

Due to a continuous program of research and development, some procedures, specifications and parts may be altered in a constant effort to improve machines.

Periodic revisions may be made to this publication and mailed automatically to distributors. It is recommended that customers contact their distributor or dealer for information on the latest revision.

UD-236 AND UD-282

ENGINE AND
ATTACHMENTS *Parts Catalog*

FORM PU-51D

JUNE, 1975

(Supersedes FORM PU-51C)

The Importance of ADEQUATE PARTS and SERVICE



The wise purchaser of a new machine gives consideration to the following factors:

1. Original quality.
2. Availability of service parts.
3. Availability of adequate service facilities.

In many cases the machine becomes the only means of performing certain tasks that must be done in a limited period of time. Wear is to be expected and under extreme conditions even breakage of parts may occur. However, the user can still be assured of getting his work done on time if service parts and adequate service facilities are available.

Foresighted International Harvester dealers make every effort to provide good service and maintain a completely adequate stock of service parts.

When in need of parts, always give the International Construction Equipment distributor or dealer your Chassis and Engine serial numbers. We suggest that you write these serial numbers in the spaces provided below, for ready reference when parts are required.

Chassis Serial No. _____
(Stamped on plate on left side of clutch housing)

Engine Serial No. _____
(Stamped on pad on right side of crankcase above injection pump)

INSTRUCTIONS FOR ORDERING PARTS

- (a) All parts orders should be sent to parts depot when so instructed. Give complete address, state the county and railroad station (when shipping point is different than post office), also whether shipment is to go by parcel post, express, truck, or freight.
- (b) When ordering parts, give the IH part number, including suffix or prefix letters. To facilitate identification of these parts, "Complete Serial Numbers" (including letters and numerals) assigned to machines, if any, should be furnished.
- (c) Parts should be ordered on the standard parts order blank. The parts should be arranged in sequence by part numbers to facilitate service on orders at the parts depot.
- (d) Claims for shortage or error in the handling of an order for parts must be made upon receipt of goods.

It is the policy of International Harvester Company to improve its products whenever it is possible and practical to do so.

We reserve the right to make changes or add improvements in the design or construction of parts at any time without incurring the obligation to install such changes on products previously delivered.

PAY LINE PUBLICATIONS INFORMATION

The following basic publications are available for additional information on this particular machine. Special publications, other than the basic publications shown below, can be ordered from the PAY LINE Index and Price List. (*) Please tear out this page and check the publications desired. Fill in ALL the information requested and mail to:

International Harvester Company
Printing and Distribution Services
807 Blackhawk Drive
Westmont, Illinois 60559

Attn: PAY LINE CUSTOMER SALES

Please send me (Check items in box)

<u>FORM NO.</u>	<u>DESCRIPTION</u>	<u>PRICE</u>
☐ _____	Engine Parts Catalog	\$ 3.00
☐ ☐ _____	Chassis Parts Catalog	5.00
☐ ☐ _____	Operator's Manual	3.00
☐ ☐ ISS-1040 _____	Engine Service Manual	7.00
☐ ☐ _____	Chassis Service Manual	10.00
(*) ☐ ☐ 1 019 104 R11 (or later) _____	PAY LINE Index and Price List (List of all PAYLINE publications available)	2.00

NOTE: Enclose check or money order payable to International Harvester Company. DO NOT SEND CASH. (Please allow up to 30 days for delivery).

TYPE or PRINT information in the spaces below.

Date _____ Amount Enclosed \$ _____

Name _____

Address _____

City _____ State _____ Zip _____

IMPORTANT: THE FOLLOWING IS YOUR RETURN SHIPPING LABEL. PLEASE FILL OUT COMPLETELY AND LEGIBLY. DO NOT DETACH!

FROM: International Harvester Company
Printing and Distribution Services
807 Blackhawk Drive
Westmont, Illinois 60559

TO: Name _____

Address _____

City _____ State _____ Zip _____

INTRODUCTION

This catalog contains a list of service parts for the UD-236 and UD-282 engines and attachments. The UD-236 has a 3-11/16 x 3-11/16 inch six-cylinder diesel engine and the UD-282 has a 3-11/16 x 4.390 inch six-cylinder diesel engine.

Following is a brief summary of the system used in compiling this catalog. It is to your advantage to carefully study this summary.

This catalog is printed in a double column page format, and is divided into four sections --- Introductory Pages, Indexes to Units, Illustration and Parts Lists, and Numerical Index.

(1) INDEXES. Two types of indexes are used. The index to units alphabetically lists all of the units by page number. The numerical index at the back of the catalog lists all part numbers (excluding standard fasteners) giving the page number where the part is listed.

NOTE - Refer frequently to the Index to Units to save time in locating the proper unit.

(2) ILLUSTRATIONS. Parts in this catalog are illustrated by the "exploded view" method. Individual parts in each illustration are shown where they belong in relation to one another. Reference numbers only are shown in each illustration. These numbers correspond with numbers in the Reference Number column in the accompanying list of parts. Parts in illustrations without reference numbers are the same as duplicate parts with reference numbers.

CAUTION: Reference numbers should not be used when ordering parts. Always use IH part numbers or description when ordered.

(3) METHOD OF LISTING. The parts list of each classification is divided into units. Parts are listed in order according to reference number shown in the illustration, followed by a full description based upon the "noun first" method --- i.e., the noun name of the part is listed first then the modifying descriptive information which serves to specifically identify the item. For example: SHAFT w/two PLUGS ASSEMBLY, valve lever. Parts not shown in illustrations appear at end of list in alphabetical sequence by noun name. Parts listed will work on all units covered in this catalog unless a serial number or other qualifying designation is given for purpose of identification.

Throughout this catalog the term "Front" indicates the radiator end. Whenever the terms "Right" or "Left" are used it should be understood to mean from a rear position looking toward the radiator end.

MANUFACTURERS PART NUMBERS ARE LISTED IN BRACKETS FOLLOWING THE DESCRIPTION OF THE PART.

(4) NUMBER REQUIRED. In this new double-column catalog format the single "No. Req'd." column is eliminated and the quantity used of each item is shown in parenthesis (4) following the description of the item. Where no quantity is indicated it should be understood to mean that only one (1) is required.

In many parts lists it is possible to include more than one assembly or attachment. The assemblies or attachments are listed at the beginning of the parts lists with the letters A, B, C, etc., preceding the part number of the assembly or attachment. The number required information is shown in parenthesis following the description of the parts. When letters (A, B, C, etc.) are shown without a quantity it should be understood to mean only one (1) is required. Parts without letters after the description indicate the part is used for all assemblies or attachments listed in the heading.

(5) ASSEMBLIES AND ATTACHMENTS. Where ever possible the component parts of assemblies or attachments are shown in the "exploded views" by use of boxes, brackets or arrows. Component parts of assemblies or attachments are listed by one of the following methods.

(a) The listings are fully covered by descriptions for simple assemblies and attachments.

(b) When four or more parts are contained in the assemblies or attachments the listing of components immediately follows the description with the wording "(Composed of -)."

(c) Assemblies or attachments consisting of many parts shows the assembly or attachment number at the beginning of the unit list, followed by the listing of the components.

Exceptions to the above methods are explained by footnotes in the text.

Individual parts of an assembly which are not available for service are marked with a symbol . In some instances, such parts are listed with a notation giving the information which is to be used for ordering.

(6) REVISIONS. Due to a continuous program of research and development, some procedures, specifications and parts may be altered in a constant effort to improve machines.

Periodic revisions may be made to this publication and mailed automatically to distributors. It is recommended that customers contact their distributor or dealer for information on the latest revision.

INTRODUCTION

(7) MISCELLANEOUS PARTS. Standard bolts, screws, nuts, etc. --- are not identified by a reference number. These parts are known as COMMON HARDWARE items and appear in abbreviated nomenclature and are shown indented under the major items with which they are used. They should be ordered as listed, since they are not component parts of the pieces they attach. Hardware parts identified with part numbers have been designed for a specific usage. Standard hardware parts should not be substituted for them.

WARNING: Attaching parts especially made for their location should never be substituted with regular standard parts.

The following rules are established to govern the listing of attaching parts:

The part number for Common Hardware items is eliminated. However, Design Hardware items will continue to be listed by part number and description.

All Carriage, Machine and Plow **BOLTS; NUTS; Caps, Machine and Set SCREWS**, will be considered furnished with National Coarse Thread unless otherwise specified. The number of threads per inch will be eliminated.

All **NUTS** will be considered "hex" unless otherwise specified.

All **WASHERS** will be considered "Plain" unless otherwise specified. The "ID", "OD" and "No." identity will be eliminated. The inside dimension will be listed first, followed by the outside diameter and the thickness.

All **lock WASHERS** will be considered "Medium" type unless specified as "Light" or "Heavy".

All **cotter PINS** will be considered "Extended Prong" type unless otherwise specified.

All **groove PINS** will be considered "Standard Groove" unless otherwise specified.

All **common RIVETS** will be considered "Annealed" unless otherwise specified.

All **countersunk-head tubular RIVETS** will be considered "Copper-Plated Steel" unless otherwise specified.

All **oval-head tubular RIVETS** will be considered "Brass".

Standard bolts used in International Harvester Products are manufactured under standards known

as Unified National Coarse Thread (U.N.C.) and Unified National Fine Thread (U.N.F.) with the number of threads per inch for various diameters as follows:

Diameter of Bolt	No. of Threads per inch (U.N.C.)	No. of Threads per inch (U.N.F.)
1/4"	20	28
5/16"	18	24
3/8"	16	24
7/16"	14	20
1/2"	13	20
9/16"	12	18
5/8"	11	18
3/4"	10	16
7/8"	9	14
1"	8	14
1-1/8"	7	12
1-1/4"	7	12
1-3/8"	6	12
1-1/2"	6	12

(8) ABBREVIATIONS. The abbreviations used in this catalog are explained in the list of abbreviations on page 3.

(9) SERIAL NUMBERS. Following is a list of starting serial numbers for these engines.

Model	Engine Starting Serial Number	Basic Engine Serial Number	Chassis Starting Serial Number
UD-236	UD-236M-501	BSD-236-501	UD-236-501
UD-282	UD-282M-501	BSD-282-501	UD-282-501

The engine serial numbers and basic engine serial numbers for the UD-236 and UD-282 are stamped on a pad located on the left hand side of the engine to the front and above oil cooler mounting pad.

The chassis serial numbers are stamped on the name plate on the clutch housing below the instrument panel.

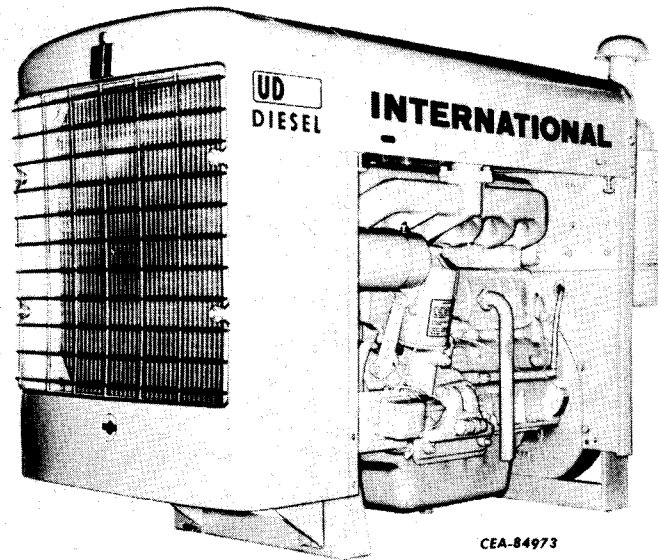
QUICK REFERENCE FILTER ELEMENTS AND BELTS FOR UD-236 AND UD-282 ENGINE AND ATTACHMENTS

FILTER ELEMENT	PART NO.
<u>FUEL SYSTEM</u>	
Final Filter Element with Gasket	304 101 R91
Primary Filter Element with Gasket	306 353 R91
<u>LUBRICATION SYSTEM</u>	
Lubricating Oil Filter Element with Gasket	323 827 R91
<u>BELTS</u>	
<u>COOLING AND ELECTRICAL SYSTEM</u>	
Fan, Water Pump and Generator Belt (Not used with Hydraulic Pump Adapter) UD-236M 501 to 1677 UD-282M 501 to 2270	304 436 R1
Fan, Water Pump and Generator Belt (Not used with Hydraulic Pump Adapter) UD-236M 1678 Up UD-282M 2271 Up	670 363 C1
Fan, Water Pump, Generator and Alternator Belt (Used with Hydraulic Pump Adapter)	670 363 C1
Fan and Alternator	670 261 C1

LIST OF ABBREVIATIONS

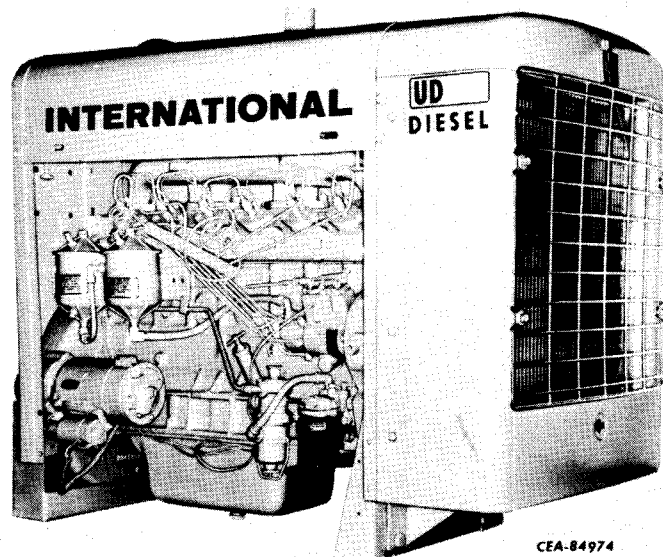
A period after the abbreviation is used only when the abbreviation form spells a common English word.

adj	adjustable	lb	pound, pounds
al	aluminum	lentil-hd	lentil head
ast	alloy steel	LH	left hand
amp	ampere, amperes	lkg	locking
anl	annealed	LP Gas	Liquefied Petroleum Gas
approx	approximately	lub	lubrication
assy	assembly	mach.	machine
att	attachment	med	medium
bd-hd	binding head	MI	malleable iron
b-hd	button head	NC	National Coarse (thread)
brg	bearing	NF	National Fine (thread)
brs	brass	ni	nickel
brz	bronze	ni-pltd-stl	nickel plated steel
cd-pltd	cadmium plated	No.	number
cd-pltd-stl	cadmium plated steel	NPT	National pipe thread
C-Z	cadmium or zinc plated	OC	outside circumference
cr-pltd	chromium plated	OD	outside diameter
cr-pltd-stl	chromium plated steel	O/S	oversize
CI	cast iron	ov-hd	oval head
csk	countersunk	oz	ounce, ounces
csk-hd	countersunk head	parkerized-stl	parkerized steel
cl-rec-hd	clutch recess head	pkg	package
com	common	pltd	plated
cone-pt	cone point	pt	point
cont	continued	PTO	power take-off
cop	copper	rd-end	round end
cpl	copper plated	rd-hd	round head
cot.	cotter	rd-pt	round point
c-pin	cotter pin	reg	regular
crs	corrosion-resistant-steel (stainless)	RH	right hand
cr-rec-hd	cross recess head	RPM	revolutions per minute
cre	corrosion resisting	SAE	Society of Automotive Engineers
crg	carriage	sf	semi-finished
cup-pt	cup point	slt	slotted
cyl	cylinder, cylinders	slt-hd	slotted head
deg	degree	slt-bd-hd	slotted binding head
dia	diameter	slt-fil-hd	slotted fillister head
dld	drilled	slt-f-hd	slotted flat head
dld-f/c-pin	drilled for cotter pin	slt-hex-hd	slotted hexagon head
dld-f/lkg-wire	drilled for locking wire	slt-pan-hd	slotted pan head
dog-pt	dog point	slt-rd-hd	slotted round head
ext	external	slt-truss-hd	slotted truss head
f/	for	sq	square
fem	female	sq-hd	square head
fil-hd	fillister head	sq-nk	square neck
fin-nk	fin neck	std	standard
f-csk-hd	flat countersunk head	std-hd	standard head
f-fil-hd	flat fillister head	stl	steel
f-hd	flat head	str	straight
f-pt	flat point	T	teeth
flex.	flexible	tap.	tapping
fltd	fluted	thd	thread
ft	foot, feet	UNC	Unified Coarse (thread)
ga	gauge	UNF	Unified Fine (thread)
hd	head	U/S	undersize
hdls	headless	unfin	unfinished
hex.	hexagon	wb-hd	wagon box head
hex-hd	hexagon head	w/	with
hex-soc-hd	hexagon socket head	w/brz	with bronze
hp	horsepower	w/hex.	with hexagon
hv	heavy	w/o	without
hyd	hydraulic	zn	zinc
ID	inside diameter	zn-ct	zinc coated
in.	inch, inches	zn-pltd	zinc plated
int	internal		



Illust. 1

Left front view of the UD-236 or UD-282 engine with air cleaner, hood and dash, radiator grille, front and rear support, radiator and connections and exhaust pipe attachments.



Illust. 2

Right front view of the UD-236 or UD-282 engine with air cleaner, hood and dash, radiator grille, front and rear support, radiator and connections and exhaust pipe attachments.

PRINTED IN UNITED STATES OF AMERICA

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SKELETON AND BASIC SERVICE ENGINES

SKELETON SERVICE ENGINE (UD-282)

345 245 R92 ENGINE, Skeleton Service Diesel (See Note)

(Consists of -

Camshaft and Related Parts

Connecting Rods and Pistons

Crankcase

Crankcase Front Plate, Idler Gear and Related Parts

Crankshaft and Related Parts

Oil Pump)

SKELETON SERVICE ENGINE (UD-236)

684 286 C91 ENGINE, Skeleton Service Diesel (See Note)

(Consists of -

Camshaft and Related Parts

Connecting Rods and Pistons

Crankcase

Crankcase Front Plate, Idler Gear and Related Parts

Crankshaft and Related Parts

Injection Pump Gear

Oil Pump)

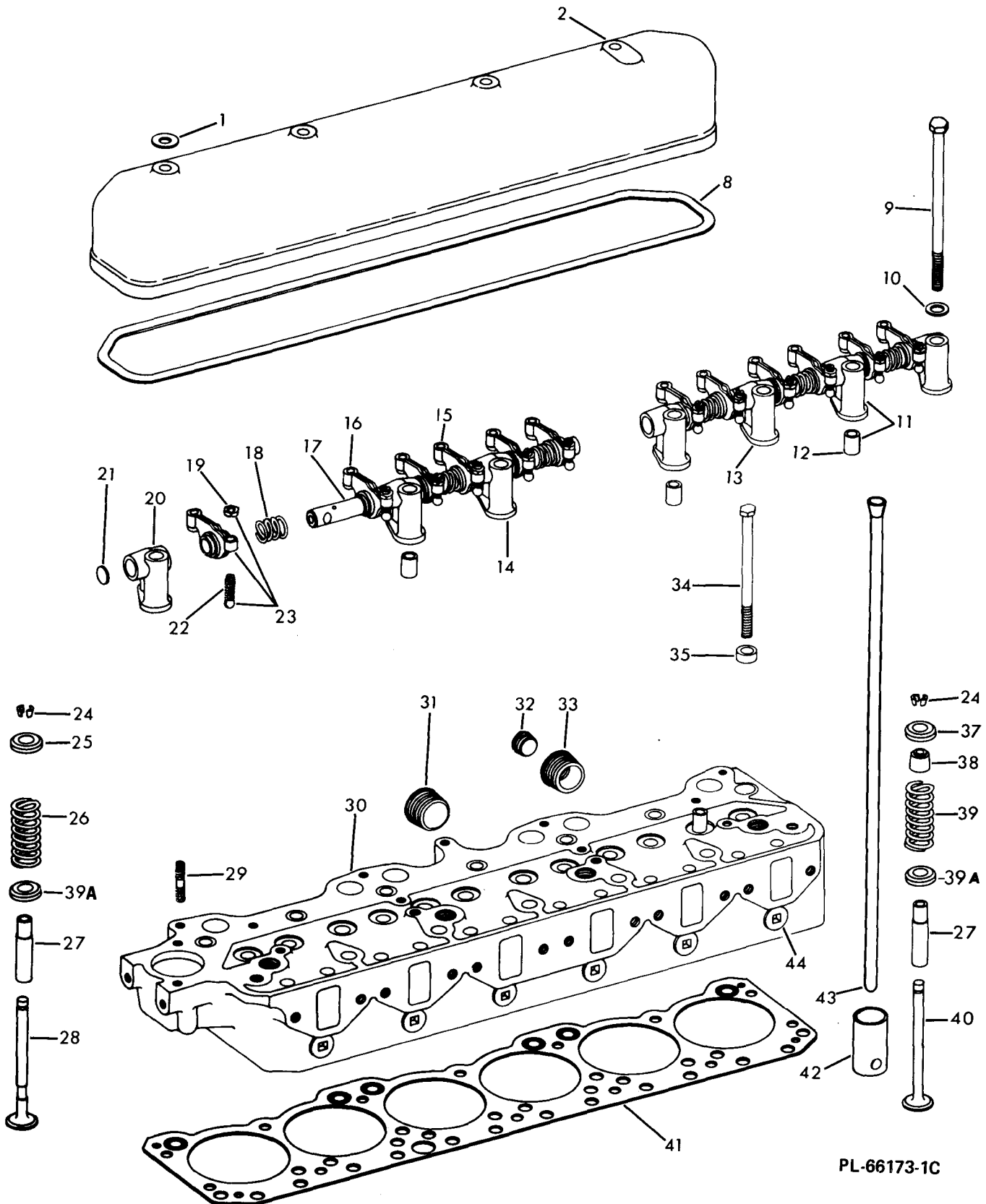
NOTE: When ordering a Service Engine, give complete serial number (including letters and numerals) shown on crankcase of engine to be replaced.

MEMORANDA

ENGINE

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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CYLINDER HEAD, VALVE COVER, VALVES AND ROCKER ARM



PL-66173-1C

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ENGINE

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CYLINDER HEAD, VALVE COVER, VALVES AND ROCKER ARM - Continued			26	315 744 R1	SPRING, exhaust valve (together with 317 935 R91 and 151 167 R3 will work for 367 192 R1) (6)
1	116 103	WASHER, valve cover bolt (4)	27	278 300 R1	GUIDE, valve (12)
2	278 307 R1 17 790 R1	COVER, valve SCREW, 3/8 x 4-3/4" hex-hd cap (4)	28	278 302 R1	VALVE, exhaust (6) UD-236M 501 to 2839 (6) UD-282M 501 to 3623
8	278 308 R1	GASKET, valve cover	28	349 381 R1	VALVE, exhaust (optional with 612 312 C1) (6) UD-236M 2840 up (6) UD-282M 3624 up
9	367 190 R1	BOLT, cylinder head (long) (9) UD-236M 501 to 2060; UD-282M 501 to 2779	28	612 312 C1	VALVE, exhaust (optional with 349 381 R1) (6) UD-236M 2840 up (6) UD-282M 3624 up
9	320 097 R1 315 701 R1	BOLT, cylinder head (long) (X) UD-236M 2061 up; UD-282M 2780 up SPACER, cylinder head bolt (2)	29	303 473 R1 39 524 D 113 934 H	STUD, exhaust manifold (10) NUT, exhaust manifold stud (10) WASHER, flat (for front and rear mounting studs) (4)
10	58 516 H	WASHER, cylinder head bolt (7)	30	304 324 R31	HEAD ASSEMBLY, cylinder UD-236M 501 to 2839 (Composed of - 1 BUSHING 142 765 12 GUIDE 278 300 R1 \$ 1 HEAD 1 PLUG 444 589 5 PLUG 601 244 C1 11 PLUG 9 409 949 \$ 6 SLEEVE 10 STUD 303 473 R1)
11	76 860 R11	BRACKET w/DOWEL, 69 500 R1, rocker arm shaft (Nos. 2,4,6) (3)	30	323 770 R41	HEAD ASSEMBLY, cylinder UD-236M 2840 up (Composed of - 1 BUSHING 142 765 12 GUIDE 278 300 R1 \$ 1 HEAD 1 PLUG 444 588 11 PLUG 9 409 949 5 PLUG 601 244 C1 \$ 6 SLEEVE 10 STUD 303 473 R1)
12	69 500 R1	DOWEL, rocker arm shaft bracket (3)			
13	76 858 R1	BRACKET, rocker arm shaft (No. 5)			
14	76 858 R1	BRACKET, rocker arm shaft (No. 3)			
15	278 304 R21	ARM w/SCREW, 16 067 DA and NUT, 133 093 R1, RH exhaust rocker (3)			
16	323 727 R91	ARM w/SCREW, 16 067 DA and NUT, 133 093 R1, intake rocker (Will work for 91 121 R92) (6)			
17	318 020 R11	SHAFT w/PLUG, 169 071 R1 rocker arm (2)			
18	35 619 H	SPRING, rocker arm shaft (6)			
19	133 093 R1	NUT, tappet adjusting screw lock (12)			
20	76 859 R1	BRACKET, rocker arm shaft (Nos. 1 and 7) (2)			
21	169 071 R1	PLUG, cup (3)			
22	16 067 DA	SCREW, tappet adjusting (12)			
23	278 303 R21	ARM w/SCREW, 16 067 DA and NUT, 133 093 R1, LH exhaust rocker (3)			
24	41 339 D	KEY, valve spring seat (24)			
25	151 167 R3	RETAINER, valve spring (6)			

(\$) - Not Furnished Separately.

X - As Required

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ENGINE

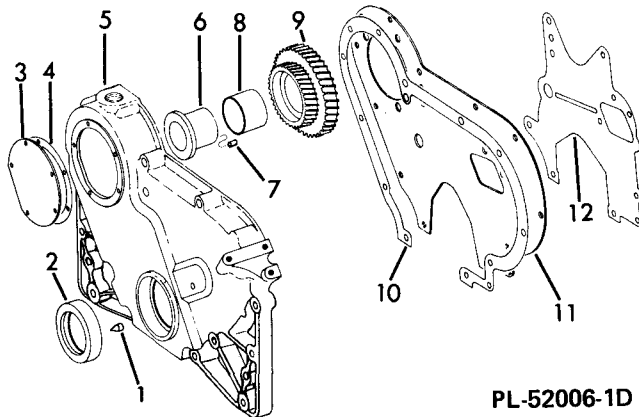
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CYLINDER HEAD, VALVE COVER, VALVES AND ROCKER ARM - Continued			43	164 436 R91	ROD w/upper and lower rod ENDS, valve lifter (12)
30	278 368 R61	HEAD ASSEMBLY, cylinder UD-282M 501 to 3623 (Composed of - 1 BUSHING 142 765 12 GUIDE 278 300 R1 \$ 1 HEAD 1 PLUG 444 588 5 PLUG 601 244 C1 11 PLUG 9 409 909 \$ 6 SLEEVE 10 STUD 303 473 R1)	44	9 409 949	PLUG, 3/4" sq-soc pipe (11)
30	323 771 R31	HEAD ASSEMBLY, cylinder UD-282M 3624 up (Composed of - 1 BUSHING 142 765 12 GUIDE 278 300 R1 \$ 1 HEAD 1 PLUG 444 588 11 PLUG 9 490 949 5 PLUG 601 244 C1 \$ 6 SLEEVE 10 STUD 303 473 R1)	PACKAGE ASSORTED GASKETS		
31	601 244 C1	PLUG, 1-1/4" csk-hdls. pipe (5)	310 446 R95	GASKET SET, valve grinding (Consists of the following -	
32	444 588	PLUG, 1/2" sq-hd pipe	278 280 R1	GASKET, thermostat housing	
33	142 765	BUSHING, 1-1/4 x 1/2" reducing pipe	278 308 R1	GASKET, valve cover	
34	278 305 R1	BOLT, cylinder head (short) (5)	278 313 R2	GASKET, exhaust manifold ends (2)	
35	278 306 R1	WASHER, cylinder head bolt (5)	278 314 R1	GASKET, exhaust manifold center (2)	
37	151 167 R3	RETAINER, valve spring (6)	305 804 R1	GASKET, intake manifold	
38	612 107 C 1	DEFLECTOR, intake valve stem oil (6)	601 509 C1	GASKET, cylinder head	
39	315 744 R1	SPRING, intake valve (together with 317 935 R1 and 151 167 R3 will work for 367 192 R1) (6)	416 103	WASHER, valve cover (4)	
39A	317 935 R91	ROTO COIL, intake and exhaust (together with 315 744 R1, and 151 167 R3 will work for 367 193 R91) (12)			
40	278 301 R1	VALVE, intake (6) UD-236M 501 to 2839 (6) UD-282M 501 to 3623			
40	323 774 R1	VALVE, intake (6) UD-236M 2840 up (6) UD-282M 3624 up			
41	601 509 C1	GASKET, cylinder head			
42	684 729 C1	TAPPETS, valve (12)			
					\$ - Not Furnished Separately.

\$ - Not Furnished Separately.

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ENGINE

REF. NO.	PART NUMBER	DESCRIPTION
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CRANKCASE FRONT COVER AND IDLER GEAR
(Not used with Hydraulic Pump Adapter)



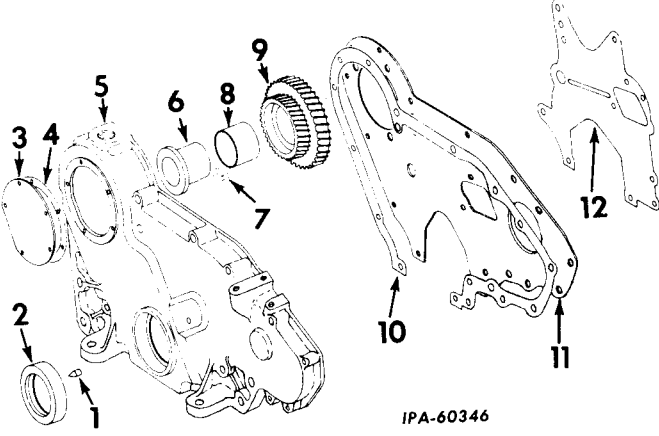
PL-52006-1D

1	367 572 R1	POINTER, timing
2	357 672 R91	OIL SEAL, crankshaft front (used with DAMPERS, 372 202 R1, 372 203 R2, 338 949 R91 and 338 952 R91)
2	317 549 R91	OIL SEAL, crankshaft front (used with DAMPERS, 338 949 R91 and 338 952 R91)
3	278 269 R1 179 814 103 320	COVER, injection pump gear SCREW, 5/16 x 5/8" hex-hd cap (5) WASHER, 5/16" lock (5)
4	278 270 R2	GASKET, injection pump gear cover
5	328 542 R11 44 459 16 081 R1 179 839 103 323 103 321	COVER w/POINTER, 367 572 R1 and two PIN, 19 892 R1 crankcase front PLUG, 3/4" sq-hd pipe SCREW, 1/2 x 3-1/8" hex-hd cap (6) SCREW, 3/8 x 1" hex-hd cap (6) WASHER, 1/2" lock (6) WASHER, 3/8" lock (6)
6	367 580 R11 179 890 103 323	SHAFT w/DOWEL, 141 150, idler gear SCREW, 1/2 x 2-1/4" hex-hd cap WASHER, 1/2" lock
7	141 150	DOWEL, 3/16 x 7/16" idler gear shaft
8	367 578 R1	BUSHING, idler gear

REF. NO.	PART NUMBER	DESCRIPTION
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9	278 263 R11	GEAR w/BUSHING, idler
10	278 268 R1	GASKET, crankcase front cover
11	278 264 R11	PLATE w/three NUT, 264 723 R1, crankcase front UD-236M 501 to 8182 UD-282M 501 to 12051
11	612 151 C11	PLATE, crankcase front UD-236M 8183 up UD-282M 12052 up
	179 838	SCREW, 3/8 x 7/8" hex-hd cap (4)
	103 321	WASHER, 3/8" lock (4)
12	278 265 R1	GASKET, crankcase front plate
	674 295 C1	NUT, spline (3)
	19 892 R1	PIN, 3/8 x 1-1/2" dowel (crankcase front cover) (2)

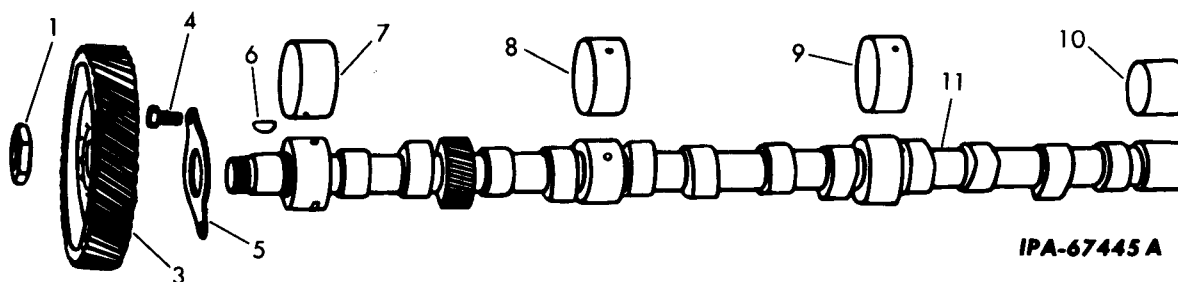
ENGINE

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKCASE FRONT COVER AND IDLER GEAR (For use with Hydraulic Pump Adapter)			10	312 506 R1	GASKET, crankcase front cover
 IPA-60346			11	312 504 R11	PLATE w/four NUT, 264 723 R1, crankcase front UD-236M 501 to 8182 UD-282M 501 to 12051
			11	612 181 C11	PLATE w/NUT, 264 723 R1 crankcase front UD-236M 8183 up UD-282M 12052 up
				179 838	SCREW, 3/8 x 7/8" hex-hd cap (4)
				103 321	WASHER, 3/8" lock (4)
			12	278 265 R1	GASKET, crankcase front plate
				264 723 R1	NUT, spline (3)
1	367 572 R1	POINTER, timing			
2	357 672 R91	OIL SEAL, crankshaft front (used with DAMPERS, 372 202 R1, 372 203 R2, 338 949 R91 and 338 952 R91)			
2	317 549 R91	OIL SEAL, crankshaft front (used with DAMPERS, 338 949 R91 and 338 952 R91)			
3	278 269 R1	COVER, injection pump gear SCREW, 5/16 x 9/16" hex-hd cap (5) WASHER, 5/16" lock (5)			
4	278 270 R2	GASKET, injection pump gear cover			
5	312 505 R31	COVER w/POINTER, 367 572 R1 crankcase front			
	16 081 R1	SCREW, 1/2 x 3-1/8" hex-hd cap (4)			
	179 883	SCREW, 1/2 x 1-1/4" hex-hd cap			
	179 839	SCREW, 3/8 x 1" hex-hd cap (6)			
	103 323	WASHER, 1/2" lock (6)			
	103 321	WASHER, 3/8" lock (6)			
6	367 580 R11	SHAFT w/DOWEL, 141 150, idler gear SCREW, 1/2 x 2-1/4" hex-hd cap WASHER, 1/2" lock			
7	141 150	DOWEL, 3/16 x 7/16" idler gear shaft			
8	367 578 R1	BUSHING, idler gear			
9	278 263 R11	GEAR w/BUSHING, idler			

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ENGINE

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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CAMSHAFT AND RELATED PARTS

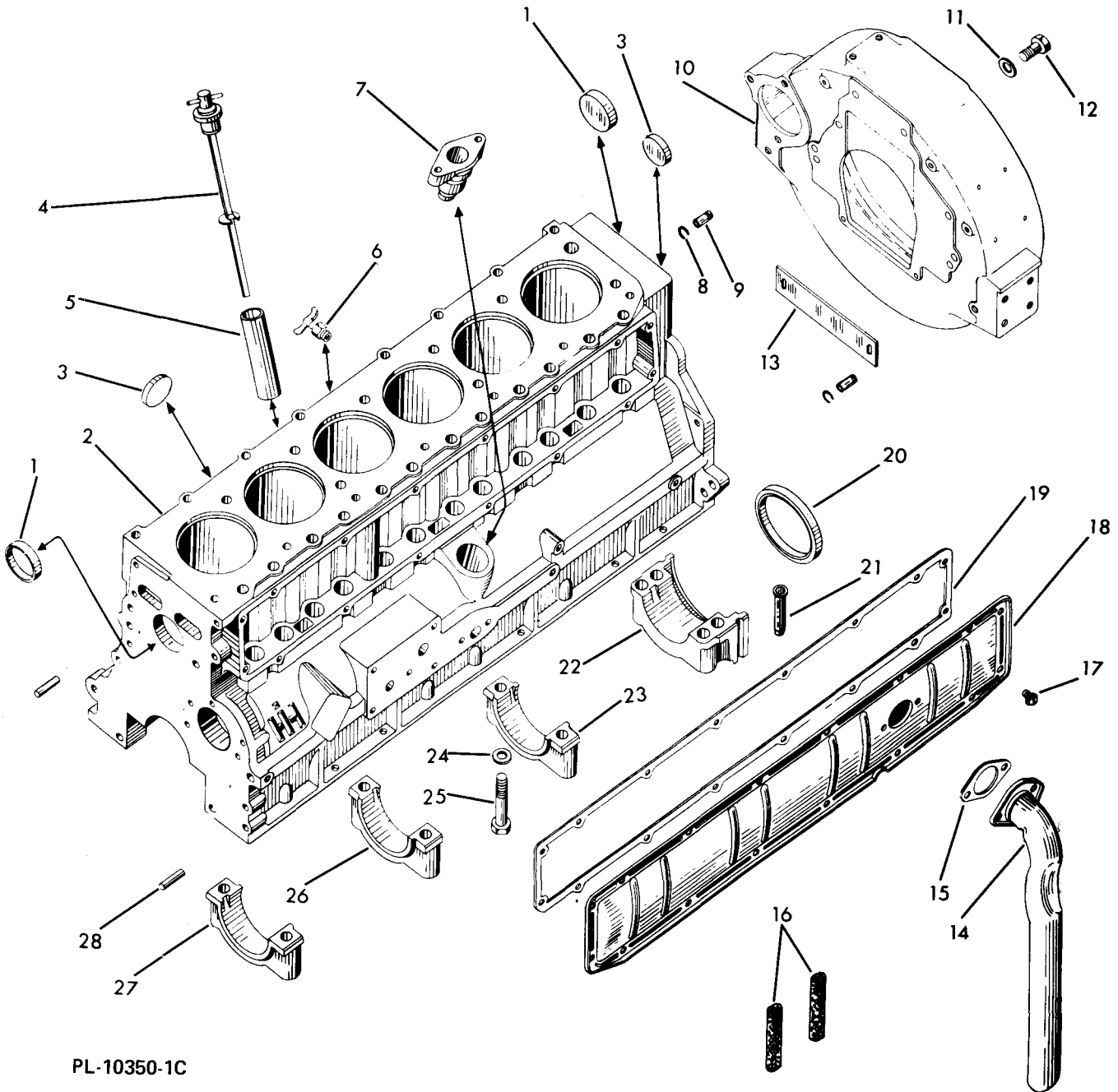


1	16 026 DB	NUT, camshaft gear	6	127 559	KEY, camshaft gear
3	312 500 R1	GEAR, camshaft (used with Hydraulic Pump Adapter)	7	70 259 R2	BEARING, camshaft (front)
3	367 240 R1	GEAR, camshaft (Not used with Hydraulic Pump Adapter)	8	70 260 R1	BEARING, camshaft (intermediate front)
4	70 425 R1	BOLT, camshaft thrust plate (2)	9	70 261 R2	BEARING, camshaft (intermediate rear)
5	35 650 HA	PLATE, camshaft thrust	10	70 262 R1	BEARING, camshaft (rear)
			11	367 229 R1	CAMSHAFT

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ENGINE

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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CRANKCASE AND RELATED PARTS



PL-10350-1C

1	20 840 R1	PLUG, core hole (2)
2	612 017 C92	CRANKCASE ASSY, (will work for CRANKCASE, 601 776 C91) (Order PACKAGE, 612 094 C91 for CRANKCASE, 312 434 R93) (Composed of - \$4 BEARING

10	BOLT	328 512 R1
\$4	CAP	
\$1	CRANKCASE	
2	DOWEL	141 285
2	DOWEL	371 699 R2
2	PIN	19 328 R1
1	PLUG	50 410 DA

\$ - Not Furnished Separately.

ENGINE

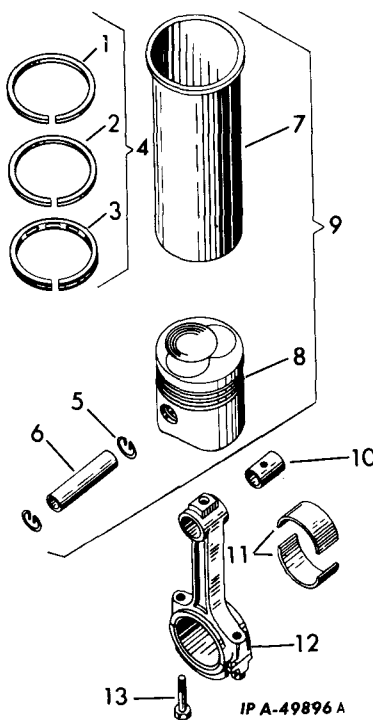
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKCASE AND RELATED PARTS - Continued			18	315 970 R91	COVER w/two ELEMENT, 315 849 R1, valve push rod (not used with oil level sight gauge attachment)
	6	PLUG 70 128 R1	18	332 474 R91	COVER w/two ELEMENT, 314 849 R1, valve push rod (used with oil level sight gauge attachment)
	2	PLUG 20 840 R1	19	369 982 R1	GASKET, valve push rod cover
	3	PLUG 445 671	20	403 066 R91	OIL SEAL, crankshaft, rear
	2	PLUG 444 782	21	310 665 R1	PACKING, rear bearing cap (will work for 1 738 Y) (2)
	\$6	SLEEVE	22	306 674 R1	CAP, crankshaft rear bearing
	1	TUBE 368 985 R2	23	306 673 R1	CAP, crankshaft rear intermediate bearing
	10	WASHER 345 409 R1)	24	345 409 R1	WASHER, crankshaft bearing cap bolt (10)
444 782	PLUG, 3/8" sq-soc-hd pipe (short) (2)		25	328 512 R1	BOLT, crankshaft bearing cap (10)
2	612 094 C91	PACKAGE, crankcase assembly (Will work for CRANKCASE ASSY, 312 434 R93) (Consists of - 1 CRANKCASE 612 017 C92 1 "O" RING 349 055 R2 1 VALVE 612 092 C91)	26	306 672 R1	CAP, crankshaft bearing intermediate front
3	70 128 R1	PLUG, core hole (6)	27	306 671 R1	CAP, crankshaft front bearing
4	368 986 R91	GAUGE, oil level	28	141 285	DOWEL, 1/2 x 1-1/4" crankcase front plate (2)
5	368 985 R2	TUBE, oil filler		19 328 R1	PIN, roll (2)
6	9 982 T	VALVE, 1/4" drain		50 410 DA	PLUG
7	367 513 R1	ADAPTER, oil pump shaft support (used SUPPORT, 278 375 R91)	444 571	PLUG, 1/8" sq-hd pipe (cd or zn-pltd) (3)	
8		NOT USED	612 092 C91	VALVE, oil pressure regulating (used only when CRANKCASE, 601 776 C91 or 612 017 C92 replaces CRANKCASE, 312 434 R93) (Also, listed with oil filters)	
9	371 699 R2	DOWEL, engine rear support (2)	349 055 R2	"O" RING, oil pressure regulating valve (used only when CRANKCASE, 601 776 C91 or 612 017 C92 replaces CRANKCASE, 312 434 R93) (Also, listed with oil filters)	
10	304 440 R3	HOUSING, flywheel			
	179 885	WASHER, 1/2" lock (6)			
	103 323	SCREW, 1/2 x 1-1/2" hex-hd cap (6)			
	142 095	PLUG, button			
11		Follows Reference No. 10			
12		Follows Reference No. 10			
13	367 225 R1	SEAL, engine rear support dust			
	179 814	SCREW, 5/16 x 5/8" hex-hd cap (2)			
	103 340	WASHER, 11/32 x 11/16" x No. 16 ga. (2)			
14	368 429 R31	PIPE, breather			
	374 587 R91	SCREW w/WASHER, 1/4" slt-rd-hd (2)			
15	369 981 R1	GASKET, breather pipe			
16	315 849 R1	ELEMENT, breather pipe (2)			
17	375 612 R91	SCREW w/WASHER, 1/4" slt-rd-hd (16)			

\$ - Not Furnished Separately.

ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
PACKAGE ASSORTED GASKETS - Continued					
	332 652 R91	GASKET SET, crankcase (Consists of the following -			
	310 665 R1	BOOT, seal (2)			
	3 405 H	GASKET, oil pan drain plug			
	3 405 H	GASKET, lubricating oil pressure relief valve plug			
	51 527 DC	GASKET, water trap			
	69 607 R1	GASKET, oil pump body			
	69 674 R1	GASKET, water pump plate			
	69 676 R1	GASKET, water pump			
	251 403 R1	GASKET, relief valve plug			
	278 265 R1	GASKET, crankcase front plate			
	278 268 R1	GASKET, crankcase front cover			
	278 270 R1	GASKET, injection pump gear cover			
	278 347 R1	GASKET, injection pump adapter			
	304 854 R1	GASKET, oil filter case			
	349 038 R1	GASKET, oil cooler manifold			
	349 039 R1	GASKET, lubricating oil filter base			
	353 936 R2	GASKET, oil pan shaft support			
	369 981 R1	GASKET, breather pipe flange			
	369 982 R1	GASKET, push rod cover			
	369 984 R1	GASKET, crankcase oil pan			
	601 790 C1	GASKET, lubricating oil filter base			
	304 720 R1	"O" RING, pump adapter			
	350 684 R1	"O" RING (3/4 x 1 x 1/8") (2)			
	304 012 R1	GASKET, center tube			

ENGINES

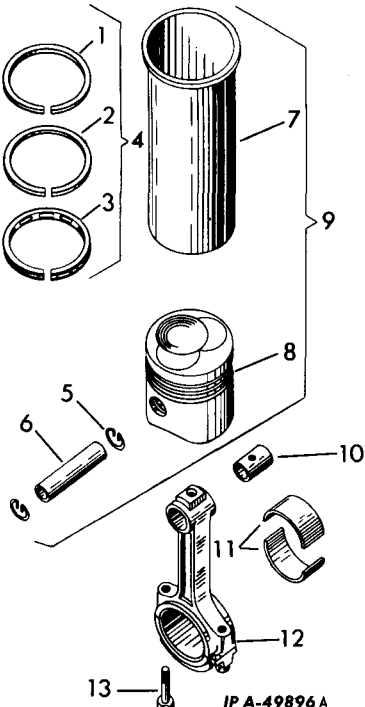
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CONNECTING ROD AND PISTON (UD-236)					
					
			7	278 272 R1	SLEEVE, cylinder (6) UD-236M 501 to 7153
			7	609 028 C11	SLEEVE, cylinder (x) UD-236M 7154 Up
			7	323 802 R1	SLEEVE, cylinder (.002" oversize) (6) (part of package 609 291 C91) (X) UD-236M 501 to 7153
			7	601 289 C1	SLEEVE, cylinder (.010 oversize) (X) UD-236M 501 to 7153
			7	612 000 C11	SLEEVE, cylinder (.002" oversize) UD-236M 7154 Up
			7	612 001 C11	SLEEVE, cylinder (.010 oversize) UD-236M 7154 Up
			8	278 324 R4	PISTON ("SS" marking) (6) UD-236M 501 to 750
			8		PISTON (Not furnished separately) (6) UD-236M 751 Up
			9	278 332 R92	SLEEVE SET (Consists of six SLEEVE w/PISTON, 278 330 R94) UD-236M 501 to 750
			9	278 330 R94	SLEEVE w/PISTON and RING ASSEMBLY, cylinder (6) UD-236M 501 to 750
			9	332 669 R91	SLEEVE w/PISTON and RING ASSEMBLY, cylinder (will work for 306 284 R95) (6) UD-236M 751 to 7153
			9	612 016 C91	SLEEVE w/PISTON and RING ASSEMBLY, cylinder UD-236M 7154 Up
			10	364 913 R1	BUSHING, piston pin (6) UD-236M 501 to 750
			10	306 708 R1	BUSHING, piston pin (6) UD-236M 751 Up
			11	367 408 R11	BEARING, connecting rod (standard) (two halves) (6)
			11	367 632 R11	BEARING, connecting rod (.002" undersize) (two halves) (6)
			11	367 631 R11	BEARING, connecting rod (.030" undersize) (two halves) (6)
					(X) - As Required.
1		RING, piston (top compression) (Not Furnished Separately) (6)			
2		RING, piston - (compression - inter- mediate) (Not Furnished Separately) (6)			
3		RING, piston - (oil regulating) (Not Furnished Separately) (6)			
4	674 726 C91	PACKAGE, piston ring field service (Consists of three RINGS)(optional w/PACKAGE, 674 727 C91) (6)			
4	674 727 C91	PACKAGE, piston ring field service (Consists of three RINGS)(optional w/PACKAGE, 674 726 C91) (6)			
5	238 627 R1	RING, piston pin retainer (12) UD-236M 501 to 750			
5	338 835 R1	RING, piston pin retainer (12) UD-236M 751 up			
6	278 271 R1	PIN, piston (6) UD-236M 501 to 750			
6	332 436 R1	PIN, piston (6) UD-236M 751 Up			

ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CONNECTING ROD AND PISTON - Continued (UD-236)					
11	376 666 R11	BEARING, connecting rod (.010" undersize) (two halves) (6)			
11	376 668 R11	BEARING, connecting rod (.020" undersize) (two halves) (6)			
12	367 406 R12	ROD w/two BOLT, 316 366 R1 and BUSHING, 364 913 R1, connecting (6) UD-236M 501 to 750			
12	306 280 R12	ROD w/two BOLT, 316 366 R1 and BUSHING, 306 708 R1, connecting (6) UD-236M 751 Up			
13	316 366 R1	BOLT, connecting rod (12) (will work for 70 013 R1)			
	367 630 R91	BEARING SET, connecting rod (consists of six rod BEARING, 367 408 R11)			
	320 017 R91	PACKAGE, cylinder sleeve (consists of SLEEVE, 278 272 R1, SHIM, 320 000 R1 and two SHIM, 320 018 R1) (6) UD-236M 501 to 7153			
	601 291 C91	PACKAGE, piston (standard) and cylinder sleeve (.002" oversize OD) Field Service UD-236M 501 to 7153 (Consists of - 1 PAMPHLET instruction 1 014 864 R3 1 PAMPHLET instruction 1 014 914 R2 1 PIN 332 436 R1 1 PISTON 306 275 R4 \$3 RING 2 RING 338 835 R1 1 SHIM 320 000 R1 2 SHIM 320 018 R1 1 SLEEVE 323 802 R1)			
	320 000 R1	SHIM, cylinder sleeve (.005") (6)			
	320 018 R1	SHIM, cylinder sleeve (.003") (12)			

§ - Not Furnished Separately.

ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CONNECTING ROD AND PISTON (UD-282)			6	278 326 R1	PIN, piston (.005" oversize) (6) UD-282M 501 to 1100
			7	278 272 R1	SLEEVE, cylinder (6) UD-282M 501 to 10227
			7	323 802 R1	SLEEVE, cylinder (.002" oversize) (6) (part of package 609 346 C91) (X) UD-282M 501 to 10227
			7	601 289 C1	SLEEVE, cylinder (.010" oversize) (X) UD-282M 501 to 10227
			7	609 028 C11	SLEEVE, cylinder (X) UD-282M 10228 Up
			7	612 000 C11	SLEEVE, cylinder (.002" oversize) UD-282M 10228 Up
			7	612 001 C11	SLEEVE, cylinder (.010" oversize) UD-282M 10228 Up
			8		PISTON (Not furnished separately) (6) UD-282M 1101 Up
			8	278 325 R4	PISTON ("SS" marking) (6) UD-282M 501 to 1100
			9	278 333 R92	SLEEVE SET (Consists of six SLEEVE w/PISTON, 278 331 R94) UD-282M 501 to 1100
			9	609 345 C91	SLEEVE SET (Consists of six SLEEVE w/PISTON, 609 344 C91) UD-282M 1101 to 10227
1		RING, piston - (top compression) (Not Furnished Separately) (6)	9	278 331 R94	SLEEVE w/PISTON and RING ASSEMBLY, cylinder (6) UD-282M 501 to 1100
2		RING, piston (compression - intermediate) (Not Furnished Separately) (6)	9	609 344 C91	SLEEVE w/PISTON and RING ASSEMBLY, cylinder (will work for 318 384 R92) (6) UD-282M 1101 to 10227
3		RING, piston (oil regulating) (Not Furnished Separately) (6)	9	612 008 C92	SLEEVE w/PISTON and RING, ASSEMBLY, cylinder (53) (X) UD-282M 10228 Up
4	674 726 C91	PACKAGE, piston ring field service (Consists of three RING)(optional w/PACKAGE, 674 727 C91) (6)	10	364 913 R1	BUSHING, piston pin (6) UD-282M 501 to 1100
4	674 727 C91	PACKAGE, piston ring field service (Consists of three RING)(optional w/PACKAGE, 674 726 C91) (6)	10	306 708 R1	BUSHING, piston pin (6) UD-282M 1101 Up
5	238 627 R1	RING, piston pin retainer (12) UD-282M 501 to 1100			
5	338 835 R1	RING, piston pin retainer (12) UD-282M 1101 Up			
6	278 271 R1	PIN, piston (6) UD-282M 501 to 1100			
6	332 436 R1	PIN, piston (6) UD-282M 1101 Up			X - As Required.

