

PARTS MANUAL D7H TOWING WINCH

CSP

Date Purchased _____
Model Number _____
Serial Number _____

LIST OTHER SPECIAL EQUIPMENT

HOW TO USE YOUR PARTS BOOK

This parts book contains a complete listing of all parts used since the first model. When ordering parts give the model number, serial number, catalog form number, quantity, name of part and part number.

To find any part needed for replacement, start with the index shown on the right. Determine which section contains the part desired. By bending the book back slightly to the right, the heavy arrows on the right hand side of the index page will line up with a black tab on the edge of the index page of the section desired. Proceed then to locate the part in this section.

Service, Operating, and lubrication Instructions will be found in Section "A."

Quantities shown are quantities per assembly unless otherwise stated.

Assembly numbers at the top of a page contain all of the parts listed on that page; exceptions are noted.

Parts with Indented Descriptions are included in the assembly immediately above.

Example

Ref. No.	Hyster Part No.	NAME OF PART	Qty. Req.	
			A	B
1	134274	Kit—Major	1	1
2	127039	Capscrew	6	6
	78035A	Kit—Minor	1	1
3	.....	Seal	2	2
4	123699	Kit—Gear	1	1

Be sure to read all foot notes at the bottom of any page from which parts are being ordered. Foot notes are indicated by an asterisk or other symbol preceding a part number.

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

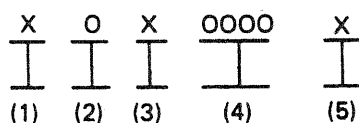
**We reserve the right to make changes in design or add improvements
without incurring the obligation to make such changes in
Winches previously manufactured.**

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

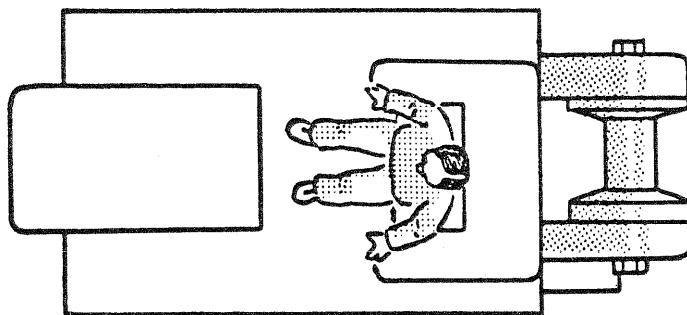
UNIT SERIAL NO.



- (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

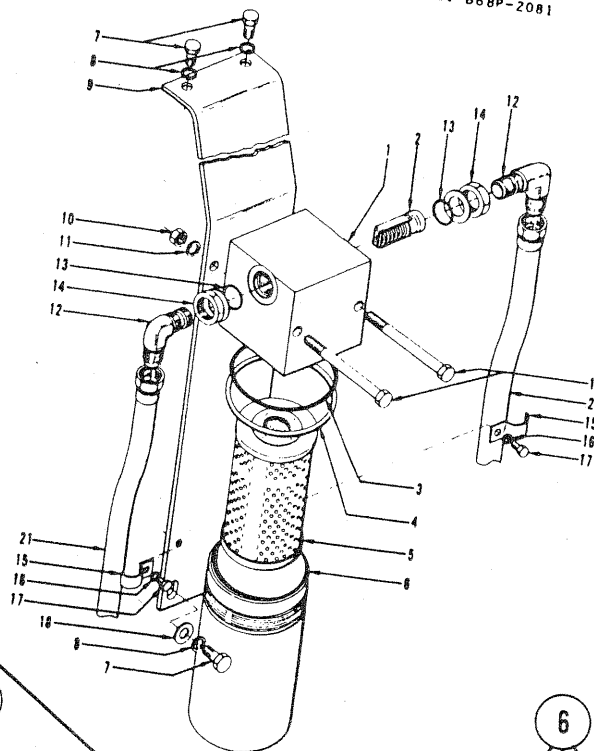
Service, Operation and Installation Instructions

Section Q NUMERICAL INDEX

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
142	F3	16165	F2	18889	F2	89	
206	F12	16200	F8	18903	F11	89	
6327	D1	16220	F3	18994	F8	89	
9413	F12	16352	D1	19871	F3	89	
9455	D1	16386	D3	19987	D5	89	
10389	D4	16397	D2	21420	B2	92212	
12479	D3	16448	F2	27187	F8	92606	
12480	D6	16466	F2	29582	F4	92671	
12823	D5	16482	F4	30059	D2	92720	
12898	F3	16484	F4	30080	D2	92720	
99	F6	16485	F10			92720	
7	D2	16486				92720	
	D1					92720	

FILTER

FIRST USED ON WINCH SERIAL NO. B68P-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	16829	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	2
13	16487	O-RING	1
14	16589	LOCKNUT	1
15	151714	CLAMP	1
16	15156	LOCKWASHER-3/8	1
17	16870	CAPSCREW-3/8 UNC X 1 1/2	2
18	38760	WASHER	2
19	18578	CAPSCREW-7/16	2
20	147455	MOOSE	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.

INTENTIONALLY BLANK

Section B

FRAMES, COVERS AND

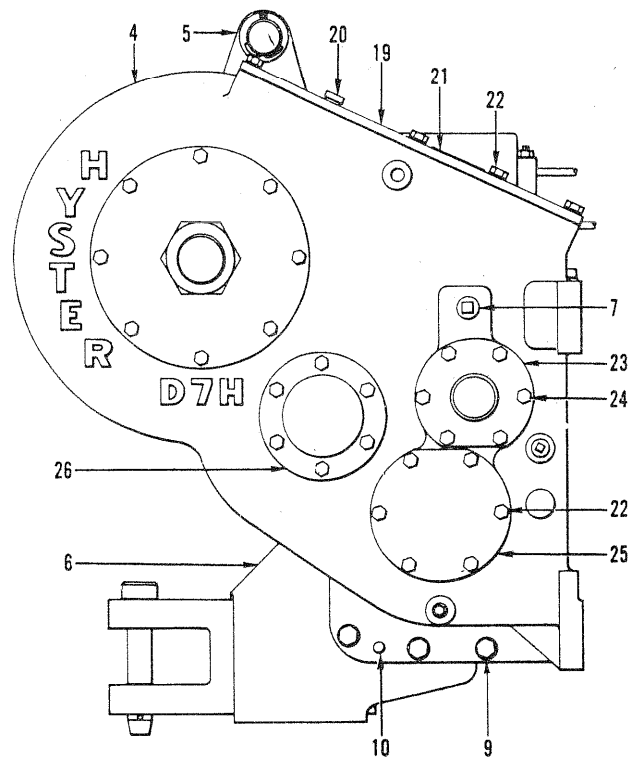
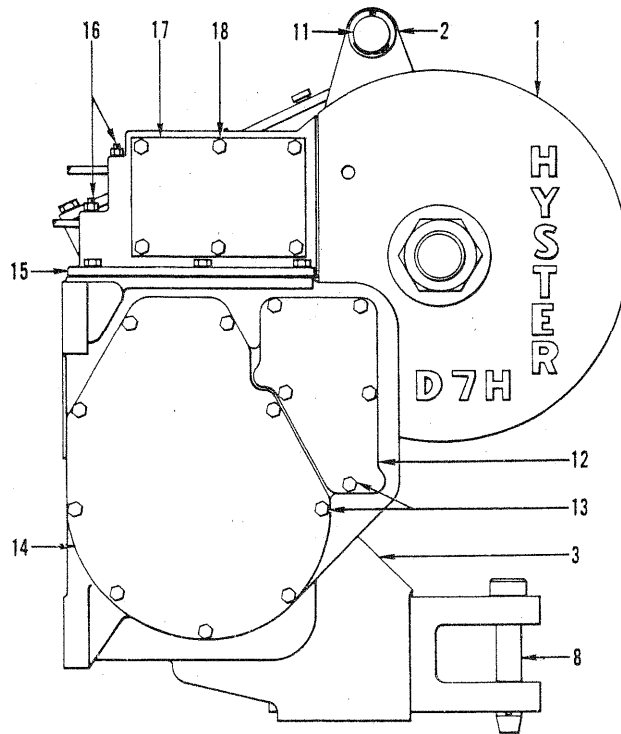
MOUNTING STUDS

INDEX

ATTACHING PARTS (977 Traxcavator)	B8
FLOOR PLATES (D7 Tractor)	B4
FRAMES AND COVERS (Cast Frame Winch)	B1
FRAMES AND COVERS (Fabricated Frame Winch)	B3
MOUNTING STUDS	B7
SWIVELING DRAWBAR	B2
TRACTOR ALTERATIONS (D7 Tractor and 572E Pipelayer)	B9
WINCH ASSEMBLY (Direct Drive)	B5
WINCH ASSEMBLY (Power Control)	B6

FRAMES AND COVERS

LAST USED ON WINCH SERIAL NO. D47P-1648 & C77P-1746



FRAMES AND COVERS

LAST USED ON WINCH SERIAL NO. D47P-1648 & C77P-1746

KEY

A-FOR DIRECT DRIVE WINCH.
B-FOR POWER CONTROL WINCH.

