }	2
117135	ARM, rocker, fuel and vacuum pump	1
117151	BODY, fuel pump, vacuum section	1
117423	BODY with OIL SEAL, fuel and vacuum pump	1
117138	BUSHING, rocker arm pin	1
117424	COVER, fuel and vacuum pump (Fuel Section)	1
117426	CUP, drain, fuel and vacuum pump	1
117422	DIAPHRAGM, fuel and vacuum pump, assembly (Fuel Section)	1
117435	DIAPHRAGM, fuel and vacuum pump, assembly (Vacuum Section)	1
117141	FILTER, fuel and vacuum pump (curled hair)	1
117428	GASKET, cover plate cap screw (Fuel or Vacuum Section)	2
117427	GASKET, fuel pump cover plate (Fuel Section)	1
116748	GASKET, fuel pump valve and cage (Fuel Section)	1
117153	GASKET, fuel and vacuum pump cover plate (Vacuum Section)	1
115652	GASKET, fuel and vacuum pump valve cage (Vacuum Section)	2
648934	KIT, fuel and vacuum pump diaphragm for fuel section	1
	Consists of:	
117422	1 DIAPHRAGM and PULL ROD Assembly	
117154	1 GASKET	
117521	1 GASKET	
638737	2 GASKET, pump to block	
116748	1 GASKET, valve and cage	
115651	2 VALVE Assembly	
648933	KIT, fuel and vacuum pump diaphragm for vacuum section	1
	Consists of:	
117435	1 DIAPHRAGM and PULL ROD Assembly	
117154	1 GASKET	
117153	1 GASKET, cover plate	
638737	2 GASKET, pump to block	
115652	2 GASKET, valve cage	
115651	2 VALVE Assembly	
648931	KIT, repair, fuel and vacuum pump	1
	Consists of:	
117138	1 BUSHING, rocker arm pin	
117422	1 DIAPHRAGM and PULL ROD Assembly	
117435	1 DIAPHRAGM and PULL ROD Assembly	
117154	2 GASKET	
117521	1 GASKET	
117153	1 GASKET, cover plate	
638737	2 GASKET, pump to block	
115652	2 GASKET, valve cage	
116748	1 GASKET, valve and cage	
116343	1 LINK	
116344	1 LINK, left	
116345	1 LINK, right	
117520	1 OIL SEAL	
117432	1 OIL SEAL Assembly	
116329	1 PIN, rocker arm	
117430	1 SCREEN, fuel section	
117157	1 SCREEN, vacuum section	
116346	1 SPACER, link	

