

Allied Systems
COMPANY
WINCH DIVISION

PARTS MANUAL

**TOWING WINCH
W8K / D7K
(CAT ONLY)**

Date Purchased _____

Model Number _____

Serial Number _____

LIST OTHER SPECIAL EQUIPMENT

**We reserve the right to make changes in design or add improvements
without incurring the obligation to make such changes in
Winches previously manufactured.**

INDEX

SECTION A Introduction



SECTION B Frames, Covers and Mounting Studs



SECTION D Gear Train and Shafts



SECTION E Brake and Shifter Mechanism—Direct Drive



SECTION F Brake and Hydraulic System—Power Control



SECTION G Optional Equipment



SECTION Q Numerical Index



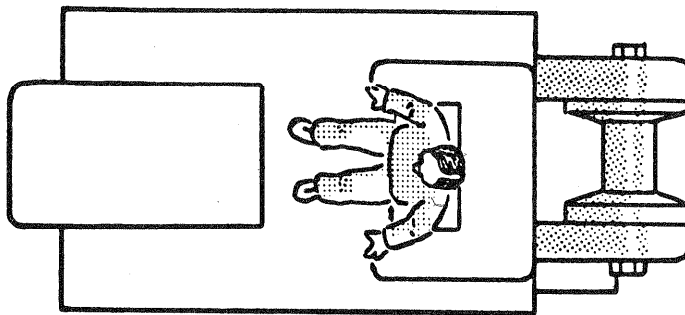
UNIT IDENTIFICATION
UNIT SERIAL NO.

X	O	X	0000	X
I	I	I	I	I
(1)	(2)	(3)	(4)	(5)

- (1) & (2) The first letter and number denote the design series and model of the unit.
- (3) The second letter denotes the plant at which the unit was manufactured.
- (4) The number series denotes the serial number of the unit.
- (5) The final letter denotes the year of manufacture starting with "A" in 1957. The letters "I", "O", and "Q" will not be used.

**Parts Referred To In This Book As Right Or Left Hand Parts
Are In Accordance With The Sketch Below**

R. H. Side



L. H. Side

CAUTION!

**Never Attempt To Clean, Oil Or Adjust A Machine
While It Is In Motion**

**NOTE: All Studs and Capscrews used in this Winch
are Heat-treated.**

USE HYSTER APPROVED PARTS... it pays

Section A

INTRODUCTION

USE HYSTER APPROVED PARTS... *it pays*

How To Use The Illustrated Parts Manual

This Parts Book describes and illustrates assemblies, sub-assemblies and detail parts needed for service replacement.

D89B
Form 853
REVISION NO. 2
2/68

INDEX

Section Q NUMERICAL INDEX

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
142	F3	16165	F2	18889	F2		
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9413	F12	16352	D1	19871	F3		
9455	D1	16386	D3	19987	D5		
10389	D4	16397	D2	21420	B2		
12479	D3	16448	F2	27187	F8		
12480	D6	16466	F2	29582	F4		
12823	D5	16482	F4	30059	D2		
2898	F3	16484	F4	30080	D2		
99	F6	16485	F10				
7	D2	16486					
	D1						

Service, Operation and Installation Instructions

Frames, Covers and Mounting

Gear Train and Shaft Gear

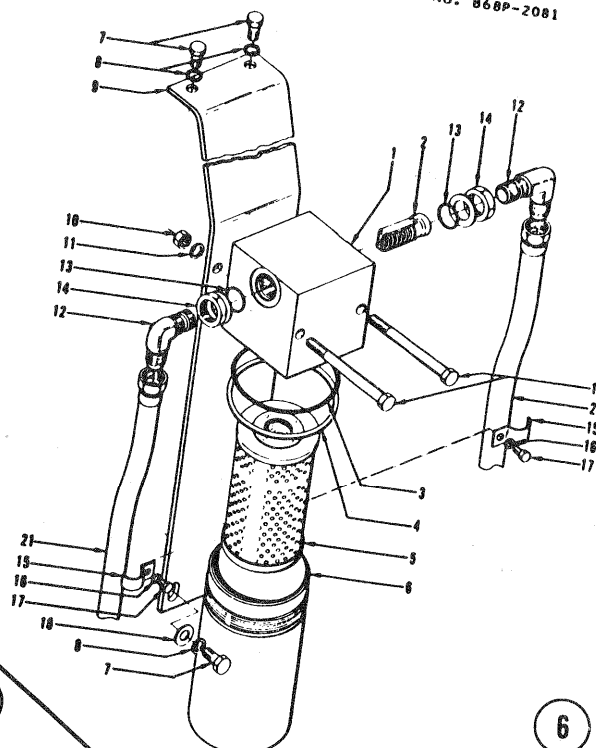
Hydraulic System and

Optional Equipment

Numerical Index

SECTION Q

FILTER
FIRST USED ON WINCH SERIAL NO. 868P-2081



KEY
A-FOR D8 TRACTORS.
B-FOR D9 TRACTORS.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	147461	FILTER	1
2	149295	HEAD ASSEMBLY	1
3	149297	RELIEF VALVE ASSEMBLY	1
4	149298	O-RING	1
5	147463	RING-BACK UP	1
6	149296	ELEMENT	1
7	14829	CASE	1
8	15158	CAPSCREW-1/2 UNC X 1	1
9	154760	LOCKWASHER-1/2	1
10	151713	PLATE	4
11	15057	NUT-7/16 UNC	4
	15157	LOCKWASHER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
12	16562	ELBOW	1
13	16487	O-RING	1
14	16589	LOCKNUT	1
15	151714	CLAMP	2
16	15156	LOCKWASHER-3/8	1
17	16870	CAPSCREW-3/8 UNC X 1/2	1
18	38760	WASHER	2
19	18578	CAPSCREW-7/16 UNC	2
20	147455	WASHER	2

When The Part Number Is Not Known

1. **USE:** Determine the function and application of the part required. Turn to the index page immediately behind the front cover and select the most appropriate section.
2. Line up the black arrow with the black tab on

the index page of the selected section. Use the section index to determine the assembly which would normally contain the part required. Proceed then to locate the part on the assembly breakdown page.

When The Part Number Is Known

3. Use the numerical index (section Q) to find the part number. Turn to the page listed and locate the required part in the assembly breakdown.

GENERAL: The assembly breakdowns include part numbers, description, quantities required, keys and footnotes to help in selecting the correct parts.

4. Keys are used to show effective serial numbers, two or more similar assemblies. Select the appropriate key, "A," "B," "C" or "D" and find the required part in the corresponding column.
5. Indent numbers are used to indicate assemblies and sub-parts of assemblies. Number 1 is the major assembly. Part descriptions which are indented under 2, 3 or 4 are sub-parts of that major assembly shown above.
6. Quantities shown are for one assembly. Note that two assemblies are shown, but the quan-

ties of the sub-parts are indicated as one. This means one per assembly.

7. The revision number and date on the index page, indicates the latest printing of the manual.

DEALERS NOTE: When supplements are issued to up-date the manuals, the index page with the latest revision number and date are included with the supplement. Be sure the index pages are added to the manuals in your possession.

ORDERING PARTS:

When ordering replacement parts, give the winch serial number, manual form number (and revision number, if any), part number, name of part and quantity required.

For any further information on parts, service, or ordering, consult your Hyster dealer.

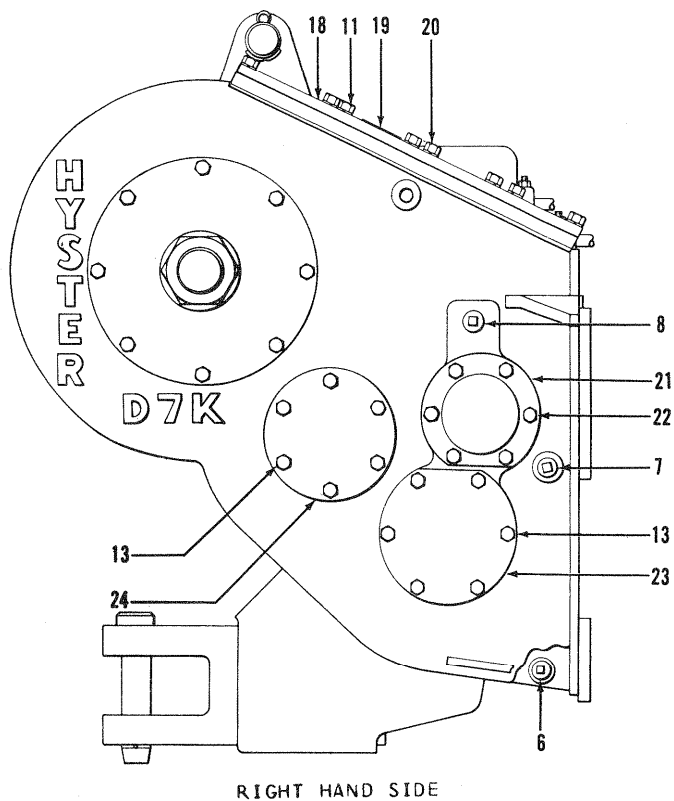
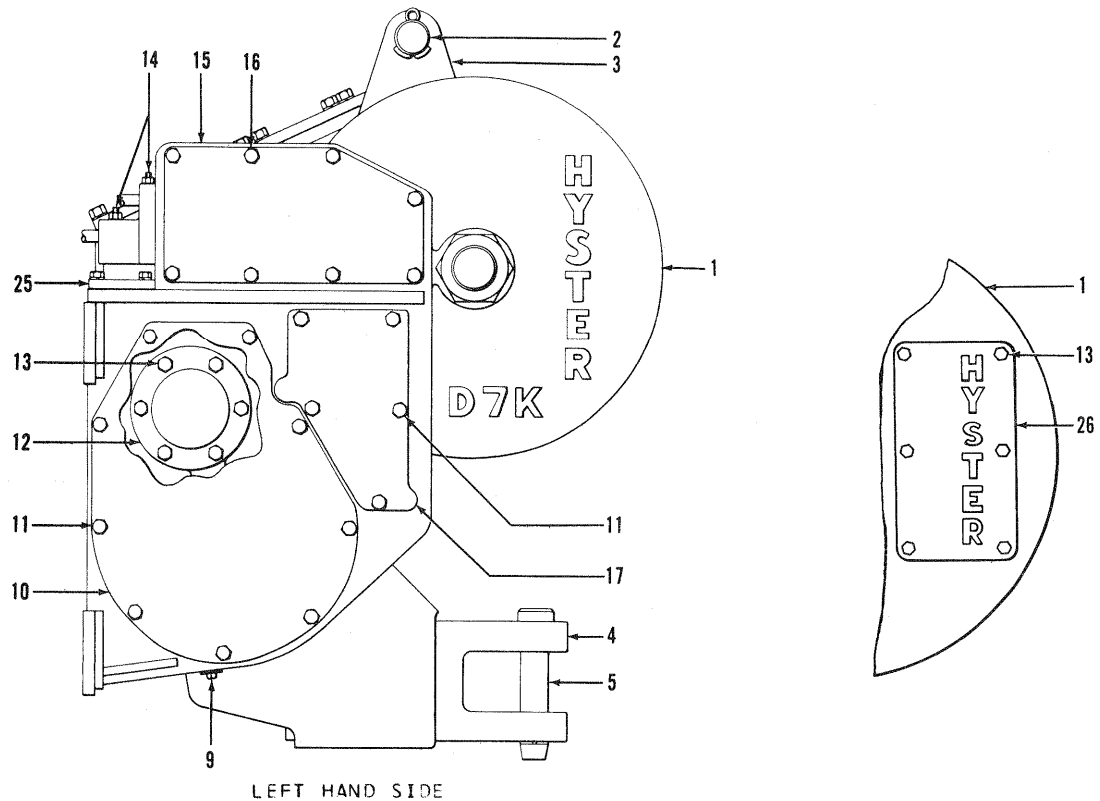
Section B

FRAMES, COVERS AND

MOUNTING STUDS

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FRAMES AND COVERS

FRAMES AND COVERS

KEY

A-FOR DIRECT DRIVE WINCHES.

B-FOR POWER CONTROL WINCHES.

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.		REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.	
			A	B				A	B
1	.....	FRAME-WINCH	1	1	15	164691	COVER	1	1
2	92606	ROD-TIE	1	1	15	* 164708	GASKET	1	1
2	# 196279	ROD-TIE	1	1	16	16598	CAPSCREW-3/8 UNC X 7/8	8	8
2	15272	COTTER-3/8 X 3	2	2	16	15156	LOCKWASHER-3/8	8	8
3	173609	BRACKET-TIE ROD	2	2	17	96425	COVER	1	1
3	# 196278	BRACKET-TIE ROD	2	2	17	* 96426	GASKET	1	1
4	15064	NUT-7/8 UNC	6	6	18	142760	COVER-TOP R.H.	1	1
4	178020	BRACKET-RIGID DRAWBAR	1	1	18	# 192956	COVER-TOP R.H.	1	1
4	178025	BRACKET-SWIVELING DRAWBAR	1	1	18	* 142761	GASKET	1	1
4	142736	BRACKET-R.H. } SWINGING	1	1	19	15319	PLUG-PIPE, 1 1/2	1	1
4	142735	BRACKET-L.H. } DRAWBAR	1	1	20	15306	PLUG	1	1
4	189496	SPACER-SWINGING DRAWBAR	2	2	21	95948	RETAINER-BEARING	1	..
4	189497	CAPSCREW-HT, 7/8 UNC X 9	6	6	21	96472	RETAINER-BEARING	..	1
4	15164	LOCKWASHER-7/8	6	6	21	110934	SHIM-.005	AR	..
5	95959	PIN-DRAWBAR } RIGID	1	1	21	110935	SHIM-.007	AR	..
5	15273	COTTER-3/8 X 2 1/2 } DRAW.	1	1	21	110936	SHIM-.020	AR	..
5	.....	PIN-DRAWBAR } SWIVEL.DRAW.,	1	1	21	134107	SHIM-.005	..	AR
5	.....	COTTER } SEE PAGE B2	1	1	21	134108	SHIM-.007	..	AR
6	35503	PLUG-MAGNETIC, 3/4	1	1	21	134109	SHIM-.020	..	AR
7	15304	PLUG-PIPE, 3/4	1	1	22	178402	CAPSCREW-HT, 1/2 UNC X 1 1/4	6	7
8	15305	PLUG-PIPE, 1	1	..	22	15158	LOCKWASHER-1/2	6	7
9	15304	PLUG-PIPE, 3/4	1	..	23	96433	RETAINER-BEARING	1	1
9	35503	PLUG-MAGNETIC, 3/4	..	1	23	134081	SHIM-.005	AR	AR
10	96423	COVER-BRAKE	1	1	23	134082	SHIM-.007	AR	AR
10	@ 196024	COVER-BRAKE	1	1	23	134083	SHIM-.020	AR	AR
10	* 96424	GASKET	1	1	24	92623	COVER	1	1
10	@ 196023	GASKET	1	1	24	134074	SHIM-.005	AR	AR
11	178403	CAPSCREW-HT, 1/2 UNC X 1	25	25	24	134075	SHIM-.007	AR	AR
11	15158	LOCKWASHER-1/2	25	25	24	134076	SHIM-.020	AR	AR
12	95961	CARRIER-BEARING } BEVEL GEAR	1	..	25	.....	COVER-TRANS., PAGE E1 OR		
12	133911	CARRIER-BEARING } SHAFT	..	1	25		F1 OR F3	1	1
12	110934	SHIM-.005	AR	..	26	186459	COVER-FILTER	..	1
12	110935	SHIM-.007	AR	..	26	186460	GASKET	..	1
12	110936	SHIM-.020	AR	..		168728	GASKET KIT	1	..
12	133913	SHIM-.005	..	AR		168729	GASKET KIT	..	1
12	133914	SHIM-.007	..	AR					
12	133915	SHIM-.020	..	AR					
13	178402	CAPSCREW-1/2 UNC X 1 1/4	18	23					
13	15158	LOCKWASHER-1/2	18	23					
14	16212	SETSCREW-3/8 UNC X 1 1/4	2	..					
14	15086	NUT-JAM, 3/8 UNC	2	..					

