

Roadranger®

Eaton®Fuller® Heavy Duty Transmissions

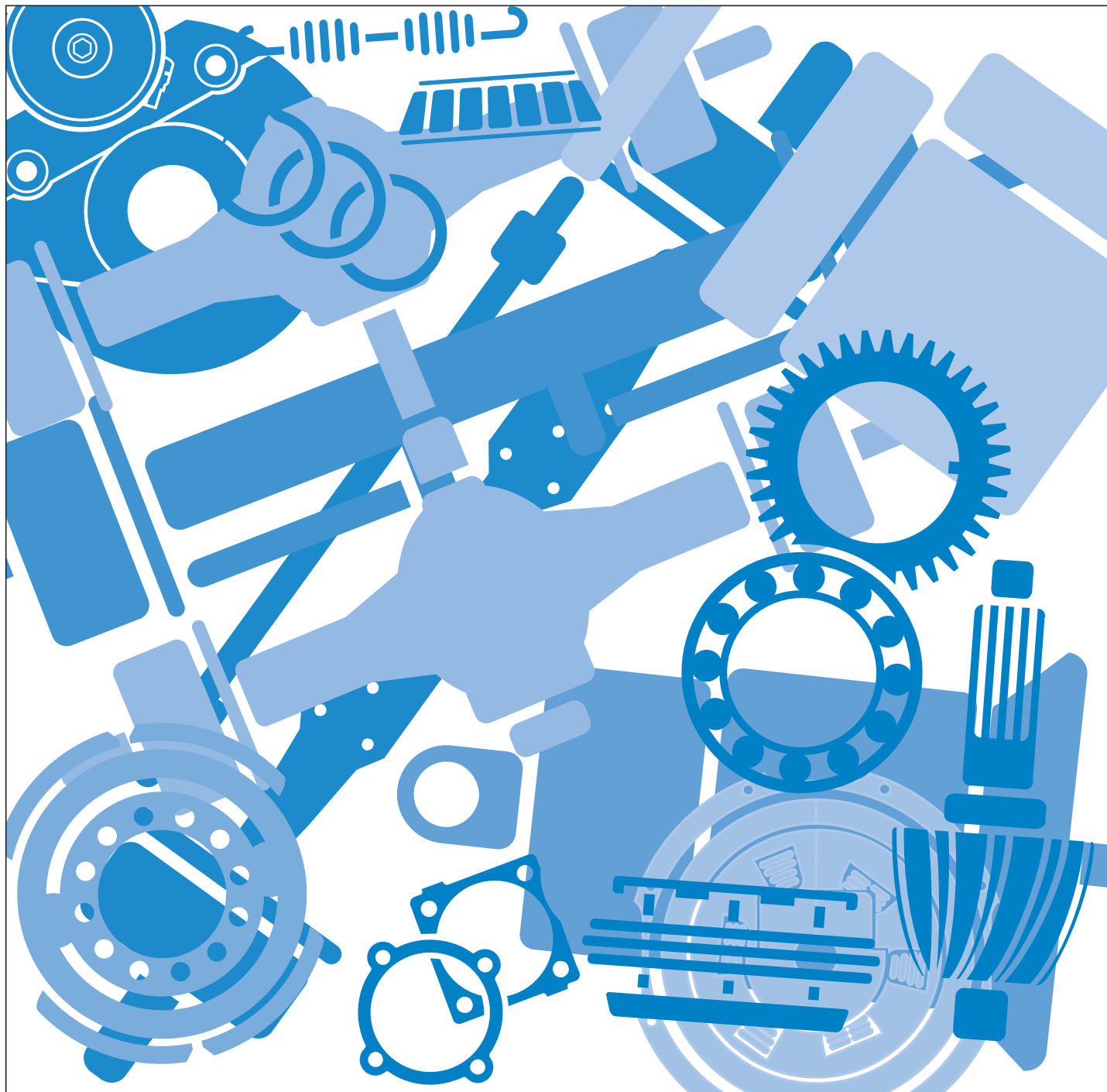
RT-613 Series



EAT•N

One Great Drivetrain from Two Great Companies

Illustrated Parts List TRIP-0605 December 1984



For the most current information, visit the Roadranger web site at www.roadranger.com

‘‘We’re there when you need us’’

This booklet is designed to identify all parts in the RT-613 Series Transmissions and to recommend an initial parts stocking quantity. The suggested quantities are based on an inventory sufficient for maintaining 25 RT-613 Series Transmissions.

Service Kits and Assemblies available for the RT-613 Series

Page	Sym.	Part #	Description	Stock Qty.
35	∞	K-1712	Adapter plate kit	—
17	b	A-219	Adjusting arm assembly	1
35	G	K-1003	Brake kit TCB-6	—
35	H	K-1004	Brake kit TCB-8	—
17	P	S-1321	Case assembly	1
29	r	S-1405	Case assembly intermediate	1
17	—	A-3711	Clutch housing assembly #2	1
17	—	S-1085	Clutch housing assembly #1	1
27	s	A-4145	Cover assembly cylinder w/valve	1
27	d	A-4131	Cover kit range	1
23	z	K-1938	Cover kit - rear bearing mechanical only	1
33	h	S-1428	Cover kit rear bearing mechanical & electronic	1
27	λ	K-1434	Cylinder kit intermediate	1
—	—	K-1781	Gasket kit	6

Page	Sym.	Part #	Description	Stock Qty.
21-23-25	£	K-1670	Gear kit helix (direct)	2
21-23-25	€	K-1671	Gear kit helix (overdrive)	2
19	v	K-1124	Gear shift lever replacement kit	1
25	K	S-1334	Idler shaft assembly	2
25	M	S-1250	Input shaft assembly	4
25	N	S-1253	Input shaft assembly	4
25	Q	S-1251	Input shaft assembly	4
25	R	S-1252	Input shaft assembly	4
25	U	S-1254	Input shaft assembly	4
25	V	S-1255	Input shaft assembly	4

Page	Sym.	Part #	Description	Stock Qty.	Page	Sym.	Part #	Description	Stock Qty.
27	m	K-1447	"O" ring kit all	6	15	±	K-1613	Replacement kit cap (A-3991)	—
27	k	K-1451	"O" ring kit intermediate	6	19	c	K-1476	Replacement kit lever housing	1
27	j	K-1450	"O" ring kit range	6	19	~	K-1627	Replacement kit lever housing	1
27	w	K-1457	"O" ring kit valve	3	19	ϕ	K-1628	Replacement kit lever housing	1
17	y	K-1444	Oil filter kit	—	19	Δ	K-1629	Replacement kit lever housing	1
23	▼	K-1932	Oil seal kit	6	19	//	K-1631	Replacement kit lever housing	1
23	±	K-1933	Oil seal tool kit	1	19	∠	K-1630	Replacement kit lever housing (std.)	1
33	v	S-1301	Rear housing assembly	1	29	q	K-1019	Replacement kit oil trough	1
33	x	S-1300	Rear housing assembly	1	27	i	K-1771	Replacement kit range cylinder	1
33	z	S-1001	Rear housing assembly	1	33	t	K-1037	Replacement kit reservoir	1
17	a	A-2268	Release yoke kit	1	27	n	K-1527	Replacement kit yoke bar	1
35	↔	K-1005	Repair kit brake TCB	1	19	●	S-1442	Shift bar housing assembly	1
15	α	K-1486	Repair kit filter	2	19	■	S-1476	Shift bar housing assembly complete	1
13	A	K-1443	Repair kit selector valve	6	19	f	K-1584	Shift lever kit	1
13	D	K-1550	Repair kit selector valve	6	5	—	K-1735	Slave valve conversion kit	—
15	B	K-1699	Repair kit slave valve	2	—	S	K-1513	Small parts kit	2
15	Π	K-1935	Repair kit slave valve (A-5000)	2	31	⊗	K-1654	Synchronizer kit	2

Purposes of Symbols

A. To denote the parts included in a kit or an assembly. B. Used for notes.

Kit and Assembly Identification for Service Parts

A — Denotes Production Assemblies K — Denotes Service Kit (Unassembled) S — Denotes Service Assembly

RT-613 is the RT-610, RT-613 front and the RT-613, RTO-613 Auxiliary.
RTO-613 is the RTO-610, RTO-613 front and the RT-613, RTO-613 Auxiliary.

Basic Overhaul Kit

Sym.	Part #	Description	Stock Qty.
≡	K-1061	Basic overhaul kit	1
Above Kit also includes Gaskets.			

Basic Rebuild Kit

Sym.	Part #	Description	Stock Qty.
Ø	K-1851	Fits all clutch types	1
Above Kit also includes Gaskets.			

Cooling and Lubrication Systems

PTO Mounted Pump

K-1435	Lubrication Kit 6-Bolt Oil Pump
K-1436	Lubrication Kit 8-Bolt Oil Pump
K-1029	Oil Cooler Kit 6-Bolt Oil Pump
K-1030	Oil Cooler Kit 8-Bolt Oil Pump
K-1034	Oil Cooler Installation Parts Kit

Auxiliary Countershaft Mounted Pump

A-4679	Pump Assembly
K-1710	Collar Kit
K-1704	Pump Installation Kit
K-1700	Oil Cooler Kit
K-1703	Cooler Installation Kit
K-1707	Lubrication Kit Drive Set

Illustrated Parts List Form No. P-528 available for Detailed and Illustrated Procedures.

Sealants and Lubricants

Part #	Description	Stock Qty.
71203	Silicone Lubricant 8 oz. size (236.59 cc)—(fleet size)	1
71204	Adhesive Sealant 0.5 cc size (single application size)	12
71205	Sealant 2 cc size (single application size)	12
71206	Silicone Lubricant 4 cc size (single application size)	12

Operating Labels and Instructions

English	French	Spanish
19303	19681	19672
19304	19682	Shift diagram label <i>RT-613</i>
17011	19046	Shift diagram label <i>RTO-613</i>
18803		Shift diagram label TCB-6 — TCB-8
DR108		Range shift warning label
71004		Drivers instructions RT-613 — RTO-613
		Instruction letter TCB-6 — TCB-8

Maintenance and Repair

RT-613 Series Service Manual Form Number 175

Every effort has been made to ensure the accuracy of all information in this brochure. **However, Eaton Transmission Division makes no expressed or implied warranty or representation based on the enclosed information.** Any errors or omissions may be reported to Marketing Communications, Eaton Transmission Division, P.O. Box 4013, Kalamazoo, MI 49003.

MODEL SERIES	STANDARD HOUSING									
	SAE NO. 1					SAE NO. 2				
	ALUMINUM		IRON			ALUMINUM		IRON		
600 6600 8600 ①	TYPE	PART NO.	TYPE	PART NO.	PART NO.	TYPE	PART NO.	TYPE	PART NO.	PART NO.
			○	A-4386				★	A-3711	
			□	A-4385				□	A-3709	
			★	A-4387				○	A-3710	
			△	A-5052						
		Weight 71 Lbs.				Weight 64 Lbs.				
NODAL MOUNT #1										
SYMMETRICAL					NON-SYMMETRICAL					
ALUMINUM		IRON			IRON		IRON			
TYPE	PART NO.	TYPE	PART NO.	PART NO.	TYPE	PART NO.	TYPE	PART NO.	TYPE	PART NO.
		‡	A-5067				○	A-3608	★	A-3609
			□				A-3574			
		△	A-4577							
Weight 82 Lbs.										

SYMBOL CODE, CLUTCH PEDAL SHAFT CONFIGURATION

- Above Centerline Pull
- △ Below Centerline Pull
- Below Centerline Push
- ★ Above Centerline Pull and Below Centerline Push
- ‡ Above and Below Centerline Pull
- ① 8600 Transmission Not Configured for Push Type Clutch

CLUTCH HOUSING TERMS

SAE #1 & SAE #2 denotes clutch housing size. SEE FIG. 1

SAE SIZE NO.	A PILOT DIAMETER	B OUTSIDE DIAMETER	C BOLT CIRCLE	CAPSCREW	
				QTY.	SIZE
1	20- $\frac{1}{8}$	21- $\frac{3}{4}$	20- $\frac{7}{8}$	12	$\frac{7}{16}$ -14
2	17- $\frac{5}{8}$	19- $\frac{1}{4}$	18- $\frac{3}{8}$	12	$\frac{3}{8}$ -16

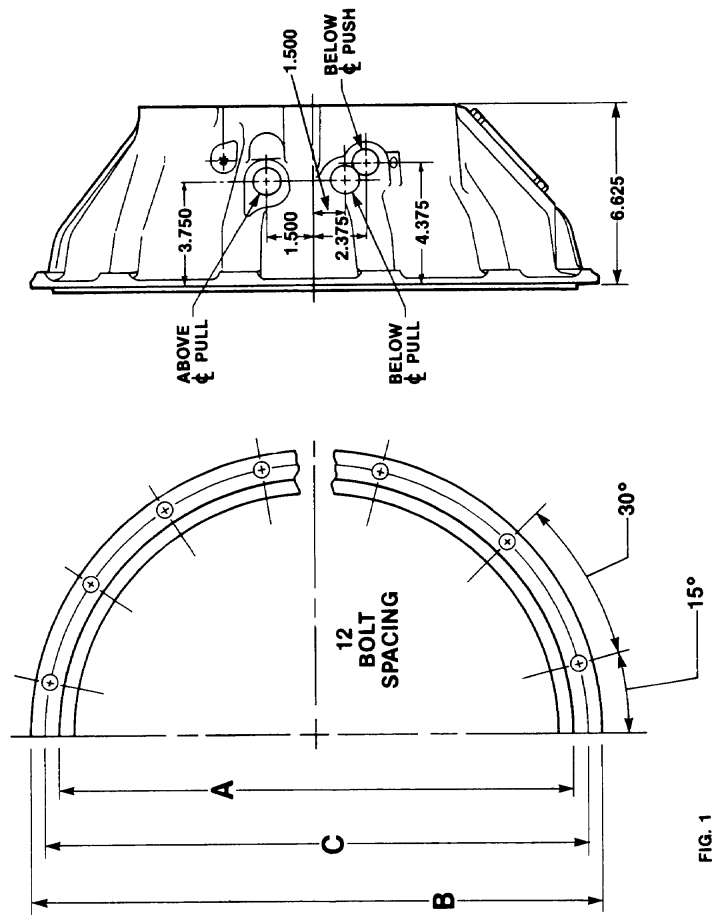


FIG. 1

NODAL MOUNT - Denotes side mounting pads used for support of transmission and engine.

