

PARTS LIST

Novo Rollr Engines

Four Cylinder

U Models

FFU-3" x 4" HHU-3 $\frac{3}{16}$ " x 4" RRU-3 $\frac{3}{8}$ " x 5"
YYU-3 $\frac{3}{4}$ " x 5" JJU-4 $\frac{1}{8}$ " x 5"

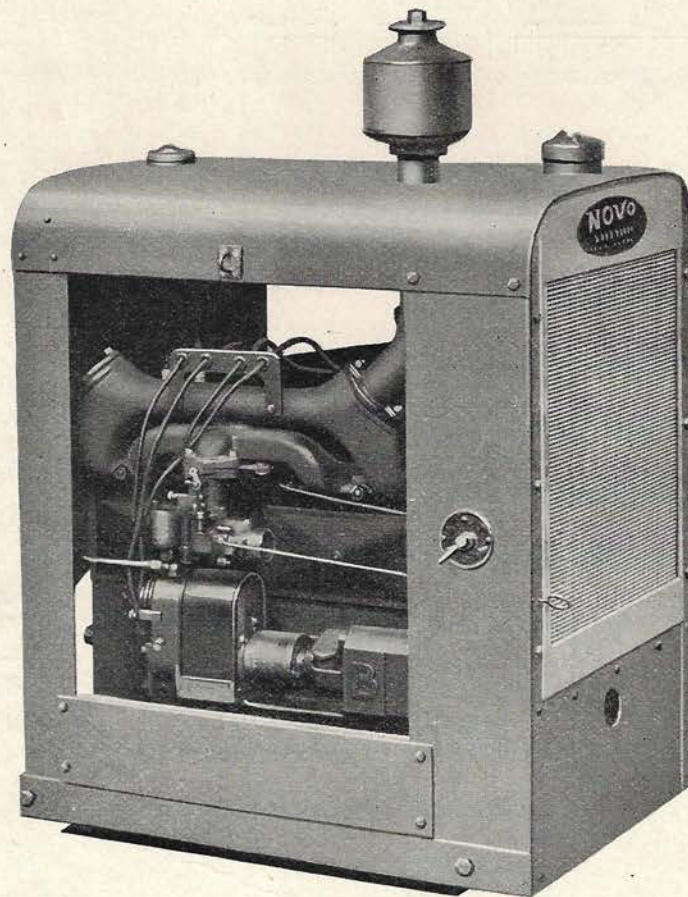


Fig. 1289

NOVO ENGINE CO.
Clarence E. Bement, Vice-Pres. & Gen. Mgr.
LANSING ~ MICHIGAN

U. S. A.

New York Office—811 Graybar Bldg.

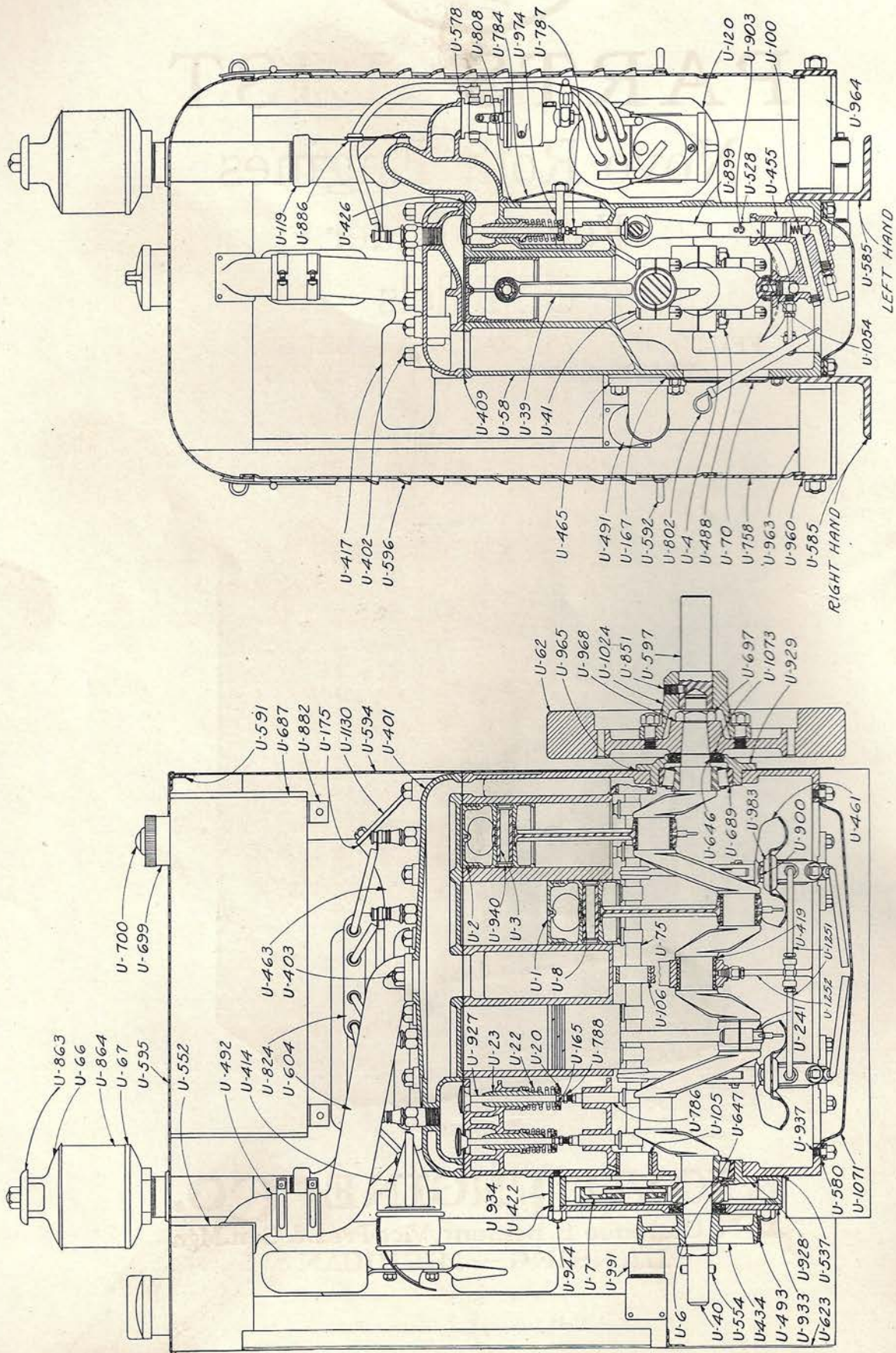


FIG. D125 SECTIONAL VIEW MODEL U FOUR CYLINDER ENGINE

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs.



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Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs

Instructions for Ordering Parts

1. Always give serial number of engine and outfit as it appears on the brass name plates.
2. Always specify type and model of both engine and outfit.
3. Always give symbol and name of each part.
4. All prices are F.O.B. Lansing, Michigan.
5. State whether shipments are to be forwarded parcel post, express, or freight.
6. Orders for parts should be written separately from correspondence pertaining to other matters. Be sure to write your name and complete address plainly.
7. Do not order by sets. State exactly how many pieces are required.
8. This Parts List supersedes all others of previous date. Prices are subject to change without notice.
9. Returned parts must be tagged showing shipper's name and address, and be accompanied by claim letter giving full details together with serial number of engine and outfit. In case of declined claims the inspected parts are subject to the shipper's orders for disposition and we cannot be held responsible for such parts for more than 30 days.
10. Claims for defective parts not of our manufacture must be made to their respective makers insofar as they are fully warranted by their manufacturers.
11. All claims must be made within 3 days after receipt of goods.

STANDARD WARRANTY

Every part of our manufacture is guaranteed against defect in either material or workmanship for a period of one year. We agree to replace free of charge any part of our manufacture sold hereunder providing the part or parts claimed defective are returned to the factory, transportation charges prepaid, within one year from original date of purchase of the engine or outfit, and upon receipt and examination we find the condition of the part or parts substantiates customer's claim of defect. When defective parts are replaced free of charge it is agreed that the manufacturer is in no way liable for expenditures covering labor or otherwise that may be incurred in the replacement of the defective parts. Claimant agrees to furnish the manufacturer with such evidence or information that may be required from time to time when handling claims.

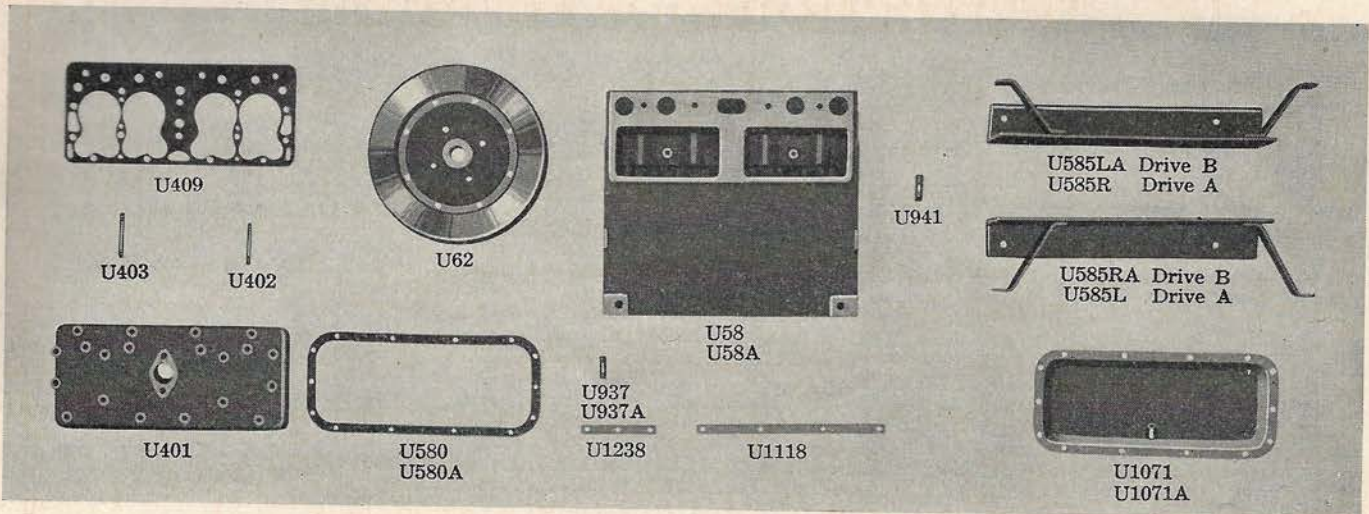
NOVO ENGINE CO.
Clarence E. Bement, Vice-Pres. & Gen. Mgr.

LANSING ~ MICHIGAN

Cable Address "NOVO LANSING"
Distributors Throughout the World



CYLINDER, CYLINDER HEAD, OIL PAN, FLYWHEEL, ENGINE AND HOUSING SUPPORT PARTS



Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Sybol	Price
<p>When ordering cylinder and parts note the following changes: Location or drilling for oil pan stud changed on FFU and HHU engines. Aluminum oil pan used on FFU engines numbered previous to engine No. 13010, and steel oil pan used on engines numbered after engine No. 13009. Location or drilling for studs and cap screws on cylinder block for timing gear case and bell housing. Parts not interchangeable, affects cylinder, timing gear case, gear case gasket, timing gear case cover, gear case cover gasket and bell housing. Change first made on engine No. 11798.</p>						
U58	Cylinder with valve stem guides, cam shaft bushings and center main bearing, used on engines with plain babbbitted center main bearing.					
	FFU engine only	1	101FFU	75.00		
	HHU engine only	1	101HHU	85.00		
	RRU engine only (used on engines numbered previous to RRU 15706.)	1			101RRU	112.00
	YYU engine only (used on engines numbered previous to YYU 15244)	1			101YYU	125.00
U58	Cylinder with valve stem guides and cam shaft bushings, used on engines with ball bearing center main bearing.					
	RRU engine only (used on engines numbered after RRU 15705)	1			101RRUA	110.00
	YYU engine only (used on engines numbered after YYU 15243)	1			101YYUA	123.00
	JJU engine only	1			101JJU	133.00
U58A	Cylinder assembled with valves complete, pistons complete, and cam shaft bushings and center main bearing, used on engines with plain babbbitted center main bearing.					
	FFU engine only	1	101FFUA	87.00		
	HHU engine only	1	101HHUA	97.00		
	RRU engine only (used on engines numbered previous to RRU15706)	1			101RRUB	149.00
	YYU engine only (used on engines numbered previous to YYU15244)	1			101YYUB	165.00
U58A	Cylinder assembled with valves complete, pistons complete, and cam shaft bushings, used on engines with ball bearing center main bearing.					
	RRU engine only (used on engines numbered after RRU 15705)	1			101RRUC	147.00
	YYU engines only (used on engines numbered after YYU 15243)	1			101YYUC	163.00
	JJU engine only	1			101JJUA	177.00
U62	Flywheel	1	FFU62	16.50	RRU62	23.00
U401	Cylinder head for FFU engine only	1	FFU401	15.00		
	HHU engine only	1	HHU401	16.00		
	RRU engine only	1			RRU401	22.00
	YYU engine only	1			YYU401	24.00
	JJU engine only	1			JJU401	27.00
U402	Cylinder head stud—short, 13 used on FFU, HHU, and 19 used on RRU, YYU and JJU engine.					
			UF402]	.20	RRU402	.25
U403	Cylinder head stud—long, 5 used on FFU, HHU, and 3 used on RRU, YYU and JJU engine.					
			UF403	.20	RRU403	.25
U409	Cylinder head gasket	1	FFU409	.90	RRU409	1.40
U580	Oil pan gasket—14 holes	1	FFU580A	.30	FFU580A	.30
*U580A	Oil pan gasket—10 holes—obsolete	1	FFU580	.30		
U585L	Housing and engine support, plain side, A drive	1	T3422	3.75	T3679	7.00
U585R	Housing and engine support—carburetor side, A drive	1	T3423	3.75	T3677	7.00
U585RA	Housing and engine support, plain side, B drive	1	T3421	3.75	T3678	7.00
U585LA	Housing and engine support, carburetor side, B drive	1	T3420	3.75	T3680	7.00
U937	5/16" x 1" stud for steel oil pan	14	FFU937	.08	FFU937	.08
*U937A	3/8" x 1 1/16" stud for aluminum oil pan—obsolete	10	UF937	.10		
U941	Stud for housing and engine support, 4 used on FFU, HHU, and 12 used on RRU, YYU and JJU engine		UF941	.20	RRU941	.15
U1071	Oil pan—steel	1	FFU1071A	5.75	FFU1071A	5.75

*PARTS NOT ILLUSTRATED.

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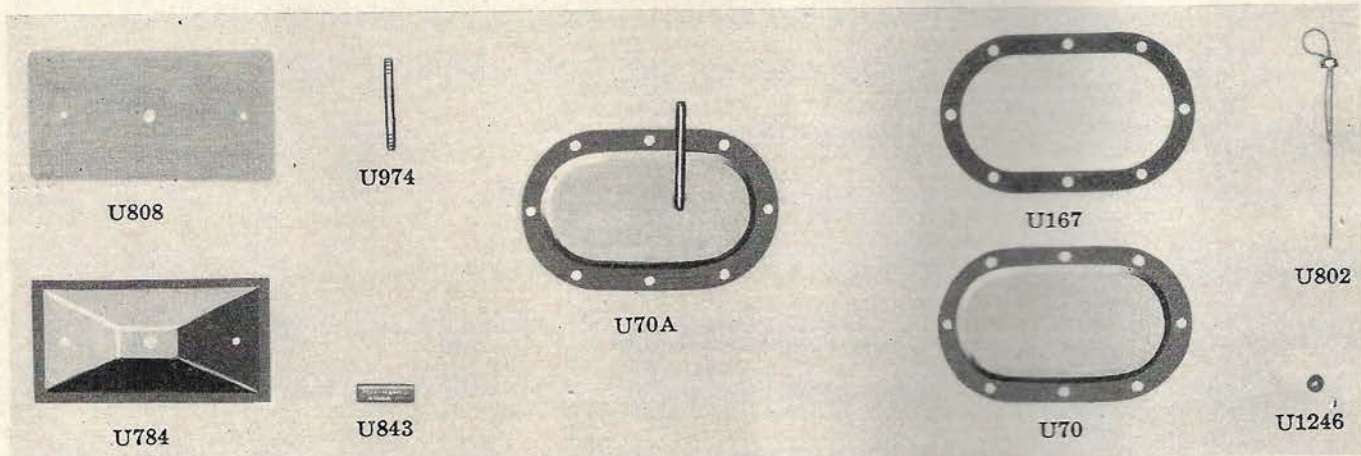
CYLINDER, CYLINDER HEAD, OIL PAN, FLYWHEEL, ENGINE AND HOUSING SUPPORT PARTS—Continued.

Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
U1071A	Oil pan—aluminum—obsolete.....	1	FFU1071	3.50	.....	.....
*U1072	Special nut for stud U937A—obsolete.....	10	UF1072	.10	.....	.....
U1118	Reinforcing strip for oil pan.....	2	FFU1118A	.30	FFU1118A	.30
U1238	End reinforcing strip for oil pan.....	2	FFU1238	.20	FFU1238	.20

STANDARD PURCHASED MATERIAL

X41	1/4" pipe plug for U1071A—obsolete.....	1	X41	.04	.....	.....
X42	3/8" pipe plug for U1071.....	1	X42	.04	X42	.04
X73	1/4" pipe coupling for U1071A—obsolete.....	1	X73	.05	.....	.....
X103	3/8" pipe coupling for U1071.....	1	X103	.06	X103	.06
X183	1/4" x 3 1/4" pipe nipple for U1071A—obsolete.....	1	X183	.08	.....	.....
X184	3/8" x 3 1/4" pipe nipple for U1071.....	1	X184	.09	.....	.....
X123	3/8" x 4" pipe nipple for U1071.....	1	.....	.....	X123	.10
X367	5/16" hex nut for U937.....	14	X367	.02	X367	.02
X370	7/16" hex nut for U402 and U403.....	18	X370	.03	.....	.....
X371	1/2" hex nut for U402 and U403.....	22	.....	.....	X371	.04
X371	1/2" hex nut for U941.....	12	.....	.....	X371	.04
X372	5/8" hex nut for U941.....	4	X372	.04	.....	.....
X413	5/16" lock washer for U937.....	14	X413	.01	.....	.....
X416	1/2" lock washer for U941.....	12	.....	.....	X416	.02
X417	5/8" lock washer for U941.....	4	X417	.01	.....	.....

VALVE COVER, HAND HOLE PLATE AND OIL GAUGE PARTS



U70	Hand hole plate, 1 used on FFU and HHU, 3 used on RRU, YYU and JJU engine.....	1	AF70B	.40	AF70B	.40
U70A	Hand hole plate assembly for oil gauge.....	1	T3364	1.00	T3364	1.00
U167	Gasket for hand hole plate, 2 used on FFU, HHU, 4 used on RRU, YYU and JJU engine.....	2	AF167A	.12	AF167A	.12
U784	Valve cover assembled with parts 808, 843 and X670.....	2	T3232	.80	T3232	.80
U802	Oil gauge with part U1246.....	1	T3799	.40	T3800	.40
U808	Gasket for valve cover.....	2	UF808	.15	UF808	.15
U843	Plate showing valve clearance.....	2	UF843	.10	UF843	.10
U974	Stud for valve cover plate to cylinder.....	2	UF974	.15	RU974	.15
U1246	Felt washer for oil gauge.....	1	UF1246	.02	UF1246	.02

STANDARD PURCHASED MATERIAL

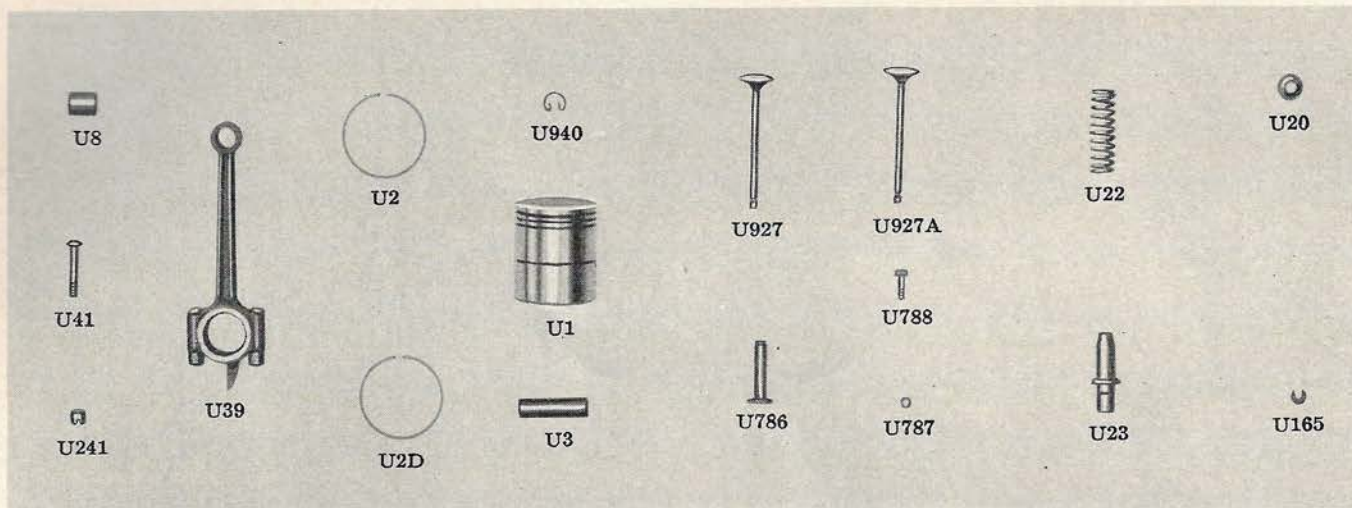
X369	3/8" hex nut for valve cover stud.....	2	X369	.03	X369	.03
X461	5/16" x 1/2" hex head cap screw for hand hole plate, 16 used on FFU and HHU.....	16	X461	.04	X461	.04
X670	5/32" x 1/2" oval head clinch rivet for valve cover.....	4	X670	.01	X670	.01

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



PISTON, CONNECTING ROD, VALVE, VALVE TAPPET AND VALVE GUIDE PARTS



Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
*U1A	3" diameter piston assembled with parts 1, 2, 3 and 940 for FFU engine only	4	100UFA	4.80	.....	.....
*U1A	3 3/16" diameter piston assembled with parts 1, 2, 3 and 940 for HHU engine only	4	100HU	4.80	.....	.....
*U1A	3 3/8" diameter piston assembled with parts 1, 2, 3 and 940 for RRU engine only	4	.....	.....	100RRU	5.55
*U1A	3 3/4" diameter piston assembled with parts 1, 2, 3 and 940 for YYU engine only	4	.....	.....	100YU	6.20
*U1A	4 1/8" diameter piston assembled with parts 1, 2, 3 and 940 for JJU engine only	4	.....	.....	100JJU	7.15
U1	3" diameter piston for FFU engine only	4	UF1	3.00	.....	.....
U1	3 3/16" diameter piston for HHU engine only	4	HU1	3.00	.....	.....
U1	3 3/8" diameter piston for RRU engine only	4	.....	.....	RRU1	3.35
U1	3 3/4" diameter piston for YYU engine only	4	.....	.....	YU1	3.75
U1	4 1/8" diameter piston for JJU engine only	4	.....	.....	JJU1	4.25
U2	3" diameter plain piston ring for FFU engine only	8	UF2	.30	.....	.....
U2	3 3/16" diameter plain piston ring for HHU engine only	8	HU2	.30	.....	.....
U2	3 3/8" diameter plain piston ring for RRU engine only	8	.....	.....	RRU2	.40
U2	3 3/4" diameter plain piston ring for YYU engine only	8	.....	.....	NF2	.45
U2	4 1/8" diameter plain piston ring for JJU engine only	8	.....	.....	JJU2	.50
U2D	3" diameter piston ring, oil regulating, for FFU engine only	4	UF2D	.35	.....	.....
U2D	3 3/16" diameter piston ring, oil regulating, for HHU engine only	4	HU2D	.35	.....	.....
U2D	3 3/8" diameter piston ring, oil regulating, for RRU engine only	4	.....	.....	RRU2D	.45
U2D	3 3/4" diameter piston ring, oil regulating, for YYU engine only	4	.....	.....	YU2D	.50
U2D	4 1/8" diameter piston ring, oil regulating, for JJU engine only	4	.....	.....	JJU2D	.55
U3	Piston pin for FFU and HHU engine	4	UF3	.65	.....	.....
U3	Piston pin for RRU engine only	4	.....	.....	AF3A	.75
U3	Piston pin for YYU engine only	4	.....	.....	NF3A	.85
U3	Piston pin for JJU engine only	4	.....	.....	JJU3	1.10
U8	Connecting rod bushing for FFU and HHU engine	4	UF8	.20	.....	.....
U8	Connecting rod bushing for RRU and YYU engine only	4	.....	.....	AF8	.35
U8	Connecting rod bushing for JJU engine only	4	.....	.....	JJU8	.50
U20	Valve stem collar	8	UF20	.10	RU20	.10
U22	Valve spring, inlet or exhaust	8	UF22	.10	RU22	.10
U23	Valve stem guide	8	UF23	.40	AF23	.50
U39	Connecting rod assembled with parts 8, 39, 41, 241 and X262	4	T3227	6.50	.....	.....
U39	Connecting rod assembled with parts 8, 39, 41, 241 and X262 for RRU and YYU engine only	4	.....	.....	T3685	11.50
U39	Connecting rod assembled with parts 8, 39, 41, 241 and X262, for JJU engine only	4	.....	.....	T3782	12.00
U41	Connecting rod bolt with nut part 241	8	UF41	.25	RU41	.35
U165	U washer for valve stem	8	UF165	.03	RU165	.04
U241	Nut for connecting rod bolt	8	UF241	.15	2S241	.15
U786	Valve tappet	8	SU786	.90	RU786	1.00
U787	Nut for valve tappet adjusting screw	8	UF787	.02	X387	.02
U788	Valve tappet adjusting screw	8	UF788	.15	RU788	.30
U927	Inlet valve	4	UF927C	.50	RRU927	1.10
U927A	Exhaust valve	4	UF927C	.50	RRU927A	1.80
*U927B	Silcrome exhaust valve, used on engines above 1500 R. P. M. crankshaft speed	4	UF927D	1.00	.....	.....
U940	Snap ring for piston for FFU and HHU engine	8	UF940	.10	.....	.....
U940	Snap ring for piston for RRU and YYU engine only	8	.....	.....	AF940	.10
U940	Snap ring for piston for JJU engine only	8	.....	.....	JJU940	.12

STANDARD PURCHASED MATERIAL

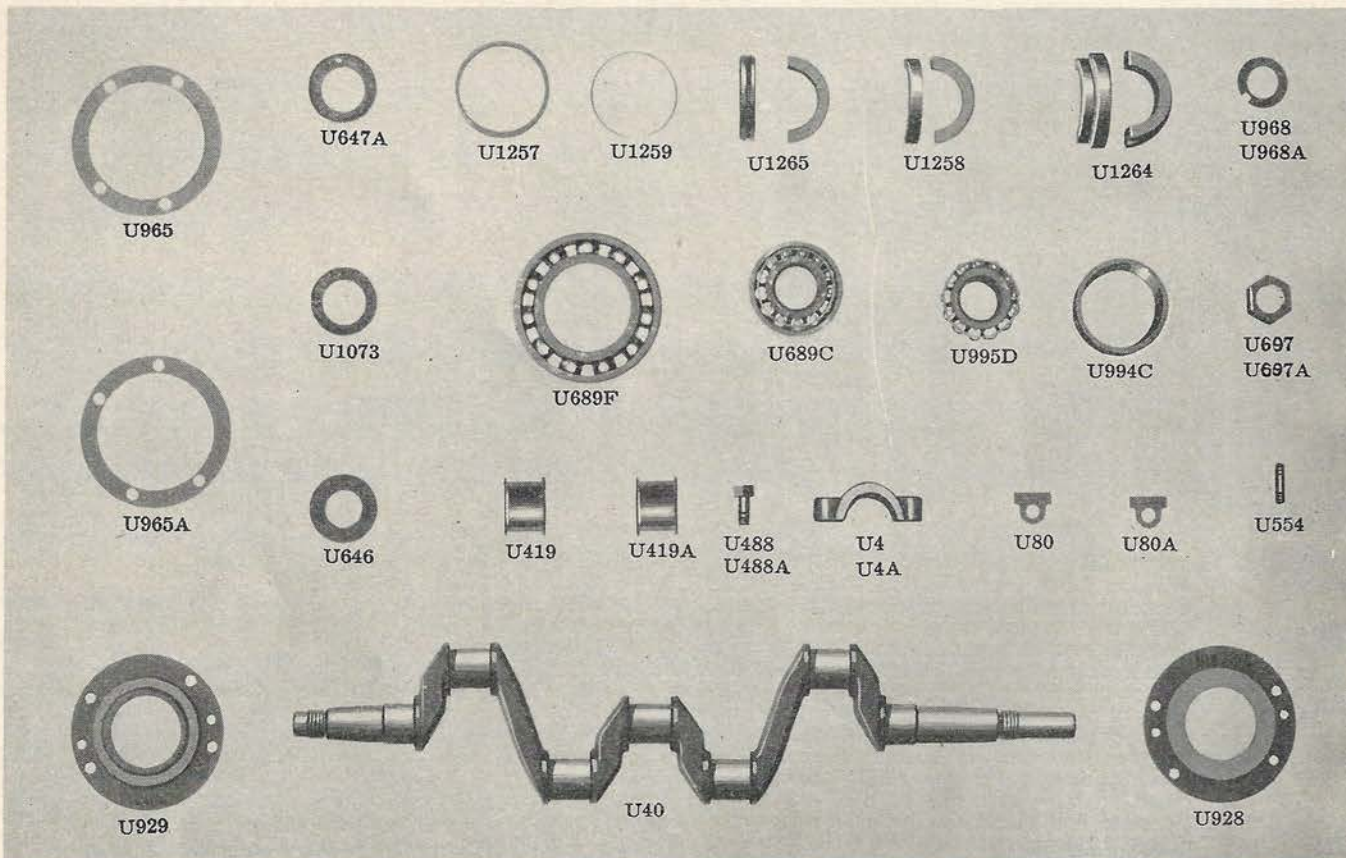
X262	3/32" x 3/4" cotter pin for connecting rod bolt	8	X262	.01	.....	.....
X263	3/32" x 1" cotter pin for connecting rod bolt	8	.....	.....	X263	.01

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



CRANK SHAFT AND MAIN BEARING PARTS



Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
U4	Bearing cap for center plain bearing (used on RRU and YYU engines numbered previous to RRU 15706 and YYU 15244).....	1	FFU4	.60	RRU4	2.25
U4A	Bearing cap for center main ball bearing (used on RRU and YYU engines numbered after engine number RRU 15705 and YYU 15243).....	1	.....	.....	RRU4A	1.50
U40	Crank shaft only.....	1	FFU40	27.50	RRU40	50.00
U80	Center main bearing shim—thick (used on RRU and YYU engines numbered previous to RRU 15706 and YYU 15244).....	2	FFU80	.03	RRU80	.04
U80A	Center main bearing shim—thin (used on RRU and YYU engines numbered previous to RRU 15706 and YYU 15244).....	2	FFU80B	.01	RRU80A	.01
U419	Upper center main bearing (used on RRU and YYU engines numbered previous to RRU15706 and YYU15244).....	1	FFU419	.60	RRU419	1.10
U419A	Lower center main bearing (used on RRU and YYU engine numbered previous to RRU 15706 and YYU 15244).....	1	FFU419A	.60	RRU419A	1.10
U488	Cap screw for center main plain bearing cap (interchangeable with stud formerly used on FFU and HHU engine, obsolete on RRU and YYU engine).....	2	FFU488A	.40	RRU488	.50
U488A	Cap screw for center main bearing cap for ball bearing.....	2	.....	.....	X450	.05
U554	Starting crank pin.....	1	LF554	.12	LF554	.12
U646	Felt washer for rear main bearing housing.....	1	LF646B	.20	RRU646	.25
U647A	Inner felt washer retainer for rear main bearing housing.....	1	LF647B	.20	RRU647	.25
U689C	Timken roller bearing complete for crank shaft (No. 418-414 used on FFU, HHU and 555S-552A used on RRU, YYU and JJU engine).....	2	UF689C	7.48	RRU689	14.46
U689F	No. N. D. 3216 ball bearing for center bearing (used on RRU and YYU engines after engine No. RRU 15705 and YYU 15243).....	1	.....	.....	RRU689C	16.00
U697	Nut for crank shaft—starting end.....	1	UF697	.35	RU697	.65
U697A	Nut for crank shaft—flywheel or driving end.....	1	UF697	.35	RRU697	.70
U928	Housing for front main roller bearing with part 994.....	1	UF928A	4.10	RRU928A	10.17
U929	Housing for rear main roller bearing with part 994.....	1	UF929A	4.60	RRU929A	10.92
U965	Thin gasket for main bearing housing.....	4	UF965	.03	RRU965	.05
U965A	Thick gasket for main bearing housing.....	2	UF965A	.05	RRU965A	.08
U968	Lock washer for crank shaft—starting end.....	1	UF968	.10	RU968	.10
U968A	Lock washer for crank shaft—for flywheel or driving end.....	1	UF968	.10	RRU968	.12
U994C	Cup for roller bearing, No. 414 used on FFU, HHU, and No. 552A used on RRU, YYU and JJU engine.....	2	UF994B	2.60	RRU994	6.17