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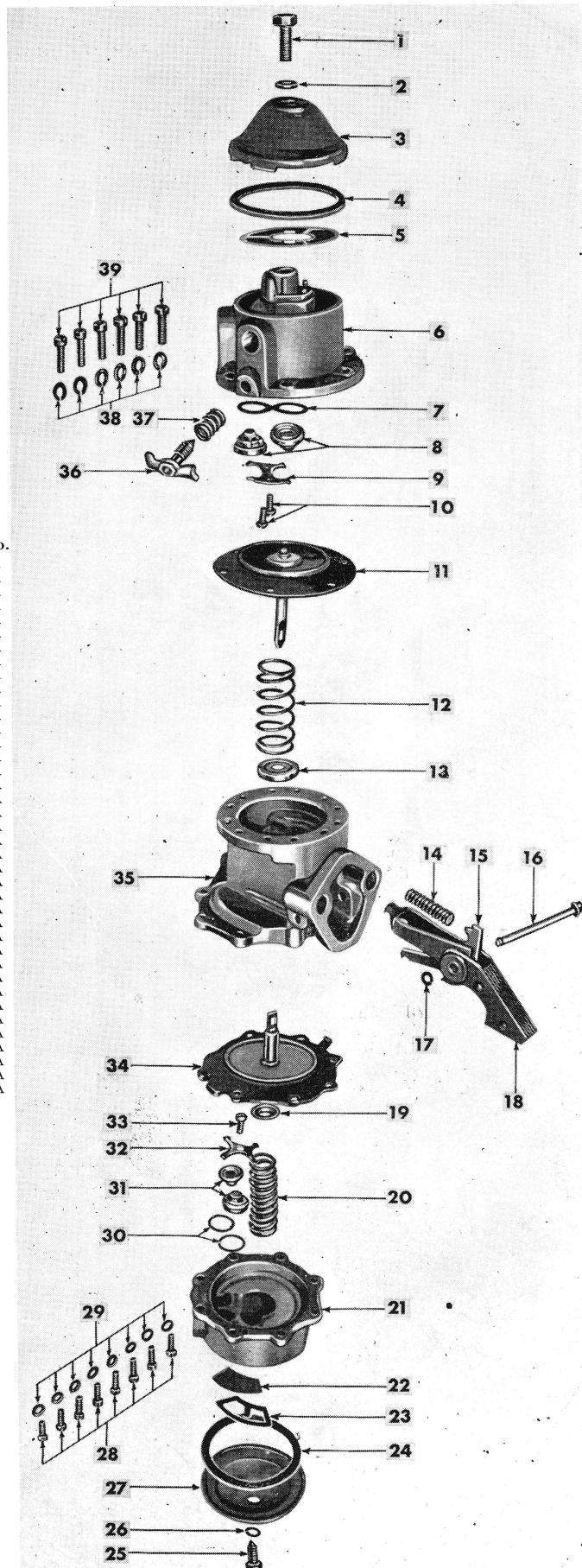


FIG. No. 22—FUEL AND VACUUM PUMP

Ref. No.	Part No.	Description	Group No.
1	117431	Screw, cover plate cap	12-09A
2	117428	Gasket, cap screw.....	12-09A
3	117429	Plate, cover, fuel section.....	12-09A
4	117427	Gasket, cover plate	12-09A
5	117430	Screen, fuel section	12-09A
6	117424	Cover, fuel	12-09A
7	116748	Gasket, valve and cage	12-09A
8	115651	Valve and cage	12-09A
9	115653	Retainer, valve plate	12-09A
10	51546	Screw, valve plate	12-09A
11	117422	Diaphragm, fuel section	12-09A
12	117147	Spring, diaphragm, fuel section	12-09A
13	117432	Oil Seal	12-09A
14	116332	Spring, rocker arm	12-09A
15	116346	Retainer, spring	12-09A
16	116329	Pin, rocker arm	12-09A
17	116762	Washer, rocker arm pin	12-09A
18	117135	Arm, rocker	12-09A
19	117156	Seat, spring, vacuum section	12-09A
20	117160	Spring, diaphragm, vacuum section	12-09A
21	117151	Body, vacuum	12-09A
22	117157	Screen, vacuum section	12-09A
23	117155	Retainer, screen, vacuum section	12-09A
24	117153	Gasket, cover, vacuum section	12-09A
25	117436	Screw, cover plate cap	12-09A
26	117428	Gasket, cap screw	12-09A
27	117152	Plate, cover, vacuum section	12-09A
28	113439	Screw, body cover	12-09A
29	113440	Lockwasher, body cover screw	12-09A
30	115652	Gasket, valve and cage	12-09A
31	115651	Valve and Cage	12-09A
32	117144	Retainer, valve plate	12-09A
33	117146	Screw, valve plate	12-09A
34	117435	Diaphragm, vacuum section	12-09A
35	117423	Body and Oil Seal	12-09A
36	117426	Cup, drain	12-09A
37	117434	Spring, drain cup	12-09A
38	113440	Lockwasher, body cover screw	12-09A
39	113439	Screw, body cover	12-09A

Quan. Req'd.
Per Assy.