Symmetrical - Denotes symmetrical bolt mounting pattern of nodal mount. SEE FIG. 2.

Non symmetrical - Denotes non symmetrical bolt mounting pattern of nodal mount. SEE FIG. 3 & 4.

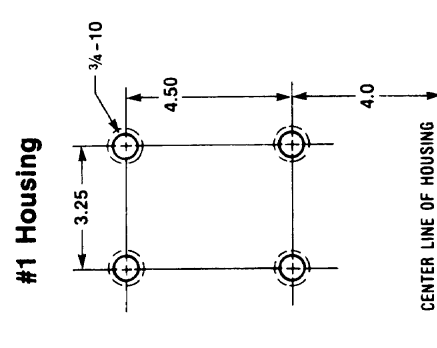


FIG. 2

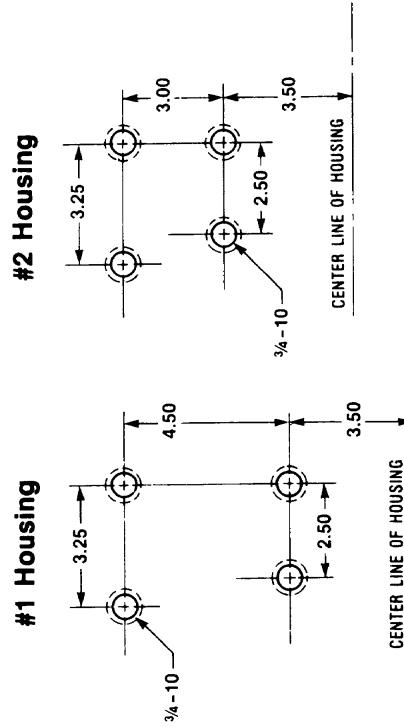


FIG. 3

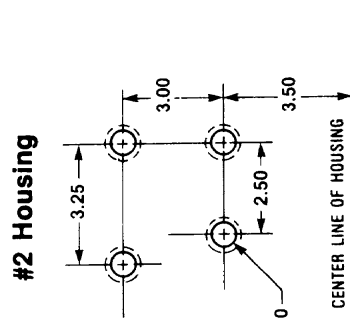
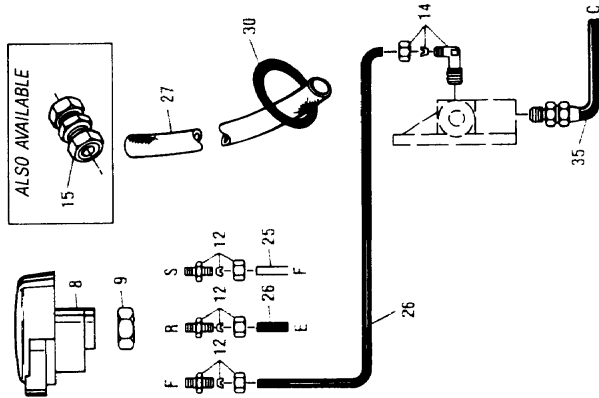


FIG. 4

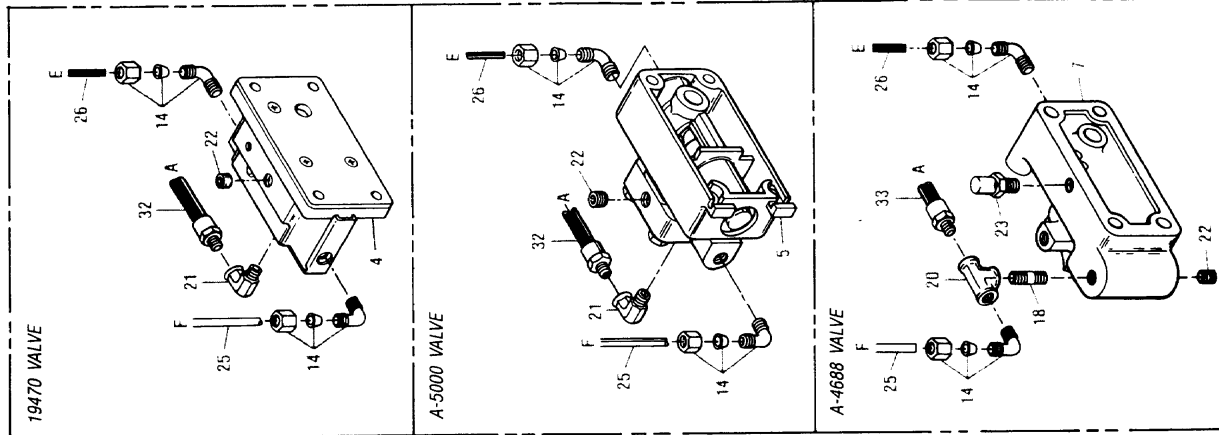
AIR SYSTEMS

AIR SYSTEM
SELECTOR VALVE
A-4488
A-4490



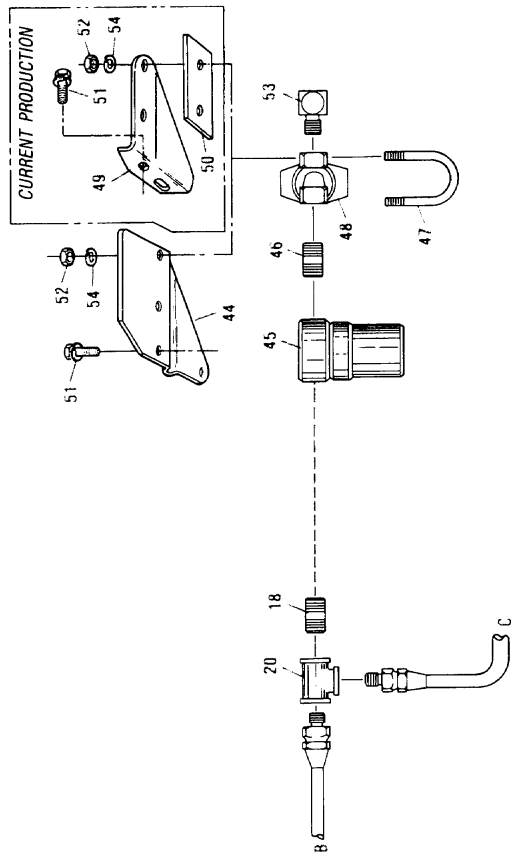
Cut 6007-12/83

AIR SYSTEM RANGE



Cut 60200-11/84

REGULATOR-FILTER ASSEMBLY



Cut 36-12/84

QTY. USED	ITEM PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	QTY. USED	ITEM PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
4	19470	Slave valve assembly		4	14	85002	Elbow assembly 1/8" pipe		—
5	A-5000	Slave valve assembly		4	or	84502	Elbow 1/8" pipe		—
7	A-3991	Slave valve assembly replaced by A-4688		—	and	83501	Grip nut		—
or	A-3547	Slave valve assembly w/R.H. SRC replaced by A-4687		—	and	83001	Compression sleeve		—
or	A-4688	Slave valve assembly		4	15	84101	Connector 1/8" nylon tubing		—
or 1	A-4687	Slave valve assembly w/R.H. SRC		4	or	NPN	Body order 84101		—
8	A-4065	Selector valve assembly 5/8"-11 replaced by K-1564 (RTD-613)		4	and	83501	Grip nut		—
or	A-4115	Selector valve assembly 1/2"-13 replaced by K-1565 (RT-613)		4	and	83001	Compression sleeve		—
or	A-4116	Selector valve assembly 1/2"-20 replaced by K-1564 (RTD-613) or A-4490 (RT-613)		4	18	12769	Nipple 1/8"		—
or	A-4117	Selector valve assembly 7/16"-14 replaced by K-1564 (RTD-613) or K-1565 (RT-613)		4	20	12881	Tee 1/8"		—
or	A-4118	Selector valve assembly 3/8"-24 replaced by K-1564 (RTD-613) or K-1565 (RT-613)		4	21	12845	Street ell 1/8"		—
or	A-4310	Selector valve assembly 1/2"-13 replaced by A-4488 (RTD-613) or K-1565 (RT-613)		4	22	X-12-208	Plug 1/8"		—
or	A-4392	Selector valve assembly 1/2"-13 replaced by A-4488 (RTD-613) or A-4490 (RT-613)		4	23	7935	Breather		—
or	A-4488	Selector valve 1/2"-13		4	25	68500	Nyaflo tubing white		—
or	A-4490	Selector valve 1/2"-13		4	26	82000	Nyaflo tubing black		—
9	X-9-1001	Nut 5/8"-11		4	27	80000	Sheathing		—
X-1-807	Nut 1/2"-20			4	30	13571	"O" ring clamp		—
X-9-802	Nut 1/2"-13			4	32	55527	Hose 15"		—
X-9-701	Nut 7/16"-14			4	33	55522	Hose 28"		—
X-1-612	Nut 3/8"-24			4	35	55525	Hose 17"		—
84001	Connector assembly 1/16" pipe			4	44	16744	Bracket		4
82501	Connector 1/16" pipe			4	45	16743	Regular valve		—
83501	Grip nut			4	46	16741	Nipple 1/4"		—
and	83001	Compression sleeve		4	47	16742	U-bolt 1/4"-20		—
				4	48	A-4041	Air filter assembly		4
				4	49	17107	Bracket		—
				4	50	18860	Plate		—
				4	51	X-8L-601	Capscrew 3/8"-16 X 3/4"		—
				4	52	X-1-401	Nut 1/4"		—
				4	53	16865	Street ell		—
				4	54	X-3-400	Lockwasher 1/4"		—

CONSISTS OF:

- K-1097 with A-4310 selector valve
- K-1098 with A-4310 selector valve
- K-1099 with A-4310 selector valve
- K-1100 with A-4310 selector valve

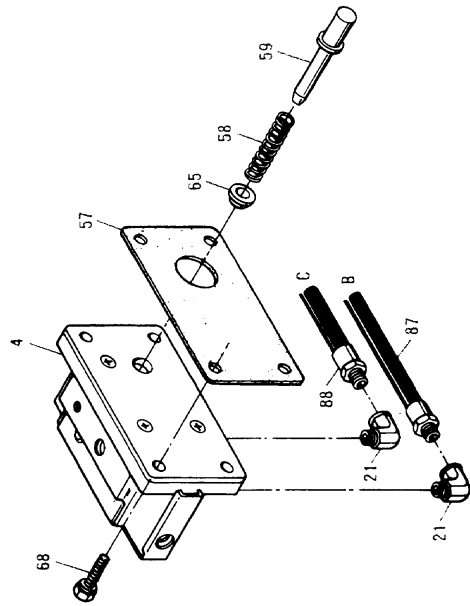
NOTE: INCLUDES WITH EACH KIT, PROPER LEVER ADAPTER, JAM NUT AND 1/2 X 13 THREADED REPLACEMENT VALVE WITH FINGER STOP.

† STARTING WITH OCT. 1977 PRODUCTION, NEW BRACKET ITEM 49 PAGE 9 AND AUXILIARY HOUSING ITEM 59 PAGE 33.