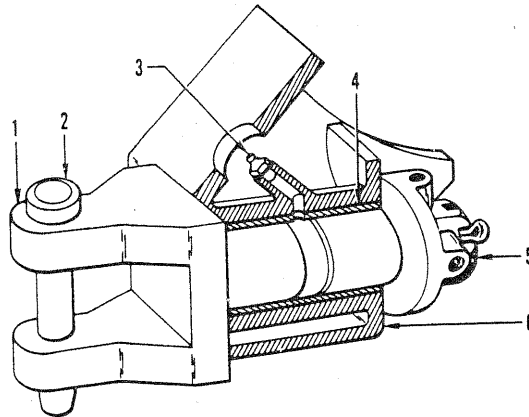
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	134201	FRAME-WINCH } HYSTER DRAWBAR	1	..
	134203	FRAME-WINCH } CAT. DRAWBAR	..	1
	134202	FRAME-WINCH } CAT. DRAWBAR	1	..
	134204	FRAME-WINCH } CAT. DRAWBAR	..	1
	133976	HOUSING-L.H. } HYSTER DWBR.	1	..
	133970	HOUSING-L.H. } CAT. DWBR.	..	1
	133972	HOUSING-L.H. } CAT. DWBR.	1	..
	133960	HOUSING-L.H. } CAT. DWBR.	..	1
	93771	BRACKET-TIE ROD	1	1
	96391 W	BRACKET-HYSTER DRAWBAR	1	1
2	96402 W	BRACKET-L.H., CAT. DWBR.	1	1
	133975	HOUSING-R.H. } HYSTER DWBR.	1	..
3	133971	HOUSING-R.H. } CAT. DWBR.	..	1
	133974	HOUSING-R.H. } CAT. DWBR.	1	..
4	133963	HOUSING-R.H. } CAT. DWBR.	..	1
	93771	BRACKET-TIE ROD	1	1
5	96409 W	BRACKET-R.H., CAT. DWBR.	1	1
	15305	PLUG-PIPE, 1	1	..
6	94369	PIN-DRAWBAR } HYSTER	1	1
	15273	COTTER-3/8 X 2 1/2 DWBR.	1	1
7	16800	CAPSCREW-HT, 3/4 UNF X 2	7	7
	15162	LOCKWASHER-3/4	7	7
8	95440	PIN-DOWEL	1	1
	92606	ROD-TIE	1	1
9	15272	COTTER-3/8 X 3	2	2
	96425	COVER	1	1
10	* 96426	GASKET	1	1
	16820	CAPSCREW-HT, 1/2 UNF X 1	14	14
11	15158	LOCKWASHER-1/2	14	14
	96423	COVER-BRAKE	1	1
12	* 96424	GASKET	1	1
	.....	COVER-TRANSMISSION, SEE PG. B5	1	1
13	.....	HOUSING-CONTROLS, SEE PG. E1	1	..
	.....	HOUSING-CONTROL VALVE, SEE PAGE F1	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
16	16212	SETSCREW-3/8 UNC X 1 1/4	2	..
	15086	NUT-JAM, 3/8 UNC	2	..
17	96378	COVER	1	..
	132021	COVER	..	1
18	* 96379	GASKET	1	..
	* 132020	GASKET	..	1
19	16829	CAPSCREW-HT, 1/2 UNC X 1	6	..
	16805	CAPSCREW-HT, 3/8 UNC X 1	..	6
20	15158	LOCKWASHER-1/2	6	..
	15156	LOCKWASHER-3/8	..	6
21	138905	COVER-R.H. TOP	1	1
	* 140371	GASKET	1	1
22	21420	PLUG-VENT	1	1
	15319	PLUG-PIPE, 1 1/2	1	1
23	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	16	16
	15158	LOCKWASHER-1/2	16	16
24	95948	RETAINER-BEARING	1	..
	96472	RETAINER-BEARING	..	1
25	110934	SHIM-.005	AR	..
	110935	SHIM-.007	AR	..
26	110936	SHIM-.020	AR	..
	134107	SHIM-.005	..	AR
27	134108	SHIM-.007	..	AR
	134109	SHIM-.020	..	AR
28	16807	CAPSCREW-HT, 1/2 UNF X 1 1/2	6	..
	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	..	7
29	15158	LOCKWASHER-1/2	6	7
	96433	RETAINER-BEARING	1	1
30	134081	SHIM-.005	AR	AR
	134082	SHIM-.007	AR	AR
31	134083	SHIM-.020	AR	AR
	.....	COVER-SEE PAGE D1	1	1
32	142799	GASKET SET	1	..
	142797	GASKET SET	..	1

*INCLUDED IN GASKET SET.

SWIVELING DRAWBAR

INCLUDED WITH APPROPRIATE WINCH FRAME



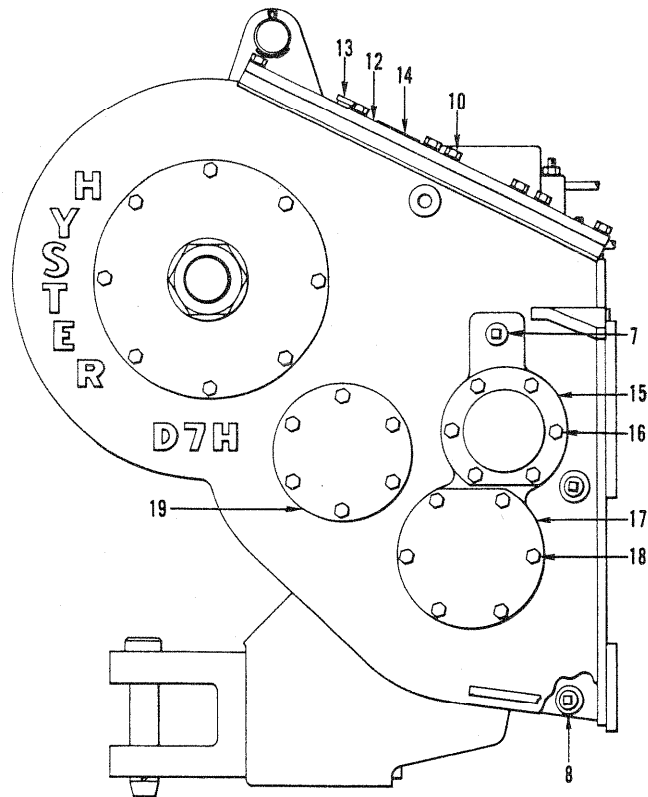
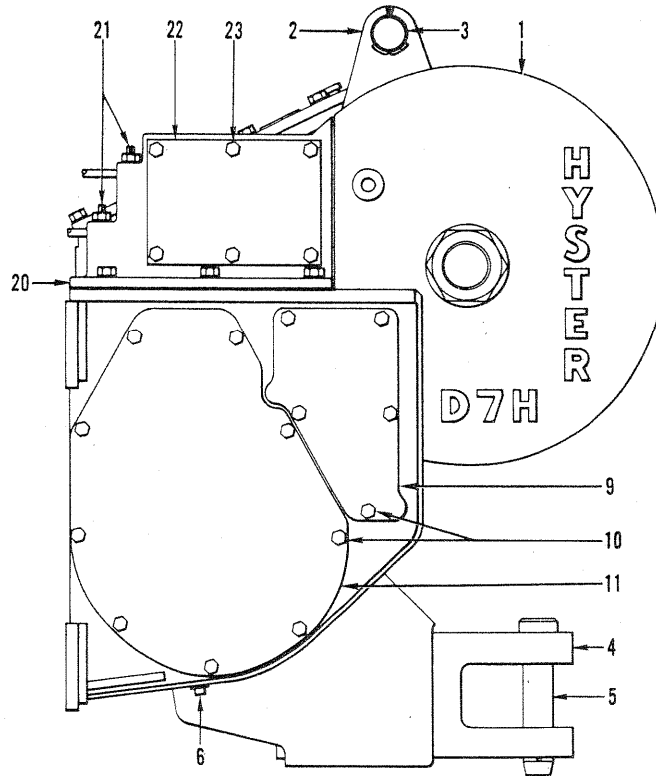
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	33787	DRAWBAR	1
2	.....	PIN-DRAWBAR } SEE PAGE B1 OR B2	1
3	16002	FITTING-GREASE	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
4	92671	BUSHING	2
5	33618	NUT-SPECIAL	1
6	15295	COTTER-1/2 X 5	1
7	.....	BRACKET-DRAWBAR, SEE PG. B1 OR B3	1

HYSTER COMPANY
PORTLAND, OREGON

FRAMES AND COVERS

FIRST USED ON WINCH SERIAL NO. D47P-1649 & C77P-1747



FRAMES AND COVERS

KEY

A-FOR DIRECT DRIVE WINCH.
B-FOR POWER CONTROL WINCH.

FIRST USED ON WINCH SERIAL NO. D47P-1649 & C77P-1747

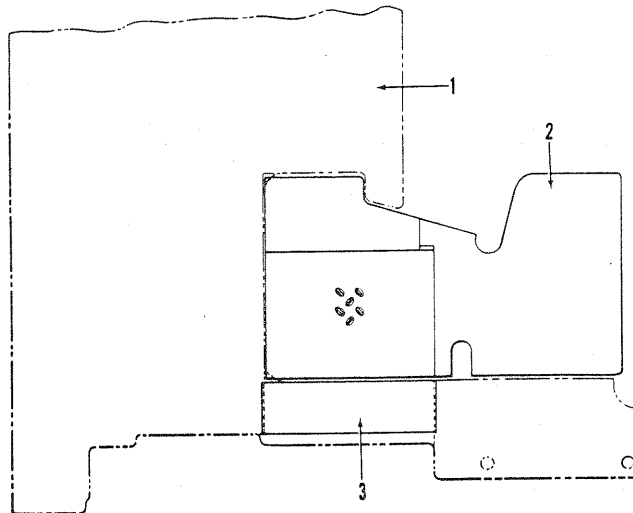
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	142887	FRAME-WINCH } RIGID DRAWBAR	1	..
	142890	FRAME-WINCH }	..	1
	142889	FRAME-WINCH } SWIVEL. DRAWBAR	1	..
	142892	FRAME-WINCH }	..	1
	142888	FRAME-WINCH } SWING. DRAWBAR	1	..
2	142891	FRAME-WINCH }	..	1
	93771	BRACKET-TIE ROD	2	2
3	92606	ROD-TIE	1	1
	15272	COTTER-3/8 X 3	2	2
4	142872	BRACKET-RIGID DRAWBAR	1	1
	142879	BRACKET-SWIVELING DRAWBAR	1	1
	142736	BRACKET-R.H. } SWIVELING	1	1
	142735	BRACKET-L.H. } DRAWBAR	1	1
5	95959	PIN-DRAWBAR } RIGID	1	1
	15273	COTTER-3/8 X 2 1/2 } DWBR.	1	1
	.....	PIN-DRAWBAR } SWIVEL. DWBR.,	1	1
	.....	COTTER } SEE PAGE B2	1	1
6	15304	PLUG-PIPE, 3/4	1	1
7	15305	PLUG-PIPE, 1	1	..
8	35503	PLUG-MAGNETIC PIPE, 3/4	1	1
9	96425	COVER	1	1
	* 96426	GASKET	1	1
10	16820	CAPSCREW-HT, 1/2 UNF X 1	25	25
	15156	LOCKWASHER-1/2	25	25
11	96423	COVER-BRAKE	1	1
	* 96424	GASKET	1	1
12	142760	COVER-TOP R.H.	1	1
	*142761	GASKET	1	1
13	21420	PLUG-VENT	1	1
14	15319	PLUG-PIPE, 1 1/2	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
15	95948	RETAINER-BEARING	1	..
	96472	RETAINER-BEARING	..	1
	110934	SHIM-.005	AR	..
	110935	SHIM-.007	AR	..
	110936	SHIM-.020	AR	..
16	134107	SHIM-.005	..	AR
	134108	SHIM-.007	..	AR
	134109	SHIM-.020	..	AR
	16807	CAPSCREW-HT, 1/2 UNF X 1 1/2	6	..
	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	..	7
17	15158	LOCKWASHER-1/2	6	7
	96433	RETAINER-BEARING	1	1
	134081	SHIM-.005	AR	AR
	134082	SHIM-.007	AR	AR
	134083	SHIM-.020	AR	AR
18	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	6	6
	15158	LOCKWASHER-1/2	6	6
	.....	COVER-SEE PAGE D1	1	1
19	.....	COVER-TRANSMISSION, SEE PG. 85	1	1
	.....	HOUSING-CONTROLS, SEE PG. E1	1	..
	.....	HOUSING-CONTROL VALVE, SEE PAGE F1	..	1
21	16212	SETSCREW-3/8 UNC X 1 1/4	2	..
	15086	NUT-JAM, 3/8	2	..
	96378	COVER	1	..
22	132021	COVER	..	1
	* 96379	GASKET	1	..
	*132020	GASKET	..	1
	142799	GASKET SET	1	..
	142797	GASKET SET	..	1

*INCLUDED IN GASKET SET.