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 12-09A—FUEL AND VACUUM PUMP—CJ-3A (Continued)		
117147	1 SPRING, diaphragm	
117160	1 SPRING, diaphragm	
116332	1 SPRING, rocker arm	
115651	4 VALVE Assembly	
116762	1 WASHER, rocker arm pin	
116347	1 WASHER, link spacer	
116343	LINK, fuel and vacuum pump	1
116344	LINK, fuel and vacuum pump, left	1
116345	LINK, fuel and vacuum pump, right	1
113440	LOCKWASHER, body cover screw	14
117432	OIL SEAL, fuel pump body (Fuel Section)	1
116329	PIN, fuel and vacuum pump rocker arm	1
117429	PLATE, fuel pump cover (Fuel Section)	1
117152	PLATE, fuel and vacuum pump cover (Vacuum Section)	1
117142	RETAINER, curled hair filter	1
117155	RETAINER, fuel and vacuum pump screen (Vacuum Section)	1
115653	RETAINER, fuel and vacuum pump valve plate	1
117144	RETAINER, fuel and vacuum pump valve plate (Vacuum Section)	1
116346	RETAINER, rocker arm spring	1
117430	SCREEN, fuel and vacuum pump (Fuel Section)	1
117157	SCREEN, fuel and vacuum pump (Vacuum Section)	1
117431	SCREW, cover plate cap (Fuel Section)	1
117436	SCREW, cover plate cap (Vacuum Section)	1
51546	SCREW, fuel pump valve plate (Fuel Section)	2
113439	SCREW, fuel and vacuum pump body cover	
117146	SCREW, valve plate (Vacuum Section)	14
117156	SEAT, diaphragm spring (Vacuum Section)	1
117433	SPACER, fuel and vacuum pump link	1
117160	SPRING, diaphragm (Vacuum Section)	1
117147	SPRING, fuel pump diaphragm (Fuel Section)	1
117434	SPRING, fuel and vacuum pump drain cup	1
116332	SPRING, fuel and vacuum pump rocker arm	1
115651	VALVE, fuel and vacuum pump, assembly (Fuel Section)	4
116347	WASHER, fuel and vacuum pump link spacer	2
116762	WASHER, rocker arm pin	1

Attaching Parts for Fuel and Vacuum Pump 647911

384569	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 647311)	3
647311	ELBOW, inverted flared tube, $\frac{1}{4}$ " (Int'ch'ble with 384569)	3
638737	GASKET, mounting, fuel pump to cylinder block	2
647669	SPACER, fuel and vacuum pump	1
387891	UNION, flared tube, $\frac{1}{4}$ "	1

GROUP 13—MUFFLER

GROUP 13-01—MUFFLER (Up to Serial No. 18638)

A-6118	Muffler Assembly	1
636004	CLAMP, exhaust pipe to muffler	1
5922	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{8}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
5437	WASHER, flat, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
640688	CLAMP, extension, exhaust pipe	1
51523	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $\frac{3}{4}$ "	1
52983	BOLT, rd. hd., $\frac{5}{16}$ "-18 x $\frac{7}{8}$ ", carriage	1
6167	NUT, hex., $\frac{5}{16}$ "-18	2
52274	WASHER, plain, $\frac{5}{16}$ "	2
51833	LOCKWASHER, $\frac{5}{16}$ "	2
A-5753	CLAMP, muffler support	2
5934	BOLT, hex. hd., $\frac{5}{16}$ "-24 x 1"	2
53285	NUT, hex., $\frac{5}{16}$ "-24	2
51833	LOCKWASHER, $\frac{5}{16}$ "	2
A-6119	CLAMP, muffler tail pipe (Use 117653)	1
117653	CLAMP, muffler tail pipe	1
5922	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{8}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
5437	WASHER, plain, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
634814	GASKET, exhaust pipe flange	1
A-658	INSULATOR, muffler support	2
51396	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{3}{4}$ "	1
50929	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{7}{8}$ "	3
5910	NUT, hex., $\frac{5}{16}$ "-24	2
51833	LOCKWASHER, $\frac{5}{16}$ "	4
A-10199	PIPE, exhaust, assembly	1