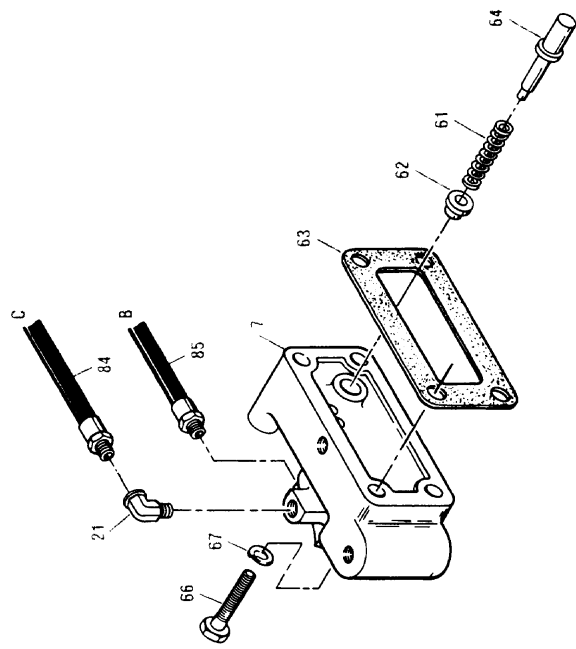
@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

AIR SYSTEM RANGE

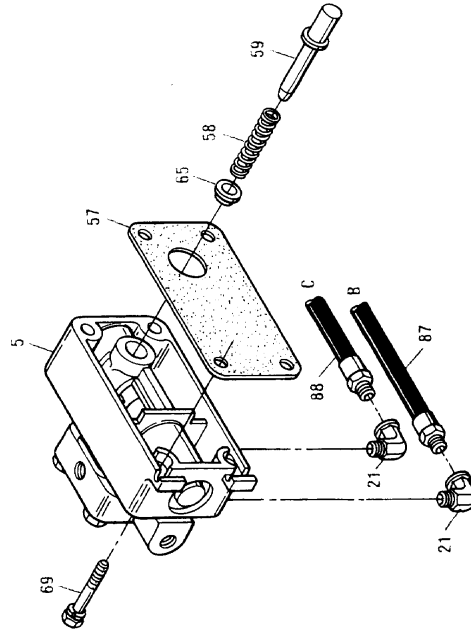
19470 VALVE



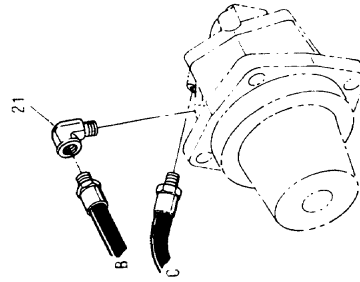
A-4688 VALVE



A-5000 VALVE



Cut 6076C-12/84



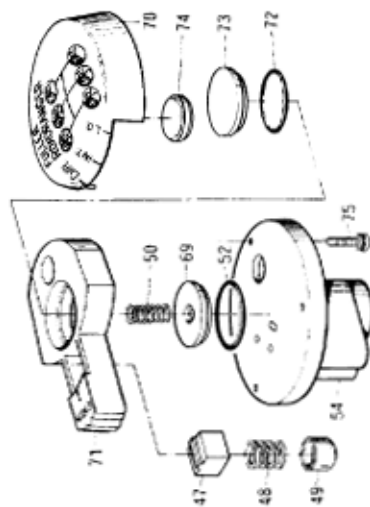
ITEM	QTY. USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
4	19470	Slave valve assembly			4
5	A-5000	Slave valve assembly			4
7	A-3991	Slave valve assembly			—
		replaced by A-4688			—
or	A-3547	Slave valve assembly			—
		w/R.H. SRC replaced by A-4687			4
or	A-4688	Slave valve assembly			4
or 1	A-4687	Slave valve assembly			—
		w/R.H. SRC			—
21	12845	Street ell 1/8"			—
57	19481	Gasket			—
58	19572	Spring			1
59	19571	Pin replaced by 20649			—
or	20649	Pin			1

ITEM	QTY. USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
61	6392	Spring			1
62	12751	Sleeve			—
63	15758	Gasket			—
64	15102	Pin		S	1
65	19570	Sleeve			—
66	X-8-411	Capscrew 1/4"-20 X 1-3/4"			—
		replaced by X-8L-411			—
	or	X-8L-411	Capscrew 1/4"-20 X 1-3/4"		—
67	X-3-400	Lockwasher 1/4"			—
68	X-8C-401	Capscrew 1/4"-20 X 1-1/8"			—
	X-8S-405	Capscrew 1/4"-20 X 1.10			—
69	X-8C-411	Capscrew 1/4"-20 X 1-3/4"			—
84	55527	Hose 15"			—
85	55507	Hose 20"			—
87	55506	Hose 18"			—
88	55525	Hose 17"			—

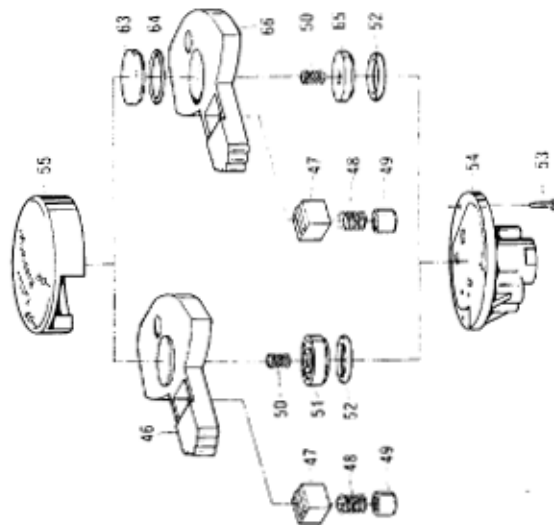
S Small parts kit K-1513

SELECTOR VALVE ASSEMBLY

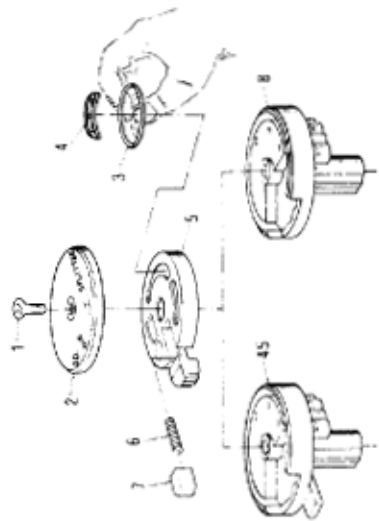
Current Production



SELECTOR VALVE ASSEMBLY



SELECTOR VALVE ASSEMBLY

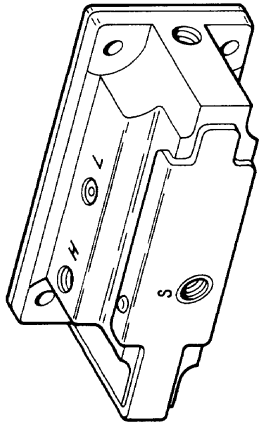


ITEM	QTY USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	ITEM	QTY USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
1	1	15887	Screw		—	50	1	17919	Spring	ζD	—	K-1443	Repair kit selector valve	A	@
2	1	16808	Selector valve cover <i>replaced by 17509</i>		—	51	1	17921	Seal	ζ	—	K-1550	Repair kit selector valve	D	@
or 1	1	17509	Selector valve cover		—	52	1	17923	"0" ring	ζD	—				
3	1	15772	"0" ring	ζA	—	53	3	17924	Self-tapping screw		—				
4	1	15879	Insert	ζA	—	or 3	3	18394	<i>replaced by 18394</i>		—				
5	1	15878	Actuator valve		—	54	1	18143	Self-tapping screw	ζD	—				
or 1	1	17508	<i>replaced by 17508</i>	ζA	—	55	1	18142	Valve body	ζ	—				
6	1	15886	Actuator valve	ζA	1	63	1	18398	Selector valve cover	ζ	—				
7	1	15885	Spring	ζA	—	64	1	18399	Retainer	ζ	—				
8	1	16818	Lock	ζA	—	65	1	18397	"0" ring	ζ	—				
or 1	1	16871	Valve body 5/8"-11		—	66	1	18396	Seal	ζ	—				
			Valve body 1/2"-13		—	69	1	18397	Actuator	ζ	—				
			<i>replaced by item 43</i>	ζ	—	70	1	18623	Seal	ζD	—				
or 1	1	16927	Valve body 1/2"-20		—	or 1	1	18625	Cover <i>RT0-613</i>		—				
or 1	1	16926	Valve body 7/16"-14		—	71	1	18660	Cover <i>RT-613</i>		—				
or 1	1	16925	Valve body 3/8"-24		—	72	1	18661	Actuator	ζD	—				
45	1	17513	Valve body	ζ	—	73	1	18662	"0" ring	ζD	—				
46	1	17917	Actuator valve	ζ	—	74	1	18714	Retainer	ζD	—				
47	1	17922	Detent	ζD	—	75	3	X-8S-154	Seat	ζD	—				
48	1	17918	Spring	ζD	—				Screw	ζ	—				
49	1	17920	Retainer	ζD	—						—				

ζ NOT AVAILABLE SEPARATELY --- ORDER
KIT OR ASSEMBLY

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

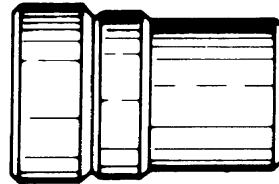
SLAVE VALVE
ASSEMBLY
19470



REPLACE UNIT IF DEFECTIVE

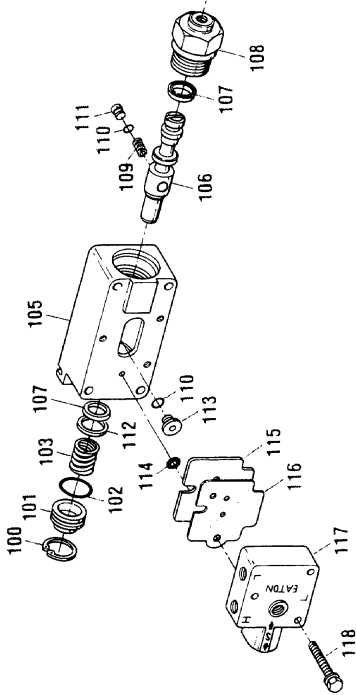
Cut 61610-11/84

REGULATOR VALVE
ASSEMBLY
16743



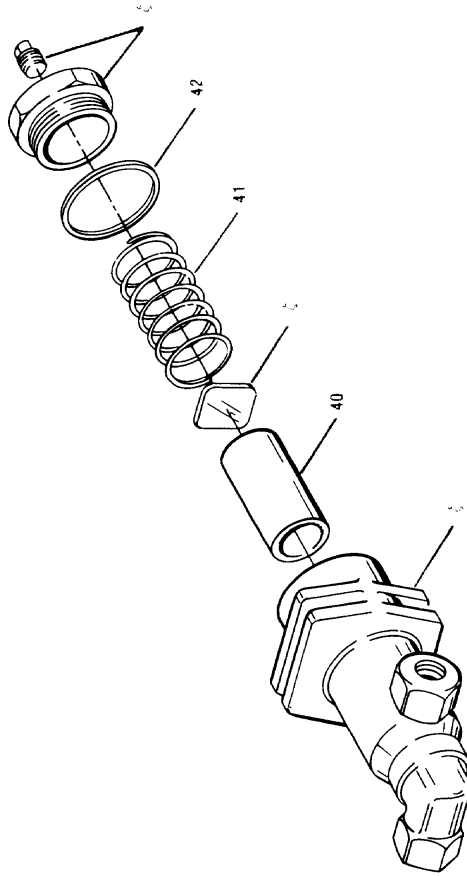
Cut 138J-11/84

SLAVE VALVE
ASSEMBLY
A-5000



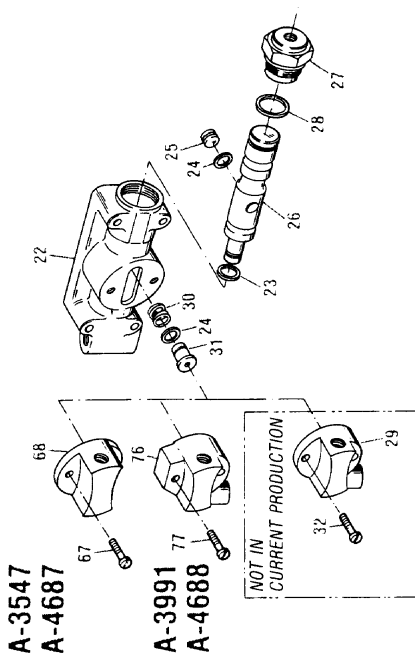
Cut 6162-6/84

AIR FILTER
ASSEMBLY
A-4041



Cut 145A-3/80

SLAVE VALVE
ASSEMBLY
A-3547
A-3991
A-4687
A-4688



Cut 160-4/80

QTY.	ITEM	USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
22	1	15125		Slave valve housing <i>replaced by 19464</i>		—
or	1	19464		Slave valve housing	ξ	—
23	1	13653		"0" ring <i>replaced by 19461</i>		—
or	1	19461		"0" ring	≡B	—
24	2	15114		"0" ring	≡BD	—
25	1	15128		Plug	≡B	—
26	1	15126		Piston <i>replaced by 19463</i>		—
or	1	19463		Piston		1
27	1	15131		Cap		—
28	1	14033		"0" ring <i>replaced by 19462</i>		—
or	1	19462		"0" ring	≡B	—
29	1	16429		Cap A-3991 <i>replaced by K-1613</i>		—
30	1	15127		Spring <i>replaced by 18709</i>		—
or	1	18709		Spring	≡B	—
31	1	15129		Seal <i>replaced by 18708</i>		—
or	1	18708		Seal	≡B	—
32	1	X-8S-401		Capscrew 1/4"-20 (A-3991)		—
and	1	X-8S-427		Capscrew 1/4"-20 (A-3991)		—
40	1	16920		Element	ξα	—
41	1	16919		Spring	ξα	—