FLOOR PLATES

FOR D7 TRACTOR WITH POWER CONTROL WINCH & OPTIONAL HYDRAULIC PUMP



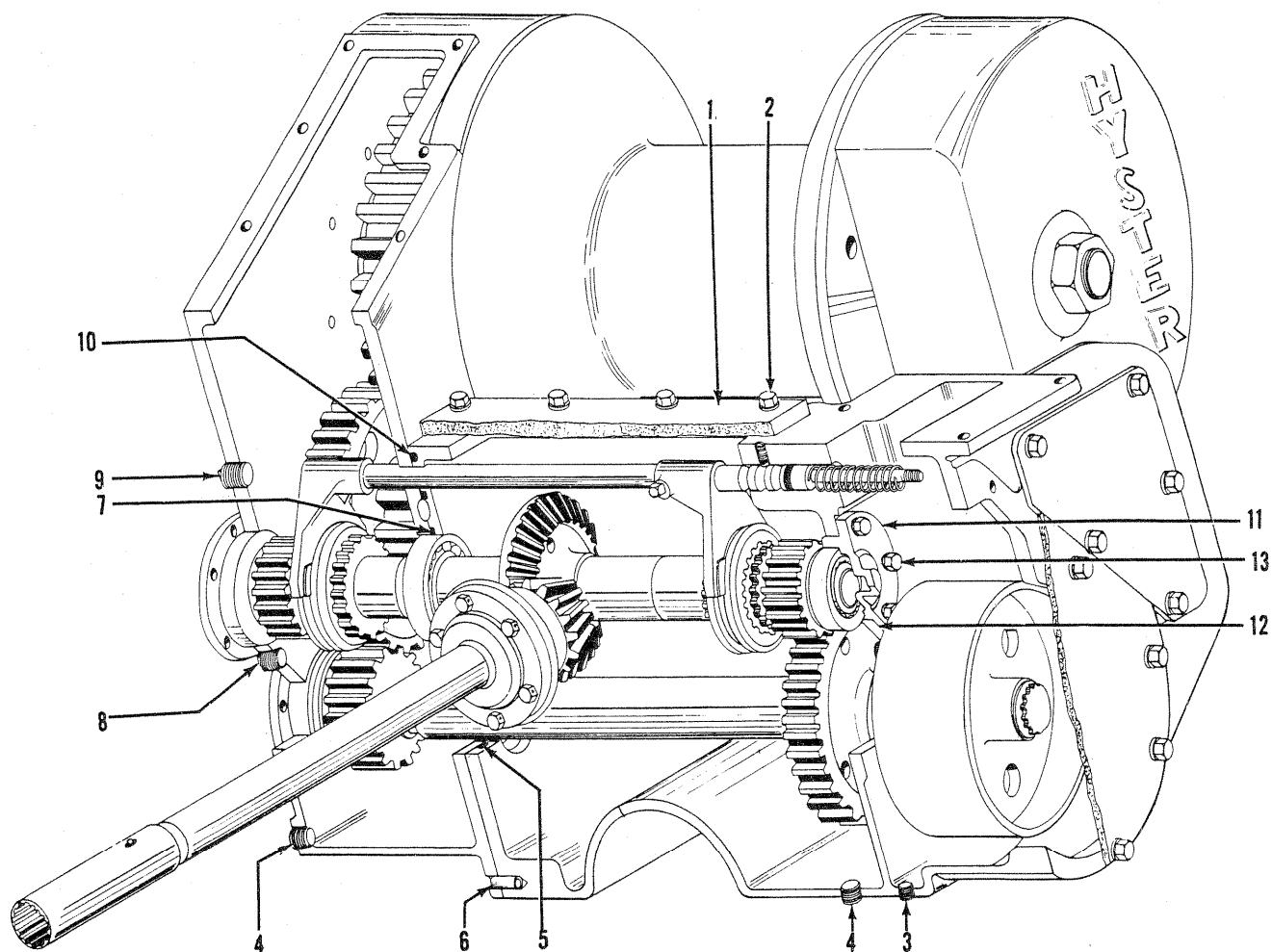
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	.....	FLOOR PLATE-CATERPILLAR 2M516	1
	*	FLOOR PLATE-CATERPILLAR 356739	1
2	144773	COVER	1
	*144034	FLOOR PLATE	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
3	133952	PLATE	1
*FOR TRACTOR SERIAL NO. A47A-3396 AND UP AND 48A-6393 AND UP.			

HYSTER COMPANY
PORTLAND, OREGON

WINCH ASSEMBLY

DIRECT DRIVE WINCH



KEY

A-LAST USED ON WINCH SERIAL NO. D47P-1648.
 B-USED ON WINCH SERIAL NO. D47P-1649 THRU 2174.
 C-FIRST USED ON WINCH SERIAL NO. D47P-2175.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
1	96369	COVER-TRANSMISSION	1	..	..
	142857	COVER-TRANSMISSION	..	1	..
	161848	COVER-TRANSMISSION	..	..	1
	* 96370	GASKET	1	..	..
2	*142759	GASKET	..	1	1
	16807	CPSCR-HT, 1/2 UNF X 1 1/2	5	..	..
	16748	CPSCR-HT, 1/2 UNF X 2 3/4	4	..	..
	37562	CPSCR-HT, 1/2 UNF X 1 1/4	..	6	..
	16824	CPSCR-HT, 1/2 UNF X 2 1/2	..	4	..
	151788	CPSCR-HT, 1/2 UNF X 1 1/4	..	..	6
	163182	CPSCR-HT, 1/2 UNF X 2 1/2	..	..	4
	15158	LOCKWASHER-1/2	9	10	..
	15135	WASHER-1/2	..	..	10
	15315	PLUG-PIPE, 1/2	1	..	..
3	10389	PLUG-MAGNETIC PIPE, 3/4	2	..	..
	.....	PLUG-MAGNETIC, SEE PG. B3	..	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
5	133921	O-RING	1	..	..
6	.....	PIN-DOWEL, SEE PAGE B1	1	..	..
7	86543	O-RING	1	..	..
8	15304	PLUG-PIPE, 3/4	1	1	1
9	.....	PLUG-PIPE, SEE PG. B1 OR B3	1	1	1
10	79980	O-RING	1	..	..
11	95942	RETAINER-BEARING	1	1	1
12	110934	SHIM-.005	AR	AR	AR
	110935	SHIM-.007	AR	AR	AR
	110936	SHIM-.020	AR	AR	AR
13	37562	CPSCR-HT, 1/2 UNF X 1 1/4	6	6	6
	15158	LOCKWASHER-1/2	6	6	6

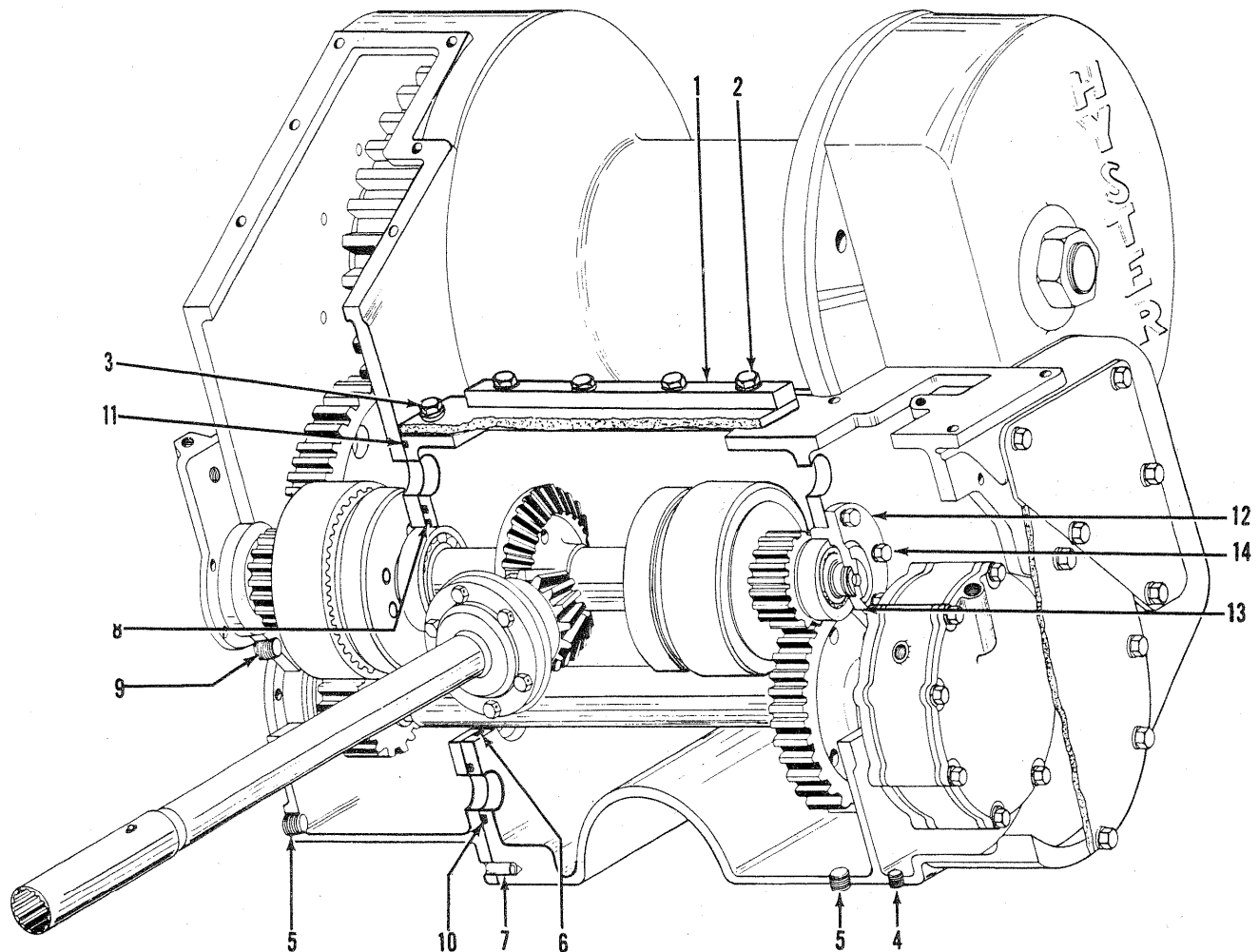
*INCLUDED IN GASKET SET 142799.

□ INCLUDED WITH WINCH FRAME.