*INCLUDED IN GASKET KIT.

#FIRST USED ON SERIAL NO. E77P-2184 AND

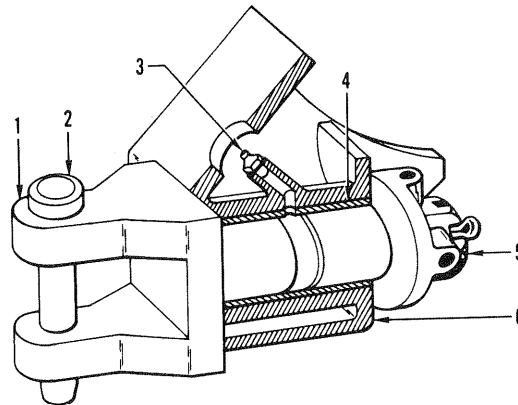
F47P-2155.

@FIRST USED ON SERIAL NO. E77P-2344 AND

F47P-2174 .

SWIVELING DRAWBAR

INCLUDED WITH APPROPRIATE WINCH FRAME

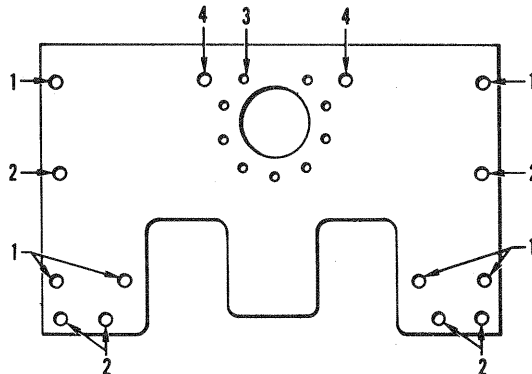


REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	33787	DRAWBAR	1	4	92671	BUSHING	2
2	94369	PIN-DRAWBAR	1	5	33618	NUT-SPECIAL	1
2	15273	COTTER-3/8 X 2 1/2	1	5	15295	COTTER-1/2 X 5	1
3	16002	FITTING-GREASE	1	6		BRACKET-DRAWBAR, SEE PAGE B2	1

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MOUNTING STUDS

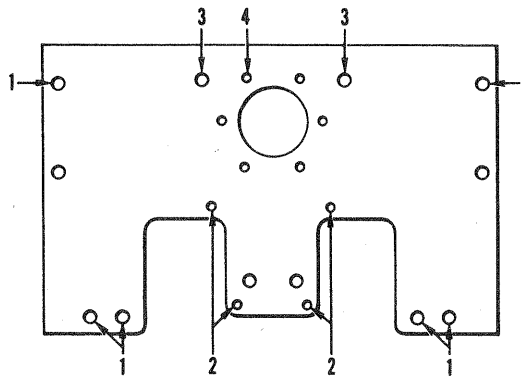
FOR D7 TRACTOR SERIAL NO. 47A1 & UP, 48A1 & UP, 93N1 & UP, 94N1 & UP
AND 572E PIPELAYER SERIAL NO. 65A1 & UP



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4				1 2 3 4	
1	95837	STUD-1 1/4 UNF X 4 11/16	6	4	95835	STUD-1 1/4 UNF X 3 13/16	2
1	15168	LOCKWASHER-1 1/4	6	4	55434	O-RING	2
1	15018	NUT-1 1/4 UNF	6	4	134821	NUT-SLOTTED, 1 1/4 UNF	2
2	18001	PLUG-CORK, #17	6	4	15240	COTTER-5/32 X 2 1/2	2
3	18000	PLUG-CORK, #5	9				

MOUNTING STUDS

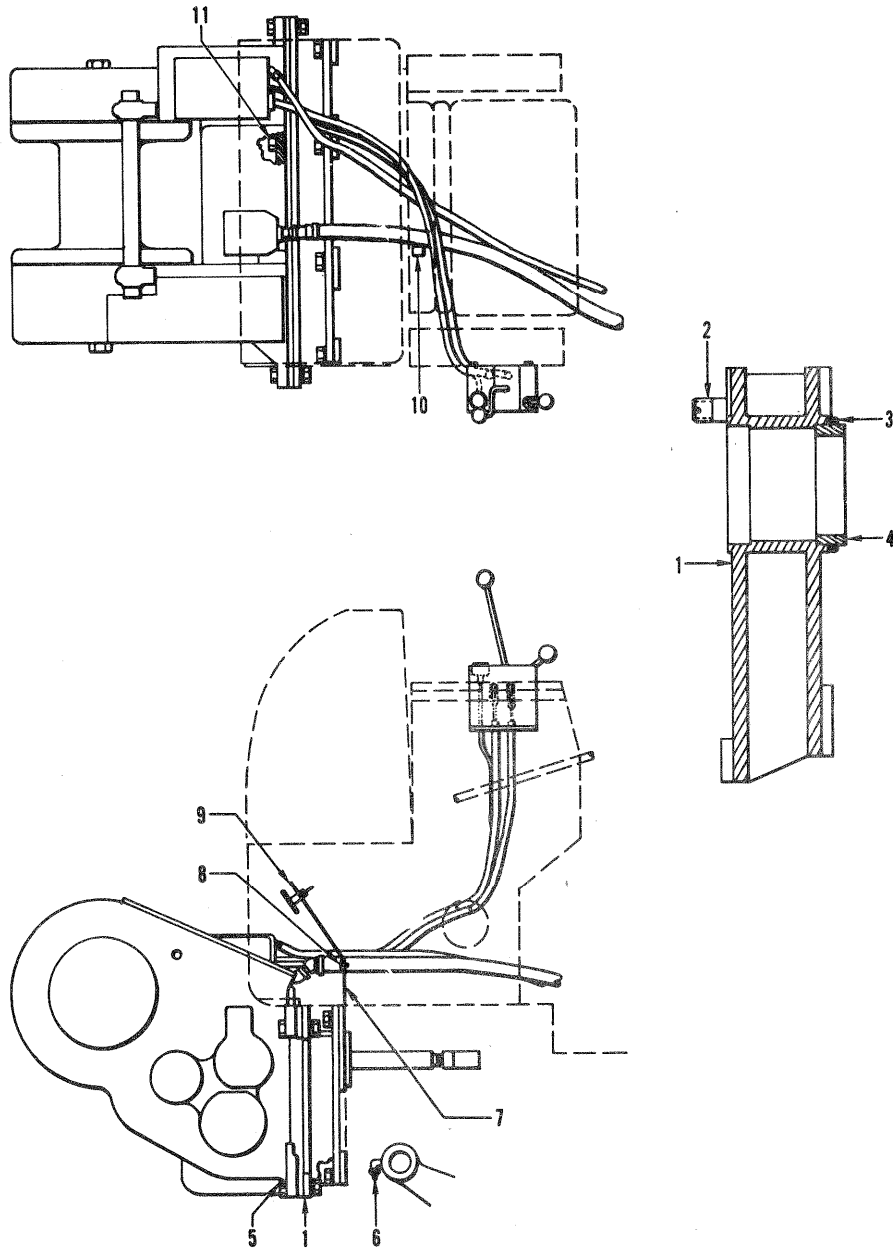
FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4				1 2 3 4	
1	133179	STUD-1 UNS X 4	6	3	36240	STUD-1 1/4 UNF X 4 3/4	2
1	15166	LOCKWASHER-1	6	3	15168	LOCKWASHER-1 1/4	2
1	15016	NUT-1 UNS	6	3	15018	NUT-1 1/4 UNF	2
2	18005	PLUG-CORK, #11	4	4	18004	PLUG-CORK, #7	6

ATTACHING PARTS

FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP



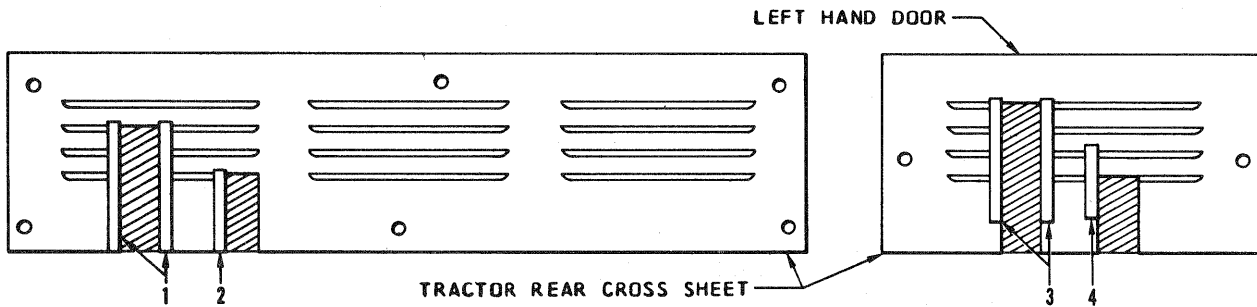
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	143056	ADAPTER-WINCH MOUNTING	1
2	132922	STUD-1 1/4 UNF X 3 1/4	2
3	134118	O-RING	2
4	132921	RING	1
5	133529	CAPSCREW-HT, 1 1/4 UNF X 4 1/2	6
5	15168	LOCKWASHER-1 1/4	6
5	15018	NUT-1 1/4 UNF	6
6	15451	ELBOW-STREET, 1/4	2
7	132927	COVER-LOWER REAR	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
8	18202	CAPSCREW-3/8 UNF X 1 1/4	2
8	15156	LOCKWASHER-3/8	2
8	15006	NUT-3/8 UNF	2
9	132924	COVER ASSEMBLY-REAR	1
10	132931	BRACKET	1
11	55434	O-RING	2
11	134821	NUT-SLOTTED, 1 1/4 UNF	2
11	15240	COTTER-5/32 X 2 1/2	2

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TRACTOR ALTERATIONS

FOR D7 TRACTOR WITH DIRECT DRIVE WINCH



KEY

A-FOR TRACTOR SERIAL NO. 47A2081-47A3395.

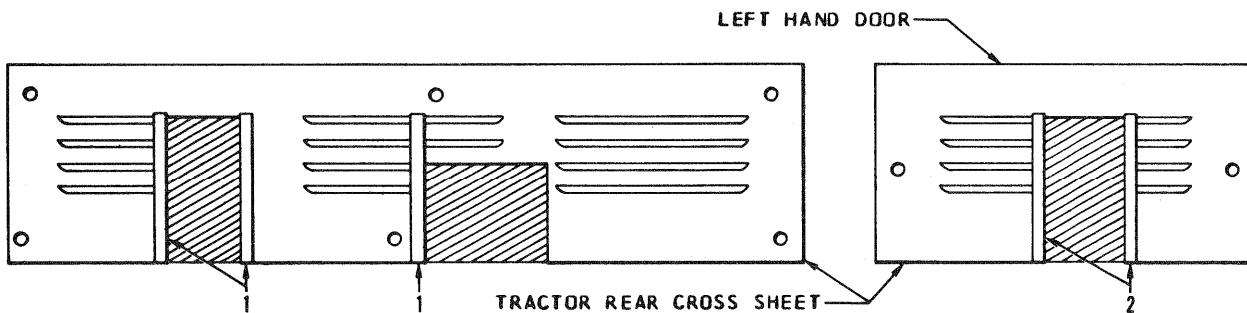
B-FOR TRACTOR SERIAL NO. 47A3396 & UP, 93N1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	135737	STRIP	2	..
2	135738	STRIP	1	..

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
3	135737	STRIP	..	2
4	135738	STRIP	..	1

TRACTOR ALTERATIONS

FOR D7 TRACTOR & 572E PIPELAYER WITH POWER CONTROL WINCH



KEY

A-FOR TRACTOR SERIAL NO. 47A2081-47A3395 AND 48A3471-48A6392.

B-FOR TRACTOR SERIAL NO. 47A3396 & UP, 48A6393 P UP, 93N1 & UP, 94N1 & UP AND 572E PIPELAYER SERIAL NO. 65A1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	165493	STRIP	3	..

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
2	165493	STRIP	..	2

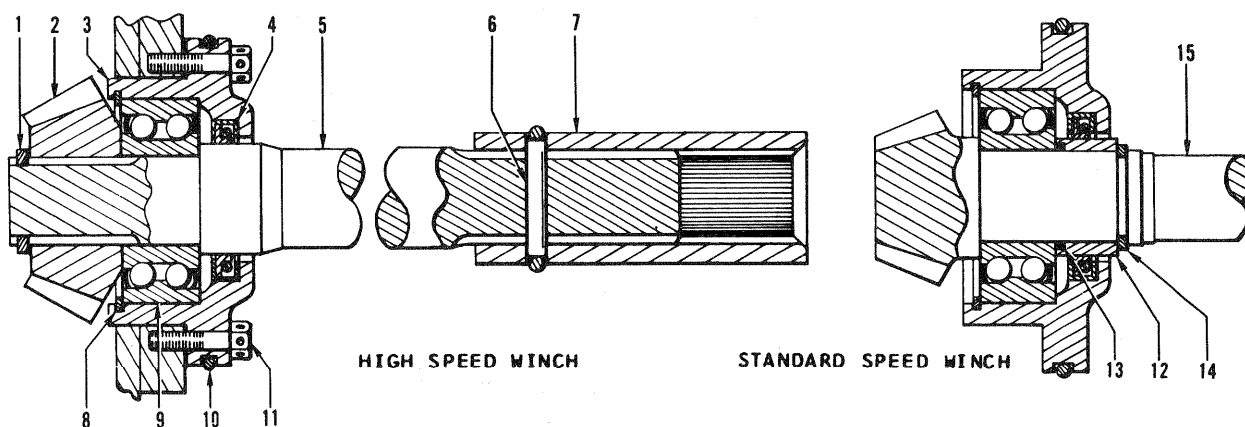
Section D

GEAR TRAIN AND SHAFTS

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OIL BRAKE (Power Control)	D4
POWER TAKE-OFF	D1

POWER TAKE-OFF



KEY

A-FOR D7 TRACTOR SERIAL NO. 47A1 & UP AND 93N1 & UP.

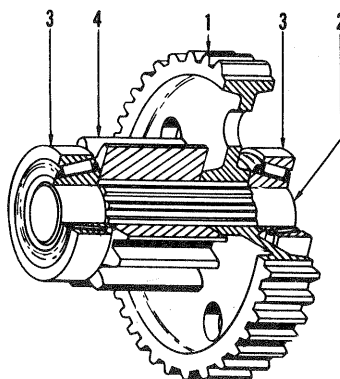
C-FOR D7 TRACTOR SERIAL NO. 48A1 & UP, 94N1 & UP AND 572E PIPELAYER SERIAL NO. 65A1 & UP.

C-FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
1	12916	SNAP RING	1	1	1
2	96020	GEAR-BEVEL, 23 TEETH	1	1	1
3	98362	CARRIER-BEARING	1	1	1
3	134078	SHIM-.005	AR	AR	AR
3	134079	SHIM-.007	AR	AR	AR
4	79389	SEAL-OIL	1	1	1
5	96367	SHAFT-P.T.O.	1	..	..
5	96451	SHAFT-P.T.O.	..	1	..
5	132908	SHAFT-P.T.O.	..	..	1
6	33786	PIN	1	1	..
6	9563	PIN	..	..	1
6	9528	RING-LOCK	1	1	..
6	9554	RING-LOCK	..	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
7	33785	COUPLING	1	1	..
7	97553	COUPLING	..	..	1
8	35573	SNAP RING	1	1	1
9	125399	BEARING-BALL	1	1	1
10	109453	O-RING	1	1	1
11	169671	CAPSCREW-DRILLED HEAD	6	6	6
11	.....	LOCKWIRE	1	1	1
12	96524	SPACER	1	1	1
13	133898	O-RING	1	1	1
14	12944	SNAP RING	1	1	1
15	96368	SHAFT-P.T.O.	1	..	..
15	96452	SHAFT-P.T.O.	..	1	..
15	132909	SHAFT-P.T.O.	..	..	1

INTERMEDIATE GEAR SHIFT



KEY

A-FOR HIGH SPEED WINCH.