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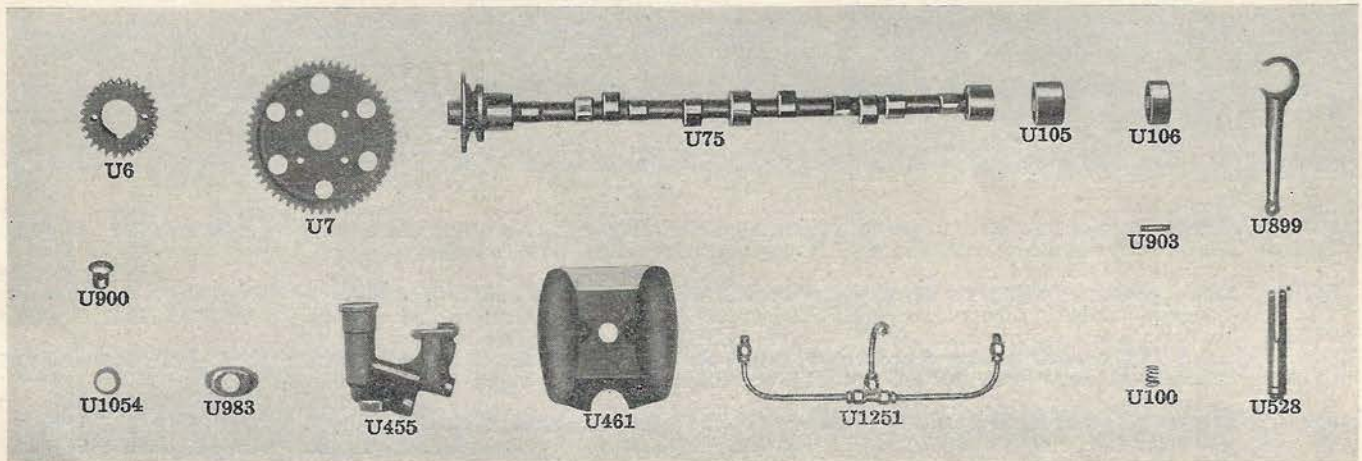
CRANK SHAFT AND MAIN BEARING PARTS—Continued

Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
U995D	Cone and rollers, No. 418 used on FFU, HHU, and No. 555S used on RRU, YYU and JJU engines.	2	UF995B	4.88	RRU995	8.29
U1073	Outer felt washer retainer for rear main bearing housing	1	UF1073	.20	RRU1073	.25
U1257	Collar for center ball bearing	1			RRU1257	.50
U1258	Sleeve for center ball bearing—price per half	2			RRU1258	.75
U1259	Lock spring for center ball bearing	1			RRU1259	.10
U1264	Bushing for center ball bearing—price per half	2			RRU1264	1.00
U1265	Spacer for center ball bearing—price per half	2			RRU1265	.80

STANDARD PURCHASED MATERIAL

X414	3/8" lock washer for center main bearing cap, for ball bearing	2			X414	.01
X414A	3/8" light pattern lock washer for main bearing housing	8	X414A	.01		
X415A	7/16" light pattern lock washer for main bearing housing	8			X415A	.02
X449	3/8" x 1" hex head cap screw for main bearing housing	8	X449	.04		
X484	7/16" x 1" hex head cap screw for main bearing housing	8			X484	.04
X968	No. C Woodruff key for fan pulley and flywheel	2	X968	.05		
X963	No. B Woodruff key for cam pinion	1	X963	.05		
X963	No. B Woodruff key for cam pinion and fan pulley	2			X963	.05
X966	No. G Woodruff key for flywheel	1			X966	.08

TIMING GEARS, CAMSHAFT, CAMSHAFT BUSHING AND OIL PUMP PARTS



U6	Cam Pinion	1	UF6	2.00	RU6	3.00
U7	Cam gear	1	UF7	1.75	RU7	2.25
U75	Cam shaft	1	FFU75	16.00	RRU75	20.00
*U75A	Cam shaft and gear assembled, parts 7, 75 and X681	1	T3403	18.75	T3686	23.50
U100	Oil pump spring	2	RF100	.09	RF100	.09
U105	Front and rear cam shaft bushing	2	UF105	.35	RRU105	.65
U106	Center cam shaft bushing	1	FFU106	.30	RRU106	.60
U455	Oil pump body	2	FFU455	4.00	FFU455	4.00
*U455A	Oilpump assembled with parts 100, 455, 461, 528, 900, 983, 1054, X39 and X1114	2	T3409	6.75	T3845	6.90
U461	Oil trough	2	UF461B	.50	RU461C	.65
U528	Oil pump plunger	2	UF528A	1.00	UF528A	1.00
U899	Eccentric rod for oil pump	2	UF899A	1.00	RU899	1.65
U900	Discharge fitting for oil pump	2	UF900C	.35	UF900C	.35
U903	Pin for oil pump plunger	2	UF903	.15	UF903	.15
U983	Outer cup for oil discharge fitting	2	UF983A	.15	UF983A	.15
U1054	Inner cup for oil discharge fitting	2	UF1054	.10	UF1054	.10
U1251	Oil pipe assembly for center main babbitt bearing—obsolete on RRU, YYU engine	1	T3848	1.50	T3847	1.70

STANDARD PURCHASED MATERIAL

X1	5/16" solderless union for oil suction pipe	2	X1	.20	X1	.20
X40A	1/8" headless brass pipe plug for oil pump	2	X40A	.04	X40A	.04
X267	1/16" x 1/2" Cotter pin for pump plunger pin	2	X267	.01	X267	.01
X413	5/16" lock washer for oil pump to cylinder	4			X413	.01
X414	3/8" lock washer for oil pump to cylinder	4	X414	.01		
X441	5/16" x 1" cap screw for oil pump to cylinder	4			X441	.04
X449	3/8" x 1" cap screw for oil pump to cylinder	4	X449	.04		
X681	1/4" x 5/8" round head rivet for cam shaft and gear	4	X681	.01		
X691	5/16" x 3/4" round head rivet for cam shaft and gear	4			X691	.02
X963	No. B Woodruff key for cam pinion	1	X963	.05	X963	.05
X1039	A10 tee for 1/4" tubing for oil pipe assembly	1	X1039	.35	X1039	.35

*PARTS NOT ILLUSTRATED.

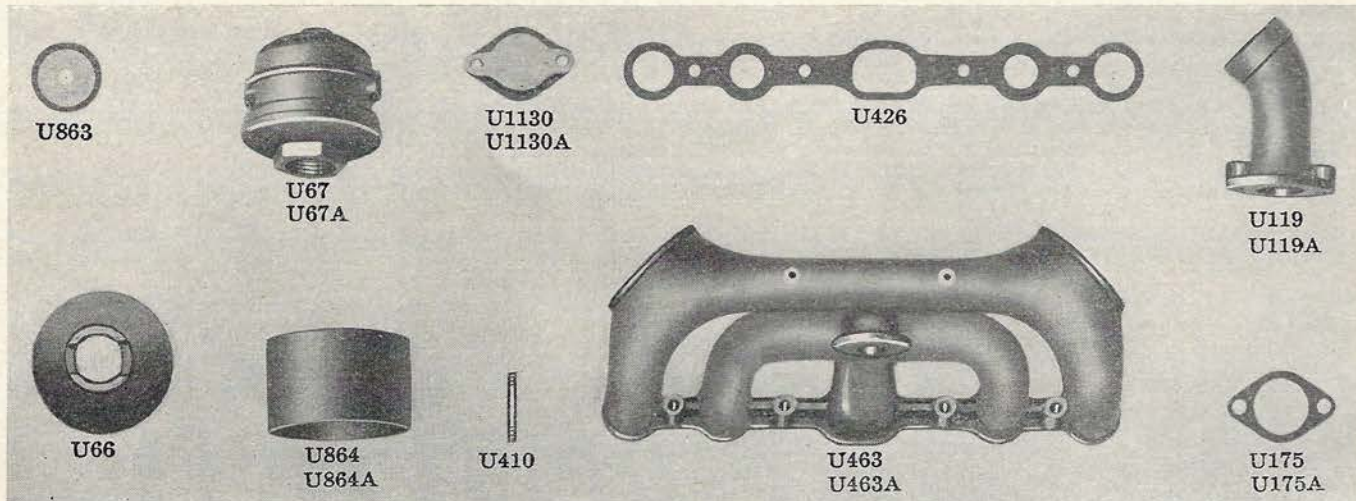
Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



TIMING GEARS, CAMSHAFT, CAMSHAFT BUSHING AND OIL PUMP PARTS—Continued

Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
X1040	A3 connector for 1/4" tubing and 1/8" pipe connection for oil pipe assembly	3	X1040	.16	X1040	.16
X1114	1/2" steel ball for suction and discharge for oil pump	2	X1114	.06	X1114	.06
	5/16" x 6 1/2" oil suction pipe	2		.08		.08

MANIFOLD, EXHAUST PIPE AND MUFFLER PARTS



U66	Muffler end	1	AF66	.20	AF66	.20
U67	Muffler body (used on RRU and YYU engine numbered after engine No. 16543)	1	RF67B	2.00	EF67	3.00
U67A	Muffler body (used only on RRU and YYU engines numbered previous to engine No. 16544) obsolete	1			AF67	2.50
*U67B	Muffler assembled with parts 66, 67, 863, 864 and X447 (used on RRU and YYU engines numbered after engine No. 16543)	1	T3149	4.00	T3147	5.00
*U67B	Muffler assembled with parts 66, 67, 863, 864 and X447 (used only on RRU and YYU engines numbered previous to engine No. 16544) obsolete	1			T3148	4.35
U119	Exhaust pipe elbow (used on RRU and YYU engines numbered after engine No. 16543)	1	FFU119	2.90	RRU119A	4.00
U119A	Exhaust pipe elbow (used only on RRU and YYU engine numbered previous to engine No. 16544) obsolete	1			RRU119	3.50
U175	Gasket for exhaust pipe flange and cover (used on RRU and YYU engines numbered after engine No. 16543)	2	FFU175	.10	EF175	.15
U175A	Gasket for exhaust pipe flange and cover, and also for parts No. U119A, U463A and U1130A—Obsolete	2			RRU486	.12
U410	Manifold stud, 4 used on FFU, HHU, and 6 used on RRU, YYU and JJU engines	1	UF410	.15	UF410	.15
U426	Manifold gasket	1	FFU426	.40	RRU426	.50
U463	Manifold (used on RRU and YYU engines numbered after engine No. 16543)	1	FFU463	14.00	RRU463A	19.00
U463A	Manifold (used only on RRU and YYU engine numbered previous to engine No. 16544) obsolete	1			RRU463	18.00
U863	Muffler nut	1	AF863A	.20	AF863A	.20
U864	Muffler outer casing (used on RRU and YYU engines numbered after engine No. 16543)	1	RF864	1.00	EF864	1.25
U864A	Muffler outer casing (used only on RRU and YYU engines numbered previous to engine No. 16544) obsolete	1			AF864	1.10
U1130	Cover for exhaust pipe flange (used on RRU and YYU engines numbered after engine No. 16543)	1	FFU1130	.60	RRU1130A	.85
U1130A	Cover for exhaust pipe flange (used only on RRU and YYU engines numbered previous to engine No. 16544) obsolete	1			RRU620	.75

STANDARD PURCHASED MATERIAL

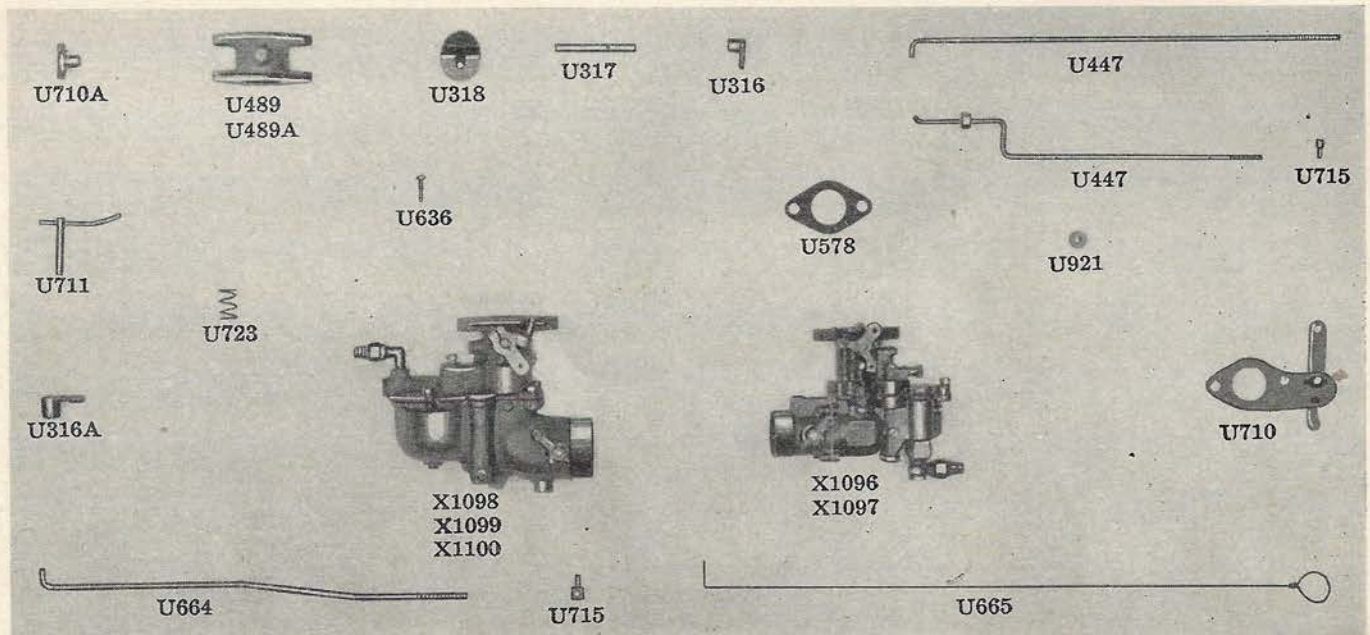
X168	1 1/2" x 8" exhaust pipe nipple	1	X168	.45		
X179	2" x 12" exhaust pipe nipple (used only on RRU and YYU engines numbered previous to engine number 16544) obsolete	1			X179	1.25
X180	2 1/2" x 12" exhaust pipe nipple (used on RRU and YYU engines numbered after engine No. 16543)	1			X180	1.45
X369	3/8" hex nut for manifold stud (4 used on FFU, HHU, and 6 used on RRU, YYU and JJU engines)	2	X369	.03	X369	.03
X449	3/8" x 1" hex head cap screw for exhaust pipe flange cover	2	X449	.04		
X450	3/8" x 1 1/4" hex head cap screw for exhaust pipe elbow	2	X450	.05		
X472	1/2" x 1" hex head cap screw for exhaust pipe flange cover	2			X472	.05
X473	1/2" x 1 1/4" hex head cap screw for exhaust pipe elbow	2			X473	.08
X477	1/2" x 2 1/4" hex head cap screw for muffler body and nut	1	X477	.10	X477	.10

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



CARBURETOR, CARBURETOR CONTROL, GOVERNOR ROD AND BUTTERFLY HOUSING PARTS



Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
U316	Butterfly valve shaft lever	1			RRU316	.25
U316A	Hand throttle lever	1			AF316A	.20
U317	Butterfly valve shaft	1			AF317B	.20
U318	Butterfly valve	1			RRU318	.35
U447	Governor rod for A drive	1	T3829	.45	RRU447A	.30
U447	Governor rod for B drive	1	T3828	.45	RRU447A	.30
U489	Butterfly valve housing	1			RRU489	3.50
U489A	Butterfly valve housing assembly, parts 316, 317, 318, 489, 636 and X521	1			T3785	4.75
U578	Gasket for carburetor	2	NF578	.05	AF578	.05
U636	Butterfly valve set screw	1			AF636	.20
U664	Throttle control rod	1			RRU664	.30
U665	Choker wire	1	FFU665	.15	RRU665	.17
U710	Hand throttle assembled	1	T3273	1.50		
U710A	Quadrant for hand throttle	1			LF710B	.50
U711	Hand throttle lever and shaft assembly	1			T3090	.50
U715	Pin for governor rod and throttle control rod, 1 used on FFU, HHU, and 2 used on RRU, YYU and JJU	1			RF715	.30
U723	Spring for hand throttle	1			LF723	.15
U921	Throttle lever stop	1				
X1096	Model 84T Zenith carburetor for FFU engine only	1	X1096	17.50		
X1097	Model 84T Zenith carburetor for HHU engine only	1	X1097	17.50		
X1098	Model 94 1/2 AX Zenith carburetor for RRU engine only	1			X1098	15.00
X1099	Model 94 1/2 AX Zenith carburetor for YYU engine only	1			X1099	15.00
X1100	Model 94 1/2 AX Zenith carburetor for JJU engine only	1			X1100	15.00
STANDARD PURCHASED MATERIAL						
X204	10-24" x 1/2" round head machine screw for quadrant	2			X204	.01
X267	1/16" x 1/2" cotter pin for U445, 664 and 715	3	X267	.01	X267	.01
X300	1/4" x 1/2" headless set screw for throttle lever stop	1	X300	.02		
X364	10-24" hex nut for quadrant	2			X364	.01
X400	3/16" plain washer for pin on governor rod	1	X400	.01	X400	.01
X433	5/16" x 3/4" hex head cap screw for carburetor to manifold	2	X433	.04		
X494	5/8" x 4" hex head cap screw for carburetor to manifold	2			X494	.10
X521	No. 00 x 5/8" taper pin for butterfly and hand throttle lever	2			X521	.02
X188	1/2" diameter Welch expansion plug for part U489	1			X188	.02

JET SETTING

FFU engine—Model 84T carburetor, venturi 18 main jet 18 compensating 18 idling jet 9 needle valve seat 44