HYSTER COMPANY
 PORTLAND, OREGON

WINCH ASSEMBLY

POWER CONTROL WINCH



KEY

A-LAST USED ON WINCH SERIAL NO. C77P-1746.
 B-USED ON WINCH SERIAL NO. C77P-1747 THRU 2698.
 C-FIRST USED ON WINCH SERIAL NO. C77P-2699.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
1	133965	COVER-TRANSMISSION	1	..	..
	#132935	COVER-TRANSMISSION	1	..	..
	142861	COVER-TRANSMISSION	..	1	..
	#142758	COVER-TRANSMISSION	..	1	1
	161850	COVER-TRANSMISSION	..	..	1
	* 96370	GASKET	1	..	..
	*142759	GASKET	..	1	1
	16748	CPSCR-HT, 1/2 UNF X 2 3/4	4	..	..
	16821	CPSCR-HT, 1/2 UNF X 2 1/4	..	4	..
	2	163182	CPSCR-HT, 1/2 UNF X 2 1/4	..	..
2	15158	LOCKWASHER-1/2	4	4	..
	15135	WASHER-1/2	..	..	4
	16807	CPSCR-HT, 1/2 UNF X 1 1/2	5	..	..
	# 16807	CPSCR-HT, 1/2 UNF X 1 1/2	9	10	10
	16820	CPSCR-HT, 1/2 UNF X 1	..	6	..
	3	151788	CPSCR-HT, 1/2 UNF X 1 1/4	..	..
	15158	LOCKWASHER-1/2	5	6	..
	# 15158	LOCKWASHER-1/2	9	10	10
	15135	WASHER-1/2	..	..	6
	4	15315	PLUG-PIPE, 1/2	1	..

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
5	10389	PLUG-MAGNETIC PIPE, 3/4	2	..	..
	.....	PLUG-MAGNETIC, SEE PG. B3	..	1	1
6	133921	O-RING	1	..	..
7	.....	PIN-DOWEL, SEE PAGE B1	1	..	..
8	86543	O-RING	1	..	..
9	15304	PLUG-PIPE, 3/4	1	1	1
10	133920	O-RING	1	..	..
11	79980	O-RING	1	..	..
12	133911	RETAINER-BEARING	1	1	1
13	133913	SHIM-.005	AR	AR	AR
	133914	SHIM-.007	AR	AR	AR
	133915	SHIM-.020	AR	AR	AR
14	37562	CPSCR-HT, 1/2 UNF X 1 1/4	5	5	5
	15158	LOCKWASHER-1/2	5	5	5

*INCLUDED IN GASKET SET 142797.

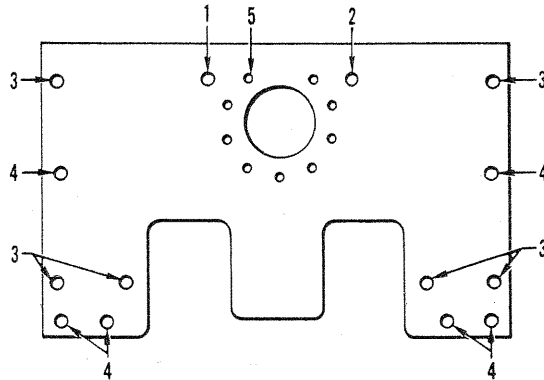
■ INCLUDED WITH WINCH FRAME.

#FOR 977 TRAXCAVATOR ONLY.

HYSTER COMPANY
 PORTLAND, OREGON

MOUNTING STUDS

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



KEY

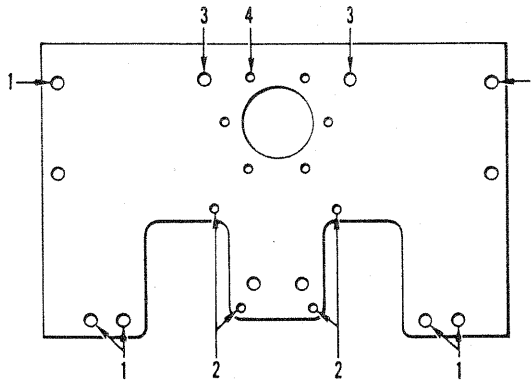
A-LAST ON WINCH SERIAL NO. C77P-1746.
B-FIRST ON WINCH SERIAL NO. C77P-1747.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	95835	STUD-1 1/4 UNF X 3 13/16	1	1
	134821	NUT-SLOTTED, 1 1/4 UNF	1	1
	15240	COTTER-5/32 X 2 1/2	1	1
	55434	O-RING	..	1
	96422	STUD-1 1/4 UNF X 4 7/16	1	..
2	15018	NUT-1 1/4 UNF	1	..
	15168	LOCKWASHER-1 1/4	1	..
	95835	STUD-1 1/4 UNF X 3 13/16	..	1
	134821	NUT-SLOTTED, 1 1/4 UNF	..	1
	15240	COTTER-5/32 X 2 1/2	..	1
	55434	O-RING	..	1
			..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
3	95837	STUD-1 1/4 UNF X 4 11/16	6	6
	15168	LOCKWASHER-1 1/4	6	6
	15018	NUT-1 1/4 UNF	6	6
4	18001	PLUG-CORK, #17	6	6
5	18000	PLUG-CORK, #5	9	9

MOUNTING STUDS

FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP



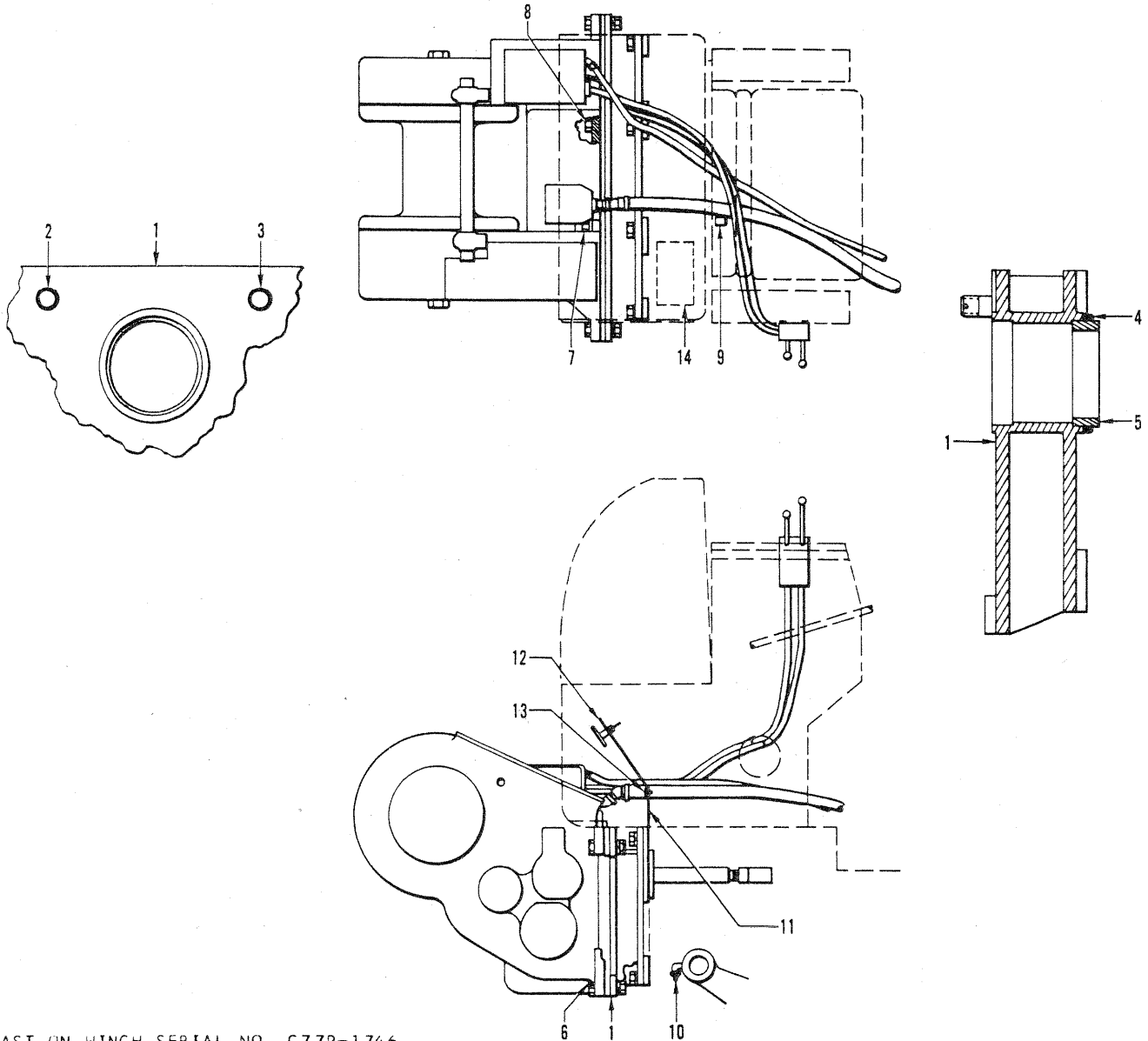
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			1	2
1	133179	STUD-1 UNS X 4	6	6
	15166	LOCKWASHER-1	6	6
	15016	NUT-1 UNS	6	6
2	18005	PLUG-CORK, #11	4	4

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

HYSTER COMPANY
PORTLAND, OREGON

ATTACHING PARTS

FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP



KEY

A—LAST ON WINCH SERIAL NO. C77P-1746.
B—FIRST ON WINCH SERIAL NO. C77P-1747.