B-FOR STANDARD SPEED WINCH.

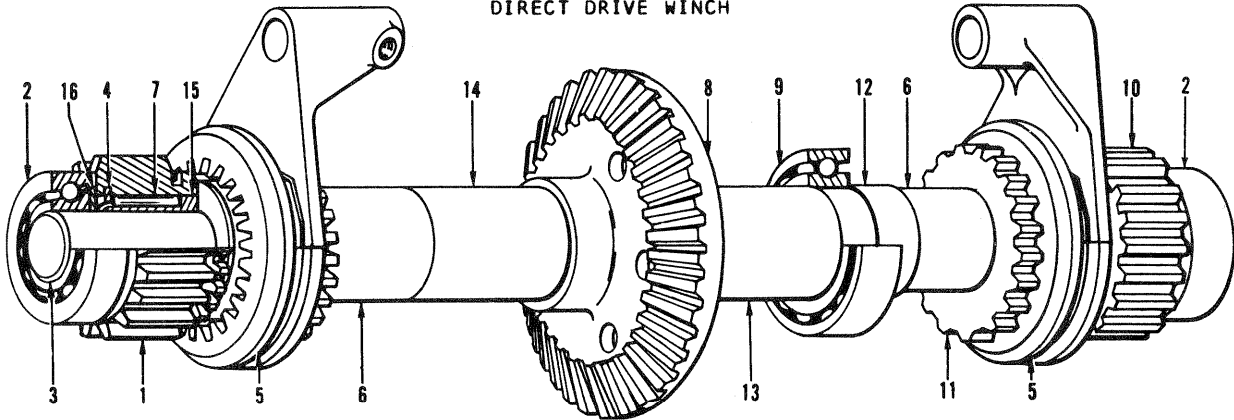
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	96415	GEAR-51 TEETH } INTERMEDIATE	1	..
1	96418	GEAR-54 TEETH } SPEED	..	1
2	92620	SHAFT	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
3	30091	CUP-BEARING	2	2
3	230309	CONE-BEARING	2	2
4	92621	GEAR-DRUM PINION, 15 TEETH	1	1

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BEVEL GEAR SHAFT

DIRECT DRIVE WINCH

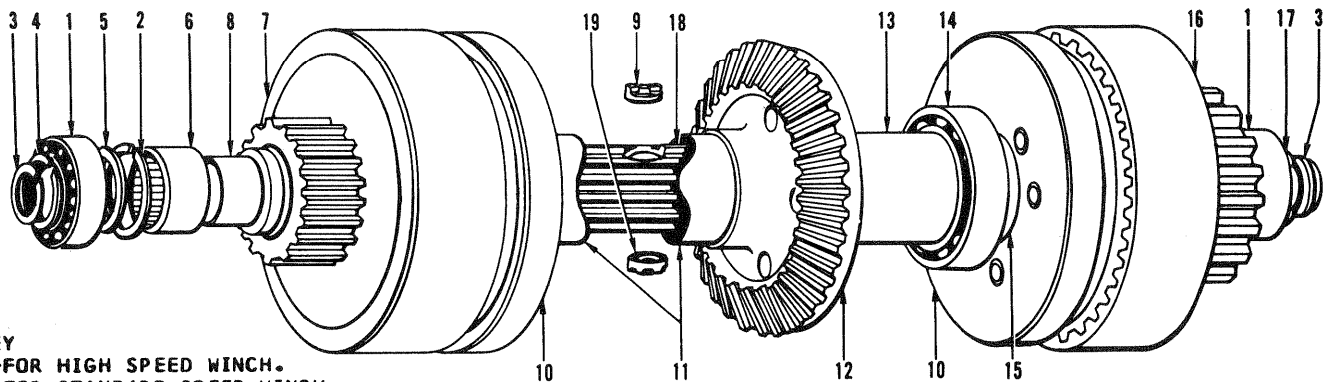


KEY
A-FOR HIGH SPEED WINCH.
B-FOR STANDARD SPEED WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	95944	GEAR-2ND RED., 22 TEETH	1	1
2	230351	CUP-BEARING	2	2
2	230405	CONE-BEARING	2	2
3	96371	SHAFT BEVEL GEAR	1	1
4	58938	SNAP RING	2	2
5	95946	CLUTCH-DENTAL	2	2
6	96372	SPACER	2	2
7	230407	BEARING-ROLLER	2	2
8	96021	GEAR-BEVEL, 45 TEETH	1	..
8	96028	GEAR-BEVEL, 45 TEETH	..	1
9	44316	BEARING-BALL	1	1
10	96413	GEAR-22 TEETH } REVERSE	1	..
10	96416	GEAR-19 TEETH } PINION	..	1
11	95945	HUB-DENTAL CLUTCH	2	2
12	196379	CARRIER-BEARING	1	1
13	196377	SPACER	1	1
14	196376	SPACER	1	1
15	95961	CARRIER-R.H. BEARING	1	1
15	96431	CARRIER-L.H. BEARING	1	1
16	174559	WASHER	2	2

BEVEL GEAR SHAFT

POWER CONTROL WINCH

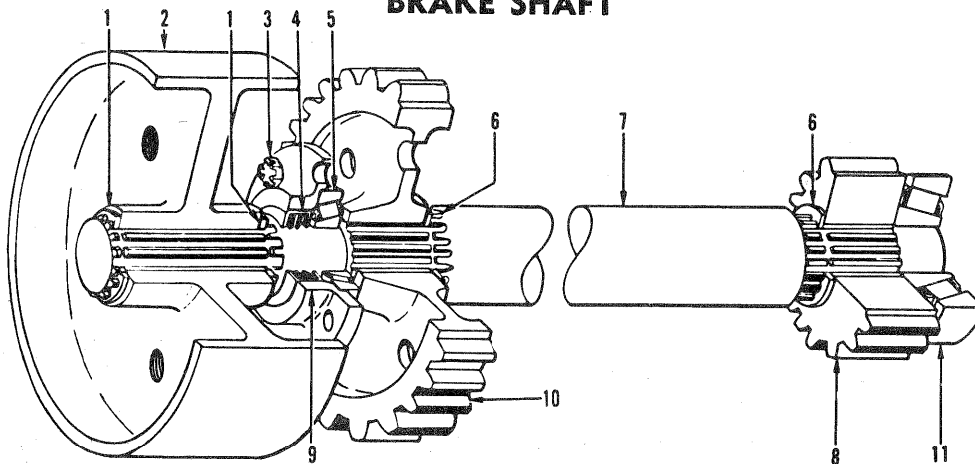


KEY
A-FOR HIGH SPEED WINCH.
B-FOR STANDARD SPEED WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	230351	CUP-BEARING	2	2
1	230405	CONE-BEARING	2	2
2	58938	SNAP RING	2	2
3	95581	RING-SEAL	2	2
4	12916	SNAP RING	1	1
4	* 174560	SNAP RING	1	1
5	95962	WASHER	2	2
5	* 174559	WASHER	2	2
6	230407	BEARING-ROLLER	2	2
7	96469 W	GEAR-22 & 88 TEETH, 2ND REDUCTION SPIDER	1	1
8	95961	CARRIER-R.H. BEARING	1	1
8	96431	CARRIER-L.H. BEARING	1	1
9	96783	SEAL-THREE TEETH	2	2
10	.....	CLUTCH-SEE PAGE D3	2	2
11	196376	SPACER	1	1
12	96021	GEAR-BEVEL, 45 TEETH	1	..
12	96028	GEAR-BEVEL, 45 TEETH	..	1
13	196377	SPACER	1	1
14	44316	BEARING-BALL	1	1
15	196379	CARRIER-BEARING	1	1
16	96495 W	GEAR-22 & 88 TEETH } REVERSE	1	..
16	96497 W	GEAR-19 & 88 TEETH } SPIDER	..	1
17	21014	LOCKNUT-BEARING	1	1
17	21013	LOCKWASHER-BEARING	1	1
17	* 174561	LOCKWASHER-BEARING	1	1
18	96458	SHAFT-BEVEL GEAR	1	1
18	* 174434	SHAFT-BEVEL GEAR	1	1
19	96784	SEAL-TWO TEETH	2	2

*FIRST USED ON SERIAL NO. E77P-1623.

BRAKE SHAFT



KEY

A-FOR HIGH SPEED DIRECT DRIVE WINCH.
 B-FOR STANDARD SPEED DIRECT DRIVE WINCH.
 C-FOR HIGH SPEED POWER CONTROL WINCH.
 D-FOR STANDARD SPEED POWER CONTROL WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.			
			A	B	C	D
1	12940	SNAP RING	1	1	..	..
2	* 92652	WHEEL-BRAKE	1	1	..	..
2	.....	BRAKE-AUTO. } SEE PG. D4	1	1	..	..
2	.....	BRAKE-OIL	..	..	1	1
3	178402	CAPSCREW-H.T., 1/2 UNC X 1 1/4	6	6	..	..
3	15158	LOCKWASHER-1/2	6	6	..	..
4	87656	SEAL-OIL	1	1	..	..
5	230311	CUP-BEARING	1	1	1	1
5	230310	CONE-BEARING	1	1	1	1
6	12915	SNAP RING	2	2	2	2
7	96432	SHAFT-BRAKE	1	1	..	..

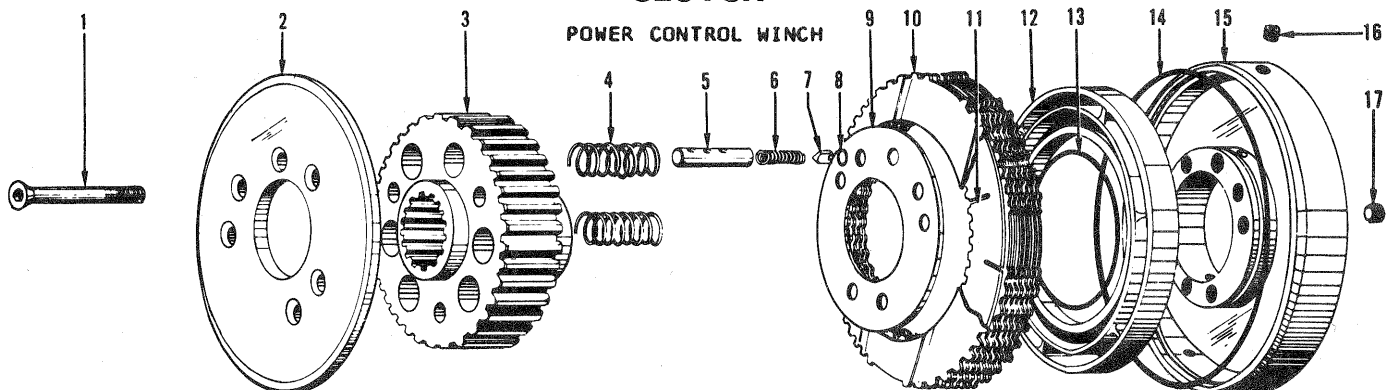
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.			
			A	B	C	D
7	133918	SHAFT-BRAKE	..	..	1	1
8	96414	GEAR-22 TEETH } INTERM.	1	..	1	..
8	96417	GEAR-19 TEETH } PINION	..	1	..	1
9	89727	RETAINER-OIL SEAL	1	1	..	..
9	92649	GASKET	1	1	..	..
10	95969	GEAR-2ND RED., 51 TEETH	1	1	1	1
11	30059	CUP-BEARING	1	1	1	1
11	30080	CONE-BEARING	1	1	1	1

*USED ONLY WITHOUT AUTOMATIC BRAKE.

□INCLUDED IN GASKET KIT 168728.

NOTE-DIRECT DRIVE WINCH BRAKE ILLUSTRATED.

CLUTCH



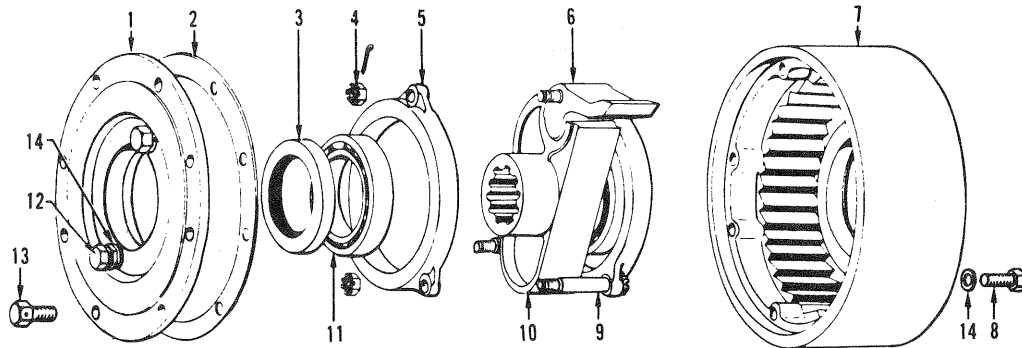
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
	89773 A	CLUTCH	2
	* 174554	CLUTCH	2
1	96468	CAPSCREW-SPECIAL	6
2	96467	PLATE-COVER	1
2	96785	SHIM-.032	AR
3	96460	HUB	1
3	* 174553	HUB	1
4	96466	SPRING	6
5	89772	BODY-VALVE	1
6	95833	SPRING-VALVE	1
7	89771	PLUNGER-VALVE	1
8	89770	SNAP RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
9	96461	RETAINER-SPRING	1
10	133917	DISC-FRICTION	8
11	96464	PLATE-SEPARATOR	8
12	96462	PISTON-CLUTCH	1
13	89777	O-RING	1
14	79972	O-RING	1
15	96463	PLATE-RETAINER	1
16	141348	PLUG-PIPE	1
17	17118	SETSCREW-1/2 UNF X 1/2	6

*FIRST USED ON SERIAL NO. E77P-1623.

AUTOMATIC BRAKE

DIRECT DRIVE WINCH



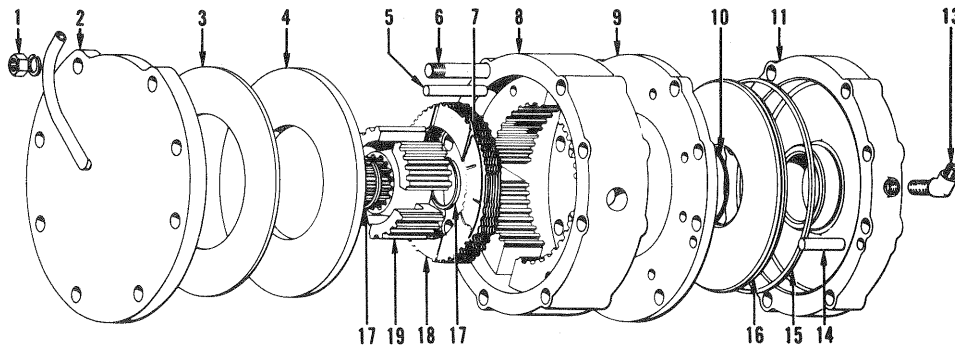
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	92716 A	BRAKE ASSEMBLY-AUTOMATIC	1
1	59397	COVER	1
2 *	59432	GASKET	1
3	33783	SEAL-OIL	1
4	15079	NUT-SLOTTED, 3/8 UNF	6
4	15212	COTTER-3/32 X 3/4	6
5	36006	RING-DRAW	2
6	36007	PAWL	1
7	59425 A	WHEEL-BRAKE	1
8	15515	CAPSCREW-1/2 UNF X 3/4	3

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
9	94601	LINK-SHOULDER	3
10	92684	HUB	1
11	36000	BEARING-BALL	2
12	59370	PLUG-VENT, SPECIAL	1
13	59927	CPSCR-DRILL HD, 7/16 UNF X 1	8
13	67355	LOCKWIRE	1
14 *	35159	GASKET-COPPER	4

*INCLUDED IN GASKET KIT 168728.