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 13-01—MUFFLER (Up to Serial No. 18638) (Continued)		
50878	BOLT, hex. hd., $\frac{3}{8}$ "-24 x 1 $\frac{1}{4}$ "	1
53287	NUT, hex., $\frac{3}{8}$ "-24	2
332515	STUD, $\frac{3}{8}$ "-24 x 1 $\frac{3}{8}$ "	1
638058	PLATE, muffler support insulator	4
A-657	STRAP, muffler support	2

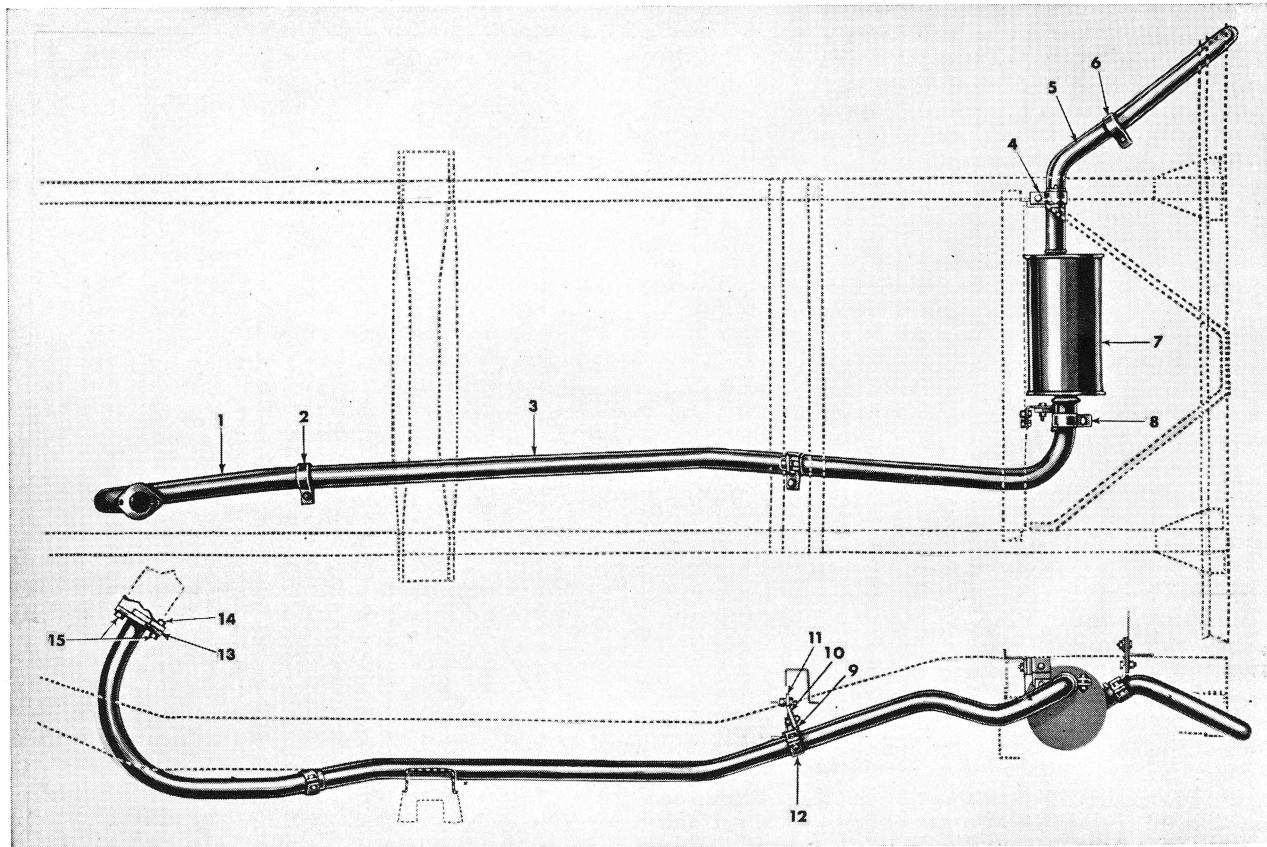


FIG. No. 23—MUFFLER

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	641856	Pipe, exhaust...	13-01A	9	641876	Strap, support...	13-01A
2	636004	Clamp, pipe to extension...	13-01A	10	A-658	Insulator, support...	13-01A
3	641855	Extension, exhaust pipe...	13-01A	11	638058	Plate, insulator...	13-01A
4	630528	Clamp, tail pipe...	13-01A	12	642123	Clamp, pipe support...	13-01A
5	641872	Pipe, tail...	13-01A	13	634814	Gasket, flange...	13-01A
6	630534	Clamp, tail pipe support	13-01A	14	50878	Bolt, flange to manifold...	13-01A
7	641878	Muffler...	13-01A	15	53287	Nut, flange to manifold...	13-01A
8	641875	Clamp, pipe to muffler...	13-01A				

GROUP 13-01A—MUFFLER—(After Serial No. 18638)

641878	Muffler Assembly...	1
641874	BRACKET, support (muffler to intermediate rear cross member)...	1
51396	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{3}{4}$ "	2
5910	NUT, hex., $\frac{5}{16}$ "-24	2
51833	LOCKWASHER, $\frac{5}{16}$ "	2
668726	BRACKET, support, tail pipe (For trucks with spare wheel carrier on left side of body) (After Serial No., Up to Serial No.).	1
642123	Cl AMP, exhaust p.p. support	1
5922	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{8}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
52274	WASHER, plain, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
636004	CLAMP, exhaust pipe to extension	1
6609	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{4}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
52274	WASHER, plain, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1

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Quan. Req'd.
Per Assy.