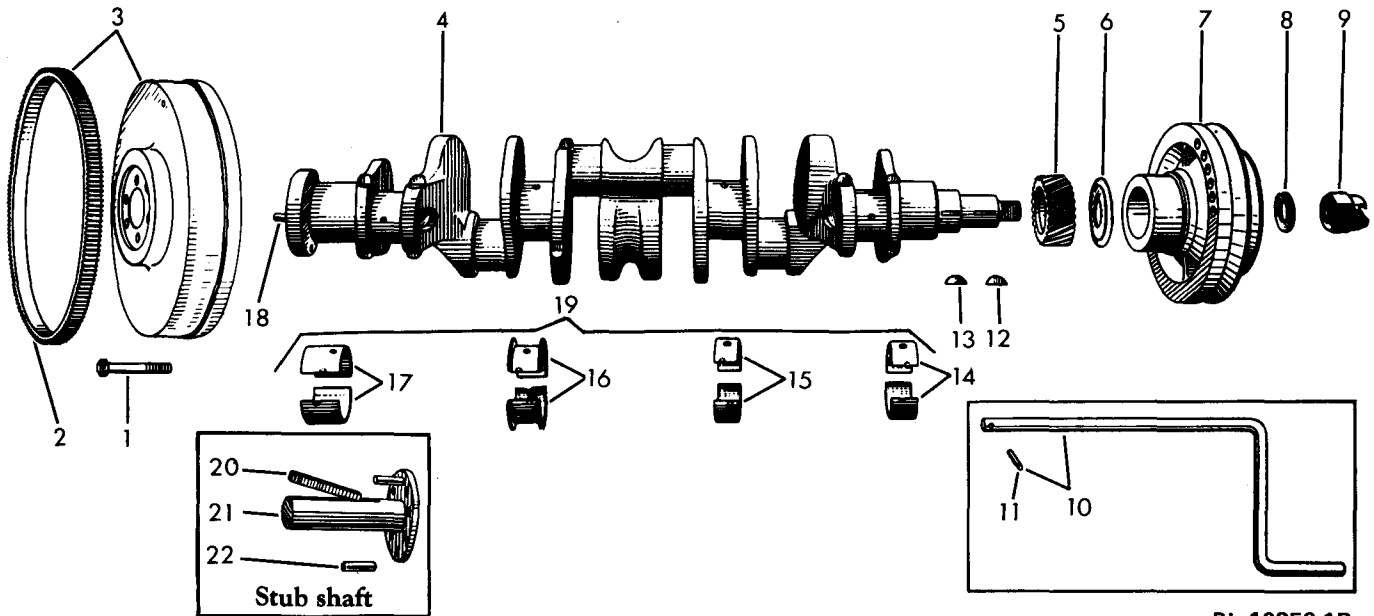
ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CONNECTING ROD AND PISTON - Continued (UD-282)			320 000 R1	SHIM, cylinder sleeve (.005") (6)	
			320 018 R1	SHIM, cylinder sleeve (.003") (12)	
11	367 408 R11	BEARING, connecting rod (standard) (two halves) (6)			
11	367 632 R11	BEARING, connecting rod (.002" undersize) (two halves) (6)			
11	367 631 R11	BEARING, connecting rod (.030" undersize) (two halves) (6)			
11	376 666 R11	BEARING, connecting rod (.010" undersize) (two halves) (6)			
11	376 668 R11	BEARING, connecting rod (.020" undersize) (two halves) (6)			
12	367 406 R12	ROD w/two BOLT, 316 366 R1 and BUSHING, 364 913 R1, connecting (6) UD-282M 501 to 1100			
12	306 280 R12	ROD w/two BOLT, 316 366 R1 and BUSHING, 306 708 R1, connecting (6) UD-282M 1101 Up			
13	316 366 R1	BOLT, connecting rod (will work for 70 013 R1) (12)			
	367 630 R91	BEARING SET, connecting rod (stand- ard) (consists of six rod BEARING, 367 408 R11)			
	320 017 R91	PACKAGE, cylinder sleeve (consists of SLEEVE, 278 272 R1, SHIM, 320 000 R1 and two SHIM, 320 018 R1) (6) UD-282M 501 to 10227			
	609 346 R91	PACKAGE, piston (standard) and cylinder sleeve (.002" oversize OD) Field service UD-282M 501 to 10227 (Consists of - 1 PAMPHLET instruction 1 014 864 R3 1 PAMPHLET instruction 1 014 914 R2 1 PIN 332 436 R1 \$ 1 PISTON \$ 3 RING 2 RING 338 835 R1 1 SHIM 320 000 R1 2 SHIM 320 018 R1 1 SLEEVE 323 802 R1)			

\$ - Not Furnished Separately.

ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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**CRANKSHAFT , FLYWHEEL, BEARING, STUB SHAFT
AND STARTING CRANK**

PL-10356-1B

1	323 979 R1	BOLT, 7/16NF x 1-3/4" hex lock (6)			(Composed of -
2	304 439 R1	GEAR, flywheel ring (124T)			1 BEARING 332 267 R91
3	304 437 R11	FLYWHEEL w/ring GEAR, 304 439 R1 (part of ATTACHMENT, 304 579 R91)			1 BEARING 367 276 R91
3	304 438 R11	FLYWHEEL w/ring GEAR, 304 439 R1 (part of ATTACHMENT, 304 580 R91) (*)			1 BEARING 367 279 R91
					1 BEARING 367 285 R91
					6 BEARING 367 408 R11
					\$1 CRANKSHAFT
					1 PIN 82 970 R1)
3	312 561 R21	FLYWHEEL w/ring GEAR, 304 439 R1 (part of ATTACHMENT, 312 570 R91)	4	320 188 R93	PACKAGE, crankshaft w/BEARINGS field service (standard size) UD-282
3	316 199 R11	FLYWHEEL w/ring GEAR, 304 439 R1 (part of ATTACHMENT, 316 197 R91)			(Composed of -
3	318 048 R11	FLYWHEEL w/ring GEAR, 304 439 R1 (part of ATTACHMENT, 318 046 R91)			1 BEARING SET 382 357 R91
					1 BEARING SET 367 630 R91
					\$1 CRANKSHAFT
					1 BEARING 367 282 R91
					1 PIN 82 970 R1
					1 PAMPHLET, instruction 1 019 253 R2)
4	367 268 R92	CRANKSHAFT ASSEMBLY (standard size) UD-236M 501 to 3231 (Composed of -	5	367 272 R1	GEAR, crankshaft
		1 BEARING 367 276 R91	6	71 763 R2	SLINGER, crankshaft oil
		1 BEARING 367 279 R91	7	338 949 R91	DAMPER, vibration (standard) (not part of 318 003 R91)
		1 BEARING 367 282 R91	7	338 952 R91	DAMPER, vibration (part of 318 003 R91)
		1 BEARING 367 285 R91			
		6 BEARING 367 408 R11			
		\$1 CRANKSHAFT			
		1 PIN 82 970 R1)			
4	382 355 R91	CRANKSHAFT ASSEMBLY (standard size) UD-236M 3232 Up			

* - (Used On UD-236 Equipped with
Extended Shaft And Outboard
Bearing)

\$ - Not Furnished Separately.

ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKSHAFT, FLYWHEEL, BEARING, STUB SHAFT AND STARTING CRANK - Continued			16	367 306 R91	BEARING, crankshaft intermediate rear (.002" undersize) (two halves) UD-236M 501 to 3231 UD-282M 501 to 4119
8	70 109 R1	WASHER, starting crank nut			
9	219 755	NUT, crankshaft (not used with starting crank)	16	332 273 R91	BEARING, crankshaft intermediate rear (.002" undersize) (two halves) UD-236M 3232 Up UD-282M 4120 Up
10	271 705 R91	CRANK w/PIN, 15 204 D, starting			
11	15 204 D	PIN, starting crank	16	376 676 R91	BEARING, crankshaft intermediate rear (.010" undersize) (two halves) UD-236M 501 to 3231 UD-282M 501 to 4119
12	117 994	KEY, 5/16 x 1-3/8" fan drive pulley (Woodruff No. 23)			
13	124 552	KEY, 3/16 x 1" crankshaft gear (Woodruff No. 13)	16	332 276 R91	BEARING, crankshaft intermediate rear (.010" undersize) (two halves) UD-236M 3232 Up UD-282M 4120 Up
14	367 276 R91	BEARING, crankshaft front (standard size) (two halves)			
14	367 300 R91	BEARING, crankshaft front (.002" undersize) (two halves)	16	376 689 R91	BEARING, crankshaft intermediate rear (.020" undersize) (two halves) UD-236M 501 to 3231 UD-282M 501 to 4119
14	376 670 R91	BEARING, crankshaft front (.010" undersize) (two halves)			
14	376 683 R91	BEARING, crankshaft front (.020" undersize) (two halves)	16	332 279 R91	BEARING, crankshaft intermediate rear (.020" undersize) (two halves) UD-236M 3232 Up UD-282M 4120 Up
14	367 288 R91	BEARING, crankshaft front (.030" undersize) (two halves)			
15	367 279 R91	BEARING, crankshaft intermediate front (standard size) (two halves)	16	367 294 R91	BEARING, crankshaft intermediate rear (.030" undersize) (two halves) UD-236 501 to 3231 UD-282 501 to 4119
15	367 303 R91	BEARING, crankshaft intermediate front (.002" undersize) (two halves)			
15	376 673 R91	BEARING, crankshaft intermediate front (.010" undersize) (two halves)	16	332 270 R91	BEARING, crankshaft intermediate rear (.030" undersize) (two halves) UD-236 3232 Up UD-282 4120 Up
15	376 686 R91	BEARING, crankshaft intermediate front (.020" undersize) (two halves)			
15	367 291 R91	BEARING, crankshaft intermediate front (.030" undersize) (two halves)	17	367 285 R91	BEARING, crankshaft rear (standard size) (two halves)
16	367 282 R91	BEARING, crankshaft intermediate rear (standard size) (two halves) UD-236M 501 to 3231 UD-282M 501 to 4119	17	367 309 R91	BEARING, crankshaft rear (.002" undersize) (two halves)
16	332 267 R91	BEARING, crankshaft intermediate rear (standard size) (two halves) UD-236M 3232 Up UD-282M 4120 Up	17	376 679 R91	BEARING, crankshaft rear (.010" undersize) (two halves)
			17	376 692 R91	BEARING, crankshaft rear (.020" undersize) (two halves)
			17	367 297 R91	BEARING, crankshaft rear (.030" undersize) (two halves)
			18	82 970 R1	PIN, flywheel to crankshaft flange

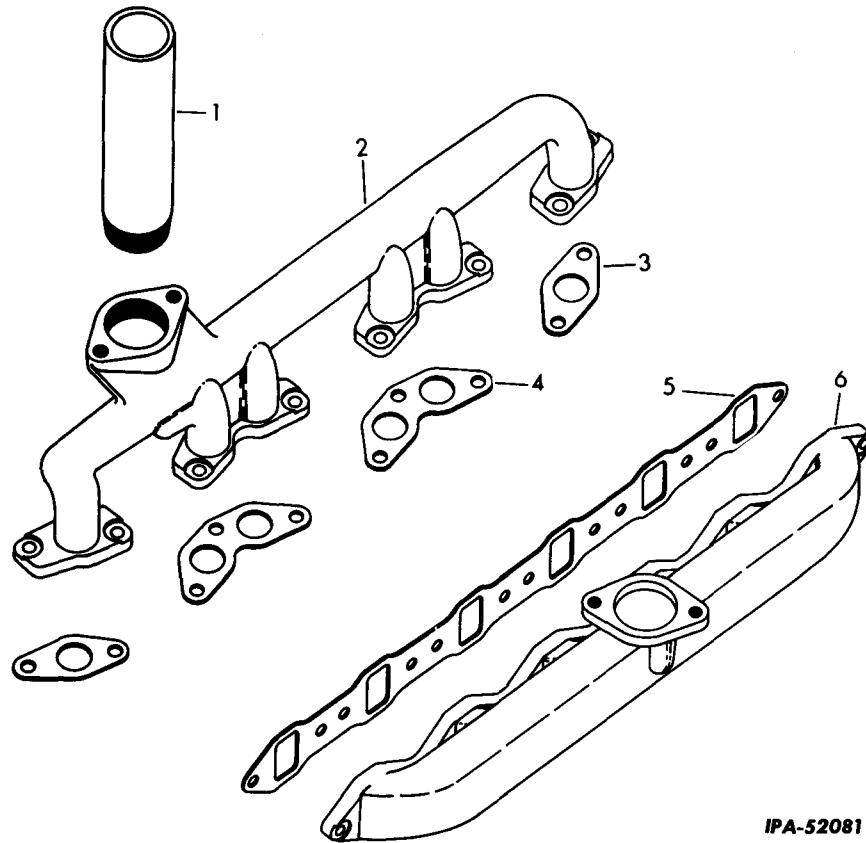
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ENGINE

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKSHAFT, FLYWHEEL, BEARING, STUB SHAFT AND STARTING CRANK - Continued			318 046 R91	ATTACHMENT, flywheel (with Torque Converter mounting parts) (for use with Funk Model TRC-D16A-T9 Torque Converter) (+) (Consists of - 1 BUSHING 318 049 R1 1 FLYWHEEL 318 048 R11 1 SPACER 312 562 R2 8 SPACER 318 050 R1 3 STUD 57 714 D)	
19	382 357 R91	BEARINGS, crankshaft (standard size) UD-282 (Consists of - 1 BEARING 367 276 R91 1 BEARING 367 279 R91 1 BEARING 332 267 R91 1 BEARING 367 285 R91)			
20	29 308 D	KEY, belt pulley (part of ATTACH- MENT, 305 698 R91)	318 003 R91	ATTACHMENT, vibration damper and auxiliary drive pulley (5.02" OD single "A" sheave) (For use w/suction fan Attachment, 320 166 R91 and 701 363 C91 and blower fan ATTACHMENT, 323 768 R91, 701 364 C92) (consists of vibration DAMPER, 338 952 R91) (+)	
21	305 699 R91	SHAFT w/DOWEL, 305 700 R1 stub (part of ATTACHMENT, 305 698 R91)			
	18 646 R1	BOLT, 7/16NF x 2-1/4" hex lock (6)			
22	305 700 R1	DOWEL, stub shaft (part of ATTACH- MENT, 305 698 R91)	318 049 R1	BUSHING, torque converter pilot (part of ATTACHMENT, 318 046 R91)	
	304 579 R91	ATTACHMENT, flywheel (consists of FLYWHEEL, 304 437 R11, six BOLT, 323 979 R1) (for use with 10" single plate over-center drive ring type clutch) (+) UD-236	312 562 R2	SPACER, cranking motor (part of ATTACHMENT, 312 570 R91 and 318 046 R91)	
	304 580 R91	ATTACHMENT, flywheel (consists of FLYWHEEL, 304 438 R11, six BOLT, 323 979 R1) (for use with 11-1/2" single plate over-center drive ring type clutch) (+) (UD-282)	318 050 R1	SPACER, mounting strap (part of ATTACHMENT, 318 046 R91) (8)	
	305 698 R91	ATTACHMENT, direct connected stub shaft (See NOTES 1 and 3)	57 714 D	STUD, cranking motor (part of ATTACHMENTS, 312 570 R91 and 318 046 R91) (3) NUT, 3/8NF (3) WASHER, 3/8" lock (3)	
	312 570 R91	ATTACHMENT, flywheel (for use with clutch and controls ATTACH- MENT, 312 837 R91) (Consists of - 6 BOLT 323 979 R1 1 FLYWHEEL 312 561 R21 1 SPACER 312 562 R2 3 STUD 57 714 D)			
	316 197 R91	ATTACHMENT, flywheel (Consists of six BOLT, 323 979 R1 and FLYWHEEL, 316 199 R11) (for use with clutch and controls ATTACH- MENT, 305 891 R91 and transmission ATTACHMENT, 305 889 R91) (+)			
			(+) - Attachment No Longer Available Service Parts will be Furnished.		
			NOTE 1 - Factory Application - Order On Machine Order Form.		
			NOTE 3 - Field Application - Order Through Regular Service Parts Channels.		

ENGINES

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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MANIFOLD AND EXHAUST PIPE



IPA-52081

1	304 534 R1	PIPE, exhaust	304 534 R91	ATTACHMENT, exhaust pipe (Consists of Ref. 1 only) (will work for 304 533 R91) (+)
2	278 643 R2	MANIFOLD, exhaust		
3	278 313 R2	GASKET, exhaust manifold (end) (2)	39 524 DA	NUT, exhaust manifold stud (10)
4	278 314 R1	GASKET, exhaust manifold (center) (2)	444 571	PLUG, 1/8" sq-hd pipe (cd or zn-plated)
5	305 804 R1	GASKET, intake manifold	113 934 H	WASHER, exhaust manifold flat (for front and rear mounting studs) (4)
6	332 110 R11	MANIFOLD w/PLUG, 444 571, intake SCREW, 3/8 x 1-1/8" hex-hd cap (12) WASHER, 3/8" lock (12)		

(+) - Attachment No Longer Available
Service Parts will be Furnished.

-27-
FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FUEL INJECTION PUMP DRIVE AND INJECTION PIPES					
1	250 617 R1	NUT, injection pipe (nozzle end) (6)	11	307 816 R91	PUMP ASSEMBLY, fuel injection (DBGFC-629-4AE) (2400 RPM) (UD-236) (Not used with Automatic Shut-off Attachment) (Order PUMP ASSEMBLY, 321 196 R91) (See NOTE)
2	278 707 R11	PIPE, injection (cylinder No. 6)	11	305 853 R91	PUMP ASSEMBLY, fuel injection (DBGFC-631-7AE) (2400 RPM) (UD-282) (Not used with Automatic Shut-off Attachment) (Order PUMP ASSEMBLY, 321 204 R91) (See NOTE)
3	278 706 R11	PIPE, injection (cylinder No. 5)	11	313 293 R91	PUMP ASSY, fuel injection (DBGFC 629-3AM) (2400 RPM) (UD-236) (for use with Automatic Shut-Off Attachment) (Order PUMP ASSY, 321 198 R91) (See NOTE)
4	278 705 R11	PIPE, injection (cylinder No. 4)	11	313 294 R91	PUMP ASSY, fuel injection (DBGFC-631-4AM) (2400 RPM) (UD-282) (for use with Automatic Shut-Off Attachment) (Order PUMP ASSY, 321 216 R91) (See NOTE)
5	304 314 R91	BLOCK ASSEMBLY, junction (for components refer to "Electric Starting")			
6	278 704 R11	PIPE, injection (cylinder No. 3)			
7	278 703 R11	PIPE, injection (cylinder No. 2)			
8	278 702 R21	PIPE, injection (cylinder No. 1)			
9	279 265 R1	FITTING, nozzle (also listed and illustrated with "Injection Nozzle") (6)			
10		NOZZLE ASSEMBLY, injection (for component see list of parts under details of "Injection Nozzle") (6)			
11	307 816 R91	PUMP ASSEMBLY, fuel injection (DBGFC-629-4AE) (2400 RPM) (UD-236) (Not used with Automatic Shut-off Attachment) (Order PUMP ASSEMBLY, 321 196 R91) (See NOTE)			

NOTE - Pumps listed with symbol (+) are not available under part numbers shown. Order basic pump and necessary parts as shown in the parts catalog PU-70. Also refer to the PU-70 catalog for detail parts on all Roosa Master Pumps.

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FUEL INJECTION PUMP DRIVE AND INJECTION PIPES - Continued			19	368 985 R1	TUBE, oil filler (also listed and illustrated with "Crankcase and Related Parts")
11	321 196 R91	(+) PUMP ASSY, fuel injection (will work for PUMP ASSY, 307 816 R91) (DBGFC-629-29AE) (2400 RPM) (UD-236) (Not for use with Automatic Shut-Off Attachment) (See NOTE)	20		GAUGE, oil level (also listed and illustrated with "Crankcase and Related Parts")
11	321 204 R91	(+) PUMP ASSY, fuel injection (will work for PUMP ASSY, 305 853 R91) (2400 RPM) (UD-282) (Not for use with Automatic Shut-Off Attachment) (See NOTE)	21		TUBE, priming pump to primary fuel filter (order 3/8" OD x 3/4" long cut from bulk stock 995 063 R1) UD-236M 501 to 8469 UD-282M 501 to 12529
11	321 198 R91	PUMP ASSY, fuel injection (will work for PUMP ASSY, 313 293 R91) (2400 RPM) (UD-236) (for use with Automatic Shut-Off Attachment) (See NOTE)	22	332 489 R1	CLAMP, injection pipe (drilled) (order PACKAGE, 701 127 C91) UD-236M 501 to 9003 UD-282M 501 to 13597
11	321 216 R91	(+) PUMP ASSY, fuel injection (will work for PUMP ASSY, 313 294 R91) (DBGFC-631-10AM) (2400 RPM) (UD-282) (for use with Automatic Shut-Off Attachment) (See NOTE)	22	670 004 C11	CLAMP w/three PIN, 19 387 R1 injection pipe (drilled) UD236M 9004 up UD-282M 13598 up
	102 635	NUT, 3/8" (2)	22	332 490 R1	CLAMP, injection pipe (tapped)
	103 321	WASHER, 3/8" lock (2)		332 491 R2	PAD, injection pipe clamp (2)
	142 619 H	WASHER (2)		181 317	SCREW, 1/4NF x 1-1/4" hex-hd cap (5)
	678 026 C1	WIRE, lock (2)		103 319	WASHER, 1/4" lock (3)
	678 027 C1	LOCK, seal wire (2)		103 339	WASHER, 9/32 x 5/8" x No. 16 ga. (3)
12	118 755	ELBOW, 3/8 x 90° flared tube (injection pump inlet)	23	312 588 R11	BRACKET, engine shut-off wire
13	304 443 R2 179 857	BRACKET, fuel pump and water trap SCREW, 7/16 x 7/8" hex-hd cap (2)	25	32 596 D	CLAMP, engine shut-off wire UD-236M 501 to 963 UD-282M 501 to 1473 NUT, No. 10NF sq. SCREW, No. 10 x 5/8" fil-hd mach WASHER, No. 10 lock
	103 322	WASHER, 7/16" lock (2)			
14	37 323 D	ELBOW, hi-duty male (4) UD-236M 501 to 8469 (4) UD-282M 501 to 12529	25	275 965 R1	CLAMP, engine shut-off wire UD-236M 964 Up UD-282M 1474 Up NUT, No. 10NF SCREW, No. 10NF x 5/8" rd-hd mach WASHER, No. 10 lock
15		TUBE, water trap to priming pump (order 3/8" OD x 10" long cut from bulk stock 995 063 R1) UD-236M 501 to 8469 UD-282M 501 to 12529			
16		TRAP ASSEMBLY, water (for components see list of parts under details of "Water Trap")			
17	278 953 R91	NUT, hi-duty nylon (4) UD-236M 501 to 8469 (4) UD-282M 501 to 12529			
18	303 753 R91	PUMP ASSEMBLY, hand primer (for components see list of parts under details of "Hand Primer Pump") NUT, No. 10 (2) SCREW, No. 10 x 1" slt-rd-hd mach (2) WASHER, No. 10 lock (2)			

NOTE - Pumps listed with symbol (+) are not available under part numbers shown. Order basic pump and necessary parts as shown in the parts catalog PU-70. Also refer to the PU-70 catalog for detail parts on all Roosa Master Pumps.

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FUEL INJECTION PUMP DRIVE AND INJECTION PIPES - Continued			39	105 423	ELBOW, priming pump outlet (optional with ELBOW, 120 499) (2) UD-236M 8470 Up (2) UD-282M 12530 Up
26	275 946 R91	HOSE, final filter to injection pump flexible (14.5" long)	40	118 755	ELBOW, water trap inlet (2) UD-236M 8470 Up (2) UD-282M 12530 Up
27	137 538	ELBOW, 1/4" x 90° (final fuel filter outlet)	41	317 805 R91	HOSE w/FITTINGS, priming pump to water trap UD-236M 8470 Up UD-282M 12530 Up
28	278 335 R11	PIPE, primary filter to final fuel filter	42	308 446 R1	TUBE, water trap auxiliary fuel filter UD-236M 8470 Up UD-282M 12530 Up
29	22 510 D	ELBOW, final fuel filter inlet	43	37 323 D	ELBOW, hi-duty male (2) UD-236M 8470 Up (2) UD-282M 12530 Up
30	65 834 D	ELBOW, primary fuel filter outlet	44	278 953 R91	NUT, hi-duty nylon (2) UD-236M 8470 Up (2) UD-282M 12530 Up
31		FILTER ASSEMBLY, fuel (for components see list of parts under details of "Primary and Final Fuel Filters") (2)		305 273 R1	BRACKET, fuel filter
32	612 084 C1	GEAR, injection pump drive (will work for injection pump GEAR, 278 315 R1, HUB, 278 316 R1 and WASHER, 278 317 R1)		179 858	SCREW, 7/16 x 1" hex-hd cap (3)
	114 497	NUT, 9/16NF jam		103 322	WASHER, 7/16" lock (3)
	103 324	WASHER, 9/16" lock		305 927 R1	BRACKET, hand primer pump
33	303 463 R1	STUD, Roosa pump adapter (2) UD-236M 501 to 8182 UD-282M 501 to 12051		102 634	NUT, 5/16" (2)
34	303 462 R11	ADAPTER w/two STUD, 303 463 R1, Roosa pump UD-236M 501 to 8182 UD-282M 501 to 12051		179 816	SCREW, 5/16 x 3/4" hex-hd cap (2)
	179 838	SCREW, 3/8 x 7/3" hex-hd cap (3)		103 320	WASHER, 5/16" lock (2)
	103 321	WASHER, 3/8" lock (3)	263 716 R91	CLIP, fuel tube	
35	278 347 R1	GASKET, injection pump adapter UD-236M 501 to 8182 UD-282M 501 to 12051	37 167 D	ELBOW, fuel return line	
36	278 316 R1	HUB, injection pump gear (used with GEAR, 278 315 R1) SCREW, 5/16 x 1-1/8" hex-hd mach WASHER, w/external-tooth lock (3)	367 984 R1	GASKET, fuel line connector (12)	
37	278 317 R1	WASHER, injection pump gear (used with GEAR, 278 315 R1)	278 953 R91	NUT, fuel return line elbow (nylon)	
39	120 499	ELBOW, priming pump outlet (optional with ELBOW, 105 423) (2) UD-236M 8470 Up (2) UD-282M 12530 Up	19 387 R1	PIN, slotted spring 7/16 x 3/4" (3) UD-236M 9004 Up (3) UD-282M 13598 Up	
			701 127 C91	PACKAGE, injection pipe clamp field service (Consists of CLAMP, 670 004 C11 and two PAD, 332 491 R2) UD-236M 501 to 9003 UD-282M 501 to 13597	
			61 921 D	SEAL, injection pump torque screw	
			250 610 R2	SLEEVE, injection pipe (6)	

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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FUEL INJECTION PUMP DRIVE AND INJECTION PIPES- Continued

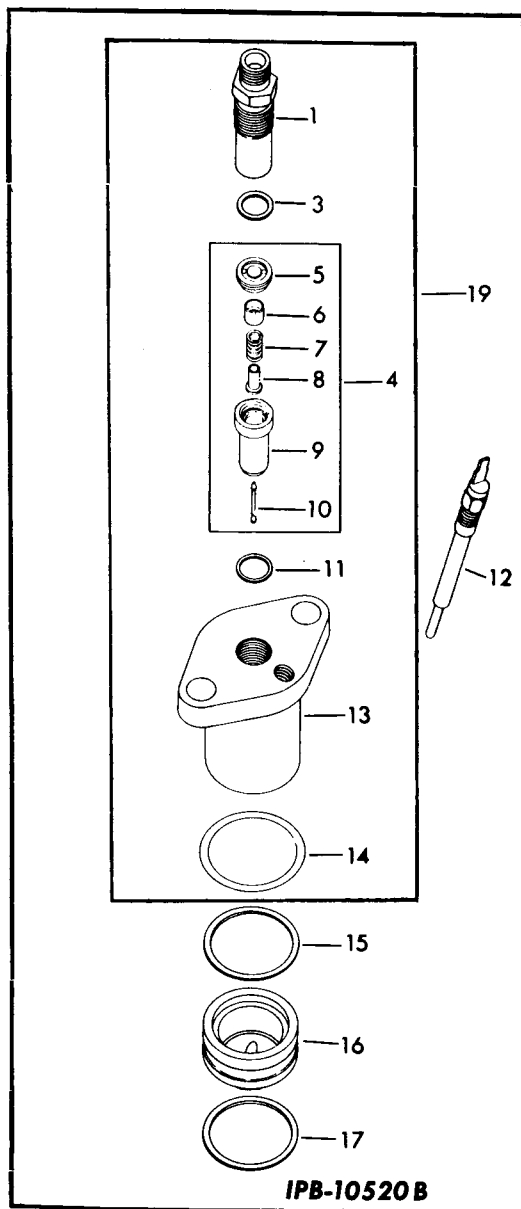
305 925 R1	SPACER, fuel filter
995 063 R1	TUBE, 3/8" OD copper bulk (*)

(*) - Part Number and Price covers
one foot of tubing. Furnished
only in fifty foot rolls.

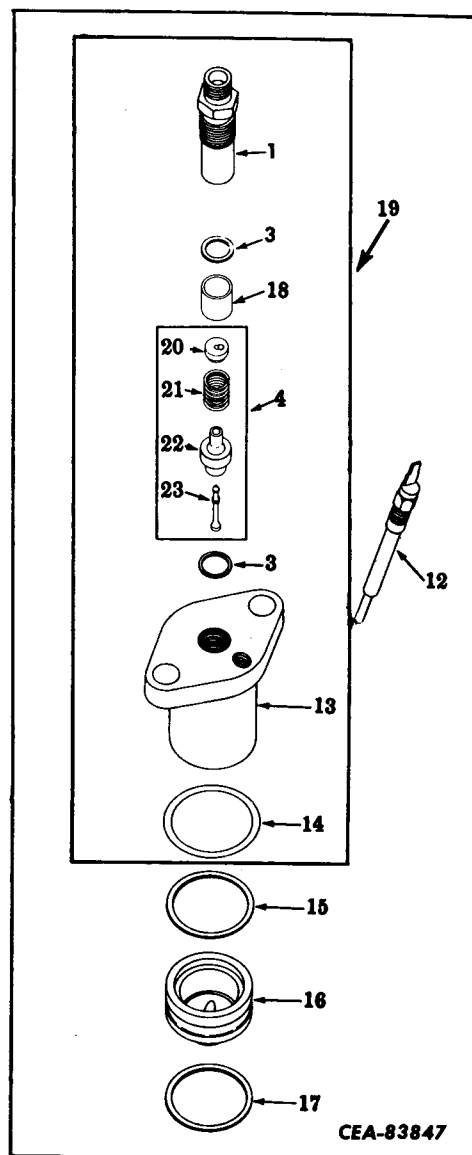
FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION
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REF. NO.	PART NUMBER	DESCRIPTION
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**INJECTION NOZZLE, PRE-COMBUSTION CHAMBER AND
GLOW PLUG
(UD-236)**

Nozzle Assembly, 279 263 R91

- | | | |
|---|------------|--|
| 1 | 279 265 R1 | FITTING, nozzle (used with NOZZLE, 279 263 R91) (6) |
| 1 | 278 321 R1 | FITTING, nozzle (used with NOZZLE, 332 487 R91 and 341 120 R91) |
| 3 | 308 011 R1 | GASKET, nozzle valve (used with NOZZLE, 279 263 R91) (12) |
| 3 | 279 274 R1 | GASKET, nozzle valve (used with NOZZLE, 332 487 R91 and 341 120 R91) |


Nozzle Assembly, 332 487 R91 and 341 120 R91

- | | | |
|---|-------------|--|
| 4 | 303 461 R91 | VALVE ASSEMBLY, nozzle used with NOZZLE, 279 263 R91) (6) |
| 4 | 330 303 R91 | VALVE ASSEMBLY, nozzle (used with NOZZLE, 332 487 R91 and 341 120 R91) |
| 5 | 309 006 R1 | CAP, nozzle body (used with NOZZLE, 279 263 R91) (6) |
| 6 | | HANGER, spring (order 303 461 R91) (used with NOZZLE, 279 263 R91) |

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
INJECTION NOZZLE, PRE-COMBUSTION CHAMBER AND GLOW PLUG - Continued (UD-236)			19	279 263 R91	NOZZLE ASSEMBLY, injection (order six NOZZLE, 332 487 R91) (6) (Composed of - 1 BODY 279 264 R2 1 FITTING 279 265 R1 1 GASKET 272 761 R1 2 GASKET 308 011 R1 1 SEAL 251 044 R2 1 VALVE 303 461 R91) SCREW, 3/8 x 2-1/2" hex-hd cap (12)
7	309 007 R1	SPRING, nozzle (.4440 - .4459") (used with NOZZLE, 279 263 R91)			
8	309 008 R1	SPACER (.020 - .024") (used with NOZZLE, 279 263 R91)			
8	309 009 R1	SPACER, (.026 - .030") (used with NOZZLE, 279 263 R91)			
8	309 010 R1	SPACER (.032 - .036") (used with NOZZLE, 279 263 R91)	19	332 487 R91	NOZZLE ASSEMBLY, injection (when NOZZLE, 279 263 R91 is required, order six NOZZLE, 332 487 R91) (when NOZZLE, 341 120 R91 is required, order six NOZZLE, 332 487 R91 and six CHAMBER, 341 163 R1) (6) (Composed of - 1 BODY 310 389 R1 1 FITTING 278 321 R1 3 GASKET 279 274 R1 1 SEAL 251 044 R2 1 SLEEVE 310 402 R1 1 VALVE 330 303 R91) SCREW, 3/8 x 2-1/2" hex-hd cap (12)
8	309 011 R1	SPACER (.038 - .042") (used with NOZZLE, 279 263 R91)			
9		BODY, nozzle (order 303 461 R91) (used with NOZZLE, 279 263 R91)			
10		PINTLE (order 303 461 R91) (used with NOZZLE, 279 263 R91)			
11	272 761 R1	GASKET, nozzle valve (used with NOZZLE, 279 263 R91) (6)			
12	304 131 R3	PLUG, glow (optional with 343 894 R1) (6)			
12	343 894 R1	PLUG, glow (optional with 304 131 R3) (6)	19	341 120 R91	NOZZLE ASSEMBLY, injection (order six NOZZLE, 332 487 R91 and six CHAMBER, 341 163 R1) (Composed of - 1 BODY 341 121 R1 1 FITTING 278 321 R1 3 GASKET 279 274 R1 1 SEAL 251 044 R2 1 SLEEVE 310 402 R1 1 VALVE 330 303 R91) SCREW, 3/8 x 2-1/2" hex-hd cap (12)
13	279 264 R2	BODY, nozzle (used with NOZZLES, 279 263 R91) (6)			
13	310 389 R1	BODY, nozzle (used with NOZZLE, 332 487 R91) (6)			
13	341 121 R1	BODY, nozzle (used with NOZZLE, 341 120 R91) (6)			
14	251 044 R2	SEAL, nozzle body dust (6)			
15	260 879 R4	GASKET, nozzle body (6)	20	310 394 R1	SEAT, nozzle spring (.012" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)
16	341 163 R1	CHAMBER, pre-combustion (Used with injection NOZZLES, 279 263 R91 and 332 487 R91) (6)	20	310 395 R1	SEAT, nozzle spring (.104" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)
16	341 119 R1	CHAMBER, pre-combustion (Used with injection NOZZLE, 341 120 R91) (6)	20	310 396 R1	SEAT, nozzle spring (.106" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)
17	260 879 R4	GASKET, pre-combustion chamber (6)			
18	310 402 R1	SLEEVE, nozzle valve (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)	20	310 397 R1	SEAT, nozzle spring (.108" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)

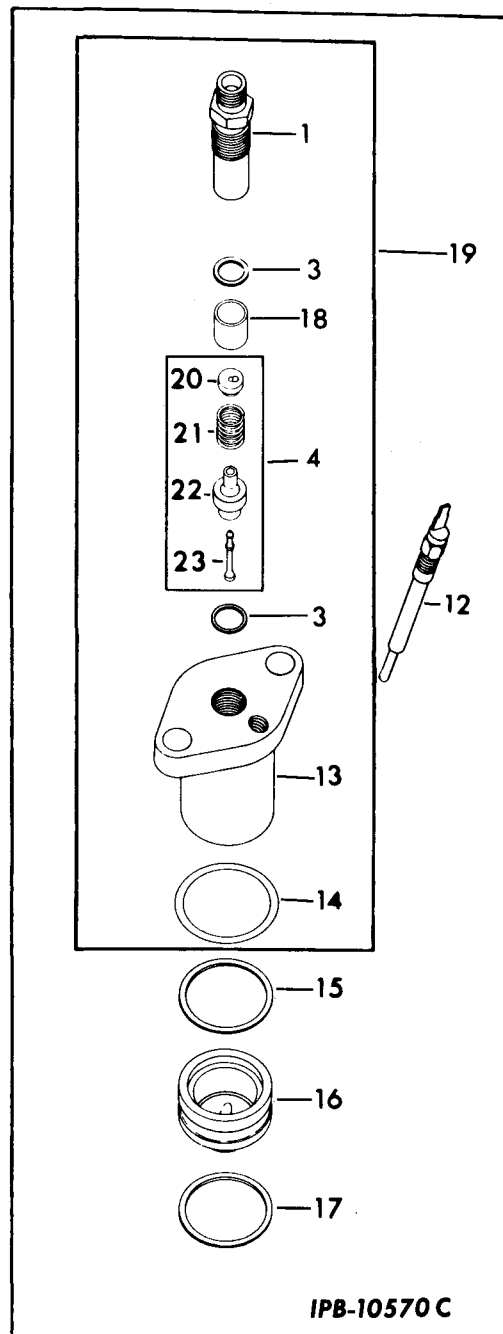
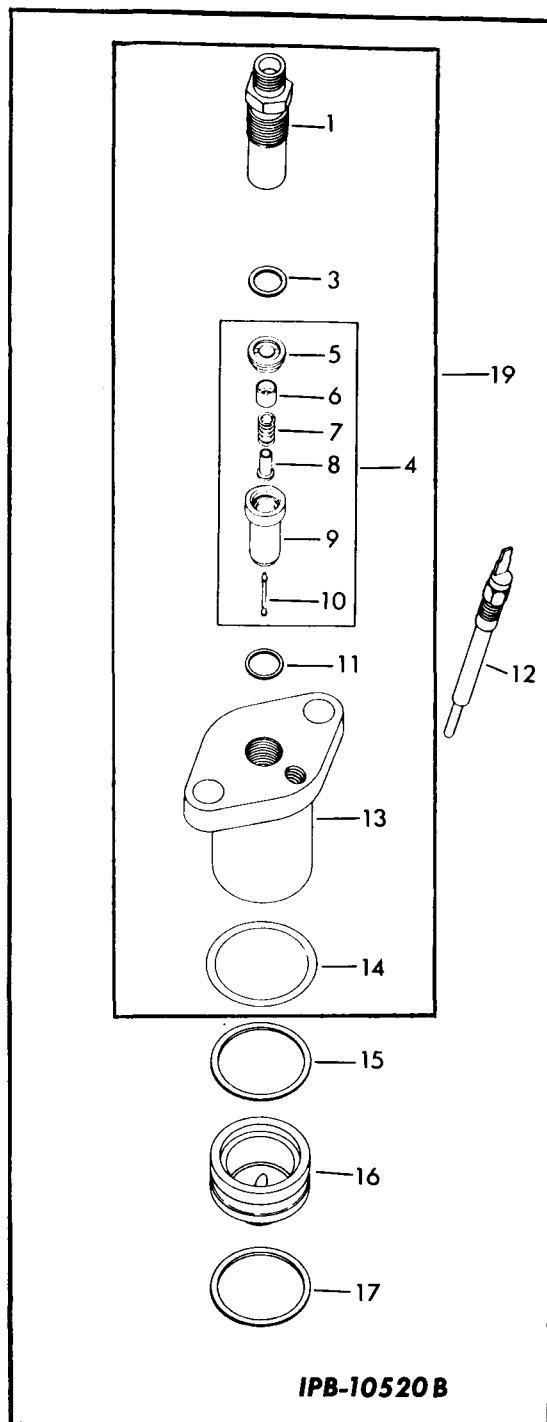
FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
INJECTION NOZZLE, PRECOMBUSTION CHAMBER AND GLOW PLUG - Continued (UD-236)					
20	310 398 R1	SEAT, nozzle spring (.110" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)			
20	310 399 R1	SEAT, nozzle spring (.112" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)			
20	310 400 R1	SEAT, nozzle spring (.114" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)			
20	310 401 R1	SEAT, nozzle spring (.116" thick) (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)			
21	310 393 R1	SPRING, nozzle valve (used with NOZZLE, 332 487 R91 and 341 120 R91) (6)			
22		SEAT, nozzle valve (order valve 330 303 R91) (used with NOZZLE, 332 487 R91 and 341 120 R91)			
23		VALVE, nozzle (order valve 330 303 R91) (used with NOZZLE, 332 487 R91 and 341 120 R91)			

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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INJECTION NOZZLE PRE-COMBUSTION CHAMBER AND GLOW PLUG (UD-282)



FUEL SYSTEM

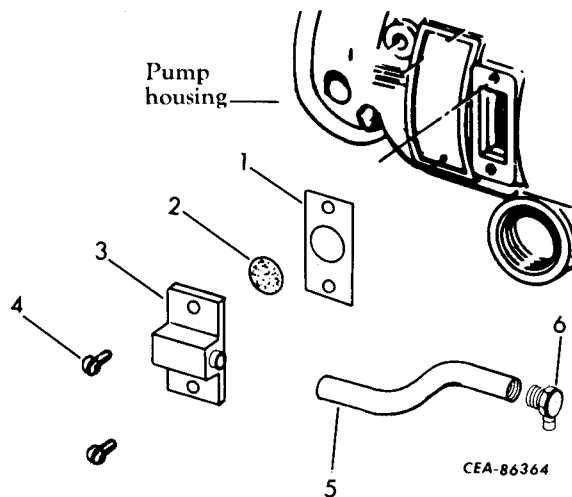
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
INJECTION NOZZLE PRE-COMBUSTION CHAMBER AND GLOW PLUG - Continued (UD-282)			13	279 264 R2	BODY, nozzle (used with NOZZLE, 279 263 R91) (6)
1	279 265 R1	FITTING, nozzle (used with NOZZLE, 279 263 R91) (6)	13	310 389 R1	BODY, nozzle (used with NOZZLE, 332 495 R91) (6)
1	278 321 R1	FITTING, nozzle (used with NOZZLE, 332 495 R91)	14	251 044 R2	SEAL, nozzle body dust (6)
3	308 011 R1	GASKET, nozzle valve (used with NOZZLE, 279 263 R91) (12)	15	260 879 R4	GASKET, nozzle body (6)
3	279 274 R1	GASKET, nozzle valve (used with NOZZLE, 332 495 R91) (18)	16	278 275 R3	CHAMBER, pre-combustion (6)
4	303 461 R91	VALVE ASSEMBLY, nozzle (used with NOZZLE, 279 263 R91) (6)	17	260 879 R4	GASKET, pre-combustion chamber (6)
4	332 496 R91	VALVE ASSEMBLY, nozzle (used with NOZZLE, 332 495 R91) (6)	18	310 402 R1	SLEEVE, nozzle valve (used with NOZZLE, 332 495 R91) (6)
5	309 006 R1	CAP, nozzle body (used with NOZZLE, 279 263 R91) (6)	19	279 263 R91	NOZZLE ASSEMBLY, injection (order six NOZZLE, 332 495 R91) (6) (Composed of - 1 BODY 279 264 R2 1 FITTING 279 265 R1 1 GASKET 272 761 R1 2 GASKET 308 011 R1 1 SEAL 251 044 R2 1 VALVE 303 461 R91) SCREW, 3/8 x 2-1/2" hex-hd cap (12)
6		HANGER, spring (order 303 461 R91) (used with NOZZLE, 279 263 R91)	19	332 495 R91	NOZZLE ASSEMBLY, injection (when NOZZLE, 279 263 R91 is required, order six NOZZLE, 332 495 R91) (6) (Composed of - 1 BODY 310 389 R1 1 FITTING 278 321 R1 3 GASKET 279 274 R1 1 SEAL 251 044 R2 1 SLEEVE 310 402 R1 1 VALVE 332 496 R91) SCREW, 3/8 x 2-1/2" hex-hd cap (12)
7	309 007 R1	SPRING, nozzle (.4440 - .4459") (used with NOZZLE, 279 263 R91)			
8	309 008 R1	SPACER (.020 - .024") (used with NOZZLE, 279 263 R91)			
8	309 009 R1	SPACER (.026 - .030") (used with NOZZLE, 279 263 R91)			
8	309 010 R1	SPACER (.032 - .036") (used with NOZZLE, 279 263 R91)			
8	309 011 R1	SPACER (.038 - .042") (used with NOZZLE, 279 263 R91)			
9		BODY, nozzle (order 303 461 R91) (used with NOZZLE, 279 263 R91)	20	310 394 R1	SEAT, nozzle spring (.102" thick) (used with NOZZLE, 332 495 R91) (6)
10		PINTLE (Order 303 461 R91) (used with NOZZLE, 279 263 R91)	20	310 395 R1	SEAT, nozzle spring (.104" thick) (used with NOZZLE, 332 495 R91) (6)
11	272 761 R1	GASKET, nozzle valve (used with NOZZLE, 279 263 R91) (6)	20	310 396 R1	SEAT, nozzle spring (.106" thick) (used with NOZZLE, 332 495 R91) (6)
12	304 131 R3	PLUG, glow (optional with 343 894 R1) (6)			
12	343 894 R1	PLUG, glow (optional with 304 131 R3) (6)	20	310 397 R1	SEAT, nozzle spring (.108" thick) (used with NOZZLE, 332 495 R91) (6)

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION
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**INJECTION NOZZLE PRE-COMBUSTION CHAMBER AND
FLOW PLUG - Continued
(UD-282)**

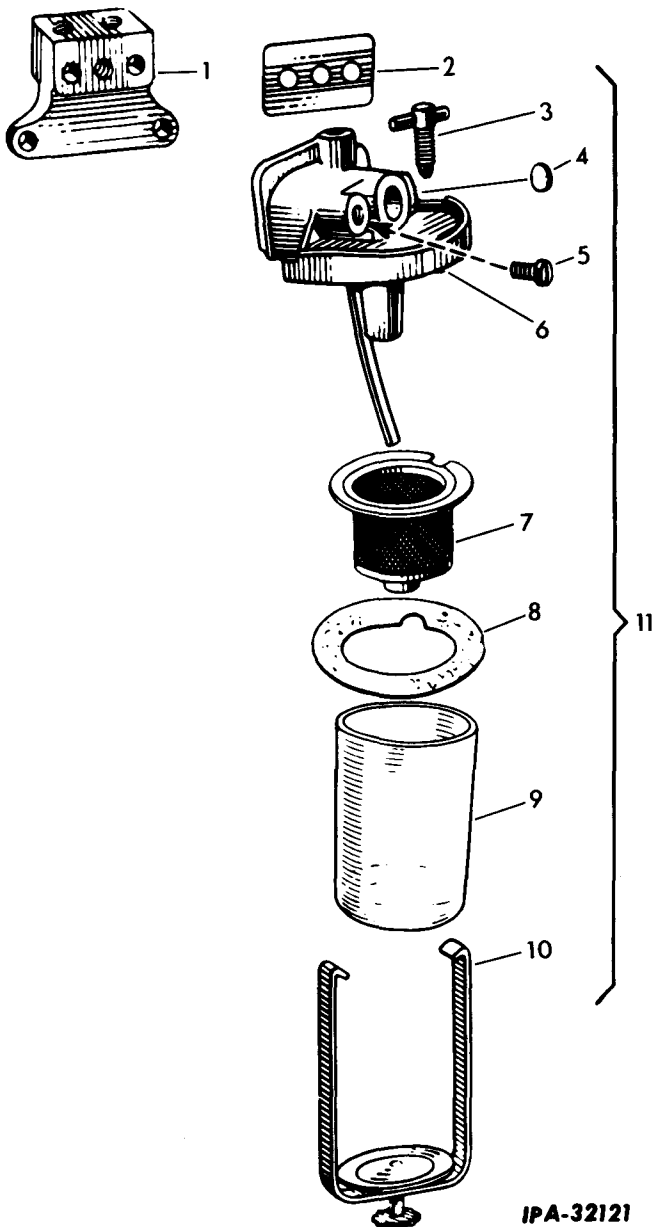
20	310 398 R1	SEAT, nozzle spring (.110" thick) (used with NOZZLE, 332 495 R91) (6)
20	310 399 R1	SEAT, nozzle spring (.112" thick) (used with NOZZLE, 332 495 R91) (6)
20	310 400 R1	SEAT, nozzle spring (.114" thick) (used with NOZZLE, 332 495 R91) (6)
20	310 401 R1	SEAT, nozzle spring (.116" thick) (used with NOZZLE, 332 495 R91) (6)
21	310 393 R1	SPRING, nozzle valve (used with NOZZLE, 332 495 R91) (6)
22		SEAT, nozzle valve (order 332 496 R91) (used with NOZZLE, 332 495 R91)
23		VALVE, nozzle (order 332 496 R91) (used with NOZZLE, 332 495 R91)

RETURN FUEL BY-PASS

606 847 C91	KIT, return fuel by-pass system (See NOTE) (Consists of the following parts -
1	610 953 C1 GASKET, timing and return oil fitting
2	610 955 C1 SCREEN, return oil
3	610 951 C91 FITTING, timing and return oil
4	SCREW, No. 8 x 5/16" slt-ov-hd (timing line cover) (2)
5	610 952 C1 HOSE, return oil
6	610 954 C91 FITTING, inlet
610 950 C91	CONNECTOR, return line (top of governor control cover)

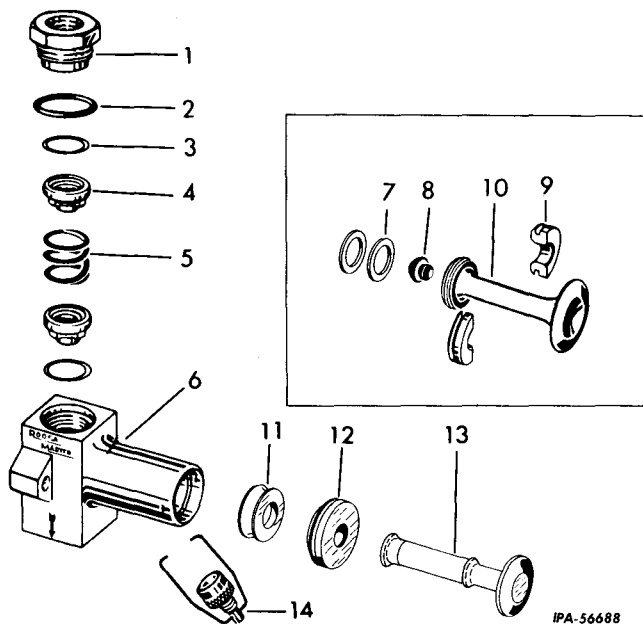
NOTE -Parts for reference numbers
1 to 6 are also listed and
illustrated in Roosa-Master
Fuel Injection Pump Parts
Catalog, PU-70.

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
WATER TRAP (UD-236 7540 and below) (UD-282 12145 and below)			5	60 871 DA	SCREW, water trap vent
 IPA-32121			6	251 380 R91	TOP w/drain PIPE and PLUG, 24 805 D, water trap
				179 893	SCREW, 1/2 x 2" hex-hd cap
				103 323	WASHER, 1/2" lock
			7	251 348 R91	SCREEN, water trap
			8	260 708 R2	GASKET, water trap bowl
			9	60 877 D	GLASS, water trap
			10	60 878 DX	BAIL w/thumb SCREW, water trap
			11	251 355 R91	TRAP ASSEMBLY, water (Composed of -
				1 BAIL	60 878 DX
				1 BOWL	60 877 D
				1 GASKET	260 708 R2
				1 SCREEN	251 348 R91
				1 SCREW	60 871 DA
				1 SCREW	279 173 R1
				1 TOP	251 380 R91)
1	9 311 D	BRACKET, water trap			
	179 839	SCREW, 3/8 x 1" hex-hd cap (2)			
	102 635	NUT, 3/8" (2)			
	103 321	WASHER, 3/8" lock (2)			
2	51 527 DC	GASKET, water trap			
3	279 173 R1	SCREW, water trap drain			
4	24 805 D	PLUG, 3/8" brs. expansion (type No. 1)			

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
HAND PRIMER PUMP (Hartford Machine Screw Co.) (Not used with Electric Fuel Transfer Pump) (UD-236 7540 and below) (UD-282 12145 and below)			6		BODY, hand primer pump (order PUMP, 303 753 R91)
			7	307 865 R1	SEAL, hand primer piston (Unit A) (2)
			8	307 864 R1	SEAL, hand primer piston (Unit A)
			9	307 862 R1	GUIDE, hand primer plunger (Unit A)
			10	307 860 R1	PLUNGER, pump (Unit A)
			11	309 019 R1	SEAL, hand primer piston (Unit B)
			12	309 018 R1	GUIDE, hand primer plunger (Unit B)
			13	309 017 R1	PLUNGER, pump (Unit B)
			14	307 861 R91	NUT w/WIRE, hand primer screw
				307 863 R1	CAP, hand primer pump rubber (Unit A)
				347 092 R1	CAP, plunger guide retaining (Unit B)

**(X) KEY TO UNITS**

- A 303 753 R91 PUMP ASSEMBLY, hand primer
(Order 303 753 R91, Hartford Machine Screw Co. number 12382)
(†)
- B 303 753 R91 PUMP ASSEMBLY, hand primer (will work for 303 753 R91 Hartford Machine Screw Co. number 701-7A)
(†)

(X) - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicate the part is used for all units.

- 1 307 867 R1 NUT, hand primer valve
- 2 307 870 R1 RING, valve nut seal
- 3 379 181 R1 GASKET, primer valve (2)
- 4 346 813 R91 VALVE, hand primer (2)
- 5 307 869 R1 SPRING, hand primer valve retaining

(†) - When Ordering Individual Parts for Either Pump Assembly Be Sure To Check Vendors Part Number of Pump Assembly.

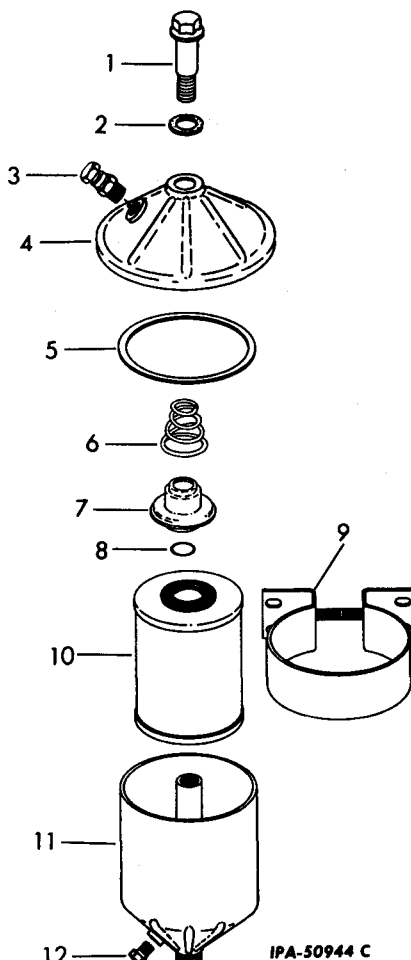
FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
PRIMARY AND FINAL FILTERS (Fram Corporation)			2	368 493 R1	GASKET, vent cap screw (2)
			3	39 677 DA	BLEEDER, fuel filter (For FILTER B)
			4	603 941 C91	COVER, fuel filter (2 for FILTER B)
			5	304 102 R1	GASKET, element cover (2)
			6	306 777 R1	"O" RING, 9/16 x 3/4 x 3/32" (2)
			7	304 101 R91	PACKAGE, final fuel filter element field service (Consists of ELEMENT and GASKET, 304 102 R1) (FILTER A)
			7	306 353 R91	PACKAGE, primary fuel filter element field service (Consists of ELEMENT and GASKET, 304 102 R1) (FILTER B)
			8	306 780 R1	STRAP, bracket (Not furnished as part of fuel filter assembly) (2)
			120 372		NUT, 1/4" sq. (2)
			133 082		SCREW, 1/4 x 3" rd-hd slt mach (2)
			120 380		WASHER, 1/4" lock (2)
			9	306 775 R91	BODY (FILTER A)
			9		BODY (Not Furnished Separately) (FILTER B)
			10	258 995 R1	PLUG, fuel filter drain (FILTER A)
			10	444 612	PLUG, fuel filter drain (FILTER B)
			11	306 778 R1	PLUG, vent (FILTER A)
			12	368 492 R1	SCREW, vent cap (FILTER A)
			13	306 776 R91	COVER (FILTER A)

Parts without letters after the description indicates the part is used for all filters listed below. Letters "A" and "B" are used to identify separate filters.