OIL BRAKE

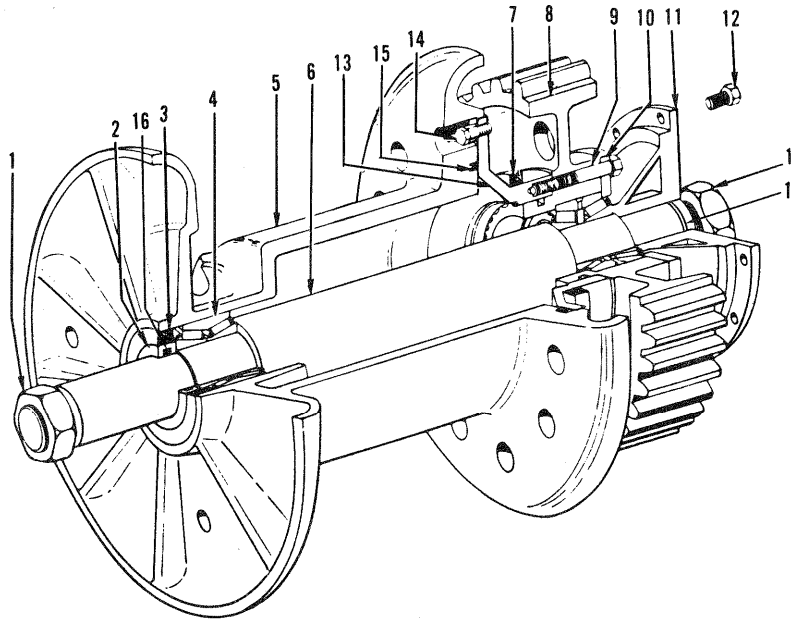
POWER CONTROL WINCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	199594	NUT-5/8 UNF, G8	8
1	199593	LOCKWASHER-5/8 HT	8
2	196026	COVER	1
3	193912	SPRING	1
4	133936	RING	1
5	133931	PIN	8
6	140184	STUD-HT, 5/8 UNF X 7 3/4	8
7	133917	DISC-FRICTION	11
8	133930	CAGE	1
9	133928	PLATE-PRESSURE	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10	79979	O-RING	1
11	196025	HOUSING-PISTON	1
13	170751	ELBOW-STREET, 45 DEGREE	1
14	92867	PIN-DOWEL	2
15	133927	RING-PISTON SEAL	1
16	133926	PISTON	1
17	12940	SNAP RING	2
18	96464	PLATE-SEPARATOR	10
19	133929	HUB	1

DRUM SHAFT

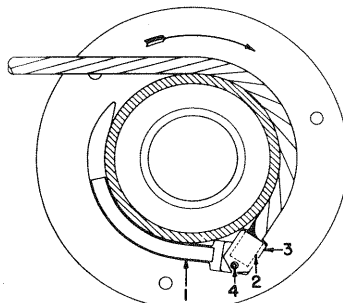


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	6607	NUT-2 1/2 SPECIAL	2
2	173604	SPACER	1
3	44484	SEAL-OIL	1
4	96437 A	BEARING ASSEMBLY-DRUM L.H.	1
4	78022	BEARING ASSEMBLY-DRUM R.H.	1
5	141357	DRUM-12 IN., STANDARD SPEED	1
5	142854	DRUM-8 IN., HIGH SPEED	1
6	173605	SHAFT-DRUM	1
6 *	192856	SHAFT-DRUM	1
7	141149	SEAL-OIL	1
8	96436	GEAR-DRUM, 45 & 58 TEETH	1
9	18863	BOLT-PLACE, 5/8 UNF X 4	8
10	96438	PLATE-GEAR RETAINER	1
11	173606	RETAINER-DRUM	1

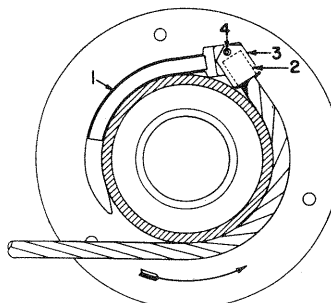
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
11	134070	SHIM-.005	AR
11	134071	SHIM-.007	AR
11	134072	SHIM-.020	AR
12	178402	CAPSCREW-HT, 1/2 UNC X 1 1/4	8
12	15158	LOCKWASHER-1/2	8
13	141325	ADAPTER	1
14	141675	CAPSCREW-5/8 UNF SPECIAL	12
14	53559	DOWEL	12
15	131982	RING-SEAL	1
16	46629	U-RING	1
17	15881	O-RING	1

*FIRST USED ON SERIAL NO. E77P-2344 AND F47P-2174.

CABLE LOCK



OVERWINDING



UNDERWINDING

KEY
A-FOR STANDARD SPEED WINCH.
B-FOR HIGH SPEED WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	A B
1	92712	FILLER-CABLE	1 ..
1	96420	FILLER-CABLE	.. 1
2	6697	FERRULE-CABLE	1 1
3	92713	LOCK-FERRULE, OVERWINDING	1 ..
3	92714	LOCK-FERRULE, UNDERWINDING	1 ..

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	A B
3	95499	LOCK-FERRULE	.. 1
4	16823	CAPSCREW-HT, 5/8 UNF X 1 1/2	1 ..
4	18850	CAPSCREW-1/2 UNF X 3	.. 1
4	15160	LOCKWASHER-5/8	1 ..
4	177949	LOCKWASHER-H.C., 1/2	.. 1

HYSTER COMPANY
PORTLAND, OREGON

Section E

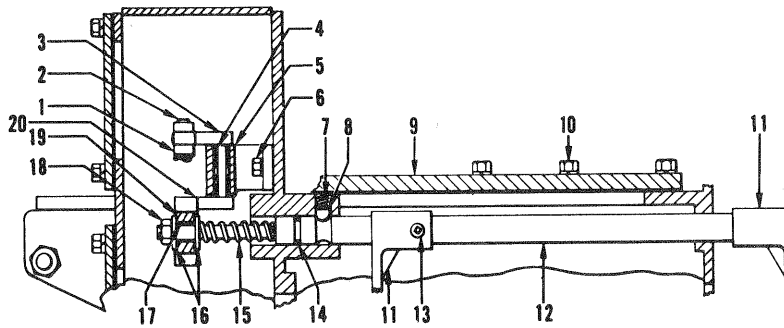
BRAKE AND SHIFTER MECHANISM

FOR DIRECT DRIVE WINCH

INDEX

BRAKE MECHANISM	E1
HANDLING GEAR	E2
SHIFTER MECHANISM	E1

SHIFTER MECHANISM



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	.....	ROD END-CLUTCH CABLE	2
2	.....	PIN-ROD END	2
2	.....	COTTER-1/8 X 1	2
3	97843 A	CRANK-SHIFTER, UPPER	1
3	15527	CAPSCREW-3/8 UNF X 1 3/4	1
3	15156	LOCKWASHER-3/8	1
3	15006	NUT-3/8 UNF	1
4	95615	BUSHING-BRACKET	2
5	164713	BRACKET	1
6	18586	CAPSCREW-HT, 1/2 UNC X 7/8	2
6	15158	LOCKWASHER-1/2	2
7	96375	SPRING	1
8	6348	BALL-1/2	1
9	161848	COVER-TRANSMISSION	1
9	# 183403	COVER-TRANSMISSION	1
9	* 142759	GASKET	1
9	# 183404	GASKET	1
10	164680	CAPSCREW-HT, 1/2 UNC X 2 1/2	4

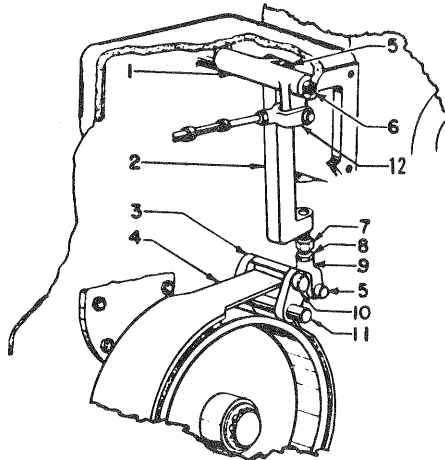
SEE PG.E2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
10	169268	CAPSCREW-HT, 1/2 UNC X 1 1/4	6
10	15135	WASHER-1/2	10
11	95951	FORK-SHIFTER	2
12	96373	SHAFT-SHIFTER	1
13	27936	LOCKSCREW	2
13	67355	LOCKWIRE	2
14	131998	O-RING	1
15	94655	SPRING	1
16	33682	WASHER	2
17	96374	SPACER	1
18	63085	LOCKNUT-5/8 UNF	1
19	33717	SHOE-SHIFTER CRANK	2
20	95636 W	CRANK-SHIFTER, LOWER	1
20	95638	PIN	1

*INCLUDED IN GASKET KIT 168728.

#FIRST USED ON SERIAL NO. F47P-2174.

BRAKE MECHANISM

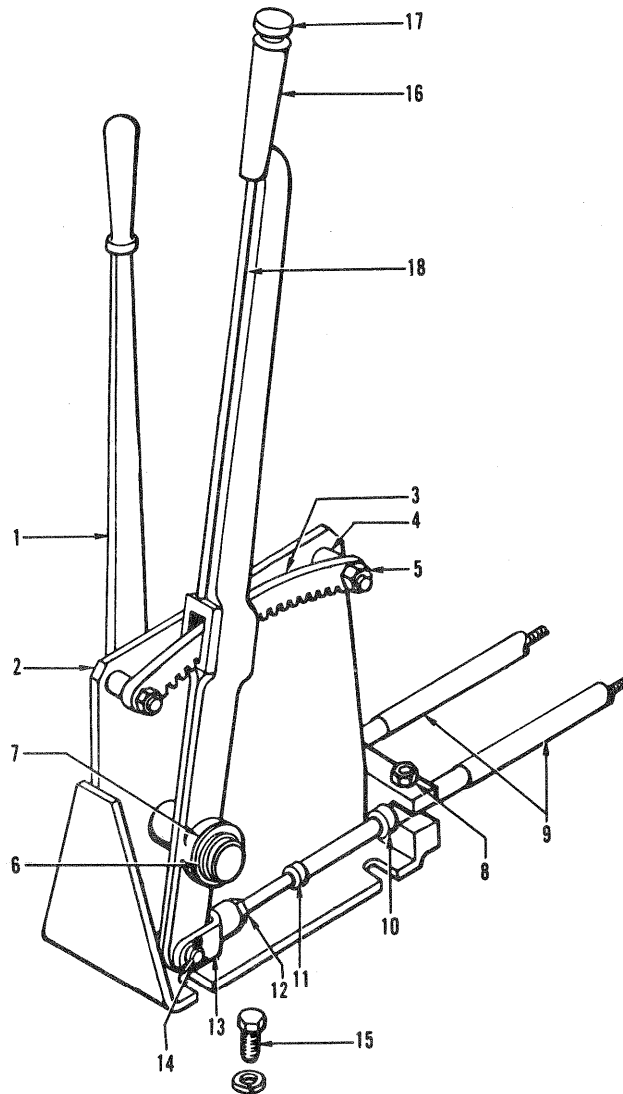


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	76699 A	CRANK ASSEMBLY-BRAKE	1
1	92705	BUSHING	2
2	76697	LINK-BRAKE	1
3	76695 A	LEVER ASSEMBLY-BRAKE	1
3	104607	BUSHING	4
4	128391	BAND ASSEMBLY-BRAKE	1
4	59802AB	LINING SET-WITH RIVETS	1
5	159	PIN-ROD END	2
5	15223	COTTER-1/8 X 1	2
6	165638	PIN-BRAKE CRANK	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
7	76696	LINK-ADJUSTING	1
8	15030	NUT-JAM, 5/8 UNF	1
9	91629	ROD END	1
10	96725	PIN-BRAKE LEVER	1
10	15226	COTTER-1/8 X 1 3/4	1
11	140741	PIN-BRAKE LEVER	1
12	.....	ROD END-BRAKE CABLE	2
12	.....	PIN-ROD END	2
12	.....	COTTER-1/8 X 1	2

SEE PG. E2

HANDLING GEAR



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
1	95750	HANDLEVER-CLUTCH	1
2	178576	BRACKET	1
3	77188	BAR-QUADRANT	1
4	94891	SPACER	2
5	16376	CAPSCREW-HT, 3/8 UNF X 2	2
5	15156	LOCKWASHER-3/8	2
5	15056	LOCKWASHER-3/8	2
6	58907	SNAP RING	2
7	90267	WASHER	2
8	16212	SETSCREW-3/8 UNC X 1 1/4	2
8	15086	NUT-JAM, 3/8 UNC	2
9	95751	CABLE-CONTROL, 69 INCH	2
10	94381	GROMMET-LARGE	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
11	95905	GROMMET-SMALL	2
12	15026	NUT-JAM, 3/8 UNF	4
13	92683	ROD END	4
14	159	PIN-ROD END	4
14	15223	COTTER-1/8 X 1	4
15	16807	CAPSCREW-HT, 1/2 UNF X 1 1/2	4
15	15158	LOCKWASHER-1/2	4
15	15008	NUT-1/2 UNF	4
16	77187 A	HANDLEVER ASSEMBLY-BRAKE	1
17	79418	BUTTON	1
17	79417	SPRING	1
18	79416	PAWL & ROD	1

Section F

BRAKE AND HYDRAULIC SYSTEM

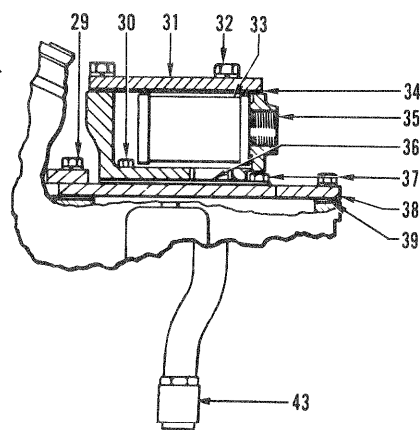
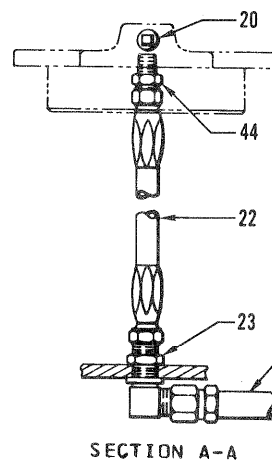
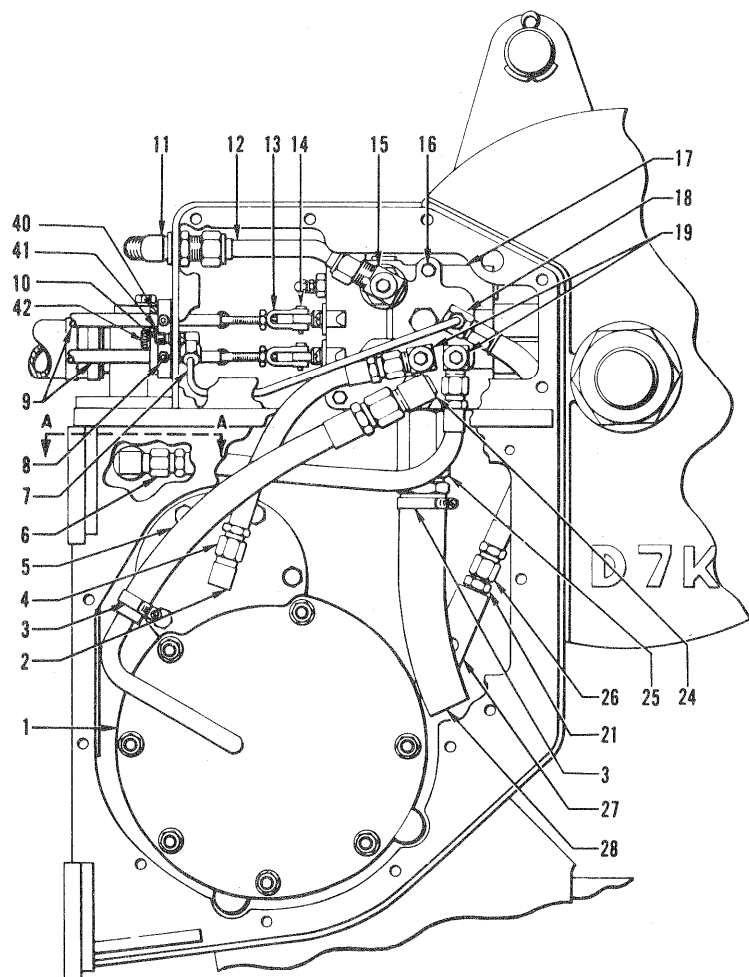
FOR POWER CONTROL WINCH