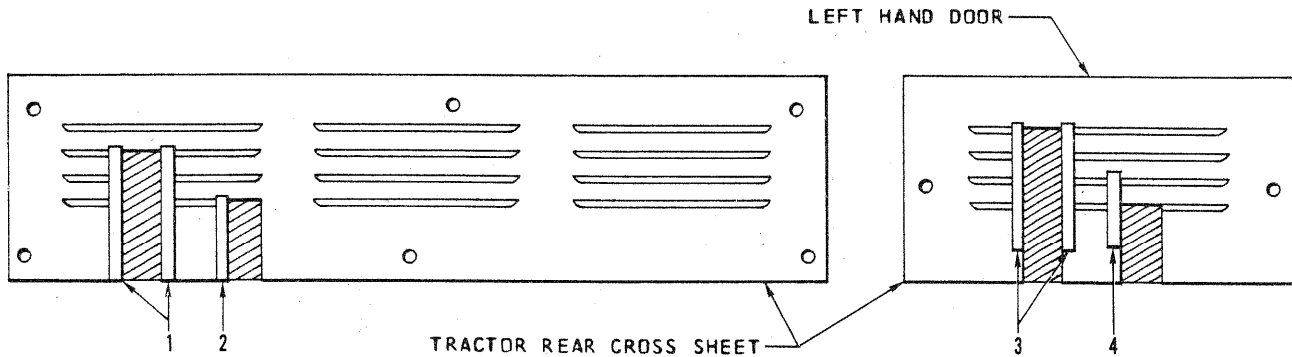
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	132911	ADAPTER ASSEMBLY	1	..
	143056	ADAPTER ASSEMBLY	..	1
2	132922	STUD-1 1/4 UNF X 3 1/4	1	1
3	132923	STUD-1 1/4 UNF X 4	1	..
	132922	STUD-1 1/4 UNF X 3 1/4	..	1
4	134118	O-RING	1	1
5	132921	RING	1	1
	133529	CAPSCREW-1 1/4 UNF X 4 1/2	6	6
6	15168	LOCKWASHER-1 1/4	6	6
	15018	NUT-1 1/4 UNF	6	6
	15018	NUT-1 1/4 UNF	1	..
	15168	LOCKWASHER-1 1/4	1	..
7	134821	NUT-SLOTTED JAM, 1 1/4 UNF	..	1
	15240	COTTER-5/32 X 2 1/2	..	1
	55434	O-RING	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
	134821	NUT-SLOTTED, 1 1/4 UNF	1	1
8	15240	COTTER-5/32 X 2 1/2	1	1
	55434	O-RING	1	1
9	132931	BRACKET	1	1
10	15451	ELBOW-STREET, 1/4	2	2
11	132927	COVER-LOWER REAR	1	1
12	132924	COVER ASSEMBLY-REAR	1	1
	18202	CAPSCREW-3/8 UNF X 1 1/4	2	2
13	15156	LOCKWASHER-3/8	2	2
	15006	NUT-3/8 UNF	2	2
14	129859	DECAL-OPERATION AND LUBE INSTRUCTION	1	1

HYSTER COMPANY
PORTLAND, OREGON

TRACTOR ALTERATIONS

FOR D7 TRACTOR WITH DIRECT DRIVE WINCH



KEY

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

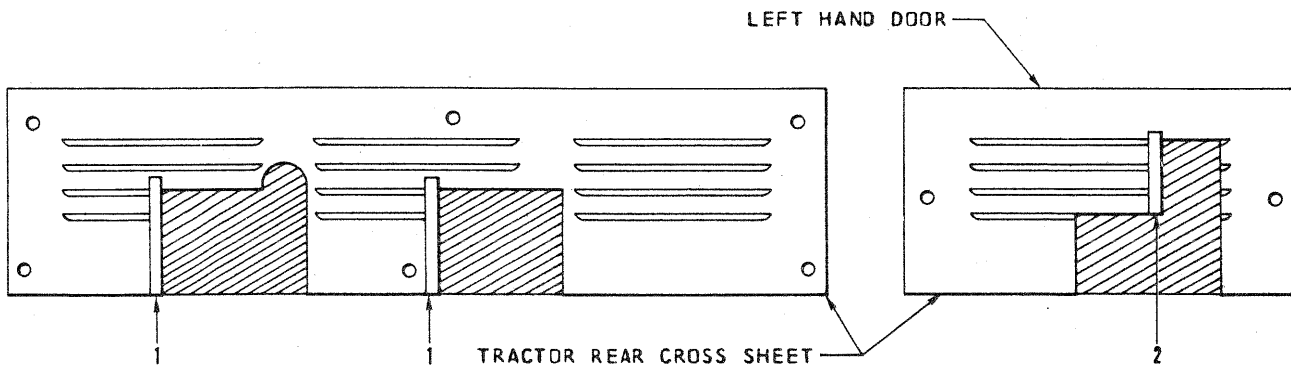
B-FOR SERIAL NO. 47A3396 & UP.

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 D7 SERIAL NO. 47A2081-47A3395 AND 48A3471-48A6392.

B-FOR D7 SERIAL NO. 47A3396 & UP, 48A6393 & UP AND 572E PIPELAYER SERIAL NO. 65A1 & UP.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	97554	STRIP	2	..

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

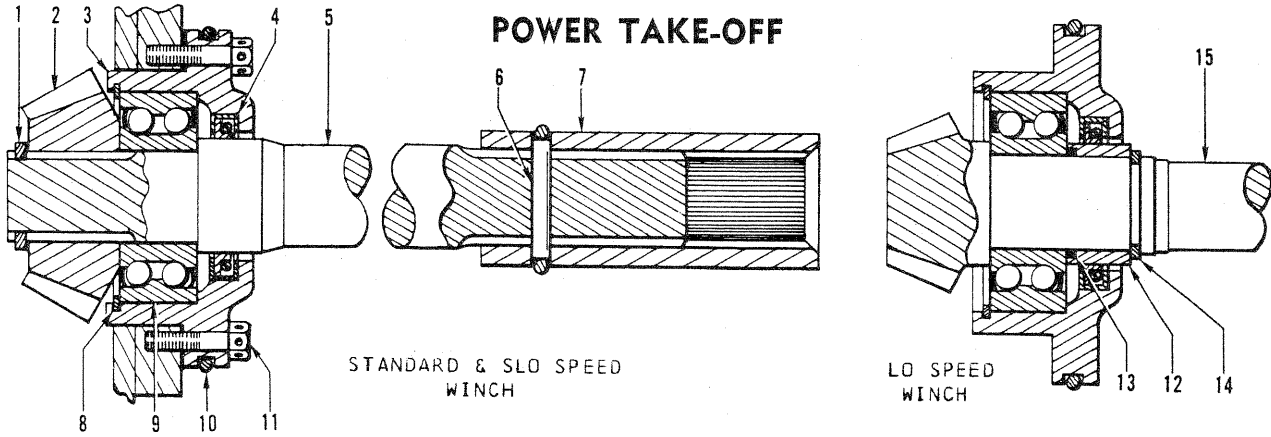
Section D

GEAR TRAIN AND SHAFTS

INDEX

AUTOMATIC BRAKE (Direct Drive)	D4
BEVEL GEAR SHAFT	D2
BRAKE SHAFT	D3
CABLE LOCK	D5
CLUTCH (Power Control)	D3
DRUM SHAFT	D5
INTERMEDIATE GEAR SHAFT	D1
OIL BRAKE (Power Control)	D4
POWER TAKE-OFF	D1

POWER TAKE-OFF



KEY

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

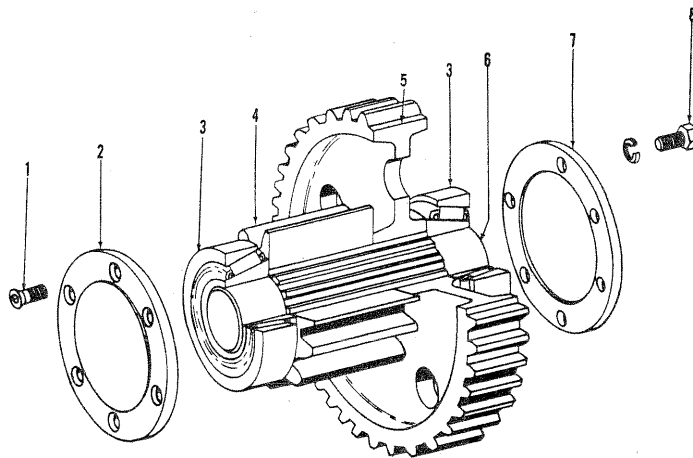
B-FOR D7 TRACTOR SERIAL NO. 48A1 & UP AND 572E PIPELAYER SERIAL NO. 65A1 & UP.

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, 14 TEETH	1	1	1
3	98362	CARRIER-BEARING	1	1	1
	134078	SHIM-.005	AR	AR	AR
4	134079	SHIM-.007	AR	AR	AR
	79389	SEAL-OIL	1	1	1
5	96367	SHAFT-P.T.O.	1	..	..
	96451	SHAFT-P.T.O.	..	1	..
6	132908	SHAFT-P.T.O.	..	..	1
	33786	PIN	1	1	..
6	9563	PIN	..	..	1
	9528	RING-LOCK	1	1	..
	9554	RING-LOCK	..	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
7	33785	COUPLING	1	1	..
	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	26379	CAPSCREW-DRILLED HEAD	6	6	6
	.....	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	..	..
	96452	SHAFT-P.T.O.	..	1	..
	132909	SHAFT-P.T.O.	..	..	1

INTERMEDIATE GEAR SHAFT



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
1	16352	CAPSCREW-1/2 UNF X 1 1/4	6		
	15929	LOCKWASHER-1/2	6		
2	92619	COVER	1		
	92618	GASKET	1		
3	30091	CUP-BEARING	2		
	230309	CONE-BEARING	2		
4	92621	GEAR-DRUM PINION	1		
5	96415	GEAR-51 TEETH	1		
	96418	GEAR-54 TEETH, LO-SPEED	1		

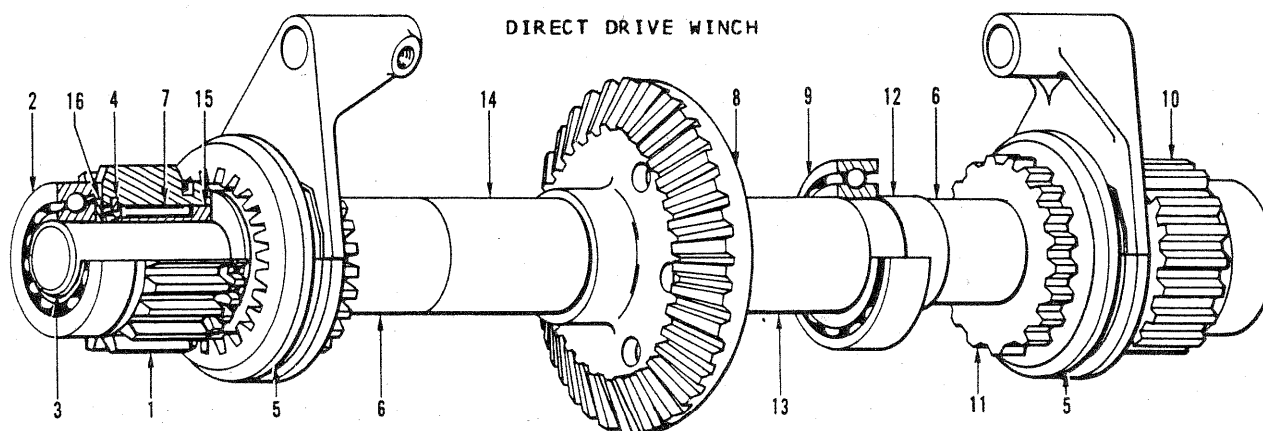
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
6	92620	SHAFT-INTERMEDIATE	1		
	92623	COVER	1		
7	134074	SHIM-.005	AR		
	134075	SHIM-.007	AR		
	134076	SHIM-.020	AR		
8	37562	CAPSCREW-1/2 UNF X 1 1/4	6		
	15158	LOCKWASHER-1/2	6		

*INCLUDED IN GASKET SET 142797 & 142799.

□LAST USED ON WINCH SERIAL NO. D47P-1648 & C77P-1746.