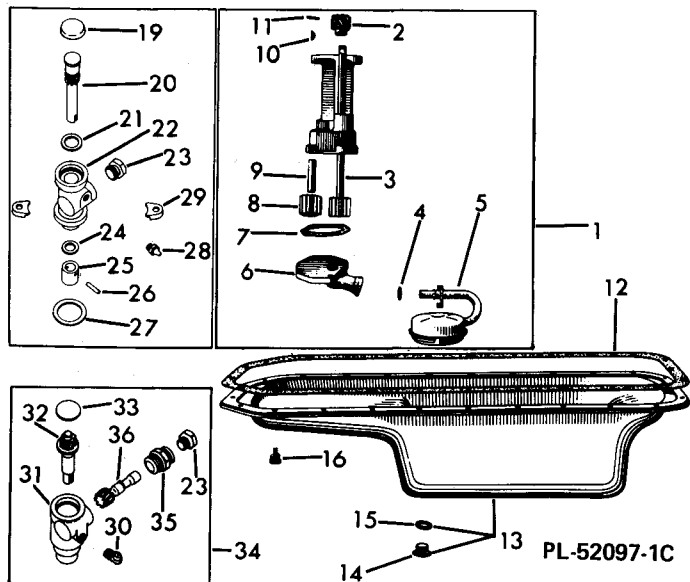
- A 306 399 R91 FIELD ASSEMBLY, final fuel (Order final fuel FILTER, 347 066 R91)
- 102 634 NUT, 5/16" (2)
- 179 824 SCREW, 5/16 x 1-3/4" hex-hd cap (2)
- 103 320 WASHER, 5/16" lock (2)
- 103 340 WASHER, 11/32 x 11/16" x No. 16 ga. (2)
- B 601 508 C91 FILTER ASSEMBLY, less STRAP, primary fuel (order FILTER ASSY, 610 932 C91 and BRACKET, 304 104 R1)
- 102 634 NUT, 5/16" (2)
- 179 824 SCREW, 5/16 x 1-3/4" hex-hd cap (2)
- 103 320 WASHER, 5/16" lock (2)
- 103 340 WASHER, 11/32 x 11/16" x No. 16 ga. (2)
- 1 368 422 R1 SCREW, fuel filter retaining cap (FILTER B)

FUEL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
PRIMARY AND FINAL FUEL FILTERS (Purolator Products, Inc.)			work for primary fuel FILTER, 278 062 R91 or 601 508 C91) also (together with ADAPTER, 444 014, BRACKET, 304 104 R91, and TEE, 116 386 will work for primary fuel FILTER, 333 863 R91)		
			102 634 NUT, 5/16" (2) 179 824 SCREW, 5/16 x 1-3/4" hex-hd cap (2) 103 320 WASHER, 5/16 lock (2) 103 340 WASHER, 11/32 x 11/16" x 16 ga. (2)		
1 321 727 R1 SCREW, retaining (FILTER A)			1 368 333 R1 SCREW, retaining (FILTER B)		
2 368 334 R1 GASKET, retaining (2)			3 39 677 DA BLEEDER		
4 321 720 R91 COVER and BUSHING (2)			5 304 102 R1 GASKET, element cover (2)		
6 321 721 R1 SPRING, retaining (2)			7 321 722 R1 RETAINER, gasket (2)		
8 355 966 R1 GASKET, "O" ring retainer (2)			9 304 104 R91 BRACKET, fuel filter (Not furnished as part of fuel filter assemblies) (2)		
10 304 101 R91 PACKAGE, final fuel filter field service (Consists of ELEMENT and GASKET, 304 102 R1) (FILTER A)			10 306 353 R91 PACKAGE, primary fuel filter element field service (Consists of ELEMENT and GASKET, 304 102 R1) (FILTER B)		
11 304 100 R91 CASE (2)			12 258 995 R1 PLUG, fuel filter drain (2)		
444 014 ADAPTER, primary fuel filter inlet (+) (FILTER B)			37 323 D ELBOW, 3/8" x 90° final filter inlet (%) (FILTER A)		
179 547 ELBOW, 3/8 x 1/4" reducing pipe (final filter outlet) (%) (FILTER A)			603 945 C1 NUT, flat speed (FILTER B)		
336 109 R1 SCREW, retaining (2 for use with FILTER, 333 863 R91)			116 386 TEE, 3/8 x 3/8 x 1/4" reducing (primary fuel filter outlet) (+) (FILTER B)		
(%) - Used With Primary Fuel FILTER, 347 066 R91 (Only When It Re- places Final Fuel Filter			(+) - Used With Primary Fuel FILTER, 601 507 C91 Only When It Re- places Primary Fuel Filter, 333 863 R91.		
A	347 066 R91	FILTER ASSY, final fuel (less BRACKET) (together with BRACKET, 304 104 R91) (Will work for final fuel FILTER, 278 062 R91 or 306 399 R91) also (together with BRACKET, 304 104 R91, ELBOW, 179 547 and ELBOW, 37 323 D will work for final fuel filter 333 863 R91)	102 634	NUT, 5/16" (2)	
	179 824	SCREW, 5/16 x 1-3/4" hex-hd cap (2)	103 320	WASHER, 5/16" lock (2)	
	103 340	WASHER, 11/32 x 11/16 x 16 ga. (2)			
B	610 932 C91	FILTER ASSY, primary fuel (less BRACKET) (together with BRACKET, 304 104 R91 will			

LUBRICATION SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKCASE OIL PAN, OIL PUMP AND PUMP SHAFT SUPPORT			6	169 679 R1	COVER, oil pump body (Used with PUMPS, 308 366 R91, 230 421 R91 and 367 811 R91)
			180 079		SCREW, 5/16 x 1" hex-hd cap (phosphate coated) (4)
			120 214		WASHER, 5/16" lock (phosphate coated) (4)
			6	379 139 R91	COVER w/SCREEN ASSY, oil pump (order SCREEN, 308 367 R91, COVER, 169 679 R1, PIN, 137 195 and "O" RING, 352 221 R1)
			103 320		SCREW, 5/16 x 7/8" hex-hd cap (4)
					WASHER, 5/16" lock (4)
			7	69 607 R1	GASKET, oil pump body cover (as required)
			8	35 631 H	GEAR, oil pump body driven (Used with PUMPS, 308 366 R91, 367 811 R91)
			8	227 713 R1	GEAR, oil pump body driven (Used with PUMPS, 379 138 R91 and 230 421 R91)
			9	35 647 H	SHAFT, idler gear
			10	103 905	KEY, oil pump drive gear (Woodruff No. 5)
			11	112 011	PIN, 1/8 x 7/8" square end straight
			12	369 984 R1	GASKET, crankcase pan
			13	367 575 R92	PAN w/GASKET, 3 405 H and PLUG, 445 096, crankcase oil
			14	445 096	PLUG, crankcase oil pan drain (Not used with oil level sight gauge ATTACHMENT, 332 472 R91)
			15	3 405 H	GASKET, oil pan drain plug
			16	179 816	SCREW, 5/16 x 3/4" hex-hd cap (25)
			103 320		WASHER, 5/16" lock (25)
			19	278 387 R1	PLUG, oil pump shaft support housing UD-236 501 to 976 UD-282 501 to 1481
			20	278 386 R1	PINION, oil pump shaft support UD-236 501 to 976 UD-282 501 to 1481
			21	368 055 R1	WASHER, pinion thrust (upper) UD-236 501 to 976 UD-282 501 to 1481
			22	278 376 R11	HOUSING, oil pump shaft support UD-236 501 to 976 UD-282 501 to 1481
			23	369 013 R1	PLUG, distributor housing
			24	368 054 R1	WASHER, pinion thrust (lower) UD-236 501 to 976 UD-282 502 to 1481
1	308 366 R91	PUMP ASSY, w/SCREEN, 308 367 R91, oil (order PUMP, 230 421 R91)			
1	367 811 R91	PUMP ASSY, w/SCREEN, 308 367 R91, oil (order PUMP, 230 421 R91)			
1	379 138 R91	PUMP ASSY w/COVER and SCREEN, 379 139 R91 (order PUMP, 230 421 R91, SCREEN, 308 367 R91, PIN, 137 195 and "O" RING, 352 221 R1)			
1	230 421 R91	PUMP ASSY, less SCREEN, oil			
	179 818	SCREW, 5/16 x 1" hex-hd cap (2)			
	103 320	WASHER, 5/16" lock (2)			
2	69 608 R3	GEAR, oil pump drive			
3	69 606 R11	SHAFT and GEAR ASSY, oil pump drive (used with PUMPS, 308 366 R91 and 367 811 R91)			
3	230 409 R91	SHAFT w/GEAR, oil pump drive (Used with PUMPS, 379 138 R91 and 230 421 R91)			
4	352 221 R1	"O" RING, oil pump screen (Used with PUMPS, 308 366 R91 and 230 421 R91)			
5	308 367 R91	SCREEN ASSY, oil pump (used with PUMPS, 308 366 R91, 230 421 R91 and 367 811 R91)			
	137 195	PIN, 1/8 x 1-1/4" cotter (Phosphate coated)			



LUBRICATION SYSTEM

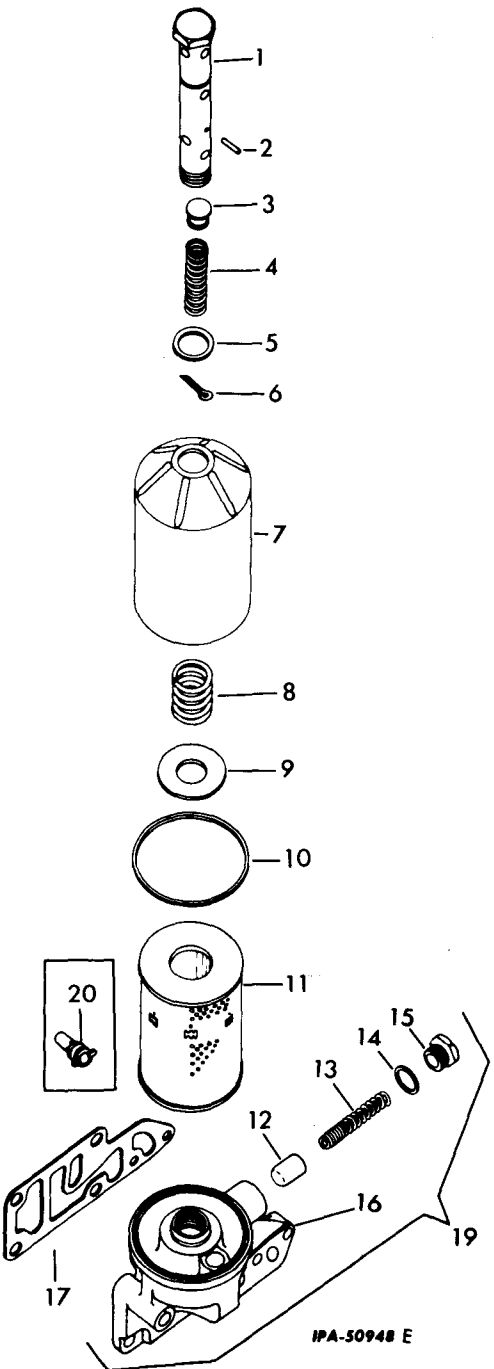
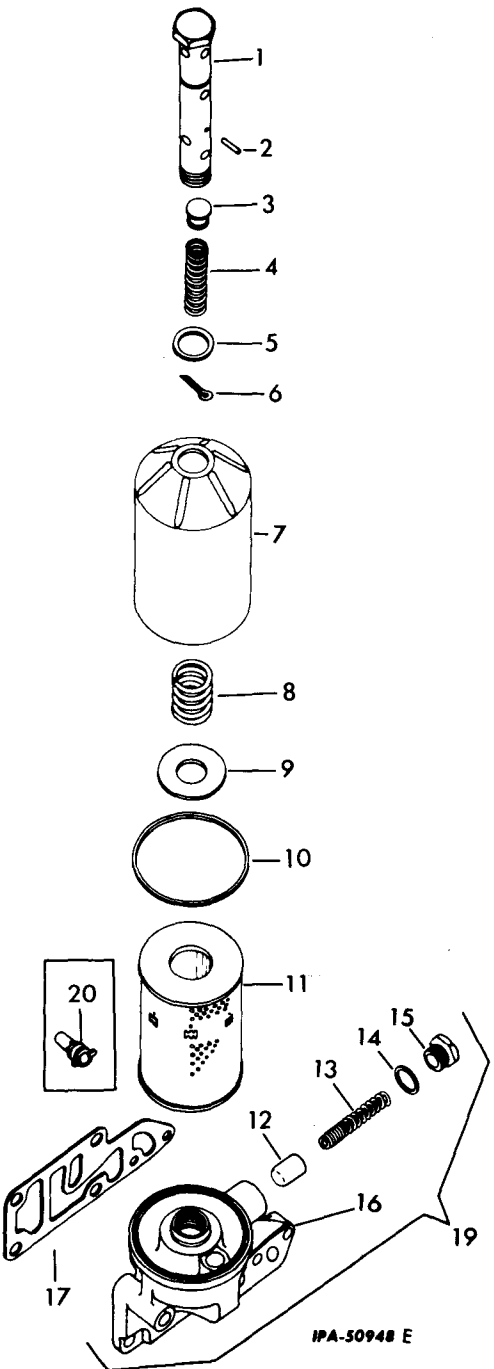
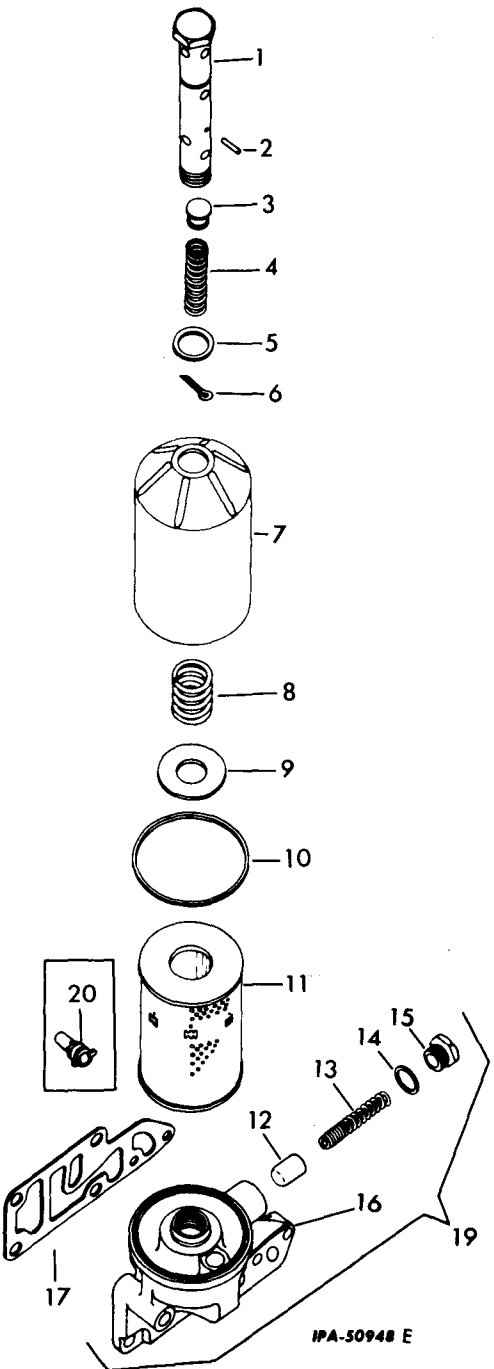
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKCASE OIL PAN, OIL PUMP AND PUMP SHAFT SUPPORT - Continued					1 PLATE 312 162 R1
					1 PLUG 172 557
25	368 053 R1	COLLAR, oil pump shaft support pinion UD-236 501 to 976 UD-282 501 to 1481			1 PLUG 369 013 R1
					1 SHAFT 312 159 R11)
26	354 552 R1	PIN, oil pump shaft support pinion collar UD-236 501 to 976 UD-282 501 to 1481	34	315 704 R91	SUPPORT ASSY, tachometer drive and oil pump shaft UD-236 1351 to 4940 UD-282 1733 to 6647 (Composed of -
27	353 936 R2	GASKET, oil pump shaft UD-236 501 to 976 UD-282 501 to 1481			1 FITTING 109 460
28	109 461	FITTING, lubrication (Lincoln No. 5000) (Optional with 138 322 H) UD-236 501 to 976 UD-282 501 to 1481			\$1 HOUSING
					1 PLATE 312 162 R1
					1 PLUG 172 557
					1 PLUG 369 013 R1
					1 SHAFT 315 705 R91)
28	138 322 H	FITTING, lubrication (Alemite No. 1610-BL) (Optional with 109 461) UD-236 501 to 976 UD-282 501 to 1481	34	316 328 R91	SUPPORT ASSY, tachometer or tachourmeter drive and oil pump shaft UD-236 4941 up UD-282 6648 up (Composed of -
29	353 937 R1	CLAMP, support (2) UD-236 501 to 976 UD-282 501 to 1481 SCREW, 5/16 x 7/8" hex-hd cap (2) WASHER, 5/16" lock (2)			1 FITTING 109 460
					1 GEAR 314 442 R91
					\$1 HOUSING
					1 HOUSING 368 246 R1
					1 PLATE 312 162 R1
					1 PLUG 172 557
					1 SHAFT 315 705 R91)
30	109 460	FITTING, lubrication (Lincoln 5300) UD-236 977 up UD-282 1482 up	35	368 246 R1	HOUSING, tachometer or tachour- meter connection (also listed and illustrated with tachometer)
31		HOUSING, oil pump shaft support (Order SUPPORT ASSY, 312 157 R91, 315 704 R91 or 316 328 R91) UD-236 977 up UD-282 1482 up	36	314 442 R91	GEAR, tachometer or tachourmeter drive UD-236 1351 up UD-282 1733 up
32	315 705 R91	SHAFT w/GEAR and WASHER, tachometer drive (used with SUPPORT, 315 704 R91) UD-236 1351 up UD-282 1733 up	36	368 245 R12	GEAR, tachometer or tachourmeter drive (used with ATTACHMENTS, 306 686 R91 and 306 687 R91, listed under tachometer)
32	312 159 R11	SHAFT w/GEAR and WASHER, tachometer drive (used with SUPPORT, 312 157 R91) UD-236 977 to 1350 UD-282 1482 to 1732	137 195		PIN, 1/8 x 1-1/4" cotter
33	312 162 R1	PLATE, tachometer thrust UD-236 977 up UD-282 1482 up	172 558		PLUG, 1-3/4 x .083" housing expansion UD-236 501 to 976 UD-282 501 to 1481
34	312 157 R91	SUPPORT ASSY, tachometer drive pump shaft UD-236 977 to 1350 UD-282 1482 to 1732 (Composed of - 1 FITTING 109 460 \$1 HOUSING			

(\$) - Not Furnished Separately.

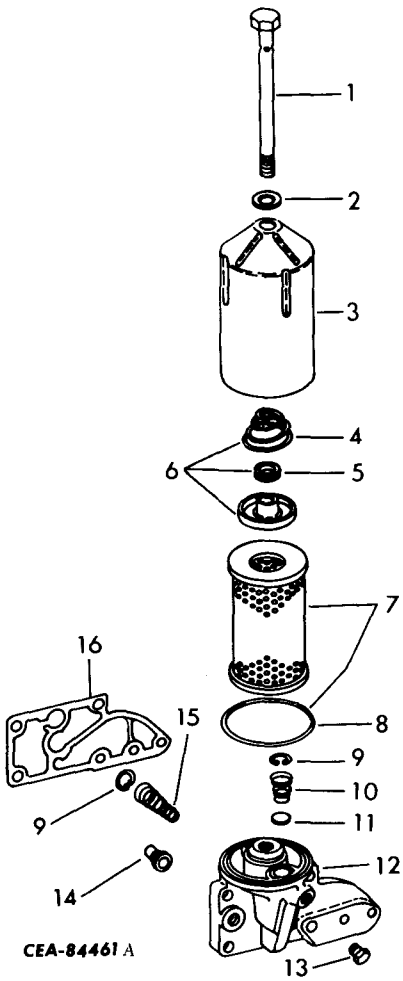
LUBRICATION SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKCASE OIL PAN, OIL PUMP AND PUMP SHAFT SUPPORT - Continued					
	172 557	PLUG, 1-3/16 x .083" housing expansion UD-236 977 up UD-282 1482 up			
	219 199	PLUG, 1/2" pipe (oil pan drain plug for use with oil level sight gauge ATTACHMENT, 332 472 R91)			
	114 869 R1	REINFORCEMENT, crankcase oil pan (for use with PAN, 367 575 R91 only)			

LUBRICATION

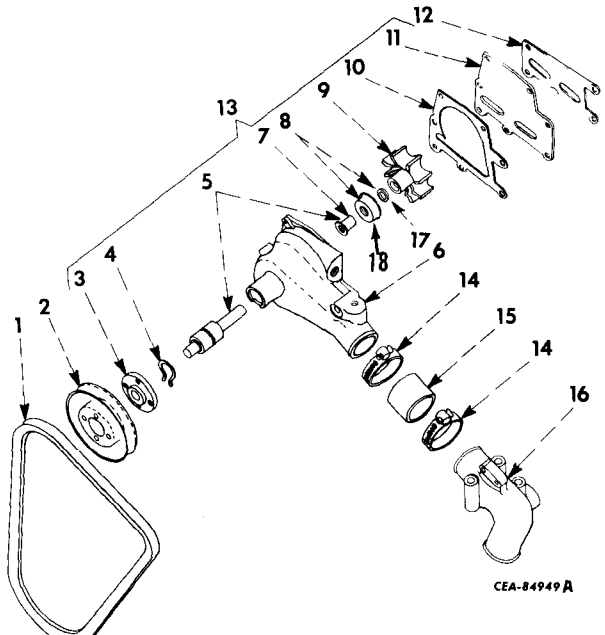
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
LUBRICATING OIL FILTER (UD-236M 501 to 6555) (UD-282M 501 to 8979)			2	17 141 R1	PIN, 5/32 x 1" (by-pass valve and spring retainer)
			3	304 008 R1	VALVE, by-pass
			4	304 009 R1	SPRING, by-pass valve
			5	304 012 R1	GASKET, center tube
			6	103 364	PIN, 1/16 x 1-1/8" cotter
			7	303 998 R1	CASE, lubricating oil filter
			8	304 011 R1	SPRING, element hold down
			9	304 010 R1	WASHER, element retainer
			10	304 854 R1	GASKET, oil filter case
			11	323 827 R91	PACKAGE, lubricating oil filter element service (consists of ELEMENT and GASKET, 304 854 R1)
			12	61 261 VA	VALVE, relief
			13	49 946 HA	SPRING, relief valve
			14	3 405 H	GASKET, relief valve plug
			15	61 263 VA	PLUG, relief valve
			16		Not Furnished Separately
			17	349 039 R1	GASKET, lubricating oil filter base
			19	320 285 R11	BASE ASSEMBLY (Consists of Ref. 12 to 16 and PLUG, 445 686)
				179 860	SCREW, 7/16 x 1-1/4" hex-hd cap (3)
				179 866	SCREW, 7/16 x 2" hex-hd cap
				138 225	SCREW, 5/16 x 1-3/4" hex-soc-hd cap (2)
				103 322	WASHER, 7/16" lock (4)
			20	612 092 C91	VALVE, oil pressure regulating (used only when CRANKCASE, 601 776 C91 or 612 017 C91, replaces CRANKCASE, 312 434 R93)
				349 055 R2	"O" RING
				445 686	PLUG, 3/8NPT sq-hd pipe
304 003 R91 FILTER ASSEMBLY, oil					
1	304 005 R91	TUBE w/PIN, 17 141 R1, VALVE, 304 008 R1 and SPRING, 304 009 R1, center			

LUBRICATION

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
LUBRICATING OIL FILTER (UD-236M 6556 Up) (UD-282M 8980 Up)			7	323 827 R91	PACKAGE, lubricating oil filter element service (Consists of ELEMENT, and GASKET, 304 854 R1)
 CEA-84461 A			8	304 854 R1	GASKET, oil filter case
			9	303 322 R1	RING, snap (2)
			10	384 525 R1	SPRING, check valve
			11	384 528 R2	VALVE, oil filter base
			12	601 789 C11	BASE w/PLUG, 445 673 oil filter
			13	444 618	PLUG, 1/4" automotive hex-hd pipe
			14	341 195 R92	VALVE, oil pressure regulating (*)
			15	384 527 R1	SPRING, element by-pass
			16	601 790 C1	GASKET, oil filter base (*)
				445 673	PLUG, oil filter base
601 786 C91	FILTER ASSEMBLY, lubricating oil				
179 860	SCREW, 7/16 x 1-1/4" hex-hd cap (3)				
179 866	SCREW, 7/16 x 2" hex-hd cap				
138 225	SCREW, 5/16 x 1-3/4" hex-soc-hd (2)				
103 322	WASHER, 7/16" lock (4)				
1	384 530 R11	TUBE ASSEMBLY, oil filter center			
2	384 532 R1	GASKET, center tube			
3	384 529 R1	CASE, oil filter			
4	384 536 R1	SPRING, element hold down			
5	384 535 R1	GROMMET, element retaining washer			
6	384 533 R91	RETAINER w/GROMMET, 384 535 R1, and SPRING, 384 536 R1, element			

(*) - Not Furnished As Part Of Filter Assembly.

COOLING

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
WATER PUMP AND RELATED PARTS			10	69 674 R1	GASKET, water pump plate
			11	69 675 R1	PLATE, water pump
				441 444	SCREW, 1/4 x 1/2" pan-hd slt mach. (3)
			12	69 676 R1	GASKET, water pump
			13	601 816 C92	PUMP ASSEMBLY, water
				179 849	SCREW, 3/8 x 2-1/2" hex-hd cap (3)
				179 848	SCREW, 3/8 x 2-1/4" hex-hd cap
				103 321	WASHER, 3/8" lock (4)
			14	279 038 R91	CLAMP, water pump inlet hose (2)
			15	407 008 R1	HOSE, water pump inlet (1-3/4 x 2 x 3/16")
			16	278 278 R2	ELBOW, water inlet (-)
			16	312 501 R1	ELBOW, water inlet (+)
				179 850	SCREW, 3/8 x 2-3/4" hex-hd cap (3)
				103 321	WASHER, 3/8" lock (3)
			17	684 432 C1	SEAT, water pump seal
			18		SEAL, water pump (order PACKAGE, 701 331 C92)
				374 544 R93	PACKAGE, water pump field service (Consists of the following parts -
1	670 363 C1	BELT, fan and generator (*) UD-236M 1678 Up UD-282M 2271 Up		1	GASKET 69 674 R1
1	304 436 R1	BELT, fan and generator (*) UD-236M 501 to 1677 UD-282M 501 to 2270		1	GASKET 69 676 R1
1	670 261 C1	BELT, fan and alternator (*)		1	IMPELLER 387 931 R1
1	670 363 C1	BELT, fan (+)		1	RING 102 069 H
				1	SEAL
2	304 435 R1	PULLEY, water pump			PACKAGE 701 331 C92
	181 309	SCREW, 1/4 x 1/2" hex-hd cap (@) (4)		1	SHAFT 376 602 R91)
	103 319	WASHER, 1/4" lock (4)	444 661		PLUG, 3/8"NPT sq-soc-hd pipe
3	368 501 R2	HUB, pulley	444 589		PLUG, 1/2"NPT sq-hd pipe (cd or zn-pltd) (3)
4	102 069 H	RING, bearing retainer			
5	376 602 R91	SHAFT and BEARING w/SLINGER, 71 351 R1			
6	318 118 R21	BODY w/two PLUG, 444 589, PLUG, 444 661 and PLUG, 44 789 water pump			
7	71 351 R1	SLINGER, water pump			
8	701 331 C92	PACKAGE, water pump seal			
9	387 931 R1	IMPELLER, water pump			

(-) - Used With Units Equipped With Alternator.

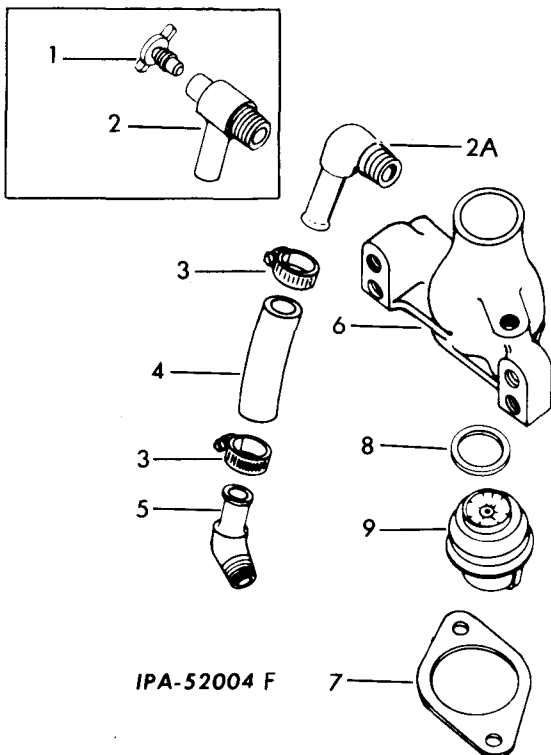
(@) - Not Used With Blower Fan.

(*) - Not Used With Hydraulic Pump Adapter.

(+) - Used With Hydraulic Pump Adapter.

COOLING

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
THERMOSTAT, THERMOSTAT HOUSING, WATER PUMP BY-PASS VALVE AND CONNECTIONS			6	278 279 R2	HOUSING, thermostat
				179 869	SCREW, 7/16 x 2-3/4" hex-hd cap (2)
				103 322	WASHER, 7/16" lock (2)
			7	278 280 R1	GASKET, thermostat housing
			8	254 753 R1	SEAL, thermostat (%) UD-236 501 to 844 UD-282 501 to 844
			8	262 882 R1	SEAL, thermostat (used with THERMOSTAT, 313 942 R91) (%) UD-236 845 Up UD-282 845 Up
			9	261 514 R92	THERMOSTAT w/SEAL, 254 753 R1 (165° to 190°) (%) UD-236 501 to 844 UD-282 501 to 844
			9	313 942 R91	THERMOSTAT w/SEAL, 262 882 R1 (170° to 190°) (%) UD-236 845 Up UD-282 845 Up



1	538 V	STEM, water pump by-pass valve (order ELBOW, 320 275 R1) (%)
2	303 483 R1	BODY, water pump by-pass valve (order ELBOW, 320 275 R1) (%)
2A	320 275 R1	ELBOW, water pump by-pass hose (will work for STEM, 538 V and BODY, 303 483 R1) (%)
3	274 085 R91	CLAMP, water pump by-pass hose (%) (2)
4	278 807 R1	HOSE, water pump by-pass (4 x 5/8 x 3/16") (UD-282) (%)
4	169 192 R1	HOSE, water pump by-pass (4 x 5/8 x 3/16") (%) (UD-236)
5	171 809 R1	ELBOW, water pump by-pass hose (5/8 x 1/2") (90°) (%) (+)
5	278 089 R1	ELBOW, water pump by-pass hose (5/8 x 1/2") (45°) (%) (*)

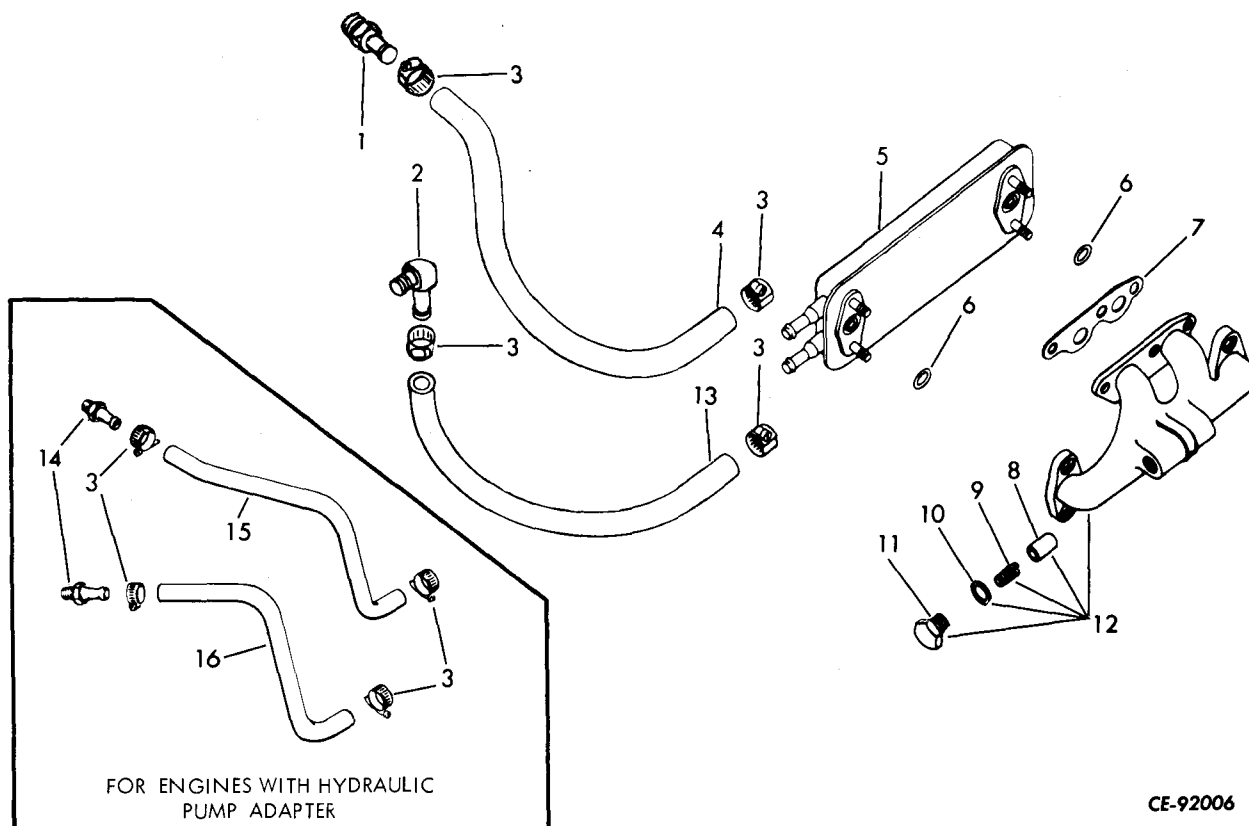
(*) - Not Used With Hydraulic Pump Adapter.

(+) - Used With Hydraulic Pump Adapter.

(%) - Not Used On Units Equipped With Flo-Matic Valve.

COOLING

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ENGINE OIL COOLER

CE-92006

1	320 182 R1	CONNECTOR, water inlet oil cooler hose (together with HOSE, 321 878 R1 will work for ELBOW, 278 089 R1 or together with HOSE, 321 880 R1 will work for ELBOW 299 446 R1) (*)	9	279 163 R1	SPRING, oil cooler relief valve
2	320 275 R1	ELBOW, water outlet oil cooler (*)	10	251 403 R1	GASKET, relief valve plug
3	274 085 R91	CLAMP, water hose (4)	11	251 402 R1	PLUG, relief valve
4	321 878 R1	HOSE, engine oil cooler water inlet (5/8 x 15/16 x 19.88") (together with CONNECTOR, 320 182 R1, will work for HOSE, 305 205 R1) (*)	12	279 160 R11	MANIFOLD ASSEMBLY, engine oil cooler (Composed of - 1 GASKET 251 403 R1 \$1 MANIFOLD 2 PLUG 444 574 1 PLUG 251 402 R1 1 SPRING 279 163 R1 1 VALVE 251 400 R1 SCREW, 5/16 x 1-3/4" hex-soc-hd cap (2) WASHER, 5/16" lock (2)
5	279 212 R91 102 634 103 320	COOLER, engine oil NUT, 5/16" (4) WASHER, 5/16" lock (4)	13	315 129 R1	HOSE, engine oil cooler water outlet (*)
6	350 684 R1	"O" RING, oil cooler to manifold (3/4 x 15/16 x 3/32") (2)			
7	349 038 R1	GASKET, oil cooler manifold			(*) - Not Used With Hydraulic Pump Adapter.
8	251 400 R1	VALVE, oil cooler relief			(\$ - Not Furnished Separately.

COOLING

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ENGINE OIL COOLER - Continued					
14	320 275 R1	ELBOW, water outlet oil cooler (+) UD-236M 501 to 8541 UD-282M 501 to @			
14	320 182 R1	CONNECTOR, water pump inlet oil cooler hose (together with HOSE, 321 880 R1 will work for ELBOW, 171 809 R1) (+) (1) UD-236M 501 to 8541 UD-282M 501 to @ (2) UD-236M 8542 Up UD-282M @ Up			
15	321 880 R1	HOSE, engine oil cooler water inlet (5/8 x 15/16 x 29.88") (Together with CONNECTOR, 320 182 R1 will work for HOSE, 312 502 R1) (+) UD-236M 501 to 8541 UD-282M 501 to @			
15	150 955 R2	HOSE, engine oil cooler water inlet (5/8 x 15/16 x 22.75") (+) UD-236M 8542 Up UD-282M @ Up			
16	312 503 R1	HOSE, engine oil cooler water outlet (5/8 x 15/16 x 20") (+) UD-236M 501 to 8541 UD-282M 501 to @			
16	684 162 R1	HOSE, engine oil cooler water outlet (5/8 x 15/16 x 15.75") (+) UD-236M 8542 Up UD-282M @ Up			
	362 123 R1	CLIP			
	444 574	PLUG, 1/4NPT sq-hd pipe (manifold) (2)			

(+) - Used With Hydraulic Pump
Adapter.

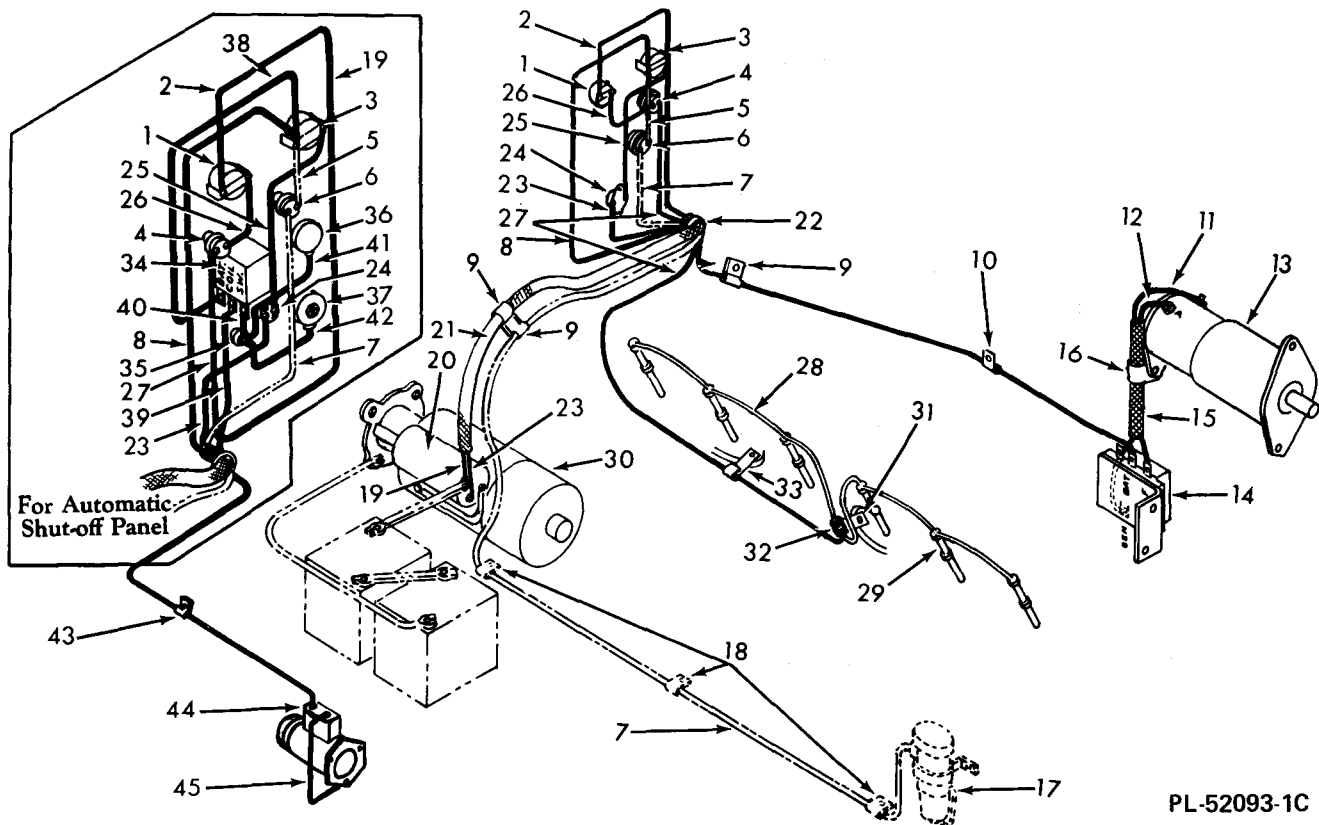
(@) - Serial Number Not Yet Available.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ELECTRIC WIRING

(For use with Instrument Panel ATTACHMENT, 304 584 R91)
and Automatic Shut-Off ATTACHMENT, 308 019 R91 and
Generator)



1	702 282 C1	METER, glow plug (*)	9	100 770 H	CLIP, cable (for 3/8" bolt on dash mounting bolts) (*) (2)
2	278 209 R92	CABLE, minus (-) on ammeter to plus (+) on glow plug meter (Positive ground) or plus (+) on ammeter to minus (-) on glow plug meter (negative ground) (*)	10	264 164 R91	CLIP, ammeter to regulator cable (for 7/16" bolt on front fuel oil filter bolt) (*)
3	702 283 C1	AMMETER (*)	11		CABLE, "F" on generator to "F" on regulator (blue) (order 264 637 R93)
4		SWITCH, glow plug (Delco-Remy Part No. 1996097) (*)	12		CABLE, "A" on generator to "GEN" on regulator (yellow) (order 264 637 R93)
5	359 377 R91	CABLE, fuel pump switch to minus (-) on ammeter	13		GENERATOR ASSEMBLY (for components see list of parts under details of "Generator")
6	62 801 DC	SWITCH, fuel pump			
7	305 222 R91	CABLE, fuel pump to switch (+)			
8	265 691 R91	CABLE, "BAT" on regulator to plus (+) on ammeter (positive ground) or "BAT" on regulator to minus (-) on ammeter (negative ground) (black) (*)			
					(*) - Furnished As Part Of "Instruments and Panel" ATTACHMENT, 304 584 R91.
					(+) - Furnished As Part Of "Electric Fuel Pump" ATTACHMENT, 306 447 R91.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING - Continued (For use with Instrument Panel ATTACHMENT, 304 584 R91 and Automatic Shut-Off ATTACHMENT, 308 019 R91 and Generator)			26	278 209 R92	CABLE, minus (-) on glow plug meter to glow plug switch (positive ground) or plus (+) on glow plug meter to glow plug switch (negative ground) (*)
14		REGULATOR ASSEMBLY (for components see list of parts under details of "Regulator")	27	304 589 R92	CABLE, glow plug switch to glow plug (*)
15	265 191 R91	HARNESS, regulator to generator cable UD-236 1678 up UD-282 2277 up	28	319 965 R91	HARNESS, glow plug cable (2)
15	264 637 R93	HARNESS, regulator to generator cable UD-236 501 to 1677 UD-282 501 to 2270	29	304 131 R3	PLUG, glow (optional with 343 894 R1) (6)
			29	343 894 R1	PLUG, glow (optional with 304 131 R3) (6)
16	263 514 R91	CLIP, cable (for 5/16" bolt on generator bracket)	30		MOTOR ASSEMBLY, cranking (for components see list of parts under details of "Cranking Motor")
17		PUMP, electric fuel transfer (for components see list of parts under the details of "Electric Fuel Transfer Pump") (+)	31	304 313 R1	BRACKET, junction block mounting
18	100 770 H	CLIP, cable (for 3/8" bolt on oil pan) (+) (4)	32	42 915 D	BLOCK, junction NUT, No. 10 SCREW, No. 10 x 1/2" slt-rd-hd mach WASHER, No. 10 lock
19		CABLE, solenoid switch to minus (-) on ammeter (positive ground) or solenoid switch to plus (+) on ammeter (negative ground) (red) (order 304 588 R91)	33	263 717 R91	CLIP, cable WASHER, 3/8" internal-external tooth lock
20		SWITCH ASSEMBLY, solenoid (Delco-Remy No. 1119778) (for components see list of parts under details of "Cranking Motor")	34	606 069 C91	RELAY (†)
21	304 588 R91	HARNESS, cable (*)	35	265 471 R91	SWITCH w/WIRE STOP (†)
22	144 229	GROMMET (in dash)	36	347 604 R91	GAUGE w/WIRE, oil pressure safety (†)
23		CABLE, engine starting switch to solenoid switch (black) (order 304 588 R91)	37		INDICATOR, heat safety (Listed and Illustrated with "Automatic Safety Shut-off Attachment")
24	366 317 R92	SWITCH, starting (*)			(+) - Furnished As Part Of "Electric Fuel Pump" ATTACHMENT, 306 447 R91.
25	359 377 R91	CABLE, minus (-) on ammeter to engine starting switch (positive ground) or plus (+) on ammeter to engine starting switch (negative ground) (*)			(†) - Furnished As Part Of "Automatic Safety Shut-off", ATTACHMENT, 308 019 R91.
					(*) - Furnished As Part Of "Instruments and Panel", ATTACHMENT, 304 584 R91.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING - Continued					
(For use with Instrument Panel ATTACHMENT, 304 584 R91 and Automatic Shut-Off ATTACHMENT, 304 019 R91, and Generator)					
38	359 377 R91	CABLE, "BAT" on relay to plus (+) on ammeter (positive ground) or "BAT" on relay to minus (-) on ammeter (negative ground) (black) (†)			
39	59 117 D	CABLE, injection pump solenoid to "coil" on relay (Black) (†)			
40		CABLE, "SW" on relay to stop switch (furnished as part of SWITCH, 265 471 R91)			
41		CABLE, stop switch to oil pressure safety indicator (furnished as part of 268 542 R91)			
42		CABLE, stop switch to heat safety indicator (furnished as part of 265 468 R91)			
43	100 770 H	CLIP, cable (on fuel filter bolt) (†)			
44		COVER and SOLENOID ASSEMBLY (for components see list of parts under details of "Automatic Safety Shut-Off") (†)			
45	57 055 DA	CABLE, injection pump solenoid to ground (†)			
	304 314 R91	BLOCK, 42 915 D, w/BRACKET, 304 313 R1 junction			

(+) - Furnished As Part Of "Electric Fuel Pump" ATTACHMENT, 306 447 R91.

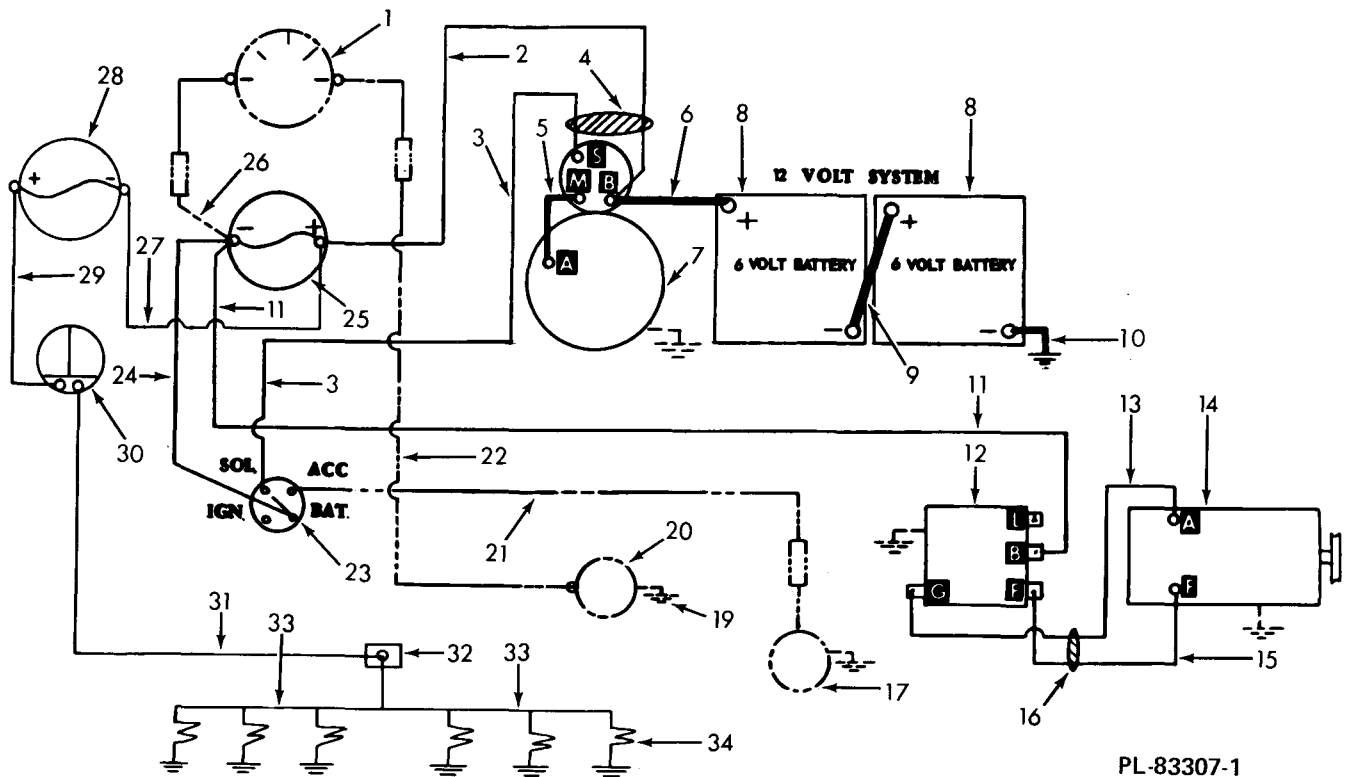
(†) - Furnished As Part Of "Automatic Safety Shut-Off", ATTACHMENT, 308 019 R91.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ELECTRIC WIRING

(Regular Gauges) (For use with Instrument Panel
ATTACHMENT, 349 132 R91 and Instrument Panel
Mounting ATTACHMENT, 349 226 R91 and Generator)

REGULAR SYSTEM

1	HOURMETER, electric (furnished as part of ATTACHMENT, 345 060 R91)	9	CABLE, battery to battery (not furnished with engine)
2	CABLE, plus (+) on ammeter to solenoid (order 304 588 R91)	10	CABLE, battery to ground (Not furnished with engine)
3	CABLE, "SOL" on ignition switch to "S" on solenoid (order 304 588 R91)	11	265 691 R91 CABLE, minus (-) on ammeter to "B" on regulator (*)
4	304 588 R91 HARNESS, cranking motor solenoid cable (*)	12	REGULATOR ASSY, voltage (for components see list of parts under details of "Voltage Regulator")
5	CONNECTOR, terminal to switch (Delco-Remy No. 1935435) (Furnished as part of cranking MOTOR)	13	CABLE, "A" on generator to "G" on voltage regulator (order 265 191 R91)
6	CABLE, battery to cranking motor (Not furnished with engine)	14	GENERATOR ASSY (for components see list of parts under details of "Generator")
7	MOTOR ASSY, cranking (for components see list of parts under details of "Cranking Motor")		
8	BATTERY (6 volt) (not furnished with engine) (2)		(*) - Also Listed With "Instruments, Instrument Panel And Instrument Panel Mounting."

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING (Regular Gauges) (For use with Instrument Panel ATTACHMENT, 349 132 R91 and Instrument Panel Mounting ATTACHMENT, 349 226 R91 and Generator)			32	42 915 D	BLOCK, junction NUT, No. 10 SCREW, No. 10 x 1/2" slit-rd-hd mach WASHER, No. 10 lock
15		CABLE, "F" on generator to "F" on voltage regulator (order 265 191 R91)	33	319 965 R91	HARNESS, glow plug cable (2)
16	265 191 R91	HARNESS, generator to voltage regulator	34	304 131 R3	PLUG, glow (optional with 343 894 R1) (6)
17		PUMP, electric fuel (for components see list of parts under details of "Electric Fuel Pump") (part of ATTACHMENT, 306 447 R91)	34	343 894 R1	PLUG, glow (optional with 304 131 R3) (6)
			304 313 R1	BRACKET, junction block mounting	
19	266 770 R91	CABLE, pressure switch to ground (part of ATTACHMENT, 345 060 R91)			
20	132 244 R91	SWITCH, pressure (part of ATTACH- MENT, 345 060 R91)			
21	305 222 R91	CABLE, pump to ignition switch (part of ATTACHMENT, 306 447 R91)			
22	305 222 R91	CABLE, hourmeter to pressure switch (part of ATTACHMENT, 345 060 R91)			
23	327 144 R91	SWITCH, ignition and starter (*)			
24	359 377 R91	CABLE, "BAT" on starting switch to minus on ammeter (*)			
25	702 283 C1	AMMETER (*)			
26	271 065 R91	CABLE, hourmeter to minus (-) on ammeter (part of ATTACHMENT, 345 060 R91)			
	264 164 R91	CLIP, cranking motor cable harness			
27	278 209 R92	CABLE, ammeter to glow plug meter (*)			
28	702 282 C1	METER, glow plug (*)			
29	278 209 R92	CABLE, glow plug meter to switch (*)			
30		SWITCH, push button (Delco-Remy Part No. 1996097) (*)			
31	304 589 R92	CABLE, switch to glow plug (*)			

(*) - Also Listed With "Instruments,
Instrument Panel And Instrument
Panel Mounting."