INDEX

BRAKE AND HYDRAULIC SYSTEM	F1-F3
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CONTROL VALVE	F9-F10
DUMP VALVE	F2
FILTER AND HOSES (D7 Tractor)	F3 & F13
HANDLING GEAR	F11-F12
HYDRAULIC HOSES (977 Traxcavator)	F6
HYDRAULIC PUMP	F7-F8
PUMP DRIVE (D7 Tractor)	F5
PUMP DRIVE (977 Traxcavator)	F6
PUMP DRIVE AND HOSES (572E Pipelayer)	F5

BRAKE AND HYDRAULIC SYSTEM

LAST USED ON SERIAL NO. E77P-2343



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	.....	BRAKE ASSEMBLY-OIL, SEE PAGE D4	1
2	17309	ELBOW	1
3	127045	CLAMP-HOSE	2
4	133943	HOSE ASSEMBLY-L.H. CLUTCH	1
5	164704	HOSE ASSEMBLY-BRAKE	1
6	132009	HOSE ASSEMBLY-R.H. CLUTCH	1
7	165497	TUBE ASSEMBLY	1
8	18853	SETSCREW-5/16 UNC X 1 1/4	2
8	15001	NUT-JAM, 5/16 UNC	2
9	.....	CABLE-CONTROL, SEE PAGE F11	2
10	16455	ELBOW-BULKHEAD	1
10	14758	LOCKNUT	1
11	16468	ELBOW-BULKHEAD, 45 DEG.	1
11	14763	LOCKNUT	1
12	164702	TUBE ASSEMBLY	1
13	168737	ROD END	2
14	133683	PIN-ROD END	2
14	15211	COTTER-3/32 X 1/2	2
15	164703	ELBOW-SPECIAL	1
15	16486	O-RING	1
15	16588	LOCKNUT	1
15	14349	PLUG-PIPE, 1/8	1
16	18522	CAPSCREW-HT, 5/16 UNC X 3 1/2	3
16	15155	LOCKWASHER-3/16	3
17	.....	VALVE-CONTROL, SEE PAGE F9	1
18	14668	CONNECTOR-MALE	1
19	165662	ELBOW-SPECIAL	2
19	14349	PLUG-PIPE, 1/8	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
19	16909	CONNECTOR	2
19	16485	O-RING	1
20	15302	PLUG-PIPE, 3/8	1
21	17315	CONNECTOR-MALE	2
22	96480	HOSE ASSEMBLY	1
23	16458	ELBOW-BULKHEAD	1
23	14761	LOCKNUT	1
24	111331	ELBOW	1
24	16485	O-RING	1
24	16587	LOCKNUT	1
25	.....	VALVE-CHECK, SEE PAGE F2	1
25	16487	O-RING	1
26	168736	HOSE ASSEMBLY	1
27	.....	VALVE-DUMP, SEE PAGE F2	1
28	104942	HOSE	1
29	* 164680	CAPSCREW-HT, 1/2 UNC X 2 1/2	4
29	□ 18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	4
29	15135	WASHER-1/2	4
30	\$ 37562	CAPSCREW-HT, 1/2 UNC X 1 1/4	3
30	\$ 86229	WASHER-SEAL	3
31	\$ 89025	COVER	1
31	@ 17741C	COVER	1
32	\$ 37562	CAPSCREW-HT, 1/2 UNC X 1 1/4	5
32	\$ 15158	LOCKWASHER-1/2	5
32	@ 18598	CAPSCREW-HT, 1/2 UNC X 5 1/2	4
32	@ 15158	LOCKWASHER-1/2	4
33	160387	FILTER ELEMENT	1

HYSTER COMPANY
PORTLAND, OREGON

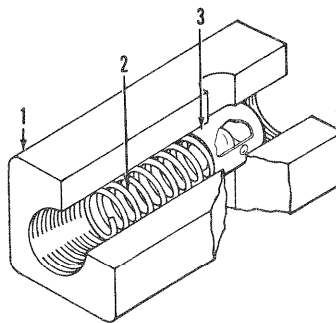
BRAKE AND HYDRAULIC SYSTEM

LAST USED ON SERIAL NO. E77P-2343

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4				1 2 3 4	
34	# 89023	GASKET	1	41	% 100154	O-RING	2
34	@ 177409	GASKET	1	42	16805	CAPSCREW-HT, 3/8 UNC X 1	1
35	* 133968	MANIFOLD-INTAKE	1	42	% 159812	CAPSCREW-HT, 3/8 UNC X 3/4	1
35	* 183060	MANIFOLD-INTAKE	1	42	15156	LOCKWASHER-3/8	1
35	□ 132936	MANIFOLD-INTAKE	1	43	@ 177369	FOOT-VALVE	1
35	□ 179942	MANIFOLD-INTAKE	1	44	14723	CONNECTOR	1
36	# 134116	GASKET	1	44	19987	NIPPLE	1
36	@ 177409	GASKET	1				
37	* 169268	CAPSCREW-HT, 1/2 UNC X 1 1/4	6			*FOR D7 TRACTOR SERIAL NO. 47A1 & UP, 48A1 & UP	
37	□ 18588	CAPSCREW-HT, 1/2 UNF X 1 1/2	6			93N1 & UP, 94 N1 & UP AND 572E PIPELAYER	
37	15135	WASHER-1/2	6			SERIAL	
38	* 161850	COVER-TRANSMISSION	1			NO. 65A1 & UP.	
38	* 179940	COVER-TRANSMISSION	1			□FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP.	
38	□ 142758	COVER-TRANSMISSION	1			%FIRST USED ON SERIAL NO. E77P-1950.	
38	□ 179939	COVER-TRANSMISSION	1			#INCLUDED IN GASKET KIT 168729.	
39	# 142759	GASKET	1			\$LAST USED ON SERIAL NO. E77P-1884.	
40	170233	PLATE	1			@FIRST USED ON SERIAL NO. E77P-1885.	
40	% 186319	PLATE	1				
41	104681	O-RING	2				

DUMP VALVE

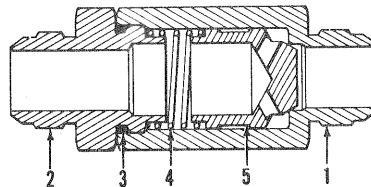
LAST USED ON SERIAL NO. E77P-2343



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4				1 2 3 4	
1	181031	DUMP VALVE	1	2	161857	SPRING	1
	138542	BODY	1	3	181032	SPOOL	1

CHECK VALVE

LAST USED ON SERIAL NO. E77P-2343

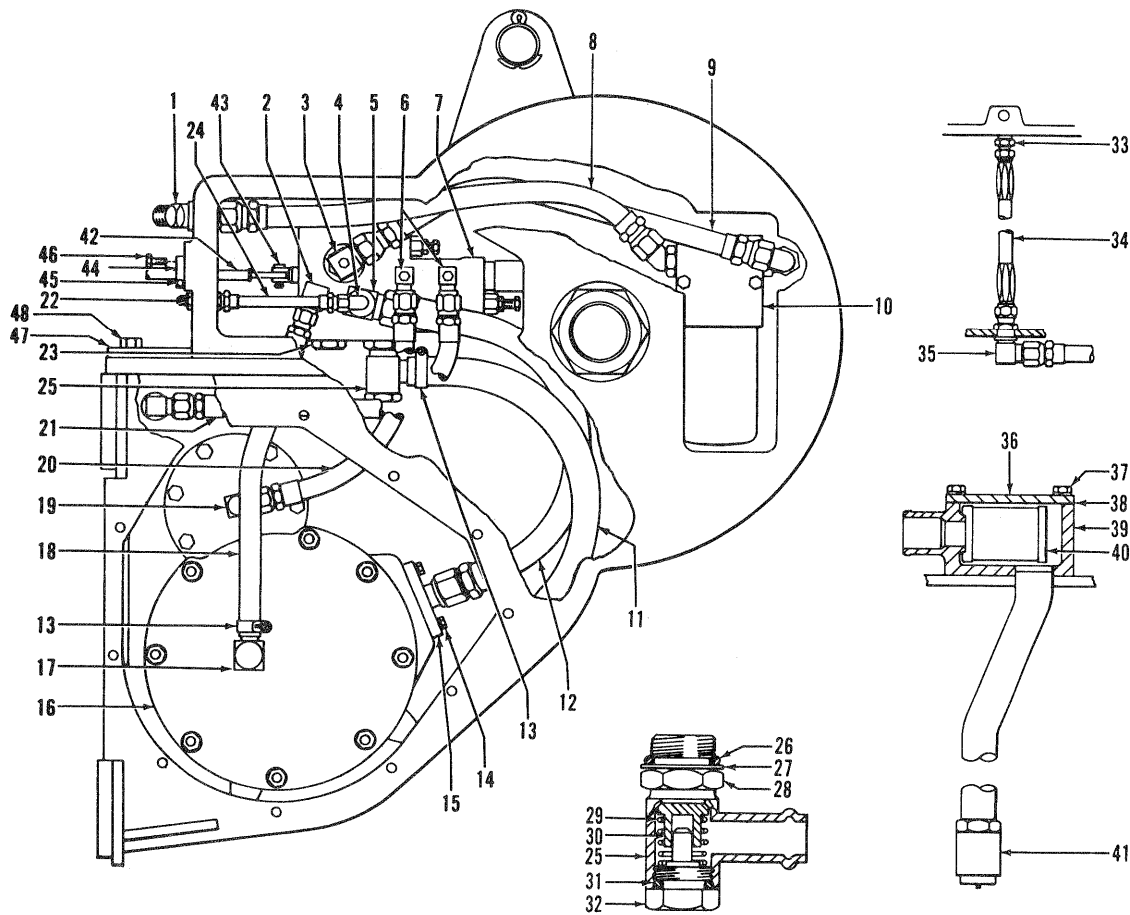


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4				1 2 3 4	
1	168730	VALVE ASSEMBLY-CHECK	1	3	16487	O-RING	1
	.....	BODY	1	4	170543	SPRING	1
2	170545	CAP	1	5	170542	POPPET	1

HYSTER COMPANY
PORTLAND, OREGON

BRAKE AND HYDRAULIC SYSTEM

FIRST USED ON SERIAL NO. E77P-2344

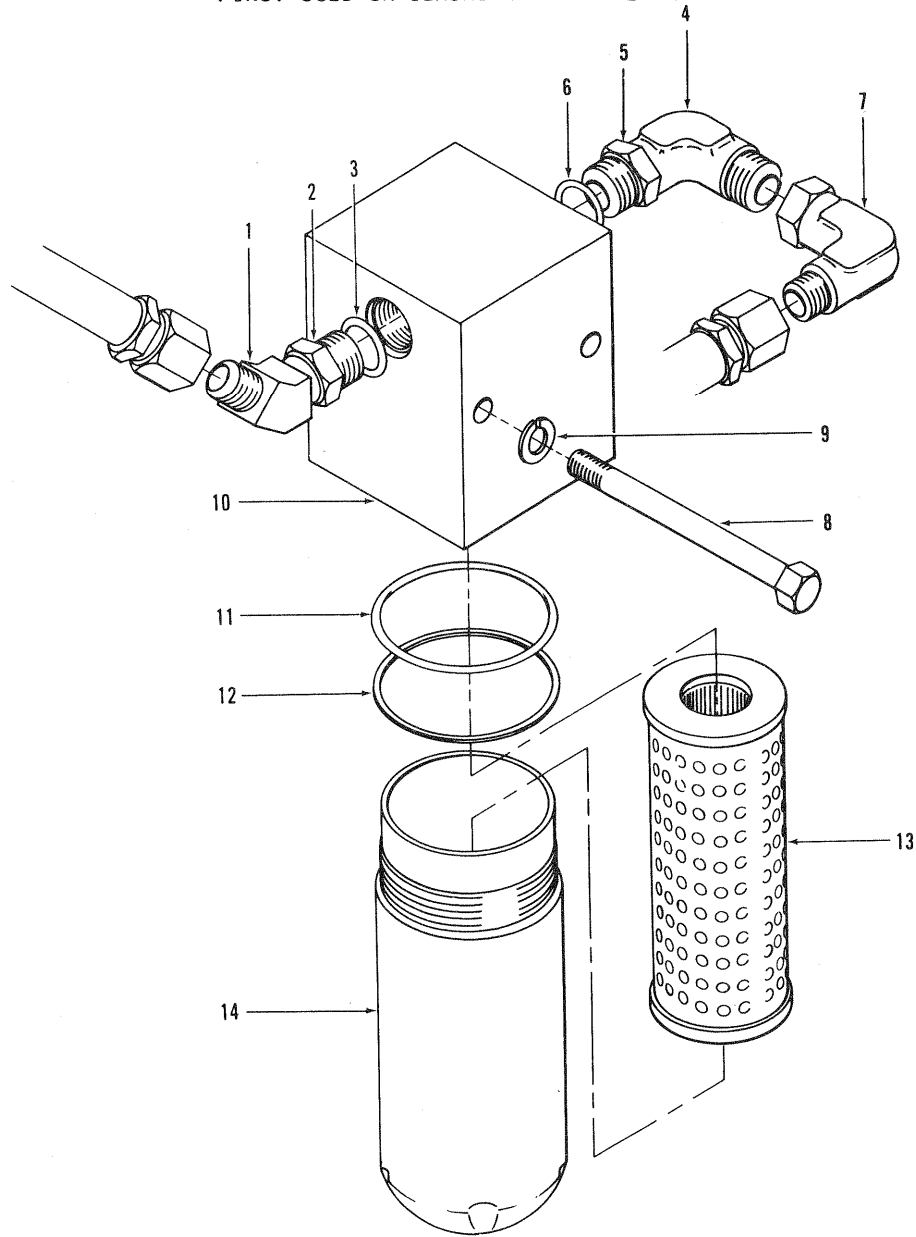


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	16468	FITTING-BULKHEAD	1
2	198062	ELBOW	1
2	14349	PLUG	1
3	198064	FITTING-SPECIAL	1
3	14349	PLUG	1
4	14500	ELBOW	1
5	198065	ELBOW	1
6	198063	ELBOW-SPECIAL	1
6	14349	PLUG	1
7	.....	CONTROL VALVE-PAGE F10	1
8	180980	HOSE	1
9	75384	HOSE	1
10	.....	FILTER-HYDRAULIC, PAGE F4	1
11	77297	HOSE	1
12	196021	HOSE	1
13	127045	CLAMP-HOSE	2
14	16828	CAPSCREW-3/8 UNC X 1 1/4 G5	2
14	15156	LOCKWASHER-3/8	2
15	196020	FITTING-SPECIAL	1
15	196022	GASKET	1
16	.....	BRAKE-OIL, SEE PAGE D4	1
17	16155	NIPPLE	1
18	196015	HOSE	1
19	17344	ELBOW	1
20	133943	HOSE	1
21	132009	HOSE	1
22	16445	UNION-BULKHEAD	1
22	14758	LOCKNUT	1
23	.....	PLUG-SPECIAL, PAGE F10	1
24	196036	HOSE	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
25	196031	VALVE-FITTING	1
26	16487	O-RING	1
27	196028	WASHER-BACK-UP	1
28	16589	LOCKNUT	1
29	198066	SPRING	1
30	198069	POPPET-CHECK VALVE	1
31	16487	O-RING	1
32	196033	PLUG-SPECIAL	1
33	14723	CONNECTOR	1
33	19987	NIPPLE-CLOSE	1
34	96480	HOSE	1
35	16458	ELBOW	1
36	177410	COVER	1
37	18598	CAPSCREW-1/2 UNC X 5 1/2 G5	4
37	15158	LOCKWASHER-1/2	4
38	177409	GASKET	2
39	183060	MANIFOLD-INTAKE	1
40	160387	CARTRIDGE	1
41	177369	VALVE-FOOT	1
42	.....	CABLE-CONTROL, SEE PAGE F12	1
43	139	PIN-ROD END	1
43	15212	COTTER-3/32 X 3/4	1
44	196034	BRACKET-CABLE	1
45	62499	ROLL PIN-5/16 X 1 1/4	1
46	16830	CAPSCREW-1/2 UNC X 1 1/4 G5	1
46	15158	LOCKWASHER-1/2	1
47	179940	COVER-TRANSMISSION	1
48	169268	CAPSCREW-1/2 UNC X 1 1/4	6
48	164680	CAPSCREW-1/2 UNC X 2 1/2	4
48	15135	LOCKWASHER-1/2	10