HHU engine—Model 84T carburetor, venturi 19, main jet 19, compensating 19, idling jet 9, needle valve seat 44

RRU engine—model 94 1/2 AX carburetor, venturi 23, main jet 24, regular main jet 21, compensating 22, idling jet 11, needle valve seat 54, cap jet 23

YYU engine—model 94 1/2 AX carburetor, venturi 25, main jet 25, regular main jet 24, compensating jet 23, idling jet 11, needle valve seat 54, cap jet 23

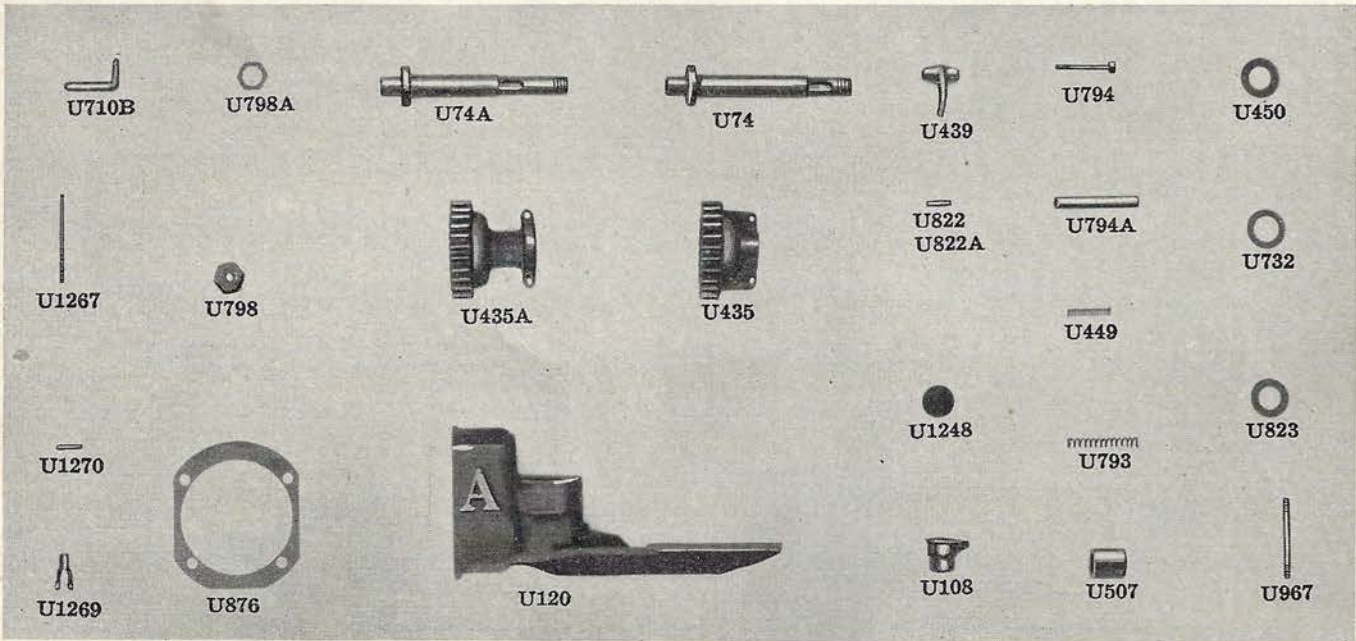
JJU engine—model 94 1/2 AX carburetor, venturi 26, main jet 26, regular main jet 25, compensating jet 25, idling jet 11, needle valve seat 54, cap jet 23

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



GOVERNOR PARTS



Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
	Governor assembled complete with parts UF120B, 74, 108, 435, 439, 450, 507 732, 793, 794, 798, 822 and 823, governor with enclosed governor springs and impulse coupling with fiber driving disc used on FFU and HHU engines numbered previous to engines No. 15973, A drive, and 16049, B drive—obsolete	1	117UF	19.00	.....	.....
	Governor assembled complete with parts UF120C, 74, 108, 435, 439, 450, 507, 732, 794, 798, 822 and 823, governor with outside governor springs and impulse coupling with fiber driving disc used on RRU, YYU, JJU engines numbered previous to engines No. 16096—obsolete	.....	.....	.....	117UFA	21.50
	Governor assembled complete with parts UF120D, 74, 108, 435, 439, 450, 507, 732, 794, 798, 822 and 823, governor with outside governor springs and impulse coupling without fiber driving disc used on RRU, YYU and JJU engines numbered after engine No. 16095	.....	.....	.....	117UFB	21.50
	Governor assembled complete with parts UF120E, 74, 108, 435, 439, 450, 507, 732, 793, 794, 798, 822 and 823, governor with enclosed governor springs and impulse coupling without fiber driving disc used on FFU and HHU engines numbered after engines No. 15972, A drive, and 16048, B drive	.....	117UFC	19.00	.....	.....
U74	Governor shaft with collar for governor with enclosed governor springs	1	T3237	3.25	.....	.....
U74A	Governor shaft with collar for governor with outside governor springs	1	.....	.....	T3674	4.00
U108	Breather tube	1	UF108B	.20	UF108B	.20
U120B	Magneto and governor bracket with part 507 for governor with enclosed governor springs and impulse coupling with fiber driving disc, used on FFU and HHU engines numbered previous to engine No. 15973, A drive, and 16049, B drive	1	UF120B	7.25	.....	.....
U120C	Magneto and governor bracket with parts 507 for governor with outside governor spring and impulse coupling with fiber driving disc, used on RRU, YYU and JJU engines numbered previous to engine No. 16096	1	.....	.....	UF120C	7.25
U120D	Magneto and governor bracket with part 507 for governor with outside governor spring and impulse coupling without fiber driving disc, used on RRU, YYU, JJU engines numbered after engine No. 16095	1	.....	.....	UF120D	7.25
U120E	Magneto and governor bracket with part 507 for governor with inclosed governor springs and impulse coupling without fiber driving disc used on FFU and HHU engines numbered after engine No. 15972, A drive, and 16049, B drive	1	UF120E	7.25	.....	.....
U435	Governor pinion	1	UF435	2.00	.....	.....
U435A	Governor pinion	1	.....	.....	RU435A	3.50
U439	Governor weight	2	RF439A	1.00	RF439A	1.00
U449	Governor spring	1	UF449	.10	UF449	.10
U450	Governor sleeve washer, 1/16" thick	1	RF450	.15	RF450	.15
U507	Governor shaft bushing	2	UF507A	.40	UF507A	.40
U710B	Bracket for governor spring adjusting screw	1	.....	.....	RU710	.35
U732	Fiber washer for governor shaft	2	RF732	.12	RF732	.12
U793	Spring for governor shaft plunger	1	UF793B	.10	.....	.....
U794	Governor plunger	1	UF794	.40	.....	.....
U794A	Governor plunger with steel ball	1	RU794B	.50

*PARTS NOT ILLUSTRATED.

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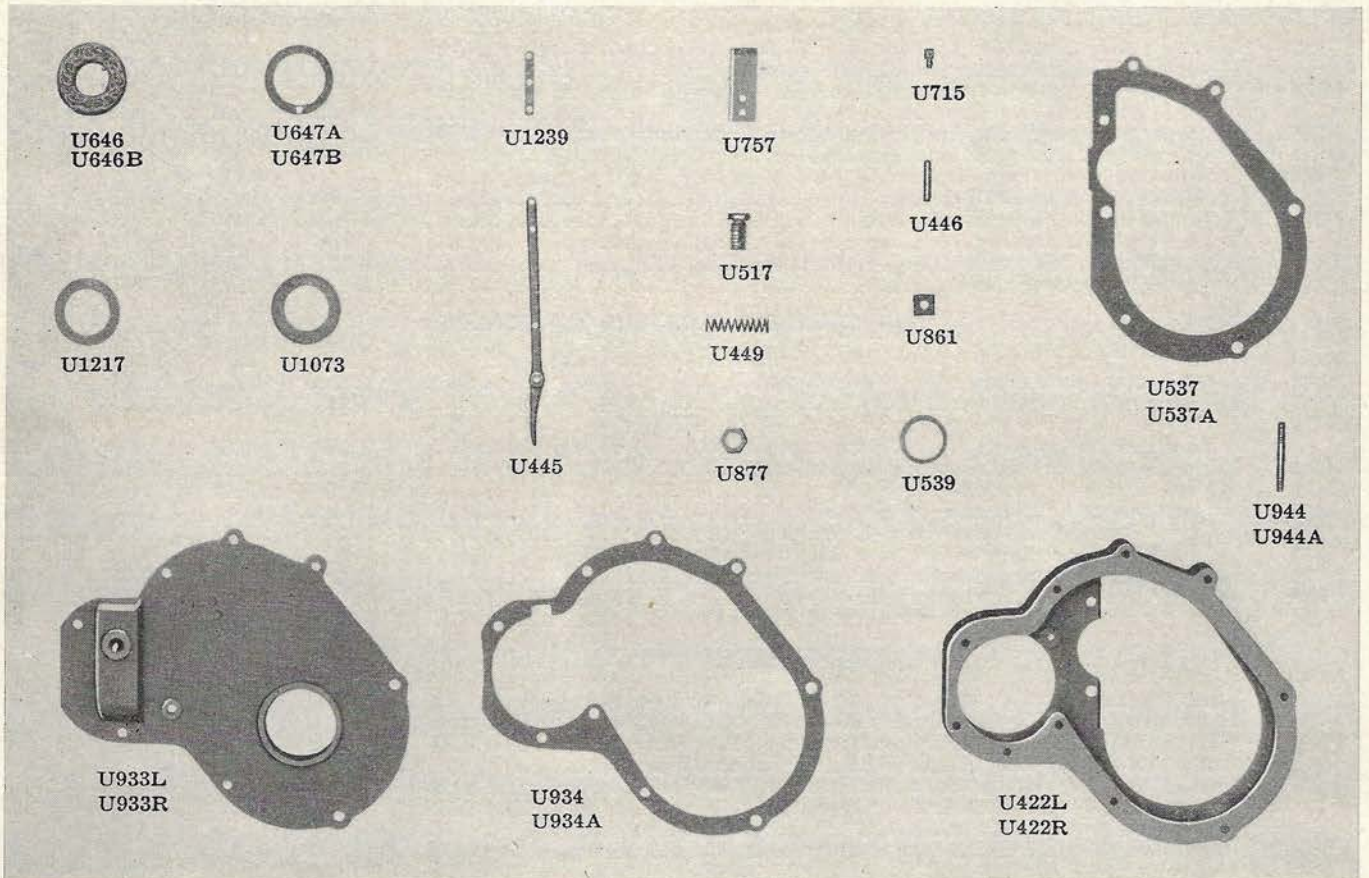
GOVERNOR PARTS—Continued

Part No.		No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
U798	Nut for governor shaft U74	1	RF798	.70		
U798A	Nut for governor shaft U74A	1			UF798	.40
U822	Pin for governor weight, 3/16" x 7/8"	2	RF822	.05		
U822A	Pin for governor weight, 3/16" x 1 1/32"	2			UF822	.10
U823	Lock washer for governor shaft nut	1	RF823	.10	RF823	.10
U876	Gasket for magneto and governor bracket	1	UF876	.05	UF876	.05
U967	Stud for magneto and governor bracket to cylinder	3	UF967	.15	UF967	.15
U1248	Felt for breather tube	1	UF1248	.05	UF1248	.05
U1267	Governor spring adjusting screw	1			RU1267	.10
U1269	Yoke for governor adjusting screw	1			RU1269	.75
U1270	Pin for governor adjusting screw yoke	1			RU1270	.10

STANDARD PURCHASED MATERIAL

X267	1/16" x 1/2" cotterpin for parts U822 and U1267	4			X267	.01
X364	10-24" hex nut for governor spring adjusting screw	3			X364	.01
X367	5/16" hex nut for magneto and governor bracket to cylinder	4	X367	.02	X367	.02
X412	1/4" lock washer for U710B	1			X412	.01
X428	1/4" x 1/2" hex head cap screw for U710B	1			X428	.03
X495	5/16" x 4 1/2" hex head cap screw for magneto and governor bracket to cylinder	1	X495	.15	X495	.15
X969	No. 6 Woodruff key for governor shaft and pinion	1	X969	.02	X969	.02

OIL THROWER, GEAR CASE, GOVERNOR LEVER, FELT WASHER AND RETAINER PARTS



U422L	Gear case for drive B (used on FFU and HHU engines numbered after engine No. 11797)	1	UF422LC	6.00	RU422LB	8.50
U422R	Gear case for drive A (used on FFU and HHU engines numbered after engine No. 11797)	1	UF422RC	6.00	RU422RB	8.50
*U422LA	Gear case for drive B, used on engines numbered previous to engine No. 11798—obsolete	1	UF422LB	5.75		
*U422RA	Gear case for drive A (used on engines numbered previous to engine No. 11798)—obsolete	1	UF422RB	5.75		
U445	Governor lever	1	RRU445	1.50	RRU445	1.50
U446	Governor lever pin	1	RF446	.20	RF446	.20

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



OIL THROWER, GEAR CASE, GOVERNOR LEVER, FELT WASHER AND RETAINER PARTS—Continued

Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
U449	Governor spring	1	UF449	.10	UF449	.10
U517	Governor spring adjusting screw	1	FFU517	.75	FFU517	.75
U537	Gear case gasket (used on FFU and HHU engines numbered after engine No. 11797)	1	UF537A	.08	RU537	.10
U537A	Gear case gasket (used on engines numbered previous to engine No. 11798)—obsolete	1	UF537	.05		
U539	Oil thrower	1	UF539A	.10	RU539A	.15
U646B	Felt washer for gear case cover (used on FFU and HHU engines numbered after engine No. 11755)	1	UF646A	.20	RU646	.20
U646	Felt washer for gear case cover (used on engines numbered previous to engine No. 11756)—obsolete	1	LF646B	.20		
U647B	Inner felt washer retainer (used on FFU and HHU engines numbered after engine No. 11755)	1	FFU647B	.20	RRU647	.25
U647A	Inner felt washer retainer (used on engines numbered previous to engine No. 11756)—obsolete	1	LF647B	.20		
U715	Throttle lever pin	1	RF715	.30	RF715	.30
U757	Cam shaft stop spring	1	UF757A	.15	UF757A	.15
U861	Felt washer for governor lever	1	RF861A	.15	RF861A	.15
U877	Lock nut for adjusting screw	1	RF877	.10	RF877	.10
U933L	Gear case cover assembled with spring U757 for drive B (used on FFU and HHU engines numbered after engine No. 11797)	1	UF933LD	4.25	RU933LC	5.00
U933R	Gear case cover assembled with spring U757 for drive A (used on FFU and HHU engines numbered after engine No. 11797)	1	UF933RD	4.25	RU933RC	5.00
*U933LA	Gear case cover assembled with spring U757 for drive B (used on engines numbered previous to engine No. 11798)—obsolete	1	UF933LC	4.25		
*U933RA	Gear case cover assembled with spring U757 for drive A (used on engines numbered previous to engine No. 11798)—obsolete	1	UF933RC	4.25		
U934	Gear case cover gasket (used on FFU and HHU engines numbered after engine No. 11797)	1	UF934A	.20	RU934	.25
U934A	Gear case cover gasket (used on engines numbered previous to engine No. 11798)—obsolete	1	UF934	.20		
U944	Stud for gear case to cylinder, 3 used $\frac{5}{16}$ " x $2\frac{1}{2}$ " on FFU, HHU, 6 used $\frac{7}{16}$ " x $2\frac{7}{8}$ " on RRU, YYU and JJU engines		UF944	.10	RU944	.20
U944A	$\frac{7}{16}$ " x $2\frac{1}{2}$ " stud for gear case to cover	2	UF944A	.15		
U1073	Outer felt washer retainer	1	UF1073	.20	RU1073	.25
U1217	Steel washer for felt washer	1	UF1217	.05	RU1217	.07
U1239	Extension for governor lever	1			RRU1239A	.30

STANDARD PURCHASED MATERIAL

X204	10-24" x $\frac{1}{2}$ " round head machine screw for extension for governor lever	2			X204	.01
X364	10-24" hex nut for extension for governor lever	2			X364	.01
X367	$\frac{3}{16}$ " hex nut for gear case cover stud	3	X367	.02		
X370	$\frac{1}{16}$ " hex nut for gear case cover stud, 2 used on FFU, HHU, and 6 used on RRU, YYU and JJU engine		X370	.03	X370	.03
X411	$\frac{3}{16}$ " lock washer for extension for governor lever	2			X411	.01
X413	$\frac{3}{16}$ " lock washer for gear case to cylinder	2	X413	.01		
X414	$\frac{3}{8}$ " lock washer for gear case to cylinder	2			X414	.01
X432	$\frac{5}{16}$ " x $\frac{3}{8}$ " hex head cap screw for gear case cover	3	X432	.04		
X433	$\frac{5}{16}$ " x $\frac{3}{4}$ " hex head cap screw for gear case to cylinder	2	X433	.04		
X433	$\frac{3}{16}$ " x $\frac{3}{4}$ " hex head cap screw for gear case cover	3			X433	.04
X470	$\frac{7}{16}$ " x $\frac{3}{4}$ " hex head cap screw for gear case to cylinder	2			X470	.04
X674	$\frac{3}{16}$ " x $\frac{3}{8}$ " round head rivet for cam shaft stop spring	2	X674	.01	X674	.01

IMPULSE COUPLING PARTS

When ordering impulse coupling or part, note following changes:

Impulse coupling with fiber driving disc used on the following engines numbered previous to engine No. 15973, drive A, 16049 drive B, for FFU, HHU and 16096, drive A and B, for RRU, YYU and JJU engines.