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 13-01A—MUFFLER—(After Serial No. 18638) (Continued)		
641875	CLAMP, exhaust pipe to muffler.....	1
6609	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{4}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
52274	WASHER, plain, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
630528	CLAMP, muffler tail pipe.....	1
5922	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{8}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
52274	WASHER, plain, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
630534	CLAMP, muffler tail pipe support.....	1
5922	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $1\frac{1}{8}$ "	1
53285	NUT, hex., $\frac{5}{16}$ "-24	1
52274	WASHER, plain, $\frac{5}{16}$ "	1
51833	LOCKWASHER, $\frac{5}{16}$ "	1
641855	EXTENSION, exhaust pipe.....	1
634814	GASKET, exhaust pipe flange.....	1
50878	BOLT, hex. hd., $\frac{3}{8}$ "-24 x $1\frac{1}{4}$ "	2
53287	NUT, hex., $\frac{3}{8}$ "-24	2
A-658	INSULATOR, support (Exhaust pipe to center cross member)	1
50929	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{7}{8}$ "	2
53285	NUT, hex., $\frac{5}{16}$ "-24	2
51833	LOCKWASHER, $\frac{5}{16}$ "	2
51396	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{3}{4}$ "	2
53285	NUT, hex., $\frac{5}{16}$ "-24	2
GM-446362	WASHER, plain, $\frac{5}{16}$ "	2
51833	LOCKWASHER, $\frac{5}{16}$ "	2
641856	PIPE, exhaust, assembly.....	1
641872	PIPE, tail, muffler.....	1
638058	PLATE, support insulator (Exhaust pipe to center cross member).	2
51396	BOLT, hex. hd., $\frac{5}{16}$ "-24 x $\frac{3}{4}$ "	2
53285	NUT, hex., $\frac{5}{16}$ "-24	2
GM-446362	WASHER, plain, $\frac{5}{16}$ "	2
51833	LOCKWASHER, $\frac{5}{16}$ "	2
641876	STRAP, muffler support.....	1
642777	STRAP, muffler support (1—Muffler tail pipe, 1—Muffler to intermediate cross member). .	2
641876	STRAP, support (Muffler to intermediate rear cross member)	1
641873	STRAP, tail pipe support.....	1

GROUP 14—COOLING

GROUP 14-01—RADIATOR (Bottom Mounted) (Up to Serial No.)