FILTER AND HOSES

FIRST USED ON SERIAL NO. E77P-2344



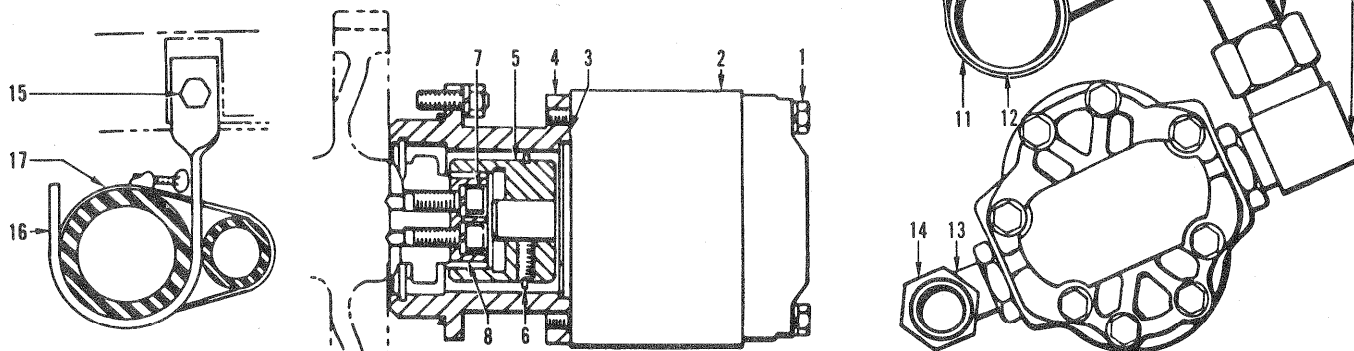
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	164642	ELBOW-45 DEGREE	1
2	16589	LOCKNUT	1
3	16487	O-RING	1
4	201776	ELBOW	1
5	16589	LOCKNUT	1
6	16487	O-RING	1
7	83857	ELBOW	1
8	18547	CAPSCREW-3/8 UNC X 4 1/2 G5	2

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
9	15156	LOCKWASHER-3/8	2
10	147461	FILTER	1
10	149295	HEAD	1
10	.....	VALVE-RELIEF	1
11	149297	O-RING	1
12	149298	RING-BACK-UP	1
13	147463	ELEMENT	1
14	149296	CASE	1

HYSTER COMPANY
PORTLAND, OREGON

PUMP DRIVE

FOR 572E PIPELAYER SERIAL NO. 65A1 & UP

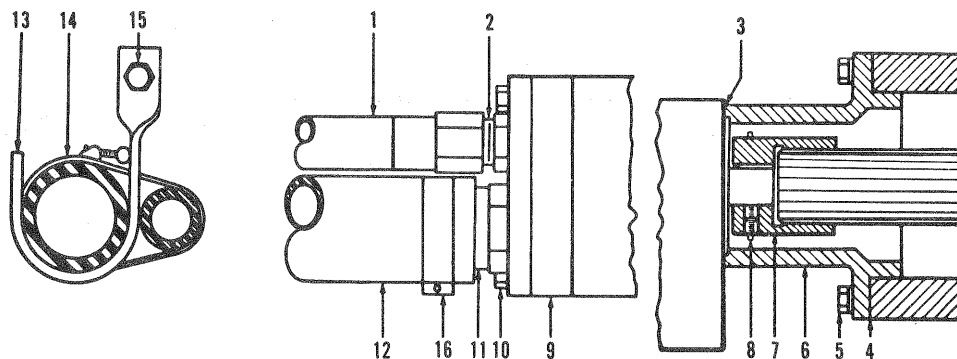


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
1	18551	CAPSCREW-HT, 3/8 UNC X 5 1/8	2
1	15156	LOCKWASHER-3/8	2
2	.....	PUMP ASSY.-HYD., SEE PAGE F7	1
3	132044	GASKET	1
4	145478	HOUSING-PUMP DRIVE	1
5	145477	COUPLING-PUMP	1
6	88837	SNAP RING	1
6	16200	SETSCREW-3/8 UNC X 3/8	2
7	27187	CAPSCREW-3/8 UNC X 1	2
7	15156	LOCKWASHER-3/8	2
8	145476	SHAFT	1
9	16949	ELBOW	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
9	16983	O-RING	1
9	16980	LOCKNUT	1
10	146385	TUBE ASSEMBLY	1
11	142781	CLAMP-HOSE	2
12	165490	HOSE	1
13	201776	ELBOW	1
13	16487	O-RING	1
13	16589	LOCKNUT	1
14	123043	HOSE ASSEMBLY	1
15	18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	1
16	143362	CLAMP-HOSE LOCATING	1
17	18994	CLAMP-HOSE	1

PUMP DRIVE

FOR D7 TRACTOR



KEY

A-FOR TRACTOR SERIAL NO. 47A1-47A3395 AND 48A1-48A6392.

B-FOR TRACTOR SERIAL NO. 47A3396 & UP, 48A6393 & UP, 93N1 & UP, 94N1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
1	.....	HOSE ASSEMBLY-PUMP TO FILTER	
1		SEE PAGE F13	
1	# 139725	HOSE-PUMP TO WINCH	
2	16543	CONNECTOR-MALE	
2	16486	O-RING	
3	95710	GASKET	
4	95486	GASKET	
5	16805	CAPSCREW-HT, 3/8 UNC X 1	
5	15156	LOCKWASHER-3/8	
6	145351	ADAPTER	
6	147965	ADAPTER	
7	145347	COUPLING	
7	* 181895	COUPLING	
8	54112	SNAP RING	
8	16200	SETSCREW-3/8 UNC X 3/8	

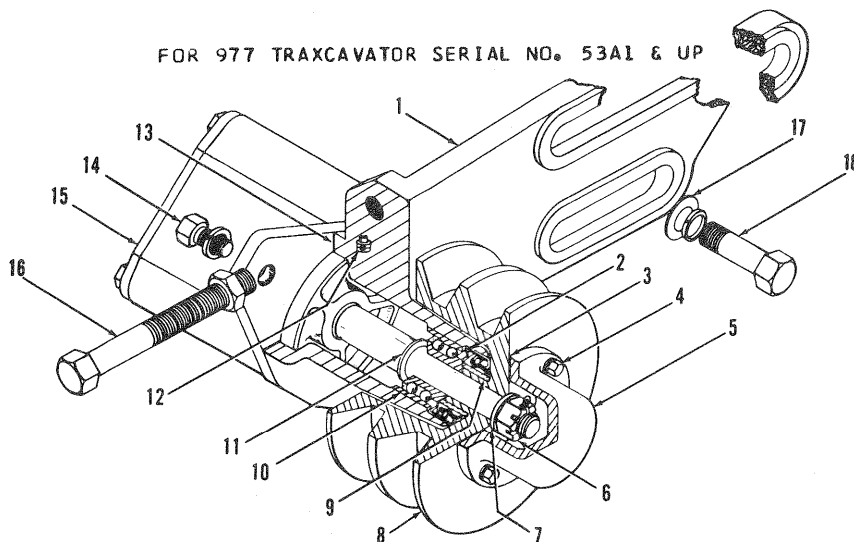
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
8	136391	SETSCREW-3/8 UNC X 1/4	
9	.....	PUMP-PAGE F7 OR F8	
10	18551	CAPSCREW-3/8 UNC X 5 1/8	
10	15156	LOCKWASHER-3/8	
11	145350	NIPPLE-HOSE, SPECIAL	
11	16983	O-RING	
12	170719	HOSE-MANIFOLD TO PUMP	
13	143362	CLAMP-HOSE LOCATING	
14	18994	CLAMP-HOSE	
15	18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	
16	142781	CLAMP-HOSE	

*FIRST USED ON SERIAL NO. E77P-2123.

*FIRST USED ON SERIAL NO. E77P-2344.

PUMP DRIVE

FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP

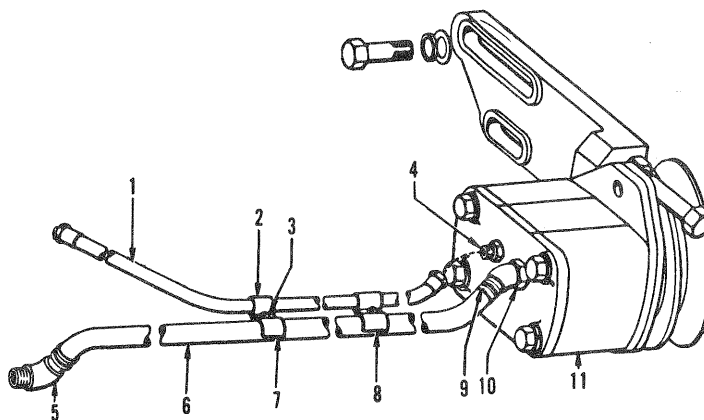


REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
	97950 A	PUMP & PULLEY ASSEMBLY	1
1	97953	BRACKET-PUMP DRIVE	1
2	97955	SEAL-OIL	1
3	97959	GASKET	1
4	18460	CAPSCREW-HT, 1/4 UNC X 3/4	4
4	15154	LOCKWASHER-1/4	4
5	97960	COVER-PULLEY	1
6	15078	NUT-SLOTTED, 1/2 UNF	1
6	15213	COTTER-3/32 X 1	1
7	15135	WASHER-1/2	1
8	97956 A	PULLEY	1
9	97958	SLEEVE-WEAR	1

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
10	45303	BEARING-BALL	1
11	97954	WASHER-SPECIAL	1
12	15306	PLUG-PIPE 1/8	1
13	97952	GASKET	1
14	16634	CAPSCREW-HT, 3/8 UNF X 1	2
14	15156	LOCKWASHER-3/8	2
15	.....	PUMP-HYDRAULIC, SEE PAGE F7	1
16	97964	BOLT-ADJUSTING	1
16	15015	NUT-JAM, 5/8 UNC	1
17	15135	WASHER-1/2	3
18	18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	3
18	15158	LOCKWASHER-1/2	3

HYDRAULIC HOSES

FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP

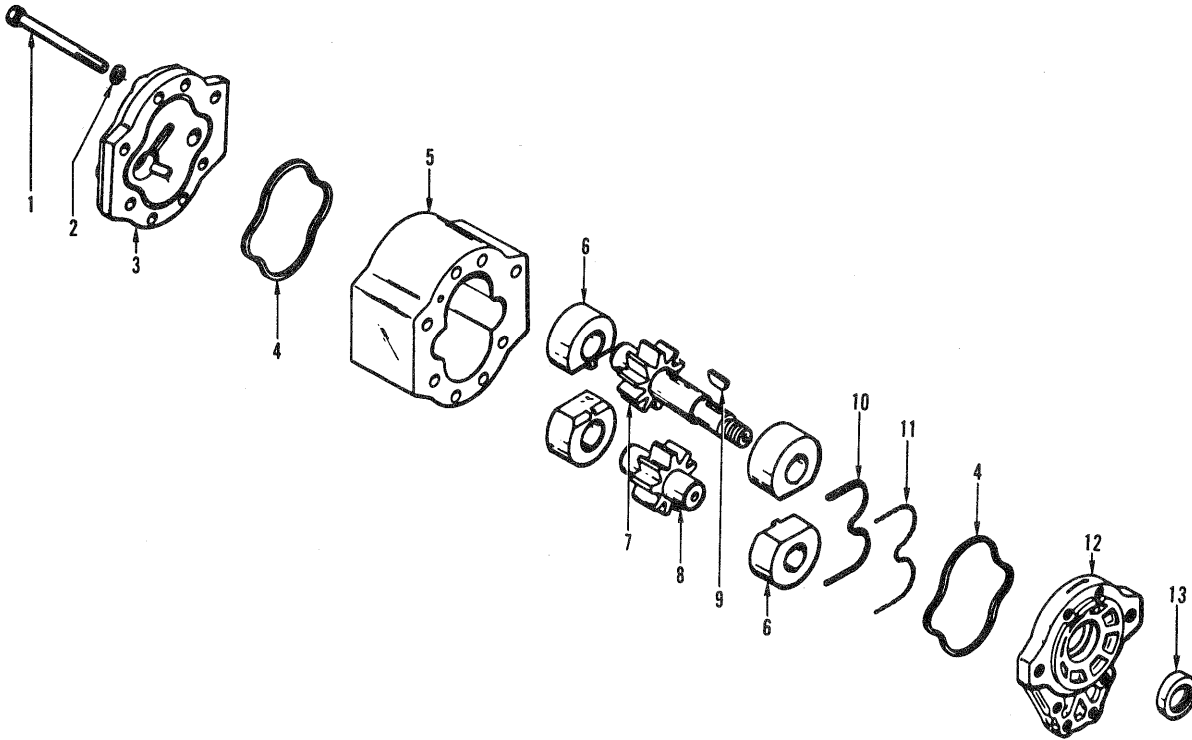


REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	155298	HOSE ASSEMBLY	1
2	60016	CLAMP-HOSE LOCATING	2
3	18467	CAPSCREW-HT, 1/4 UNF X 1 1/4	2
3	15154	LOCKWASHER-1/4	2
3	15004	NUT-1/4 UNF	2
4	164661	CONNECTOR-MALE	1
4	16484	O-RING	1
4	17040	ELBOW-45 DEG. SWIVEL	1
5	15476	ELBOW-STREET, 45 DEG.	1
5	111330	NIPPLE-HOSE, 45 DEG.	1

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
6	97963	HOSE	1
7	15978	CLAMP-HOSE LOCATING	2
7	132930	SUPPORT-CLAMP	1
8	132929	SUPPORT-CLAMP	1
9	89781	CLAMP-HOSE	2
10	97961	NIPPLE-HOSE, SPECIAL	1
10	16486	O-RING	1
10	16588	LOCKNUT	1
11	.....	PUMP & PULLEY-SEE PAGE F6	1

HYSTER COMPANY
PORTLAND, OREGON

HYDRAULIC PUMP



KEY

A-FOR D7 TRACTOR SERIAL NO. 47A1 & UP, 48A1 & UP, 93N1 & UP, AND 94N1 & UP.

B-FOR 572E PIPELAYER SERIAL NO. 65A1 & UP.