Impulse coupling without fiber driving disc used on the following engines numbered after engine No. 15972, drive A, 16048, drive B, for FFU, HHU, and 16095, drive A and B, for RRU, YYU and JJU engines.

Impulse coupling assembled complete with fiber disc and drive plate assembly, obsolete.

Impulse coupling assembled complete with drive plate (coupling not with fiber disc)

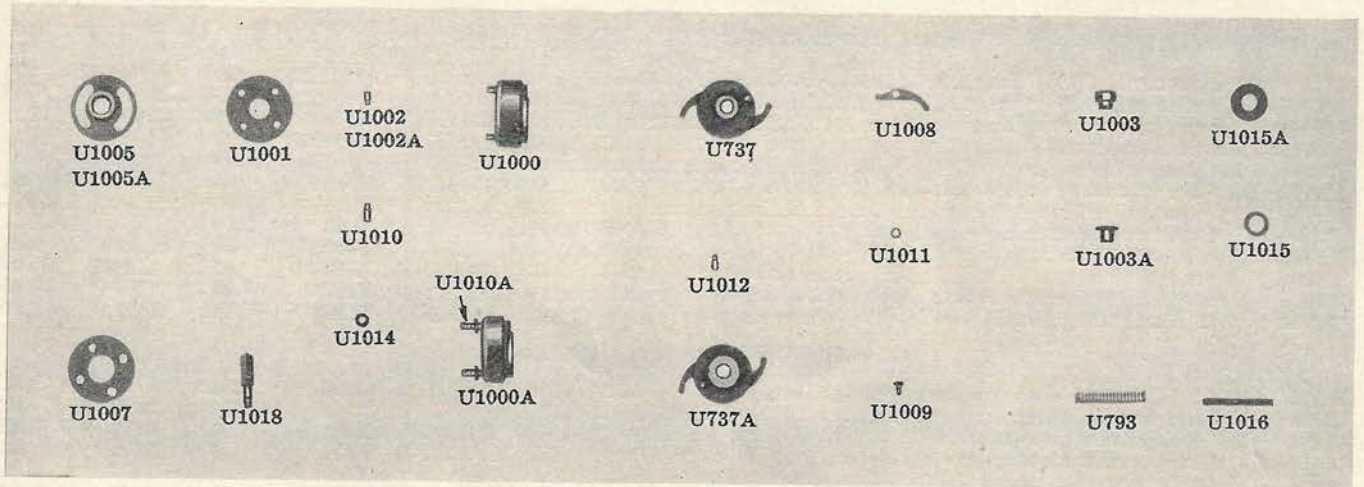
U737	Hub assembly for impulse coupling with fiber disc, with parts 737, 1008, 1009, 1011 and 1012—obsolete	1	113NSU	10.00	113NSU	10.00
U737A	Hub assembly for impulse coupling without fiber disc, with part 737, 1008, 1009, 1011 and 1012	1	113NSUA	7.75	113NSUA	7.75
U737B	Hub assembly for impulse coupling with fiber disc, with parts 737, 1008, 1009, 1011 and 1012—obsolete	1	UF737B	3.50	UF737B	3.50
U737C	Hub assembly for impulse coupling without fiber disc, with part 737, 1008, 1009, 1011 and 1012	1	UF737C	3.50	UF737C	3.50
U793	Spring for impulse coupling	2	RF793	.20	RF793	.20
U1000	Housing assembled for impulse coupling with fibre disc, with parts 1000, 1002, and 1006—obsolete	1	UF1000A	2.50	UF1000A	2.50
U1000A	Housing assembled for impulse coupling without fiber disc, with parts 1000 and 1010	1	UF1000B	1.95	UF1000B	1.95

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



IMPULSE COUPLING PARTS—Continued

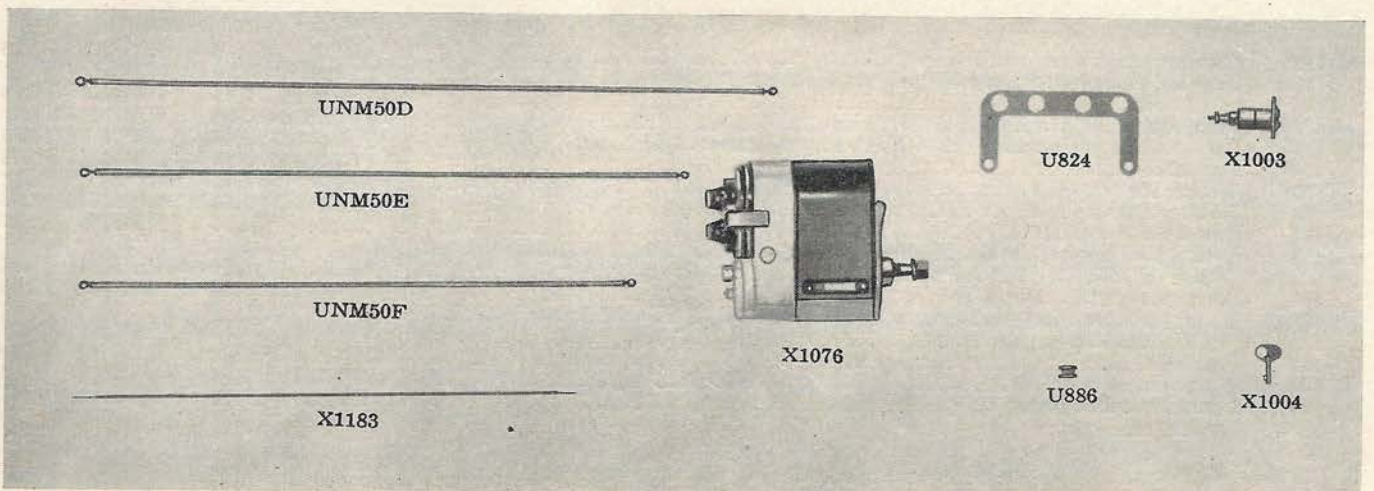


Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
*U1001	Drive plate with parts 1001, 1002, 1010, X387 and X413.—obsolete.....	1	T3318	1.25	T3318	1.25
*U1001A	Drive plate assembled with parts 1001, 1002, 1005, 1010 and 1014—obsolete..	1	T3304	1.85	T3304	1.85
U1002	Drive pin for part 1001A—obsolete.....	2	UF1002A	.02	UF1002A	.02
U1002A	Drive pin for part 1000—obsolete.....	2	UF1002B	.05	UF1002B	.05
U1003	Special nut for magneto shaft—obsolete.....	1	UF1003A	.10	UF1003A	.10
U1003A	Special nut for magneto shaft for impulse without fiber disc.....	1	UF1003B	.10	UF1003B	.10
U1005	Drive hub on governor shaft—obsolete.....	1	UF1005	.50	UF1005	.50
U1005A	Drive hub on governor shaft for part U1000A.....	1	UF1005A	.75	UF1005A	.75
U1007	Fiber disc—obsolete.....	1	UF1007	1.00	UF1007	1.00
U1008	Finger for hub.....	2	UF1008	.15	UF1008	.15
U1009	Pin for impulse coupling finger.....	2	UF1009	.10	UF1009	.10
U1010	Threaded pin for part 1001—obsolete.....	2	UF1010	.10	UF1010	.10
U1010A	Drive screw for 1000A.....	2	UF1010A	.15	UF1010A	.15
U1011	Washer for impulse coupling finger.....	2	UF1011	.01	UF1011	.01
U1012	Pin for part 737 and 793.....	1	UF1012	.05	UF1012	.05
U1014	Washer for drive plate 1001—obsolete.....	1	UF1014	.01	UF1014	.01
U1015	Washer for magneto shaft—obsolete.....	1	UF1015A	.03	UF1015A	.03
U1015A	Washer for magneto shaft.....	1	UF1015B	.04	UF1015B	.04
U1016	1/4" diameter, 1 1/2" long felt for spring 793.....	2	UF1016	.05	UF1016	.05
U1018	Stop for impulse coupling.....	1	UF1018	.40	UF1018	.40

STANDARD PURCHASED MATERIAL

X369	3/4" hex nut for stop part 1018.....	1	X369	.03	X369	.03
X387	5/16" S. A. E. nut for drive plate.....	2	X387	.02	X387	.02
X413	3/16" lock washer for drive plate.....	2	X413	.01	X413	.01
X414	3/8" lock washer for stop.....	1	X414	.01	X414	.01
X534	No. 3 x 1" taper pin for drive hub.....	1	X534	.03	X534	.03
X1114	1/2" steel ball for impulse coupling housing.....	3	X1114	.06	X1114	.06

SWITCH, MAGNETO AND CABLE SUPPORT PARTS



*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



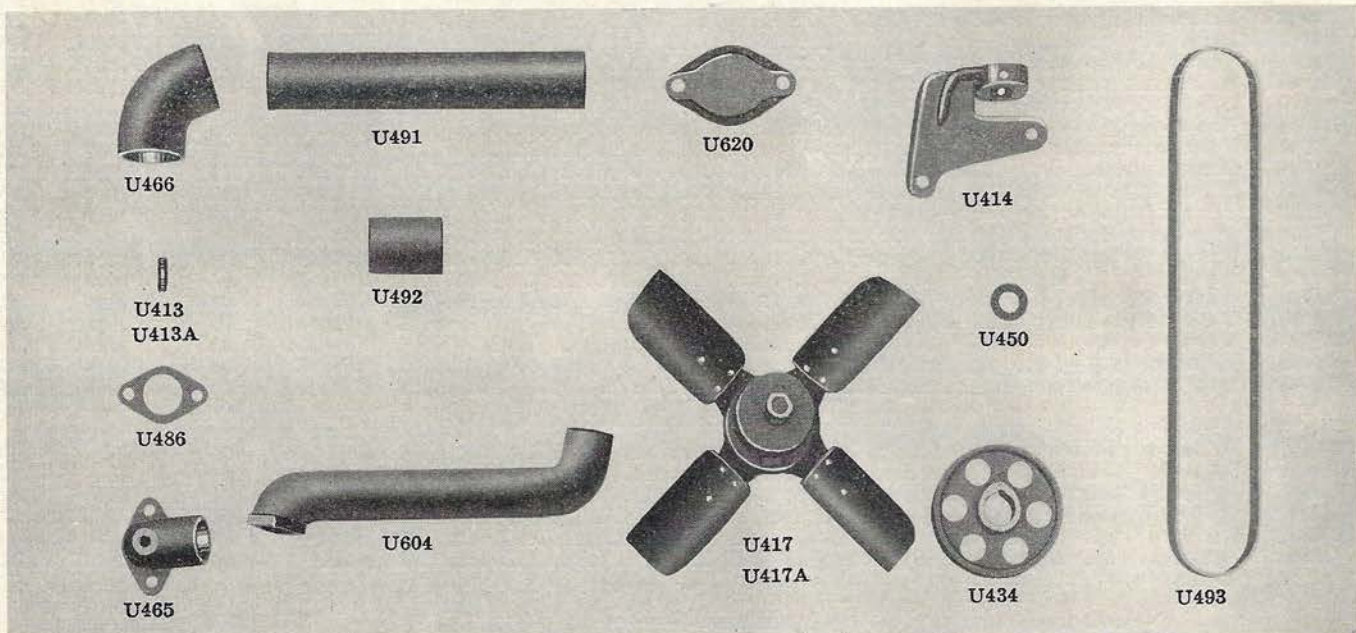
SWITCH, MAGNETO AND CABLE SUPPORT PARTS—Continued

Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
UNM50D	Magneto cable, 26 1/2" long.	1	FFNM50A	.35	FFNM50A	.35
UNM50D	Magneto cable, 29 1/2" long.	3			RRNM50	.35
UNM50E	Magneto cable, 23 1/2" long.	2	RNM50C	.30		
UNM50F	Magneto cable, 21 1/2" long.	1	FFNM50	.30		
U824	Magneto cable support.	1	FFU824	.25	T3950	1.00
U886	Rubber insulator for cable support.	4	RF886	.03	RF886	.03
*X995	Splitdorf switch key—obsolete.	1	X995	.60		
*X996	Splitdorf switch with key—obsolete.	1	X996	2.00		
X1003	Bosch switch with key.	1	X1003	1.50	X1003	1.50
X1004	Bosch switch key.	1	X1004	.45	X1004	.45
X1076	Model NS4 Splitdorf magneto, right hand rotation.	1	X1076	47.00	X1076	47.00
X1183	No. 16 x 31" long ground wire from switch to magneto.	1	X1183	.10	X1183	.10

STANDARD PURCHASED MATERIAL

X196	7/32" x 1/2" Round head machine screw for switch.	2	X196	.01	X196	.01
X349	5/32" hex nut for switch.	2	X349	.02	X349	.02
X411	3/16" lock washer for switch.	2	X411	.01	X411	.01
X414	3/8" lock washer for magneto cap screw.	2	X414	.01	X414	.01
X447	3/8" x 3/4" hex head cap screw for magneto to bracket.	2	X447	.04	X447	.04
X460	1/4" x 3/8" hex head cap screw for cable support to manifold.	2	X460	.03	X460	.03

WATER MANIFOLD, HOSE, FAN, FAN BELT AND FAN BRACKET PARTS



U413	Stud for water inlet manifold.	2	EF413	.15	RRU941	.15
U413A	Stud for water outlet manifold and cover for water jacket.	2	UF403	.20	RRU941	.15
U414	Fan bracket.	1	FFU414	2.50	RRU414	2.75
U417	Fan, used on engine 1200 R. P. M., crank shaft speed.	1	FFU417B	7.00	RRU417A	14.50
U417A	Fan, used on engine above 1200 R. P. M., crank shaft speed.	1	FFU417C	12.60	RRU417A	14.50
U434	Fan drive pulley.	1	FFU434A	3.50	RRU434	5.50
U450	Washer for fan shaft.	2	RF450	.15	RF450	.15
U465	Water inlet manifold.	1	FFU465	1.50	RRU465A	2.00
U466	Elbow for water outlet.	1			RRU466	1.00
U486	Gasket for inlet and outlet water manifold and cover plate for cylinder head, 2 used on FFU, HHU, 3 used on RRU, YYU and JJU engine.	2	AF578	.05	RRU486	.12
U491	Lower radiator hose—water inlet.	1	FFU491	.65	RRU491	1.40
U492	Upper radiator hose—water outlet, 1 used on FFU, HHU and 2 used on RRU, YYU and JJU engine.	1	FFU492	.20	RRU492	.25
U493	Fan Belt.	1	FFU493A	1.50	RRU493	2.50
U604	Water outlet manifold.	1	FFU604	2.75	RRU604C	2.90
U620	Cover for water jacket on cylinder head.	1			RRU620	.75

*PARTS NOT ILLUSTRATED.