QTY.	ITEM	USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
42	1	16918		Gasket or "0" ring	ξα	—
67	2	X-8S-427		Capscrew 1/4"-20 (A-3547)		—
68	1	15130		Cap (A-3547)		—
76	1	18707		Cap (A-3991) <i>order K-1613</i>		—
77	2	X-8S-401		Capscrew 1/4"-20	±	—
100	1	19793		Snap ring	±	—
101	1	20855		Plug	ξΠ	—
102	1	20875		"0" ring	ξΠ	—
103	1	20856		Spring	ξΠ	—
105	1	20850		Body	ξ	—
106	1	20854		Piston		—
107	2	20858		U-Seal	ξΠ	—
108	1	20849		Cap		—
109	1	20860		Spring	ξΠ	—
110	2	15114		"0" ring	ξΠ	—
111	1	20859		Seal	ξΠ	—
112	1	20857		Washer	ξΠ	—
113	1	20861		Seal		—
114	1	20862		"0" ring	ξΠ	—
115	1	20853		Plate		—
116	1	20852		Gasket		—
117	1	20851		Cap	ξ	—
118	3	X-8C-413		Capscrew 1/4"-20 × 1-1/2		—

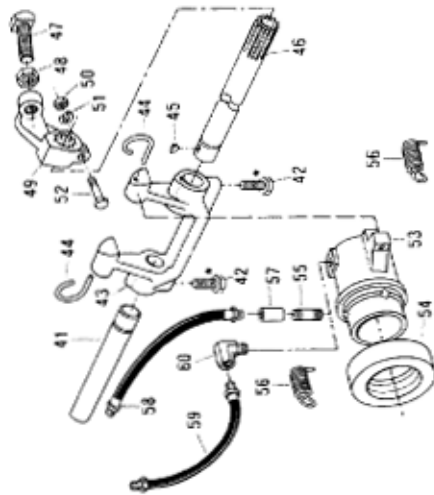
PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
K-1699	Repair kit slave valve	B	@
K-1486	Repair kit filter	α	@
K-1613	Replacement kit cap (A-3991)	±	@
K-1935	Repair kit slave valve (A-5000)	Π	@

BASIC OVERHAUL KIT SEE PAGE 3			
K-1061	≡		

ξ NOT AVAILABLE SEPARATELY --- ORDER
KIT OR ASSEMBLY

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

RELEASE YOKE
ASSEMBLY
PUSH TYPE

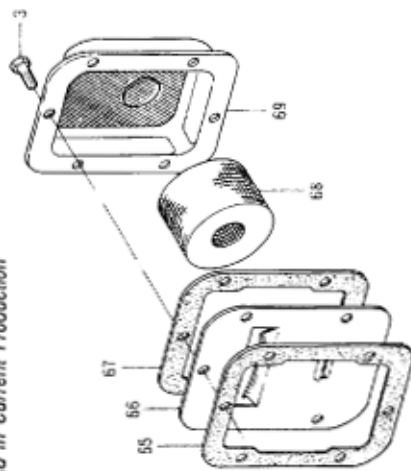


*Note: Use lock wire at these positions.

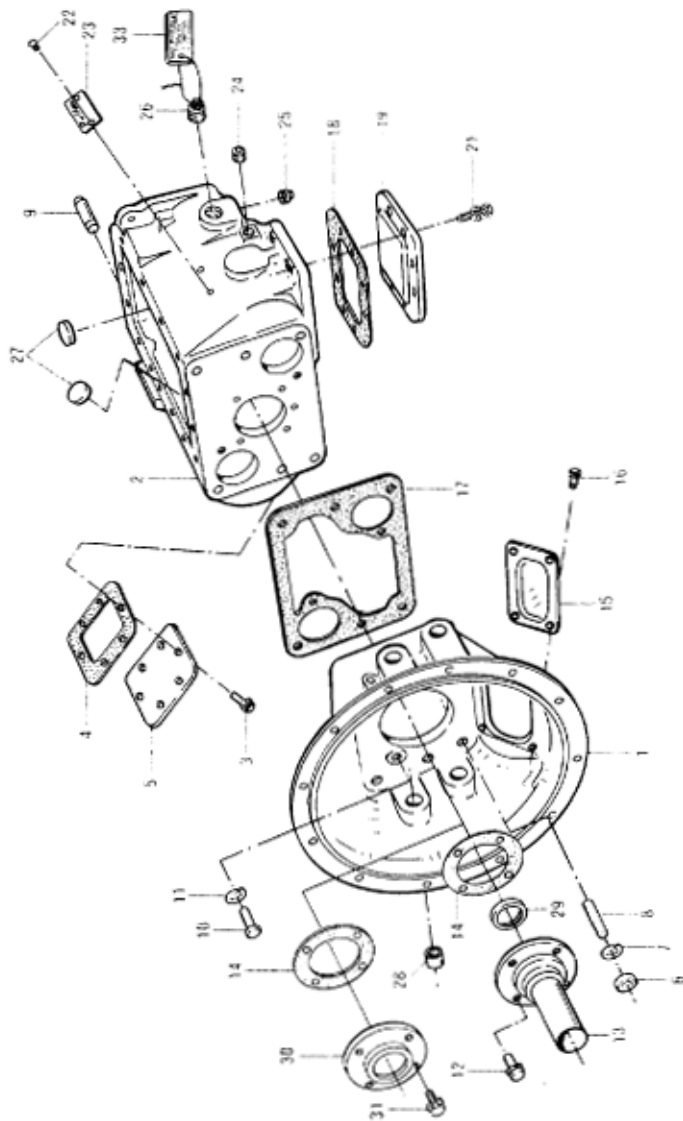
Ord 8200-4/83

OIL FILTER
ASSEMBLY
K-1444

Not Used in Current Production



MAIN HOUSING
ASSEMBLY

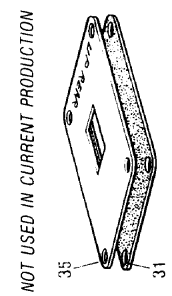
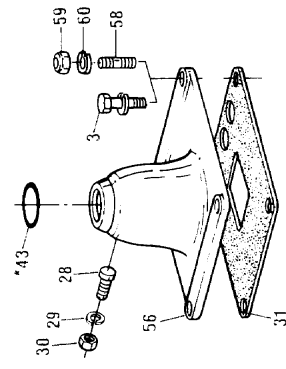
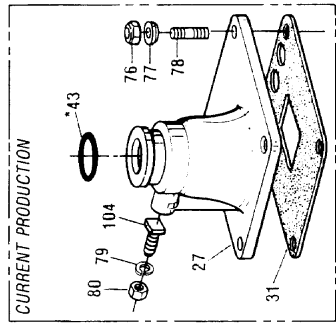
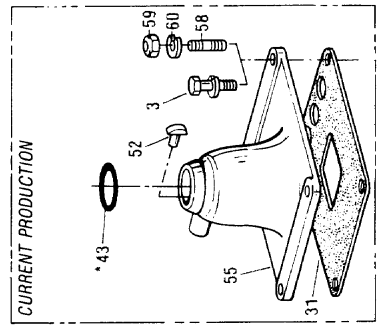


ITEM	QTY.	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	ITEM	QTY.	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
1	1	A-3711	Clutch housing assembly #2 <i>push-pull</i>	@	@	23	1	57000	Name plate		—	A-219	Adjusting arm assembly	b	@
or 1	1	S-1085	Clutch housing assembly #1 <i>push-pull</i>	@	@	24	1	X-12-800	Pipe plug 1/2"		—	A-2268	Release yoke assembly	a	@
			For additional clutch housing information see pages 6 and 7			25	1	X-12-1201	Pipe plug 3/4"		—	K-1444	Oil filter kit	y	@
			Case order S-1321	P		or 1	1	X-12-1202	Pipe plug 3/4" magnetic		—	S-1321	Case assembly	p	@
2	1	16800				26	1	X-12-2001	Pipe plug 1-1/4" <i>replaced by X-12-2002</i>		—				
3	6	X-8S-601	Capscrew 3/8"-16 X 3/4"			or 1	1	X-12-2002	Pipe plug 1-1/4"	P	—				
4	1	1684	Gasket			27	2	14373	Magnet		8				
5	1	14575	PTO cover			28	8	12815	Bushing		6				
6	6	X-1-1000	Nut 5/8"-18			29	1	16020	Oil seal for 1-1/2" shaft		2				
7	6	X-3-1000	Lockwasher 5/8"			30	1	15019	Cover 1-3/4" shaft <i>pull</i>		—				
8	6	1632	Stud			31	4	X-8L-604	Capscrew 3/8"-16 X 1-1/4" <i>pull</i>		—				
9	2	14334	Dowel pin						NOTE: FOR FULLER UPSHIFT BRAKE SEE PAGE 20						
10	2	X-8-808	Capscrew 1/2"-13 X 1-1/4"			33	1	18913	Lube instruction plate (English)		—				
11	2	X-3-801	Lockwasher 1/2"			or 1	1	19037	Lube instruction plate (French)		1				
12	4	X-8-678	Capscrew 3/8"-16 X 1"			41	1	14494	Pedal shaft		—				
or 2	2	X-8L-604	Capscrew 3/8"-16 X 1-1/4 <i>push</i>			42	2	X-7-603	Bolt 3/8"-24 X 1"	a	—				
and 2	2	X-3-600	Lockwasher 3/8" <i>push</i>			43	1	12817	Release yoke	a	1				
and 2	2	X-8-619	Capscrew 3/8"-16 X 1-1/4" <i>(special) push</i>			44	2	9293	Spring		2				
			<i>replaced by X-8L-619</i>			45	1	X-6-11	Key		—				
or 2	2	X-8L-619	Capscrew 3/8"-16 X 1-1/4" <i>(special) push</i>			46	1	1984	Pedal shaft (std.) #1 housing		1				
			<i>6-7/32" long push</i>			or 1	1	1983	Pedal shaft (std.) #2 housing		1				
13	1	15020	Front bearing cover 1-3/4" shaft <i>6-7/32" long push</i>			47	1	X-8-802	Set screw 1/2"	b	—				
or 1	1	16324	Front bearing cover 1-3/4" shaft <i>6-7/8" long push</i>			48	1	X-9-800	Nut 1/2"	b	—				
or 1	1	15491	Front bearing cover 1-1/2" shaft <i>5-25/32" long push</i>	§	2	49	1	1966	Adjusting arm	b	1				
or 1	1	15647	Front bearing cover 1-1/2" shaft <i>7-1/4" long push</i>	§	2	50	1	X-1-600	Nut 3/8"	b	—				
or 1	1	15727	Front bearing cover 1-1/2" shaft <i>6-7/32" long push</i>	§	2	51	1	X-3-600	Lockwasher 3/8"	b	—				
or 1	1	15265	Front bearing cover 1-1/2" shaft <i>7-1/16" long push</i>	§	2	52	1	X-7-601	Bolt 3/8"-24 X 1-3/4"	b	—				
or 1	1	16277	Front bearing cover 1-1/2" shaft <i>6-1/4" long push</i>	§	2	53	1	8696	Bearing carrier (std.)		1				
			Gasket			54	1	6168	Bearing		4				
14	1	15059	Hand hole cover <i>push</i>			55	1	3230	Nipple 1/8"		—				
15	1	1565	Hand hole cover <i>pull</i>			56	2	4425	Spring		4				
or 1	1	11453	Capscrew 5/16"-18 X 1/2" <i>replaced by X-8L-509</i>			57	1	3233	Pipe coupling 1/8"		—				
16	4	X-8-509	Capscrew 5/16"-18 X 1/2" <i>replaced by X-8L-509</i>			58	1	51006	Hose assembly 8"		—				
or 4	4	X-8L-509	Capscrew 5/16"-18 X 1/2"			59	1	51016	Hose assembly 6-1/2"		—				
17	1	15060	Gasket			60	1	12880	Elbow		—				
18	1	16929	Gasket			65	1	1684	Gasket	y	—				
19	1	16596	PTO cover			66	1	8547	Oil filter plate	y	—				
21	8	X-8L-703	Capscrew 7/16"-14 X 1"			67	1	14086	Gasket	y	—				
22	2	X-13-206	Self-tapping screw			68	1	8548	Filter element	y	6				
						69	1	8546	Oil filter housing	y	—				

§ USES 16020 OIL SEAL ITEM 55

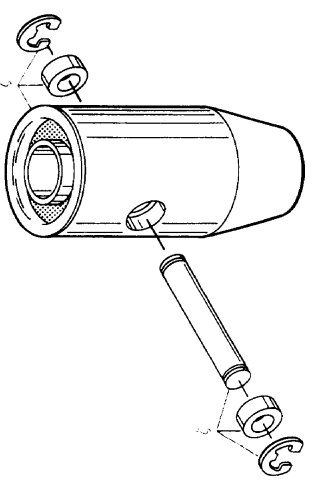
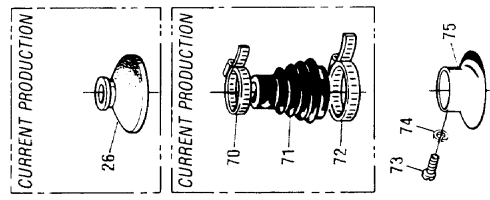
@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