C-FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
	145344	PUMP-HYDRAULIC	1	..	..
	145479	PUMP-HYDRAULIC	..	1	..
	97951 A	PUMP-HYDRAULIC	..	..	1
1	123704	CAPSCREW	6	..	..
1	127661	CAPSCREW	..	6	..
1	124247	CAPSCREW	..	..	4
2	129447	WASHER	6	6	..
3	126445	COVER-REAR	1	..	..
3	127658	COVER-REAR	..	1	..
3	124241	COVER-REAR	..	..	1
4	□*	SEAL	2	2	2
5	.....	BODY	1	1	1
6	*	BEARING	4	4	4
7	#	GEAR-DRIVE	1	1	1
8	#	GEAR-DRIVEN	1	1	1
9	* 9413	KEY	1	..	..
9	* 206	KEY	..	1	..
9	* 124248	KEY	..	..	1
10	□*	GASKET	1	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
11	□*	SPACER	1	1	..
12	126444	COVER-FRONT	1	..	..
12	127657	COVER-FRONT	..	1	..
12	124240	COVER-FRONT	..	..	1
13	□*	SEAL-SHAFT	1	1	..
	145381	REPAIR KIT-MAJOR	1	..	..
	147401	REPAIR KIT-MAJOR	..	1	..
	124245	REPAIR KIT-MAJOR	..	..	1
	145382	REPAIR KIT-MINOR	1	..	..
	78035 A	REPAIR KIT-MINOR	..	1	..
	124249	REPAIR KIT-MINOR	..	..	1
	146896	GEAR KIT	1	..	..
	127659	GEAR KIT	..	1	..
	124242	GEAR KIT	..	..	1

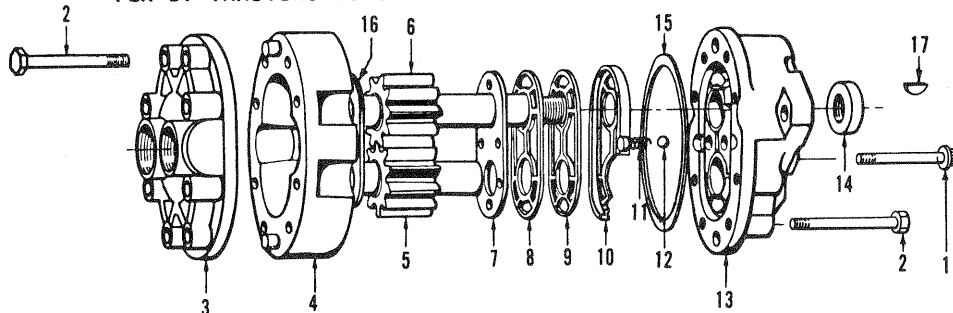
*INCLUDED IN MAJOR REPAIR KIT.

□INCLUDED IN MINOR REPAIR KIT.

#INCLUDED IN GEAR KIT.

HYDRAULIC PUMP

FOR D7 TRACTORS FIRST USED ON SERIAL NO. E77P-2123

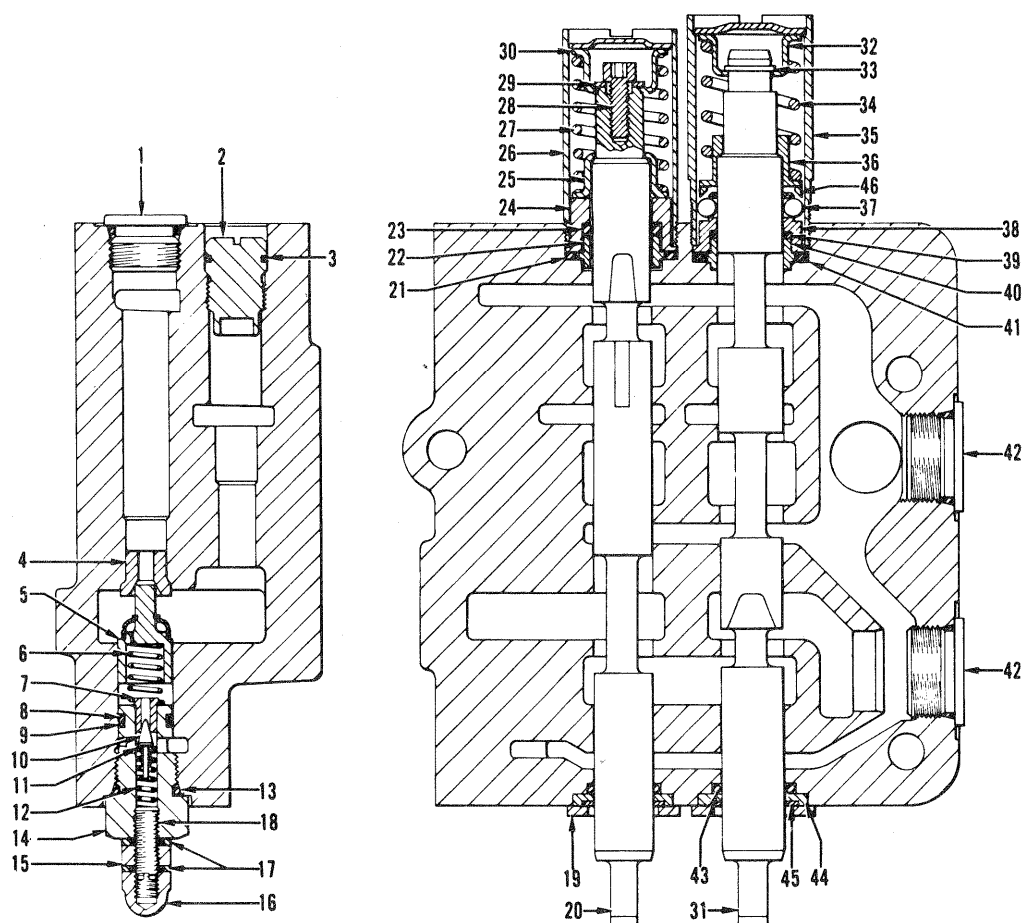


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4				1 2 3 4	
	181894	PUMP	1	10	* 184136	SEAL-DIAPHRAGM	1
1	184130	CAPSCREW-5/16 UNC X 3	2	11	* 160759	SPRING	1
2	184131	CAPSCREW-5/16 UNC X 2 1/2	4	12	* 68964	BALL	1
3	184125	BACK PLATE	1	13	184124	PLATE-FRONT	1
4	184126	BODY	1	14	* 184135	SEAL-SHAFT	1
4	184129	PIN-DOWEL	2	15	* 184138	O-RING	2
5	184127	GEAR-IDLER	1	16	* 184137	PLATE-THRUST	1
6	184128	GEAR-DRIVE	1	17	184123	KEY	1
7	* 184134	DIAPHRAGM	1				
8	* 184133	GASKET-BACKUP	1				
9	* 184139	GASKET-PROTECTOR	1				

*INCLUDED IN SEAL REPAIR KIT 184132.

HYDRAULIC CONTROL VALVE

LAST USED ON SERIAL NO. E77P-2343



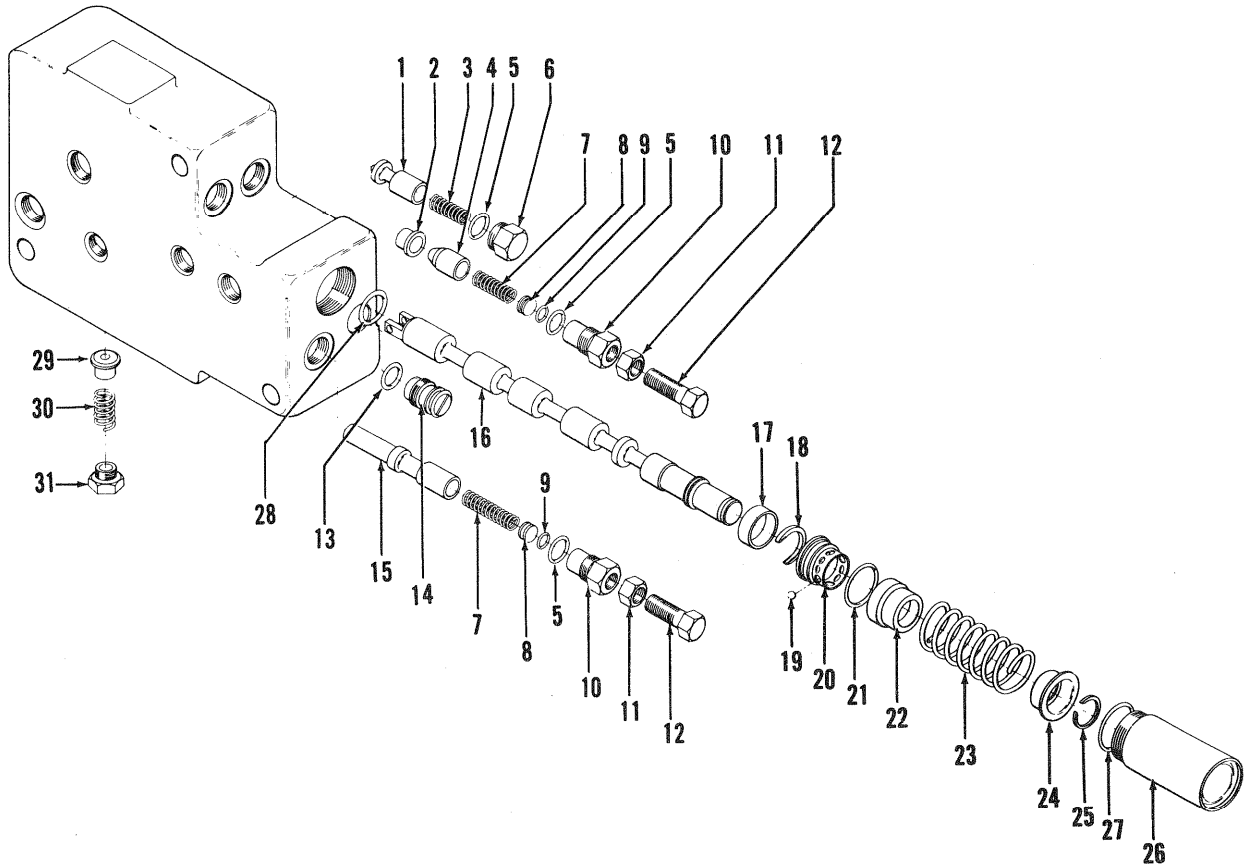
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
	168741	VALVE-CONTROL	1
1	233693	PLUG	4
1	16485	O-RING	1
2	233492	CAP	2
3	118389	O-RING	2
4	166917	VALVE-RELIEF	1
4	170988	SEAT	1
5	170989	POPPET	1
6	170993	SPRING	1
7	86976	SEAT-PILOT	1
8	159859	O-RING	1
9	159858	RING-BACK-UP	1
10	170995	PLUNGER-PILOT	1
11	170996	SLEEVE	1
12	166920	SPRING-PILOT	1
13	16484	O-RING	1
14	170994	CAP	1
15	233502	NUT-JAM	1
16	233503	NUT-ACORN	1
17	234823	WASHER-SEAL	2
18	170997	SETSCREW	1
19	233508	PLATE-RETAINER	2
19	233696	SCREW	4
20	166913	SPOOL-MODULATING	1
21	166912	O-RING	1
22	166909	RETAINER-SEAL	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
23	60836	O-RING	1
24	166910	RETAINER-SEAL	1
25	166905	RETAINER-SPRING	1
26	166906	CAP	1
27	166911	SPRING-SPOOL	1
28	166914	SCREW	1
29	166922	WASHER	1
30	166904	RETAINER-SPRING	1
31	170981	SPOOL SELECTOR	1
32	166904	RETAINER-SPRING	1
33	233495	SNAP RING	1
34	166911	SPRING-SPOOL	1
35	170985	CAP	1
36	170983	SPACER-SELECTOR	1
37	170987	BALL STEEL	8
38	170984	RETAINER-BALL	1
39	60836	O-RING	1
40	170986	RETAINER-SEAL	1
41	166912	O-RING	1
42	163660	PLUG	2
42	16486	O-RING	1
43	60836	O-RING	2
44	233506	RETAINER-SEAL	2
45	233505	WIPER	2
46	184450	SPACER	1
	166912	O-RING-VALVE TO SUPPORT	1

HYSTER COMPANY
PORTLAND, OREGON

CONTROL VALVE

FIRST USED ON SERIAL NO. E77P-2344



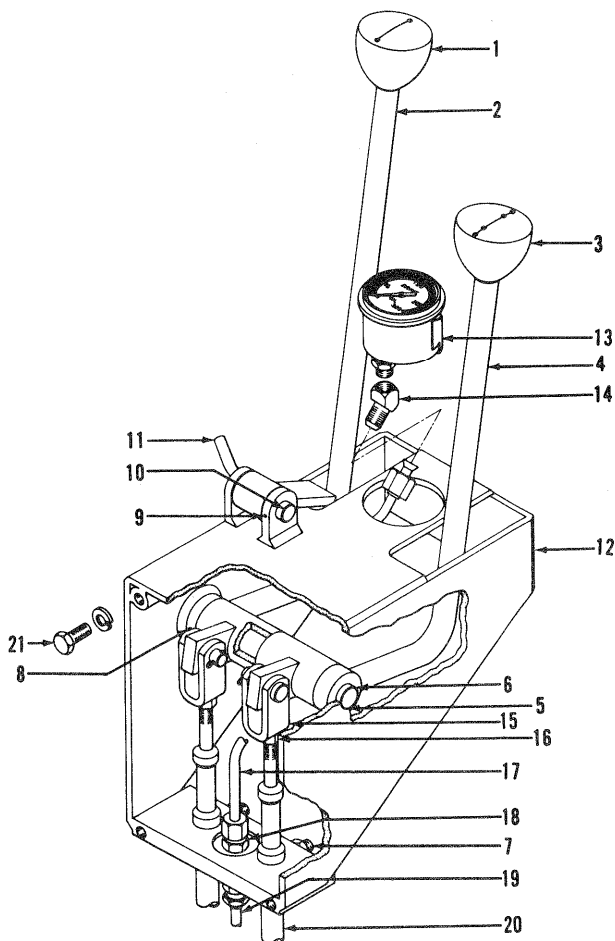
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
	196014	VALVE-CONTROL	1
1	196006	FORWARD MODULATING SPOOL	1
2	195990	RELIEF SEAT	1
3	196013	SPRING	1
4	195991	PLUNGER-RELIEF	1
5	16484	O-RING	3
6	196007	PLUG	1
7	195992	SPRING-RELIEF	2
8	195993	PLUG-O-RING	2
9	15860	O-RING	2
10	196004	FITTING-SPECIAL	2
11	15027	NUT-JAM, 7/16 UNF	2
12	195995	CAPSCREW-SPECIAL	2
13	118389	O-RING	1
14	233492	CAP	1
15	196003	SPOOL-REVERSE MODULATING	1
16	195996	SPOOL	1

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
16	196012	SPOOL	1
17	195999	RING	1
18	196000	RING	1
19	170987	BALL-STEEL	8
20	195997	RETAINER-DETENT	1
21	118365	O-RING	1
22	196001	SPACER-SELECTOR	1
23	166911	SPRING	1
24	166905	SPACER-CENTERING	1
25	196002	SNAP RING	1
26	196009	CAP	1
27	39376	O-RING	1
28	60836	O-RING	1
29	198068	POPPET-CHECK VALVE	1
30	137117	SPRING	1
31	196032	FITTING-PLUG	1

HYSTER COMPANY
PORTLAND, OREGON

HANDLING GEAR

LAST USED ON SERIAL NO. E77P-2343



KEY
A-FOR D7 TRACTOR SERIAL NO. 47A1 & UP, 48A1 & UP, 93N1 & UP, 94N1 & UP, AND 572E PIPELAYER
 SERIAL NO. 65A1 & UP.
B-FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
	189085	HANDLEVER	1	1
	* 189086	HANDLEVER	1	1
1	172744	KNOB	1	1
2	183584	LEVER-INCHING, CURVED	1	1
2	* 172757	LEVER-INCHING, STRAIGHT	1	1
3	172747	KNOB	1	1
4	172745	LEVER-SELECTOR, CURVED	1	1
4	* 172759	LEVER-SELECTOR, STRAIGHT	1	1
5	174421	BUSHING	2	2
6	172748	PIN	1	1
7	173310	SETSCREW-5/16 UNC X 1	2	2
7	15001	NUT-JAM, 5/16 UNC	2	2
8	19981	ROLL PIN-1/8 X 1 1/4	1	1
9	172751	ROD	1	1
10	174564	ROLL PIN-3/32 X 1	1	1
11	172752	LEVER	1	1
12	196151	HOUSING	1	1
13	169782	GAUGE-OIL PRESSURE	1	1
13	192407	GAUGE-OIL PRESSURE	1	1
14	172762	FITTING-ELBOW	1	1
15	95709	ROD END-3/8	2	2
15	142	PIN-ROD END 3/8	2	2
15	15212	COTTER PIN-3/32 X 3/4	2	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
16	15025	NUT-JAM-5/16 UNF	4	4
17	174422	TUBE	1	1
17	192408	TUBE	1	1
18	16445	FITTING	1	1
19	165504	HOSE-HYDRAULIC	1	..
19	165505	HOSE-HYDRAULIC	..	1
20	164655	CABLE-CONTROL	2	..
20	# 187279	CABLE-CONTROL	2	..
20	165492	CABLE-CONTROL	..	2
20	132933	CLAMP	..	1
20	15552	CAPSCREW-1/4 UNC X 3/4	..	1
20	15054	NUT-HEX-1/4 UNC	..	1
20	15154	LOCKWASHER-1/4	..	1
21	15155	LOCKWASHER-5/16	4	4
21	15153	CPSCR.-5/16 UNC X 3/4	4	4
	172761	DECAL-OPERATING INSTRUCT.	1	1

*FOR LEFT HAND INSTALLATION ON THE 572E,
 PIPELAYER, ILLUSTRATED.