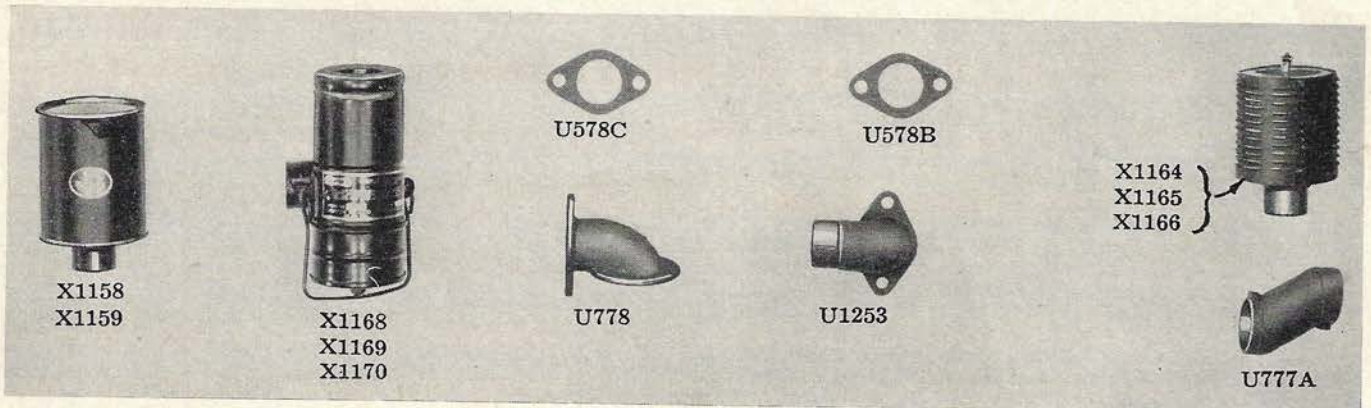
Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



WATER MANIFOLD, HOSE, FAN, FAN BELT AND FAN BRACKET PARTS—Continued

Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
STANDARD PURCHASED MATERIAL						
X369	3/8" hex nut for water inlet manifold stud.....	2	X369	.03		
X370	1/16" hex nut for water outlet manifold stud.....	2	X370	.03		
X371	1/2" hex nut for water inlet, outlet and cover for water jacket stud.....	6			X371	.04
X445	3/16" x 2 3/4" hex head cap screw for fan.....	1	X445	.08	X445	.08
X1024	1 3/4" hose clamp.....	4	X1024	.15		
X1029	2 1/2" hose clamp.....	6			X1029	.20
X42	3/8" pipe plug for water drain.....	1	X42	.04	X42	.04

AIR CLEANERS AND PARTS



U578B	Gasket for parts 778 and 1253 for Pomona air cleaner.....	2	AF578	.05	EF578A	.05
U578C	Gasket for part U1253 for Protectomotor air cleaner for JJU engine only.....	2			EF578A	.05
U777A	Offset connection for Protectomotor air cleaner.....	1	FFU777A	2.75		
U777B	Offset connection for Protectomotor air cleaner, RRU, YYU engine only.....	1			RRU777	3.00
U778	Hood for Pomona air cleaner.....	1			JJU777	3.50
U1253	Flange for Pomona air cleaner.....	1	RU778	2.00	EF778A	3.00
U1253	Flange for Protectomotor air cleaner for JJU engine only.....	1	SU1253	1.75	RRU1253	2.50
U1254	Gasket for Pomona air cleaner.....	1			RRU1253	2.50
X1158	AC air cleaner with split sleeve 1 3/8" inside diameter.....	1	X1158	2.00	EF1254	.10
X1159	AC air cleaner.....	1				
X1164	C-1 Protectomotor less bracket.....	1	X1164	8.00	X1159	2.25
X1165	C-2 Protectomotor less bracket for RRU and YYU engines only.....	1			X1165	9.50
X1166	C-4 Protectomotor less bracket, for JJU engine only.....	1			X1166	13.00
X1168	No. 270 Pomona air cleaner.....	1	X1168	10.50		
X1169	No. 141 Pomona air cleaner, for RRU and YYU engine only.....	1			X1169	15.00
X1170	No. 750 Pomona air cleaner, for JJU engine only.....	1			X1170	18.75

STANDARD PURCHASED MATERIAL

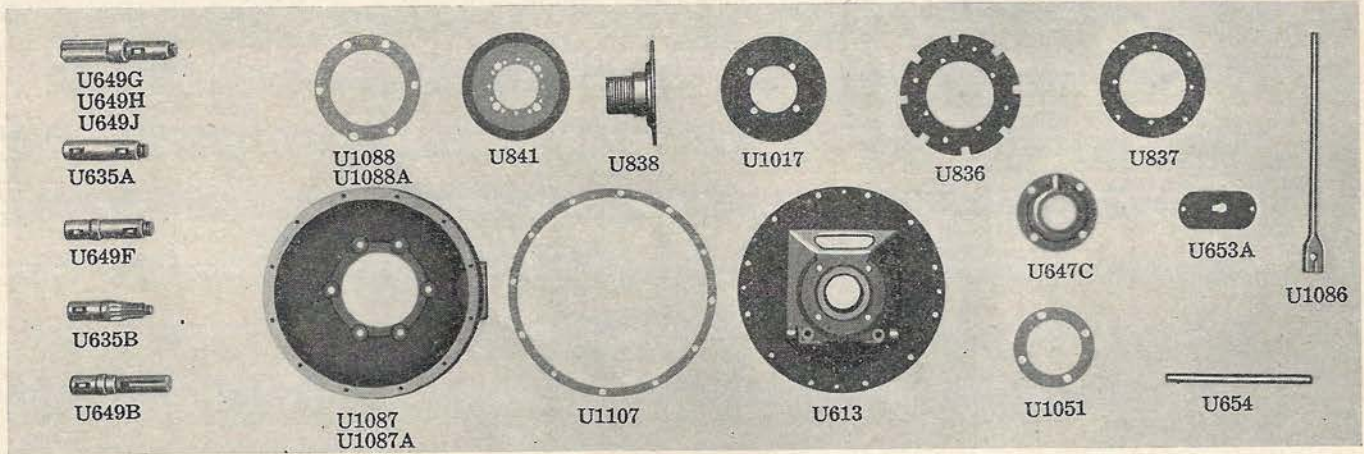
X301	1/4" x 1/2" set screw for Protectomotor air cleaner.....	1	X301	.02	X301	.02
X369	3/8" hex nut for parts RU777 and SU1253.....	2	X369	.03		
X370	1/16" hex nut for parts RU777 and SU1253.....	2			X370	.03
X370	1/16" hex nut for Protectomotor for JJU engine.....	2			X370	.03
X414	3/8" lock washer for parts U777 and U1253.....	2	X414	.01		
X414	3/8" lock washer for Pomona air cleaner.....	3			X414	.01
X415	1/16" lock washer for parts U777 and U1253.....	2			X415	.02
X415	1/16" lock washer for parts U778 and U1253.....	2			X415	.02
X433	3/16" x 3/4" hex head cap screw for Pomona air cleaner.....	3	X433	.04		
X447	3/8" x 3/4" hex head cap screw for Pomona air cleaner.....	3			X447	.04
X449	3/8" x 1" hex head cap screw for parts RU778 and SU1253.....	2	X449	.04		
X485	1/16" x 1 1/4" hex head cap screw for parts EF778A and RRU1253.....	2			X485	.04
X485	1/16" x 1 1/4" hex head cap screw for parts JJU777 and RRU1253.....	2			X485	.04
X1025	2" hose clamp for parts JJU777 and RRU1253 and AC air cleaner.....	2			X1025	.15
X1025	2" hose clamp for parts EF778A and RRU1253.....	2			X1025	.15
X1026	1 1/2" hose clamp for parts RU778 and SU1253.....	2	X1026	.10		
X1027	1 1/4" hose clamp for AC air cleaner.....	2	X1027	.10		

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



CLUTCH PARTS



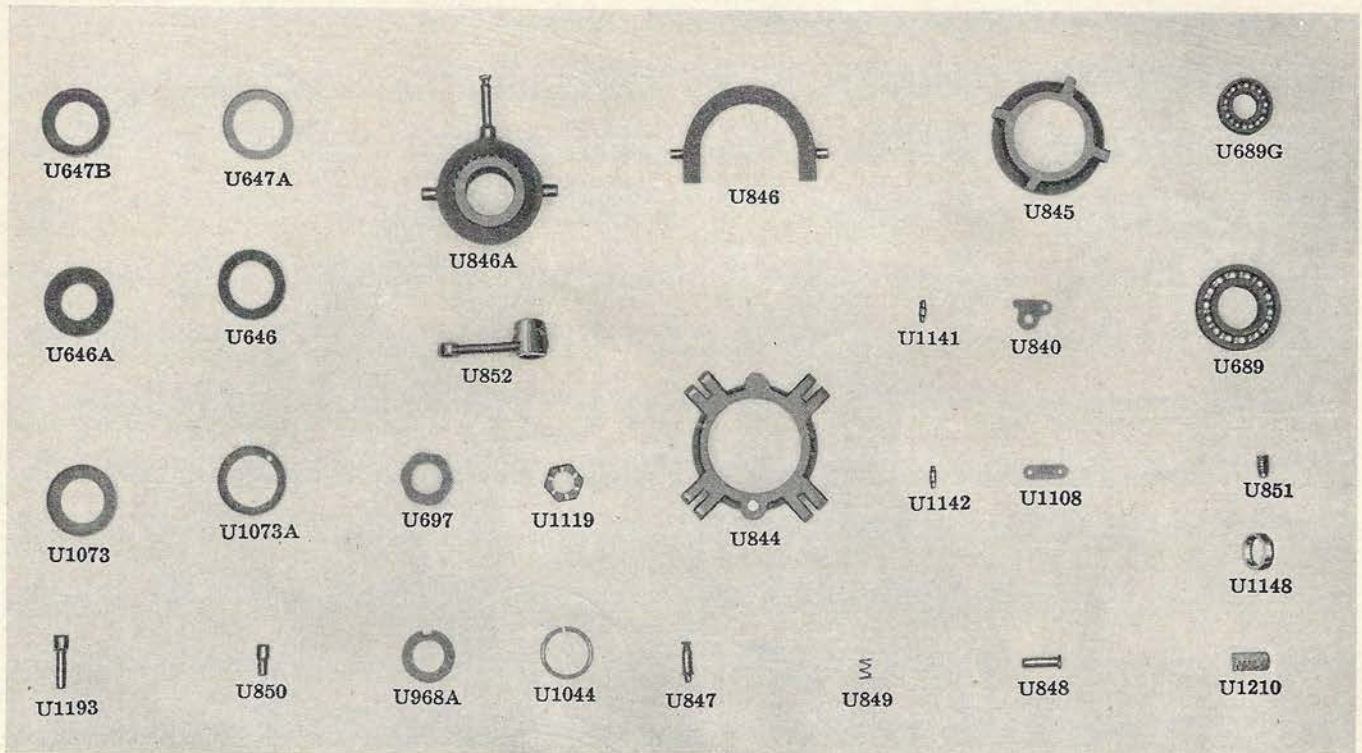
Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
U613	Outboard bearing	1	FFU613	14.50	RRU613	20.00
U635A	Clutch shaft for 2 to 1 left hand and 3 to 1 reduction, right hand rotation	1	FFU635	8.00		
U635B	Clutch shaft for 4 to 1 reduction, right and left hand rotation, for gear U632F	1	FFU635B	11.00		
U635B	Clutch shaft for 4 to 1 reduction, right and left hand rotation, for gear U632L—obsolete	1	FFU635A	11.00		
U646	Felt washer for part U647C	1	LF646B	.20	RRU646A	.25
U646A	Felt washer for part U613	1	FFU646	.20	RRU646	.25
U647A	Inner felt washer retainer for part U647C	1	LF647B	.20	RRU647	.25
U647B	Inner felt washer retainer for part U613	1	FFU647B	.20	RRU647	.25
U647C	Cover and felt washer retainer for outboard bearing U613	1	FFU647	3.00	RRU647A	8.00
U649B	Drive shaft—crank shaft drive	1	FFU649B	7.00	RRU649	16.00
U649F	Clutch shaft for 2 to 1 reduction, right hand rotation	1	FFU649F	8.25		
U649G	Clutch shaft for 3 to 1 and 4 to 1 reduction, right hand rotation	1			RRU649A	17.00
U649H	Clutch shaft for 2 to 1 reduction, right hand rotation	1			RRU649E	16.50
U649J	Clutch shaft for 2 to 1 reduction, left hand rotation	1			RRU649F	18.00
U653A	Cover for outboard bearing	1	T3458	1.00	T3458	1.00
U654	Clutch shifter shaft	1	FFU654	.45	FFU654	.45
*U654A	Clutch shifter shaft assembled with parts U654, U852 and X559	1	T3541	3.60	T3541	3.60
U689	ND 1208 ball bearing for drive or clutch shaft	1	RF689A	5.40		
U689	ND 309 ball bearing for drive or clutch shaft	1			RRU689A	8.50
U689G	ND 7205 ball bearing for clutch hub	1	AF689	3.00		
U689G	ND 7305 ball bearing for clutch hub	1			RRU689B	4.10
U697	Nut for clutch shaft and power take off shaft for 2 to 1 and 3 to 1 reduction	1	RU697	.65		
U836	Steel clutch disc with blocks, 1 used on FFU, HHU, and 2 used on RRU, YYU and JJU engine	1	T3973	2.50	T3973	2.50
U836A	Steel clutch disc assembled with U836, U837 and X709, 1 used on FFU, HHU and 2 used on RRU, YYU and JJU engine	1	105FFUA	5.50	105FFUA	5.50
U837	Facing for clutch, 2 used on FFU, HHU, and 4 used on RRU, YYU and JJU engine	1				
U838	Clutch hub with drive pin U850	1	FFU837	1.25	FFU837	1.25
U840	Clutch finger	4	FFU838	11.50	RRU838	15.00
U841	Clutch pressure plate	1	FFU840	.40	FFU840	.40
U844	Adjusting ring	1	FFU841	4.50	FFU841	4.50
U845	Sleeve for clutch	1	FFU844B	4.00	FFU844B	4.00
U846	Brass clutch shifter yoke	1	FFU845	4.00	FFU845	4.00
U847	Lock pin for adjusting ring	1	FFU846A	2.00	FFU846A	2.00
U848	Clutch finger pin	4	FFU847A	.35	FFU847A	.35
U849	Spring for lock pin	1	RF848	.20	RF848	.20
U850	Driver for pressure plate	4	RF849	.08	RF849	.08
U851	Special set screw for clutch hub	1	FFU850	.25	RRU850	.25
U852	Yoke lever	1	FFU851	.25		
U968A	Lockwasher for nut U697	1	FFU852	1.35	FFU852	1.35
U1017	Center steel clutch disc	1	RU968	.10		
U1044	Thrust ring	1			RRU1017	3.50
U1051	Gasket for outboard bearing cover	1			RRU1044	.15
U1073	Outer felt washer retainer for part U647C	1	FFU1051	.05	RRU1051	.07
U1073A	Outer felt washer retainer for part U613	1	UF1073	.20	RRU1073	.25
U1086	Clutch shifter lever	1	FFU1073	.20	RRU1073	.25
U1087	Bell housing (used on engines numbered previous to engine No. 11798)—obsolete	1	T3527	3.00	T3527	3.00
U1087A	Bell housing (used on FFU and HHU engines numbered after engine No. 11797)	1	FFU1087	13.75		
			FFU1087A	13.75	RRU1087	22.00

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



CLUTCH PARTS—Continued



Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
U1088	Gasket for bell housing to cylinder (used on engines numbered previous to engine No. 11798)	1	FFU1088	.10		
U1088A	Gasket for bell housing to cylinder (used on FFU and HHU engines numbered after engine No. 11797)	1	FFU1088A	.10		
U1107	Gasket for outboard bearing to bell housing	1	FFU1107	.10		
U1108	Link for clutch finger	8	FFU1108	.10	FFU1108	.10
U1119	Nut for clutch and power take off shaft for 4 to 1 reduction, right and left hand rotation	1	FFU1119	.45		
U1141	Pin for clutch finger link—short	4	FFU1141	.10	FFU1141	.10
U1142	Pin for clutch finger link—long	4	FFU1142	.10	FFU1142	.10
U1148	Spacer for clutch shaft	1			RRU1148	1.30
U1193	Pin for clutch driver	8	FFU1193	.15	RRU1193	.20
U1210	3/4" diameter, 1 5/8" long oil wick	1	SU1210	.10		

STANDARD PURCHASED MATERIAL

X41	1/4" pipe plug for part U613	2	X41	.04	X41	.04
X262	3/32" x 3/4" cotter pin for part U848	4	X262	.01	X262	.01
X372	5/8" U. S. hex nut for part U647C to U613	4			X372	.04
X410	7/8" lock washer for part U1119	1	X410	.04		
X414	3/8" lock washer for part U613	12	X414	.01	X414	.01
X415	7/16" lock washer for part U1087 and U1087A to cylinder, 6 used on FFU, HHU, and 8 used on RRU, YYU and JJU engine		X415	.02	X415	.02
X416	1/2" lock washer for U647 to U613	4	X416	.02		
X417	5/8" lock washer for U647 to U613	4			X417	.01
X460	1/4" x 3/8" hex head cap screw for part U653A	2	X460	.03	X460	.03
X449	3/4" x 1" hex head cap screw for part U613	12	X449	.04	X449	.04
X484	7/16" x 1" hex head cap screw for part U1087 and U1087A to cylinder, 6 used on FFU, HHU, and 8 used on RRU, YYU and JJU engine		X484	.04	X484	.04
X471A	1/2" x 3/8" hex head cap screw for part U647C to U613	4	X471A	.05		
X473	1/2" x 1 1/4" hex head cap screw for part U1086	1	X473	.08	X473	.08
X490	5/8" x 2" hex head cap screw for part U647C to U613	4			X490	.10
X559	1 9/64" x 1 1/2" drive pin for parts U654 and 852	2	X559	.06	X559	.06
X966	No. G Woodruff key	1			X966	.08
X967	No. E Woodruff key	1	X967	.05		
X1131	1/2" S. S. Dot straight oil nipple for U647C	1			X1131	.25
X1133	No. S-400W straight oil cup for U647C and U653A	1	X1133	.20		
X709	3/64" x 1/2" tubular rivet for part U836 and U837, 8 used on FFU, HHU, 16 used on RRU, YYU and JJU engine		X709	.01	X709	.01