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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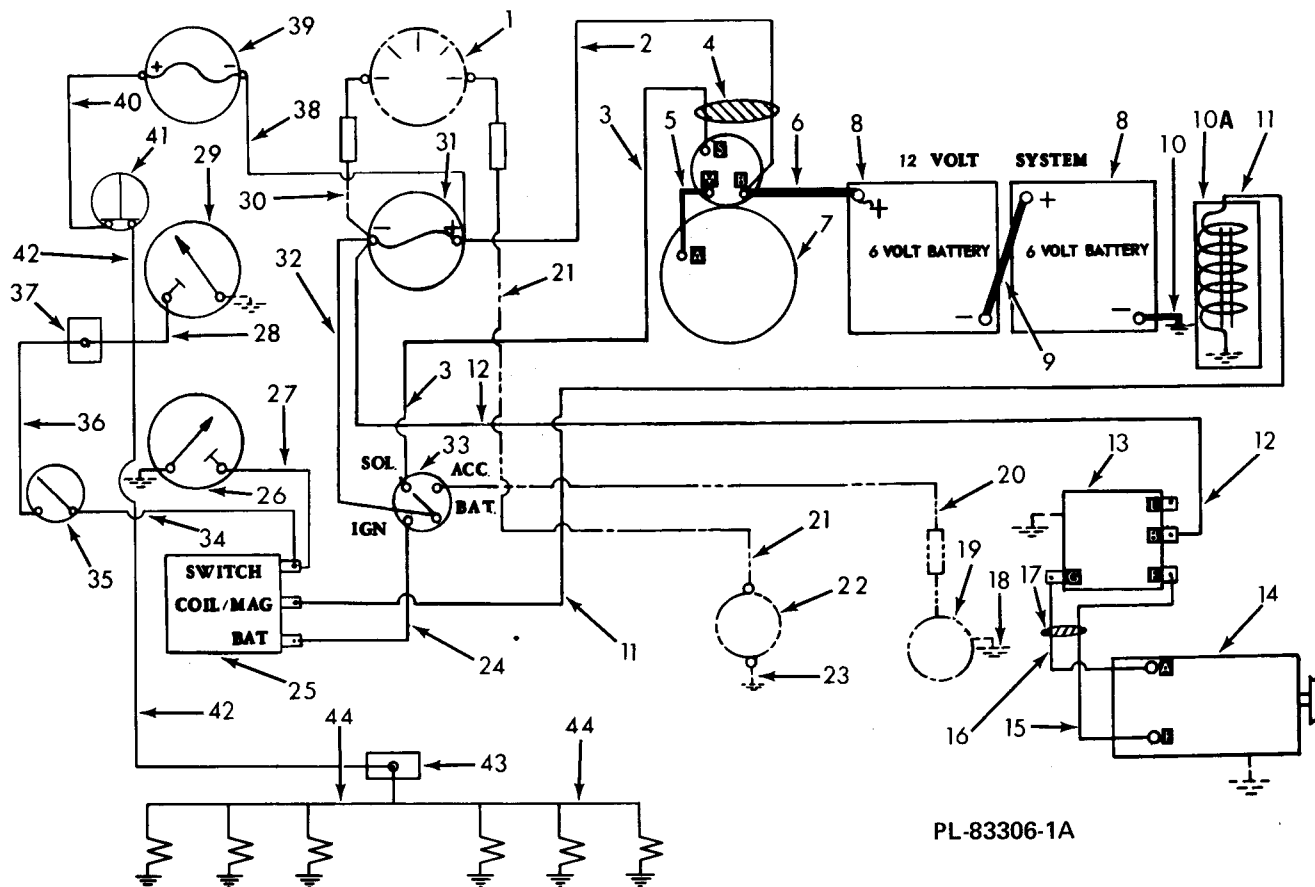
ELECTRIC WIRING

(Safety Gauges) (For use with Instrument Panel

ATTACHMENT, 349 133 R91 and Instrument Panel

Mounting ATTACHMENT, 349 226 R91 and Generator)

SAFETY SHUT-OFF SYSTEM



1	HOURMETER, electric (furnished as part of ATTACHMENT, 343 419 R91)	7	MOTOR ASSEMBLY, cranking (For components, see list of parts under details of "Cranking Motor")
2	CABLE, plus (+) on ammeter to solenoid (order 304 588 R91)	8	BATTERY (6 volt) (not furnished with engine) (2)
3	CABLE, "SOL" on ignition switch to "S" on solenoid (order 304 588 R91)	9	CABLE, battery to battery (not furnished with engine.)
4	304 588 R91 HARNESS, cranking motor solenoid cable (*)	10	CABLE, battery to ground (not furnished with engine)
5	CONNECTOR, terminal to switch (Delco-Remy No. 1935435) (furnished as part of CRANKING MOTOR)		
6	CABLE, battery to cranking motor (not furnished with engine)		

(*) - Also Listed With "Instruments, Instrument Panel And Instrument Panel Mounting."

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING (Safety Gauges) (For use with Instrument Panel ATTACHMENT, 349 133 R91 and Instrument Panel Mounting ATTACHMENT, 349 226 R91 and Generator)			26		INDICATOR, safety heat (listed and illustrated with "Instruments and Instrument Panel Safety Gauges Attachment")
10A		SOLENOID, injection pump (furnished as part of injection pump to cover)	27		CABLE, heat indicator to switch terminal on relay (part of INDI- CATOR, 347 602 R91)
11	59 116 D	CABLE, "C" terminal on relay to injection pump solenoid	28		CABLE, oil pressure indicator to switch terminal on relay (part of INDICATOR, 347 604 R91)
12	265 691 R91	CABLE, minus (-) on ammeter to "B" on regulator	29	347 604 R91	INDICATOR, safety oil pressure (*)
13		REGULATOR ASSY, voltage (for com- ponents see list of parts under details of "Voltage Regulator")	30	271 065 R91	CABLE, hourmeter to minus (-) on ammeter (part of ATTACHMENT, 345 060 R91)
14		GENERATOR ASSY (for components see list of parts under details of "Generator")	31	702 283 C1	AMMETER (*)
15		CABLE, "F" on generator to "F" on voltage regulator (order 265 191 R91)	32	359 377 R91	CABLE, "BAT" on ignition switch to minus (-) on ammeter (*)
16		CABLE, "A" on generator to "G" on voltage regulator (order 265 191 R91)	33	327 144 R91	SWITCH, ignition and starter (*)
17	265 191 R91	HARNESS, generator to voltage regulator	34	274 747 R91	CABLE, relay to safety control switch (*)
18		Not Used	34	274 747 R91	CABLE, relay to safety control switch (*) UD-236 8984 and below UD-282 13067 and below
19		PUMP, electric fuel (for components see list of parts under details of "Electric Fuel Pump") (part of ATTACHMENT, 306 447 R91)	35	603 884 C91	SWITCH, safety control toggle (optional with 253 818 R91) (*)
20	678 165 C1	CABLE, pump to ignition switch (part of ATTACHMENT, 306 447 R91)	35	603 884 C91	SWITCH, safety control toggle (optional with 253 818 R91) (*) UD-236 8984 and below UD-282 13067 and below
21	305 222 R91	CABLE, hourmeter to pressure switch (part of ATTACHMENT, 345 060 R91)	35	253 818 R91	SWITCH, safety control toggle (optional with 603 884 C91) (*)
22	132 244 R91	SWITCH, pressure (part of ATTACH- MENT, 345 060 R91)	35	253 818 R1	SWITCH, safety control toggle (optional with 603 884 C91) (*) UD-236 8984 and below UD-282 13067 and below
23	266 770 R91	CABLE, pressure switch to ground (part of ATTACHMENT, 345 060 R91)			
24	63 713 DA	CABLE, "BAT" terminal on relay to ignition switch (*)			(*) - Also Listed With "Instruments, Instrument Panel and Instrument Panel Mounting."
25	606 069 C91	RELAY, automatic safety shut-off (*)			

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING - Continued (Safety Gauges) (For use with Instrument Panel ATTACHMENT, 349 133 R91 and Instrument Panel Mounting ATTACHMENT, 349 226 R91 and Generator)			45	304 131 R3	PLUG, glow (optional with 343 894 R1) (6)
			45	343 894 R1	PLUG, glow (optional with 304 131 R3) (6)
36	274 747 R91	CABLE, safety control to junction block (*)		42 915 D	BLOCK, junction (8) (*)
36	274 747 R91	CABLE, safety control to junction block (*) UD-236 8984 and below UD-282 13067 and below		42 916 D	BRACKET, junction block (*)
			110 633		NUT, No. 10
			110 500		SCREW, No. 10 x 1/2" sltd-rd-hd mach
			106 498		WASHER, No. 12 lock
37	42 917 D	BLOCK w/BLOCK, 42 915 D and BRACKET, 42 916 D, junction (optional with 352 110 R91) (*)	304 313 R1		BRACKET, junction block mounting
37	42 917 D	BLOCK w/BLOCK, 42 915 D and BRACKET, 42 916D, junction (optional with 352 110 R91) (*) UD-236 8984 and below UD-282 13067 and below	266 758 R91		CABLE, ground (for use on Roosa- Master fuel injection pumps equipped with ground cable)
37	352 110 R91	BLOCK w/BLOCK, 42 915 D and BRACKET, 42 916 D, junction (optional with 42 917 D) (*) NUT, 3/8" NUT, No. 8NF (cd or zn-pltd) SCREW, 3/8 x 1-1/2" hex-hd cap WASHER, No. 8 internal tooth lock WASHER, 3/8" lock	363 487 R1		CLIP, relay cable (3)
	120 622				
	102 621				
	179 833				
	138 530				
	103 321				
37	352 110 R91	BLOCK w/BLOCK, 42 915 D and BRACKET, 42 916 D, junction (optional with 42 917 D) (*) UD-236 8984 and below UD-282 13067 and below			
38	278 209 R92	CABLE, ammeter to glow plug meter (*)			
39	702 282 C1	METER, glow plug (*)			
40	278 209 R92	CABLE, glow plug meter to switch (*)			
41		SWITCH, push button (Delco-Remy Part No. 1996097) (*)			
42	304 589 R92	CABLE, switch to glow plug (*)			
43	42 915 D	BLOCK, junction			
	110 633	NUT, No. 10			
	110 500	SCREW, No. 10 x 1/2" sltd-rd-hd mach			
	106 497	WASHER, No. 10 lock			
44	319 965 R91	HARNESS, glow plug cable (2)			

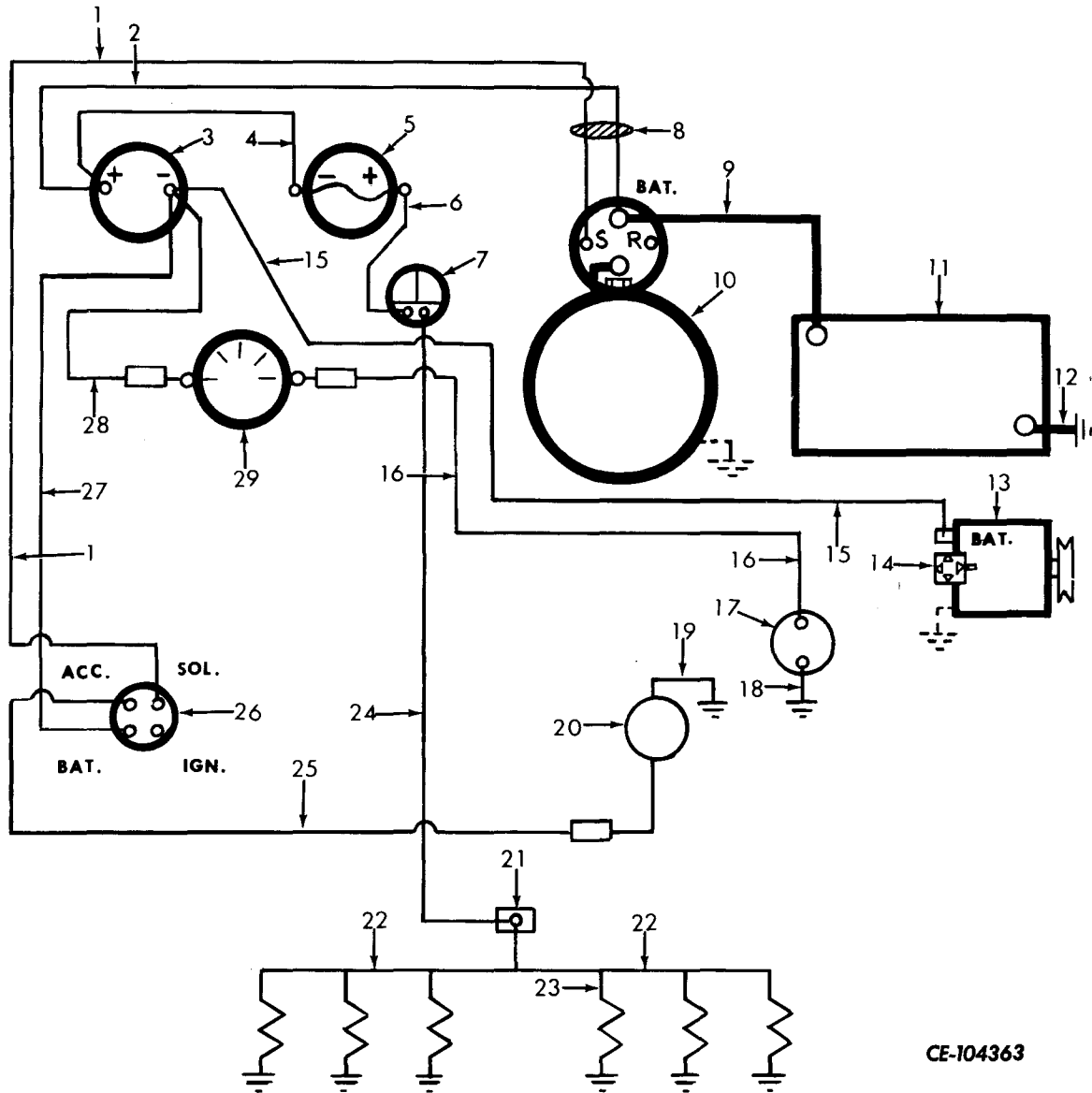
(*) - Also Listed With "Instruments,
Instrument Panel and Instrument
Panel Mounting."

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ELECTRIC WIRING

(Regular Gauges) (For Units Equipped With Alternator)



CE-104363

1	CABLE, "SOL" on ignition switch to "S" on solenoid (black)	6	CABLE, glow plug meter to glow plug switch (chrome)
2	CABLE, positive (+) on ammeter to "BAT" on solenoid (red)	7	SWITCH, glow plug
3	702 283 C1 AMMETER (@)	8	304 588 R91 HARNESS, cranking motor solenoid cable
4	CABLE, positive (+) on ammeter to negative (-) on glow plug meter (chrome)	9	CABLE, battery to cranking motor
5	702 282 C1 METER, glow plug		

(@) - Also Listed With "Instruments, Instrument Panel and Instrument Panel Mounting."

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING - Continued (Regular Gauges) (For Units Equipped With Alternator)			28		CABLE, hourmeter to negative (-) terminal on ammeter
10		MOTOR, cranking (for components see list of parts under details of "Cranking Motor")	29	621 657 C91	HOURLMETER, electric (+)
11		BATTERY (12 volt) (not furnished with engine)			
12		CABLE, battery to ground (not furnished with engine)			
13		ALTERNATOR w/REGULATOR (for components see list of parts under details of "Alternator w/Regulator")			
14		ADJUSTER, voltage (part of alternator w/regulator)			
15	683 127 C91	CABLE, "BAT" terminal on alternator to negative (-) terminal on ammeter (red)			
16		CABLE, hourmeter to pressure switch (red)			
17		SWITCH, pressure			
18		CABLE, pressure switch to ground			
19		CABLE, electric fuel transfer pump to ground			
20		PUMP, electric fuel (for components see list of parts under details of "Electric Fuel Transfer Pump")			
21		BLOCK, junction			
22		HARNESS, glow plug cable			
23		PLUG, glow (6)			
24		CABLE, junction block to glow plug switch (chrome)			
25		CABLE, electric fuel pump to "ACC" terminal on ignition switch			
26	327 144 R91	SWITCH, ignition			
27	359 377 R91	CABLE, "BAT" terminal on ignition switch to negative terminal on ammeter			

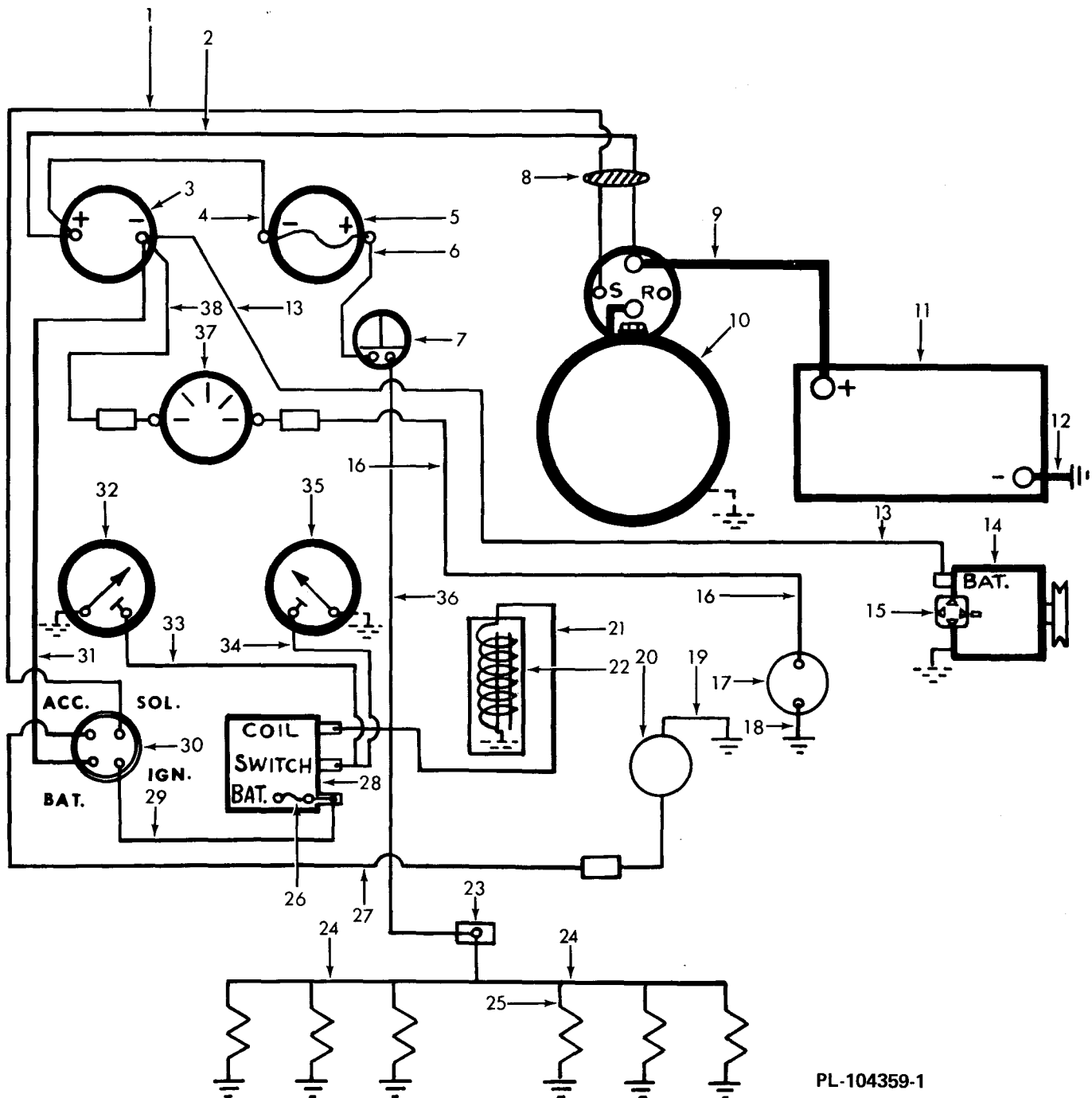
(+) - Also Listed and Illustrated With
"Hourmeter".

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ELECTRIC WIRING

(Safety Gauges) (For Units Equipped With Alternator)



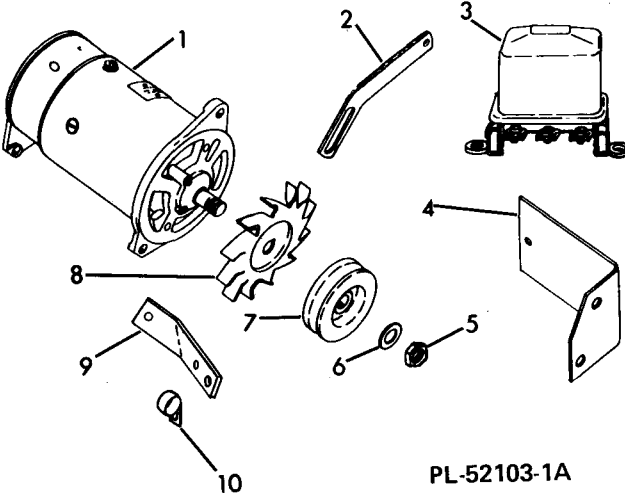
- | | |
|---|---|
| 1 | CABLE, "SOL" on ignition switch to "S" terminal on solenoid (black) |
| 2 | CABLE, positive (+) terminal on ammeter to "BAT" terminal on solenoid (red) |
| 3 | 702 283 C1 AMMETER |

- | | | |
|---|------------|--|
| 4 | | CABLE, positive (+) terminal on ammeter to negative (-) terminal on glow plug meter (chrome) |
| 5 | 702 282 C1 | METER, glow plug |
| 6 | | CABLE, glow plug meter to glow plug switch (chrome) |

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC WIRING - Continued (Safety Gauges) (For Units Equipped With Alternator)			28		SWITCH, relay
7		SWITCH, glow plug	29		CABLE, "BAT" terminal on relay switch to "IGN" terminal on ignition switch
8		HARNESS, cranking motor solenoid cable	30	327 144 R91	SWITCH, ignition and starter
9		CABLE, cranking motor to battery	31	359 377 R91	CABLE, "BAT" terminal on ignition switch to negative (-) terminal on ammeter
10		MOTOR, cranking (for components see list of parts under details of "Cranking Motor")	32		GAUGE, engine coolant temperature safety
11		BATTERY (12 volt) (Not furnished with engine)	33		CABLE, switch terminal on relay to engine coolant temperature gauge
12		CABLE, battery to ground (Not furnished with engine)	34		CABLE, switch terminal on relay to oil pressure safety gauge
13		CABLE, "BAT" terminal on alternator to negative (-) terminal on ammeter (red)	35		GAUGE, oil pressure safety
14		ALTERNATOR w/REGULATOR (for components see list of parts under details of "Alternator With Regulator")	36		CABLE, junction block to glow plug switch (Chrome)
15		ADJUSTER, voltage (part of Alternator with Regulator)	37	621 657 C91	HOURLMETER, electric (+)
16		CABLE, hourmeter to pressure switch (red)	38		CABLE, hourmeter to negative (-) terminal on ammeter
17		SWITCH, pressure			
18		CABLE, pressure switch to ground			
19		CABLE, electric fuel pump to ground			
20		PUMP, electric fuel			
21		CABLE, "COIL" terminal on relay to injection pump solenoid			
22		SOLENOID, injection pump			
23		BLOCK, junction			
24		HARNESS, glow plug cable			
25		PLUG, glow (6)			
26		FUSE, SFE (14 amp)			
27		CABLE, electric fuel pump to "ACC" terminal on ignition switch			(+) - Also Listed and Illustrated With "Hourmeter"

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
GENERATOR AND CONNECTIONS			4	304 445 R1	BRACKET, voltage regulator (*) NUT, 5/8" (2) SCREW, 5/8 x 3-3/4" hex-hd cap (2) WASHER, 5/8" lock (2)
 PL-52103-1A			5		NUT, drive pulley (Delco-Remy 1911324)
			6		WASHER, drive pulley lock (Delco- Remy No. 1888439)
			7	304 446 R1	PULLEY, generator UD-236 501 to 3109 Also 4860 to 5740 UD-282 501 to 3929 Also 6481 to 7669
			7	378 349 R1	PULLEY, generator UD-236 3110 to 4859 Also 5741 up UD-282 3930 to 6480 Also 7670 up
1		GENERATOR ASSY (for components see list of parts under details of "Generator")	8	90 426 H	FAN, generator
103 025		NUT, 5/16NF	9	306 657 R1	BRACKET, generator rear mounting (*) UD-236 1678 up UD-282 2271 up
179 819		SCREW, 5/16 x 1-1/8" hex-hd cap	9	304 017 R1	BRACKET, generator rear mounting (*) UD-236 1678 up UD-282 501 to 2270
181 343		SCREW, 5/16NF x 1-1/2" hex-hd cap	179 818		SCREW, 5/16 x 1" hex-hd cap (2)
103 320		WASHER, 5/16" lock (2)	103 320		WASHER, 5/16" lock (2)
280 185 R1		WASHER, generator mounting bolt	280 185 R1		WASHER, flat
2	304 018 R1	BRACE, generator (8) UD-236 501 to 1677 UD-282 501 to 2270	9	318 024 R2	BRACKET, generator rear mounting (+) UD-236 1678 up UD-282 2271 up
2	312 514 R1	BRACE, generator (*) UD-236 1678 up UD-282 2271 up	9	312 513 R2	BRACKET, generator rear mounting (+) UD-236 501 to 1677 UD-282 501 to 2270
2	274 191 R2	BRACE, generator (+) 179 817 SCREW, 5/16 x 7/8" hex-hd cap 179 859 SCREW, 7/16 x 1-1/8" hex-hd cap 103 322 WASHER, 7/16" lock 103 320 WASHER, 5/16" lock 280 185 R1 WASHER, 11/32 x 7/8"			
3		REGULATOR ASSY, voltage (for components see list of parts under details of "Voltage Regulator") NUT, 1/4 (cd or zn-pltd) (2) SCREW, 1/4 x 3/4" slt-rd-hd mach (cd or zn-pltd) (2)			
3		WASHER, 1/4" internal-external tooth lock (cd or zn-pltd) (2)			(*) - Not Used With Hydraulic Pump Adapter. (+) - Used With Hydraulic Pump Adapter.

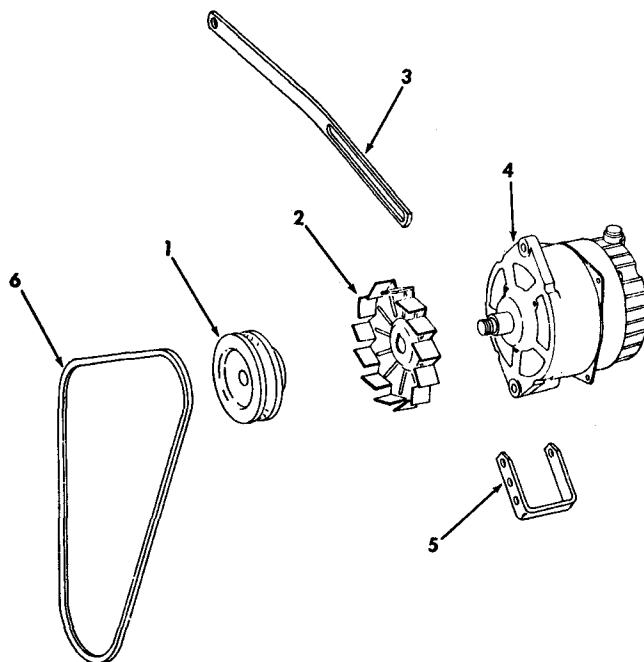
ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION
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GENERATOR AND CONNECTIONS - Continued

103 025		NUT, 5/16" @
179 818		SCREW, 5/16 x 1" hex-hd cap
179 819		SCREW, 5/16 x 1-1/8" hex-hd cap
103 320		WASHER, 5/16" lock (2)
		WASHER, 11/32 x 11/16" x No. 16 ga.
10	301 819 R1	CLAMP, hose (@) UD-236 5579 up UD-282 9049 up SCREW, 3/8 x 3/4" hex-hd cap WASHER, 3/8" lock NUT, 3/8"
	280 185 R1	SPACER, generator bracket (@)

REF. NO.	PART NUMBER	DESCRIPTION
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ALTERNATOR AND CONNECTIONS

CE-105720

1	384 986 R1	PULLEY, alternator
2	221 425 R1	FAN, alternator
3	384 997 R1	BRACE, alternator
	179 819	SCREW, 5/16 x 1-1/8" hex-hd cap
	179 858	SCREW, 7/16 x 1" hex-hd cap
	103 320	WASHER, 5/16" lock
	103 322	WASHER, 7/16" lock
	280 185 R1	WASHER, flat
4		ALTERNATOR w/REGULATOR (for components see list of parts under details of "ALTERNATOR w/REGULATOR")
5	384 995 R1	BRACKET, alternator mounting
	384 996 R1	SPACER, alternator mounting bracket
	179 824	SCREW, 5/16 x 1-3/4" hex-hd cap
	179 845	SCREW, 3/8 x 1-3/4" hex-hd cap
	103 320	WASHER, 5/16" lock
	103 321	WASHER, 3/8" lock
6	670 261 C1	BELT, fan and alternator

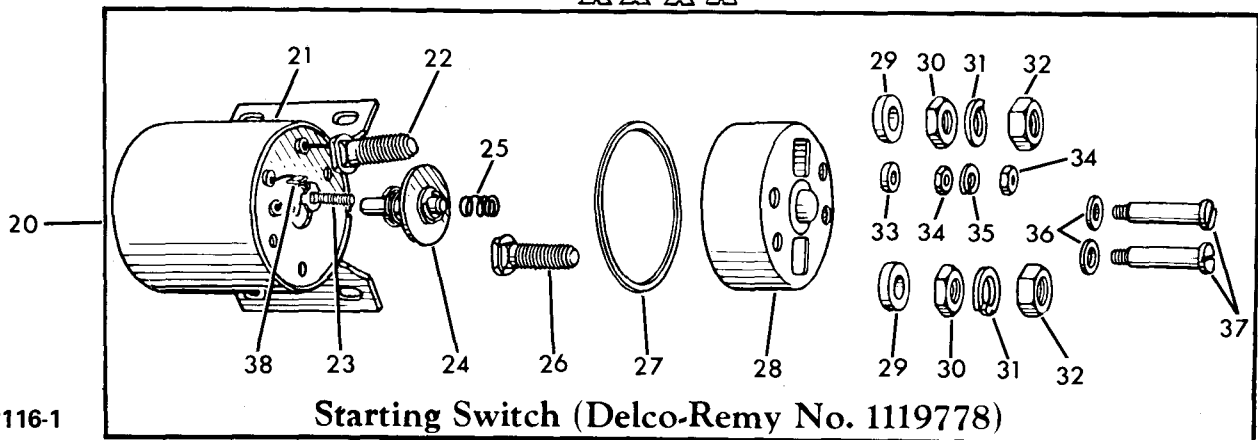
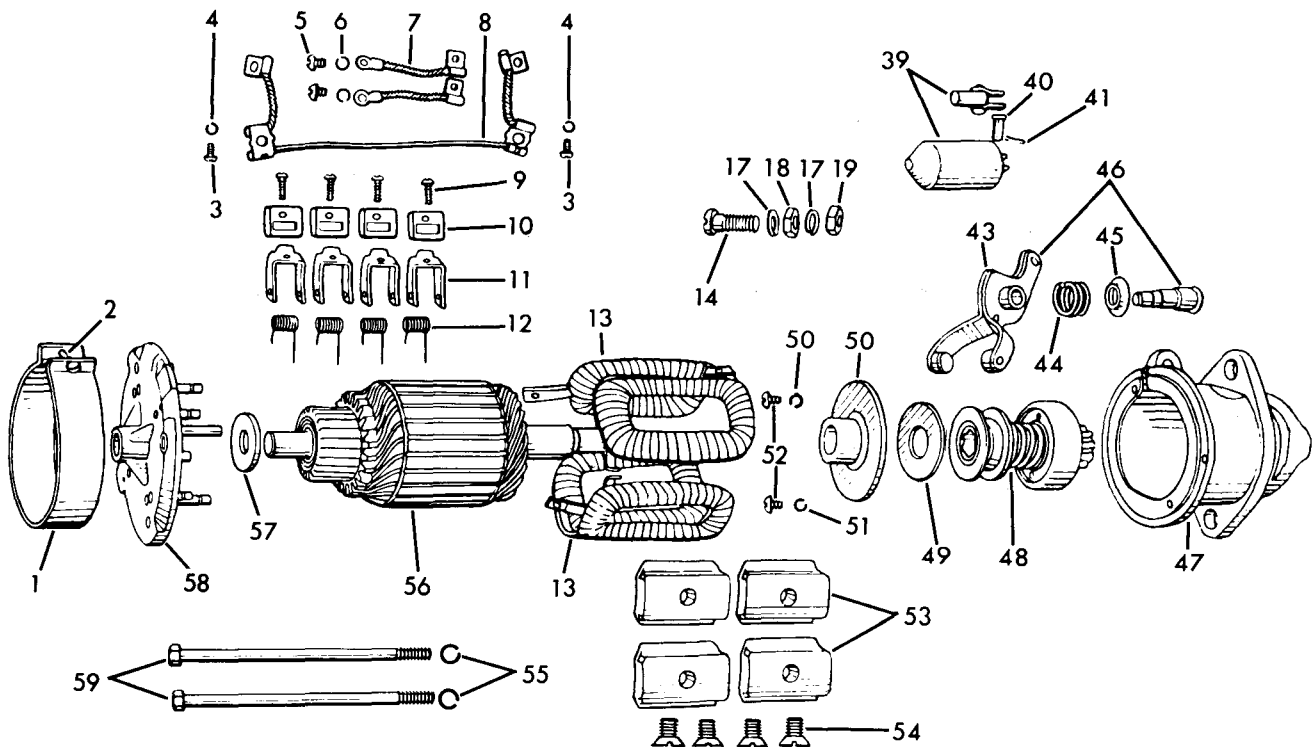
(@) - Used only with BRACKET, 318 024 R2.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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CRANKING MOTOR

(Delco-Remy No. 1 113 098)



PL-52116-1

Starting Switch (Delco-Remy No. 1119778)

1	1 113 098	CRANKING MOTOR (order 1 113 193)	6	453 435	WASHER, brush ground lead attaching screw (2)
1	1 880 355	BAND w/SCREW, 453 479, cover	7	1 931 771	LEAD, brush ground (2)
2	453 479	SCREW, cover band	8	1 931 777	LEAD, brush jumper
3	453 463	SCREW, brush lead to field coil attaching (2)	9	171 734	SCREW, brush attaching (4)
4	453 435	WASHER, brush lead attaching screw lock (2)	10	1 906 987	BRUSH (4)
5	453 464	SCREW, ground lead attaching (2)	11	1 931 773	HOLDER, brush (4)

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKING MOTOR (Delco-Remy No. 1 113 098)			32	134 566	NUT, 3/8" terminal stud (2)
			33		NOT USED
12	1 935 316	SPRING, brush (4)	34	120 622	NUT (No. 8 terminal stud) (2)
13	1 931 788	COIL, field (Upper and lower) (Consists of four coils)	35	1 946 143	WASHER, No. 8 terminal stud lock
14	1 933 879	STUD, terminal	36	1 923 935	WASHER, cover attaching screw (2)
17	120 381	WASHER, terminal stud lock (2)	37	453 468	SCREW, cover attaching (2)
18	805 258	NUT, terminal stud (5/32" thick)	38	1 926 958	CLIP, terminal (No. 8 terminal stud)
19	134 566	NUT, terminal stud (1/4" thick)	39	1 932 079	PLUNGER and LINK
20	1 119 778	SWITCH ASSEMBLY, starting solenoid (Composed of -	40	1 853 305	PIN, shift lever
	1 CASE and COIL	1 931 813	41	112 726	PIN, shift lever cotter
	1 CLIP	1 926 958			
	1 CONTACT and ROD	1 952 503	43	1 931 776	LEVER, shift
	1 COVER	1 931 818	44	1 922 876	SPRING, shift lever
	1 GASKET	1 930 629			
	2 NUT	120 622	45	1 915 668	RING, lever shaft retainer (small end)
	2 NUT	134 566			
	2 NUT	805 258	46	1 931 807	LEVER and SHAFT
	2 SCREW	453 468			
	1 SPRING	1 853 342	47	1 961 656	HOUSING w/BUSHING, 1 931 783, PLUG, 453 465 and WICK, 1 909 560, drive
	1 STUD	1 950 069			
	1 STUD	1 960 244			
	1 STUD	1 926 967			
	2 WASHER	9 421 425	48	1 941 157	DRIVE ASSEMBLY, motor (Composed of -
	2 WASHER	1 923 935			1 BUSHING 37 535
	1 WASHER	1 946 143			1 COLLAR 1 904 443
					1 LOCKWIRE 1 904 436
					1 SPRING 1 932 354)
21	1 931 813	CASE and COIL			
22	1 926 967	STUD, 3/8 x 1-5/64" terminal	49	821 453	WASHER, brake (between center bearing and motor drive)
23	1 950 069	STUD, No. 8 terminal			
24	1 952 563	CONTACT and ROD, push	50	1 931 808	PLATE w/BUSHING, 820 148, center bearing
25	1 853 342	SPRING, contact return			
26	1 960 244	STUD, 3/8 x 1-3/16" terminal	51	1 962 276	WASHER, center bearing attaching screw lock (2)
27	1 930 629	GASKET, cover	52	453 463	SCREW, center bearing attaching (2)
28	1 931 818	COVER	53	1 931 784	SHOE, pole (4)
29		NOT USED			
30	805 258	NUT, 3/8" terminal stud (2)			
31	120 381	WASHER, lock (3/8" terminal stud) (2)	Always Give Cranking MOTOR NUMBER When Ordering Parts.		

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
		CRANKING MOTOR - Continued (Delco-Remy No. 1 113 098)		820 155	WASHER, spacer (between center bearing and armature)
54	1 913 960	SCREW, pole shoe		453 339	WASHER, link attaching lock
55	9 421 424	WASHER, thru bolt lock (2)		1 950 029	WASHER, terminal stud (outside)
56	1 931 797	ARMATURE		1 857 268	WASHER, insulating terminal stud
57	1 914 842	WASHER, spacer (commutator end)		1 916 439	WICK (commutator end and drive end) (2)
58	1 937 181	FRAME and PIN ASSEMBLY (Com - mutator end) (Composed of -			
		1 BUSHING 1 872 678			
		2 PIN 812 015			
		1 PIN 809 062			
		2 PIN 812 016			
		2 PIN 817 313			
		2 PIN 817 314			
		1 PLUG 810 819			
		1 PLUG 125 947			
		1 WICK 1 916 439)			
59	809 763	BOLT, thru (2)			
	1 872 678	BUSHING (commutator end)			
	1 931 783	BUSHING, terminal stud insulating			
	820 148	BUSHING, center bearing			
	1 931 783	BUSHING (drive end)			
	1 914 873	INSULATION, field coil (2)			
	809 593	PIN, dowel (drive end)			
	817 313	PIN, brush hinge (2)			
	812 016	PIN, brush holder hinge and insulator (2)			
	817 314	PIN, brush holder stop (2)			
	812 015	PIN, brush holder stop and insulator (2)			
	809 062	PIN, dowel (commutator end) (2)			
	453 465	PLUG, pipe (commutator and drive end) (2)			
	810 819	PLUG, end			
	453 435	SCREW, link attaching			
	103 321	WASHER, 3/8" lock (used to mount cranking motor) (3)			

Always Give Cranking Motor Number When Ordering
Parts.

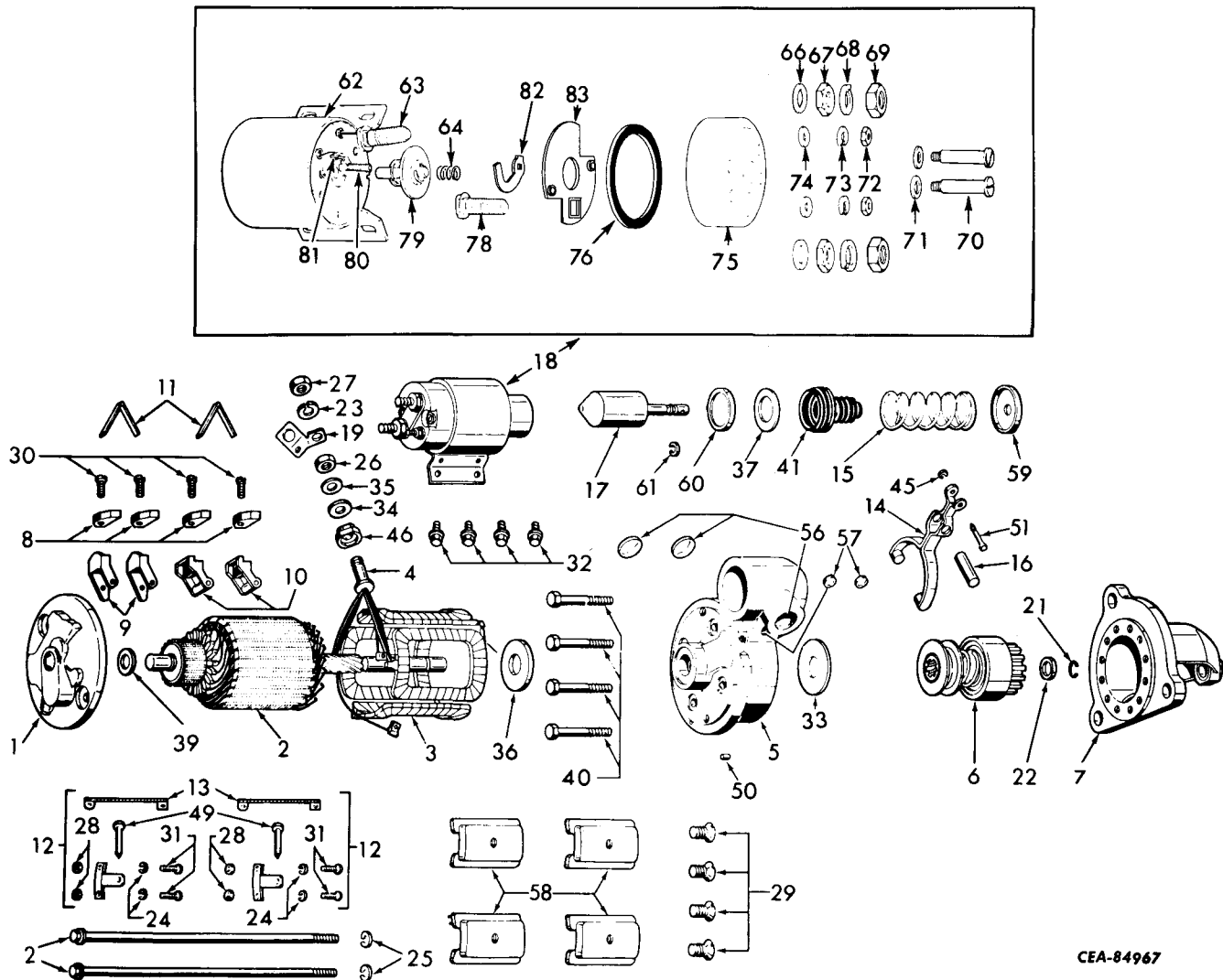
ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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CRANKING MOTOR

(For units equipped w/Alternator)

(Delco-Remy No. 1 113 193)



CEA-84967

1	1 113 193	MOTOR ASSY, cranking (will work for 1 113 098)	2	1 967 042	ARMATURE
	324 470 R1	SCREW, 3/8 x 1-1/8" hex-hd cap (3)	3	1 945 350	COIL w/STUD, 1 933 879, field (four coils)
	115 093	WASHER, 3/8" lock (3)	4	1 933 879	STUD, terminal
1	1 946 555	FRAME w/BUSHING, 1 872 678, PLUG, 125 947 and WICK, 1 909 654, commutator end			
1	1 945 617	FRAME ASSY, commutator end (Composed of -			
	1 BUSHING	1 872 678			
	1 PLUG	453 465			
	1 PLUG	810 819			
	1 WICK	1 916 439)			

Always give CRANKING MOTOR NUMBER when ordering parts.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKING MOTOR (For units equipped w/Alternator) (Delco-Remy No. 1 113 193)					2 NUT 134 566
					1 NUT 453 284
					2 NUT 453 996
					1 NUT 1 904 419
5	1 942 241	HOUSING ASSY, lever (Composed of -			1 SCREW 453 468
		1 BUSHING 1 933 999			1 SCREW 1 943 225
		2 PLUG 9 411 375			1 SPRING 1 853 342
		1 PLUG 9 419 572			2 STUD 1 943 225
		1 PLUG 1 961 573			1 STUD 1 960 248
		1 OIL SEAL 1 867 150			1 STUD 800 487
		1 WICK 1 947 350)			1 STUD 1 956 427
					1 WASHER 453 435
6	1 941 157	DRIVE, motor (Composed of -			2 WASHER 9 421 425
		1 BUSHING 37 535			2 WASHER 805 790
		1 COLLAR 1 904 443			1 WASHER 815 540
		1 SPRING 1 932 354			1 WASHER 1 856 056
		1 WIRE 1 904 436)			2 WASHER 1 923 935
					2 WASHER 1 950 064
					1 WASHER 1 856 056
					1 WASHER 9 421 425
					1 WASHER 1 950 071)
7	1 947 803	HOUSING w/BUSHING, 1 955 994, PLUG, 453 465 and WICK, 1 916 439, drive	19	1 942 249	CONNECTOR, switch
8	1 906 987	BRUSH (4)	20	809 763	BOLT, thru (2)
9	1 904 477	HOLDER, brush ground (2)	21	1 928 022	RING, pinion stop retainer
10	1 950 546	HOLDER, brush insulated (2)	22	1 928 021	COLLAR, pinion stop
11	1 945 620	SPRING, brush (2)	23	9 421 425	WASHER, lock terminal stud (2)
12	1 945 923	PACKAGE, brush support (2) (Composed of -	24	453 435	WASHER, lock brush support attaching (4)
		1 LEAD 1 930 694	25	9 421 424	WASHER, lock thru bolt (2)
		2 NUT 120 361	26	805 258	NUT, terminal stud (5/32" thick)
		1 PIN 1 938 058	26	134 566	NUT, connector attaching to switch
		2 SCREW 445 639	27		NOT USED
		2 WASHER 453 435)	28	120 361	NUT (4)
13	1 930 694	LEAD, ground (2)	29	1 913 960	SCREW, pole shoe (4)
14	1 942 245	LEVER, shift	30	1 959 514	SCREW, brush attaching (4)
15	1 948 521	SPRING, lever	31	445 639	SCREW (4)
16	1 942 255	SHAFT, lever	32	1 917 084	SCREW, switch attaching (4)
17	1 942 250	PLUNGER	33	821 453	WASHER, brake (between lever housing and motor drive)
18	1 115 510	SWITCH ASSY, solenoid starting (Composed of -			
		1 CLIP 1 958 278			
		1 CONTACT 1 917 119			
		1 CONTACT 1 935 645			
		1 COVER 1 965 624			
		1 COVER 1 923 936			
		1 GASKET 1 965 625			

Always Give CRANKING MOTOR NUMBER When
Ordering Parts.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKING MOTOR - Continued (For units equipped w/Alternator) (Delco-Remy No. 1 113 193)			71	1 923 935	WASHER, cover attaching screw (2)
			72	453 996	NUT, No. 8 hex. terminal (2)
34	1 950 029	WASHER, insulating terminal stud (2)	73	9 421 425	WASHER, No. 8 terminal lock (2)
35	805 790	WASHER, plain, terminal stud	74	815 540	WASHER, insulating
36	1 942 283	WASHER, space (between lever housing and armature)	75	1 965 624	COVER
37	1 942 259	WASHER, retainer spring	76	1 965 625	GASKET, cover
39	1 914 842	WASHER, space, commutator end	78	800 487	STUD, battery terminal
40	122 077	BOLT, drive housing attaching (4)	79	1 917 119	CONTACT and ROD
41	801 077	BOOT	80	1 960 248	STUD, terminal switch
45	1 938 376	RING, lever attaching pin snap	81	1 958 278	CLIP, terminal
46	1 931 783	BUSHING, insulating terminal stud	82	1 935 645	CONTACT
49	1 938 058	PIN, brush holder (2)	83		NOT USED
50	809 593	PIN, dowel, drive housing		37 535	BUSHING, oilless (motor drive)
51	1 942 253	PIN, lever attaching		1 872 678	BUSHING, commutator end
56	9 411 375	PLUG, expansion, lever housing (1-3/16" dia.) (2)		1 955 994	BUSHING, drive end
57	9 419 572	PLUG, expansion lever housing (1/2" dia.)		1 933 999	BUSHING, lever housing
58	1 931 784	SHOE, pole (4)		1 904 443	COLLAR, motor drive
59	1 942 282	RETAINER, spring (13/32" hole)		1 914 873	INSULATION, field coil (2)
60	1 942 256	RETAINER, spring (1-13/64" hole)		1 946 012	GASKET, lever housing to drive housing
61	9 415 235	RING, spring retainer snap		1 867 150	OIL SEAL, lever housing
62		CASE and COIL (Not Furnished Separately)		453 284	NUT, terminal stud
63	1 956 427	STUD, motor terminal		453 465	PLUG, commutator end pipe
64	1 853 342	SPRING, contact return		453 465	PLUG, drive end pipe
66	805 790	WASHER, insulating terminal (2)		273 913	PLUG, lever housing pipe (15/64" dia.)
67	1 904 419	NUT, 3/8" terminal		1 945 630	RIVET, brush support (4)
68	9 421 425	WASHER, 3/8" terminal lock (2)			
69	134 566	NUT, 3/8" terminal (2)			
70	1 943 225	STUD, cover attaching (2)			

Always Give CRANKING MOTOR NUMBER When
Ordering Parts.

ELECTRICAL SYSTEM

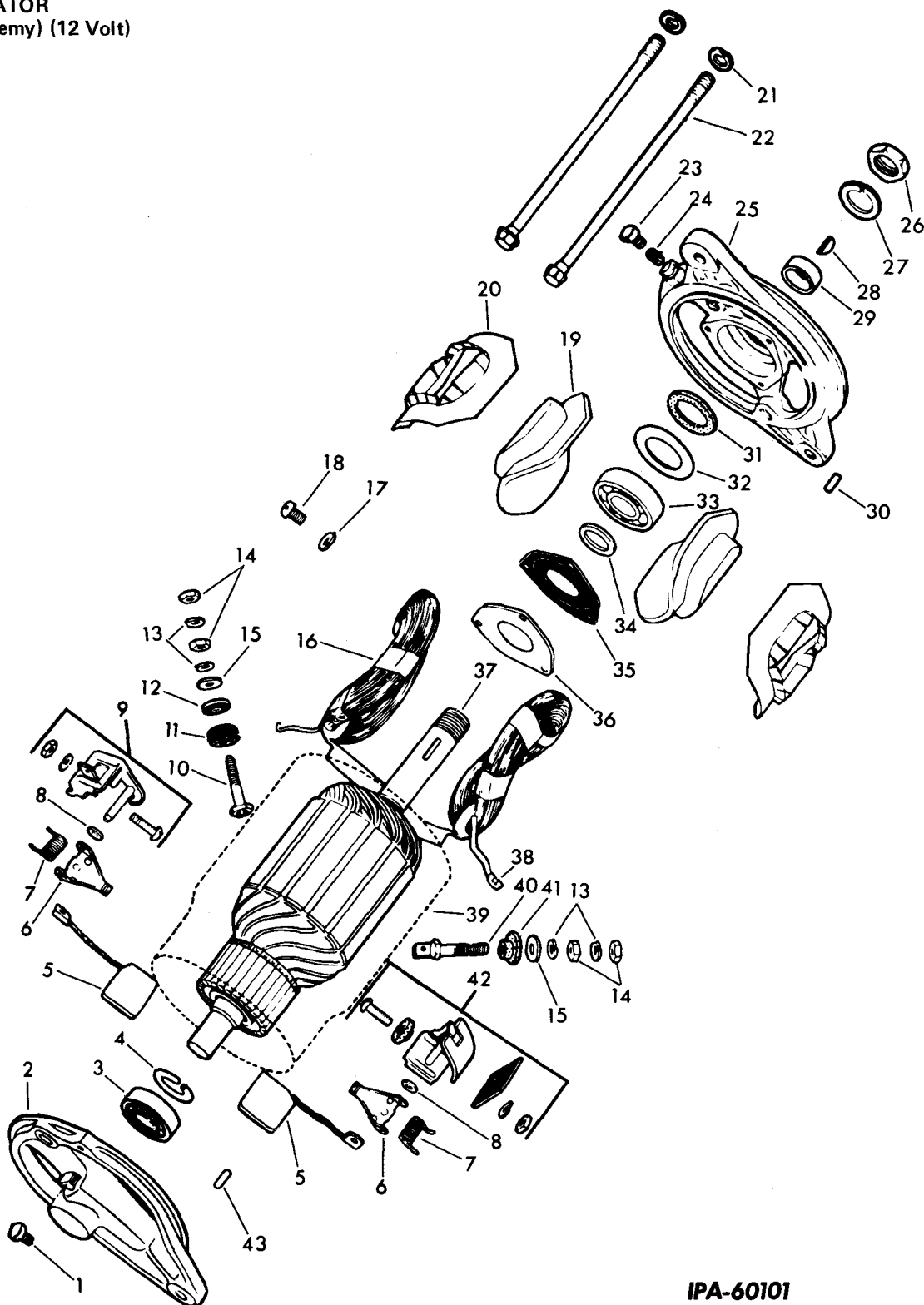
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CRANKING MOTOR - Continued (For units equipped w/Alternator) (Delco-Remy No. 1 113 193)					
	453 468	SCREW, cover attaching			
	1 943 225	SCREW, cover attaching			
	453 319	SCREW, ground (2)			
	1 932 354	SPRING, motor drive			
	453 435	WASHER, ground screw (2)			
	1 950 064	WASHER, terminal stud sealing (2)			
	1 856 056	WASHER, terminal stud			
	1 950 071	WASHER, terminal stud			
	1 916 439	WICK, oil (2)			
	1 947 350	WICK, lever housing oil			
	1 904 436	WIRE, lock (motor drive)			

Always Give GENERATOR NUMBER When Ordering Parts.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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GENERATOR (Delco-Remy) (12 Volt)



IPA-60101

1 102 034 GENERATOR ASSY (12 volt)
UD-236 1678 up
UD-282 2271 up

1 125 609 OILER, commutator end
2 1 925 204 FRAME, commutator end

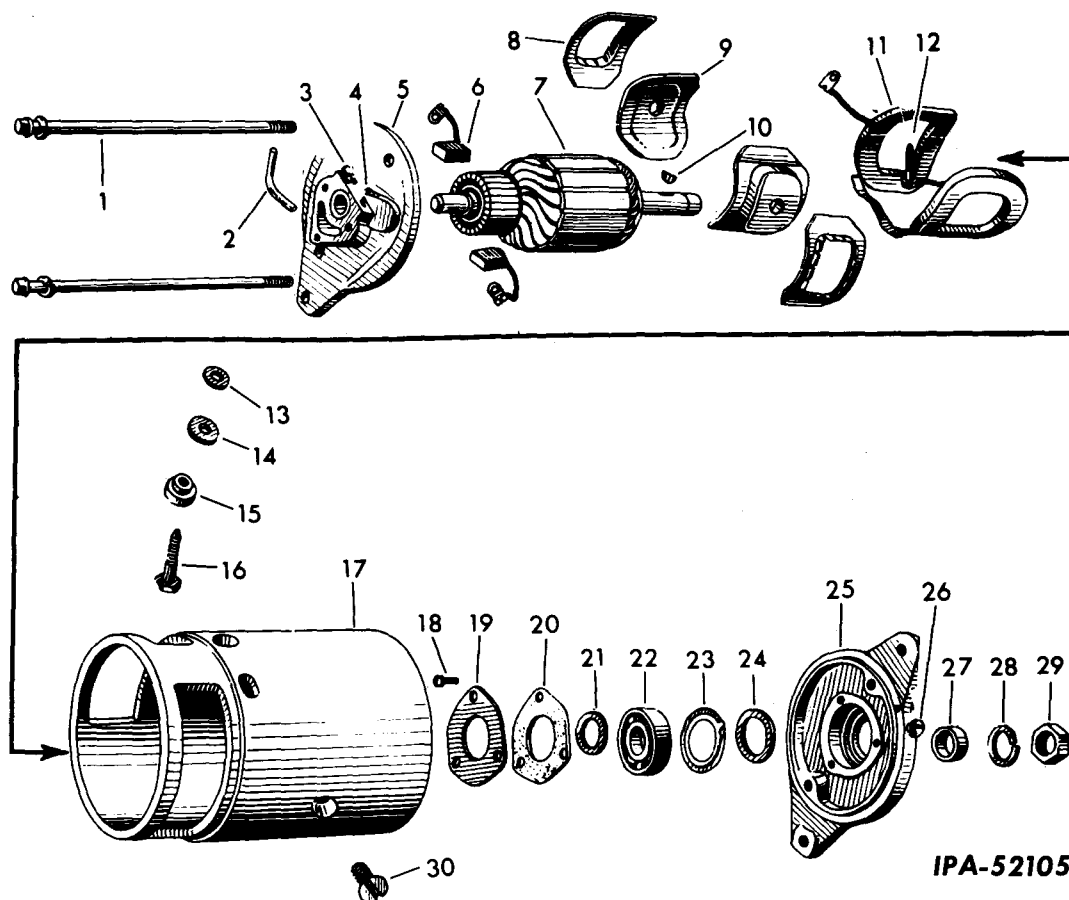
ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
GENERATOR - Continued (Delco-Remy) (12 Volt)			29	1 858 603	COLLAR, spacing
			30	809 593	PIN, drive end dowel
3	904 751	BEARING, commutator end ball	31	809 961	WASHER, drive end felt
4	1 929 959	RING, commutator end bearing	32	819 104	PLATE, drive end felt retainer
5	1 923 295	BRUSH (2)	33	954 378	BEARING, drive end ball
		SCREW, No. 6 x 1/4" rd-hd cap	34	809 945	WASHER, drive end inner space
	1 904 377	WASHER, lock	35	1 912 008	GASKET, bearing retainer
6	1 944 373	ARM, brush (2)	36	1 911 263	PLATE, bearing retainer, drive end
7	1 908 829	SPRING, brush (2)		1 904 370	SCREW, retainer plate
8	1 857 412	WASHER, space (2)		1 880 781	WASHER, lock
9	1 922 288	HOLDER, ground brush (package)	37	1 925 210	ARMATURE
10	1 921 860	STUD, "F" terminal	38	200 382	CLIP, terminal to brush
11	1 885 090	BUSHING, insulating ("F" terminal)	39		CASE (Not Furnished Separately)
12	1 858 753	WASHER, insulating ("F" terminal)	40	1 921 369	STUD ("A" terminal)
13	1 904 661	WASHER, terminal stud lock (4)	41	1 921 362	BUSHING, insulating ("A")
14		NUT, No. 12 (4)	42	1 921 289	HOLDER, insulated brush (package)
15	1 881 409	WASHER, flat (2)	43	809 062	PIN, commutator end dowel
16	1 922 701	COIL, field			
17		WASHER, 1/4" lock			
18		SCREW, 1/4 x 3/8" fil-hd slt cap			
19	1 912 725	SHOE, pole (2)			
	1 843 646	SCREW, pole shoe (2)			
20	1 912 073	INSULATOR, field coil			
21		WASHER, 5/16" heavy lock (2)			
22	809 763	BOLT, thru			
23	125 609	OILER, drive end			
24		NOT USED			
25	1 910 404	FRAME, drive end			
26	806 915	NUT, drive end hex.			
27	804 000	WASHER, drive end nut lock			
28	124 545	KEY, Woodruff, 1/8 x 5/8"			

Always Give GENERATOR NUMBER When Ordering Parts.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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GENERATOR**(Delco-Remy) (12 Volt)****IPA-52105**

1	1 100 358	GENERATOR ASSY (12 Volt) UD-236 501 to 1677 UD-282 501 to 2270 NUT, 5/16NF (2) SCREW, 5/16 x 1-1/8" hex-hd cap SCREW, 5/16NF x 1-1/2" hex-hd cap WASHER, 5/16" lock (2)	8	1 925 378	HOLDER, ground brush
1	1 951 512	FRAME w/OILER, 125 609, PIN, 809 062 and WICK, 1 947 350, commutator end	9	826 319	WASHER, terminal stud (flat) (2)
2	453 460	SCREW, brush lead (2)	10	121 743	NUT, terminal (4)
3	1 914 816	WASHER, brush lead (2)	11	1 858 749	STUD, field terminal (to brush)
4	1 932 506	BRUSH (2)	12		NOT USED
5	1 916 324	SPRING, brush (2)	13	1 858 753	WASHER, field terminal stud insulating
6	1 944 373	ARM, brush (2)	14	1 914 579	WASHER, terminal stud lock (4)
7	1 904 368	WASHER, brush arm (2)	15	1 923 625	COIL, field
			16		NOT USED
			17		NOT USED
			18	1 913 960	SCREW, pole shoe (2)

Always give GENERATOR NUMBER when ordering parts.