LEVER ASSEMBLY LEVER HOUSING ASSEMBLY



Cut 288A-10 / 84

LEVER ISOLATOR ASSEMBLY S-1481



Note: For installation instructions
See Letter of Instructions
Number L579

Cut 289-1 / 84

ITEM	QTY.	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	ITEM	QTY.	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
3	4	X-8L-604	Capscrew 3/8"-16 X 1-1/4"		—	52	1	18299	Pin	C	6	K-1124	Gear shift lever replacement kit	φ	@
26	1	10427	Boot	J	1	55	1	18298	Housing shift lever low order K-1476	ψC	@	K-1476	Replacement kit lever housing	C	@
27	1	14573	Housing shift lever high replaced by K-1627		—				Housing shift lever high order K-1628	φQ	@	K-1584	Shift lever kit	J	@
or 1	17164		Housing shift lever high order K-1627	~	@	or 1	17166		Housing shift lever high order K-1629	QΔ	@	K-1627	Replacement kit lever housing	~	@
or 1	14456		Housing shift lever low replaced by K-1631		—	or 1	17167		Housing shift lever high order K-1630	Q↑	@	K-1628	Replacement kit lever housing	φ	@
or 1	17168		Housing shift lever low order K-1631	//	@	or 1	18782		Housing shift lever high replaced by K-1630		—	K-1629	Replacement kit lever housing	Δ	@
28	1	2271	Pin		2	56	1	4530	Housing shift lever low replaced by K-1476	ε	—	K-1630	Replacement kit lever housing (std.)	↑	@
or 1	6541		Pin		2	or 1	17163		Housing shift lever high replaced by K-1476	ψ	—	K-1631	Replacement kit lever housing	//	@
29	1	X-3-500	Lockwasher 5/16"		—	or 1	7506		Housing shift lever high replaced by K-1628	Q	—				
30	1	X-1-500	Nut 5/16"-24		—	or 1	7602		Housing shift lever high replaced by K-1629	Q	—				
31	1	1642	Gasket replaced by 19870	~Δ↑//C	—	or 1	16398		Housing shift lever high replaced by K-1630	Q	—				
or 1	19870		Gasket		—	58	4	7467	Stud replaced by 11934		—				
32	1	8503	Gear shift lever (std.) low replaced by K-1124	⊙	—	or 4	11934		Stud		—				
or 1	17600		Gear shift lever (std.) low	⊙φ	—	59	4	X-1-600	Nut 3/8"-24		—				
or 1	17574		Gear shift lever (std.) high replaced by K-1572		—	60	4	X-3-600	Lockwasher 3/8"		—				
or 1	17599		Gear shift lever (std.) high replaced by K-1584	φ	—	70	1	14453	Clamp		—				
or 1	18482		Gear shift lever (std.) high replaced by K-1584	⊙J	1	71	1	14795	Boot		—				
or 1	17842		Gear shift lever (std.) high		—	72	1	14454	Clamp		—				
33	1	2538	Retainer		—	73	1	X-8-251	Machine screw #12		—				
34	1	2536	Spring		—	74	1	X-3-302	Lockwasher #12		—				
35	1	15722	Oil baffle (optional)	~Δ:↑//C	2	75	1	2962	Dust bell		—				
43	1	17162	"O" ring (special)		—	76	4	X-1-604	Nut 3/8"-24		—				
46	1	17886	Adapter 3/8"-24 to 1/2"-13		—	77	4	11932	Bevel washer		—				
or 1	17887		Adapter 7/16"-14 to 1/2"-13		—	78	4	14236	Stud		—				
or 1	17888		Adapter 1/2"-20 to 1/2"-13		—	79	1	X-3-600	Lockwasher 3/8"		—				
or 1	17889		Adapter 5/8"-11 to 1/2"-13	φ	—	80	1	X-1-600	Nut 3/8"-24		—				
						104	1	14461	Pin		—				

ξ NOT AVAILABLE SEPARATELY ---- ORDER KIT OR ASSEMBLY

* INSTALLED INSIDE ITEM 55 AND ITEM 56 HOUSING (17163, 18782 and 18298 only)

φ W/ITEM 75

⊙ W/ITEM 26 OR 71

ε W/2271 PIN

Q W/6541 PIN

↓ W/18299 PIN

ξ NOT AVAILABLE SEPARATELY --- ORDER KIT OR ASSEMBLY

* INSTALLED INSIDE ITEM 55 AND ITEM 56 HOUSING (17163, 18782 and 18298 only)

φ W/ITEM 75

⊙ W/ITEM 26 OR 71

ε W/2271 PIN

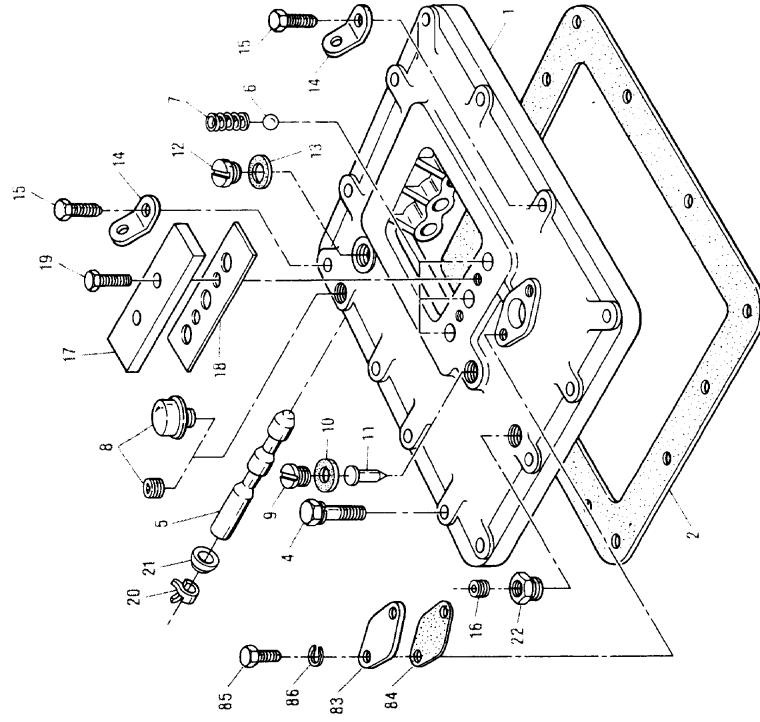
Q W/6541 PIN

ψ W/18299 PIN

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

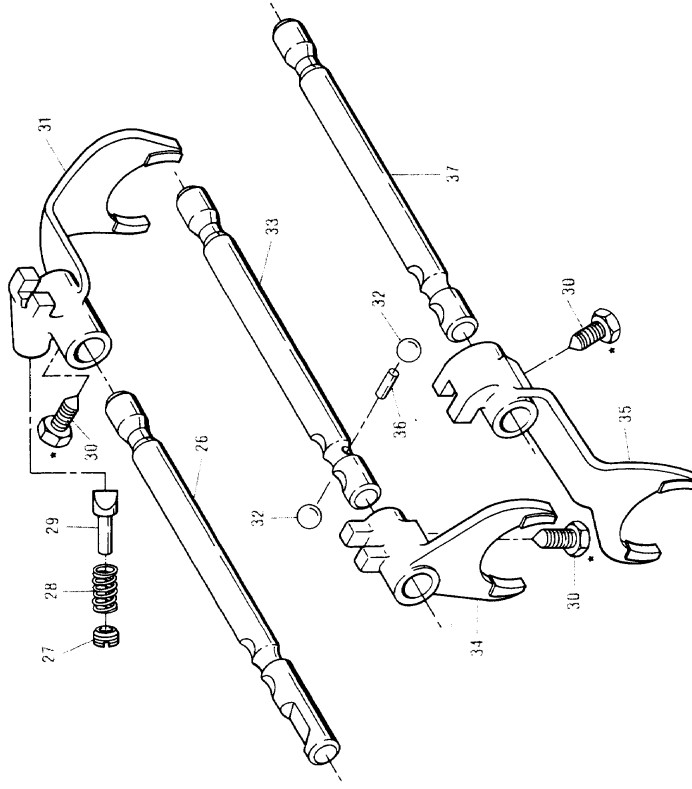
BAR HOUSING - YOKES AND BARS

HOUSING ASSEMBLY



Cut 6227-1/84

YOKES AND BARS ASSEMBLIES



*Note: Use lock wire at these positions.

Cut 6282A-12/83

ITEM	QTY. USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
1	1 20311	Shift bar housing order S-1442 replaces the following housings 15888 - 17393 - 18196 - 19447 - S-1362		
2	1 15605	Gasket	●	
4	11 X-8L-604	Capscrew 3/8"-16 X 1-1/4"		
5	1 17177	Air valve shaft	■	1
6	3 X-14-800	Steel ball 1/2"	■ S	9
7	3 1064	Spring	■ = S	36
8	1 X-12-404	Pipe plug 1/4"	●	—
or	1 15276	Breather	■	—
9	1 15917	Plug	●	—
10	1 15900	Gasket	●	—
11	1 15899	Pin	●	—
12	1 17178	Plug neutral switch hole		—
13	1 17179	Gasket		—
14	2 17105	Lifting eye replaced by 20815		—
or	2 20815	Lifting eye		—
15	2 X-8L-602	Capscrew 3/8"-16 X 1-1/2"		—
16	1 X-12-404	Pipe plug 1/4"		—
or	1 X-12-602	Pipe plug 3/8"		—
17	1 15132	Spring cover	■	—
18	1 15133	Gasket	●	—
19	2 X-8L-600	Capscrew 3/8"-16 X 1"	■	—
20	1 18217	Clip	ψ	—
21	1 18218	Actuating ring	ψ	—
22	1 11970	Bushing 1/4 X 3/8		—

ITEM	QTY. USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
26	1 15910	Yoke bar - reverse	■	2
27	1 8968	Plug	■	—
28	1 6392	Spring	■ S	1
29	1 10019	Plunger	■	1
30	3 3220	Lockscrew	■	—
31	1 15096	Shift yoke reverse	■	2
32	2 X-14-1200	Steel ball 3/4"	■	6
33	1 15100	Yoke bar 2nd speed	■	2
34	1 15097	Yoke bar 2nd speed	■	2
35	1 16300	Shift yoke - direct	■ S	2
36	1 1634	Pin	■ S	1
37	1 15101	Yoke bar - direct	■	2
83	1 20199	Plate		—
84	1 20209	Gasket		—
85	2 X-8-406	Capscrew 1/4"-20 X 3/4"		—
86	2 X-3-400	Lockwasher 1/4"		—

PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
S-1442	Shift bar housing assembly	●	@
S-1476	Shift bar housing assembly complete	■	@
S	Small parts kit K-1513		