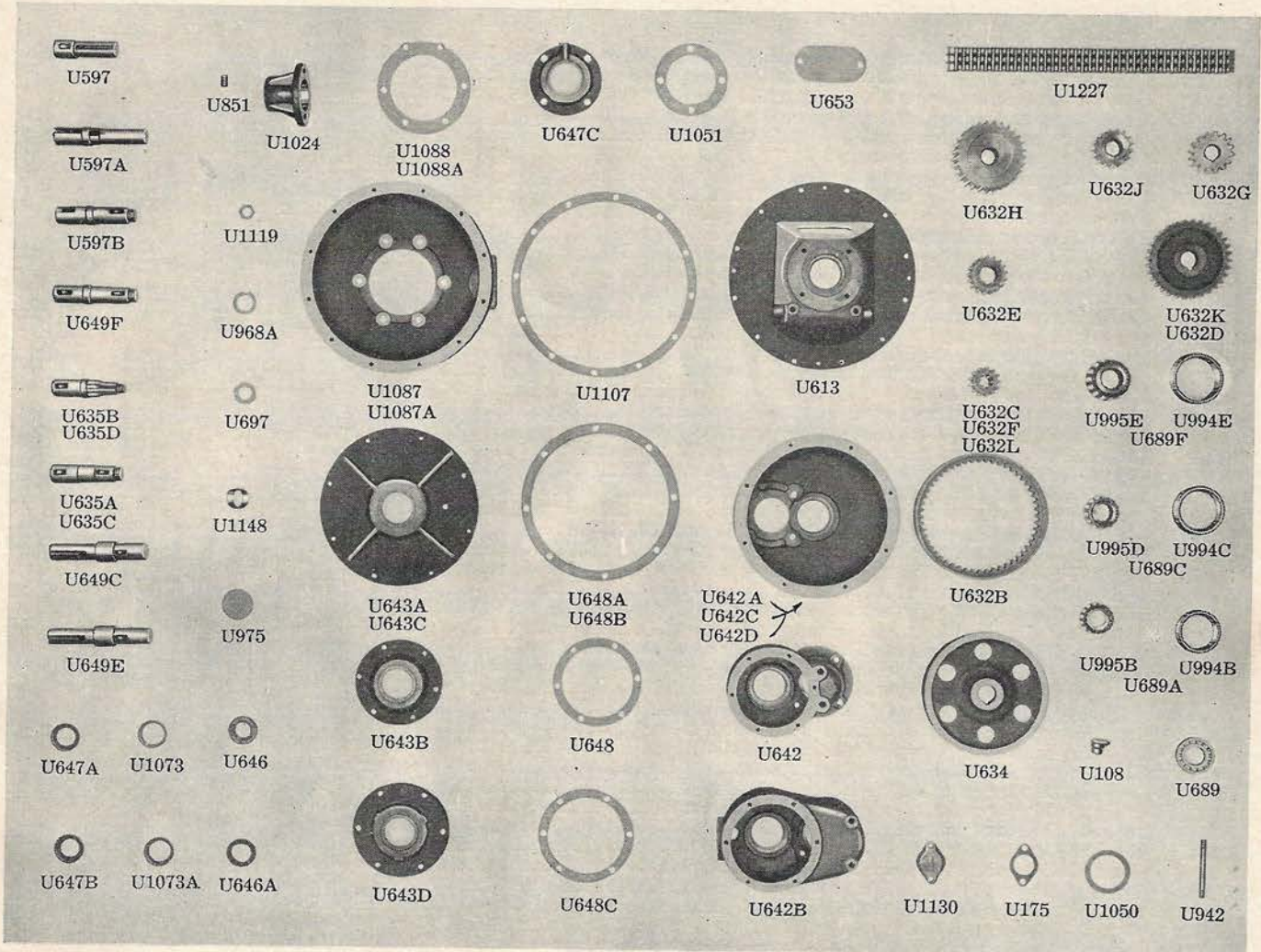
*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



CRANK SHAFT DRIVE AND REDUCTION GEAR PARTS

When ordering reduction gear housing state whether "A" or "B" drive



Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YJU, JJU Symbol	Price
U108	Oiler for gear reduction housing	1	UF108B	.20		
U175	Gasket for hand hole cover U1130	1	FFU175	.10		
U597	Extension shaft for crank shaft drive, less clutch and bell housing	1	FFU597	5.00	RRU597	7.00
U597A	Extension shaft for crank shaft drive, less clutch with bell housing	1	FFU597A	8.25	RRU597A	10.00
U597B	Power take off shaft for 2 to 1 reduction, left hand, less clutch	1	FFU597B	9.50		
U613	Outboard bearing	1	FFU613	14.50	RRU613	20.00
U632B	52T internal ring gear for 3 to 1 and 4 to 1 reduction, right hand rotation	1	FFU632B	21.00		
U632C	14T power gear for 4 to 1 reduction, left hand rotation	1	FFU632C	5.75		
U632D	56T power gear for 4 to 1 reduction, left hand rotation	1	FFU632D	14.75		
U632E	17T power gear for 3 to 1 reduction, right hand rotation	1	FFU632E	6.00		
U632F	13T power gear for 4 to 1 reduction, right hand rotation, 1" bore, see U632L	1	FFU632F	5.50		
U632G	16T power gear for 2 to 1 reduction, left hand rotation	1	RU632	5.00		
U632H	29T power sprocket for 2 to 1 reduction, right hand rotation	1	RU632H	13.50		
U632J	15T power sprocket for 2 to 1 reduction, right hand rotation	1	FFU632J	5.00		
U632K	32T power gear for 2 to 1 reduction, left hand rotation	1	RU632B	9.25		
U632L	13T power gear for 4 to 1 reduction, right hand rotation, 1 1/16" bore—see U632F	1	FFU632A	5.50		
U634	Spider for internal ring gear	1	FFU634	7.00		
U635A	Clutch shaft for 2 to 1 left hand, and 3 to 1 reduction, right hand rotation	1	FFU635	8.00		
U635B	Clutch shaft for 4 to 1 reduction, right and left hand rotation, for gear U632P	1	FFU635B	11.00		
U635C	Power take off shaft for 2 to 1 left hand and 3 to 1 reduction, right hand rotation, less clutch	1	FFU635A	11.00		
U635D	Power take off shaft for 4 to 1 reduction, right and left hand rotation, less clutch, for gear U632F	1	FFU635C	8.00		
U635D	Power take off shaft for 4 to 1 reduction, right and left hand rotation, less clutch, for gear U632L	1	FFU635D	12.00		
U635E	Power take off shaft for 4 to 1 reduction, right and left hand rotation, less clutch, for gear U632L	1	FFU635E	12.00		

*PARTS NOT ILLUSTRATED.

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CRANK SHAFT DRIVE AND REDUCTION GEAR PARTS—Continued

Part No.		No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
U642	Gear reduction housing for 2 to 1 reduction, left hand rotation	1	FFU642	14.50		
U642A	Gear reduction housing for 4 to 1 reduction, right hand rotation	1	FFU642A	16.00		
U642B	Gear reduction housing for 2 to 1 reduction, right hand rotation	1	FFU642E	15.75		
U642C	Gear reduction housing for 4 to 1 reduction, left hand rotation	1	FFU642C	16.50		
U642D	Gear reduction housing for 3 to 1 reduction, right hand rotation	1	FFU642D	16.00		
U643A	Cover for gear reduction housing U642A and U642D	1	FFU643A	10.00		
U643B	Cover for gear reduction housing U642	1	FFU643B	5.25		
U643C	Cover for gear reduction housing U642C	1	FFU643C	8.50		
U643D	Cover for gear reduction housing U642B	1	FFU643D	6.00		
U646	Felt washer for reduction gear housing cover and part U647C	1	LF646B	.20	AF646	.25
U646A	Felt washer for outboard bearing U613	1	FFU646	.20	RRU646	.25
U647A	Inner felt washer retainer for reduction gear housing cover and part U647C	1	LF647B	.20	RU647	.20
U647B	Inner felt washer retainer for outboard bearing U613	1	FFU647B	.20	RRU647	.25
U647C	Cover and felt washer retainer for outboard bearing U613	1	FFU647	3.00	RRU647A	8.00
U648	Gasket for gear reduction housing cover U643B	1	FFU648	.03		
U648A	Gasket for gear reduction housing cover U643A	1	FFU648A	.10		
U648B	Gasket for gear reduction housing cover U643C	1	FFU648B	.07		
U648C	Gasket for gear reduction housing cover U643D	1	FFU648C	.05		
U648C	Gasket for gear reduction housing cover U643D	1	FFU649	7.00		
U649C	Drive shaft for 2 to 1 and 4 to 1 reduction, right and left hand rotation	1	FFU649E	8.00		
U649E	Drive shaft for 3 to 1 reduction, right hand rotation	1	FFU649E	8.00		
U649F	Clutch shaft for 2 to 1 reduction, right hand rotation	1	FFU649F	8.25		
U649G	Clutch shaft for 3 to 1 and 4 to 1 reduction, right hand rotation	1			RRU649A	17.00
U649H	Clutch shaft for 2 to 1 reduction, right hand rotation	1			RRU649E	16.50
U649J	Clutch shaft for 2 to 1 reduction, left hand rotation	1			RRU649F	18.00
U653	Cover for outboard bearing	1	FFU653	.60	FFU653	.60
U689	No. ND 1208 ball bearing for clutch and drive shaft	1	RF689A	5.40		
U689	No. ND 309 ball bearing for clutch and drive shaft	1			RRU689A	8.50
U689A	No. 337-333 small Timken roller bearing for drive shaft, 3 to 1 reduction, right hand rotation	1	SU689A	5.69		
U689C	No. 418-414 small Timken roller bearing for drive shaft for 2 to 1 and 4 to 1 reduction, right and left hand rotation	1	UF689C	7.48		
U689F	No. 536-532A large Timken roller bearing for drive shaft for all reductions	1	RU689A	12.03		
U697	Nut for clutch shaft and power take off shaft for 2 to 1 and 3 to 1 reduction	1	RU697	.65		
U851	Set screw for driving flange	1	FFU851	.25	FFU851	.25
U942	1/2" x 5 1/8" Stud for gear reduction housing U642B	2	FFU942	.30		
U968A	Lock washer for nut U697	1	RU968	.10		
U975	2 3/4" Expansion plug for gear reduction housing	1	UF975	.15		
U994B	No. 333 Cup for roller bearing	1	UF994	2.11		
U994C	No. 414 Cup for roller bearing	1	UF994B	2.60		
U994E	No. 532 Cup for roller bearing	1	RU994B	5.04		
U995B	No. 337 Cone and rollers	1	SU995B	3.58		
U995D	No. 418 Cone and rollers	1	UF995B	4.88		
U995E	No. 536 Cone and rollers	1	RU995B	6.99		
U1024	Driving flange	1	FFU1024A	5.00	RRU1024	7.25
U1050	Bearing retainer for 2 to 1 reduction, right hand	1	FFU1050	.30		
U1051	Gasket for outboard bearing cover U647C	1	FFU1051	.05	RRU1051	.07
U1073	Outer felt washer retainer for reduction gear housing cover and part U647C	1	UF1073	.20	RU1073	.25
U1073A	Outer felt washer retainer for outboard bearing U613	1	FFU1073	.20	RRU1073	.25
U1087	Bell housing (Used on engines numbered previous to engine No. 11798) obsolete	1	FFU1087	13.75		
U1087A	Bell housing (used on FFU and HHU engines numbered after engine No. 11797)	1	FFU1087A	13.75	RRU1087	22.00
U1088	Gasket for bell housing to cylinder (used on engines numbered previous to engine No. 11798)—Obsolete	1	FFU1088	.10		
U1088A	Gasket for bell housing to cylinder (used on engines numbered after engine No. 11797)	1	FFU1088A	.10		
U1107	Gasket for outboard bearing to bell housing	1	FFU1107	.10		
U1119	Nut for clutch and power take off shaft for 4 to 1 reduction, right and left hand rotation	1	FFU1119	.45		
U1130	Hand hole cover for gear reduction housing U642B	1	FFU1130	.35		
U1148	Spacer for clutch and power take off shaft, 3 to 1 right hand, and 2 to 1 left hand reduction	1	FFU1148	.75		
U1148	Spacer for clutch and power take off shaft, 4 to 1 reduction, right and left hand rotation	1	FFU1148A	.50		
U1148	Spacer for drive shaft for 3 to 1 reduction	1	FFU1148B	.60		
U1148	Spacer for clutch and power take off shaft, 2 to 1 reduction, right hand rotation	1	FFU1148D	.90		
U1227	No. 149 triple diamond chain, 38 links, 5/8" pitch, 400 roller diameter	1	FFU1227	11.00		

STANDARD PURCHASED MATERIAL

X41	1/4" pipe plug for part U642 and U613	2	X41	.04	X41	.04
X42	3/8" pipe plug for gear reduction housing	3	X42	.04		
X45	1" pipe plug for gear reduction housing	1	X45	.10		
X270A	1/8" x 1 1/4" cotter pin for nut U1119	1	X270A	.10		
X371	1/2" U. S. Hex. nut for stud U942	2	X371	.04		
X372	5/8" U. S. Hex. nut for part U647C to outboard bearing	4			X372	.04

*PARTS NOT ILLUSTRATED.

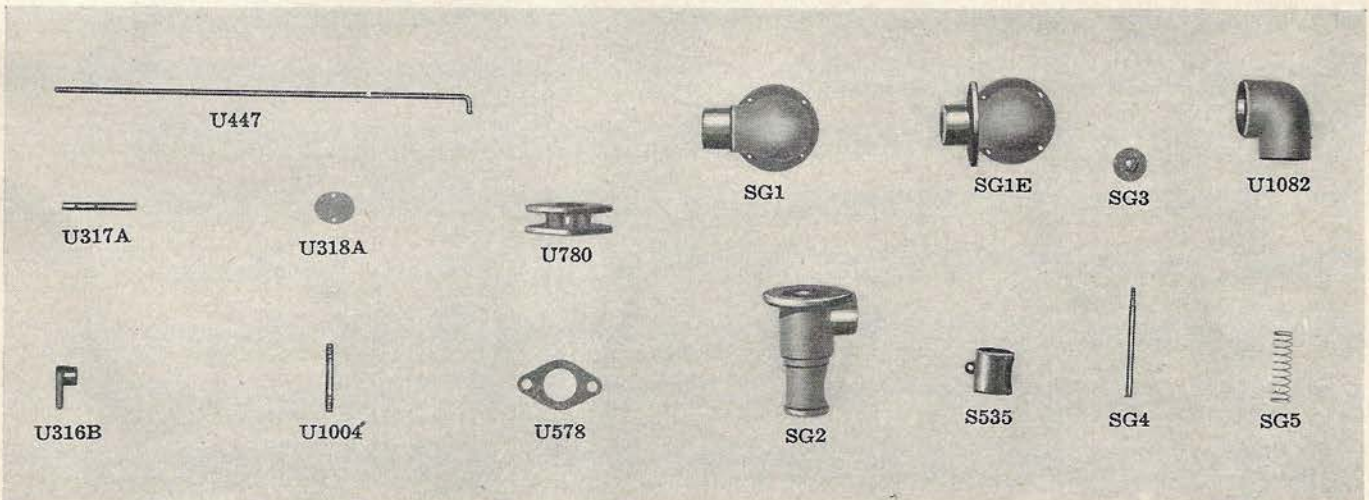
Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



CRANK SHAFT DRIVE AND REDUCTION GEAR PARTS—Continued

Part No.	NAME OF PART	No. Used	FFU, HHU Symbol	Price	RRU, YYU, JJU Symbol	Price
X410	7/8" lock washer for part U1119.	1	X410	.04		
X413	3/16" lock washer for part U634 and U632B.	12	X413	.01		
X414	3/8" lock washer for part U643B, U643D and U1130.	6	X414	.01		
X414	3/8" lock washer for part U643A and U643C.	8	X414	.01		
X414	3/2" lock washer for part U613.	12	X414	.01	X414	.01
X415	7/16" lock washer for part U1024 to flywheel.	4	X415	.02		
X415	7/16" lock washer for part U1087 and U1087A to cylinder, 6 used on FFU, HHU, and 8 used on RRU, YYU and JJU engines.		X415	.02	X415	.02
X416	1/2" lock washer for reduction gear housing to U613.	4	X416	.02		
X416	1/2" lock washer for part U1024 to flywheel.	4			X416	.02
X416	1/2" lock washer for part U647C to outboard bearing.	4	X416	.02		
X417	5/8" lock washer for part U647C to outboard bearing.	4			X417	.01
X433	5/16" x 3/4" hex. head cap screw for part U634 and U632B.	12	X433	.04		
X447	3/8" x 3/4" hex. head cap screw for part U643B, U643D and U1130.	6	X447	.04		
X447	3/8" x 3/4" hex. head cap screw for part U643A and U643C.	8	X447	.04		
X449	3/8" x 1" hex. head cap screw for part U613.	12	X449	.04	X449	.04
X460	1/4" x 3/4" hex. head cap screw for U653.	2	X460	.03	X460	.03
X484	7/16" x 1" hex. head cap screw for part U1087 and 1087A to cylinder, 6 used on FFU, HHU, and 8 used on RRU, YYU and JJU engines.		X484	.04	X484	.04
X485	7/16" x 1 1/4" hex. head cap screw for part U1024 to flywheel.	4	X485	.04		
X471A	1/2" x 3/4" hex. head cap screw for part U647C to outboard bearing.	4	X471A	.05		
X473	1/2" x 1 1/4" hex. head cap screw for reduction gear housing to U613.	4	X473	.08		
X473	1/2" x 1 1/4" hex. head cap screw for part U1024 to flywheel.	4			X473	.08
X490	5/8" x 2" hex. head cap screw for part U647C to outboard bearing.	4			X490	.10
X966	No. G Woodruff key.	1			X966	.08
X967	No. E Woodruff key.	2	X967	.05		
X1131	1/8" SS Dot straight nipple for U647C.	1			X1131	.25
X1133	No. S-400W straight oil cup for U647C.	1	X1133	.20		