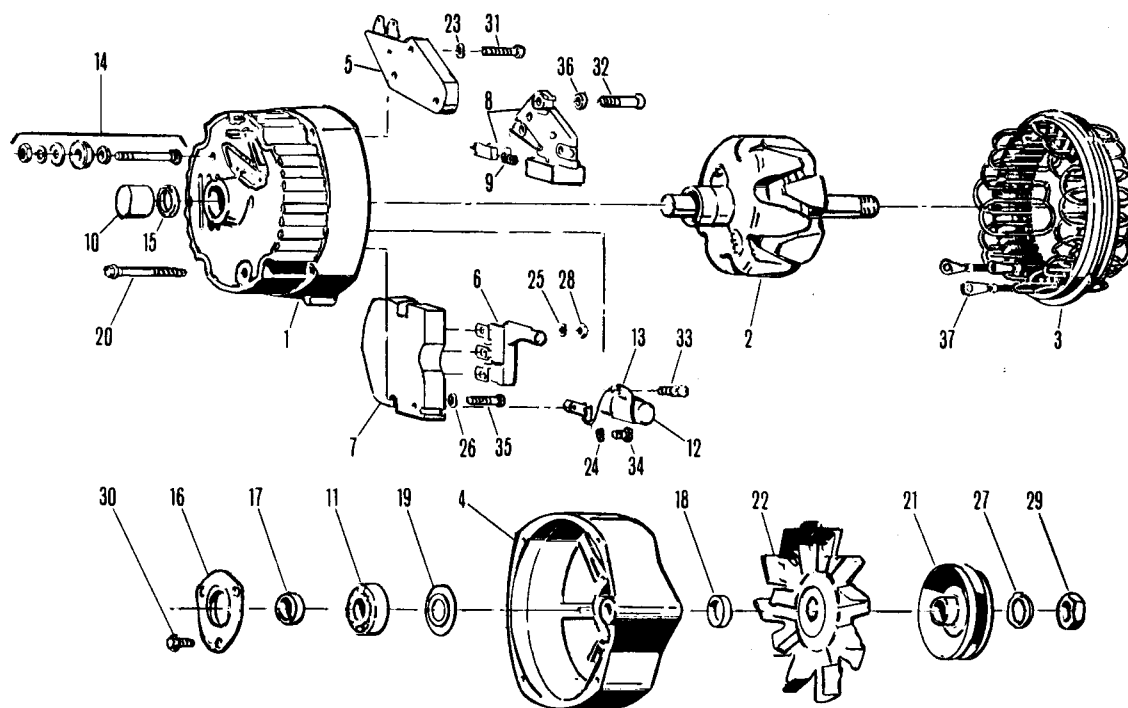
ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
GENERATOR - Continued (Delco-Remy) (12 Volt)			1 914 222	COVER, oil well (commutator end)	
			1 927 447	WASHER, felt (commutator end)	
19	1 914 618	SHOE, pole (2)			
20	1 914 491	INSULATOR, field coil (2)			
21	1 908 680	BOLT, thru (2)			
22	9 421 424	WASHER, thru bolt (2)			
23	125 609	OILER, drive end frame			
24	124 545	KEY, Woodruff (drive end)			
26	121 743	NUT, shaft (drive end)			
27	1 915 265	WASHER, shaft nut (drive end)			
28	1 953 882	FRAME w/OILER, 125 609, drive end			
29	809 593	PIN, dowel (drive end)			
30	1 962 276	WASHER, lock (3)			
31	1 914 580	SCREW, retainer plate (3)			
32	200 382	CLIP, terminal (to brush)			
33	1 921 362	BUSHING, arm terminal insulated			
34	1 923 284	STUD, arm terminal			
35	1 925 379	HOLDER, insulated brush			
36	113 702	OILER, commutator end			
37	1 928 952	ARMATURE			
38	1 911 263	PLATE, drive end retainer			
39	809 945	WASHER, space (inside--drive end)			
40	907 503	BEARING, ball (drive end)			
41	819 104	PLATE, felt washer retainer (drive end)			
42	809 961	WASHER, felt (drive end)			
43	1 858 603	COLLAR, space (outside-drive end)			
44	1 912 008	GASKET, drive end retainer plate			
	823 551	WICK, oil (drive end)			

Always give GENERATOR NUMBER when ordering parts.

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ALTERNATOR
(Delco-Remy)

CE-105245

ILLUSTRATIONS ARE OF TYPICAL PARTS ONLY

1	1 102 364	ALTERNATOR w/REGULATOR (12V-37 Amp)	13	1 869 573	BRACKET, capacitor
1	1 867 480	FRAME ASSY w/BEARING, 7 451 931, and SEAL, rectifier end	14	1 846 900	PACKAGE, battery terminal
2	1 846 657	ROTOR ASSY.	15		NOT USED
3	1 971 986	STATOR ASSY, w/CLIP, 1 846 548	16	1 971 993	PLATE, diode end ball bearing retainer
4	1 970 525	FRAME ASSY, diode end	17	1 963 139	COLLAR, diode end (Inside)
5	1 116 389	REGULATOR	18	1 959 991	COLLAR, diode end (Outside)
6	1 971 528	DIODE, trio	19	800 832	SLINGER, grease
7	1 852 209	RECTIFIER, bridge	20	1 956 975	BOLT, thru (4)
8	1 852 002	BRUSH & HOLDER ASSY w/SPRING, 1 964 117	21		PULLEY, alternator (Not part of Alternator)
9	1 964 117	SPRING, brush	22		FAN, alternator (Not part of Alternator)
10	7 451 931	BEARING, rectifier end roller	26	1 847 933	WASHER, rectifier bridge attaching screw lock (2)
11	908 019	BEARING, diode end ball	27	1 941 978	WASHER, diode end shaft nut lock
12	801 824	CAPACITOR	28	453 434	NUT, rectifier bridge (3)

ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ALTERNATOR (Delco-Remy)					
29	1 915 172	NUT, diode end shaft			
30	1 965 104	SCREW, ball bearing retainer attachment			
31	1 971 519	SCREW, brush holder attaching (Grd)			
32	1 846 864	SCREW, brush holder attaching (Insulation) (2)			
33	1 851 612	SCREW and LOCKWASHER, capacitor bracket			
35	1 970 145	SCREW, rectifier bridge attaching (2)			
36	1 847 933	WASHER, brush holder insulating screw			
37	1 846 548	CLIP, stator lead terminal (3)			
	1 851 612	SCREW, capacitor lead attaching			
	1 876 080	LEAD, rectifier bridge to regulator			
	801 532	CAP, voltage adjustment			
	801 548	CONNECTOR, body regulator			
	1 852 043	BRACKET, regulator connector body			

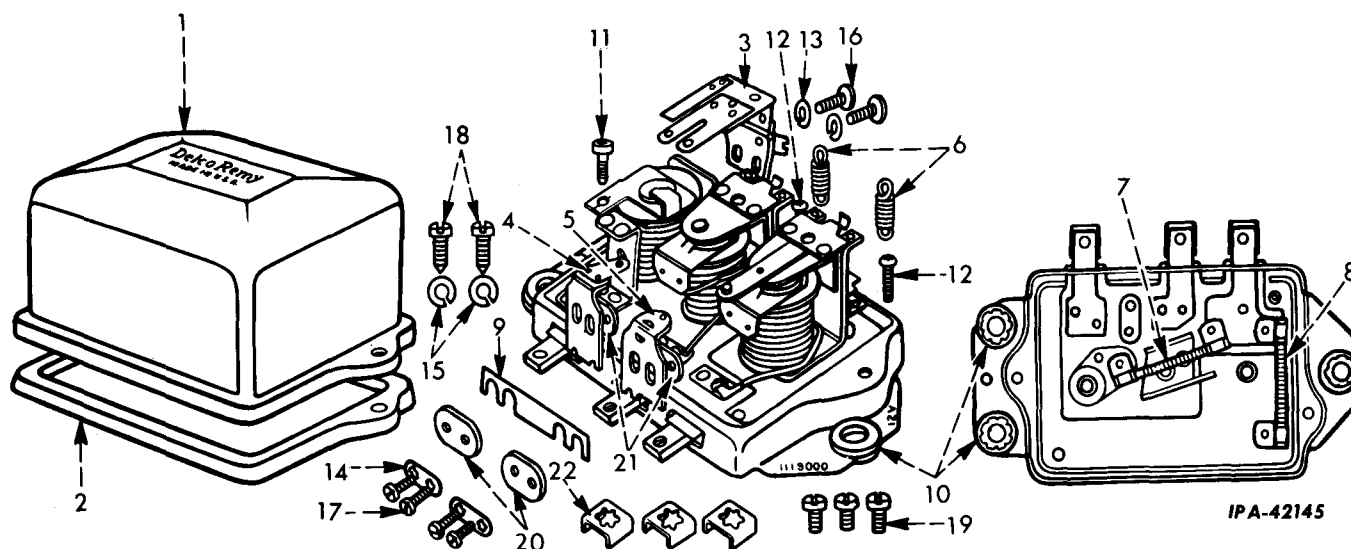
ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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VOLTAGE REGULATOR

(Delco-Remy)

(For use with Negative Grounded Battery)



IPA-42145

1	1 118 999	REGULATOR, voltage (12 Volt)	15	1 935 031	WASHER, cover screw lock (2)
1		COVER (Not furnished separately)	16	1 924 764	SCREW, relay armature attaching (2)
2	1 953 902	GASKET, cover	17	1 878 516	SCREW, regulator contact attaching (2)
3	1 945 583	ARMATURE, relay	18	1 927 982	SCREW, cover (2)
4		NOT USED	19	453 418	SCREW, terminal (3)
5	1 878 493	CONTACT and SUPPORT, voltage regulator	20	1 922 599	INSULATOR, regulator contact attaching screw (2)
6	1 912 176	SPRING, regulator armature (2)	21	1 878 507	WASHER, insulator regulator contact attaching screw (2)
7		NOT USED	22	1 868 137	CLAMP, terminal (3)
8	1 919 174	RESISTOR, "F" terminal to ground			
9		NOT USED			
10		NOT USED			
11	1 912 159	SCREW, relay armature adjusting			
12	1 944 590	SCREW, regulator armature adjusting (2)			
13		NOT USED			
14	1 878 505	WASHER, regulator contact attaching screw lock (2)			

Always Give REGULATOR NUMBER When Ordering Parts.

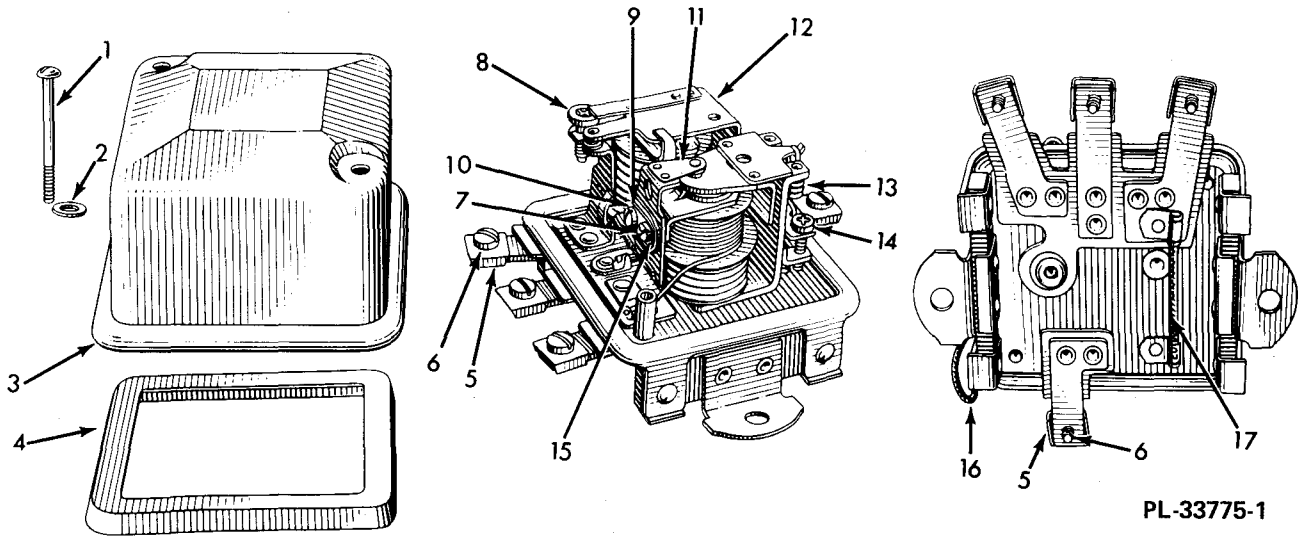
ELECTRICAL SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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VOLTAGE REGULATOR

(Delco-Remy)

(For use with Positive Grounded Battery)



PL-33775-1

1	118 779	REGULATOR ASSEMBLY, voltage (12 Volt) NUT, 1/4NF SCREW, 1/4NF x 1/2" slit-rd-hd. mach. (2) WASHER, 1/4" internal-tooth lock (2)	12	1 878 780 454 431	ARMATURE, cut-out relay (*) SCREW, cut-out relay armature (2)
				1 904 377	WASHER, cut-out relay armature attaching screw lock (2)
1	1 927 982	SCREW, cover attaching (2)	13	1 912 176	SPRING, current - voltage regulator armature
2	1 935 031	WASHER, cover attaching screw insulating (2)	14	1 944 590	SCREW, current-voltage regulator armature adjusting
3		COVER (Not furnished separately)	15	1 922 599	INSULATOR, current-voltage regulator contact attaching screw
4	1 953 902	GASKET, cover	16	1 927 975	LEAD, ground
5	1 868 137	CLAMP, terminal (4)	17	1 910 174	RESISTOR, "F" terminal to ground
6	453 418	SCREW, terminal (3)		1 914 816	WASHER, armature relay screw
7	1 878 516	SCREW, current-voltage regulator contact attaching (2)		1 924 764	SCREW w/WASHER, armature attaching
8	1 912 159	SCREW, cut-out relay armature adjusting		1 878 506	BUSHING, contact attaching screw
9	1 878 507	WASHER, current-voltage regulator contact attaching screw insulating (2)			
10	1 878 505	WASHER, current-voltage regulator contact attaching screw lock			
11	1 878 517	CONTACT and SUPPORT, current-voltage regulator			

(*) - If date code stamped on base is 8-K or above, use 1 939 646.

Always Give REGULATOR NUMBER when Ordering Parts.

ELECTRICAL SYSTEM

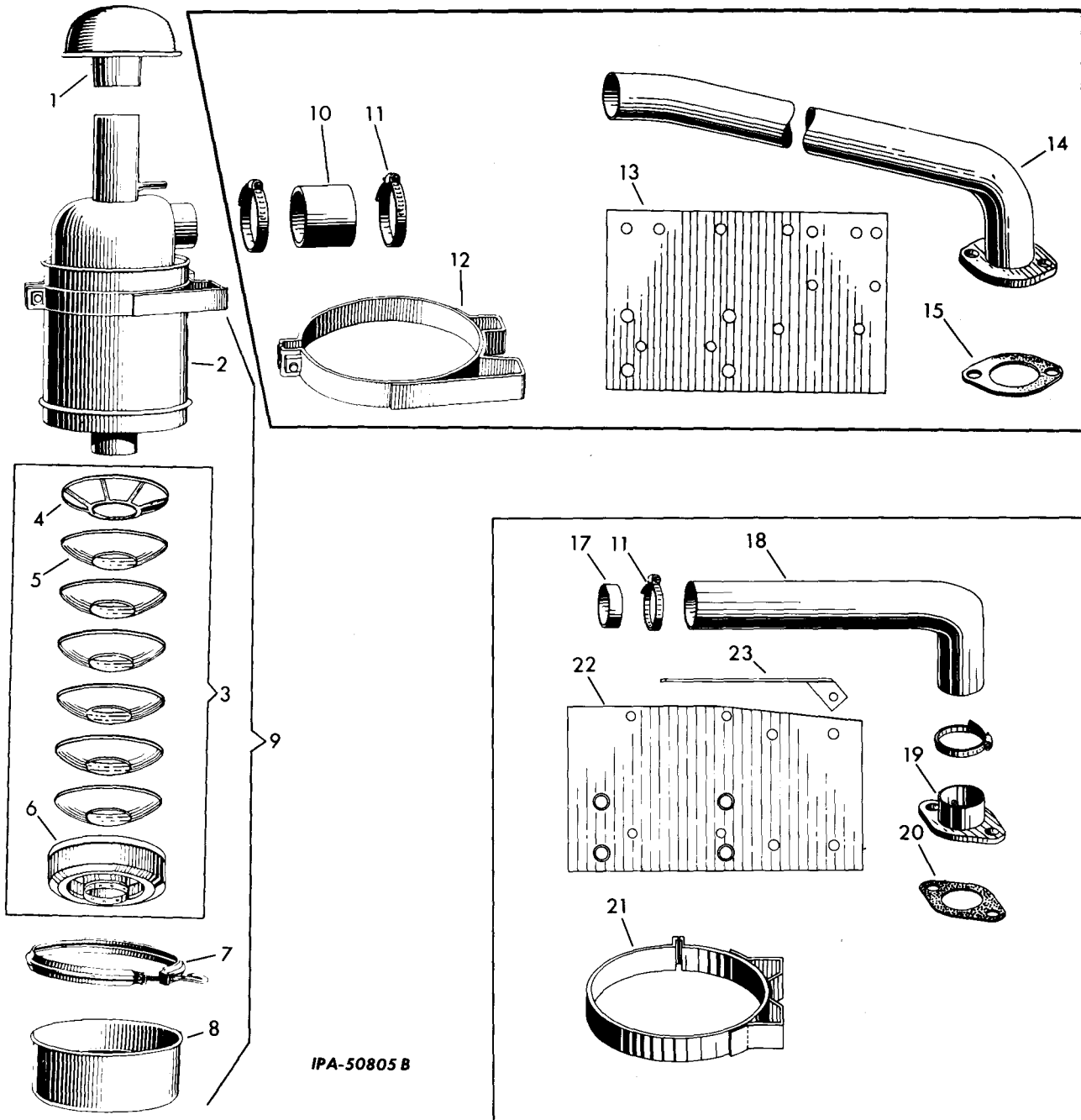
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
BATTERY AND CABLES					
		BATTERY, dry charged (Auto-Lite 3HA-143-4) (2)			
356 062 R91		BOLT, battery terminal (X)			
67 975 DBM		CABLE, battery to solenoid (positive grounded battery)			
279 391 R91		CABLE, battery to solenoid (negative grounded battery)			
259 171 R91		CABLE, battery to battery			
263 518 R91		CABLE, battery to ground (Positive grounded battery)			
67 975 DBM		CABLE, battery to ground (negative grounded battery)			
		WASHER, 3/8" internal-external tooth lock			

(X) - As Required

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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AIR CLEANER AND CONNECTIONS (Donaldson) (Oil Bath Type)



ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
AIR CLEANER AND CONNECTIONS - Continued (Donaldson) (Oil Bath Type)					
		Parts without letters after the description indicate the part is used for all attachments listed below. Letters A, B and C are used to identify separate attachments.			
A	304 525 R91	ATTACHMENT, air cleaner (%)		179 858	SCREW, 7/16 x 1" hex-hd cap (2 for Attachment A)
B	316 194 R91	ATTACHMENT, air cleaner (%)		103 322	WASHER, 7/16" lock (2)
C	349 234 R91	ATTACHMENT, air cleaner (for use with universal dash) (%)	15	369 497 R2	GASKET, air cleaner pipe flange (Attachments A and B)
1	702 172 C1	CAP, air intake	17	680 531 C1	SLEEVE, air pipe hose
2		BODY (Not Furnished Separately)	18	606 675 C1	HOSE, air cleaner inlet (2-1/2 x 22" long) (Attachment C)
3	265 730 R91	TRAY ASSY, 8" dia. removable separable	19	341 231 R11	PIPE, air (Attachment C)
4	266 503 R91	RING, screen retaining		179 858	SCREW, 7/16 x 1" hex-hd cap (2)
5	266 506 R91	SCREEN, coned (6)		103 322	WASHER, 7/16" lock (2)
6	266 500 R91	HOUSING, tray	20	369 497 R2	GASKET, air cleaner pipe (Attachment C)
7	259 881 R91	CLAMP, oil cup retaining	21	347 672 R91	BAND, air cleaner bracket (2 for Attachment C)
8	258 366 R91	CUP, oil		102 634	NUT, 5/16" (4)
9	270 895 R91	CLEANER ASSY, air		179 818	SCREW, 5/16 x 1" hex-hd cap (3)
10	307 010 R1	HOSE, air cleaner inlet (2-1/4 x 2 -3/4" long *) (Attachments A and B)		179 816	SCREW, 5/16 x 3/4" hex-hd cap (3)
11	274 088 R91	CLAMP, air cleaner pipe hose (2)		103 320	WASHER, 5/16" lock (4)
12	260 790 R91	BAND, air cleaner bracket (2 for Attachments A and B)	22	349 232 R91	SUPPORT, air cleaner (Attachment C)
	102 635	NUT, 3/8" (4)		179 887	SCREW, 1/2 x 1-3/4" hex-hd cap (4)
	102 634	NUT, 5/16" sq (2)		103 323	WASHER, 1/2" lock (4)
	179 838	SCREW, 3/8 x 7/8" hex-hd cap (4)	23	349 235 R1	BRACE, air cleaner support
		SCREW, 5/16 x 1-1/4" slt-fil-hd mach (2)		265 331 R1	CAP, vent tube
	103 321	WASHER, 3/8" lock (4)		369 497 R2	GASKET, air pipe spacer (Attachment B)
13	304 528 R21	SUPPORT, air cleaner (Attachments A and B)		444 571	PLUG, 1/8" sq-hd pipe
	179 887	SCREW, 1/2 x 1-3/4" hex-hd cap (4)		1 001 675 R1	PRODUCT GRAPHIC, air cleaner (Attachment C)
	103 323	WASHER, 1/2" lock (4)		316 195 R1	SPACER, air pipe (Attachment B)
14	304 526 R11	PIPE w/FLANGE, air cleaner (Attachments A and B)			
	179 866	SCREW, 7/16 x 2" hex-hd cap (2 for Attachment B)			

(%) - Attachment Is No Longer Available.
Service Parts Will Be Furnished.

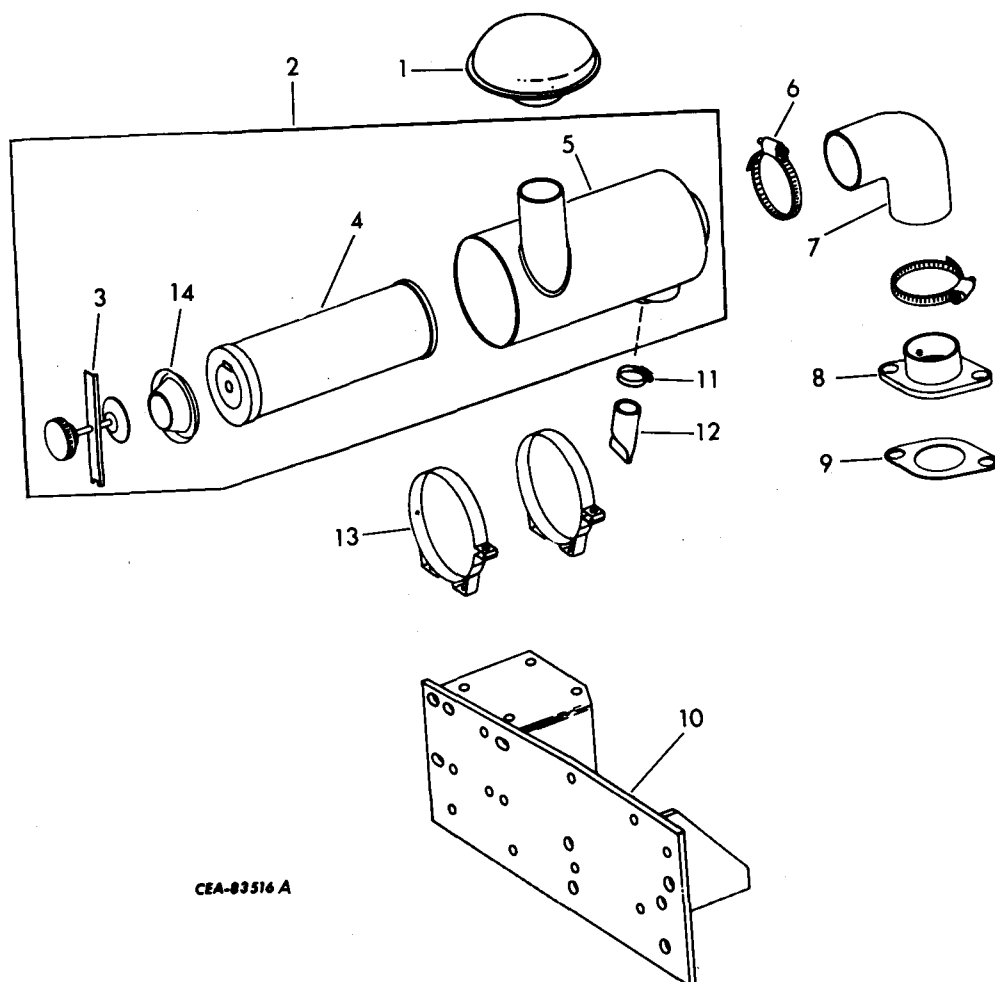
(*) - Part Number And Price Covers One Foot Of
Hose. Furnished Only In Three Foot Lengths.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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AIR CLEANER AND CONNECTIONS

(United Specialties) (Dry Type)



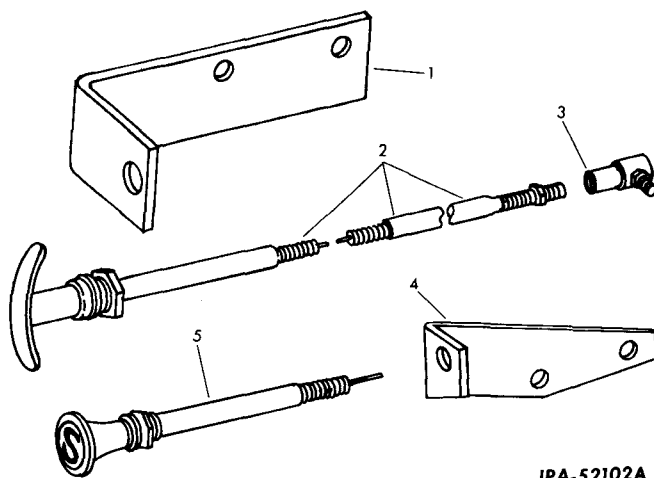
CEA-83516 A

	349 230 R91	ATTACHMENT, air cleaner and connections (%)	10	349 231 R91	SUPPORT, air cleaner
				179 887	SCREW, 1/2 x 1-3/4" hex-hd cap (4)
1	313 625 R91	CAP, weather		103 323	WASHER, 1/2" lock (4)
2	338 887 R91	CLEANER, air	11	122 316 R91	CLAMP, dust unloader
3	313 965 R91	RETAINER, air cleaner element	12	324 194 R1	UNLOADER, dust
4	317 702 R91	ELEMENT, air cleaner	13	341 373 R91	BRACKET, air cleaner mounting (2)
				102 635	NUT, 3/8" (4)
5		BODY, air cleaner (Not Furnished Separately)		179 837	SCREW, 3/8 x 3/4" hex-hd cap (4)
				103 321	WASHER, 3/8" lock (4)
6	279 028 R91	CLAMP, hose (2)	14	603 824 C1	GASKET, end cap seal
7	341 236 R1	HOSE, air inlet		444 571	PLUG, 1/8" sq-hd pipe
8	341 231 R11	PIPE, air	2 751 188 R1		PRODUCT GRAPHIC, air cleaner instruction
	179 858	SCREW, 7/16 x 1" hex-hd cap (2)			
	103 322	WASHER, 7/16" lock (2)			
9	369 497 R2	GASKET, air pipe			(%) - Attachment no longer available. Service Parts Will Be Furnished.

(%) - Attachment no longer available.
Service Parts Will Be Furnished.

ATTACHMENTS

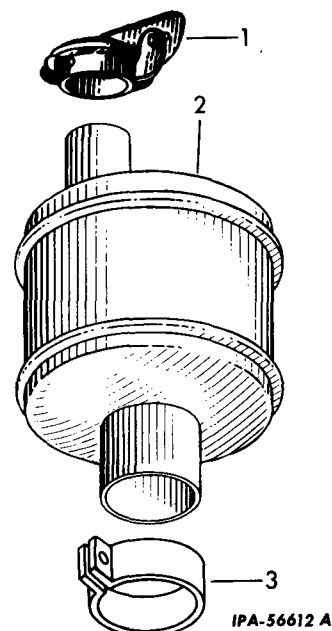
REF. NO.	PART NUMBER	DESCRIPTION
ENGINE CONTROLS		



IPA-52102A

	304 530 R91	ATTACHMENT, engine controls (%)
1	349 148 R1	BRACKET, governor control cable
	179 838	SCREW, 3/8 x 7/8" hex-hd cap (2)
	103 321	WASHER, 3/8" lock (2)
2	304 479 R92	CABLE, governor control
3	148 564	JOINT, ball (1/4" standard - type "A")
	103 024	NUT, 1/4NF
	103 321	WASHER, 1/4" lock
4	349 147 R1	BRACKET, engine shut-off control
5	304 478 R91	WIRE, engine shut-off control

REF. NO.	PART NUMBER	DESCRIPTION
EXHAUST MUFFLER AND RAIN CAP		



IPA-56612 A

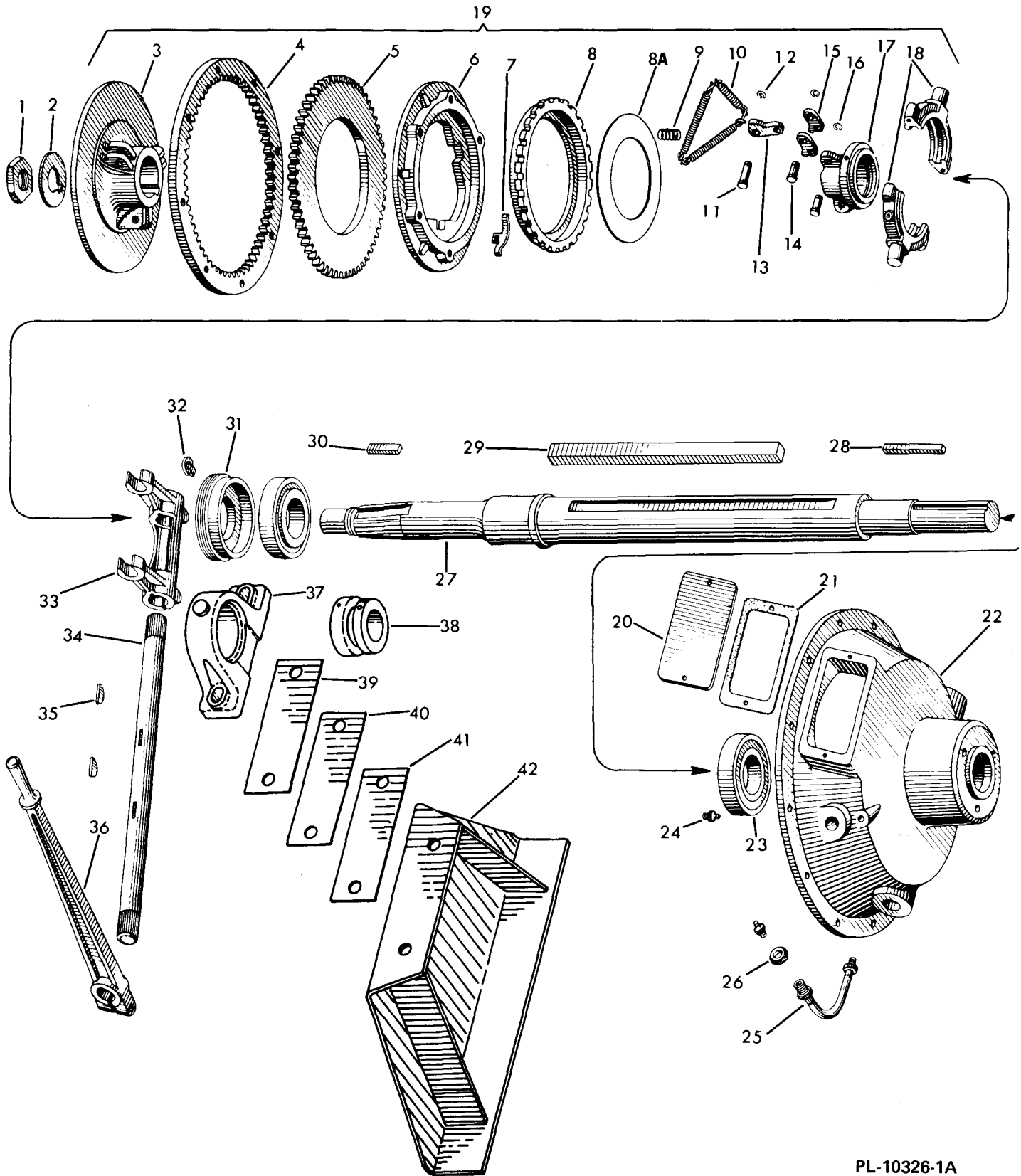
		Exhaust rain cap (For use with exhaust pipe, not for units equipped with exhaust muffler)
	332 516 R91	ATTACHMENT, exhaust rain cap (%)
	276 250 R91	ATTACHMENT, exhaust muffler (%)
1	332 516 R1	CAP, exhaust rain
2	313 847 R91	MUFFLER, exhaust
3	31 790 DA	CLAMP, exhaust muffler
	102 634	NUT, 3/8"
	179 841	SCREW, 3/8 x 1-1/4" hex-hd cap
	103 321	WASHER, 3/8" lock

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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EXTENDED SHAFT AND OUTBOARD BEARING (Rockford)



PL-10326-1A

ATTACHMENTS

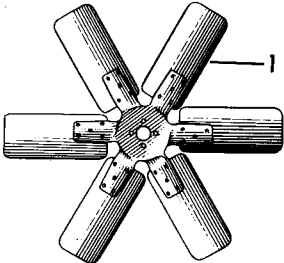
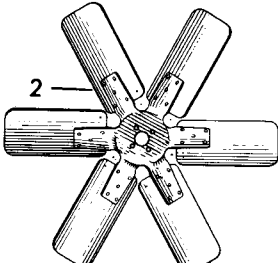
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
EXTENDED SHAFT AND OUTBOARD BEARING - Continued (Rockford)					
	304 535 R91	ATTACHMENT, Extended shaft and outboard bearing w/11-1/2" Over-Center Drive Ring Type Clutch (For Light Duty Clutch and Side Load) (%)		1	BODY 273 214 R1
				1	FACING 338 903 R1
				3	LEVER 268 866 R1
				6	LINK 266 696 R1
				1	NUT 347 871 R1
				3	PIN 266 694 R1
				6	PIN 266 697 R1
				1	PLATE 268 861 R91
				1	PLATE 347 872 R1
				3	RING 255 395 R1
				6	RING 266 698 R1
				1	RING 267 065 R1
				1	SLEEVE w/BEARING 273 216 R91
				3	SPRING 266 704 R1
				1	SPRING 268 865 R91)
1	266 681 R1	NUT, drive shaft			
2	273 212 R1	WASHER, drive shaft lock			
3	273 214 R1	BODY, clutch			
4	267 065 R1	RING, driving			
5	338 903 R1	FACING, clutch (one set includes three segments)	20	321 481 R1	PLATE, instruction
6	268 861 R91	PLATE w/LOCK, 268 869 R1, pressure	21	266 656 R1	GASKET, cover
7	268 869 R1	LOCK, adjusting	22	273 240 R1	HOUSING, clutch
8	347 871 R1	NUT, adjusting	23	13 396 DC	CONE, tapered roller bearing (2)
8A	347 872 R1	PLATE, adjusting ring	23	13 390 D	CUP, tapered roller bearing (2)
9	266 704 R1	SPRING, separator (3)	24	109 461	FITTING, lubrication (3)
10	268 865 R91	SPRING, lever	25	266 667 R91	TUBE, flexible
11	266 697 R1	PIN, clevis (6)	26	114 498	NUT, 5/8NF
12	266 698 R1	RING, retaining (6)	27	273 209 R1	SHAFT, drive
13	268 866 R1	LEVER (3)	28	268 864 R1	KEY, 3/8 x 3/8 x 3-1/2"
14	266 694 R1	PIN, clevis (3)	29	268 863 R1	KEY, 5/8 x 5/8 x 11-1/2"
15	266 696 R1	LINK, connecting (6)	30	273 211 R1	KEY, 3/8 x 3/8 x 2-1/4"
16	255 395 R1	RING, retaining (3)	31	266 660 R1	RETAINER, bearing
17	273 217 R1	SLEEVE, release	32	266 661 R1	PLATE, lock
17	273 216 R91	SLEEVE, 273 217 R1 w/BEARING, 273 218 R91	33	273 210 R91	YOKE, clutch
18	273 218 R91	BEARING w/two NUT, 258 370 R1 and one PLUG, 103 883, release	34	266 663 R1	SHAFT, yoke
19	273 215 R91	CLUTCH ASSEMBLY (11-1/2") (Composed of -	35	124 553	KEY (Woodruff No. 15) (2)
			36	266 666 R91	LEVER, shifting

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

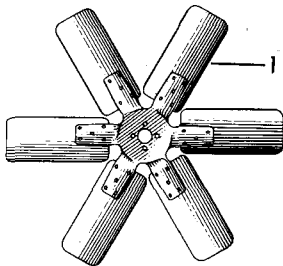
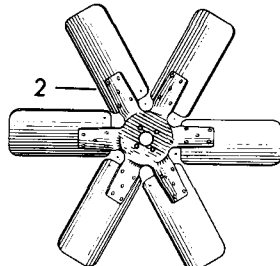
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
EXTENDED SHAFT AND OUTBOARD BEARING					
- Continued					
(Rockford!)					
37	304 485 R91	BLOCK w/BEARING, 305 166 R91 and FITTING, 138 322 H, outboard bearing pillow (optional with 304 486 R91)			1 PLATE 267 216 R2 1 PLATE 266 661 R1 1 RETAINER 266 660 R1 1 SHAFT 273 209 R1 1 SHAFT 266 663 R1 1 TUBE 266 667 R91 1 WASHER 273 212 R1 1 YOKE 273 210 R91)
37	304 486 R91	BLOCK w/BEARING, 305 167 R91, outboard bearing pillow (optional with 304 485 R91)	179 840		SCREW, 3/8 x 1-1/8" hex-hd. cap (for mounting clutch housing and power take-off) (12)
	102 637	NUT, 1/2" (2)			
	179 889	SCREW, 1/2" hex-hd. cap (2)	179 843		SCREW, 3/8 x 1-1/2" hex-hd. cap (for mounting clutch housing and power take-off) (8)
	103 323	WASHER, 1/2" lock (2)			
	103 343	WASHER, 17/32 x 1-11/16" x 13 Ga. (2)	103 321		WASHER, 3/8" lock (for mounting clutch housing and power take-off) (20)
38	305 166 R91	BEARING w/locking COLLAR			
38	305 167 R91	BEARING w/locking COLLAR	103 883		PLUG, 1/8" slt-hd stl. pipe (release bearing)
39	304 539 R1	SHIM, outboard bearing (heavy)			SCREW, 5/16NF x 2" hex-hd. cap (release bearing) (2)
40	304 540 R1	SHIM, outboard bearing (medium) (2)			
41	304 541 R1	SHIM, outboard bearing (light) (X)			SCREW, 3/8 x 1-1/4" hex-hd. cap (clutch yoke) (2)
42	304 537 R11	BRACKET, outboard bearing	131 375		SCREW, 1/4 x 3/8" slt-fil-hd. mach. (pressure plate)
	305 861 R91	BEARING, clutch (optional with 338 543 R91)	110 992		SCREW, 5/16 x 1/4" fl-pt. set (clutch housing)
	338 543 R91	BEARING, clutch pilot (optional with 305 861 R91)			SCREW, 1/2 x 1-3/4" hex-hd cap (shifting lever)
	273 355	FITTING, hydraulic lubricator (1/4 drive type) (2)	120 214		SCREW, 5/16 x 1/2" hex-hd. cap (lock plate)
	258 370 R1	NUT, 5/16NF elastic stop (release bearing) (Esna 29E-054) (2)	265 636 R1		SPACER, clutch pilot bearing
	319 519 R91	POWER TAKE-OFF w/extended SHAFT ASSEMBLY (Composed of -			WASHER, 1/2" lock (shifting lever)
		2 CONE 13 396 DC			WASHER, 3/8" lock (clutch yoke) (2)
		1 CLUTCH 273 215 R91			WASHER, 5/16" lock (Lock plate)
		2 CUP 13 390 D			
		3 FITTING 109 461			
		1 GASKET 266 656 R1			
		1 HOUSING 273 240 R1			
		1 KEY 268 863 R1			
		2 KEY 124 553			
		1 KEY 268 864 R1			
		1 KEY 273 211 R1			
		1 LEVER 266 666 R91			
		1 NUT 266 681 R1			
					(X) - Four Or More As Required.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FAN (UD-236)			1	306 355 R91	FAN, blower (18-1/2" dia. 6 blade) (Attachment D and F)
 Blower Fan  Suction Fan CEA-83319			1	317 720 R91	FAN, blower (18" dia. 6 blade) (Attachment E) SCREW, 1/4NF x 2" hex-hd cap SCREW, 1/4 x 1-5/8" hex-hd cap (4 for Attachment E) SCREW, 1/4NF x 1-3/4" hex-hd cap (4 for Attachment D) WASHER, 1/4" lock (4 for Attachments D, E and F)
			2	321 565 R91	FAN, suction (18-1/2" dia. 6 blade) (Will work for FANS, 267 450 R91 or 371 633 R91) (Attachments A and B)
Parts without letters after the description indicates the part is used for all attachments listed below. Letters "A" thru "F" are used to identify separate attachments.			2	317 719 R91	FAN, suction (18" dia. 6 blade) (Attachment C) SCREW, 1/4NF x 2-1/4" hex-hd cap (4 for Attachments A, B and C) WASHER, 1/4" lock (4 for Attachments A, B and C)
A	320 165 R91	ATTACHMENT, suction fan (18-1/2" dia. 6 blade w/1.38" spacer) (For use on standard units and units with auxiliary drive pulley Attachments with single "A" sheave) (Order ATTACHMENT, 320 166 R91)	19 918 R1	BOLT (Used with FANS, 267 450 R91 and 371 633 R91 when SPACER, 304 575 R1 is used) (4)	
B	320 166 R91	ATTACHMENT, suction fan (18-1/2" dia. 6 blade w/1.62" spacer) (For use with auxiliary drive pulley ATTACHMENT, 318 001 R91, 318 002 R91 and 318 003 R91) (+)	19 919 R1	BOLT (Used with FANS, 267 450 R91 and 371 637 R91 when SPACER, 318 008 R1 is used) (4)	
C	316 170 R91	ATTACHMENT, suction fan (18" dia. 6 blade w/1.62" spacer) (For use with 48 H.P. flexible coupling ATTACHMENT, 318 004 R91) (+)	316 169 R1	SPACER, fan (1.00") (Attachment E)	
D	304 549 R93	ATTACHMENT, blower fan (18-1/2" dia. 6 blade w/1.38" spacer) (For use on standard units and units with 20 H.P. flexible coupling ATTACHMENT, 318 005 R91) (+)	574 100 R1	SPACER, fan (1.31") (Attachment F)	
E	316 168 R91	ATTACHMENT, blower fan (18" dia. 6 blade w/1.00" spacer) (For use with 48 H.P. flexible coupling ATTACHMENT, 318 004 R91) (+)	304 575 R1	SPACER, fan (1.38") (Attachments A and D)	
F	323 768 R91	ATTACHMENT, blower fan (18" dia. 6 blade w/1.31" spacer) (For use with auxiliary drive pulley ATTACHMENTS, 318 001 R91, 318 002 R91 and 318 003 R91) (+)	318 008 R1	SPACER, fan (1.62") (Attachments B and C)	

(+) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

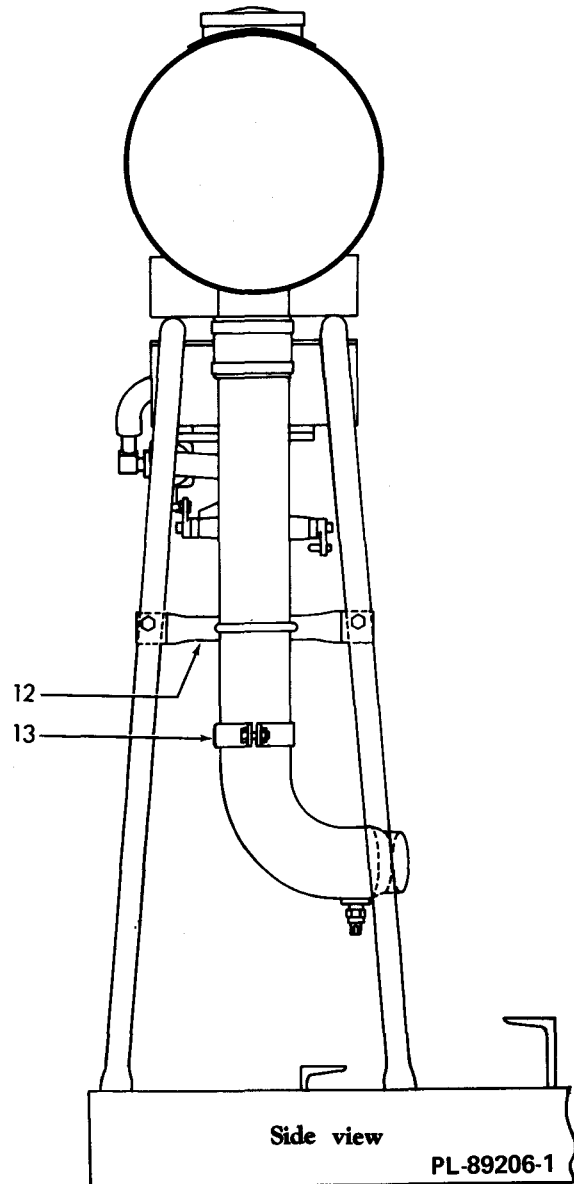
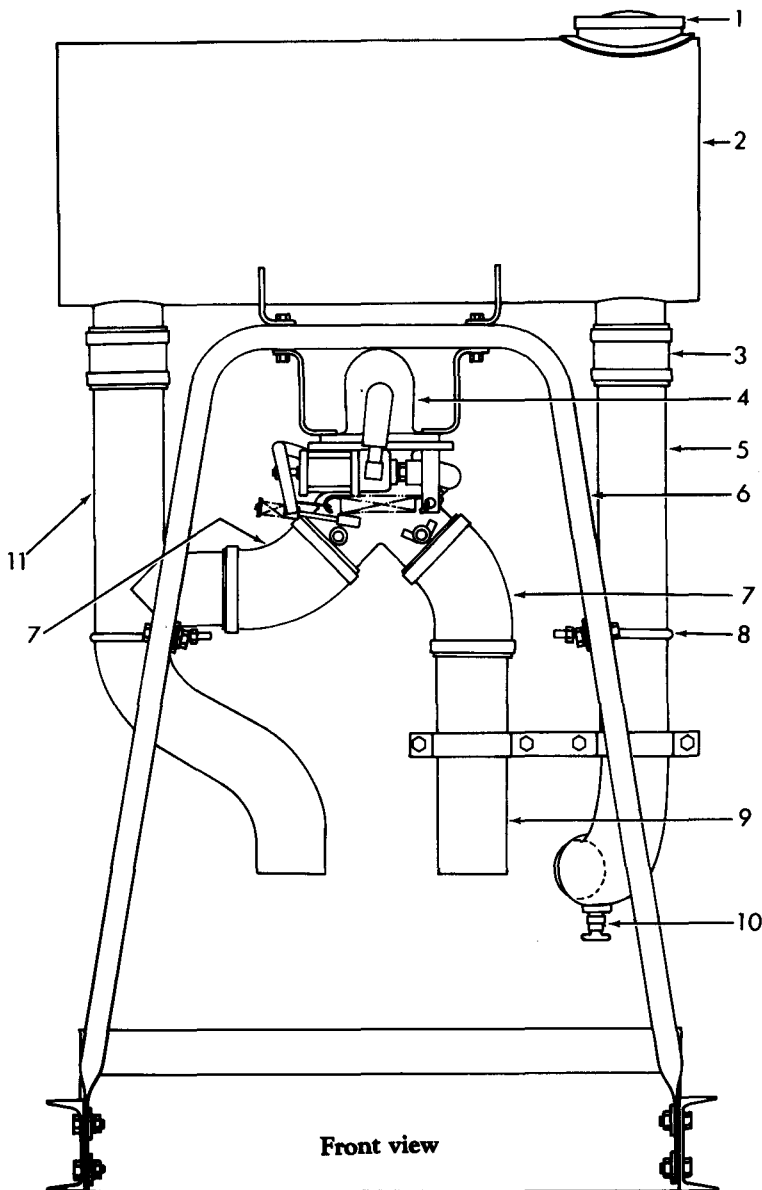
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FAN (UD-282)			ATTACHMENTS, 318 001 R91, 318 002 R91 and 318 003 R91) (Order ATTACHMENT, 701 364 C91)		
 Blower Fan			 Suction Fan CEA-83319		
Parts without letters after the description indicates the part is used for all attachments listed below. Letters "A" thru "J" are used to identify separate attachments.					
A	320 165 R91	ATTACHMENT, suction fan (18-1/2" dia. 6 blade w/1.38" spacer) (For use on standard units and units with auxiliary drive pulley Attachments with single "A" sheave) (Order ATTACHMENT, 701 363 C91)	G	701 362 C91	ATTACHMENT, blower fan (18-1/2" dia. 6 blade w/1.00" spacer) (For use on standard units and units with 20 H.P. flexible coupling ATTACHMENT 318 005 R91) (%)
B	320 166 R91	ATTACHMENT, suction fan (18-1/2" dia. 6 blade w/1.62" spacer) (For use with auxiliary drive pulley ATTACHMENT, 318 001 R91, 318 002 R91, and 318 003 R91) (Order ATTACHMENT, 701 363 C91)	H	701 364 C92	ATTACHMENT, blower fan (18-1/2" dia. 6 blade w/1.62" spacer) (For use with auxiliary drive pulley ATTACHMENT, 318 001 R91, 318 002 R91 and 318 003 R91) (%)
C	316 170 R91	ATTACHMENT, suction fan (18" dia. 6 blade w/1.62" spacer) (For use with 48 H.P. flexible coupling ATTACHMENT, 318 004 R91) (%)	J	701 363 C91	ATTACHMENT, suction fan (18-1/2" dia. 6 blade w/1.62" spacer) (For use with auxiliary drive pulley ATTACHMENT, 318 001 R91, 318 002 R91 and 318 003 R91) (%)
D	304 549 R93	ATTACHMENT, blower fan (18-1/2" dia. 6 blade w/1.38" spacer) (For use on standard units and units with 20 H.P. flexible coupling ATTACHMENT, 318 005 R91) (Order ATTACHMENT, 701 362 C91)	1	306 355 R91	FAN, blower (18-1/2" dia. 6 blade) (Attachments D and F)
E	316 168 R91	ATTACHMENT, blower fan (18" dia. 6 blade w/1.00" spacer) (For use with 48 H.P. flexible coupling ATTACHMENT, 318 004 R91) (%)	1	702 895 C1	FAN, blower (18-1/2" dia. 6 blade) (Attachments G and H)
F	323 768 R91	ATTACHMENT, blower fan (18" dia. 6 blade w/1.31" spacer) (For use with auxiliary drive pulley	19 919 R1		SCREW, hex-hd cap (4) WASHER, 1/4" lock (4)
			1	317 720 R91	FAN, blower (18" dia. 6 blade) (Attachment E) SCREW, 1/4NF x 2" hex-hd cap (4 for Attachment F) SCREW, 1/4 x 1-5/8" hex-hd cap (4 for Attachment E) SCREW, 1/4NF x 1-3/4" hex-hd cap (4 for Attachment D) WASHER, 1/4" lock (4 for Attachments, D, E and F)
			2	321 565 R91	FAN, suction (18-1/2" dia. 6 blade) (will work for FANS, 267 450 R91 or 371 633 R91) (Attachments A and B)
					(%) - Attachment No Longer Available. Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FAN - Continued (UD-282)					
2	317 719 R91	FAN, suction (18" dia. 6 blade) (Attachment C) SCREW, 1/4NF x 2-1/4" hex-hd cap (4 for Attachments A and B) SCREW, 1/4 x 2" hex-hd cap (4 for Attachment C) WASHER, 1/4" lock (4 for Attachments, A, B and C)			
2	702 894 C1	FAN, suction (18-1/2" dia. 6 blade) (Attachment J)			
	19 919 R1	SCREW, hex-hd cap (4) WASHER, 1/4" lock (4)			
	19 918 R1	BOLT (Used with FANS, 267 450 R91 and 371 633 R91 when SPACER, 304 575 R1 is used) (4)			
	19 919 R1	BOLT (Used with FANS, 267 450 R91 and 371 637 R91 when SPACER, 318 008 R1 is used) (4)			
	316 169 R1	SPACER, fan (1.00") (Attachments E and G)			
	304 575 R1	SPACER, fan (1.38") (Attachments A, C and D)			
	318 008 R1	SPACER, fan (1.62") (Attachments B, F, H and J)			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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EXPANSION TANK AND CONNECTIONS

- | | |
|---|---|
| <p>332 459 R91 ATTACHMENT, expansion tank and connections (For use with flo-matic valve attachment and engine support attachment) (%)</p> <p>1 317 654 R91 CAP, tank filler</p> <p>2 316 029 R93 TANK, water expansion</p> <p>102 634 NUT, 5/16" (4)</p> <p>179 824 SCREW, 5/16 x 1-3/4" hex-hd cap (4)</p> <p>103 320 WASHER, 5/16" lock (4)</p> <p>444 664 PLUG, 1/2" pipe</p> | <p>3 346 611 R1 HOSE, inlet and outlet tube connector (2)</p> <p>279 029 R91 CLAMP, hose (4)</p> <p>4 VALVE, flo-matic (Not furnished as part of "Expansion Tank and Connections Attachment") (For components see list of parts under details of "Flo-Matic Valve")</p> <p>(%) - Attachment No Longer Available. Service Parts Will Be Furnished.</p> |
|---|---|

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
EXPANSION TANK AND CONNECTIONS - Continued					
5	316 040 R11	TUBE, water outlet			
6	316 035 R1	SUPPORT, expansion tank (2)			
	102 635	NUT, 3/8" (8)			
	179 839	SCREW, 3/8" x 1" hex-hd cap (8)			
	103 321	WASHER, 3/8" lock (8)			
	128 145	WASHER, 7/16" lock (8)			
7	316 058 R2	ELBOW, by-pass valve body (2)			
	279 029 R91	CLAMP, hose (4)			
8	316 039 R1	U-BOLT, water tube (2)			
	102 634	NUT, 5/16" (4)			
	103 320	WASHER, 5/16" lock (4)			
	103 340	WASHER, 11/32 x 11/16" x No. 16 ga. (4)			
9	316 059 R1	TUBE, water return			
10	31 729 D	VALVE, drain			
11	316 037 R11	TUBE, water inlet			
12	316 036 R1	SUPPORT, tube (2)			
	102 634	NUT, 5/16" (4)			
	179 824	SCREW, 5/16 x 1-3/4" hex-hd cap (4)			
	103 320	WASHER, 5/16" lock (4)			
	103 340	WASHER, 11/32 x 11/16" x No. 16 ga. (4)			
13	316 060 R1	SUPPORT, water return tube (2)			
	102 634	NUT, 5/16" (4)			
	179 818	SCREW, 5/16 x 1" hex-hd cap (4)			
	103 320	WASHER, 5/16" lock (4)			
	332 182 R1	ELBOW, engine water outlet (2)			
	332 460 R1	ELBOW, engine water inlet			
	279 026 R91	CLAMP, hose (3)			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FLO-MATIC VALVE					
332 184 R91	ATTACHMENT, flo-matic valve (For use with expansion tank and connections, ATTACHMENT, 332 459 R91) (%)				
1	316 253 R2	INLET, flo-matic valve	9	102 776 H	PIN, rod end
2	31 729 D	VALVE, 3/8" NPT vent	10	107 761	PIN, 1/16 x 3/4" cotter
3	171 819 R1	NIPPLE, 5/8 x 3/8" hose (2)	11	316 063 R11	ROD w/CLEVIS, overtravel
4	274 085 R91	CLAMP, hose (4)	12	103 373	PIN, 3/32 x 3/4" cotter (2)
5	171 807 R1	ELBOW, 5/8 x 3/8" hose (Short)	13	61 635 D	SPRING, return
6	169 192 R1	ELBOW, 90° x 5/8" rubber hose (2)	14	316 065 R1	CLIP, return spring
7	120 879 R1	ELBOW, 90° x 5/8" hose (long)	15	300 415 R1	SPRING, overtravel
8	346 637 R91	CONTROL, vernatherm	16	103 339	WASHER, 9/32 x 5/8" x No. 16 ga. (2)
181 311	SCREW, 1/4NF x 5/8" hex-hd cap (2)				
103 319	WASHER, 1/4" lock (2)				
CEA-82259A					
(%) - Attachment No Longer Available Service Parts Will Be Furnished.					