640146	Core, Tank and Shroud, Radiator, Assembly.....	1
640145	Core, Tank, Shroud and Fan Ring Shroud, Radiator, Assembly (Includes 640144 and 640146)	
52164	NUT, hex., $\frac{7}{16}$ "-20	2
52825	NUT, hex., $\frac{7}{16}$ "-20, stamped	2
6779	WASHER, flat, $\frac{7}{16}$ "	2
A-1202	BRACKET, support, radiator, left.....	1
A-508	BRACKET, support, radiator, right.....	1
A-1215	CAP, filler, radiator, assembly (Int'ch'ble with 645187)	1
645187	CAP, filler, radiator, assembly (Int'ch'ble with A-1215)	1
A-1126	COCK, drain, radiator.....	1
A-1216	GASKET, radiator filler cap.....	1
A-1217	ROD, brace, radiator (threaded $\frac{5}{16}$ "-24)	1
52626	NUT, hex., $\frac{5}{16}$ "-24	3
53047	LOCKWASHER, $\frac{5}{16}$ "	2
A-4413	SHIM, radiator mounting (thick).....	2
A-4414	SHIM, radiator mounting (thin).....	2
640144	SHROUD, fan ring.....	1
52169	BOLT, hex. hd., $\frac{1}{4}$ "-28 x $\frac{1}{2}$ "	6
52161	NUT, hex., $\frac{1}{4}$ "-28	6
53058	LOCKWASHER, $\frac{1}{4}$ "	6

RADIATOR (Side Mounted) (After Serial No.)—CJ-3A

648451	Radiator Assembly.....	1
649203	Shroud, Radiator, Assembly	
GM-161857	SCREW, pan hd., No. 8-15 x $\frac{3}{8}$ " (Radiator shroud to radiator)	6
BRACKET, support, radiator to splash apron		
649270	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $\frac{5}{8}$ "	1
53066	NUT, hex., $\frac{5}{16}$ "-18	1
52850	WASHER, plain, $\frac{5}{16}$ "	1
53735	WASHER, plain, $\frac{5}{16}$ "	1
A-11775	LOCKWASHER, $\frac{5}{16}$ "	1
53047	CAP, sealing, radiator (4 lb.)	1
648746	CLIP, radiator to grille.....	4
648439	BOLT, hex. hd., $\frac{5}{16}$ "-10 x $\frac{9}{16}$ "	4

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Part No.	Description	Quan. Req'd. Per Assy.
GROUP 14-02—RADIATOR HOSE		
53813	CLAMP, radiator hose, 1 7/8" diam.	8
A-6373	HOSE, radiator inlet	3
A-592	HOSE, radiator water outlet, lower	1
640882	TUBE, connecting, radiator water inlet	1
640883	TUBE, connecting, radiator water outlet	1
53813	CLAMP, radiator hose, 1 7/8" diam.	4
645746	HOSE, radiator, inlet, 12 1/4" long	1
645902	HOSE, radiator, outlet (moulded)	1
649341	HOSE, radiator, inlet	1
649207	HOSE, radiator, outlet, assembly	1
Up to Serial No. 170064—Model CJ-2A		
After Serial No. 170064 Model CJ-2A and CJ-3A		
For bottom mounted radiator		
For side mounted radiator		
Model CJ-3A		

GROUP 14-03—RADIATOR GUARD
For Bottom Mounted Radiator (Up to Serial No.)