BASIC OVERHAUL KIT	SEE PAGE 4
K-1061	=

ψ ITEMS 49 AND 50 MUST BE USED WITH 18196 BAR HOUSING TO ACTUATE NEUTRAL START SWITCH

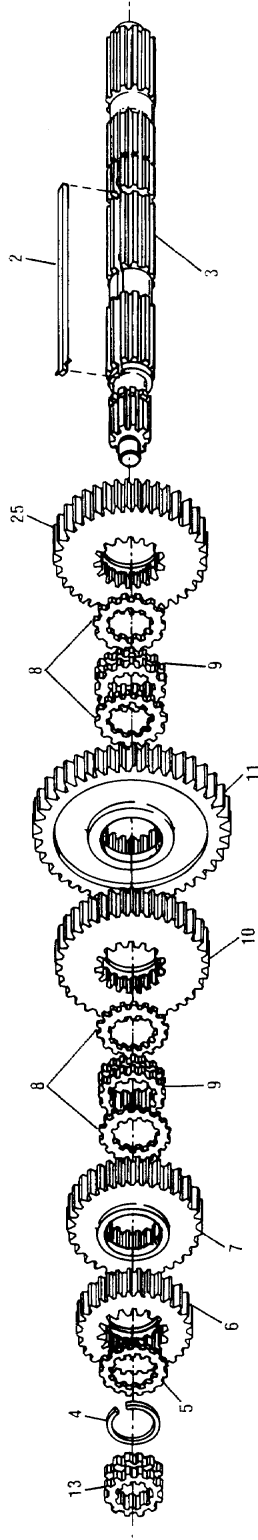
Ⓐ SEE K-1670 PAGE 23 AND 25

Ⓑ SEE K-1671 PAGE 23 AND 25

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

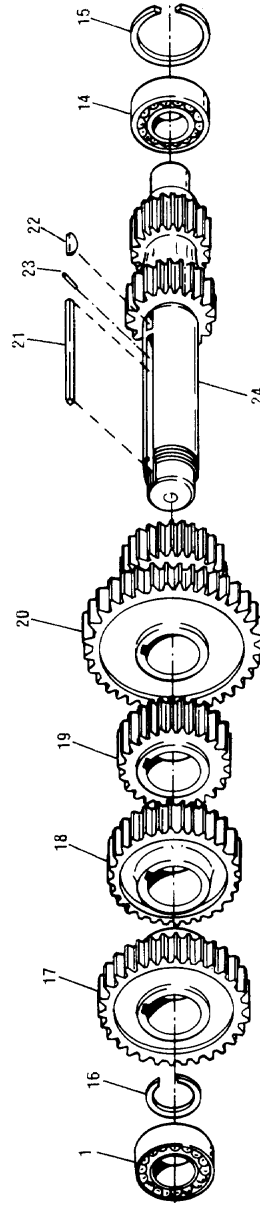
MAINSHAFT - COUNTERSHAFT

MAINSHAFT ASSEMBLY



Cut 332-4/79

COUNTERSHAFT ASSEMBLY



Cut 344A-4/79

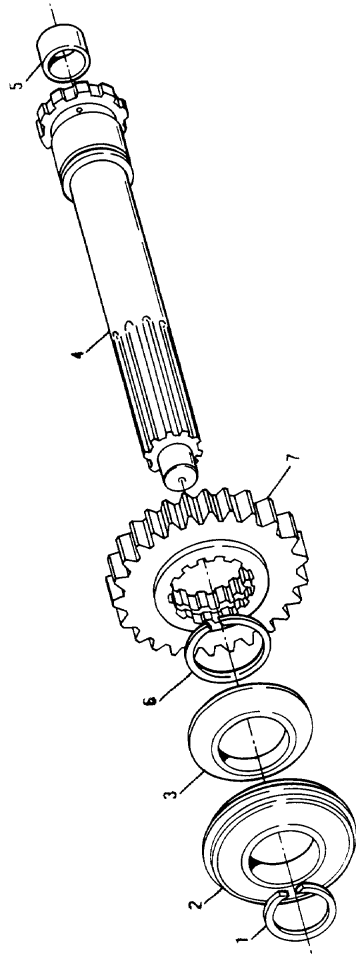
QTY.	ITEM	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	QTY.	ITEM	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	QTY.	ITEM	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	QTY.	ITEM	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	QTY.	ITEM	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	QTY.
1	2	81045	Bearing C/S front replaced by 18657		—		10	1	16229		1		11	1	16228		1		12	1	16228		1		13	1	15974		1	
or 2	18657		Bearing	≠	8		14	2	81046		4		15	2	15050		8		16	2	14286		2		17	2	16250		4	
2	1	A-3990	Key and pin assembly		2		18	2	16251		4		19	2	16252		2		20	2	16253		2		21	2	16662		2	
3	1	16805	Mainshaft	S	2		22	2	X-6-128		2		23	2	62511		S		24	2	16249		1		25	1	16227		1	
4	1	15980	Snap ring		2		or 2	18658			8		or 2	16250				or 2	16250					or 2	16250					
5	1	15976	Washer .259-.261 (orange)		2		or 2	16251			4		or 2	16251				or 2	16251					or 2	16251					
or 1	17434		Washer .263-.265 (purple)	S	2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17435		Washer .268-.270 (yellow)		2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17436		Washer .273-.276 (black)		2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17437		Washer .278-.280 (red)		2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
6	1	16231	Gear mainshaft 4th (RT-613)		—		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	88533		replaced by K-1670		—		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	18440		Gear mainshaft O/D (RT-613)		2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	18449		replaced by K-1671		—		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
7	1	16230	Gear mainshaft 4th (RT-613)	5	2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
8	4	15446	Gear mainshaft O/D (RT-613)	5	2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17259		Gear mainshaft 3rd		2		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17260		Washer .259-.261 (orange)	S	8		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17261		Washer .264-.266 (purple)	S	8		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17261		Washer .269-.271 (yellow)	S	8		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17261		Washer .274-.276 (black)		8		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
or 1	17262		Washer .279-.281 (red)		8		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					
9	2	16226	Sliding clutch		6		or 2	16250			8		or 2	16250				or 2	16250					or 2	16250					

5 THE PARTS WITH HELIX CLUTCHING TEETH MUST BE USED IN SFTS ONLY.
DO NOT MIX. ALSO SEE PAGE 25.
SEE PAGE 2 FOR HELIX KITS.

* MUST BE USED WITH FOLLOWING INPUT SHAFTS
— 18441, 18442, 18443, 18444, 18446.

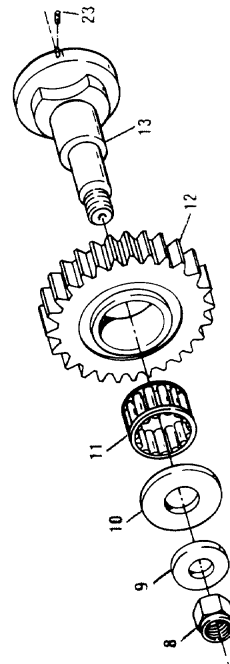
@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

DRIVE GEAR
ASSEMBLY



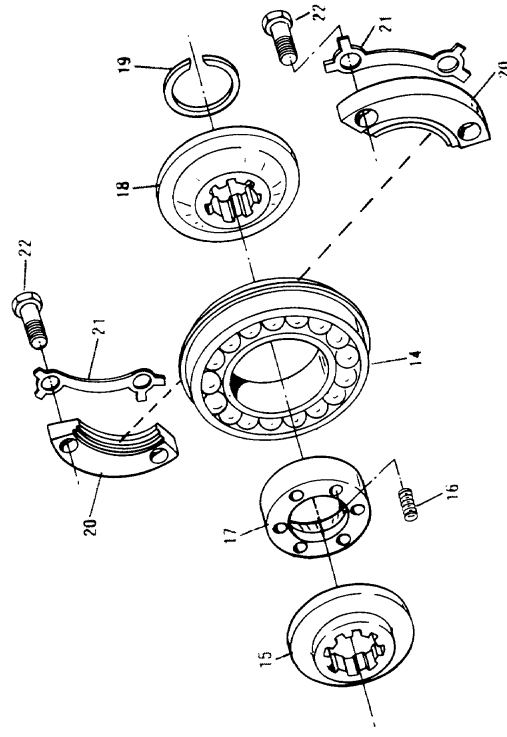
Cut 387-4/79

IDLER GEAR
ASSEMBLY



Cut 383-4/79

MAINSHAFT BEARING
ASSEMBLY



Cut 419-4/79

QTY. USED PART NO.		STOCK QTY.		SYM-BOL		DESCRIPTION		SYM-BOL		STOCK QTY.		QTY. USED PART NO.		SYM-BOL		DESCRIPTION		SYM-BOL		STOCK QTY.	
1	1	15046	4	≠δS	4	δMNQRUV	4	δMNQRUV	4	δMNQRUV	4	5	1	15977	≠δMNQRUV	4	Bushing	S-1250	M	@	
or 1	1	15253	4	δMNQRUV	4	δMNQRUV	4	δMNQRUV	4	δMNQRUV	4	6	1	15973	δ	3	Snap ring	S-1251	Q	@	
2	1	81551	4	≠δ	4	≠δ	4	≠δ	4	≠δ	4	7	1	15972	≠δ	3	Gear main drive (RT-613) replaced by K-1670	S-1252	R	@	
3	1	15971	—	—	—	—	—	—	—	—	—	or 1	88534	—	@	—	Gear main drive (RT-613) replaced by K-1671	S-1253	N	@	
4	1	16224	—	—	—	—	—	—	—	—	—	or 1	18438	—	—	—	Gear main drive (RT-613) replaced by K-1671	S-1254	V	@	
or 1	1	16281	—	—	—	—	—	—	—	—	—	or 1	18448	—	—	—	Gear main drive (RT-613) replaced by K-1671	S-1255	U	@	
or 1	1	16282	—	—	—	—	—	—	—	—	—	8	2	X-1-803	—	2	Nut 1/2"	S-1334	K	@	
or 1	1	16283	—	—	—	—	—	—	—	—	—	9	2	X-10-801	—	2	Washer 1/2"				
or 1	1	16284	—	—	—	—	—	—	—	—	—	10	2	16789	—	2	Washer				
or 1	1	16844	—	—	—	—	—	—	—	—	—	11	2	15045	≠δ	8	Bearing				
or 1	1	18260	—	—	—	—	—	—	—	—	—	12	2	16234	≠δ	2	Gear idler				
or 1	1	18262	—	—	—	—	—	—	—	—	—	13	2	16794	K	@	Idle shaft order S-1334				
or 1	1	18255	—	—	—	—	—	—	—	—	—	14	1	81505	≠δ	4	Bearing				
or 1	1	18261	—	—	—	—	—	—	—	—	—	15	1	16790	≠δ	1	Washer				
or 1	1	18263	—	—	—	—	—	—	—	—	—	16	6	1813	S	12	Spring				
or 1	1	18264	—	—	—	—	—	—	—	—	—	17	1	16793	—	1	Ring				
or 1	1	18441	—	—	—	—	—	—	—	—	—	18	1	16792	≠δS	3	Retainer				
or 1	1	18444	—	—	—	—	—	—	—	—	—	19	1	14993	≠δS	3	Snap ring				
or 1	1	18442	—	—	—	—	—	—	—	—	—	20	2	15981	≠δS	6	Retainer				
or 1	1	18443	—	—	—	—	—	—	—	—	—	21	2	15748	≠δS	6	Lockwasher				
or 1	1	18445	—	—	—	—	—	—	—	—	—	22	4	X-8-600	≠δS	6	Capscrew 3/8"-16 X 1				
or 1	1	18446	—	—	—	—	—	—	—	—	—	23	2	62506	K	—	Roll pin				
§ THE PARTS WITH HELIX CLUTCHING TEETH MUST BE USED IN SETS ONLY. DO NOT MIX. ALSO SEE PAGE 23. NEW STYLE INPUT SHAFTS MUST BE USED WITH HELIX CLUTCHING TEETH.																					
* SEE K-1670 PAGE 21 AND 23.																					
© SEE K-1671 PAGE 21 AND 23.																					

§ THE PARTS WITH HELIX CLUTCHING TEETH MUST BE USED IN SETS ONLY. DO NOT MIX. ALSO SEE PAGE 23. NEW STYLE INPUT SHAFTS MUST BE USED WITH HELIX CLUTCHING TEETH.

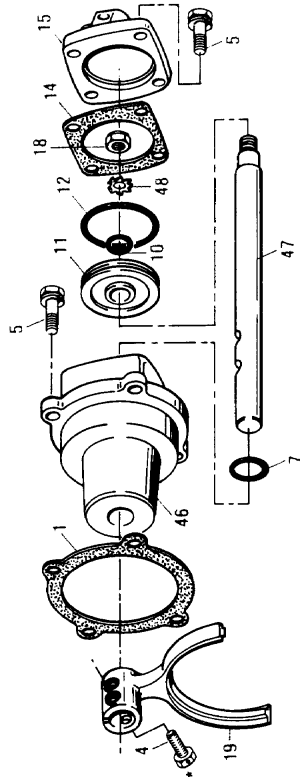
2. SEE K-1670 PAGE 21 AND 22

SEE K-1671 PAGE 21 AND 23

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

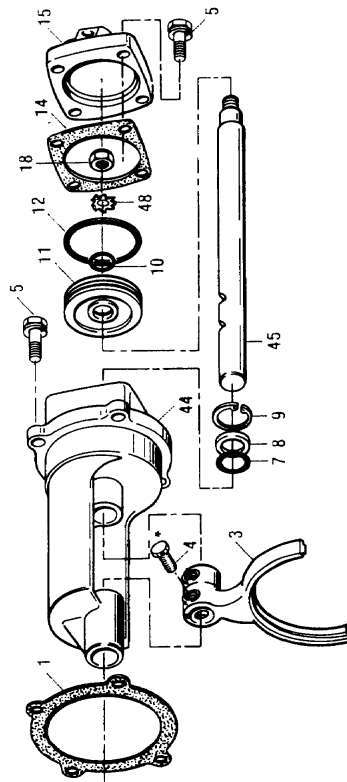
RANGE CYLINDER ASSEMBLY

Current Production



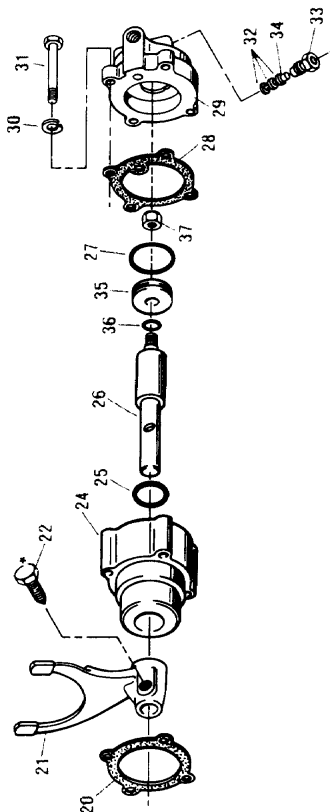
Cut 427-4/80

RANGE CYLINDER ASSEMBLY



Cut 429A-4/80

INTERMEDIATE CYLINDER ASSEMBLY



Cut 444-4/79

*Note: Use lock wire at this position

*Note: Use lock wire at this position

QTY ITEM	USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
1	1	14347	Gasket	d	—
3	1	14338	Shift yoke		2
4	2	X-7-810	Bolt 1/2"-20 x 2"		—
5	8	X-8L-604	Capscrew 3/8"-16 x 1-1/4"		—
7	1	14765	"O" ring	≠Ødj m	—
8	1	14766	Ring		—
9	1	14767	Snap ring		4
10	1	14345	"O" ring	≠Ødj m	—
11	1	14341	Piston	d	2
12	1	14344	"O" ring	≠Ødj m	—
14	1	14349	Gasket	≠Ødj m	—
15	1	14799	Cylinder cover		1
18	1	X-1-1000	Nut 5/8"-18 replaced by X-1010		—
see * note					
or 1	1	X-1-1010	Nut 5/8"-18	≠Ødj km	2
19	1	16775	Shift yoke		2
20	1	14632	Gasket	λ	—
21	1	16813	Shift yoke		2
22	1	3220	Lockscrew		—
24	1	16801	Auxiliary cylinder	λ	@
25	1	14644	"O" ring	≠λØ km	—
26	1	16804	Yoke bar replaced by K-1527		—
or 1	1	18507	Yoke bar	Φ n	2