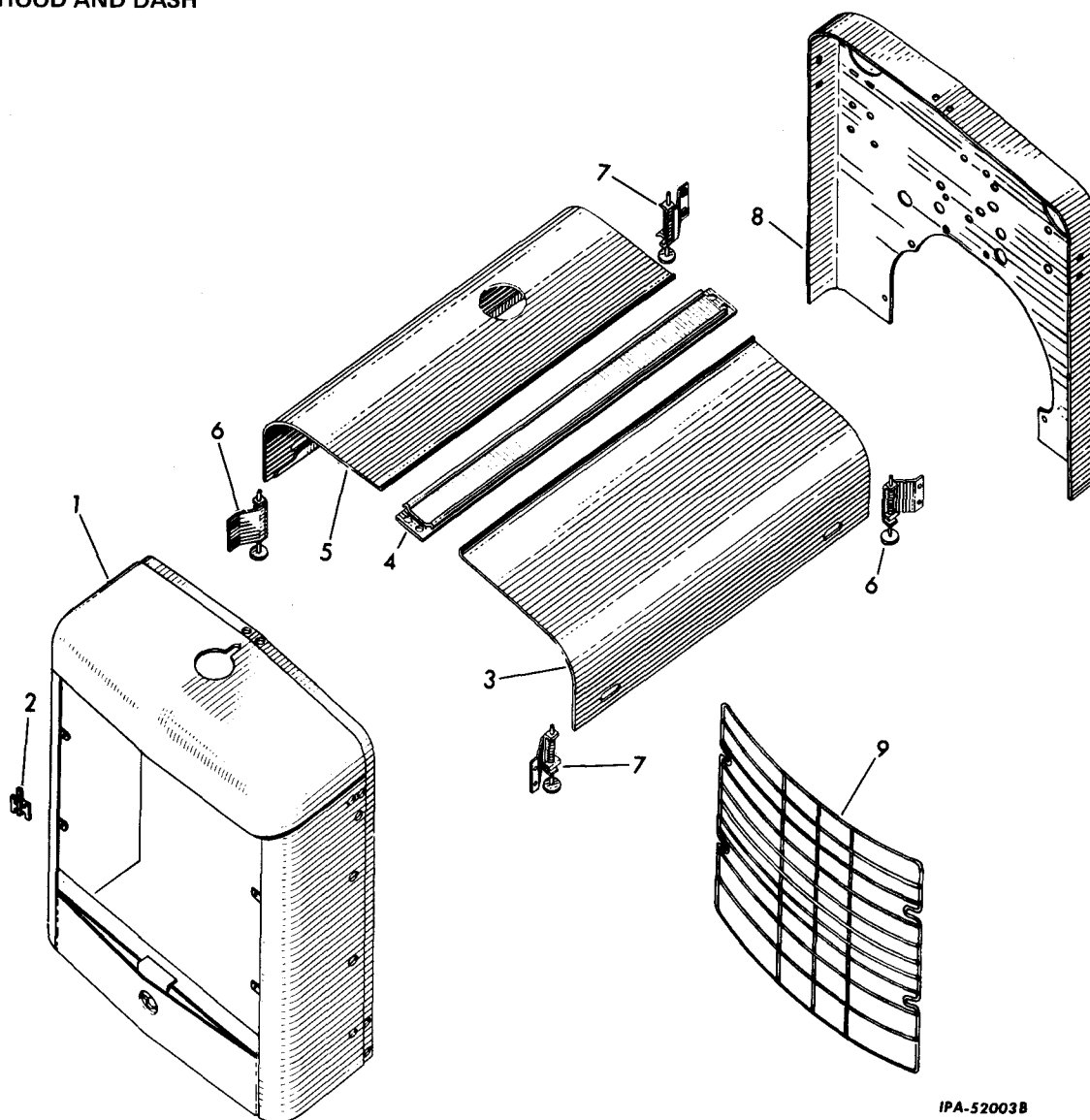
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FLO-MATIC VALVE - Continued			323 849 R92 VALVE ASSY, flo-matic (Composed of -		
17	317 554 R91	LEVER ASSY, throttle shaft (3)		1 BODY	316 046 R42
18	268 296 R91	COLLAR w/SCREW, 36 756 D, throttle shaft (3)		1 BRACKET	323 850 R1
19	36 756 D	SCREW, set (4)		2 CLAMP	274 085 R91
20	332 488 R91	STOP w/two SCREW, 11 189 V, throttle shaft		1 CLIP	316 065 R1
	11 189 V	SCREW, throttle stop adjusting (2)		3 COLLAR	268 296 R91
21	316 046 R42	BODY ASSY, flo-matic valve (Composed of -		1 CONTROL	324 340 R92
	\$ 1	BODY		1 ELBOW	169 192 R1
	4	BUSHING 347 001 R1		1 ELBOW	171 807 R1
	\$ 2	DISC		3 LEVER	317 554 R91
	2	SHAFT 612 179 C1		1 LINK	316 049 R1
	4	SCREW		2 NIPPLE	171 819 R1
	4	WASHER)		1 PIN	102 776 H
22	347 001 R1	BUSHING, throttle shaft (4)		4 PIN	103 373
23	321 881 R91	SEAL, water (4)		1 PIN	107 761
24		DISC, throttle (Not Furnished Separately)		1 PLUG	445 686
25	612 179 C1	SHAFT, throttle (2)		1 ROD	316 063 R11
26	224 536	SCREW, No. 6 x 7/16" slt-fil-hd (4)		1 SCREW	36 756 D
	111 041	WASHER, No. 6 lock (4)		4 SEAL	321 881 R91
27	445 686	PLUG, 3/8" sq-hd pipe		1 SPRING	300 415 R1
28	316 049 R1	LINK, throttle shaft lever		1 STOP	332 488 R1
29	103 373	PIN, 3/32 x 3/4" cotter (2)		1 SPRING	61 635 D)
	103 339	WASHER, 9/32 x 5/8" x No. 16 ga. (2)			
30	316 048 R1	GASKET, flo-matic valve			
31	323 847 R1	SUPPORT, flo-matic valve (2)			
	102 634	NUT, 5/16" (4)			
	179 820	SCREW, 5/16 x 1-1/4" hex-hd cap (3)			
	179 822	SCREW, 5/16 x 1-1/2" hex-hd cap			
	103 320	WASHER, 5/16" lock (4)			
32	323 850 R1	BRACKET, return spring			
	102 634	NUT, 5/16"			
	179 817	SCREW, 5/16 x 7/8" hex-hd cap			
	103 320	WASHER, 5/16" lock			

-94-
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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GRILLE HOOD AND DASH



Parts without letters after the description indicate the part is used for all Attachments listed below. Letters A thru E are used to identify separate Attachments)

- | |
|---|
| <p>A 304 581 R91 ATTACHMENT, hood and dash (%)</p> <p>B 320 136 R91 ATTACHMENT, hi-flow radiator grille (not for use with radiator shutter) (see NOTES 1 and 3)</p> <p>C 320 137 R91 ATTACHMENT, hi-flow radiator grille (for use with radiator shutter) (%)</p> <p>D 316 273 R91 ATTACHMENT, hood and dash (%)</p> |
|---|

- | |
|--|
| <p>E 349 145 R91 ATTACHMENT, hood and dash (see NOTES 1 and 3)</p> <p>1 320 138 R11 HOUSING, radiator grille Attachment B)</p> <p>1 320 140 R91 HOUSING, radiator grille (Attachment C)</p> <p>179 812 SCREW, 5/16 x 1/2" hex-hd cap (8)</p> <p>103 320 WASHER, 5/16" lock (8)</p> |
|--|

(%) - Attachment No Longer Available. Service Parts Will Be Furnished.

NOTE 1 - Factory Application - Order on Machine Order Form.

NOTE 3 - Field Application - Order Thru Regular Service Parts Channels.

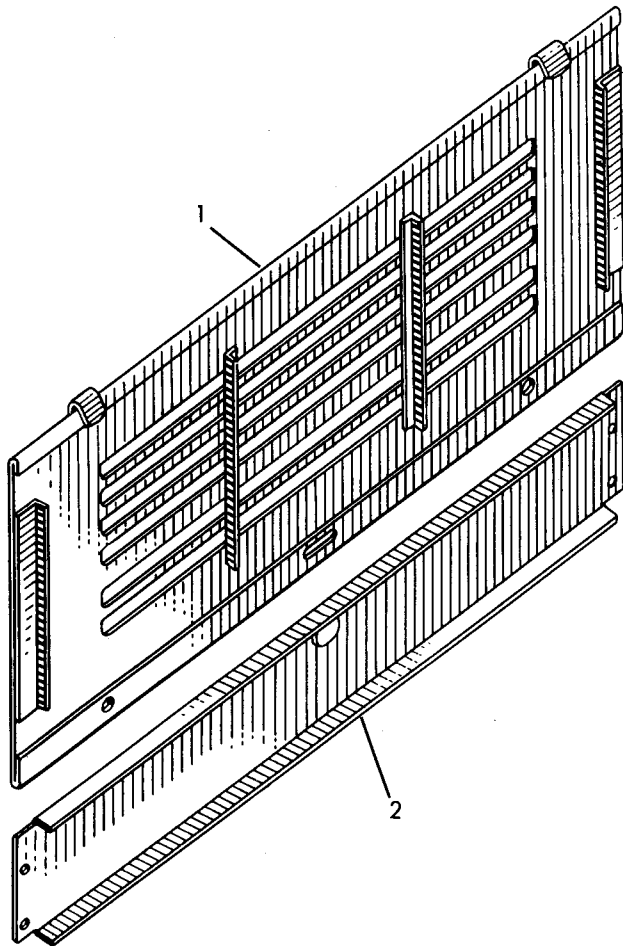
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ATTACHMENTS

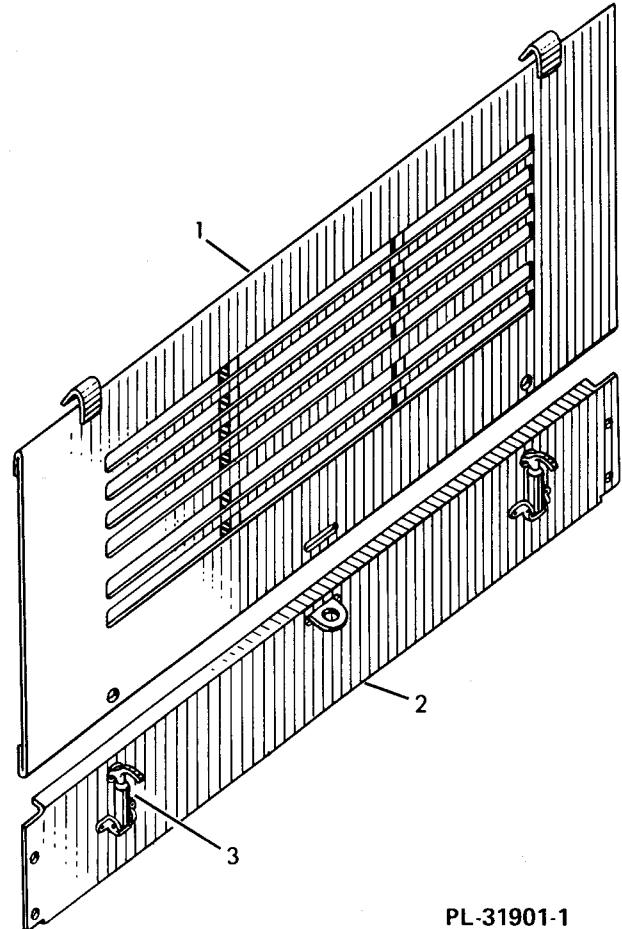
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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HOOD SIDE DOOR



268 227 R91 ATTACHMENT, hood side doors (See
NOTES 1 and 3)

1 678 252 C1 DOOR, hood side (2)



PL-31901-1

- 2 268 230 R11 SHEET, hood side (2)
102 635 NUT, 3/8" (8)
179 837 SCREW, 3/8 x 3/4" hex-hd cap
(8)
103 321 WASHER, 3/8" lock (8)
- 3 353 443 R91 LATCH, hood side door (4)
113 277 RIVET, 3/16 x 5/16" fl-hd. (8)

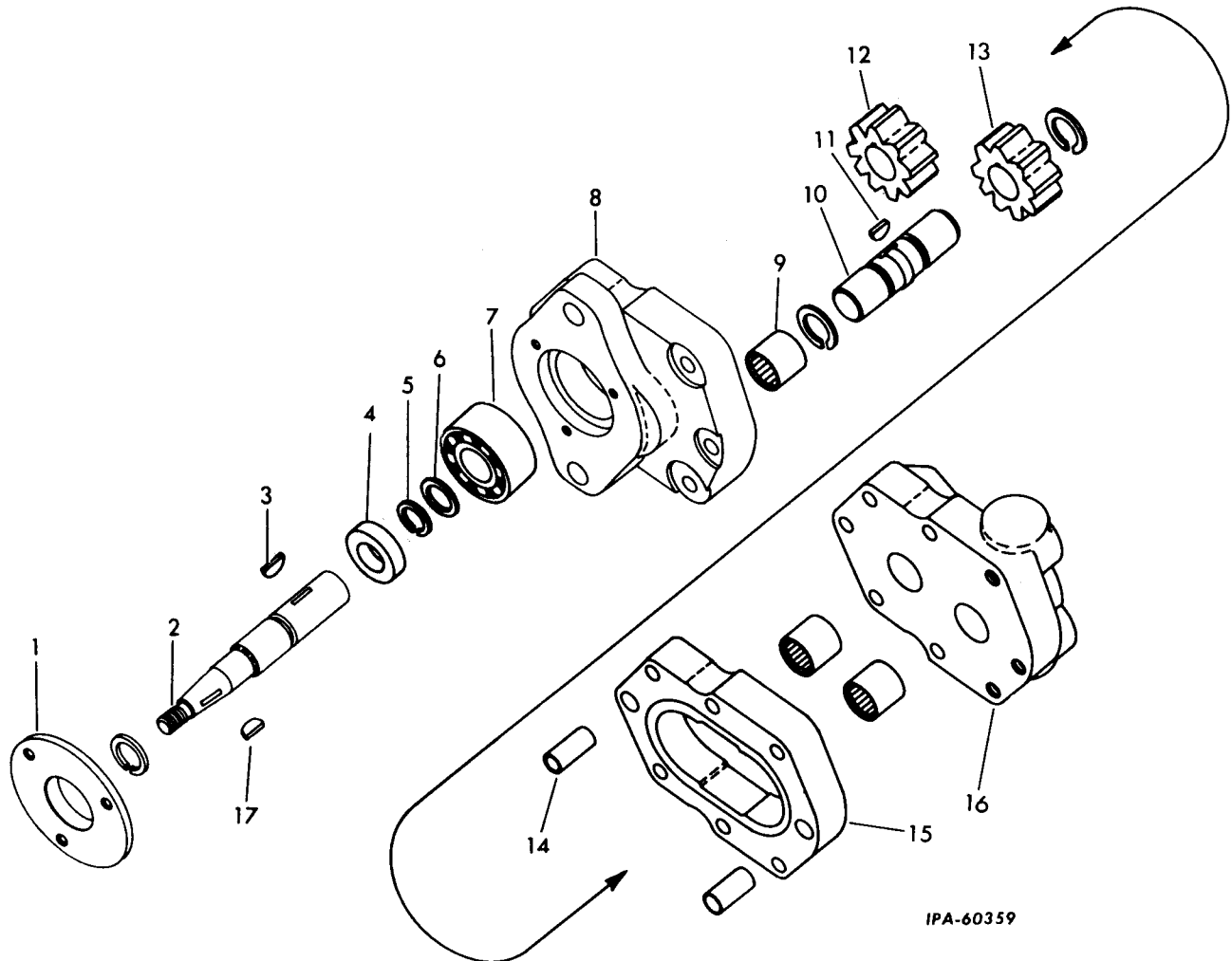
NOTE 1 - Factory Application - Order on
Machine Order Form.

NOTE 3 - Field Application - Order Through
Regular Service Parts Channels.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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HYDRAULIC PUMP (Webster Electric)



IPA-60359

(X) - KEY TO UNITS -

A 588 371 R92 PUMP, hydraulic (15 G.P.M.)

D 588 370 R91 PUMP, hydraulic (11 G.P.M.) (will work for 588 369 R91)

E 588 369 R91 PUMP, hydraulic (10 G.P.M.) (order 588 370 R91)

(X) - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicates the part is used for all units.

1 588 394 R1 PLATE, pilot
110 532 SCREW, No. 10 x 5/8" fil-hd. mach.

2 588 390 R1 SHAFT, drive (Unit E)

2 588 397 R1 SHAFT, drive (Unit D)

2 588 396 R1 SHAFT, drive (Unit A)

3 124 543 KEY, 1/8 x 1/2" (Woodruff No. 3) (Unit E)

3 103 646 KEY, 1/8 x 3/4" (Woodruff No. 7) (Units A and D)

4 586 201 R91 OIL SEAL

5 276 575 R1 RING, retaining (4)

6 276 569 R1 WASHER, 49/64 x 59/64 x .030" flat (2)

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
HYDRAULIC PUMP - Continued (Webster Electric)			HYDRAULIC PUMP ADAPTER (Inboard)		
7	8 521 T	BEARING, ball	670 363 C1		BELT, fan (+)
8	588 391 R1	BODY, pump (unit A, D and E)	274 191 R2		BRACE, generator (-)
	179 806	SCREW, 1/4 x 2-1/4" hex-hd cap	179 817		SCREW, 5/16 x 7/8" hex-hd cap
	179 826	SCREW, 5/16 x 2" hex-hd. cap (2)	179 859		SCREW, 7/16 x 1-1/8" hex-hd cap
	103 319	WASHER, 1/4" lock	103 320		WASHER, 5/16" lock
	103 320	WASHER, 5/16" lock (2)	103 322		WASHER, 7/16" lock
9	276 574 R91	BEARING, needle (3)	280 185 R1		WASHER, flat
10	572 082 R1	SHAFT, idler (Unit D)	312 513 R2		BRACKET, generator rear mounting (-)
10	572 943 R1	SHAFT, idler (Unit E)			UD-236 501 to UD-282 501 to 2270
10	573 661 R1	SHAFT, idler (Unit A)	179 818		SCREW, 5/16 x 1" hex-hd cap (2)
11	427 261	KEY, 1/8 x 3/8" (Woodruff No. 213)	103 320		WASHER, 5/16" lock (2)
12	276 579 R1	GEAR, drive (8T) (Unit D)	103 340		WASHER, 11/32 x 11/16 x No. 16 ga.
12	572 961 R1	GEAR, drive (8T) (Unit E)	318 024 R2		BRACKET, generator rear mounting (-)
12	573 693 R1	GEAR, drive (8T) (Unit A)			UD-236 up UD-282 2271 up
13	276 570 R1	GEAR, idler (8T) (Unit D)	179 818		SCREW, 5/16 x 1" hex-hd cap
13	572 962 R1	GEAR, idler (8T) *Unit E)	179 819		SCREW, 5/16 x 1-1/8" hex-hd cap
13	573 694 R1	GEAR, idler (8T) (Unit A)	103 320		WASHER, 5/16" lock (2)
14	573 666 R1	PIN, dowel (2 for Unit D)	103 340		WASHER, 11/32 x 11/16" x No. 16 ga.
14	572 941 R1	PIN, dowel (2 for Unit E)	102 634		NUT, 5/16"
14	573 657 R1	PIN, dowel (2 for Unit A)	315 722 R1		BRACKET, voltage regulator (-)
15	588 387 R1	PLATE, gear (Unit E)			NUT, 1/2" (2)
15	588 393 R1	PLATE, gear (Unit A)			SCREW, 1/2 x 1-3/8" hex-hd cap (2)
15	588 395 R1	PLATE, gear (Unit D)			WASHER, 1/2" lock (2)
16	588 392 R1	COVER, pump (Units A, D and E)	301 819 R1		CLAMP, hose (mounted on generator bracket) (-)
	179 806	SCREW, 1/4 x 2-1/4" hex-hd cap			UD-236 5579 up UD-282 9049 up
	179 826	SCREW, 5/16 x 2" hex-hd cap	179 837		SCREW, 3/8 x 3/4" hex-hd cap
	103 319	WASHER, 1/4" lock	103 321		WASHER, 3/8" lock
	103 320	WASHER, 5/16" lock	102 635		NUT, 3/8"
17	124 548	KEY, 5/32 x 3/4" (Woodruff No. 8)			(*) - Also listed And Illustrated In The "Engine" Section Of the Catalog.
	364 145 R1	"O" RING, 2-1/8 x 2-5/16 x 3/32"			(+) - Also Listed In the "Cooling System" Section Of This Catalog.
					(-) - Also Listed In The "Electrical System" Section Of This Catalog.

ATTACHMENTS

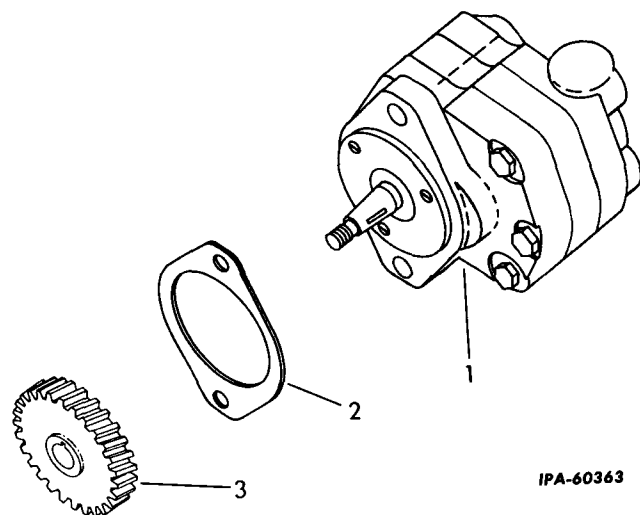
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
HYDRAULIC PUMP - Continued (Webster Electric)			357 672 R91		OIL SEAL, crankshaft front (used with DAMPERS, 372 202 R1, 372 203 R2, 338 949 R91 and 338 952 R91) (*)
320 182 R1		CONNECTOR, water pump inlet oil cooler hose (together with HOSE, 321 880 R1 will work for ELBOW, 171 809 R1) (+) (1) UD-236M 501 to 8541 (1) UD-282, 501 to 12697 (2) UD-236M 8542 up (2) UD-282M 12698 up	317 549 R91		OIL SEAL, crankshaft front (used with DAMPERS, 338 949 R91 and 338 952 R91) (*)
312 505 R31		COVER w/POINTER, 367 572 R1 crankcase front (*)	179 838		SCREW, 3/8 x 7/8" hex-hd. cap (4)
16 081 R1		SCREW, 1/2 x 3-1/8" hex-hd cap (6)	103 321		WASHER, 3/8" lock (4)
179 883		SCREW, 1/2 x 1-1/4" hex-hd cap	267 572 R1		POINTER, timing (*)
179 839		SCREW, 3/8 x 1" hex-hd cap (6)			
103 323		WASHER, 1/2" lock (9)			
103 321		WASHER, 3/8" lock (6)			
278 278 R2		ELBOW, water inlet (+)			
179 850		SCREW, 3/8 x 2-3/4" hex-hd cap (3)			
103 321		WASHER, 3/8" lock (3)			
312 506 R1		GASKET, crankcase front cover (*)			
312 500 R1		GEAR, camshaft (*)			
321 880 R1		HOSE, engine oil cooler water inlet (5/8 x 15/16 x 29.88") (together with CONNECTOR, 320 182 R1 will work for 321 502 R1) (+) UD-236M 501 to 8541 UD-282M 501 to 12697			
150 955 R2		HOSE, engine oil cooler water inlet (5/8 x 15/16 x 22-3/4") (+) UD-236M 8542 up UD-282M 12698 up			
312 503 R1		HOSE, water outlet engine oil cooler (+) UD-236M 501 to 8541 UD-282M 501 to 9048			
684 162 R1		HOSE, engine oil cooler water outlet (+) UD-236M 8542 up, UD-282M 12698 Up			
264 723 R1		NUT, spline (*)			

- (*) - Also Listed And Illustrated In The "Engine" Section of This Catalog.
- (+) - Also Listed In The "Cooling System" Section Of This Catalog.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION
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HYDRAULIC PUMP ATTACHMENTS



REF. NO.	PART NUMBER	DESCRIPTION
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3	312 452 R1	GEAR, hydraulic pump (27T)
	103 028	NUT, 1/2" NF
	179 589	WASHER, 1/2" internal-external tooth lock

(X)- KEY TO UNITS -

A 315 763 R91 ATTACHMENT, hydraulic pump (15 G.P.M.) (For use with Hydraulic Pump Adapter) (See NOTES 1 and 3)

B 316 258 R91 ATTACHMENT, hydraulic pump (11 G.P.M.) (for use with Hydraulic Pump Adapter) (%)

X - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicates the part is used for all units.

1 588 370 R91 PUMP, hydraulic (will work for 588 369 R91) (Unit B) (@)

1 588 371 R92 PUMP, hydraulic (Unit A) (@)
179 842 SCREW, 3/8 x 1-3/8" hex-hd cap
179 839 SCREW, 3/8 x 1" hex-hd cap
103 321 WASHER, 3/8" lock (2)

2 312 453 R1 GASKET, hydraulic pump

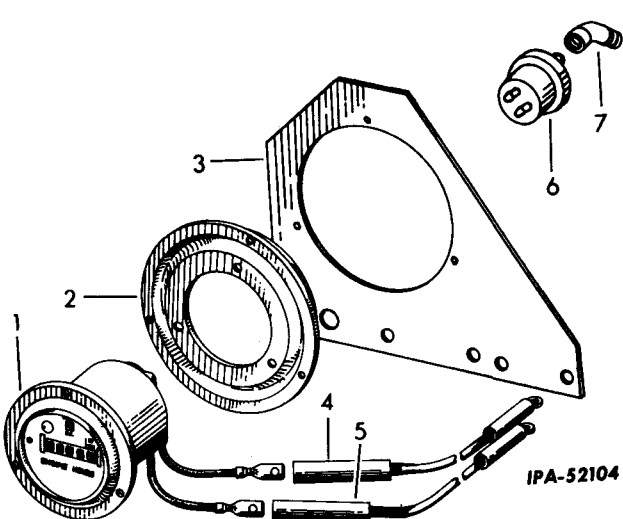
(%) - Attachment No Longer Available. Service Parts Will Be Furnished.

(@) - For Components See List of Parts Under Details of "Hydraulic Pump."

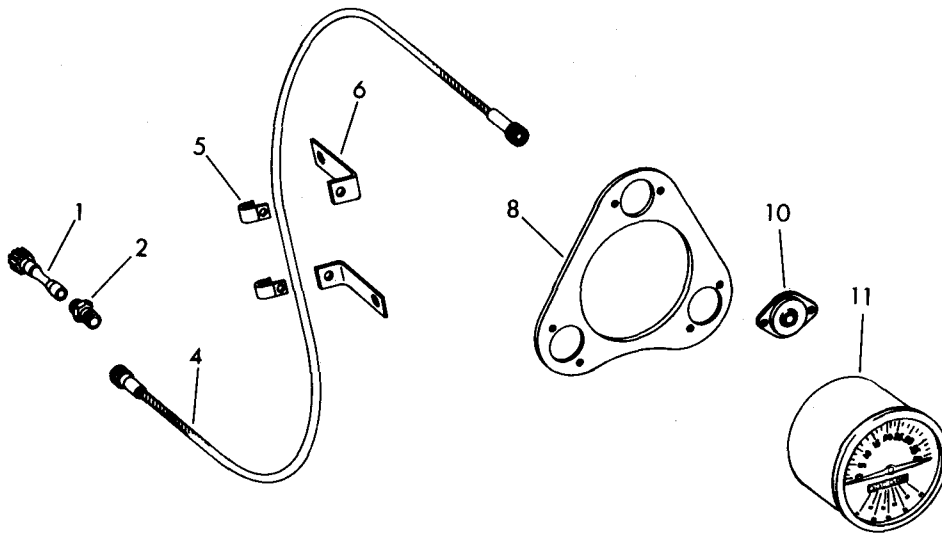
NOTE 1 - Factory Application - Order On Machine Order Form.

NOTE 3 - Field Application - Order Through Regular Service Parts Channels.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
HOURMETER			3	305 201 R1	PLATE, hourmeter mounting (Unit B)
				102 635	NUT, 3/8" (2)
				179 839	SCREW, 3/8 x 1" hex-hd. cap (2)
				103 321	WASHER, 3/8" lock (2)
			4	305 199 R91	CABLE, hourmeter to ammeter (Unit A)
			4	305 366 R91	CABLE, hourmeter to ammeter (Unit B)
			4	271 065 R91	CABLE, hourmeter to ammeter (Unit C)
			5	305 222 R91	CABLE, hourmeter to pressure switch
			6	132 244 R91	SWITCH, pressure
			7	106 649	ELBOW, 1/8 x 45° street
				266 770 R91	CABLE, pressure switch to ground WASHER, 7/16" internal-external tooth lock
				304 583 R2	DASH (Listed and illustrated with "Grille, Hood and Dash") (Unit A)
X - KEY TO UNITS					
A	305 220 R91	ATTACHMENT, hourmeter w/DASH (X) (%)			
B	305 221 R91	ATTACHMENT, hourmeter less DASH (X) (%)			
C	345 060 R91	ATTACHMENT, hourmeter (For use with Instrument and Panel ATTACHMENTS, 349 132 R91 or 349 133 R91) (%)			
X - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicates the part is used for all units.					
1	264 673 R93	HOURMETER (Units A and B)			
	112 871	SCREW, No. 6 x 5/16" slt-rd-hd (3)			
	106 495	WASHER, No. 6 lock (3)			
1	621 657 C91	HOURMETER, electric (Unit C)			
	103 091	NUT, No. 6 (3)			
	112 871	SCREW, No. 6 x 5/16" slt-rd-hd cap (3)			
	106 495	WASHER, No. 6 lock (3)			
2	264 674 R91	DAMPER, hourmeter vibration (Units A and B)			
	112 871	SCREW, No. 6 x 5/16" slt-rd-hd (3)			
	106 495	WASHER, No. 6 lock (3)			
			(%) - Attachment No Longer Available. Service Parts Will Be Furnished. (X) - These Attachments Must Be Modified When Used In Conjunction With Mechanical Tachometer Attachments.		

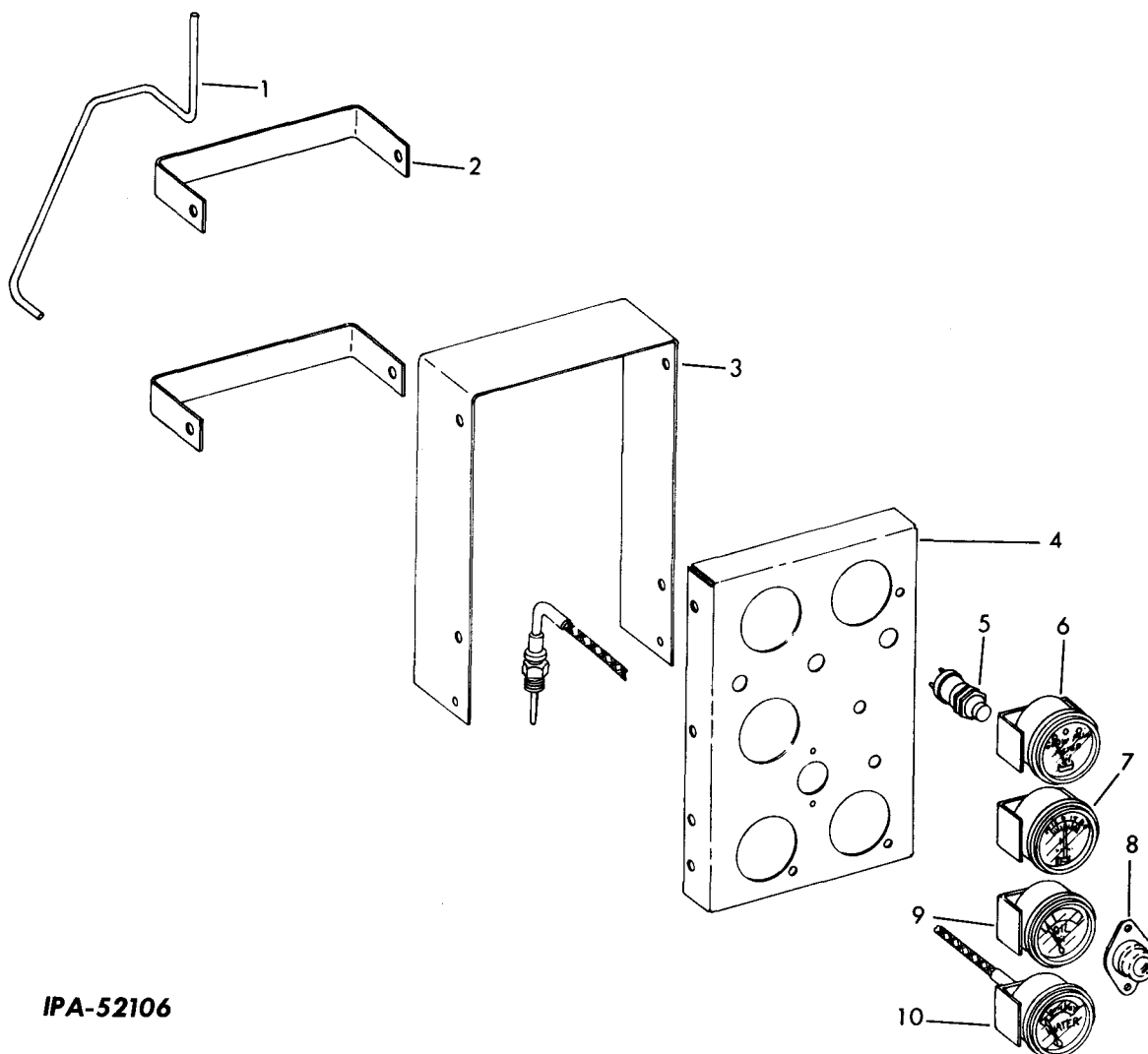
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
TACHOMETER AND TACHOURMETER					
					
IPA-52225C					
Parts without letters after the description indicate the part is used for all attachments listed below. Letters A thru C are used to identify separate attachments.					
A	316 295 R91	ATTACHMENT, tachometer (mechanical) (for units equipped with dash) (order 349 227 R91) (%)	6	56 787 R1	EXTENSION, drive cable clip
B	316 296 R91	ATTACHMENT, tachometer (mechanical) (for units not equipped with dash) (order 349 227 R91) (%)	8	281 801 R11	PLATE, w/three GROMMET, 281 802 R91 tachometer mounting (Attachments A and B) NUT, No. 8 (3) SCREW, No. 8 x 1" slt-rd-hd mach. (3) WASHER, No. 8 lock (3) WASHER, 11/64 x 13/32" x 18 ga. (6)
C	349 227 R92	ATTACHMENT, tachourmeter (mechanical) (for use with Instrument and Panel ATTACHMENTS, 349 132 R91 and 349 133 R91) (%)	10	281 802 R91	GROMMET, tachometer mounting (3 for Attachments A and B) RIVET, 1/8 x 1/4" rd-hd solid (6)
1	314 442 R91	GEAR, tachometer drive (11T)	11	338 595 R91	TACHOURMETER (will work for TACHOMETER, 338 561 R91) (together with CLAMP, 263 297 R2, Two No. 10 lockwashers and Two No. 10 Nuts will work for TACHOMETER 162 165 R91)
2	368 246 R1	HOUSING, tachourmeter connection	263 297 R2	CLAMP, tachourmeter mounting	
4	306 394 R91	CABLE, drive (optional with 306 398 R91)	103 088	NUT, No. 10 (2)	
4	306 398 R91	CABLE, drive (optional with 306 394 R91)	106 497	LOCKWASHER, No. 10 (2)	
5	73 163 H	CLIP, drive cable			
	109 084	NUT, 1/4"			
	179 791	SCREW, 1/4 x 1/2" hex-hd cap			
	103 319	WASHER, 1/4" lock			
(%) - Attachment No Longer Available. Service Parts Will Be Furnished.					

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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INSTRUMENTS AND INSTRUMENT PANEL (NOT AUTO-MATIC SAFETY SHUT-OFF)



IPA-52106

	304 584 R91	ATTACHMENT, instrument and panel (for use with air cleaner attachment) (%)	4	278 597 R2	PANEL, instrument
				113 955	SCREW, 1/4 x 1/2" slt-rd-hd (4)
				103 319	WASHER, 1/4" lock (4)
1	304 587 R1	TUBE, oil pressure indicator	5	271 179 R91	SWITCH, push button (*)
2	304 585 R11	BRACKET, instrument panel mounting (2)	6	702 282 C1	METER, glow plug (*)
	102 635	NUT, 3/8" (2)	7	702 283 C1	AMMETER (*)
	179 839	SCREW, 3/8 x 1" hex-hd cap (2)			
	179 833	SCREW, 3/8 x 1/2" hex-hd cap (2)			
	103 321	WASHER, 3/8" lock (4)			
3	304 586 R1	HOUSING, instrument panel SCREW, No. 10 x 3/8" slt-rd-hd (2)			

(*) - Also Listed and Illustrated With
"Electric Wiring".

(%) - Attachment No Longer Available
Service Parts Will Be Furnished

(*) - Also Listed and Illustrated With
"Electric Wiring".

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
INSTRUMENTS AND INSTRUMENT PANEL (NOT AUTO-MATIC SAFETY SHUT-OFF) - Continued					
8	366 317 R93	SWITCH ASSEMBLY, starting			
	120 611	NUT, No. 10 (2)			
	132 903	SCREW, No. 10 x 7/16" slt-rd- hd (2)			
	120 217	WASHER, No. 10 lock (2)			
9	702 027 C1	GAUGE, engine oil pressure			
10	702 219 C1	INDICATOR, heat			
	265 691 R91	CABLE, ammeter to regulator (*)			
	278 209 R92	CABLE, ammeter to glow plug meter (*)			
	278 209 R92	CABLE, glow plug meter to switch (*)			
	304 589 R91	CABLE, glow plug switch to glow plug (*)			
	359 377 R91	CABLE, starting switch to ammeter (*)			
	61 387 D	CLIP, heat indicator cable (Mounted on lower, rear fuel filter bracket bolt)			
	100 770 H	CLIP, ammeter to regulator cable (mounted on dash mounting bolt)			
	100 770 H	CLIP, cable harness (mounted on dash mounting bolt)			
	264 164 R91	CLIP, ammeter to regulator cable (mounted on front fuel oil filter bolt) (*)			
	29 901 D	CONNECTOR, oil pressure indicator tube (in crankcase)			
	67 869 D	ELBOW, oil pressure indicator (in gauge)			
	304 588 R91	HARNESS, cable (*)			
	19 984 R1	NUT, oil pressure indicator (in gauge)			
	19 984 R1	NUT, oil pressure indicator tube (in crankcase)			
	432 577	PLUG, instrument panel button			

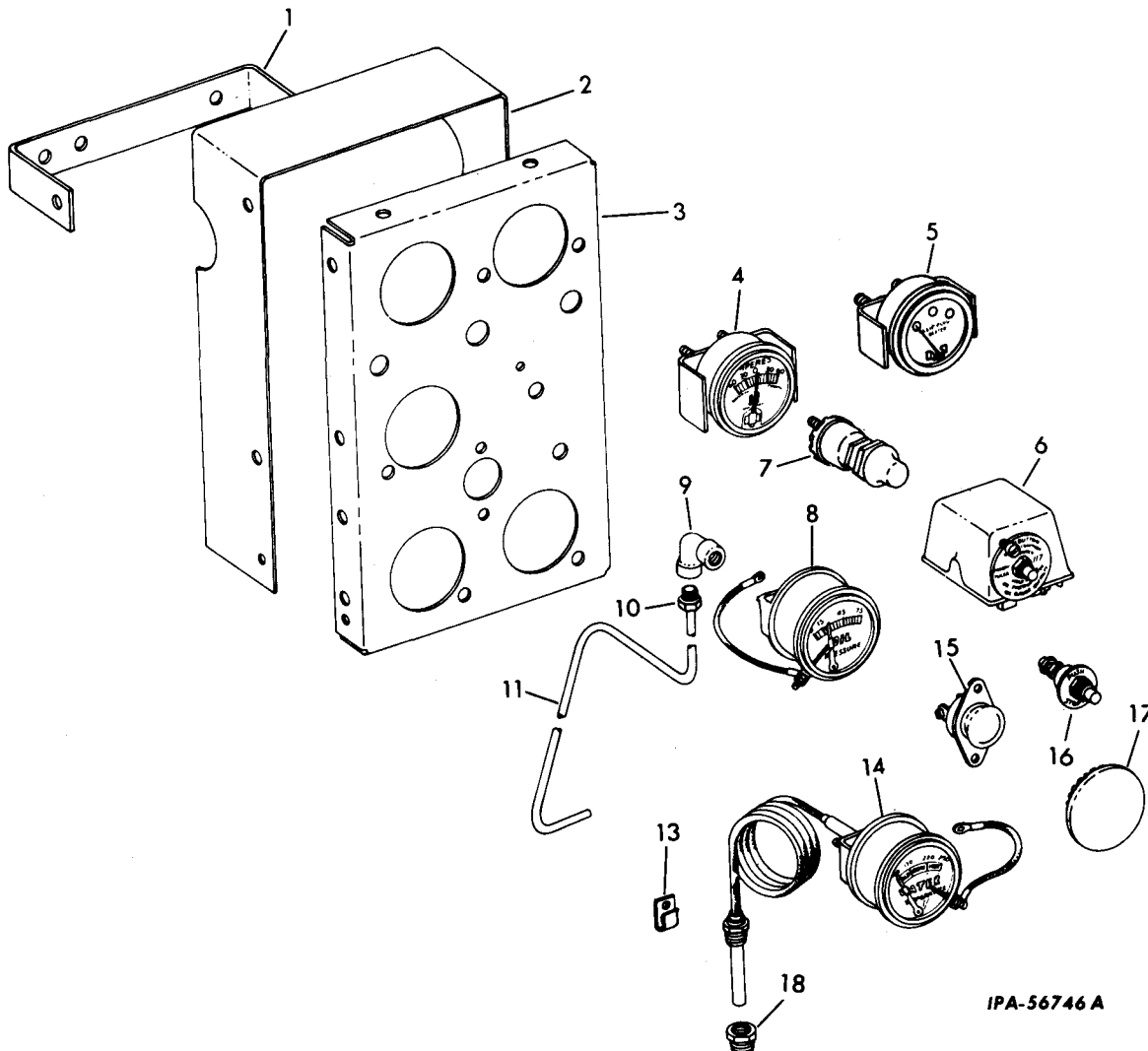
(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

(*) - Also Listed And Illustrated With
"Electric Wiring".

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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AUTOMATIC SAFETY SHUT-OFF (Murphy Panel)



IPA-56746 A

1	304 585 R11	BRACKET, instrument panel mounting (2)	5	702 282 C1	METER, glow meter (*)
	102 635	NUT, 3/8" (2)	6	606 069 C91	RELAY (*)
	179 833	SCREW, 3/8 x 1/2" hex-hd cap (2)	7	271 179 R91	SWITCH, push button
	179 839	SCREW, 3/8 x 1" hex-hd cap (4)	8	268 542 R91	GAUGE, safety oil pressure (*)
	103 321	WASHER, 3/8" lock (4)	9	67 869 D	ELBOW, oil pressure indicator tube (in gauge)
2	304 586 R1	HOUSING, instrument panel SCREW, No. 10 x 3/8" slt-rd-hd tapping (2)	10	269 987 R1	NUT, tube (nylon) (2)
3	278 597 R2	PANEL, instrument	11	304 587 R1	TUBE, oil pressure indicator
	113 955	SCREW, 1/4 x 1/2" slt-rd-hd (4)			
	103 319	WASHER, 1/4" lock (4)			
4	702 283 C1	AMMETER (*)			

(*) - Also Listed And Illustrated With "Electric Wiring".

ATTACHMENTS

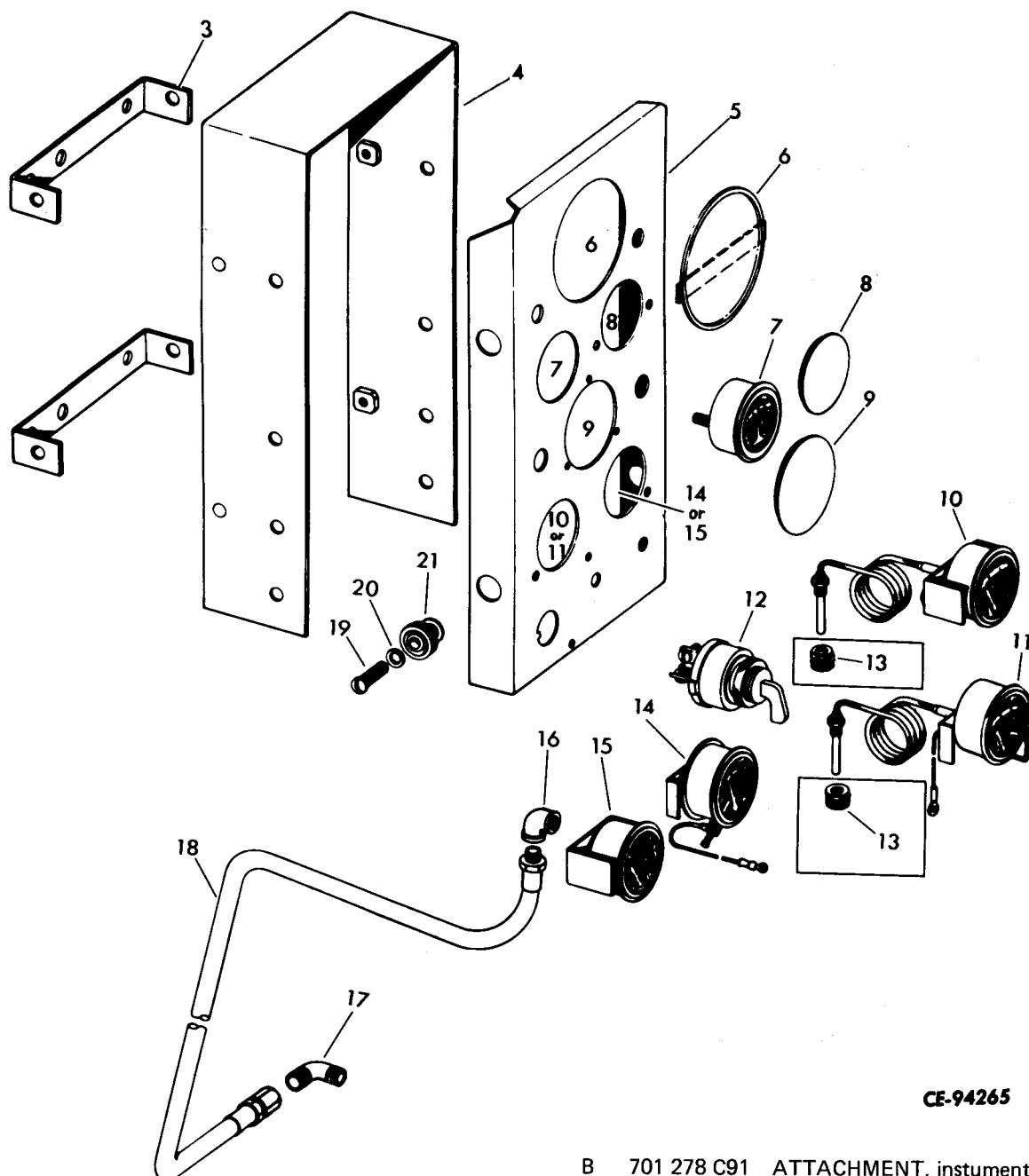
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
AUTOMATIC SAFETY SHUT-OFF (Murphy Panel) - Continued					
			100 770 H		CLIP, ammeter to regulator cable (mounted on dash mounting bolt) (*)
13	254 275 R1	CLIP, heat indicator cable	100 770 H		CLIP, cable harness (mounted on dash mounting bolt) (*)
14	702 544 C1	INDICATOR, safety heat (*)	100 700 H		CLIP, cable (on fuel filter bolt) (*)
15	366 317 R93	SWITCH, starting	264 164 R91		CLIP, ammeter to regulator cable (mounted on front fuel filter bolt) (*)
	120 611	NUT, No. 10NF (2)			
	132 903	SCREW, No. 10NF x 7/16" slt- rd-hd mach (2)			
	120 217	WASHER, No. 10 lock (2)	29 901 D		CONNECTOR, oil pressure indicator tube (in crankcase)
16	265 471 R91	SWITCH, stop (*)	313 676 R91		COVER and SOLENOID ASSEMBLY, governor control (will work for 307 948 R91) (Hartford Machine Screw Co. Part No. 16360) (for details and illustrations see "Fuel Injection Pump" under "Fuel System")
17	432 577	PLUG, instrument panel button			
18	346 598 R1	ADAPTER, heat indicator	304 588 R91		HARNESS, cable (*)
	308 019 R92	ATTACHMENT, automatic safety shut-off (Rear mounted) (%) (Composed of -	369 987 R1		NUT, oil pressure indicator tube (in crankcase)
		1 CABLE 57 055 DA			
		1 CABLE 59 117 D			
		1 CABLE 359 377 R91			
		1 CLIP 100 770 H			
		1 COVER and			
		SOLENOID 313 676 R91			
		1 GAUGE 702 544 C1			
		1 GAUGE 347 604 R91			
		1 INDICATOR 702 544 C1			
		1 NUT 368 009 R1			
		1 RELAY 606 069 C91			
		1 SCREW 304 788 R1			
		1 SWITCH 265 471 R91)			
	57 055 DA	CABLE, injection pump solenoid to ground (*)			
	59 117 D	CABLE, injection pump solenoid to relay (*)			
	265 691 R91	CABLE, ammeter to regulator (*)			
	359 377 R91	CABLE, relay to ammeter (*)			
	278 209 R92	CABLE, ammeter to glow plug meter (*)			
	278 209 R92	CABLE, glow plug meter to switch (*)			
	304 589 R91	CABLE, glow plug switch to glow plug (*)			
	359 377 R91	CABLE, starting switch to ammeter (*)			

(%) - Attachment No Longer Available.
Service Parts will be Furnished.
(*) - Also Listed And Illustrated
With "Electric Wiring".