668124	Guard, Radiator, Assembly	1
Guard, Radiator, Assembly—CJ-2A (Up to Serial No. 97740) (See Note 1)		
53541	BOLT, hex. hd., 3/8"-24 x 7/8"	3
52542	NUT, hex., 3/8"-24	2
52819	WASHER, plain, 3/8"	3
52046	LOCKWASHER, 3/8"	3
53066	BOLT, hex. hd., 5/16"-18 x 5/8"	4
53928	BOLT, hex. hd., 5/16"-18 x 3/4"	2
A-3550	NUT, sq., 5/16"	6
53735	WASHER, plain, 5/16"	6
53047	LOCKWASHER, 5/16"	6
663516	DEFLECTOR, air, radiator, left side	1
663517	DEFLECTOR, air, radiator, right side	1
663534	DEFLECTOR, air, radiator, top	1
663520	LINER, hood, radiator guard	1
663522	LINER, hood, radiator guard, left side (Up to Serial No. 118630—CJ-2A)	1
663521	LINER, hood, radiator guard, right side (Up to Serial No. 118630—CJ-2A)	1
51980	RIVET, ov. hd., 5/16" x 1 1/16" (Hood liner to radiator guard)	13
663808	LOOP, footman (Int'ch'ble with 663559)	1
663559	LOOP, footman (Int'ch'ble with 663808) (Use 663808)	1
51537	SCREW, fl. hd., No. 10-24 x 1/2"	2
52651	NUT, hex., No. 10-24	2
52221	LOCKWASHER, No. 10	2
A-3549	RETAINER, nut, 5/16"	6
663523	SEAL, radiator side air deflector to radiator (12 5/8" long)	2
663524	SEAL, radiator top air deflector to radiator (20 5/32" long)	1

Note 1: The following nine (9) items required to replace Radiator Guard 663536 for trucks

Up to Serial No. 97740.

668124	1 Guard, Radiator, Assembly	
641555	2 BEZEL, parking light	
641557	2 GASKET, parking light	
641556	2 LENS, parking light	
641609	1 SOCKET and CABLE, left	
644216	1 SOCKET and CABLE, right	
53867	4 SCREW	
52653	4 NUT	
52705	4 LOCKWASHER	
	Parking light to radiator guard	

RADIATOR GUARD FOR SIDE MOUNTED RADIATOR (After Serial No.)—CJ-3A

Parts not indicated are same as listed for Bottom Mounted Radiator.

673149	Guard, Radiator, Assembly	1
53541	BOLT, hex. hd., 3/8"-24 x 7/8"	3
52542	NUT, hex., 3/8"-24	2
52819	WASHER, plain, 3/8"	3
52046	LOCKWASHER, 3/8"	3
53066	BOLT, hex. hd., 5/16"-18 x 5/8"	4
53928	BOLT, hex. hd., 5/16"-18 x 3/4"	2
53735	WASHER, plain, 5/16"	6
53047	LOCKWASHER, 5/16"	6
672823	DEFLECTOR, air, radiator, left side, assembly	1
672824	DEFLECTOR, air, radiator, right side, assembly	1

GROUP 14-04—WATER PUMP

639992	Pump, Water, Assembly	1
6428	BOLT, hex. hd., 5/16"-18 x 7/8"	3
640231	BOLT, hex. hd., 5/16"-18 x 2 1/2"	1
51833	LOCKWASHER, 5/16"	4
636297	BEARING and SHAFT, water pump, assembly	1
640032	BELLOWS, water pump seal	1
637052	BODY, water pump	1
637053	GASKET, water pump to cylinder block	1
639993	IMPELLER, water pump	1

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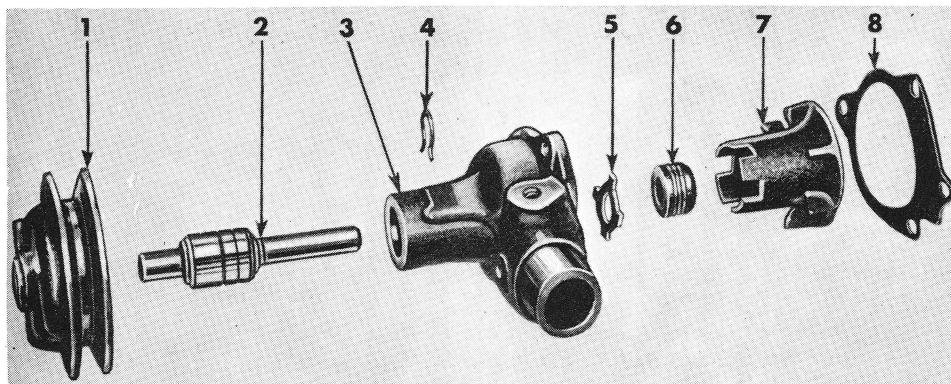