QTY. ITEM	USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
27	1	14621	"O" ring	≠λØ km	—
28	1	15720	Gasket	λ	—
29	1	16963	Cylinder cover	s	1
30	4	X-3-500	Lockwasher 5/16"		—
31	4	X-8-507	Capscrew 5/16"-18 x 1-1/2" replaced by X-8L-507		—
or 4	4	X-8L-507	Capscrew 5/16"-18 x 1-1/2"		—
32	3	13653	"O" ring part of item 34	≠w	3
33	1	15719	Plug	s	1
34	1	15512	Insert valve	≠Ø s	4
35	1	14643	Piston	λ	2
36	1	14645	"O" ring replaced by 18506		—
or 1	1	18506	Gasket	≠λØ km n	—
37	1	X-1-702	Nut 7/16"-20	≠λØ m	2
44	1	14784	Auxiliary cylinder		—
replaced by K-1731					
45	1	14339	Yoke bar		2
46	1	16778	Auxiliary cylinder	di	2
47	1	16993	Yoke bar	i	2
48	1	X-3-1006	Lockwasher 5/8"	*	2

PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
A-4145	Cover assembly cylinder	s	@
K-1431	Cylinder kit range	d	@
K-1434	Cylinder kit internal	λ	@
K-1447	"O" ring kit all	m	@
K-1450	"O" ring kit range	j	@
K-1451	"O" ring kit internal	k	@
K-1457	"O" ring kit valve	w	@
K-1527	Replacement kit yoke bar	n	@
K-1771	Replacement kit range cylinder	i	@

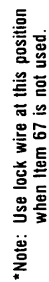
BASIC OVERHAUL KIT	SEE PAGE 4
K-1061	≡

BASIC REBUILD KIT	SEE PAGE 4
K-1851	Ø

* ITEM 48 STAR LOCKWASHER WAS ONLY USED WITH STANDARD NUT --- ITEM 48 AND ITEM 18 X-1-1000 MUST BE REPLACED WITH ITEM 18 X-1-1010 LOCK TYPE NUT.
Φ MUST BE USED IN SETS.

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

INTERMEDIATE HOUSING ASSEMBLY



ITEM	QTY. USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	ITEM	QTY. USED	PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
10	1	15061	Gasket		—	34	1	16809	Gear auxiliary drive		3
11	1	16810	Case housing order S-1405	r	@	35	1	16812	Snap ring	S	2
12	1	A-4074	Trough assembly replaced by K-1019		—	36	1	16815	Gear mainshaft		2
13	1	15701	Plug	r	—	37	1	16811	Sliding clutch		3
14	1	16824	Spacer		—	38	1	16816	Retainer		1
15	1	X-8-430	Capscrew 1/4"-20 x 7/8"		—	39	2	X-7-506	Bolt 5/16"-24 x 1"		—
16	1	16827	Gasket		—	or	2	X-7-501	Bolt 5/16"-24 x 1"		—
17	1	16828	Oil reservoir plate		—				w/19688 lockwasher		—
18	4	X-13-215	Drive screw		1	40	1	16795	Retainer		1
19	1	X-12-1201	Pipe plug 3/4"		4	41	2	16798	Snap ring	S	4
or	1	X-12-1202	Pipe plug 3/4" magnetic		—	42	1	16799	Washer		2
20	1	14373	Magnet	r	—	58	1	17504	Oil trough	iq	2
21	1	X-12-2001	Pipe plug 1-1/4"		—	67	1	19688	Lockwasher		4
22	4	X-8-679	Capscrew 3/8"-16 x 1-3/4"		—						
and	11	X-8-680	Capscrew 3/8"-16 x 1-1/2"		—						
23	2	14334	Dowel		2						
24	2	6579	Stud 5/8"		—						
25	2	X-3-1000	Lockwasher 5/8"		—						
26	2	X-1-1000	Nut 5/8"-18		—						

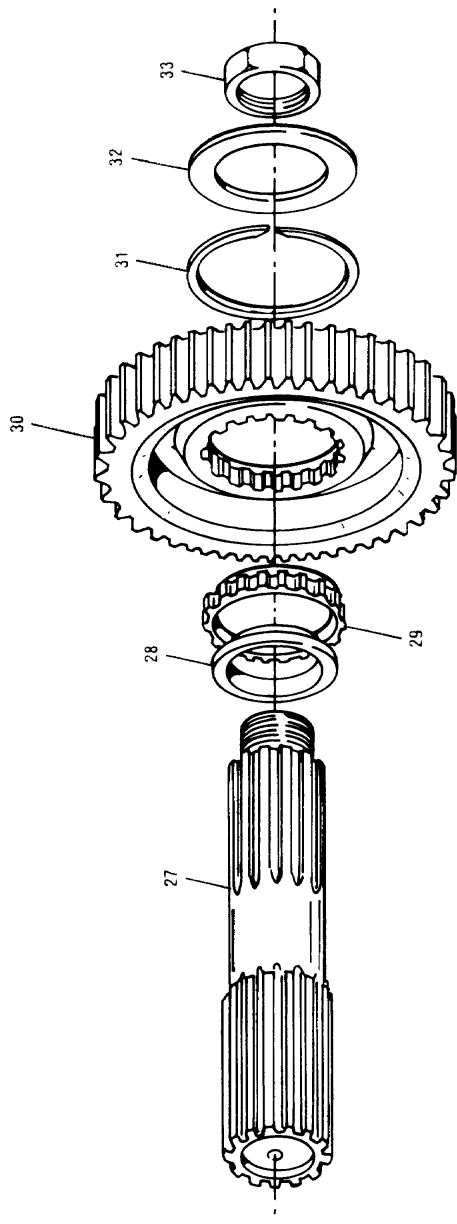
S Small parts kit K-1513

† USE ONLY WITH 17503 OIL RESERVOIR PLATE ITEM 54 PAGE 33

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

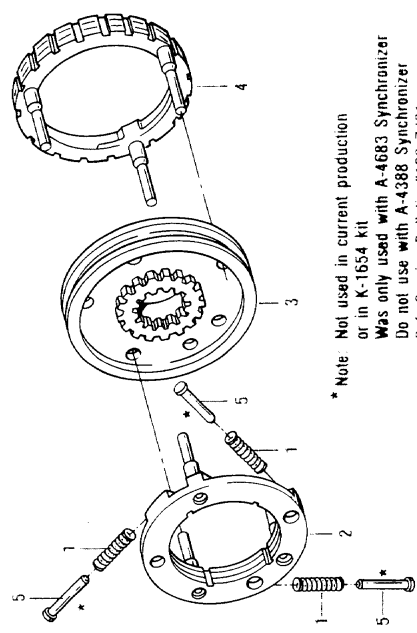
AUXILIARY MAINSHAFT ASSEMBLY

AUXILIARY MAINSHAFT ASSEMBLY



Cut 550-11/84

SYNCHRONIZER ASSEMBLY



* Note Not used in current production
or in K-1654 kit
Was only used with A-4683 Synchronizer
Do not use with A-4388 Synchronizer
Ref. Service Bulletin #130 7/81

Cut 6460B-3/84

QTY. USED PART NO.			DESCRIPTION		SYM- BOL	STOCK QTY.	QTY. USED PART NO.			DESCRIPTION		SYM- BOL	STOCK QTY.
ITEM							ITEM						
1	3	14897	Spring		≡	18	27	1	16796	Mainshaft			2
2	1	A-4194	Synchronizer high <i>replaced by A-4388</i>		⊙	—	28	1	14332	Washer		S	4
	or 1	A-4388	Synchronizer high		⊙	6	29	1	14331	Spacer		S	4
	or 1	A-4683	Synchronizer high <i>replaced by A-4388</i>			—	30	1	14326	Gear mainshaft low			2
3	1	16716	Sliding clutch			3	31	1	14327	Snap ring		S	2
4	1	A-3154	Synchronizer low <i>replaced by A-4416</i>			—	32	1	16791	Washer			4
	or 1	A-4416	Synchronizer low		⊙	6	33	1	11956	Nut			6
5	3	19154	Pin (<i>see note in cut</i>)			—							

S Small parts kit K-1513

BASIC OVERHAUL KIT		SEE PAGE 4
K-1061	≡	
BASIC REBUILD KIT		SEE PAGE 4
K-1851	⊕	

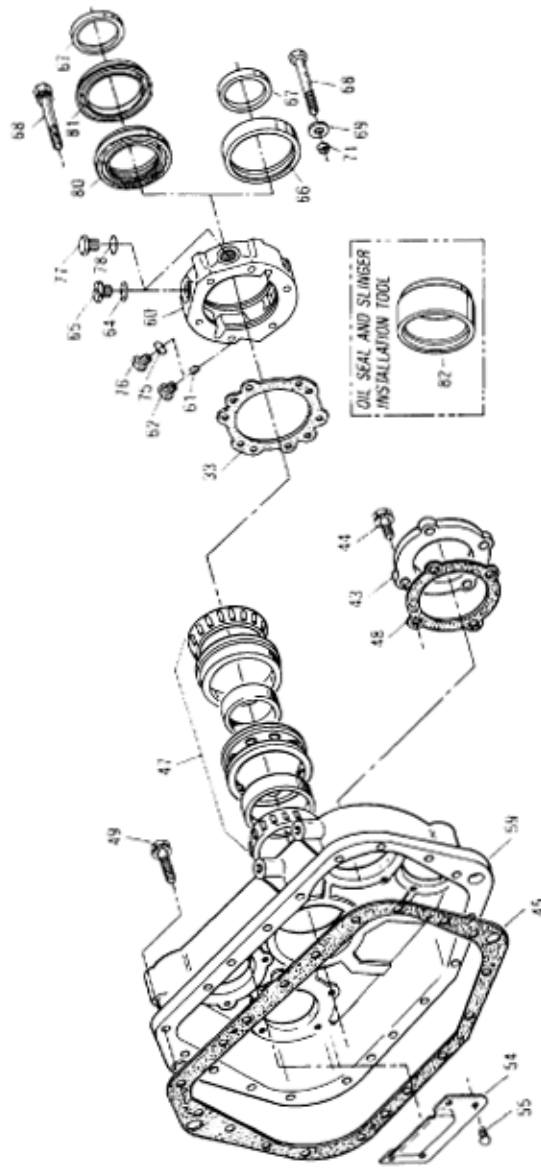
@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