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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INSTRUMENTS, INSTRUMENT PANEL AND INSTRUMENT PANEL MOUNTING



CE-94265

Parts without letters after the description indicates the part is used for all attachments listed below: Letters A, B and C are used to identify separate attachments.

- A 701 277 C91 ATTACHMENT, instruments and instrument panel regular gauges (rear shock mounted) (%)

- B 701 278 C91 ATTACHMENT, instruments and instrument panel safety gauges (rear shock mounted) (%)
- C 349 226 R91 ATTACHMENT, instrument panel mounting (for use on units equipped with Instruments and Instrument

(%) - Attachment No Longer Available. Service Parts Will Be Furnished.

ATTACHMENTS

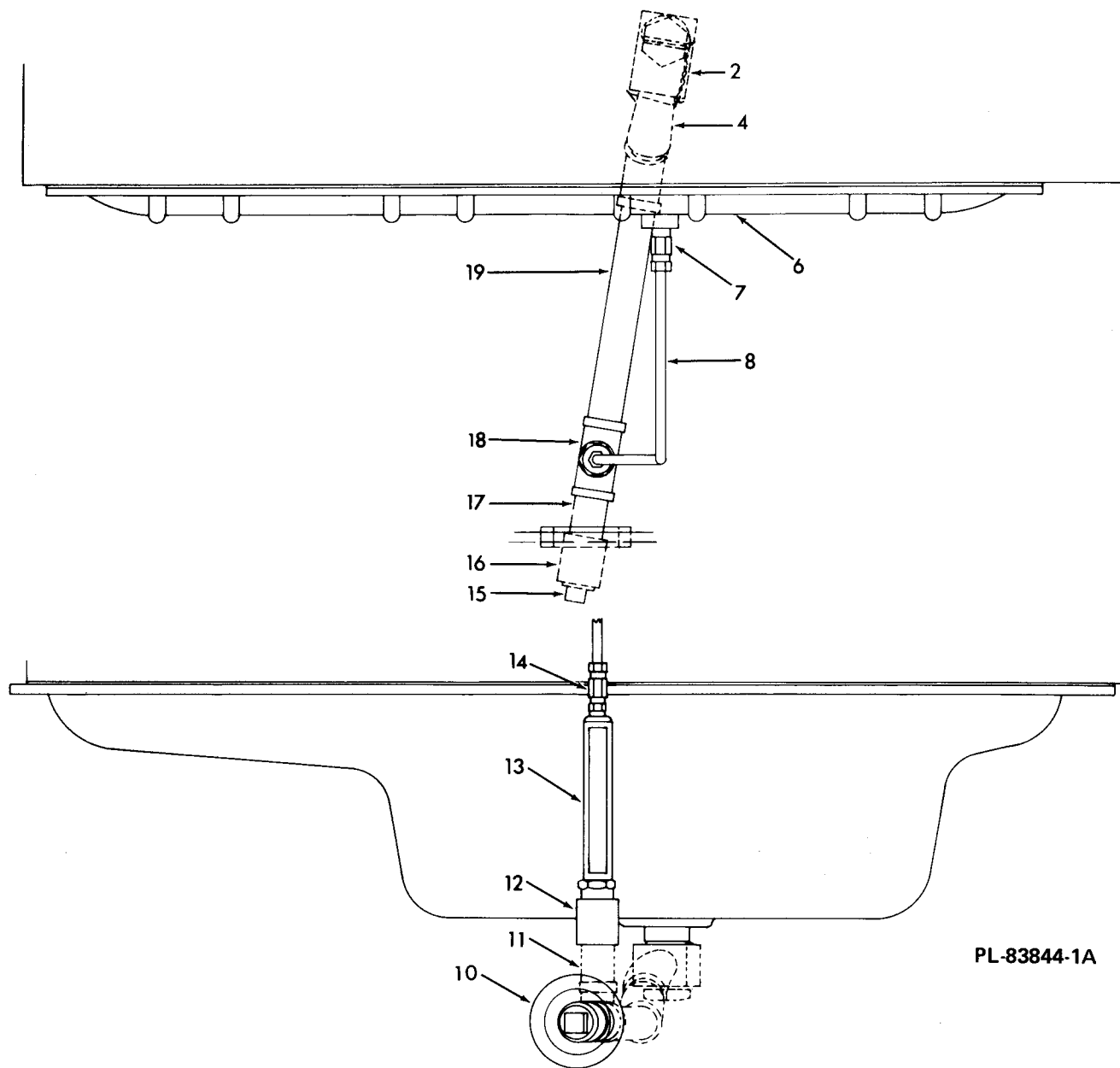
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
INSTRUMENTS, INSTRUMENT PANEL AND INSTRUMENT PANEL MOUNTING - Continued			17	118 753	ELBOW, 1/4" x 90° oil pressure hose (Attachment C)
		Panel Attachment, 701 277 C91 or Instruments and Instrument Panel ATTACHMENT, 701 278 C91) (%)	18	346 592 R91	HOSE w/two FITTINGS, oil pressure indicator (Attachment C)
			19		SCREW, No. 10 x 7/8" rd-hd mach (4 for Attachments A and B)
3	337 112 R2	BRACKET, instrument panel mounting (2 for Attachment C)	20		WASHER, No. 10 lock (4 for Attach- ments A and B)
	102 635	NUT, 3/8" (4)	21	336 419 R91	MOUNT, vibration (4 for Attachments A and B)
	179 837	SCREW, 3/8 x 3/4" hex-hd cap (4)		278 209 R92	CABLE, ammeter to glow plug meter (Attachment C) (@)
	103 321	WASHER, 3/8" lock (4)		278 209 R92	CABLE, glow plug meter to switch (Attachment C) (@)
4	337 113 R11	FRAME, instrument panel (Attachment C)		304 589 R92	CABLE, switch to glow plugs (Attachment C) (@)
	102 635	NUT, 3/8" (4)		359 377 R91	CABLE, starting switch to ammeter (Attachment C) (@)
	179 837	SCREW, 3/8 x 3/4" hex-hd cap (4)		61 387 D	CLIP, cable (fuel filter bracket top rear bolt) (Attachment C)
	103 321	WASHER, 3/8" lock (4)		362 120 R1	CLIP, harness (dash RH mounting bolt) (Attachment C)
5	337 354 R3	PANEL, instrument (Attachments A and B)		362 120 R1	CLIP, cable (injection bolt - 2nd from rear) (Attachment C)
6	370 940 R11	COVER, tachometer opening (Attach- ments A and B)		362 120 R1	CLIP, cable (dash mounting bolt - LH) (Attachment C)
7	702 283 C1	AMMETER (@) (Attachments A and B)		362 120 R1	CLIP, cable (lubricating oil filter front bolt) (Attachment C)
8	432 582	PLUG, 2-1/4" button (Attachments A and B)		304 588 C91	HARNESS, cranking motor cable (Attachment C) (@)
9	432 577	PLUG, 2-3/32" button (Attachments A and B)		702 282 C1	METER, glow plug (Attachment C)
10	702 220 C1	INDICATOR, heat (will work for INDICATOR, 346 597 R1)(Attach- ment A)	2	752 445 R1	PRODUCT GRAPHIC, safety control switch escutcheon (Attachment B)
11	702 544 C1	INDICATOR, safety heat (will work for INDICATOR, 347 602 R91) (Attachment B) (@)			
12	327 144 R91	SWITCH, ignition and starting (Attachments A and B)			
13	346 598 R1	ADAPTER, heat indicator bulb (Used with INDICATOR, 346 597 R91 or 347 602 R91) (Attachment C)			
14	347 604 R91	INDICATOR, safety oil pressure (Attachment B) (@)			
15	702 027 C1	INDICATOR, oil pressure (Attach- ment A)			
16	9 409 923	ELBOW, 1/8" x 90° (Attachments A and B)			

(@) - Also Listed With "Electric
Wiring".

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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OIL LEVEL SIGHT GAUGE



332 472 R91 ATTACHMENT, oil level sight gauge (for use with flo-matic attachment) (%)

2 702 578 C1 ELBOW, adjustable

4 137 894 ELBOW, 1/2" x 45° street pipe (2)

6 332 474 R91 COVER w/two ELEMENT, 315 849 R1, valve push rod (also listed and illustrated with "Crankcase and Related Parts")

7 59 730 H CONNECTOR, hi-duty

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

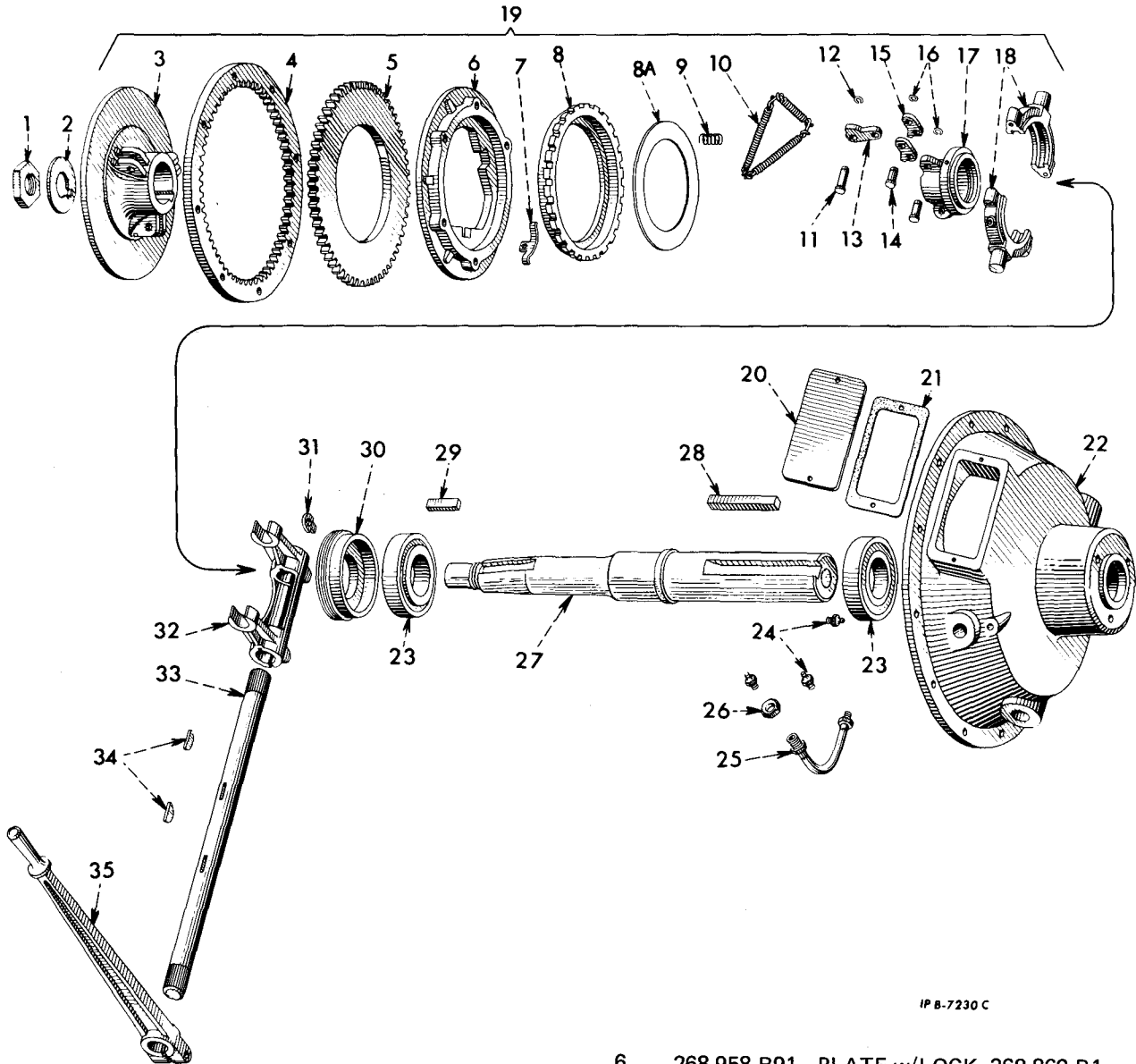
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
OIL LEVEL SIGHT GAUGE - Continued					
8	995 061 R1	TUBE, sight gauge vent (12" long, copper 1/4" OD) (@)			
10	317 623 R1	GROMMET, rubber			
11	120 278	NIPPLE, 3/8 x 1-3/4" pipe			
12	120 755	COUPLING, 3/8" pipe			
13	279 689 R91	GAUGE, oil level sight			
14	29 901 D	BODY, hi-duty tube connector (1/4")			
	369 987 R1	NUT, hi-duty tube connector body			
15	444 587	PLUG, 1/2" pipe (also listed with "Crankcase Oil Pan, Oil Pump and Pump Shaft Support")			
16	187 397	COUPLING, 1/2" pipe			
17	140 537	NIPPLE, 1/2 x 2" pipe			
18	143 166	TEE, 1/2 x 1/2 x 3/8" pipe			
19	187 249	NIPPLE, 1/2 x 7" pipe			
	278 027 R1	WIRE, bulk locking (.0625 ga.) (customer must order length required)			

(@) - Part Number And Price Covers
One Foot Of Tubing. Furnished
Only In 50 Foot Rolls.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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POWER TAKE-OFF (Rockford) (UD-236)



IP B-7230 C

	273 017 R91	ATTACHMENT, power take-off 319 503 R91 (with 10" single plate over-center drive ring type clutch) (UD-236) (%)	6	268 958 R91	PLATE w/LOCK, 268 869 R1, pressure
1	273 231 R1	NUT, hex	7	268 869 R1	LOCK, adjusting
2	273 230 R1	WASHER, lock	8	347 871 R1	NUT, adjusting
3	273 233	BODY, clutch	8A	347 872 R1	PLATE, adjusting
4	255 663 R1	RING, driving	9	266 704 R1	SPRING, separator (3)
5	266 682 R1	FACING, clutch	10	268 865 R91	SPRING, lever

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
POWER TAKE-OFF - Continued (Rockford) (UD-236)			29	266 678 R1	KEY
11	266 697 R1	PIN, clevis (6)	30	266 660 R1	RETAINER, bearing
12	266 698 R1	RING, retaining (6)	31	266 661 R1	PLATE, lock
13	268 866 R1	LEVER (3)	32	266 665 R91	YOKE, clutch
14	266 694 R1	PIN, clevis (3)	33	266 662 R1	SHAFT, yoke
15	266 696 R1	LINK, connecting (6)	34	124 553	KEY, Woodruff No. 15 (2)
16	255 395 R1	RING, retaining (3)	35	266 666 R91	LEVER, shifting
17	273 235 R1	SLEEVE, release		305 861 R91	BEARING, clutch pilot (optional with 338 543 R91)
18	273 236 R91	BEARING w/two NUT, 258 370 R1 and PLUG 103 883, release		338 543 R91	BEARING, clutch pilot (optional with 305 861 R91)
19	273 232 R91	CLUTCH ASSEMBLY, 10" (Composed of -			NUT, 5/16NF elastic stop (2)
		1 BODY 273 233 R1	319 503 R91	POWER TAKE-OFF ASSEMBLY	
		1 FACING 266 682 R1		w/10" over-center CLUTCH (For	
		3 LEVER 268 866 R1		side load applications only. NOT	
		1 LOCK 319 531 R1		for in line drives) (will work for	
		6 LINK 266 696 R1		273 015 R91)	
		1 NUT 347 871 R1		(Composed of -	
		3 PIN 266 694 R1		1 CLUTCH 273 232 R91	
		6 PIN 266 697 R1		2 CONE 29 215 H	
		1 PLATE 268 958 R91		2 CUP 29 214 H	
		1 PLATE 347 872 R1		3 FITTING 109 461	
		3 RING 255 395 R1		2 FITTING 273 355	
		1 RING 255 663 R1		1 GASKET 266 656 R1	
		6 RING 266 698 R1		1 HOUSING 273 238 R1	
		1 SCREW 19 559 R1		2 KEY 124 553	
		1 SLEEVE		1 KEY 266 668 R1	
		w/BEARING 273 234 R91		1 KEY 266 678 R1	
		3 SPRING 266 704 R1		1 LEVER 266 666 R91	
		1 SPRING 268 865 R91)		1 NUT 273 231 R1	
20	321 841 R1	PLATE, instruction		1 PLATE 266 661 R1	
21	266 656 R1	GASKET, cover		1 PLATE 321 841 R1	
22	273 238 R1	HOUSING, clutch		1 RETAINER 266 660 R1	
23	29 215 H	CONE, tapered roller bearing (2)		1 SHAFT 266 662 R1	
23	29 214 H	CUP, tapered roller bearing (2)		1 SHAFT 319 536 R1	
24	109 461	FITTING, 1/8" plug pipe (3)		1 TUBE 266 667 R91	
25	266 667 R91	TUBE, flexible		1 WASHER 273 230 R1	
26		NUT, 5/8NF hex.		1 YOKE 266 665 R91)	
27	319 536 R1	SHAFT, drive		SCREW, 3/8 x 1-1/8" hex-hd	
28	266 668 R1	KEY		cap (12) (+)	
				SCREW, 3/8 x 1-1/2" hex-hd cap	
				(8) (+)	
				WASHER, 3/8" lock (20) (+)	
			273 355	FITTING, 1/4" drive type hydraulic	
				lubricator (2)	
			103 883	PLUG, 1/8" slt-hd pipe	
			319 531 R1	LOCK, positive	
(+) - For Mounting Clutch and Power Take-Off Assembly.					

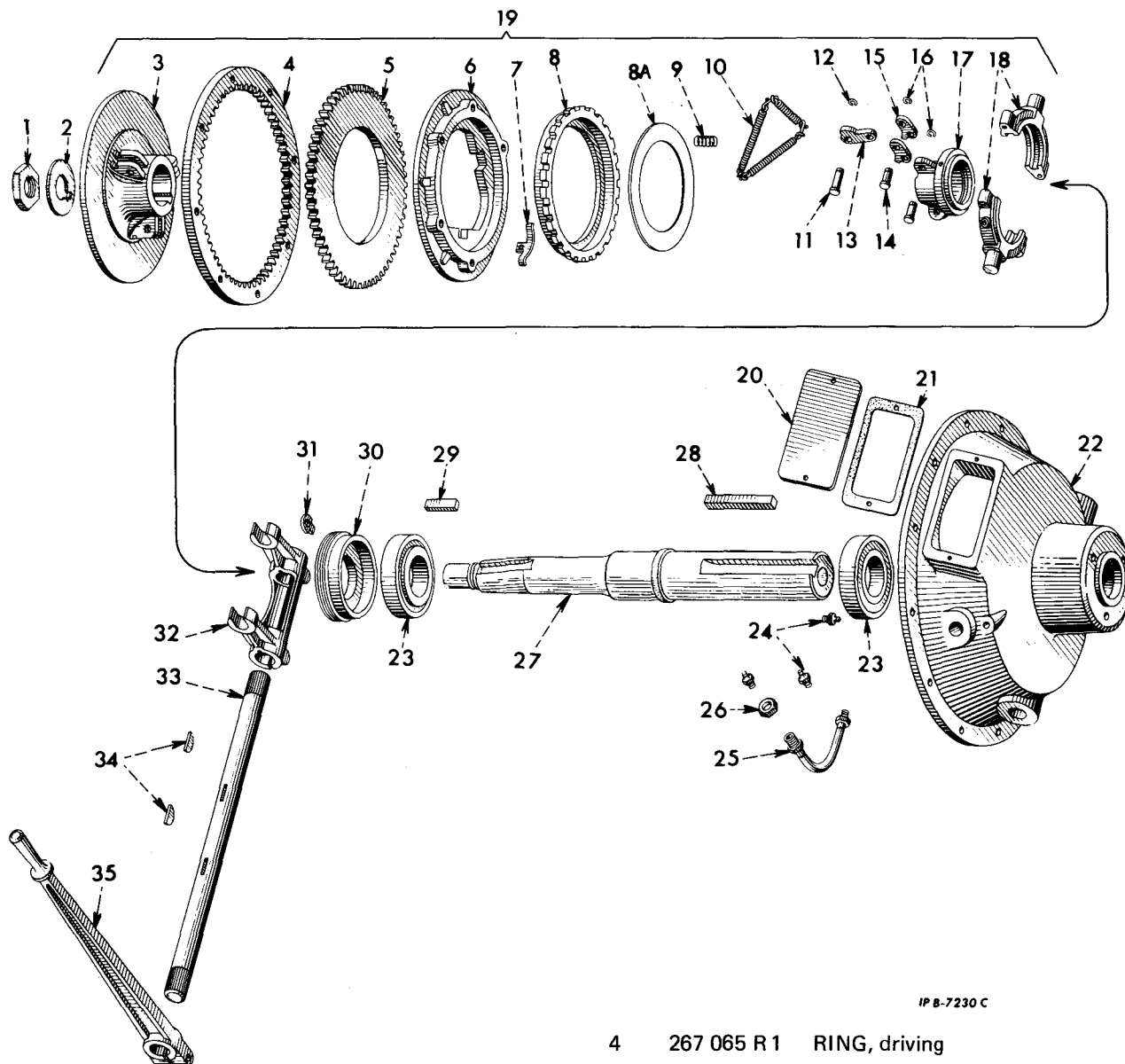
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
POWER TAKE-OFF - Continued (Rockford) (UD-236)					
		SCREW, 1/4 x 3/8" rd-hd mach (2)			
		SCREW, 1/4 x 3/8" fil-hd			
		SCREW, 3/8 x 1-1/4" hex-hd cap (2)			
		SCREW, 5/16 x 1/2" hex-hd cap			
		SCREW, 1/2 x 1-3/4" hex-hd cap			
		SCREW, 5/16NF x 1-3/4" hex-hd cap (2)			
		SCREW, 5/16 x 1/4" f-pt. set			
19 559 R1		SCREW, 1/4 x 3/8" hex-hd cap			
273 234 R91		SLEEVE, 273 235 R1, w/release BEARING, 273 236 R91			
		WASHER, 5/16" lock			
		WASHER, 3/8" lock (2)			
		WASHER, 1/2" lock			
		WASHER, 1/4" (Shakeproof)			

(+) - For Mounting Clutch and
Power Take-Off Assembly.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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POWER TAKE-OFF WITH STANDARD SHAFT
(Rockford) (UD-282)


IP 8-7230 C

273 019 R92 ATTACHMENT, power take-off w/
Standard shaft (11-1/2" over-center
drive ring type clutch) (For units
operating at 2200 RPM or below)
(UD-282) (Consists of BEARING,
305 861 R91, POWER TAKE-OFF,
319 524 R91 and SPACER, 265 636
R1) (%)

1 266 681 R1 NUT, hex.
2 273 212 R1 WASHER, lock
3 273 214 R1 BODY, clutch

4 267 065 R1 RING, driving
5 338 903 R1 FACING, clutch
6 268 861 R91 PLATE w/LOCK, 319 531 R1,
pressure
7 319 531 R1 LOCK, positive
8 347 871 R1 NUT, positive
8A 347 872 R1 PLATE, adjusting ring
9 266 704 R1 SPRING, separator (3)

(%) - Attachment No Longer Avail-
able. Service Parts Will Be
Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
POWER TAKE-OFF WITH STANDARD SHAFT - Continued (Rockford) (UD-282)			28	267 060 R1	KEY
10	268 865 R91	SPRING, lever	29	273 211 R1	KEY
11	266 697 R1	PIN, clevis (6)	30	266 660 R1	RETAINER, bearing
12	266 698 R1	RING, retaining (6)	31	266 661 R1	PLATE, lock
13	268 866 R1	LEVER (3)	32	273 210 R91	YOKE, clutch
14	266 694 R1	PIN, clevis (3)	33	266 663 R1	SHAFT, yoke
15	266 696 R1	LINK, connecting (6)	34	113 782	KEY (2)
16	255 395 R1	RING, retaining (3)	35	266 666 R91	LEVER, shifting
17	273 217 R1	SLEEVE, release	305 861 R91		BEARING, clutch pilot (optional with 338 543 R91)
18	273 218 R91	BEARING w/two NUT, 19 503 R1 and PLUG, 103 883, release	338 543 R91		BEARING, clutch pilot (optional with 305 861 R91)
19	273 215 R91	CLUTCH ASSY (11-1/2") (Composed of - 1 BODY 273 214 R1 1 FACING 338 903 R1 3 LEVER 268 866 R1 6 LINK 266 696 R1 1 NUT 347 871 R1 3 PIN 266 694 R1 6 PIN 266 697 R1 1 PLATE 268 861 R91 1 PLATE 347 872 R1 3 RING 255 395 R1 6 RING 266 698 R1 1 RING 267 065 R1 1 SLEEVE w/BEARING 273 216 R91 3 SPRING 266 704 R1 1 SPRING 268 865 R91)	19 503 R1		NUT, 5/16NF elastic stop (2)
			319 524 R91		POWER TAKE-OFF w/11-1/2" single plate over-center drive ring type clutch ASSY (For side load applica- tions only. NOT for in line drives) (Composed of - 1 CLUTCH 273 215 R91 2 CONE 13 396 DC 2 CUP 13 390 D 3 FITTING 109 461 2 FITTING 273 355 1 GASKET 266 656 R1 1 HOUSING 273 240 R1 2 KEY 113 782 1 KEY 267 060 R1 1 KEY 273 211 R1 1 LEVER 266 666 R91 1 NUT 266 681 R1 1 PLATE 266 661 R1 1 PLATE 321 481 R1 1 RETAINER 266 660 R1 1 SHAFT 266 663 R1 1 SHAFT 319 946 R1 1 TUBE 266 667 R91 1 WASHER 273 212 R1 1 YOKE 273 210 R91) SCREW, 3/8 x 1-1/8" hex-hd cap (12) SCREW, 3/8 x 1-1/2" hex-hd cap (8) WASHER, 3/8" lock (20)
20	321 481 R1	PLATE, instruction			
21	266 656 R1	GASKET, cover			
22	273 240 R1	HOUSING, clutch			
23	13 396 DC	CONE, tapered roller bearing (2)			
23	13 390 D	CUP, tapered roller bearing (2)			
24	109 461	FITTING, 1/8" pipe plug (3)			
25	266 667 R91	TUBE, flexible			
26		NUT, 5/8NF	103 883		PLUG, 1/8" slt-hd pipe (steel)
27	319 946 R1	SHAFT, drive			SCREW, 3/8 x 1-1/2" hex-hd cap

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
POWER TAKE-OFF WITH STANDARD SHAFT (ROCKFORD) (UD-282) - Continued					
		SCREW, 1/4 x 3/8" rd-hd mach (2)			
		SCREW, 3/8 x 1-1/4" hex-hd cap (2)			
		SCREW, 1/4 x 3/8" fil-hd			
		SCREW, 5/16 x 1/2" hex-hd cap			
		SCREW, 5/16NF x 2" hex-hd cap (2)			
		SCREW, 5/16 x 1/4" f-pt. set			
273 216 R91		SLEEVE, 273 217 R1 w/release BEARING, 273 218 R91, release			
265 636 R1		SPACER, clutch pilot bearing			
		WASHER, 5/16" lock			
		WASHER, 3/8" lock (3)			
		WASHER, 1/4" (Shakeproof)			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
POWER TAKE-OFF (Twin-Disc)			305 167 R91	BEARING w/locking COLLAR (used with BLOCKS, 304 486 R91 and 308 610 R91) (Attachment B)	
Parts without letters after the description indicate the part is used for all attachments listed below: Letters "A" thru "E" are used to identify separate attachments.			305 861 R91	BEARING, clutch pilot (optional with 338 543 R91) (Attachments A, B and E)	
A	266 818 R92	ATTACHMENT, power take-off w/ standard shaft (11-1/2" single plate over-center drive ring type clutch) (For units w/PTO speeds of 2200 rpm or below) (UD-282) (See NOTES 1 and 3)	338 543 R91	BEARING, clutch pilot (optional with 305 861 R91) (Attachments A, B and E)	
B	304 536 R91	ATTACHMENT, power take-off w/ extended shaft (11-1/2" over-center drive ring type clutch) (For units w/PTO speeds of 2200 rpm or below) (%)	308 610 R91	BLOCK w/BEARING, 305 167 R91, outboard bearing pillow (optional with 304 486 R91) (Attachment B)	
C	345 345 R91	ATTACHMENT, power take-off w/ standard shaft (11-1/2" single plate over-center drive ring type clutch) (For heavy duty and side-load applications w/PTO speeds above 2200 rpm) (high speed) (for use with SAE No. 3 flywheel housing and proper flywheel) (UD-282) (%)	304 486 R91	BLOCK w/BEARING, 305 167 R91, outboard bearing pillow (optional with 308 610 R91) (Attachment B)	
D	345 346 R91	ATTACHMENT, power take-off with standard shaft (11-1/2" single plate over-center drive ring type clutch) (For heavy duty and side load applications w/PTO speeds above 2200 rpm) (high speed) (for use with rear mounted instrument and panel safety gauge attachment) (for use with SAE No. 3 flywheel housing and proper flywheel) (UD-282) (%)	102 637	NUT, 1/2" (2)	
			179 889	SCREW, 1/2 x 2" hex-hd cap (2)	
			103 323	WASHER, 1/2" lock (2)	
E	273 018 R91	ATTACHMENT, power take-off w/ standard shaft (10" single plate over-center drive ring type clutch) (UD-236) (See NOTES 1 and 3)	103 343	WASHER, 17/32 x 1-11/16" x No. 13 ga. (2)	
			304 537 R11	BRACKET, outboard bearing (Attachment B)	
			345 347 R91	CABLE, temperature switch to junction block (Attachment D)	
			366 460 R1	CLIP, cable (mount on power take-off bolts) (2 for Attachment D)	
			69 610 D	KEY, belt pulley short (Attachment B)	
			60 614 D	KEY, belt pulley long (Attachment B)	
			321 054 R91	POWER TAKE-OFF w/standard SHAFT ASSY (Twin Disc Spec. No. 23712) (Attachment E) (*)	
	305 165 R91	BEARING, w/locking COLLAR (New Departure No. Z99AE111-SY1Z) (used with BLOCK, 304 484 R91) (Attachment B)			
	305 166 R91	BEARING w/locking COLLAR (used with BLOCK, 304 485 R91) (Attachment B)			
			(%) - Attachment No Longer Available. Service Parts Will Be Furnished. (*) - Order Detail Service Parts From Nearest Twin-Disc Distributor. NOTE 1 - Factory Application - Order on Machine Order Form. NOTE 3 - Field Application - Order Through Regular Service Parts Channels.		

ATTACHMENTS

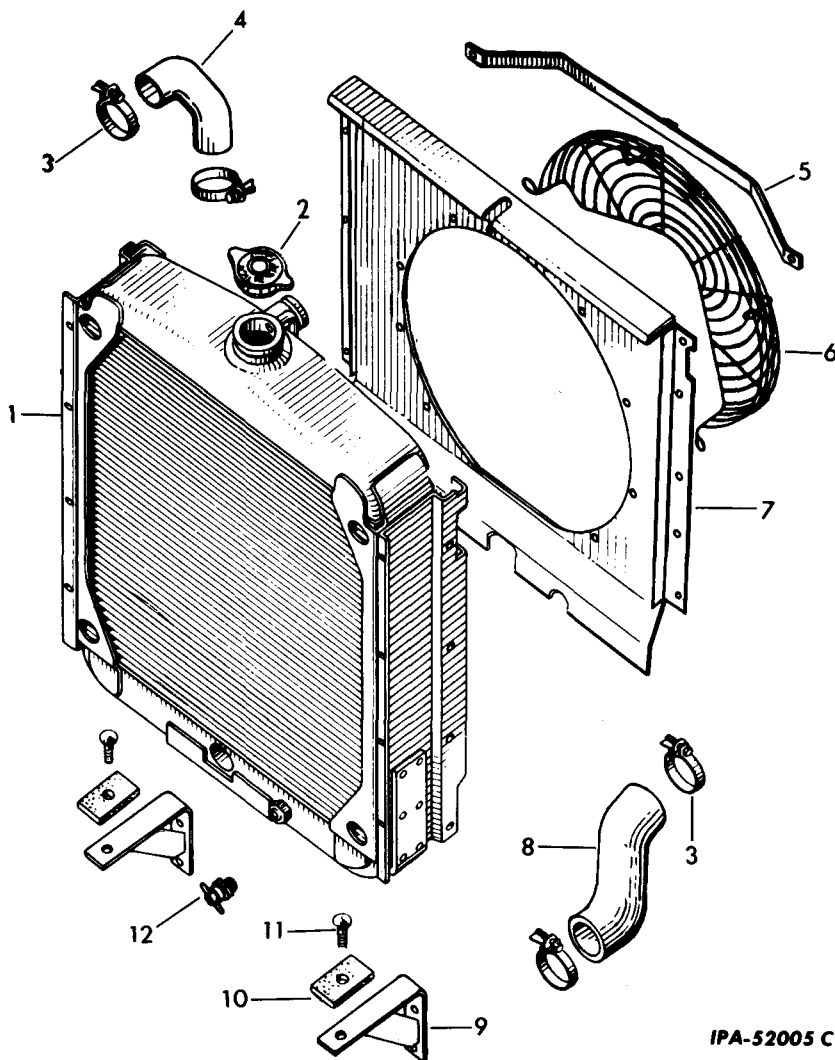
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
POWER TAKE-OFF (Twin-Disc) - Continued					
	321 056 R91	POWER TAKE-OFF w/extended SHAFT ASSY (Twin Disc Spec No. 26713) (Attachment B) (*)			
	321 057 R91	POWER TAKE-OFF w/standard SHAFT ASSY (Twin Disc Spec No. 26769) (Attachment A) (*)			
	346 882 R91	POWER TAKE-OFF w/standard SHAFT ASSY (Twin Disc Spec No. 30287) (Attachments C and D) (*)			
	179 840	SCREW, 3/8 x 1-1/8" hex-hd cap (12)			
	179 843	SCREW, 3/8 x 1-1/2" hex-hd cap (8)			
	103 321	WASHER, 3/8" lock (20)			
	304 539 R1	SHIM, outboard bearing heavy (Attachment B)			
	304 540 R1	SHIM, outboard bearing medium (2 for Attachment B)			
	304 541 R1	SHIM, outboard bearing light (4 or more for Attachment B)			
	265 636 R1	SPACER, clutch pilot bearing			
	183 350 R91	SWITCH, temperature (250°) (Attachment D)			

(*) - Order Detail Service Parts From
Nearest Twin-Disc Distributor.

-119-
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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FAN GUARD, RADIATOR AND CONNECTIONS



IPA-52005 C

(X) - KEY TO UNITS

- A 304 577 R91 ATTACHMENT, fan guard (See NOTES 1 and 3)
- B 304 595 R92 ATTACHMENT, radiator and connections (UD-236) (%)
- C 609 324 C93 ATTACHMENT, radiator and connections (UD-282) (%)

(X) - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicates the part is used for all units.

- 1 610 643 C91 RADIATOR (Unit C)

- | | | |
|---|-------------|---|
| 1 | 304 608 R93 | RADIATOR (Unit B) |
| 2 | 67 448 DD | CAP, radiator (Unit C) |
| 2 | 361 705 R91 | CAP, radiator (Unit B) |
| 3 | 274 088 R91 | CLAMP, radiator inlet elbow and radiator outlet elbow (4 for Units B and C) |

(%) - Attachment No Longer Available
Service Parts Will Be Furnished.

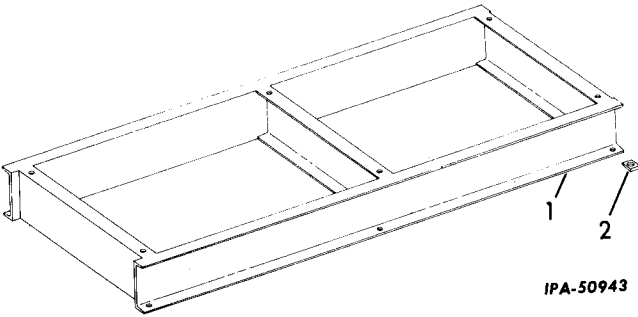
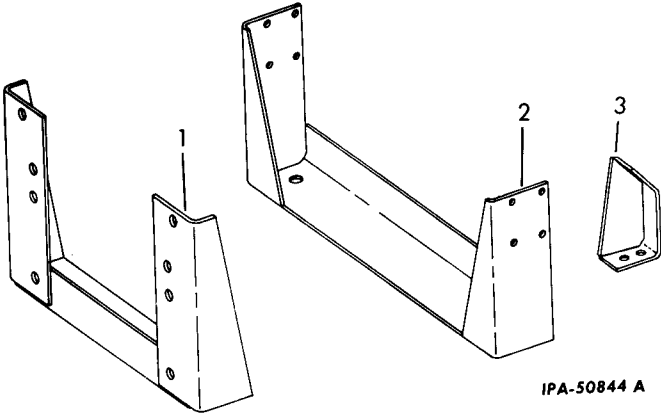
NOTE 1 - Factory Application - Order On Machine Order Form.

NOTE 3 - Field Application - Order Thru Regular Service Parts Channels.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
FAN GUARD, RADIATOR AND CONNECTIONS					
- Continued					
4	304 596 R2	ELBOW, radiator inlet (Units B and C)			
5	304 591 R11	BRACE, radiator (Units B and C)			
	179 837	SCREW, 3/8 x 3/4" hex-hd cap (2)			
	103 321	WASHER, 3/8" lock (2)			
	179 871	SCREW, 7/16 x 3-1/4" hex-hd cap			
	103 322	WASHER, 7/16" lock (2)			
6	304 578 R91	GUARD, fan (Unit A)			
	179 812	SCREW, 5/16 x 3/4" hex-hd cap (4)			
	103 320	WASHER, 5/16" lock (4)			
	103 340	WASHER, 11/32 x 11/16" x No. 16 ga. (4)			
7	612 292 C11	SHROUD, fan housing (Units B and C)			
	179 812	SCREW, 5/16 x 1/2" hex-hd cap (6)			
	103 320	WASHER, 5/16" lock (6)			
8	304 597 R2	ELBOW, radiator outlet (Units B and C)			
9	310 336 R21	SUPPORT, radiator (together with front support reworking diagram IZG-6493 will work for SUPPORT, 304 593 R11) (2 for Units B and C)			
	670 670 C1	SHIM, radiator support (2 for Units B and C)			
	102 639	NUT, 5/8" (4)			
	271 556	SCREW, 5/8 x 1-1/4" hex-hd cap (2)			
	271 558	SCREW, 5/8 x 1-1/2" hex-hd cap (2)			
	103 325	WASHER, 5/8" lock (4)			
10	265 597 R1	PAD, radiator (2 for Units B and C)			
11	15 040 R1	BOLT, radiator mounting (2 for Units B and C)			
	271 500	NUT, 7/16NF (2)			
	103 322	WASHER, 7/16" lock (2)			
	103 342	WASHER, 15/32 x 59/64" x No. 16 ga. (2)			
12	31 729 D	VALVE, radiator drain (Unit B)			
	444 782	PLUG, water outlet (Units B and C)			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
SUB-BASE (For use with Extended Shaft and Outboard Bearing Attachment)			SUPPORTS		
 IPA-50943			 IPA-50844 A		
	304 605 R91	ATTACHMENT, sub-base (%) Consists of the following parts -	(X) - KEY TO UNITS		
1	304 602 R91	SUB-BASE	A	305 296 R91	ATTACHMENT, front support (%)
	102 639	NUT, 5/8" (6)	B	305 297 R91	ATTACHMENT, rear support (%)
	271 560	SCREW, 5/8 x 1-3/4" hex-hd. cap (6)	C	305 693 R91	ATTACHMENT, rear support (For use with clutch housing and adapter ATTACHMENT, 316 196 R91 and transmission ATTACHMENT, 305 889 R91) (%)
	103 323	WASHER, 5/8" lock (6)	(X) - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicates the part is used for all units.		
2	51 811 D	WASHER, bevel (6)	1	304 546 R12	SUPPORT, front (Unit A)
				102 639	NUT, 5/8" (4)
				271 569	SCREW, 5/8 x 3-3/4" hex-hd. cap (4)
				103 325	WASHER, 5/8" lock (4)
			2	304 543 R21	SUPPORT, rear (Unit B)
				179 881	SCREW, 1/2 x 1" hex-hd. cap (8)
				103 323	WASHER, 1/2" lock (8)
			3	305 696 R11	SUPPORT, rear (2 for Unit C)
				179 885	SCREW, 1/2 x 1-1/2" hex-hd cap (2)
				103 323	WASHER, 1/2" lock (2)

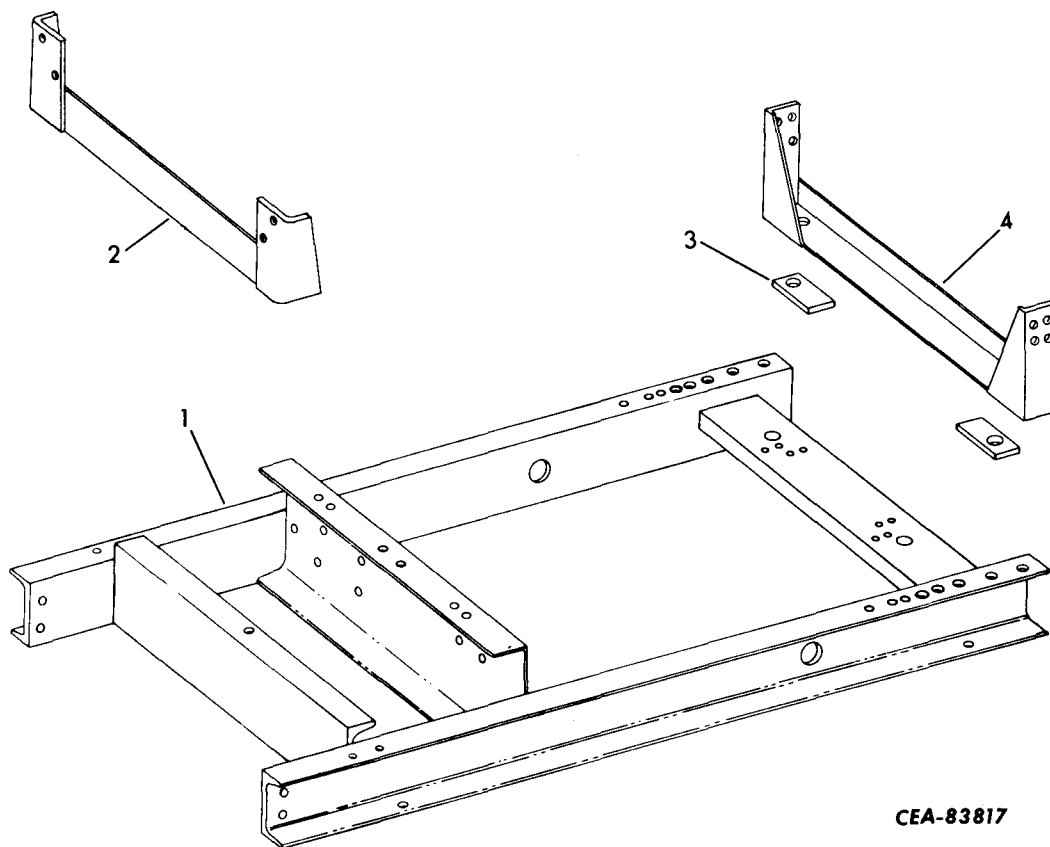
(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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ENGINE SUPPORT

(Box Type Base)

**CEA-83817**

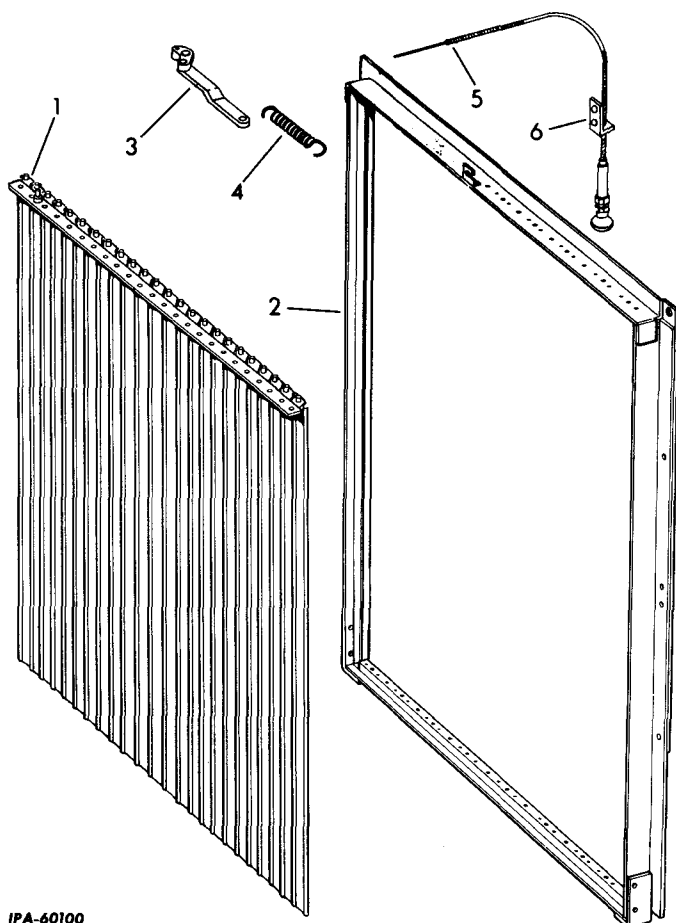
	332 190 R91	ATTACHMENT, engine support (for use with expansion tank and connections) (%)	3	332 180 R1	SPACER, rear support
				220 081	NUT, 3/4" (2)
				271 612	SCREW, 3/4 x 2-1/4" hex-hd cap (2)
				103 326	WASHER, 3/4" lock (2)
1	320 015 R93	BASE, box type	4	304 543 R11	SUPPORT, rear
2	332 191 R11	SUPPORT, front		179 881	SCREW, 1/2 x 1" hex-hd cap (8)
	102 637	NUT, 1/2" (2)		103 323	WASHER, 1/2" lock (8)
	102 639	NUT, 5/8" (4)			
	271 572	SCREW, 5/8 x 4-1/2" hex-hd cap (4)			
	179 887	SCREW, 1/2 x 1-3/4" hex-hd cap (2)			
	103 323	WASHER, 1/2" lock (2)			
	103 325	WASHER, 5/8" lock (4)			

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION
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RADIATOR SHUTTER



IPA-60100

REF. NO.	PART NUMBER	DESCRIPTION
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313 225 R91	SHUTTER ASSY, manual (Composed of -	
	1 BELLCRANK w/LINK	317 680 R91
\$1	FRAME	
	1 SHUTTER w/BAR	317 781 R91
	1 SPRING	47 530 D
	1 WASHER	352 627 R1)
179 812	SCREW, 5/16 x 1/2" hex-hd. cap (8)	
103 320	WASHER, 5/16" lock (8)	
120 614	NUT, No. 10	
431 586	SCREW, No. 10 x 9/16" rd-hd. mach.	
121 801	WASHER, No. 10 internal-tooth lock	
352 627 R1	WASHER, .325 x 5/8" flat	
137 159	PIN, 3/32 x 5/8" cotter	

312 184 R91 ATTACHMENT, radiator shutter
(%)

1	317 781 R91	SHUTTER w/operating BAR
	131 395	NUT, 1/4" (4)
	120 583	SCREW, 1/4 x 5/8" slt-rd-hd. mach. (4)
	115 109	WASHER, 1/4" lock (4)
2		FRAME (Not furnished separately)
3	317 680 R91	LINK w/BELLCRANK
4	47 530 D	SPRING, bellcrank
5	313 224 R91	CONTROL, vernier
	138 647	SCREW, 1/4NF x 1/2" ov-pt. hex-soc-hd. set
	103 024	NUT, 1/4NF
6	312 185 R1	BRACKET, shutter control
	179 839	SCREW, 3/8 x 1" hex-hd. cap

\$ - Not Furnished Separately.
(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

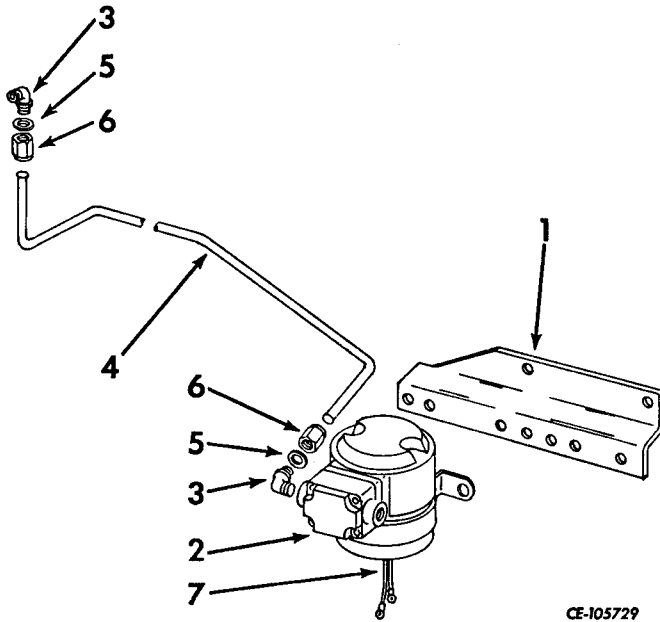
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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MEMORANDA

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRIC FUEL TRANSFER PUMP (12 Volt) (A.C. Spark Plug) UD-236 7541 and up UD-282 12146 and up			4	678 170 C91	TUBE, fuel pump to primary filter with two SLEEVE, 265 204 R1 and two NUT, 265 205 R1 (B)
			5	265 204 R1	SLEEVE (2)
			6	265 205 R1	NUT (2)
			7	678 165 C1 100 770 H	CABLE, switch to fuel pump CLIP, switch to fuel pump cable (4)



Parts without letter after the description indicate the part is used for both pumps listed below. Letters A and B are used to identify separate pumps.

- | | | |
|---|--|---|
| A | 678 164 C91 | ATTACHMENT, electric fuel transfer pump (for use with standard mounted fuel filters) |
| B | 678 168 C91 | ATTACHMENT, electric fuel transfer pump (for use with Fuel Filter Mounting, 316 268 R92) |
| 1 | 304 443 R2
179 858
103 322 | BRACKET, fuel transfer pump
SCREW, 7/16 x 1" hex-hd cap (2)
WASHER, 7/16" lock (2) |
| 2 | 891 588 C91
102 634
179 816

103 320
103 340
138 538 | PUMP, "AC" electric fuel transfer
NUT, 5/16" hex (3)
SCREW, 5/16 x 3/4" hex-hd cap (3)
WASHER, 5/16" lock
WASHER, 11/32 x 11/16" x .051
WASHER, 5/16 int. tooth lock |
| 3 | 606 845 C1 | ELBOW, 90° flex (2) |
| 4 | 678 167 C91 | TUBE, fuel pump to primary filter (A) |

ATTACHMENTS

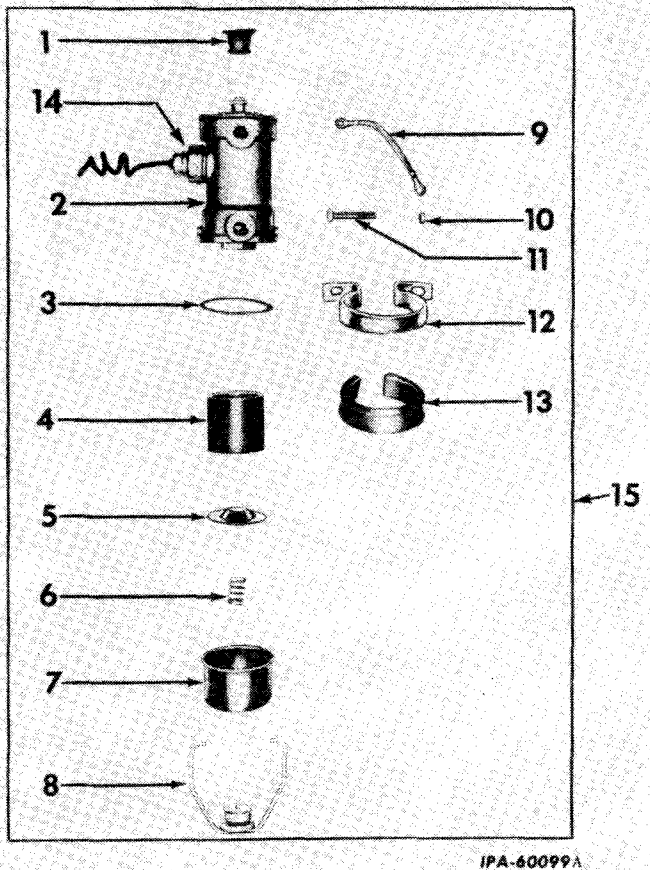
REF. NO.	PART NUMBER	DESCRIPTION
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ELECTRIC FUEL TRANSFER PUMP

(12 Volt) (Stewart-Warner)

UD-236 7540 and below

UD-282 12145 and below



REF. NO.	PART NUMBER	DESCRIPTION
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10		NUT, 1/4" jam
11		SCREW, 1/4 x 1-1/2" hex-hd cap
12		CLAMP (Not Furnished Separately)
13		SHOCK PAD (Not Furnished Separately)

14	606 753 C91	KIT, switch (Consists of - \$ 3 GASKET \$ 2 SLEEVE \$ 1 SWITCH)
----	-------------	--

15	306 274 R91	PUMP ASSY, electric fuel transfer (Consists of 1 to 14 inclusive) (Order the following parts:
----	-------------	---

1	891 588 C91	"AC" Electric fuel transfer pump
	179 816	SCREW, 5/16 x 3/4" hex-hd cap (2)
	102 634	NUT, 5/16" (3)
	103 320	WASHER, 5/16" lock (3)
	103 340	WASHER, 11/32 x 11/16" x 16 ga. (2)

1	304 443 R2	BRACKET, fuel transfer pump SCREW, 7/16 x 1" hex-hd cap (2) WASHER, 7/16" lock (2)
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1	678 165 C1	CABLE, switch to fuel pump
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4	100 770 H	CLIP, switch to fuel pump cable
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1	678 167 C91	TUBE, fuel pump to primary filter
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	305 222 R91	CABLE, switch to fuel pump (+)
--	-------------	--------------------------------

	100 770 H	CLIP, switch to fuel pump cable (4) (+)
--	-----------	--

306 447 R92 ATTACHMENT, electric fuel transfer pump (Consists of the following parts) (%)

1	313 602 R1	COVER, rubber pulse chamber
2		BODY (Not Furnished Separately) (Order 306 274 R91)
3	313 604 R2	GASKET, fuel pump
4	313 606 R1	FILTER, fuel bowl
5	313 607 R1	BASE, fuel filter
6	313 608 R1	SPRING, fuel filter
7	313 605 R1	BOWL, fuel filter pump
8	313 603 R91	BAIL, pump
9	306 396 R1	CONNECTOR, terminal (Packard Electric)

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

\$ - Not Furnished Separately.