GAS AND COMBINATION GAS MIXER PARTS



SG1	Gas mixer cover	1			9SG1	5.50
SG1E	Gas mixer cover	1	2SG1E	4.00		
SG2	Gas mixer body	1	2SG2C	4.50	9SG2A	7.00
SG3	Gas mixer valve with gasket	1	2SG3B	.35	9SG3	.65
SG4	Gas mixer valve stem	1	2SG4A	.25	9SG4	.35
SG5	Gas mixer valve spring	1	2SG5A	.10	9SG5	.10
U316B	Butterfly valve shaft lever	1	UF316	.35	RRU316	.25
U317A	Butterfly valve shaft	1	UF317	.20	AF317B	.20
U318A	Butterfly valve	1	UF318	.30	RRU318	.35
U447	Governor rod for A drive	1	T3829	.45	RRU447A	.30
U447	Governor rod for B drive	1	T3828	.45	RRU447A	.30
S535	Throttle spring	1	3S535	.35	6S535	.50
U578	Gasket for butterfly valve housing	2	NF578	.05	AF578	.05
U780	Butterfly valve housing	1	UF780	3.00	RRU489	3.50
U1004	Stud for housing to manifold	2	UF1004	.20		
U1082	Elbow for air cleaner	1	UF1082B	3.75	RRU1253A	3.75
*UF739	Bysee gas mixer, 1" S. A. E. flange for FFU and HHU only	1	Price on application			

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs

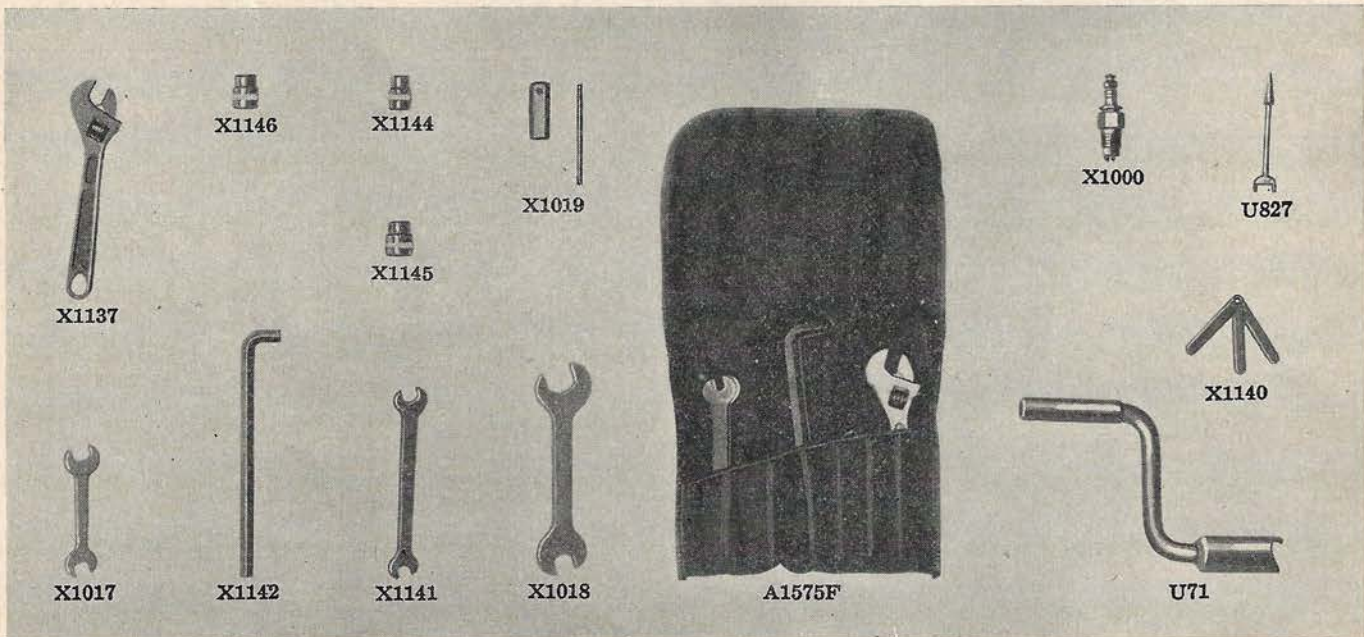


GAS AND COMBINATION GAS MIXER PARTS—Continued

STANDARD PURCHASED MATERIAL

Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
X34	3/8" index cock	1	X34	3.00		
X35	1 1/4" index cock	1			X35	6.00
X92	1/2" street ell	1	X92	.18		
X130	3/4" close nipple	1	X130	.14		
X142	1 1/4" close nipple	1			X142	.25
X181	1/2" close nipple	1	X181	.08		
X204	10-24 x 1/2" round head machine screw for gas mixer body	4	X204	.01		
X206	10-24 x 3/4" round head machine screw for gas mixer body	4			X206	.02
X206	10-24 x 3/4" round head machine screw for gas mixer to engine housing	1	X206	.02		
X301	1/4" x 1/2" set screw	2	X301	.02	X301	.02
X364	10-24 hex head nut for gas mixer valve stem	1	X364	.01		
X365	1/4" hex nut for gas mixer valve stem	1			X365	.02
X370	7/16" hex nut	2			X370	.03
X411	3/16" lock washer for gas mixer body	4	X411	.01		
X411	1/4" lock washer for gas mixer body	4			X412	.01
X415	7/16" lock washer	2			X415	.02
X484	7/16" x 1" hex head cap screw	2			X484	.04
X521	No. 00 x 5/8" taper pin for butterfly valve lever	1	X521	.02	X521	.02
X983	1/2" Lukenheimer vertical ball check	1	X983	3.00		
X1025	2" hose clamp	2			X1025	.15

STARTING CRANK AND TOOLS



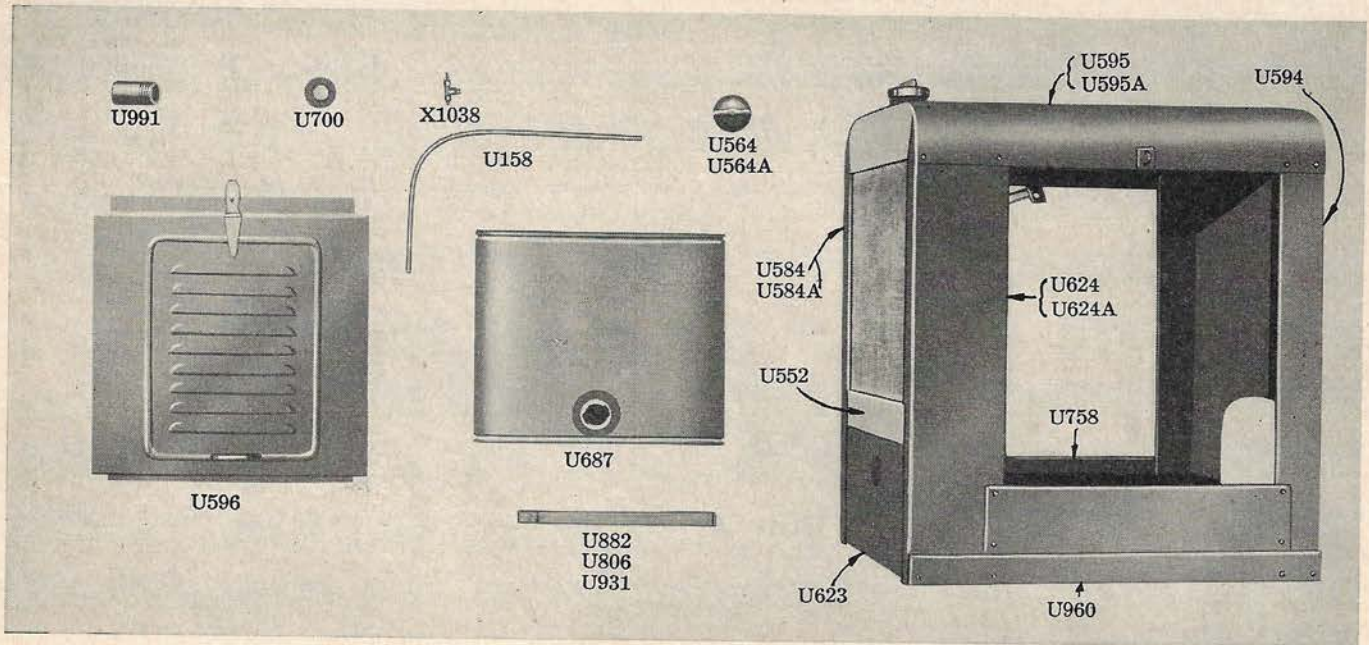
U71	Starting crank	1	T3244	2.00	T3695	2.50
U827	Valve grinding tool	1	AF827	.25	AF827	.25
*A1575	Tool kit container	1	A1575	.45	A1575	.45
A1575F	Tool kit complete with parts U827, X1017, X1137, X1140, X1141, X1142, X1144, X1145 and X1146	1	T3498	4.15	T3498	4.15
X1000	Spark plug	4	X1000	.75	X1000	.75
X1017	No. 25 wrench	1	X1017	.30	X1017	.30
X1018	No. 277 double end wrench	1	X1018	.25		
X1019	Spark plug wrench with handle UF 1280	1	UF1279	.35	RRU1279	.45
X1137	8" adjustable wrench	1	X1137	1.00	X1137	1.00
X1140	Set of feeler gauges, .010, .012 and .022	1	X1140	.30	X1140	.30
X1141	Valve tappet wrenches	2	X1141	.45	X1141	.45
X1142	Socket wrench handle 9" long, 3/4" inside bend	1	X1142	.25	X1142	.25
X1144	3/16" socket head	1	X1144	.20	X1144	.20
X1145	1 1/16" socket head	1	X1145	.20	X1145	.20
X1146	2 5/32" socket head	1	X1146	.20	X1146	.20

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



RADIATOR, FUEL TANK AND HOUSING PARTS



Part No.	NAME OF PART	No. Used	FFU, HHU		RRU, YYU, JJU	
			Symbol	Price	Symbol	Price
U158	Fuel feed pipe 29" long for FFU, HHU, and 26" long for RRU, YYU and JJU.	1	FFU158	.45	RRU158	.40
U552	Radiator for FFU and HHU only.	1	FFU552	38.00		
	RRU and YYU only.	1			RRU552	52.50
	JJU only.	1			JJU552	60.00
U564	Radiator cap, 2 5/8" threads, for Perflex radiator.	1	UF564	1.20		
U564A	Radiator cap, 2 5/16" threads, for Modine radiator.	1			UF564A	.60
U584	Radiator support, left hand or carburetor side, drive B.	1	FFU584	1.80	RRU584	2.50
U584A	Radiator support, left hand or plain side, drive A.	1	FFU584A	1.80	RRU584	2.50
*U591	Angle for housing.	1	RU591B	.20	RRU591	.60
*U592	Handle for housing door.	2	AF592A	.10	AF592A	.10
U594	Rear sheet for housing.	1	FFU594	4.50	RRU594	7.00
U595	Top sheet, drive B.	1	FFU595	4.00	RRU595B	5.95
U595A	Top sheet, drive A.	1	FFU595A	4.00	RRU595C	5.95
U596	Housing door.	2	AF596V	5.75	AF596V	5.75
U623	Front sheet.	1	FFU623	.95	RRU623	1.10
U624	Radiator support, right hand or plain side, drive B.	1	FFU624	1.80	RRU624	2.50
U624A	Radiator support, right hand or carburetor side, drive A.	1	FFU624A	1.80	RRU624	2.50
U687	Fuel Tank.	1	FFU687	12.75	RRU687	16.75
U700	Cap for fuel tank.	1	UF700	.25	UF700	.25
U758	Panel for housing door.	2	FFU758	.60	RRU758	1.20
U806	Fuel tank strap—short, with fabric pad.	2			AF806G	.60
U882	Fuel tank strap—with fabric pad.	4	FFU882	.60		
U931	Fuel tank strap—long with fabric pad.	2			AF931	.65
U960	Bar for housing and panel.	2	FFU960	1.00	RRU960	1.15
U991	Pipe nipple for radiator.	1	FFU991	.40		

STANDARD PURCHASED MATERIAL

X46	1 1/2" pipe plug for radiator.	1	X46	.10		
X48	2" pipe plug for radiator.	1			X48	.20
X365	1/4" hex nut for radiator to housing, 22 used on FFU, HHU, and 28 used on RRU, YYU and JJU engines.	2	X365	.02	X365	.02
X367	5/16" hex nut for fuel tank strap.	2	X367	.02	X367	.02
X412	1/4" lock washer for radiator to housing, 24 used on FFU, HHU, and 28 used on RRU, YYU and JJU engine.		X412	.01	X412	.01
X428	1/4" x 1 1/2" hex head cap screw for radiator to housing, 22 used on FFU, HHU, and 28 used on RRU, YYU and JJU engine.		X428	.03	X428	.03
X430	1/4" x 5/8" hex head cap screw for radiator to housing, 2 used on FFU, HHU, 4 used on RRU, YYU and JJU engine.		X430	.03	X430	.03
X439	5/16" x 2" hex head cap screw for fuel tank straps.	2	X439	.08		
X445	5/16" x 2 3/4" hex head cap screw for fuel tank straps.	2			X445	.08
X903	3/16" x 1/4" Round head rivet.	16			X903	.01
X904	3/16" x 3/8" round head rivet, 16 used on FFU, HHU, and 2 used on RRU, YYU and JJU.		X904	.01	X904	.01

*PARTS NOT ILLUSTRATED.

Always Give Model and Serial Number of Engine and Outfit When Ordering Repairs



RADIATOR, FUEL TANK AND HOUSING PARTS—Continued

Part No.	NAME OF PART	FFU, HHU		RRU, YYU, JJU	
		No. Used	Symbol	Symbol	Price
X907	$\frac{3}{16}$ " x $\frac{1}{2}$ " Round head rivet, 6 used on FFU, HHU, and 4 used on RRU, YYU and JJU		X907		.01
X670	$\frac{5}{32}$ " x $\frac{1}{2}$ " split rivet for fuel tank strap	4	X670	X670	.01
X1022	$\frac{3}{8}$ " hinge hasp and staple	2	X1022	X1022	.25
X1038	Straight valve for fuel tank No. NV82	1	X1036	X1036	.90
	Pad for fuel tank, $\frac{1}{8}$ " x 1" x 11" long	4			.08
	Pad for fuel tank, $\frac{1}{8}$ " x 1" x 32" long	1			.22
	Pad for fuel tank, $\frac{1}{8}$ " x 1" x 48" long	1			.32

What Novo Manufactures

Rollr Engines: Rollr Bearing Engines.

One Cylinder, Four Cycle, Hopper or Radiator Cooled, 1½ H. P. to 4 H. P.

Two Cylinder, Four Cycle, Hopper or Radiator Cooled, 6 H. P. to 10 H. P.
and Radiator Cooled only, 12 H. P.

Four Cylinder, Four Cycle, Radiator Cooled, 14 H. P. to 35 H. P.

Data Sheet No. 146

F Engines, Four Cylinder, Four Cycle, Valve in Head.

Models EF-40 H. P., XF-50 H. P.

Data Sheet No. 126

Novo Flud Oild High Pressure Pumps.

Models: EU, Single Cylinder Double Acting.

EW, Two Cylinder, Double Acting.

NT, Triplex, Single Acting.

Drives: Gasoline Engine, Electric Motor, or Belt. *Data Sheet No. 140*

High Pressure, Type U, Single Cylinder, Double Acting Pumping Outfits.

Data Sheet No. 97

Open Top Diaphragm Pumping Outfits—Single and Double Pumps.

Data Sheet No. 141

Closed Top Force Diaphragm Pumping Outfits, Single and Double Pumps.

Data Sheet No. 141

Direct Connected Centrifugal Pumping Outfits.

Data Sheet No. 117

Sand Dredge Pumps.

Data Sheet No. 129

Type TN Reversible Hoist Single Drum with Two Speed Sheave.

Data Sheet No. 112

Type NH Hoists, Single and Double Drum, for Loads up to 1600 Pounds.

Data Sheet No. 121

Type LH Hoist, Single and Double Drum, for Loads Up to One and Three Quarter Tons.

Data Sheet No. 127

Type DH Hoist, Single, Double and Triple Drum, for Loads Up to Two and a Half Tons with Regular Gearing.

Data Sheet No. 106

Type WH Hoist, Single, Double and Triple Drum, for Loads Up to Three Tons with Regular Gearing.

Data Sheet No. 155

Type M Hoist, a Single Drum, Mining Hoist, for Loads Up to Two Tons.

Data Sheet No. 144

Combination Hoist, Engine and Compressor (Two-in-One) Outfits. Four Sizes.

Data Sheet No. 101

Log Skidder and Loader Outfits, Double Drum, Two Speed, Portable Gasoline Log Skidder and Loader.

Data Sheet No. 103

Drag Line Hoists, for Gravel Pit and Other Excavation Work.

Data Sheet No. 119

Combination Engine and Compressor Outfits.

Data Sheet No. 148

Flud Lite Combination Engine and Generator Lighting Outfits.

Data Sheets No. 152-153

Oilfield Type Flud Lite Outfits.

Data Sheet No. 151