HYSTER COMPANY
PORTLAND, OREGON

BEVEL GEAR SHAFT



KEY

A-FOR STANDARD SPEED WINCH.

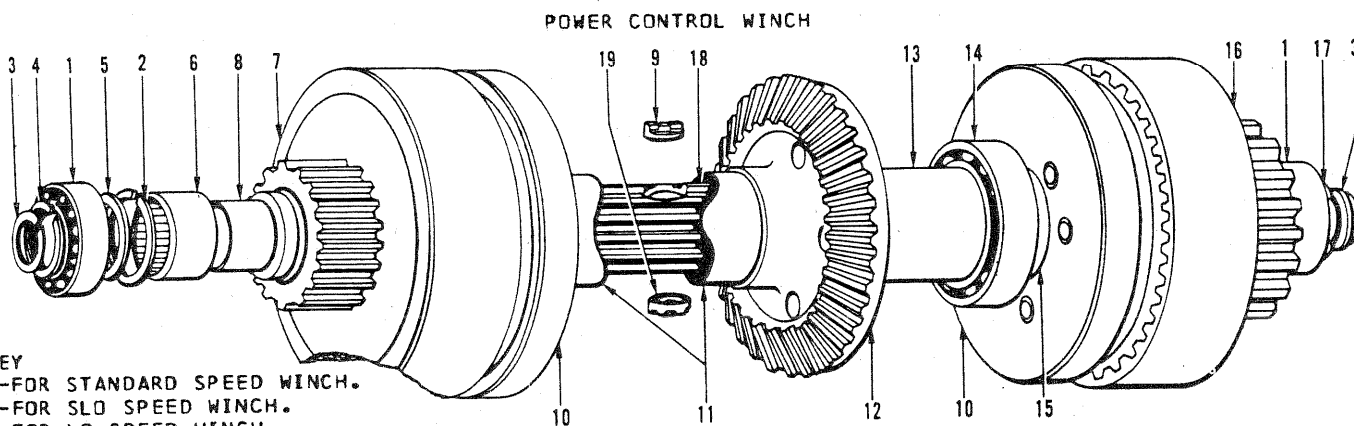
B-FOR SLO SPEED WINCH.

C-FOR LO SPEED WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
1	95944	GEAR-2ND RED., 22 TEETH	1	1	1
2	230351	CUP-BEARING	2	2	2
	230405	CONE-BEARING	2	2	2
3	96371	SHAFT-BEVEL GEAR	1	1	1
4	58938	SNAP RING	2	2	2
5	95946	CLUTCH-DENTAL	2	2	2
6	96372	SPACER	2	2	2
7	230407	BEARING-ROLLER	2	2	2
8	96021	GEAR-BEVEL, 45 TEETH	1	1	..
	96028	GEAR-BEVEL, 45 TEETH	..	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
9	44316	BEARING-BALL	1	1	1
10	96413	GEAR-22 TEETH } REVERSE	1	..	..
	96416	GEAR-19 TEETH } PINION	..	1	1
11	95945	HUB-DENTAL CLUTCH	2	2	2
12	96430	CARRIER-BEARING	1	1	1
13	95964	SPACER	1	1	1
14	95963	SPACER	1	1	1
15	95961	CARRIER-R.H. BEARING	1	1	1
	96431	CARRIER-L.H. BEARING	1	1	1
16	95962	WASHER	2	2	2

BEVEL GEAR SHAFT



KEY

A-FOR STANDARD SPEED WINCH.

B-FOR SLO SPEED WINCH.

C-FOR LO SPEED WINCH.

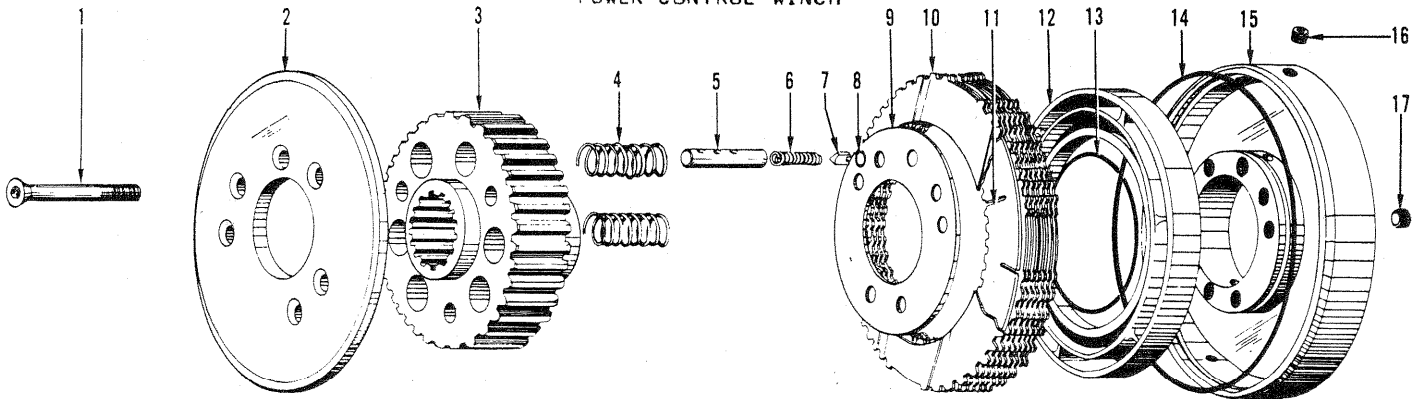
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
1	230351	CUP-BEARING	2	2	2
	230405	CONE-BEARING	2	2	2
2	58938	SNAP RING	2	2	2
3	95581	RING-SEAL	2	2	2
4	12916	SNAP RING	1	1	1
5	95962	WASHER	2	2	2
6	230407	BEARING-ROLLER	2	2	2
7	96469 W	GEAR-22 & 88 TEETH, 2ND REDUCTION SPIDER	1	1	1
8	95961	CARRIER-R.H. BEARING	1	1	1
	96431	CARRIER-L.H. BEARING	1	1	1
9	96783	SEAL-THREE TEETH	2	2	2
10	.....	CLUTCH-SEE PAGE D3	2	2	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
11	95963	SPACER	1	1	1
12	96021	GEAR-BEVEL, 45 TEETH	1	1	..
	96028	GEAR-BEVEL, 45 TEETH	..	..	1
13	95964	SPACER	1	1	1
14	44316	BEARING-BALL	1	1	1
15	96430	CARRIER-BEARING	1	1	1
16	96495 W	GEAR-22 & 88 TEETH } REV.	1	..	..
	96497 W	GEAR-19 & 88 TEETH } SPIDER	..	1	1
17	21014	LOCKNUT-BEARING	1	1	1
	21013	LOCKWASHER-BEARING	1	1	1
18	96458	SHAFT-BEVEL GEAR	1	1	1
19	96784	SEAL-TWO TEETH	2	2	2

HYSTER COMPANY
PORTLAND, OREGON

CLUTCH

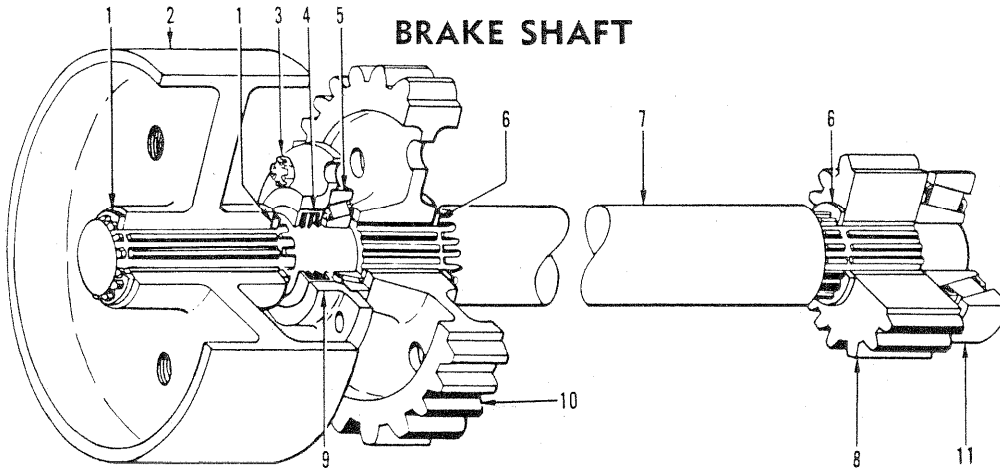
POWER CONTROL WINCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	89773 A	CLUTCH ASSEMBLY	2
1	96468	CAPSCREW-SPECIAL	6
2	96467	PLATE	1
	96785	SHIM-.031	AR
3	96460	HUB	1
4	96466	SPRING	6
5	89772	BODY-VALVE	1
6	95833	SPRING	1
7	89771	PLUNGER	1
8	89770	SNAP RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	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

BRAKE SHAFT



KEY

A-FOR STANDARD SPEED DIRECT DRIVE WINCH.
 B-FOR SLO & LO SPEED DIRECT DRIVE WINCH.
 C-FOR STANDARD SPEED POWER CONTROL WINCH.
 D-FOR SLO & LO SPEED POWER CONTROL WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
			A B C D
1	12940	SNAP RING	1 1
2	* 92652	WHEEL-BRAKE	1 1
	.....	BRAKE-AUTO. } SEE PG.D4	1 1
	.....	BRAKE-OIL	 1 1
3	37562	CAPSCREW-H.T., 1/2 UNC X 1 1/4	6 6
	15158	LOCKWASHER-1/2	6 6
4	87656	SEAL-OIL	1 1
5	230311	CUP-BEARING	1 1 1 1
	230310	CONE-BEARING	1 1 1 1
6	12915	SNAP RING	2 2 2 2
7	96432	SHAFT-BRAKE	1 1
	133918	SHAFT-BRAKE	 1 1

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

*USED ONLY WITHOUT AUTOMATIC BRAKE.

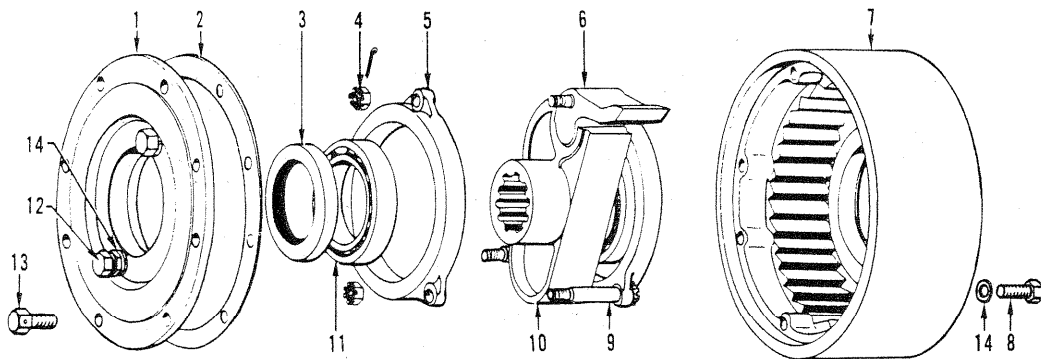
□ INCLUDED IN GASKET SET 142799.