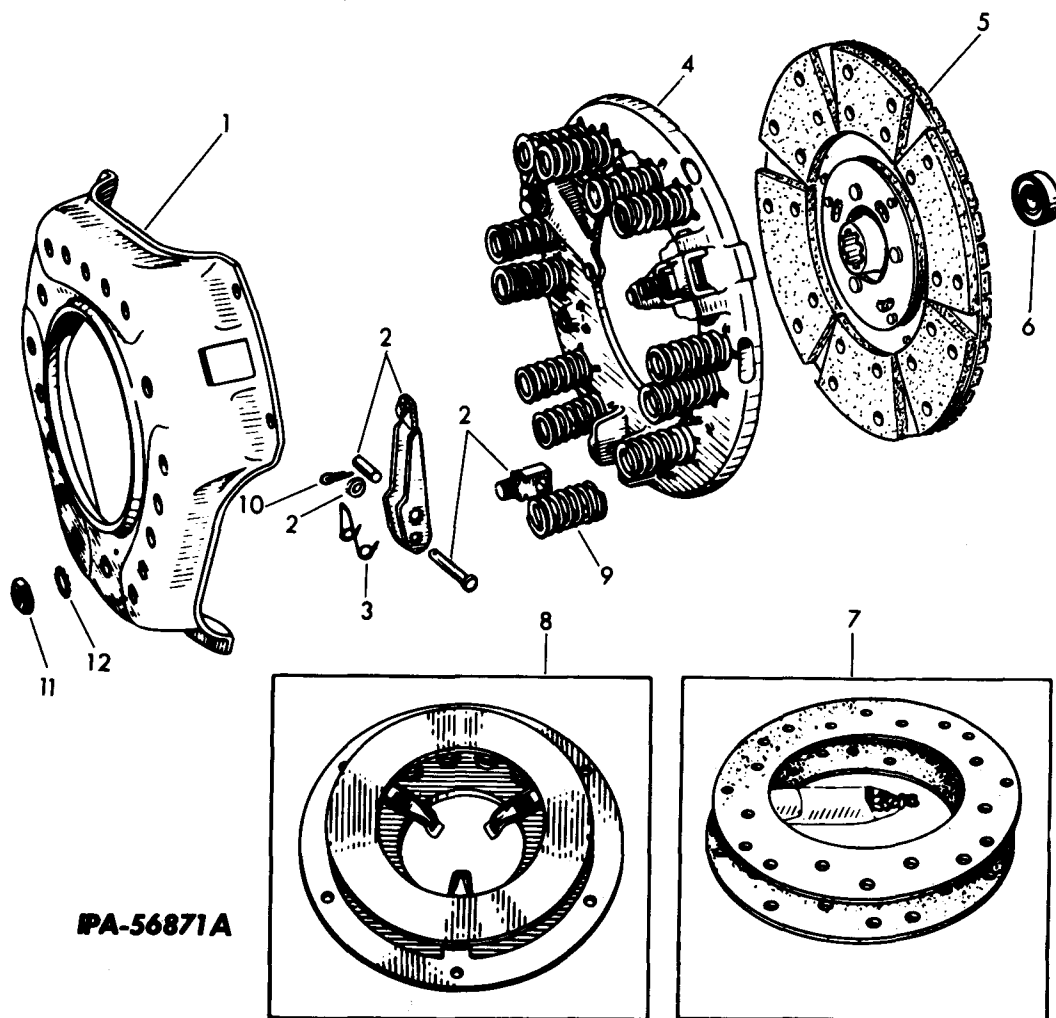
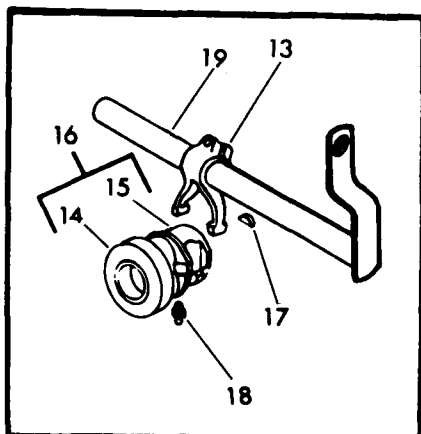
(+) - Illustrated With Electric Starting
In Electrical System.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION
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REF. NO.	PART NUMBER	DESCRIPTION
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CLUTCH AND CONTROLS



PA-56871A

305 891 R91 ATTACHMENT, clutch and controls
(with 12" spring loaded clutch)
(for use with clutch housing and
adapter ATTACHMENT, 316 196
R91 transmission ATTACHMENT,
305 889 R91 and flywheel
ATTACHMENT, 316 197 R91)(%)

1 221 508 R1 PLATE, back
73 092 R2 BOLT, clutch mounting (6)
WASHER, 3/8" lock (6)

(%) - Attachment No Longer Avail-
able. Service Parts will be
Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CLUTCH AND CONTROLS - Continued			305 894 R1		CLIP, clutch return spring anchor (mount on cranking motor top mounting bolt)
1	221 508 R1	PLATE, back	74 158 H		PIN, release shaft lever rod end
	73 092 R2	BOLT, clutch mounting (6)			PIN, 3/32 x 3/4" cotter
		WASHER, 3/8" lock (6)	96 282 H		SPRING, clutch return
2	236 064 R91	SET ASSY, lever (Consists of three, 223 264 R91)			
2	223 264 R91	LEVER, pressure plate (3)			
3	189 726 R1	SPRING, anti-rattle (3)			
4	221 509 R1	PLATE, pressure			
5	149 499 R91	MEMBER, driven (12")			
6	ST 516	BEARING, clutch pilot			
7	143 436 R91	FACINGS w/fourty-eight RIVETS, 143 271 R1, driven disc			
8	221 505 R91	PLATE, pressure (12")			
9	68 740 H	SPRING, pressure plate (15)			
10		PIN, 3/32 x 3/4" cotter (3)			
11		NUT, 9/16NF jam (3)			
12		WASHER, 9/16" external lock (3)			
13	155 633 R1	FORK, clutch release NUT, 3/8NF SCREW, 3/8NF x 1-3/4" hex-hd cap WASHER, 3/8" lock			
14	121 515 R91	BEARING, clutch release sleeve			
15		SLEEVE (Not Furnished Separately)			
16	180 155 R11	SLEEVE, release bearing			
17	112 139	KEY, clutch release fork (Woodruff No. A)			
18	109 461	FITTING, clutch release shaft lubricator (Lincoln No. 5000) (optional with 138 322 H) (2)			
18	138 322 H	FITTING, clutch release shaft lubri- cator (Alemite No. 1610B) (Optional with 109 461) (2)			
19	305 893 R91	SHAFT w/LEVER, clutch release			

(%) - Attachment No Longer Available.
Service Parts will be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
CLUTCH (BORG AND BECK) AND CONTROLS					
	312 837 R91	ATTACHMENT, clutch and controls (for use with 12" spring loaded clutch) (%)	13	110 891 H1	LEVER, release (4)
1	57 287 D	SPRING, clutch release sleeve return	14	317 539 R1	STRUT, release lever (4)
2	267 814 R91	SLEEVE, clutch release	15	317 536 R1	SPRING, anti-rattle (4)
3	110 886 H1	COVER w/four RIVETS, 317 535 R1 and eight STRAP, 317 534 R1	16	110 887 H1	EYEBOLT w/NUT (4)
4	317 534 R1	STRAP, driving (8)	17	110 890 H1	FERRULE, driving strap (4)
5	317 542 R1	SPRING (8)	18	317 544 R1	SCREW, driving strap (4)
6	317 541 R1	SPRING (8)		313 772 R91	COVER, clutch (Composed of -
7	317 535 R1	RIVET, driving strap (4)			1 COVER and STRAP 110 886 H1
8	110 889 H1	PLATE, pressure			4 EYEBOLT and NUT 110 887 H1
9	313 771 R91	MEMBER w/FACING, 317 546 R91 driven			4 FERRULE 110 890 H1
10	317 546 R91	PACKAGE, facing			4 LEVER 110 891 H1
11	ST 208 B	BEARING, clutch pilot ball			4 PIN 317 538 R1
12	317 538 R1	PIN, eyebolt (4)			1 PLATE 110 889 H1
					4 SCREW 317 544 R1
					4 SPRING 317 536 R1
					8 SPRING 317 541 R1
					8 SPRING 317 542 R1
					4 STRUT 317 539 R1)
			73 092 R2		SCREW, clutch cover mounting (8)
			103 321		WASHER, 3/8" lock (8)
(%) - Attachment No Longer Available. Service Parts Will Be Furnished.					

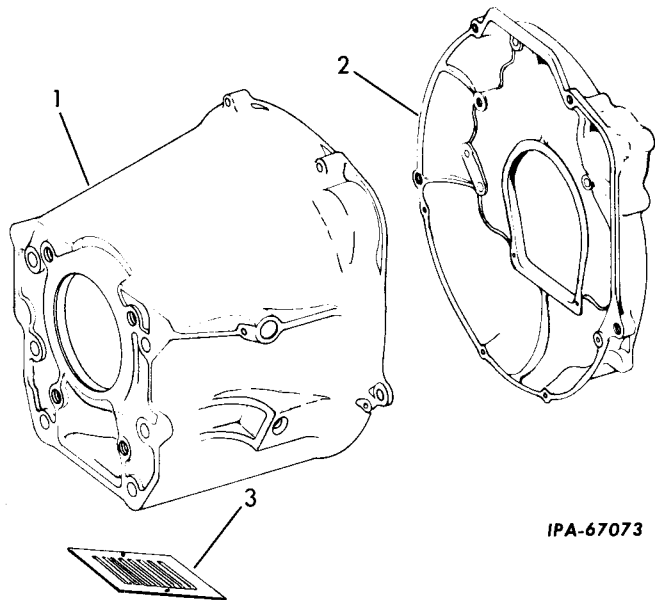
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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CLUTCH HOUSING AND RELATED PARTS

142 095 PLUG, 1-1/4" button

133 452 R1 SLEEVE, dowel (2)



316 196 R91 ATTACHMENT, clutch housing and adapter (for use with clutch and controls ATTACHMENT, 305 891 R91 and transmission ATTACHMENT, 305 889 R91 and fuel mounting ATTACHMENT, 316 268 R92) (This Attachment not for use with engine controls Attachment, 304 530 R91 or hood and dash Attachment, 349 145 R91) (%)

- | | | |
|---|-------------|------------------------------------|
| 1 | 155 141 R21 | HOUSING, transmission clutch |
| | 65 449 R1 | BOLT, 1/2 x 1-1/2" (2) |
| | 168 392 R1 | BOLT, 1/2 x 2-1/2" (2) |
| | 179 803 | SCREW, 1/4 x 1-3/4" hex-hd cap (4) |
| | 103 319 | WASHER, 1/4" lock (4) |
| | 103 323 | WASHER, 1/2" lock (4) |
| 2 | 316 139 R1 | HOUSING, adapter |
| | 179 883 | SCREW, 1/2 x 1-1/4" hex-hd cap (6) |
| | 103 323 | WASHER, 1/2" lock (6) |
| 3 | 161 617 R2 | COVER, clutch housing |
| | 179 791 | SCREW, 1/4 x 1/2" hex-hd cap (6) |
| | 103 319 | WASHER, 1/4" lock (6) |

(%) - Attachment No Longer Available.
Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
AUXILIARY DRIVE PULLEY			FUEL FILTER MOUNTING		
	318 001 R91	ATTACHMENT, auxiliary drive pulley (6.75" OD single "A" sheave) (For use w/suction fan ATTACHMENT, 323 768 R91, 701 364 C92) (%)		316 268 R92	ATTACHMENT, fuel filter mounting (less TUBE, water trap to auxiliary filter, 308 446 C1) (for use when bottom of fuel tank is not over 24" below top of fuel filters or when fuel tank is above top of fuel filters) (will work for ATTACHMENT, 316 269 R91) (%) (*)
	318 001 R91	ATTACHMENT, auxiliary drive pulley (6.75" OD single "A" sheave) (For use w/suction fan ATTACHMENT, 320 166 R91 and 701 363 C91 and blower fan ATTACHMENT, 323 768 R91, 701 364 C92) (%)		316 270 R91	ATTACHMENT, fuel filter mounting (for use with fuel transfer pump ATTACHMENT, 306 447 R91) (*) (%)
	318 002 R91	ATTACHMENT, auxiliary drive pulley (6.75" OD single "B" sheave) (For use w/suction fan ATTACHMENT, 320 166 R91 and 701 363 C91 and blower fan ATTACHMENT, 323 768 R91, 701 364 C92) (See NOTES 1 and 3)		316 267 R1	PLATE, fuel filter mounting
	284 358 R1	PULLEY, auxiliary drive (part of ATTACHMENT, 318 001 R91)		102 634	NUT, 5/16" (10)
	9 409 030	BOLT, 3/8 x 1-1/4" (Type "AA" lock) (4)		179 817	SCREW, 5/16 x 7/8" hex-hd cap (6)
	318 007 R1	PULLEY, auxiliary drive (part of ATTACHMENT, 318 002 R91)		179 828	SCREW, 5/16 x 2-1/2" hex-hd cap (2)
	9 409 231	BOLT, 3/8 x 1-1/2" (Type "AA" lock) (4)		179 829	SCREW, 5/16 x 2-3/4" hex-hd cap (2)
				103 320	WASHER, 5/16" lock (10)
				103 340	WASHER, 11/32 x 11/16 x .065" (8)
					SPACER, fuel filter mounting plate (4) (1/4" std pipe x 1-3/4" long - obtain locally)
				316 271 R1	TUBE, water trap to auxiliary fuel filter (part of 316 268 R92)
FLEXIBLE COUPLING					
	318 004 R91	ATTACHMENT, flexible coupling (front power take-off) (48 H.P. capacity) (for use with suction fan ATTACHMENT, 316 170 R91) (18" dia. 6 blade w/1.38" spacer) or blower fan ATTACHMENT, 316 168 R91 (18" dia. 6 blade w/1.00" spacer) (See NOTES 1 and 3)			(%) - Attachment No Longer Available. Service Parts Will Be Furnished.
	318 005 R91	ATTACHMENT, flexible coupling (front power take-off) (20 H.P. capacity) (%)			(*) - For Use With Clutch Housing and Adapter ATTACHMENT, 316 196 R91 And Transmission ATTACHMENT, 305 889 R91.
	319 650 R91	COUPLING, flexible (part of ATTACHMENT, 318 005 R91)			NOTE 1 - Factory Application - Order On Machine Order Form.
	319 651 R91	COUPLING, flexible (part of ATTACHMENT, 318 004 R91)			NOTE 3 - Field Application - Order Through Regular Service Parts Channels.
	21 711	SCREW, 3/8 x 7/8" soc-hd cap (4)			
	219 755	NUT, INF crankshaft jam			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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TRANSMISSION ATTACHMENTS

- 305 889 R91 ATTACHMENT, transmission (Motor Truck T-15, four speed synchromesh) (%) (This attachment not for use with engine controls attachment 304 530 R91 or hood and dash ATTACHMENT, 349 145 R91) (Consists of all parts listed under "TRANSMISSION") (Four Speed Synchromesh) ("Warner") (This attachment must be used in conjunction with the following attachments:
- 305 891 R91 Clutch and Controls
 - 316 196 R91 Clutch Housing and Adapter
 - 316 268 R92 Fuel Filter Mounting)
- 312 838 R91 ATTACHMENT, transmission (four speed sliding gear) (%) (Consists of all parts listed under "TRANSMISSION") (Four Speed Sliding Gear) ("Warner") (For use with 12" spring loaded clutch and controls ATTACHMENT, 312 837 R91 and flywheel ATTACHMENT, 312 570 R91) (UD-236)
- 312 839 R91 ATTACHMENT, transmission (four speed synchromesh) (Consists of all parts listed under "TRANSMISSION" (Four Speed Synchromesh) ("Warner") (For use with 12" spring loaded clutch and controls ATTACHMENT, 312 837 R91 and flywheel ATTACHMENT, 312 570 R91) (%)

(%) - Attachment No Longer Available. Service Parts Will Be Furnished.

NOTE 1 - Factory Application - Order On Machine Order Form.

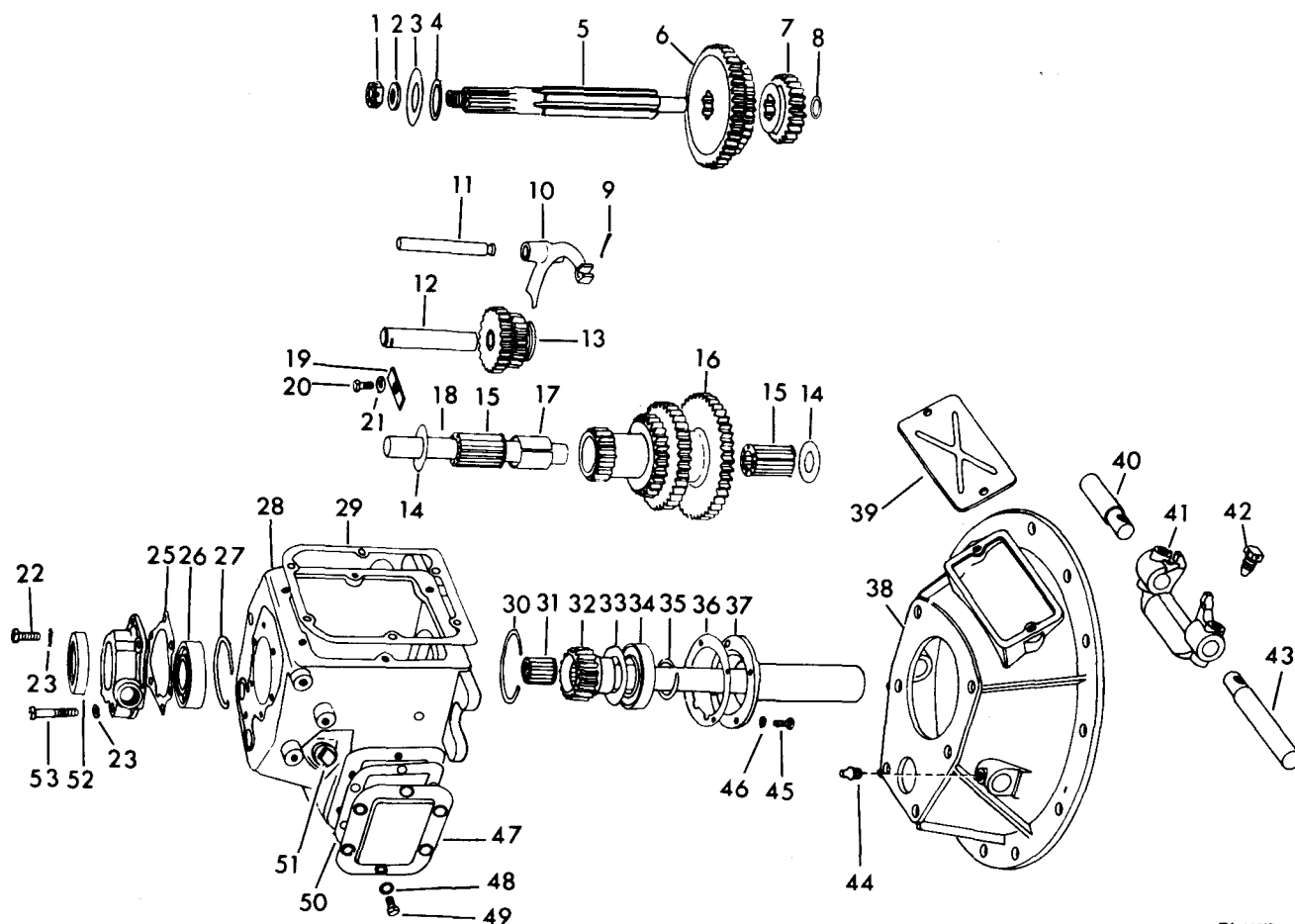
NOTE 3 - Field Application - Order Through Regular Service Parts Channels.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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TRANSMISSION

(Four Speed Sliding Gear) (Warner)

**TRANSMISSION CASE, GEARS, CLUTCH HOUSING
AND RELATED PARTS**

PA-66917

	313 740 R91	TRANSMISSION ASSY (part of ATTACHMENT, 312 838 R91)	7	62 899 H	GEAR, mainshaft third and direct
		SCREW, 3/8 x 1-1/8" hex-hd cap (12)	8	27 087 H	RING, mainshaft pilot bearing spacer
		WASHER, 3/8" lock (12)	9		PIN, 1/8 x 1-1/4" cotter
1	106 058 H	NUT, main shaft	10	27 118 H	FORK, reverse speed shift
2	60 192 H	WASHER, companion flange	11	27 083 H	RAIL, reverse speed shift fork
3	27 090 H	WASHER, mainshaft rear bearing oil	12	27 079 H	SHAFT, reverse idler gear
4	27 088 H	WASHER, mainshaft rear bearing thrust	13	62 902 H	GEAR, reverse idler
5	27 068 HB	SHAFT, main	14	95 854 H	WASHER, countershaft gear thrust (2)
6	72 975 H	GEAR, mainshaft first and second	15	23 172 H	BEARING, countershaft gear roller (2)

ATTACHMENTS

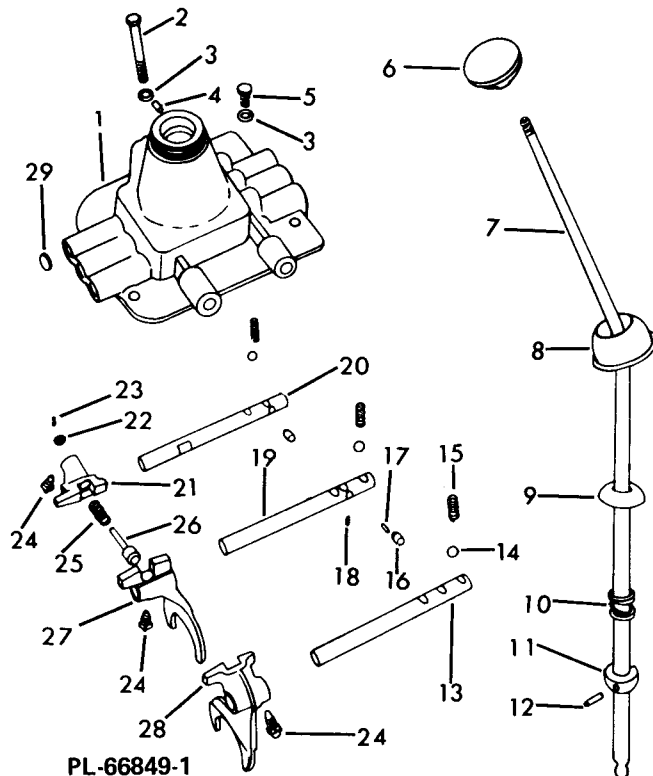
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
TRANSMISSION - Continued (Four Speed Sliding Gear) (Warner)			40	317 635 R1	SHAFT, throwout (short)
TRANSMISSION CASE, GEARS, CLUTCH HOUSING AND RELATED PARTS - Continued			41	317 637 R1	YOKE, throwout
			42	317 638 R1	SCREW, lock
16	72 976 H	GEAR, countershaft	43	317 636 R1	SHAFT, throwout (long)
17	27 091 H	SPACER, countershaft gear bearing	44	271 285	FITTING, 1/8" x 90° lubrication (optional with 109 462) (2) (not part of TRANSMISSION ASSY, 313 740 R91)
18	27 069 H	SHAFT, counter			
19	27 082 H	PLATE, reverse idler gear and countershaft lock	44	109 462	FITTING, 1/8" x 90° lubrication (optional with 271 285) (2) (not part of TRANSMISSION ASSY., 313 740 R91)
20		SCREW, 3/8 x 3/4" hex-hd cap			
21		WASHER, 3/8" lock			
22		SCREW, 3/8 x 1" hex-hd cap (4)	45		SCREW, 5/16 x 3/4" hex-hd cap (4)
23		WASHER, 3/8" lock (5)	46		WASHER, 5/16" external lock (4)
24	321 811 R 1	RETAINER, mainshaft rear bearing	47	23 045 H	COVER, power take-off opening
25	27 116 HA	GASKET, mainshaft rear bearing retainer	48		WASHER, 3/8" lock (6)
26	ST 200	BEARING, mainshaft rear	49		SCREW, 3/8 x 3/4" hex-hd cap (6)
27	27 073 H	RING, mainshaft rear bearing snap	50	111 082 R1	GASKET, power take-off opening cover
28	317 659 R1	CASE, transmission	51	273 469	PLUG, 3/4" sq-soc pipe (cd-pltd)
29	27 122 H	GASKET, control lever mounting	52	382 868 C91	OIL SEAL, mainshaft
30	27 071 H	RING, main drive gear bearing snap (inner)	53	115 617 H	SCREW, 3/8 x 2" hex-hd cap BOLT, 3/8 x 3/4" (3)
31	27 009 H	BEARING, mainshaft pilot roller		2 750 059 R1	PRODUCT GRAPHIC, shifting dia- gram (Not part of TRANSMISSION ASSY, 313 740 R91)
32	317 663 R1	GEAR, main drive			
33	27 089 H	WASHER, main drive gear oil retainer.			SCREW, 1/2 x 1-1/4" hex-hd cap (6) WASHER, 1/2" lock (6)
34	ST 201	BEARING, main drive gear			
35	27 086 H	RING, main drive gear bearing snap (outer)			
36	27 110 H	GASKET, main drive gear bearing retainer			
37	217 662 R1	RETAINER, main drive gear bearing			
38	317 666 R1	HOUSING, clutch			
39	317 634 R1	COVER, hand hole SCREW, 5/16 x 5/8" fil-hd (2) WASHER, 5/16" lock (2)			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION
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TRANSMISSION

(Four Speed Sliding Gear) (Warner)

TRANSMISSION CONTROL HOUSING AND LEVER

1	317 665 R1	HOUSING, control lever
2		SCREW, 3/8 x 2-7/8" hex-hd cap
3		WASHER, 3/8" lock (6)
4	27 085 HA	PIN, control lever locating
5		SCREW, 3/8 x 7/8" hex-hd cap (5)
6	16 780 H	BALL, control lever hand
7	82 717 R11	LEVER, control
8	72 218 H	CAP, control lever
9	72 219 H	WASHER, control lever spring
10	27 098 HA	SPRING, control lever
11	83 780 R1	BALL, fulcrum
12	113 163	PIN, fulcrum ball
13	27 119 HA	RAIL, shift (first and second)

REF. NO.	PART NUMBER	DESCRIPTION
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14	16 012 R1	BALL, 3/8" shift bar poppet (3)
15	23 074 H	SPRING, shift bar poppet (3)
16	27 096 H	PLUNGER, shift bar interlock (2)
17	27 104 H	PIN, shift bar interlock plunger
18	27 105 H	STOP, shift bar interlock plunger pin
19	27 120 HAX	RAIL w/PIN, shift (third and direct)
20	27 121 HA	RAIL, reverse shift
21	62 894 HB	END, reverse shift rail
22		NUT, 1/4NF slt
23		PIN, 1/16 x 1/2" cotter
24	23 079 H	SCREW, shift fork set (3)
25	62 892 HC	SPRING, reverse shift end plunger
26	62 893 H	PLUNGER, reverse shift end
27	27 111 HA	FORK, shift (third and direct)
28	27 112 HA	FORK, shift (first and second)
29	103 892	PLUG, expansion (3)
	30 443 V	PLUG, speedometer opening (not part of Transmission ASSY, 313 740 R91)

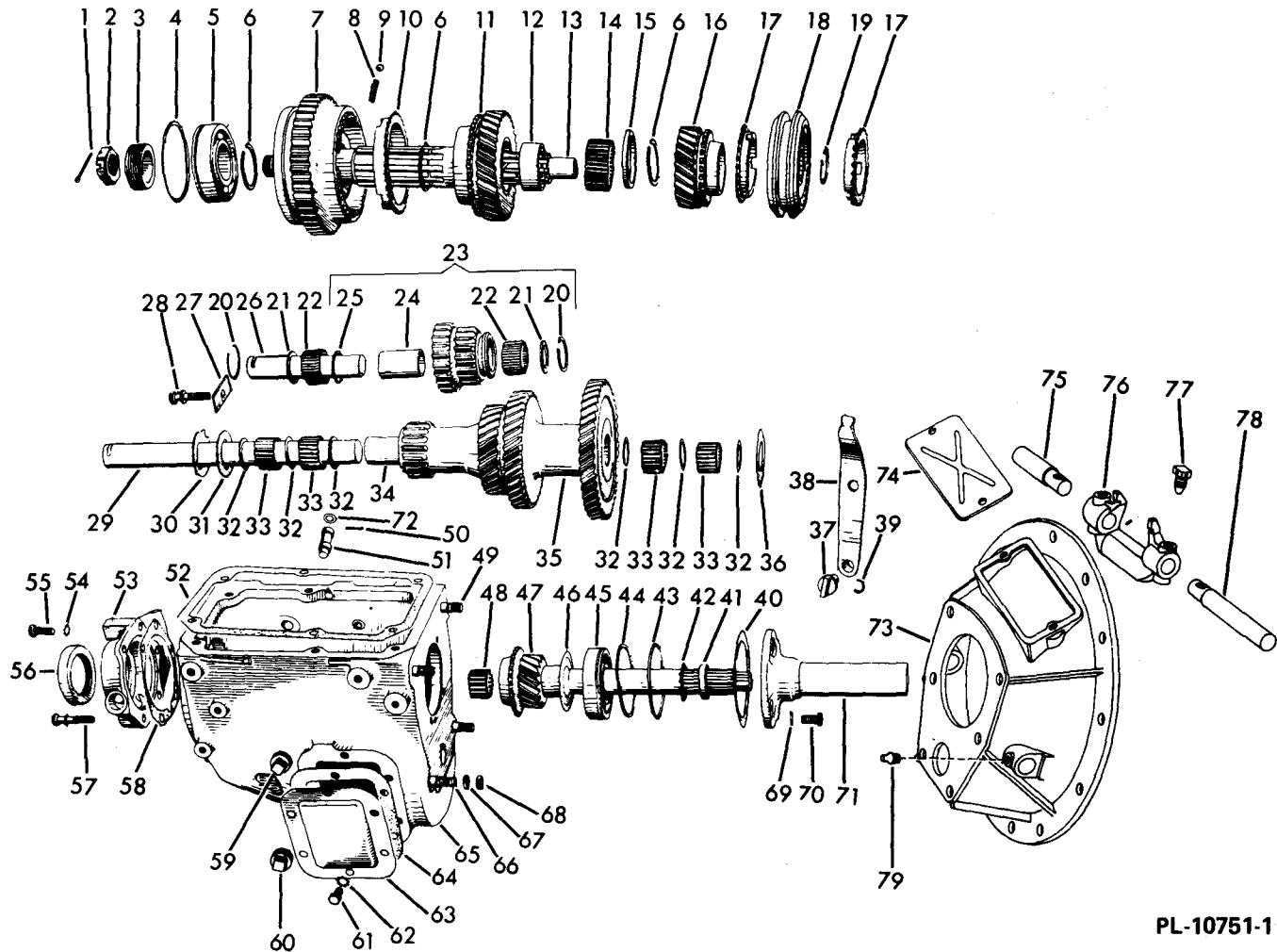
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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TRANSMISSION

(Four Speed Synchromesh) (Warner)

TRANSMISSION CASE, GEARS, CLUTCH HOUSING AND RELATED PARTS



PL-10751-1

(X) - KEY TO UNITS

A	153 879 R92	TRANSMISSION ASSY (less CONTROL HOUSING) (Motor Truck T-15) (part of ATTACHMENT, 305 889 R91) (+)
B	313 739 R91	TRANSMISSION ASSY (with CONTROL HOUSING) (AS-105-T98A) (part of ATTACHMENT, 312 839 R91)
	179 840	SCREW, 3/8 x 1-1/8" hex-hd cap (12)
	103 321	WASHER, 3/8" lock (12)

(X) - Letters of these units correspond with those shown following the description of the parts in the list below and identifies the unit for which the part is used. Items without letters after the description indicate the part is used for all units.

1	PIN (Unit A)
2	NUT, (Unit A)
2	59 585 R1 NUT, mainshaft (Unit B)
3	82 229 R1 GEAR, speedometer drive (Unit A)

(+) - Transmission No Longer Available. Service Parts Will Be Furnished.

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
TRANSMISSION (Four Speed Synchromesh) (Warner)			22	91 094 R1	ROLLER, reverse idler gear bearing (74)
TRANSMISSION CASE, GEARS, CLUTCH HOUSING AND RELATED PARTS - Continued			23	91 089 R11	GEAR ASSY, reverse idler
			24	91 095 R1	SLEEVE, reverse idler gear bearing
3	317 627 R1	SPACER, speedometer drive gear (Unit B)	25	91 093 R1	SPACER, reverse idler gear bearing
4	77 945 R1	RING, mainshaft snap	26	59 423 R1	SHAFT, reverse idler gear
5	ST 532	BEARING, mainshaft rear (Unit A)	27	317 628 R1	PLATE, countershaft reverse idler gear shift lock
5	ST 236	BEARING, main drive gear (Unit B)	28	179 837 114 606	SCREW, 3/8 x 3/4" hex-hd cap (2) WASHER, 3/8" lock (2)
6	71 843 R1	RING, mainshaft second speed gear snap (3)	29	71 860 R1	COUNTERSHAFT
7	82 092 R91	SYNCHRONIZER, low and second speed	30	71 859 R1	WASHER, countershaft rear thrust (outer)
8	73 298 R1	SPRING, low and second speed synchronizer (3)	31	154 078 R1	WASHER, countershaft rear thrust (inner)
9	16 012 R1	BALL, 3/8" low and second speed synchronizer (3)	32	59 572 R1	WASHER, countershaft bearing spacer (6)
10	71 847 R1	RING, second speed synchronizer blocking	33	59 574 R1	ROLLER, countershaft gear bearing (88)
11	154 075 R1	GEAR, mainshaft second speed	34	95 363 R1	SPACER, countershaft gear bearing
12	82 079 R1	SPACER, mainshaft second speed gear	35	154 077 R1	GEAR, countershaft
13	71 834 R2	SHAFT, main	36	71 857 R1	WASHER, countershaft thrust
14	71 846 R1	ROLLER, mainshaft second speed bearing (34)	37	91 090 R1	SHOE, reverse shifting
15	71 842 R1	WASHER, mainshaft second speed gear thrust	38	147 922 R1	ARM, reverse shifting
16	154 076 R11	GEAR w/BUSHING, 72 202 R1, mainshaft third speed	39	82 084 R1	WASHER, "C" shifting shoe
17	71 840 R1	RING, third and high speed synchronizer blocking (2)	40		GASKET, main drive gear bearing retainer
				77 946 R1	.009" thick
				77 947 R1	.0135" thick
				77 948 R1	.018" thick
				77 949 R1	.0225" thick
18	71 835 R91	SYNCHRONIZER, mainshaft third and high speed clutch	41	109 119 R91	OIL SEAL, main drive gear bearing retainer (Unit A)
19	71 841 R1	RING, third and high speed syn- chronizer hub snap	42		RING, drive gear bearing snap (small)
20	91 092 R1	RING, reverse idler gear snap (2)		137 244 R1	.117" thick
				137 245 R1	.120" thick
21	91 091 R1	WASHER, reverse idler gear thrust (2)		137 246 R1	.123" thick
				137 247 R1	.127" thick

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
TRANSMISSION (Four Speed Synchromesh) (Warner)			62	103 323	WASHER, 3/8" external lock (6)
TRANSMISSION CASE, GEARS, CLUTCH HOUSING AND RELATED PARTS - Continued			63	23 045 H	COVER, power take-off opening
43	77 945 R1	RING, main drive gear bearing snap (large)	64	111 082 R1	GASKET, power take-off opening cover
44	82 076 R1	RING, main drive gear bearing spacer	65	147 919 R11	GEAR, transmission (Unit A)
45	ST 532	BEARING, main drive gear ball (Unit A)	65	317 626 R1	CASE, transmission (Unit B)
45	ST 236	BEARING, main drive gear ball (Unit B)	66	94 807 R1	STUD, transmission mounting (2 for Unit A)
46	80 175 R1	BAFFLE, main drive gear oil	67		WASHER, 1/2" lock (4 for unit A)
47	619 522 C1	GEAR, main drive	68		NUT, 1/2NF (4 for Unit A)
48	59 579 R1	ROLLER, mainshaft bearing (16)	69		WASHER, 5/16" external lock (4)
49	94 807 R1	STUD, transmission mounting (2 for Unit A)	70		SCREW, 5/16 x 7/8" hex-hd cap (4)
50	103 565	PIN, reverse shifting arm screw	71	74 012 R21	RETAINER w/SEAL (Unit A)
51	147 921 R1	PIN, reverse shifting arm pivot	71	317 631 R1	RETAINER, main drive gear bearing (Unit B)
52	71 855 R1	GASKET, control lever housing	72	147 920 R1	OIL SEAL, pivot pin
53	80 224 R11	RETAINER w/SLEEVE, 26 905 H	73	317 633 R1	HOUSING, clutch (Unit B)
54	114 606	WASHER, 3/8" external lock (5)	74	317 634 R1	COVER, hand hole (Unit B)
55	179 839	SCREW, 3/8 x 1" hex-hd cap (4)	117 290		SCREW, 5/16 x 5/8" fil-hd (2)
56	382 868 C91	OIL SEAL, mainshaft	108 590		WASHER, 5/16" lock (2)
57	179 847	SCREW, 3/8 x 2" hex-hd cap	75	317 635 R1	SHAFT, throwout (short) (Unit B)
58		GASKET, mainshaft rear bearing retainer	76	317 637 R1	YOKE, throwout (Unit B)
	80 225 R1	(.010" thick)	77	HA 644	SCREW, lock (2 for Unit B)
	80 226 R1	(.015" thick)	78	317 636 R1	SHAFT, throwout (long) (Unit B)
	80 227 R1	(.020" thick)	79	271 285	FITTING, 1/8 x 90° lubrication (optional with 109 462) (2 for Unit B) (not part of TRANSMISSION ASSY, 313 739 R91)
	80 228 R1	(.025" thick)	79	109 462	FITTING, 1/8 x 90° lubrication (optional with 271 285) (2 for Unit B) (Not part of TRANSMISSION ASSY, 313 739 R91)
59	444 753	PLUG, 3/4" sq-hd pipe (Unit A)			
60	444 795	PLUG, 3/4" csk-hd (Unit A)			
60	444 595	PLUG, 3/4" sq-hd pipe (cd or zn-pltd) (2)	115 617 H		BOLT, 3/8 x 3/4" (2 for Unit B)
61	179 883	SCREW, 3/8 x 5/8" hex-hd cap (6)	72 202 R1		BUSHING, mainshaft third speed gear

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
TRANSMISSION (Four Speed Synchromesh) (Warner)					
TRANSMISSION CASE, GEARS, CLUTCH HOUSING AND RELATED PARTS - Continued					
	2 751 156 R1	PRODUCT GRAPHIC, shifting diagram (Unit B) (not part of TRANSMISSION ASSY, 313 739 R91)			
	82 082 R1	RING, shift plate retaining (Unit B) SCREW, 1/2 x 1-1/4" hex-hd cap (6 for Unit B) WASHER, 1/2" lock (6)			
	26 905 H	SLEEVE, speedometer drive gear			

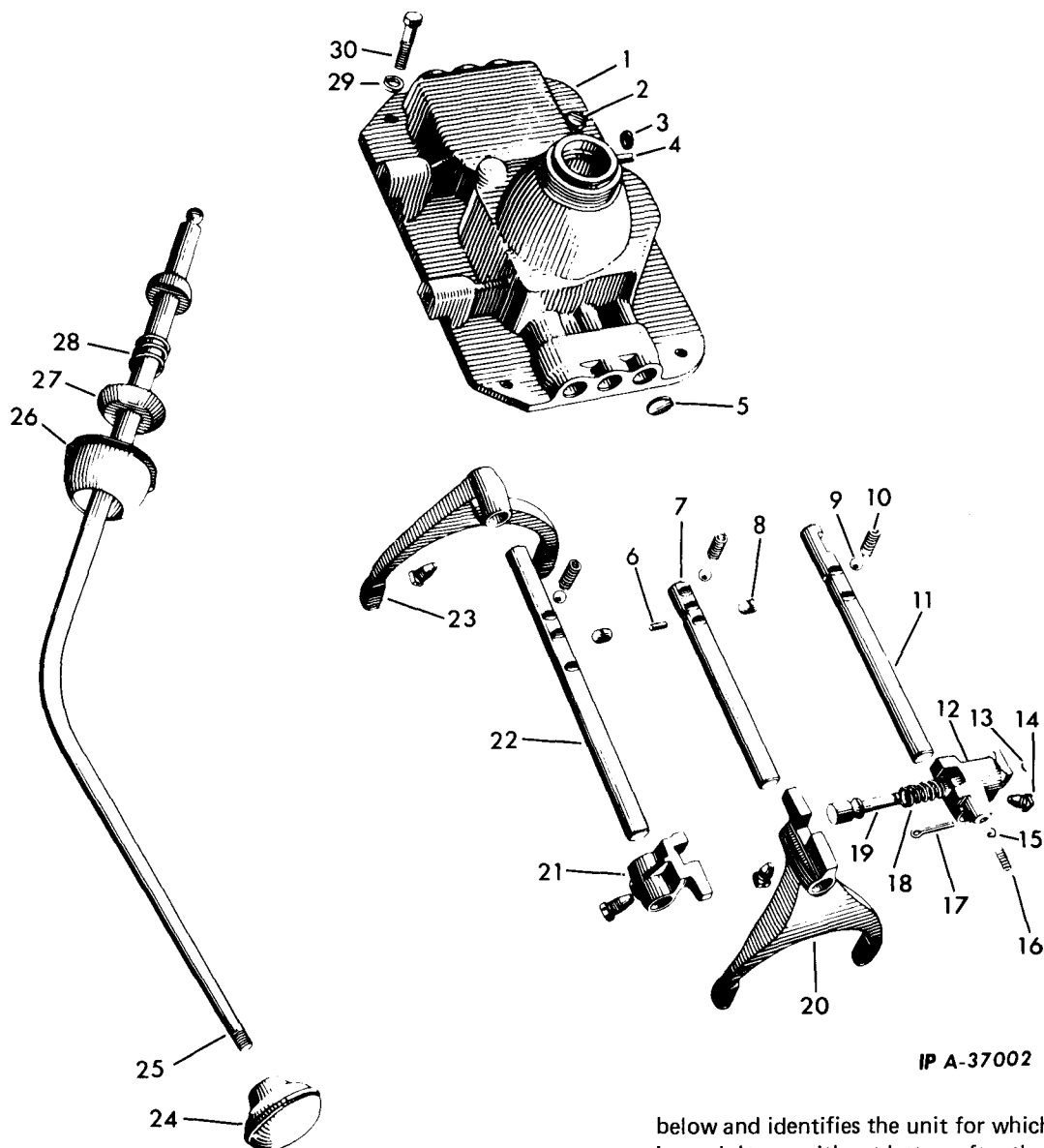
ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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TRANSMISSION

(Four Speed Synchromesh) (Warner)

TRANSMISSION CONTROL HOUSING AND LEVER



IP A-37002

below and identifies the unit for which the part is used. Items without letters after the description indicates the part is used for all units.

(X) - KEY TO UNITS

A 71 876 R91 HOUSING ASSY, transmission control lever (part of ATTACHMENT, 305 889 R91)

B Service parts for transmission control housing and lever (part of Transmission ASSY, 313 739 R91)

(X) - Letters of these units correspond with those shown following the description of the parts in the list

1	71 877 R1	HOUSING, control lever
2	82 075 R91	BREATHER
3	59 761 R1	PLUG, shift bar poppet interlock plunger hole (Unit A)
4	103 736	PIN, control housing
5	172 531	PLUG, 3/4" expansion (6) (For Unit A)

ATTACHMENTS

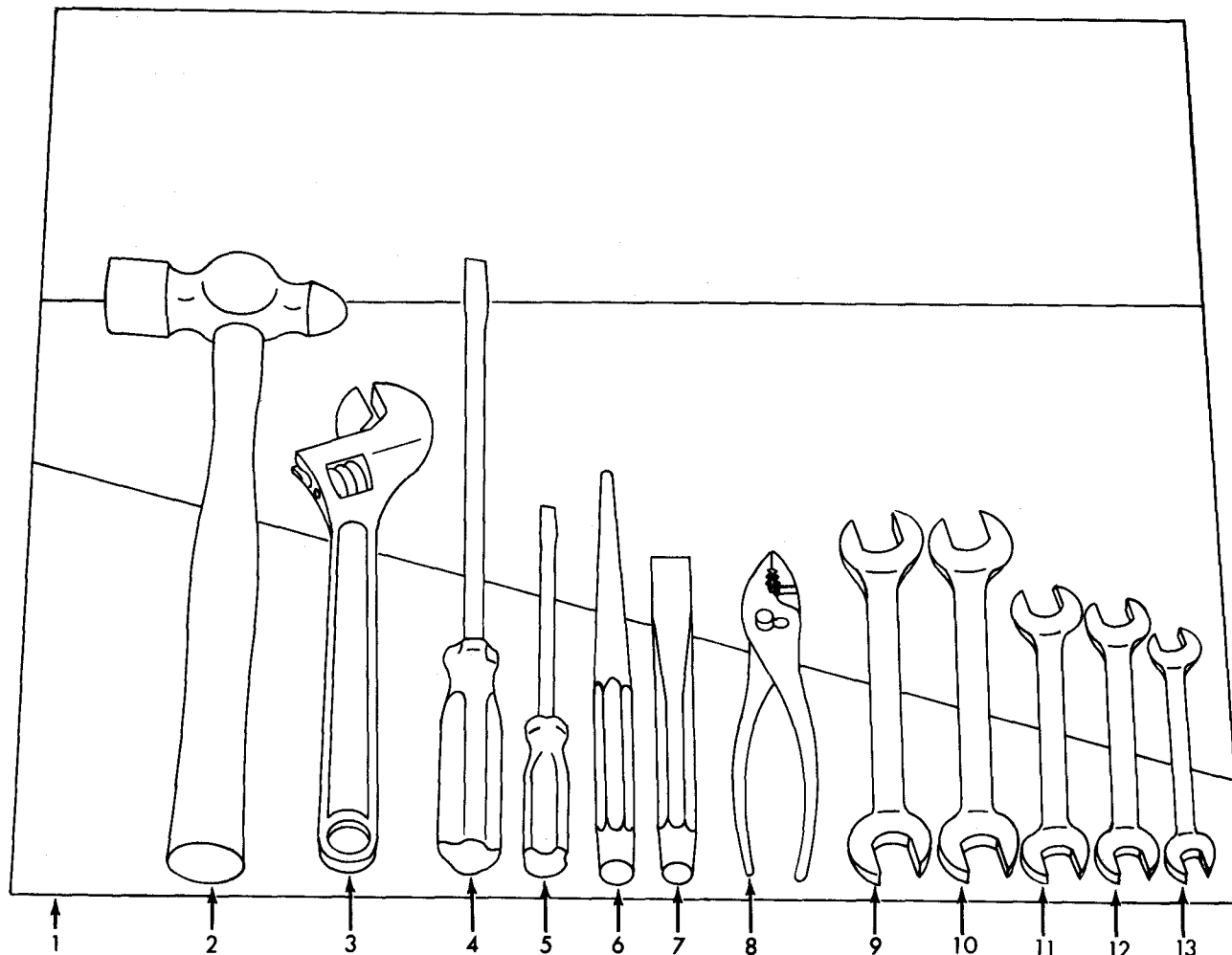
REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
TRANSMISSION (Four Speed Synchromesh) (Warner)			28	27 098 HA	SPRING, control lever
TRANSMISSION CONTROL HOUSING AND LEVER			29		WASHER, 3/8" lock (6)
5	103 892	PLUG, expansion (6 for Unit B)	30		SCREW, 3/8 x 7/8" hex-hd cap (6)
6	59 412 R1	PIN, shift bar interlock plunger		83 780 R1	BALL, fulcrum (Unit B)
7	71 879 R1	RAIL, third and direct speed shift		30 443 V	PLUG, speedometer opening (Not part of housing ASSY., 71 876 R91 or Transmission ASSY., 313 739 R91)
8	27 096 H	PLUNGER, shift bar interlock (2)			
9	16 012 R1	BALL, 3/8" shift bar poppet (3)			
10	59 411 R1	SPRING, shift bar poppet (3 for Unit A)			
10	23 074 H	SPRING, shift bar poppet (3 for Unit B)			
11	71 884 R1	RAIL, reverse speed shift			
12	82 090 R1	END, reverse speed shift			
13	82 083 R1	WASHER, "C" reverse speed plunger			
14	23 079 H	SCREW, shift fork set (4)			
15	16 008 R1	BALL, 1/4" reverse speed shift end plunger poppet			
16	82 077 R1	SPRING, reverse speed shift end plunger poppet			
17	108 630	PIN, 1/8 x 1" cotter			
18	62 892 HC	SPRING, reverse speed shift end plunger			
19	82 086 R1	PLUNGER, reverse speed shift end			
20	71 881 R1	FORK, third and direct speed shift			
21	71 883 R1	END, low and second speed shift			
22	71 880 R1	RAIL, low and second speed shift			
23	71 882 R1	FORK, low and second speed shift			
24	16 780 H	BALL, control lever			
25	69 935 R11	LEVER, control (Unit A)			
25	317 632 R1	LEVER, control (Unit B)			
26	82 078 R1	CAP, control housing			
27	32 192 R1	WASHER, control lever spring			

ATTACHMENTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
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TOOLS

(Owatonna)



PL-43351-1A

TOOL SET (Owatonna Tool Co.)

(I.H. Part Number 276 822 R91) (*)

			9	E-2426	WRENCH, end (3/4 x 13/16")
1	ED-1133	ROLL, tool leatherette	10	E-2628	WRENCH, end (13/16 x 7/8")
2	BP-32	HAMMER (2 lb. ball peen)	11	E-2022	WRENCH, end (5/8 x 11/16")
3	DA-12	WRENCH (adjustable - 12" long)	12	E-1820	WRENCH, end (9/16 x 5/8")
4	SS-123	SCREWDRIVER (3/8" shank)	13	E-1416	WRENCH, end (7/16 x 1/2")
5	SS-83	SCREWDRIVER (1/4" shank)			
6	TP-24	PUNCH (10" long)			
7	CC-24	CHISEL (8" long)			
8	712-A	PLIERS (slip joint - 8" long)			

(*) - Order Individual Tools and Complete Tool Sets From Service Tools, Inc., 1921 So. Indiana Ave., Chicago, Illinois 60616

MISCELLANEOUS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
PRODUCT GRAPHICS			2 752 298 R1	PRODUCT GRAPHIC, "International" (@)	
		The following identification and instructional Product Graphics are available.	2 752 300 R1	PRODUCT GRAPHIC, "International" (@)	
1 001 071 R2	PRODUCT GRAPHIC, generator		2 752 311 R1	PRODUCT GRAPHIC, "International" (%)	
1 001 170 R1	PRODUCT GRAPHIC, blower fan instructions		2 752 313 R1	PRODUCT GRAPHIC, "International" (%)	
1 001 516 R1	PRODUCT GRAPHIC, air cleaner instructions		2 752 467 R1	PRODUCT GRAPHIC, water trap instruction	
1 001 675 R1	PRODUCT GRAPHIC, air cleaner instruction (@)		2 752 515 R1	PRODUCT GRAPHIC, primary fuel filter instruction	
2 750 624 R2	PRODUCT GRAPHIC, engine start procedure		2 752 521 R1	PRODUCT GRAPHIC, final fuel filter instruction	
2 751 188 R1	PRODUCT GRAPHIC, air cleaner instruction		2 754 281 R1	PRODUCT GRAPHIC, "FUEL"	
2 751 471 R1	PRODUCT GRAPHIC, model symbol "UD-236" (@) (2)				
2 751 472 R1	PRODUCT GRAPHIC, model symbol "UD-236" (%) (2)				
2 751 479 R1	PRODUCT GRAPHIC, model symbol "UD-282" (@) (2)				
2 751 480 R1	PRODUCT GRAPHIC, model symbol "UD-282" (%) (2)				
2 751 529 R1	PRODUCT GRAPHIC, "diesel" (@) (2)				
2 751 530 R1	PRODUCT GRAPHIC, "diesel" (%) (2)				
2 751 533 R1	PRODUCT GRAPHIC, Flo-matic (@)				
2 751 534 R1	PRODUCT GRAPHIC, Flo-Matic (%)				
2 753 190 R1	PRODUCT GRAPHIC, "Made in U.S.A."				
2 752 048 R1	PRODUCT GRAPHIC, engine shut- down instructions				
2 754 371 R1	PRODUCT GRAPHIC, "IHC of Canada"				

(@) - For Units Painted Yellow.

(%) - For Units Painted Red.

MEMORANDA

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