#FOR RIGHT HAND INSTALLATION.

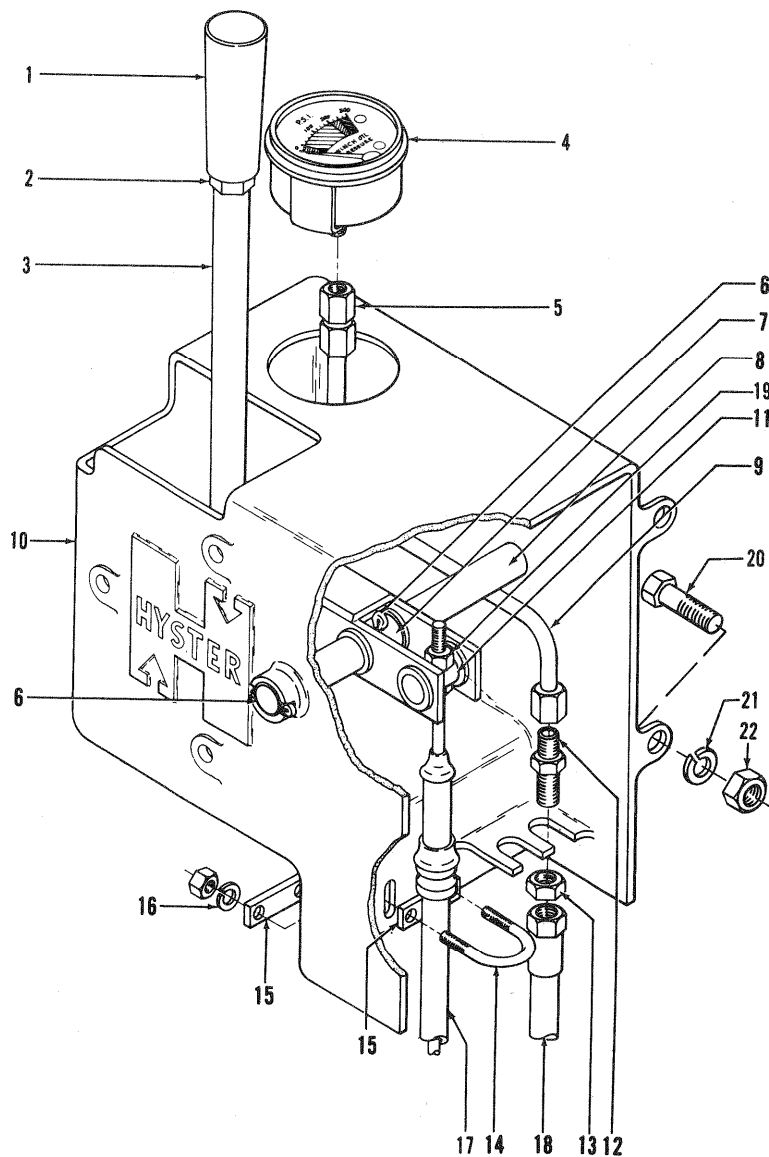
#FIRST USED ON SERIAL NO. E77P-1950.

@FIRST USED ON SERIAL NO. E77P-2146.

HYSTER COMPANY
 PORTLAND, OREGON

HANDLING GEAR

FIRST USED ON SERIAL NO. E77P-2344



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
	196462	HANDLEVER	1
1	196469	KNOB	1
2	15030	NUT-JAM, 5/8 UNF	1
3	196465	LEVER	1
4	192407	GAUGE-OIL PRESSURE	1
5	14712	CONNECTOR	1
6	15223	COTTER-1/8 X 1	3
7	196132	SPACER	1
8	196468	PIN	1
9	196134	TUBE	1
10	196114	HOUSING	1
11	196128	PIN	1

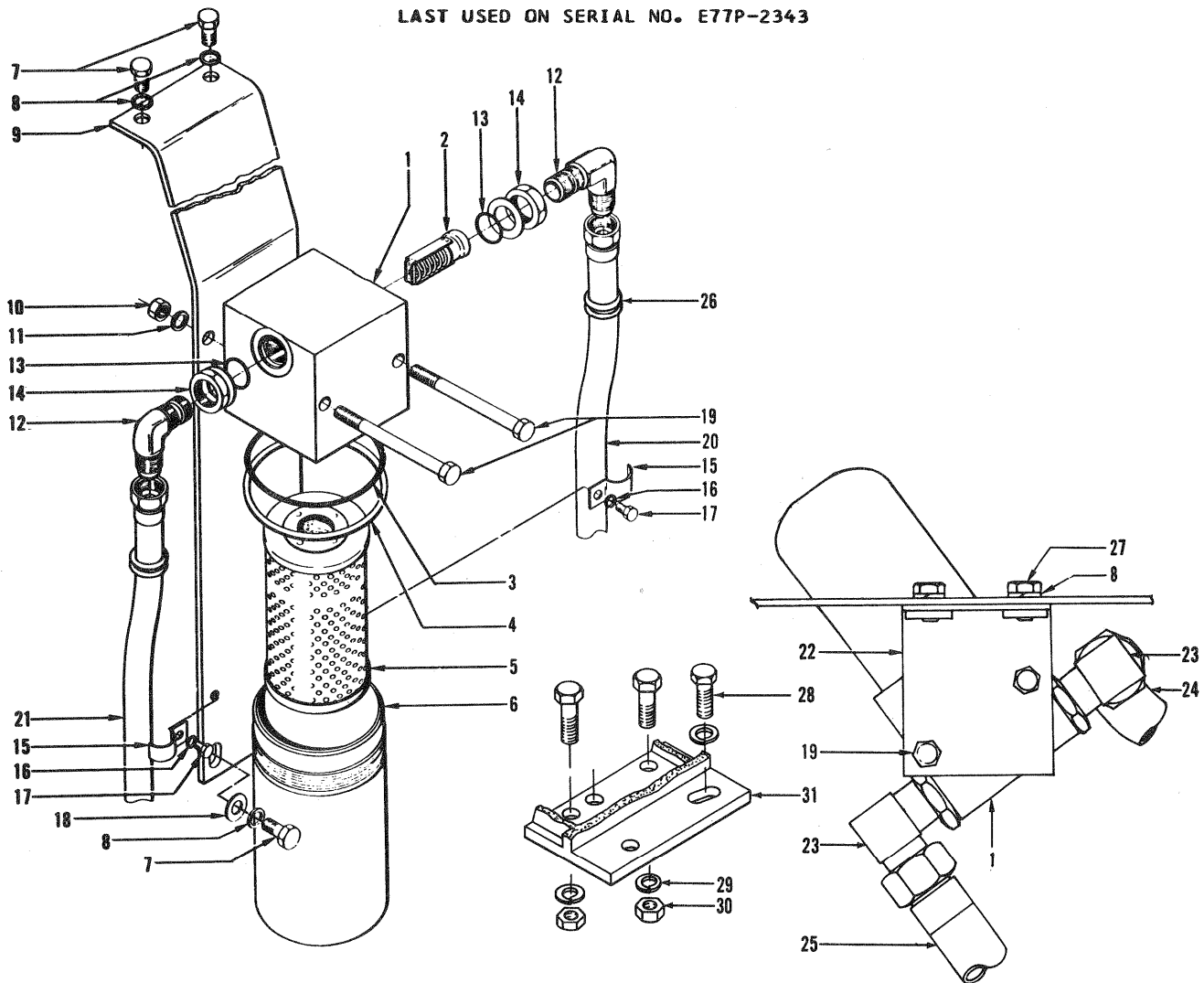
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
12	16445	UNION-BULKHEAD	1
13	14758	LOCKNUT	1
14	196129	U-BOLT	1
15	196130	SPACER	2
16	15155	LOCKWASHER-5/16	2
17	196035	CABLE-CONTROL	1
18	165504	HOSE	1
19	15106	NUT-LOCK	1
20	16805	CAPSCREW-3/8 UNC X 1 G5	4
21	15156	LOCKWASHER-3/8	4
22	178779	NUT-3/8 UNC G5	4

HYSTER COMPANY
PORTLAND, OREGON

FILTER AND HOSES

FOR D7 TRACTORS

LAST USED ON SERIAL NO. E77P-2343



KEY

A-FOR TRACTOR SERIAL NO. 47A1-47A3395 AND 48A1-48A6392.
 B-FOR TRACTOR SERIAL NO. 47A3396 & UP AND 48A6393 & UP.
 C-FOR TRACTOR SERIAL NO. 93N1 & UP AND 94N1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
1	147461	FILTER-HYDRAULIC	1	1	1
1	149295	HEAD	1	1	1
2	.....	VALVE-RELIEF	1	1	1
3	149297	O-RING	1	1	1
4	149298	RING-BACK-UP	1	1	1
5	147463	ELEMENT	1	1	1
6	149296	CASE	1	1	1
7	16829	CAPSCREW-HT 1/2 UNC X 1	..	4	..
8	15158	LOCKWASHER-1/2	4	4	..
9	155112	BRACKET-FILTER MOUNTING	..	1	..
10	15057	NUT-7/16 UNC	2	2	2
11	15157	LOCKWASHER-7/16	2	2	2
12	201776	ELBOW	..	2	2
13	16487	O-RING	..	1	1
14	16589	LOCKNUT	..	1	1
15	151714	CLAMP	..	2	..
16	15156	LOCKWASHER-3/8	..	2	..
17	16870	CAPSCREW-HT, 3/8 UNC X 1/2	..	2	..
18	38760	WASHER	..	2	..
19	18578	CAPSCREW-HT, 7/16 UNC X 5	2	2	2
20	76817	HOSE	..	2	..
21	89438	HOSE-PUMP TO FILTER	..	..	1
21	165489	HOSE-FILTER TO WINCH	..	..	1
22	148978	BRACKET-R.H. } FILTER	1	..	..
22	148980	BRACKET-L.H. } MOUNTING	1	..	..
23	201776	ELBOW	2	..	..
23	16487	O-RING	1	..	..
23	16589	LOCKNUT	1	..	..
24	76227	HOSE-PUMP TO FILTER	1	..	..
25	165489	HOSE-FILTER TO WINCH	1	..	..
26	178921	GROMMET	2	2	2
27	16830	CAPSCREW-HT, 1/2 UNC X 1 1/4	4	..	..
28	16805	CAPSCREW-HT, 3/8 UNC X 1	..	..	4
29	15156	LOCKWASHER-3/8	..	..	4
30	15056	NUT-HEX 3/8 UNC	..	..	2
31	175167	BRACKET-FILTER MOUNTING	..	..	1

HYSTER COMPANY
 PORTLAND, OREGON

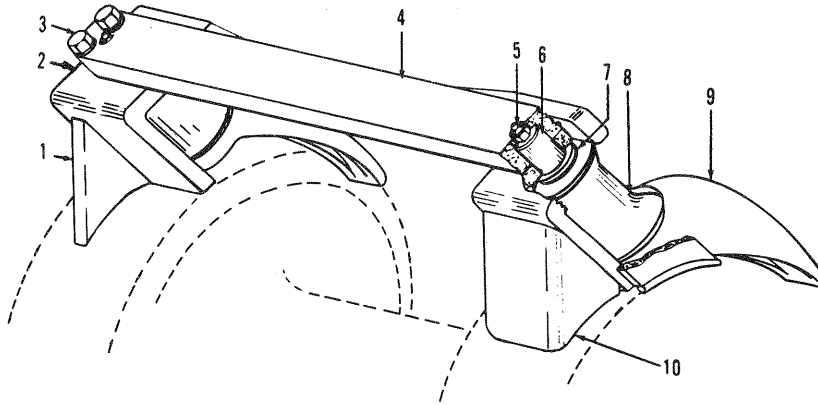
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FAIRLEAD	G1

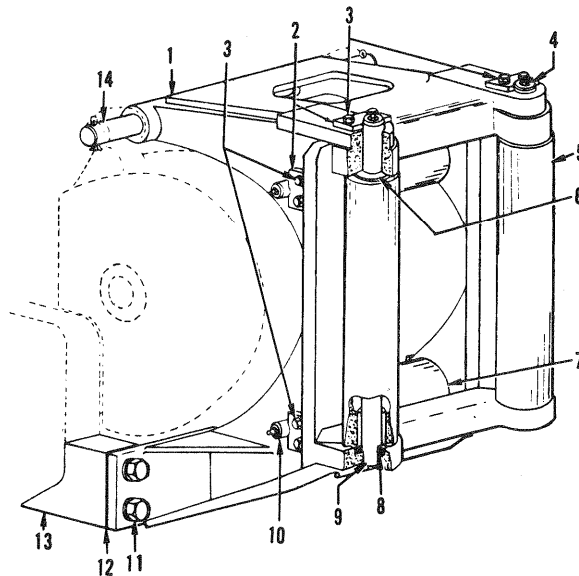
CABLE GUIDE ROLLERS



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	95877 A	ROLLER-CABLE GUIDE	1
2	95892	GUSSET-R.H. BRACKET	1
2	95883 W	BRACKET-R.H. ROLLER	1
2	95891	GUSSET	1
3	16645	CAPSCREW-5/8 UNF X 2 1/4	4
3	15156	LOCKWASHER-5/8	4
4	95888 W	GUARD-CABLE	1
5	16006	FITTING-LUBE	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
6	95669	PIN-ROLLER	2
7	95668	WASHER	6
8	95666 A	ROLLER	2
8	35135	BUSHING	2
9	95879 W	BRACKET-L.H. ROLLER	1
10	95890	BRACKET-L.H.	1
11	95889	BAR-FILLER	1

FAIRLEAD



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	95781 A	FAIRLEAD	1
1	95785 W	FRAME	1
2	93166	KEEPER	4
3	15514	CAPSCREW-1/2 UNF X 1 1/4	8
3	15158	LOCKWASHER-1/2	8
4	16001	FITTING-LUBE	8
5	36206 A	ROLLER-VERTICAL	2
5	2570	BUSHING	2
6	33394	WASHER	2
7	92212 A	ROLLER-HORIZONTAL	2
7	59419	BUSHING	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
8	230336	BEARING-BALL, THRUST	2
9	93657	SHAFT-VERTICAL ROLLER	2
10	93658	SHAFT-HORIZONTAL ROLLER	2
10	92720	WASHER	4
11	15571	CAPSCREW-1 UNF X 2 3/4	4
11	15166	LOCKWASHER-1	4
12	93985	SHIM-.134	AR
13	142808	BRACKET-L.H. MOUNTING	1
13	142809	BRACKET-R.H. MOUNTING	1
14		ROD-TIE, SEE PAGE B1	1
14		COTTER-3/8 X 3, SEE PAGE B1	2

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206	F7	9	15302	F1	20	18547	F4	8	68964	F8	12	94891	E2	4
2570	G1	5	15304	B2	7	18551	F5	1	75384	F3	9	95486	F5	4
6348	E1	8	15305	B2	8	18578	F13	19	76227	F13	24	95499	D5	3
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9563	D1	6	15515	D4	8	18863	D5	9	77187	A E2	16	95668	G1	7
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