NOTE-DIRECT DRIVE WINCH BRAKE ILLUSTRATED.

HYSTER COMPANY
 PORTLAND, OREGON

AUTOMATIC BRAKE

DIRECT DRIVE WINCH



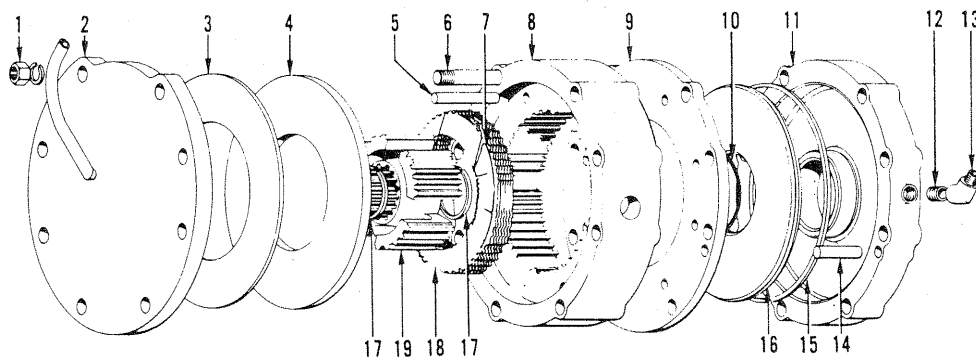
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	92716 A	BRAKE ASSEMBLY-AUTOMATIC	1
1	59397	COVER	1
2	* 59432	GASKET	1
3	33783	SEAL-OIL	1
4	{ 15079	NUT-SLOTTED, 3/8 UNF	6
	{ 15212	COTTER-3/32 X 3/4	6
5	36006	RING-DRAG	2
6	36007	PAWL	1
7	59425 A	WHEEL-BRAKE	1
8	15515	CAPSCREW-1/2 UNF X 3/4	3

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
	{	LOCKWIRE	1
14	* 35159	GASKET-COPPER	4

*INCLUDED IN GASKET SET 142799.

OIL BRAKE

POWER CONTROL WINCH

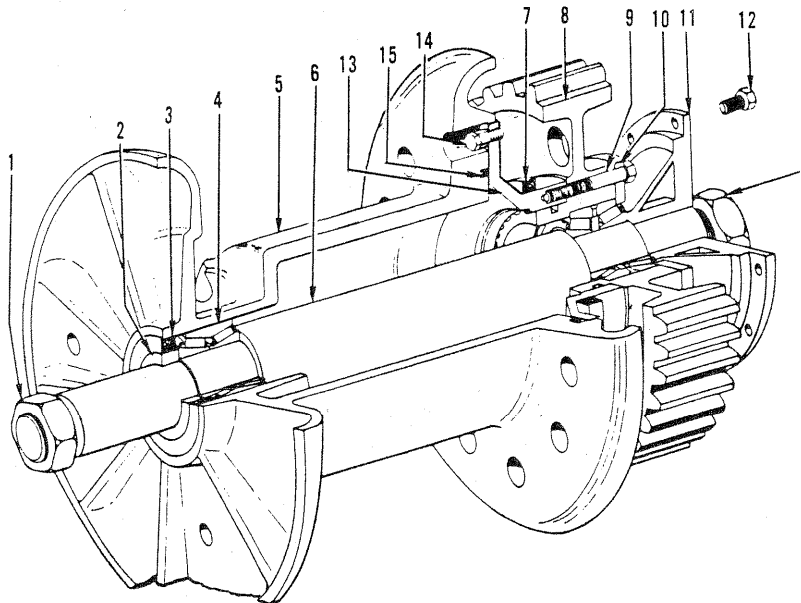


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	134220	BRAKE ASSEMBLY-OIL	1
1	{ 17161	NUT-HT, 5/8 UNF	8
	{ 15160	LOCKWASHER-5/8	8
2	138959	COVER	1
3	133937	SPRING	1
4	133936	RING	1
5	133931	PIN	8
6	140184	STUD-HT, 5/8 UNF X 7 3/4	8
7	133917	DISC-FRICTION	11
8	133930	CAGE	1
9	133928	PLATE-PRESSURE	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10	79979	O-RING	1
11	133925	HOUSING-PISTON	1
12	19987	NIPPLE-PIPE, 3/8 X 1	1
13	12823	ELBOW-STREET, 45 DEG.	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

HYSTER COMPANY
PORTLAND, OREGON

DRUM SHAFT



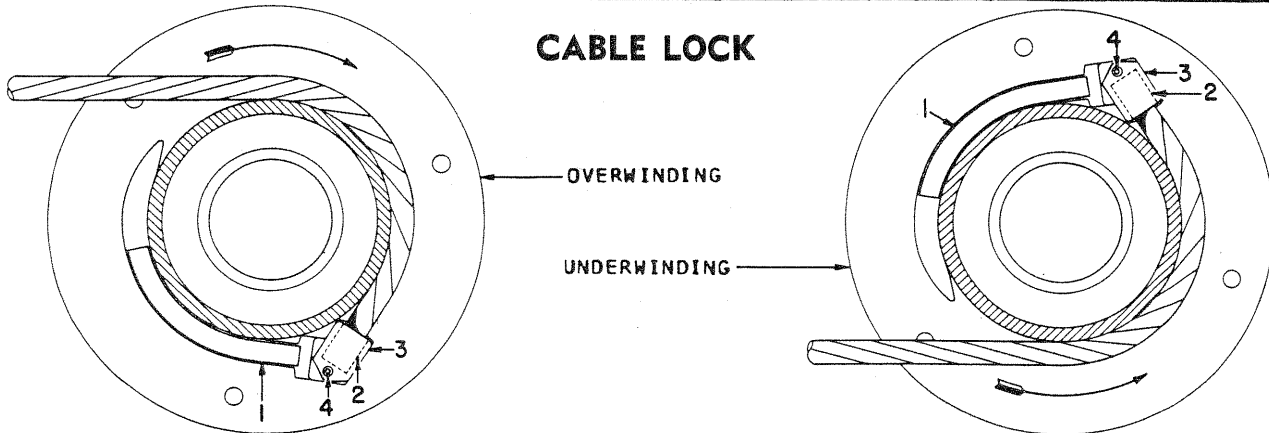
KEY

A-LAST USED ON WINCH SERIAL NO. D47P-1593 & C77P-1612.
B-FIRST USED ON WINCH SERIAL NO. D47P-1594 & C77P-1613.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	6607	NUT-2 1/2 SPECIAL	2	2
2	92608	SPACER	1	1
3	44484	SEAL-OIL	1	1
4	96437 A	BEARING ASSEMBLY-L.H.	1	1
	78022	BEARING ASSEMBLY-R.H.	1	1
	92617	DRUM-12 INCH } STD. & SLO	1	..
5	141357	DRUM-12 INCH } SPEED	..	1
	96526	DRUM-8 INCH } LO SPEED.	1	..
	142854	DRUM-8 INCH }	..	1
6	96435	SHAFT-DRUM	1	1
7	35030	SEAL-OIL	1	..
	141149	SEAL-OIL	..	1
8	96436	GEAR-DRUM, 45 & 58 TEETH	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
9	18863	PLACE BOLT-5/8 UNF X 4	8	8
10	96438	PLATE-GEAR RETAINER	1	1
	96439	RETAINER-DRUM	1	1
11	134070	SHIM-.005	AR	AR
	134071	SHIM-.007	AR	AR
	134072	SHIM-.020	AR	AR
12	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	8	8
	15158	LOCKWASHER-1/2	8	8
13	141325	ADAPTER	..	1
14	141675	CAPSCREW-5/8 UNF SPECIAL	..	12
	53559	DOWEL	..	12
15	131982	RING-SEAL	..	1

CABLE LOCK



KEY

A-FOR STANDARD & SLO SPEED WINCH.
B-FOR LO SPEED WINCH.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	92712	FILLER-CABLE	1	..
	96420	FILLER-CABLE	..	1
2	6697	FERRULE-CABLE	1	1
	92713	LOCK-FERRULE, OVERWINDING	1	..
3	92714	LOCK-FERRULE, UNDERWINDING	1	..
	95499	LOCK-FERRULE	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
4	15500	CAPSCREW-5/8 UNF X 1 1/2	1	..
	18850	CAPSCREW-1/2 UNF X 3	..	1
	15160	LOCKWASHER-5/8	1	..
	15158 B	LOCKWASHER-H.C., 1/2	..	1

HYSTER COMPANY
PORTLAND, OREGON

Section E

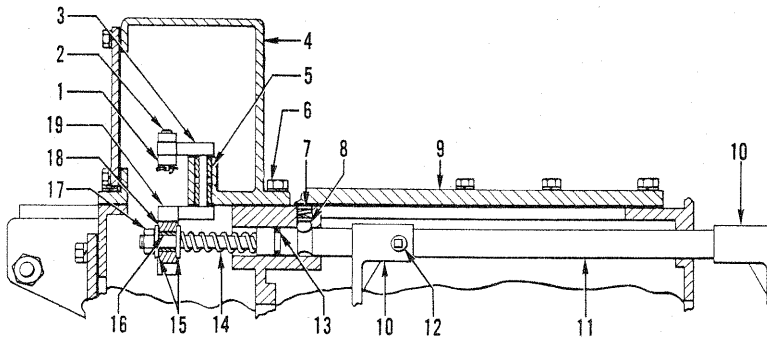
BRAKE AND SHIFTER MECHANISM

FOR DIRECT DRIVE WINCH

INDEX

BRAKE MECHANISM	E1
HANDLING GEAR	E2
SHIFTER MECHANISM	E1

SHIFTER MECHANISM



KEY

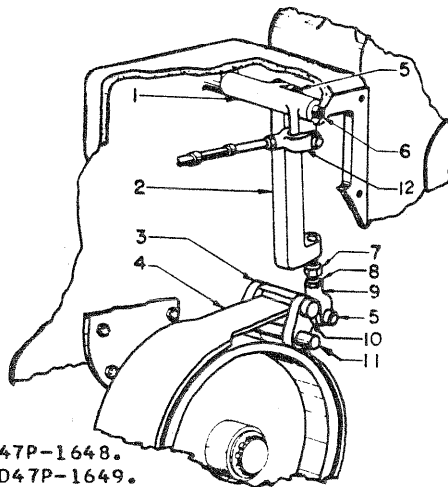
A—LAST USED ON WINCH SERIAL NO. D47P-1648.
B—FIRST USED ON WINCH SERIAL NO. D47P-1649.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	.....	ROD END-CLUTCH CABLE	2	2
2	.....	PIN-ROD END	2	2
	.....	COTTER	2	2
3	97843 A	CRANK-SHIFTER, UPPER	1	1
	15527	CAPSCREW-3/8 UNF X 1 3/4	1	1
	15156	LOCKWASHER-3/8	1	1
	15006	NUT-3/8 UNF	1	1
4	97842	HOUSING-CONTROLS	1	1
	* 96377	GASKET	1	1
5	95615	BUSHING	2	2
6	16807	CAPSCREW-HT, 1/2 UNF X 1 1/2	5	..
	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	..	5
	15158	LOCKWASHER-1/2	5	5
7	96375	SPRING	1	1
8	6348	BALL-1/2	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
9	.....	COVER-TRANSMISSION, SEE PG. 85	1	1
10	95951	FORK-SHIFTER	2	2
11	96373	SHAFT-SHIFTER	1	1
12	27936	LOCKSCREW	2	2
	.....	LOCKWIRE	2	2
13	131998	O-RING	1	1
14	94655	SPRING	1	1
15	33682	WASHER	2	2
16	96374	SPACER	1	1
17	63085	LOCKNUT-5/8 UNF	1	1
18	33717	SHOE-SHIFTER	2	2
19	95636 W	CRANK-SHIFTER, LOWER	1	1
	95638	PIN	1	1

*INCLUDED IN GASKET SET 142799.