AUXILIARY COUNTERSHAFT - AUXILIARY HOUSING

AUXILIARY COUNTERSHAFT ASSEMBLY



REAR HOUSING ASSEMBLY



ITEM	QTY	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.	ITEM	QTY	USED PART NO.	DESCRIPTION	SYM- BOL	STOCK QTY.
6	2	16817	Bearing	≠δ	8	60	1	20208	Rear bearing cover mechanical and electronic order S-1428		
7	2	A-4096	Countershaft assembly (D/G 16797— Int. 16814—C/S 16806)		2						
8	2	81008	Bearing replaced by 81052		—						
9	2	81052	Bearing	≠δ	8						
33	1	16723	Snap ring	≠δS	8						
43	2	15532	Gasket	gh	—						
43	2	16724	Rear bearing cover		1	or 1	20812				@
44	8	X-8L-600	Capscrew 3/8"-16 × 1 replaced by X-8-686		—						
or 8	X-8-686				—						
45	1	14335	Gasket		—	61	1	7992	Bushing	Qz	@
47	1	14367	Bearing	≠δ	4	62	1	2237	Plug replaced by 20226	h	—
48	2	17097	Gasket		—	or 1	20226			h	—
49	17	X-8L-602	Capscrew 3/8"-16 × 1-1/4"		—	64	1	17179	Gasket	h	—
and 2	X-3-600		Lockwasher 3/8"		—	65	1	17178	Plug magnetic speedo	h	—
and 2	X-8-614		replaced by X-8L-614		—	66	1	14337	Oil seal replaced by 19109	h	6
or 2	X-8-614		Capscrew 3/8"-16 × 2		—	or 1	19109			δh	6
or 2	X-8L-614		replaced by X-8L-614		—	67	1	14375	Sleeve speedo replacement		—
or 8	X-8L-604		Capscrew 3/8"-16 × 2		—	68	5	X-8-616	Capscrew 3/8"-16 × 2-3/4"		—
and 9	X-8L-602		Capscrew 3/8"-16 × 1-1/2	1x	—	and 1	X-8-682				—
and 2	X-3-600		Capscrew 3/8"-16 × 1-1/4	1	—	69	1	17106	Capscrew 3/8"-16 × 3"		—
and 2	X-8-614		Lockwasher replaced by X-8L-614		—	70	2	16807	Gasket		—
or 2	X-8L-614		Capscrew 3/8"-16 × 2		—	71	1	19709	Spacer		—
or 2	X-8L-614		replaced by X-8L-614		—	75	1	14142	Collar	h	6
54	1	17503	Capscrew 3/8"-16 × 2	1	—	76	1	20226	"O" ring	h	—
55	4	X-13-217	Oil reservoir plate	±qtvxz	@	77	1	20224	Plug mechanical	h	—
59	1	16843	Drive screw	qtvxz	@	78	1	20225	Plug electric	h	—
or 1	17391		Rear housing replaced by S-1300		—	or 1	13679		"O" ring use w/plug	h	—
or 1	17391		Rear housing w/oil cooler		—	80	1	20807	"O" ring use w/sensor	h	—
or 1	18765		order S-1001	z	@	81	1	20808	Oil seal	h	6
or 1	18765		Rear housing w/oil cooler		—	82	1	71219	Oil seal slinger	h	6
or 1	18764		order S-1301	1v	@				Oil seal and slinger	h	—
or 1	18787		Rear housing order S-1300	1x	@				installation tool	h	—
or 1	18787		Rear housing order S-1300	1x	@				order K-1933	h	@

† STARTING WITH OCT 1977 PRODUCTION NEW
BRACKET ITEM 49 PAGE 9 AND AUXILIARY
HOUSINGS ITEM 59 PAGE 35

• MAJOR PARTS OF WELDED ASSEMBLY

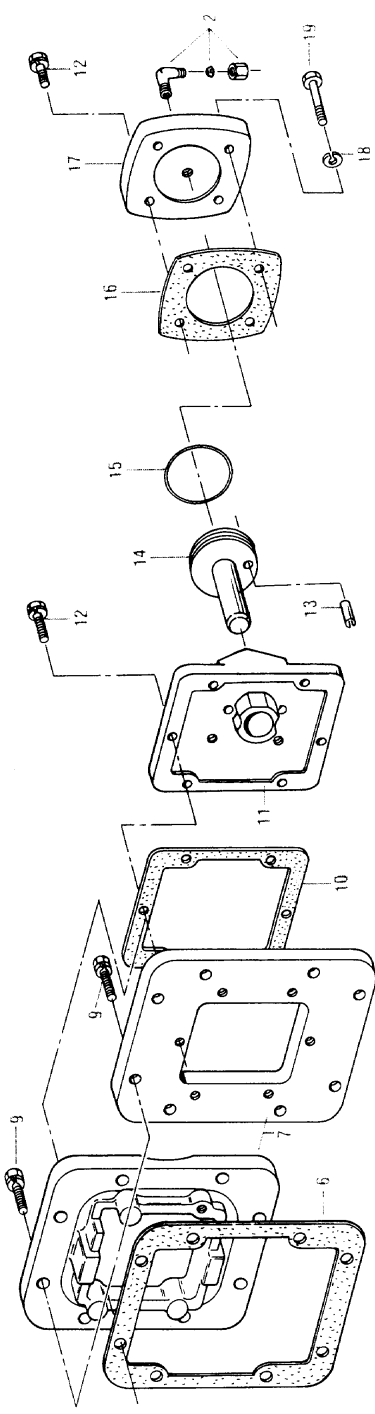
Ω NOTE: Cover may be rotated 180° to proper opening
inter opening location

⌈ NOTE: Oil seal item 80 must be used with oil seal
slinger item 81 output yoke or flange must
have machined step for slinger mounting

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY

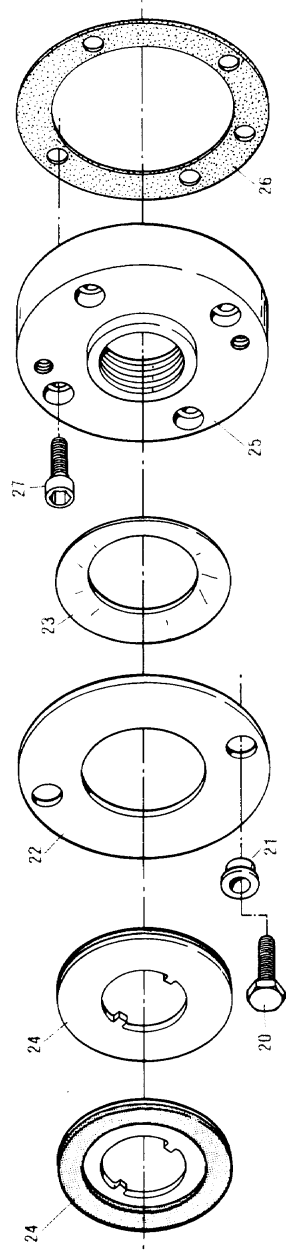
COUNTERSHAFT BRAKE - UPSHIFT BRAKE

COUNTERSHAFT BRAKE
ASSEMBLY



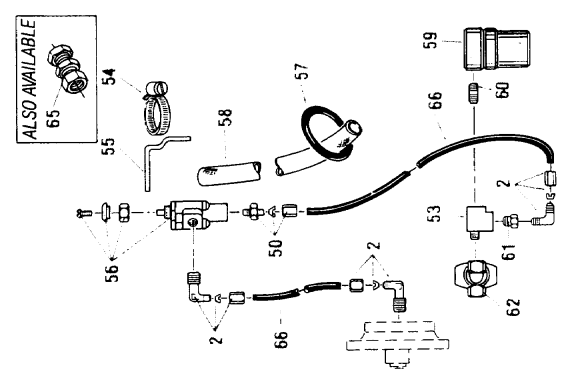
Cut 644-2/80

UPSHIFT BRAKE
ASSEMBLY



Cut 623-4/79

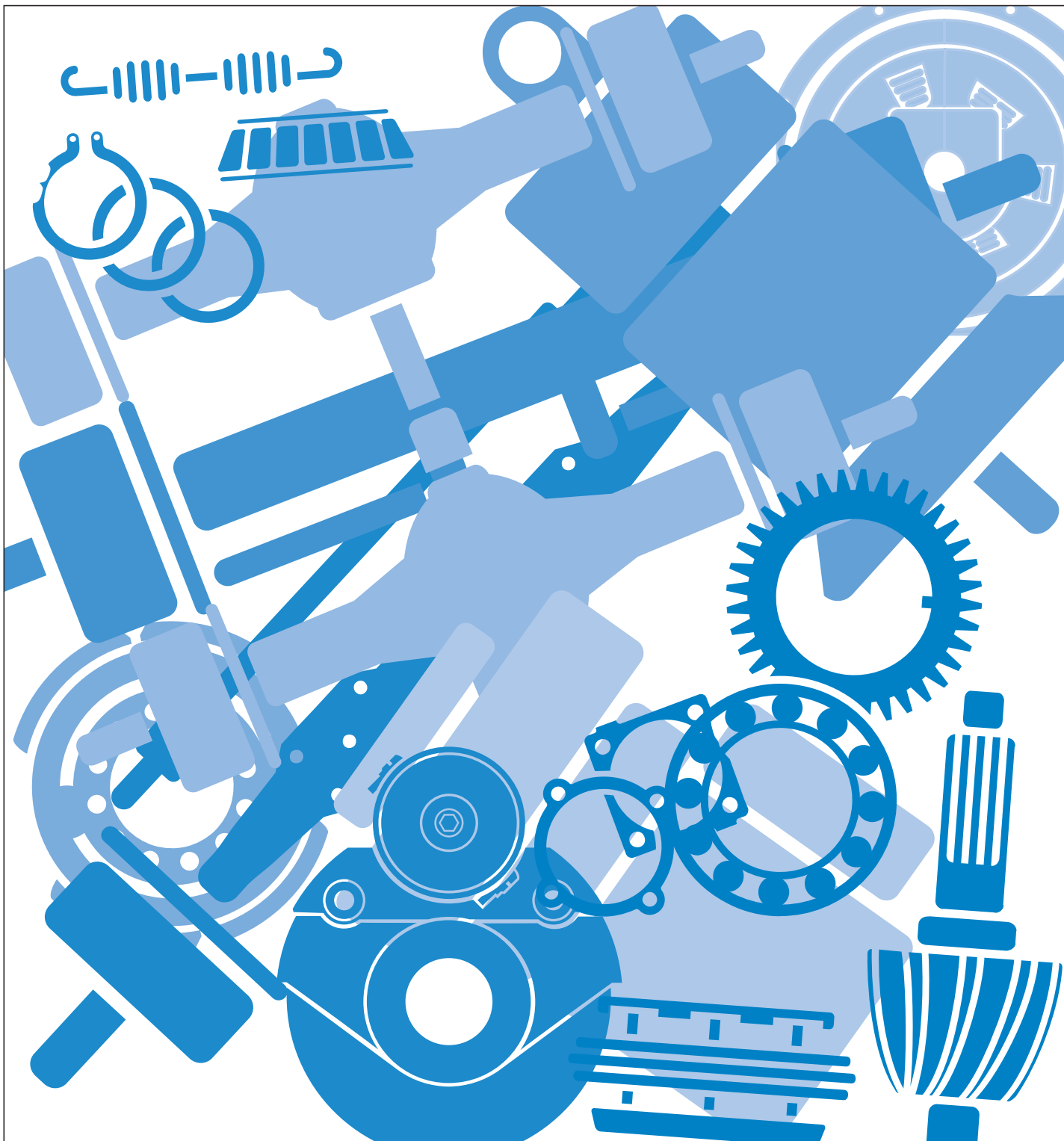
COUNTERSHAFT BRAKE
AIR SYSTEM



Cut 84-11/84

QTY. USED			SYM- BOL			STOCK QTY.			SYM- BOL			STOCK QTY.		
ITEM	USED	PART NO.	DESCRIPTION			ITEM	USED	PART NO.	DESCRIPTION			SYM- BOL	QTY.	
2	1	85002	Elbow assembly 1/8" pipe			23	1	16972	Spring			GH	—	
or 1	84502		Elbow 1/8" pipe			24	2	16973	Disc			GH	—	
and 1	83501		Grip nut			25	1	16970	Front bearing cover			GH	—	
and 1	83001		Compression sleeve			26	1	15059	Gasket			GH	—	
6	1	16929	Gasket			27	4	X-8-678	Capscrew 3/8"-16 X 1"			GH	—	
7	1	15594	Adapter plate replaced by K-1712			50	84002		Connector assembly 1/8"			GH	—	
or 1	18471		Adapter plate order K-1712			or 1	82502		Connector 1/8" pipe			GH	—	
9	8	X-8L-703	Capscrew 7/16"-14 X 1"			and 1	83501		Grip nut			GH	—	
or 8	X-8L-722		use w/15594			and 1	83001		Compression sleeve			GH	—	
10	1	1684	Capscrew 7/16"-14 X 1-1/4"			53	16975		Tee			GH	—	
11	1	16656	Gasket			54	16924		Clamp			GH	—	
12	6	X-8L-604	PTO brake housing			55	16914		Bracket			GH	—	
13	1	62515	Capscrew 3/8"-16 X 1-1/4"			56	16859		Actuator valve			GH	4	
14	1	16658	Roll pin			57	13571		"O" ring			GH	—	
15	1	16660	Piston			58	80000		Sheathing			GH	—	
16	1	16661	"O" ring			59	16743		Air regulator valve			GH	4	
17	1	16659	Gasket			60	16741		Nipple 1/4"			GH	—	
18	2	X-3-600	PTO brake cover			61	9332		Bushing 1/4 X 1/8			GH	—	
19	2	X-8-607	Lockwasher 3/8"			62	A-4041		Air filter assembly			GH	4	
20	2	X-8-677	Capscrew 3/8"-16 X 2-1/4"			63	84101		Connector 1/8" nylon tubing			GH	—	
21	2	16971	Capscrew 3/8"-16 X 1"			or 1	NPN		Body order 84101			GH	—	
22	1	16969	Sleeve			and	83501		Grip nut			GH	—	
			Brake plate			and	83001		Compression sleeve			GH	—	
						66	1	82010	Nylaflo tubing black (20')			GH	@	

@ SEE PAGES 2 AND 3 FOR STOCKING QUANTITY



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