FIG. No. 24—WATER PUMP

Ref. No.	Part No.	Description	Group No.	Ref. No.	Part No.	Description	Group No.
1	636299	Pulley.....	14-05	5	649034	Washer.....	14-04
2	636297	Shaft and Bearing.....	14-04	6	646732	Seal.....	14-04
3	637052	Body.....	14-04	7	639993	Impeller.....	14-04
4	636298	Spring.....	14-04	8	637053	Gasket.....	14-04

Part No.	Description	Quan. Req'd. Per Assy.
GROUP 14-04—WATER PUMP (Continued)		
A-6839	KIT, repair, water pump.....	1
	Consists of:	
636297	1 BEARING and SHAFT Assembly	
637053	1 GASKET, water pump to cylinder block	
646219	1 SEAL, water pump, assembly (Int'ch'ble with 646732)	
636298	1 SPRING, water pump bearing retainer	
640034	1 WASHER, water pump seal	
376373	PLUG, pipe, $\frac{3}{8}$ " (For heater water return in water pump body) (Use 5139).....	1
5139	PLUG, pipe, $\frac{3}{8}$ ", sq. hd. (Int'ch'ble with 53408).....	1
53408	PLUG, pipe, $\frac{3}{8}$ ", sq. hd. (Int'ch'ble with 5139).....	1
640031	SEAL, water pump, assembly (Use 646219 or 646732).....	1
646219	SEAL, water pump, assembly (Int'ch'ble with 646732).....	1
646732	SEAL, water pump, assembly (Int'ch'ble with 646219).....	1
636298	SPRING, water pump bearing retainer.....	1
640033	SPRING, water pump seal.....	1
640034	WASHER, water pump seal.....	1

GROUP 14-05—FAN, FAN PULLEY AND FAN BELT

A-447	Fan Assembly (Int'ch'ble with 646770).....	1
Fan Assembly (Int'ch'ble with A-447).....		
51514	BOLT, hex. hd., $\frac{1}{4}$ "-20 x $\frac{5}{8}$ " } Fan to pulley {	4
52706	LOCKWASHER, $\frac{1}{4}$ " }	4
634010	BELT, drive, fan and generator (Use 647629).....	1
647629	BELT, drive, fan and generator.....	1
A-9490	BELT, drive, fan and generator (For use with high charging generator GEG-5101 D).....	1
636299	PULLEY, fan and water pump.....	1
A-1124	SHIELD, fan pulley.....	1
A-1125	WASHER, fan pulley shield.....	6
A-6701	WASHER, fan pulley shield bolt retaining.....	6

GROUP 14-06—THERMOSTAT

637646	Thermostat Assembly.....	1
639651	RETAINER, thermostat.....	1

GROUP 15—ELECTRICAL**GROUP 15-01—GENERATOR SUPPORT**

640155	BRACE, generator (Up to Serial No. 37217) (Use 641082).....	1
BRACE, generator (After Serial No. 37217).....		
5919	BOLT, hex. hd., $\frac{3}{8}$ "-24 x 1" }	1
5901	NUT, hex., $\frac{3}{8}$ "-24 }	1
5010	LOCKWASHER, $\frac{3}{8}$ " }	1
6428	BOLT, hex. hd., $\frac{5}{16}$ "-18 x $\frac{7}{8}$ " }	1
GM-446362	WASHER, plain, $\frac{5}{16}$ " }	1
51833	LOCKWASHER, $\frac{5}{16}$ " }	1

CAUTION—Accept And Use Only Genuine Willys-Overland Parts—CAUTION