BRAKE MECHANISM



KEY

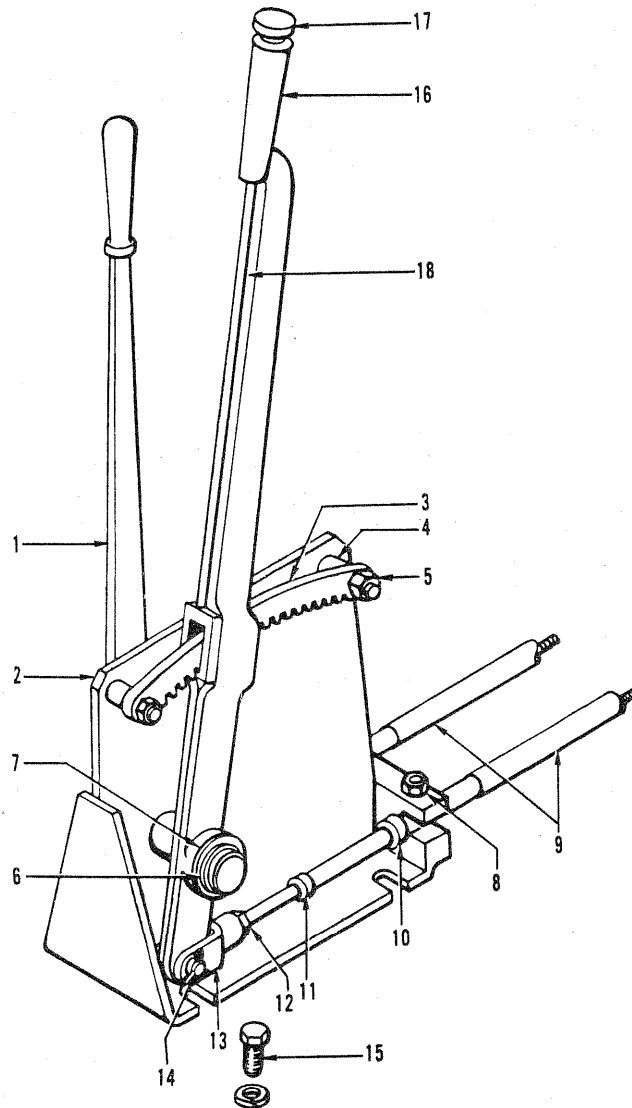
A—LAST USED ON WINCH SERIAL NO. D47P-1648.
B—FIRST USED ON WINCH SERIAL NO. D47P-1649.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	76699 A	CRANK ASSEMBLY-BRAKE	1	1
	92705	BUSHING	2	2
2	76697	LINK-BRAKE	1	1
3	76695 A	LEVER ASSEMBLY-BRAKE	1	1
	104607	BUSHING	4	4
4	128391	BAND ASSEMBLY-BRAKE	1	1
	59802AB	LINING SET-WITH RIVETS	1	1
5	159	PIN-ROD END	2	2
	15223	COTTER-1/8 X 1	2	2
6	96382	PIN-BRAKE CRANK	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
7	76696	LINK-ADJUSTING	1	1
8	15030	NUT-JAM, 5/8 UNF	1	1
9	91629	ROD END	1	1
10	96725	PIN-BRAKE LEVER	1	1
	15226	COTTER-1/8 X 1 3/4	1	1
11	128383	PIN-BRAKE	1	..
	140741	PIN-BRAKE	..	1
	.....	ROD END-BRAKE CABLE	2	2
12	.....	PIN-ROD END	2	2
	.....	COTTER	2	2

HYSTER COMPANY
PORTLAND, OREGON

HANDLING GEAR



REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	95750	HANDLEVER-CLUTCH	1
2	76706 W	BRACKET	1
3	77188	BAR-QUADRANT	1
4	94891	SPACER	2
5	18451	CAPSCREW-HT, 3/8 UNF X 2	2
	15156	LOCKWASHER-3/8	2
	15006	NUT-3/8 UNF	2
6	58907	SNAP RING	2
7	90267	WASHER	2
8	16212	SETSCREW-3/8 UNC X 1 1/4	2
	15086	NUT-JAM, 3/8 UNC	2
9	95751	CABLE-PUSH PULL	2
10	94381	GROMMET-LARGE	2

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

INTENTIONALLY BLANK

Section F

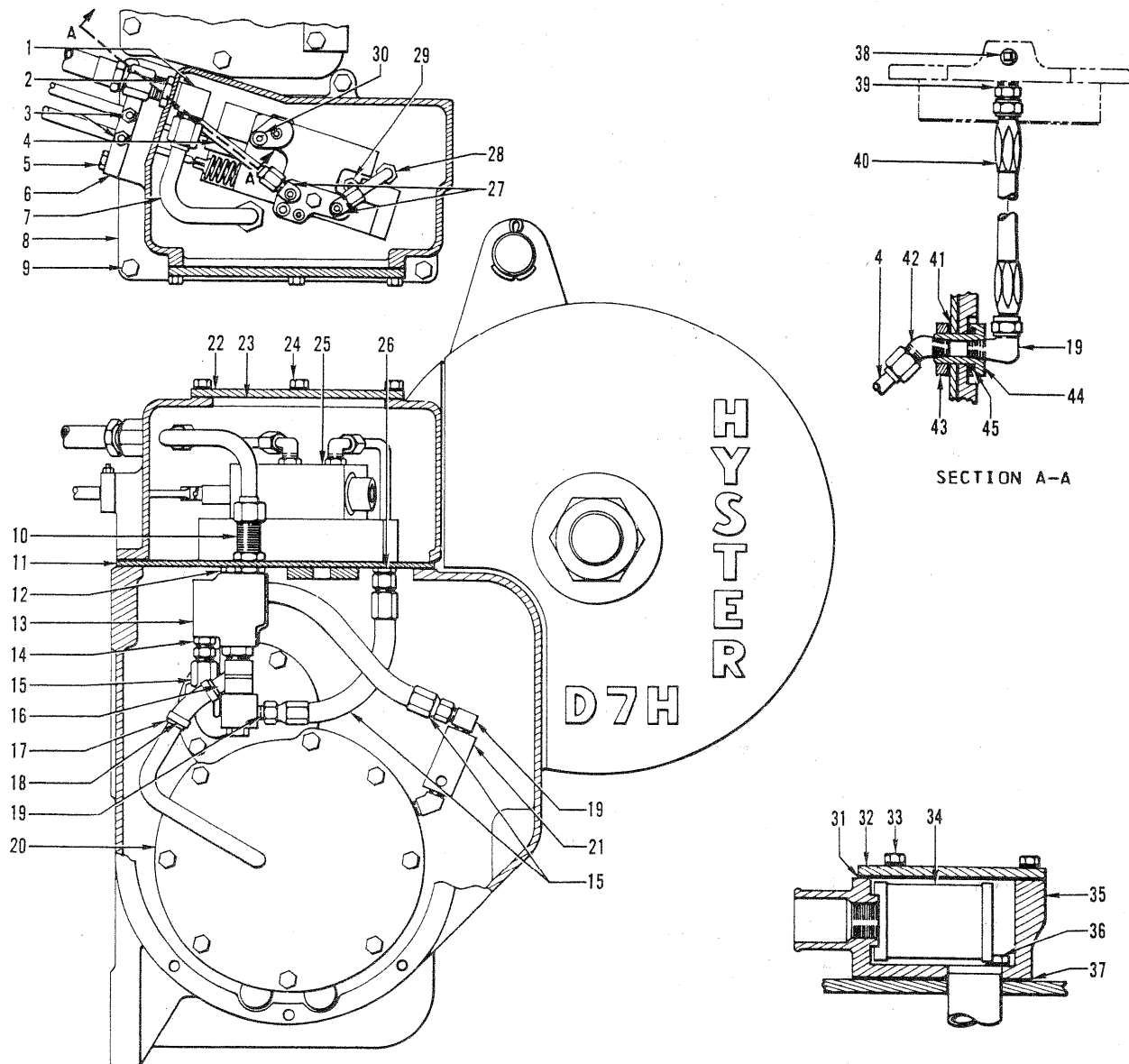
BRAKE AND HYDRAULIC SYSTEM

FOR POWER CONTROL WINCH

INDEX

BRAKE AND HYDRAULIC SYSTEM	F1
CONTROL VALVE	F3
DUMP VALVE	F2
FILTER AND HOSES (D7 Tractor)	F9
FLOW DIVIDER	F2
HANDLING GEAR (D7 Tractor & 572E Pipelayer)	F4
HANDLING GEAR (977 Traxcavator)	F5
HYDRAULIC HOSES (977 Traxcavator)	F8
HYDRAULIC PUMP	F10
PUMP DRIVE (D7 Tractor with Off-set Pump)	F6
PUMP DRIVE (D7 Tractor with In-line Pump)	F7
PUMP DRIVE (572E Pipelayer)	F7
PUMP DRIVE (977 Traxcavator)	F8
RELIEF VALVE	F3
TEMPERATURE GAUGE	F11

BRAKE AND HYDRAULIC SYSTEM



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	14349	PLUG-PIPE	1
2	140944	ELBOW-BULKHEAD, SPECIAL	1
3	16589	LOCKNUT	1
3	18853	SETSCREW-5/16 UNC X 1 1/4	2
4	15001	NUT-JAM, 5/16 UNC	2
4	96479	TUBE ASSEMBLY-R.H. CLUTCH	1
5	16085	CAPSCREW-HT, 1/2 UNC X 1 3/4	2
5	15158	LOCKWASHER-1/2	2
6	96624	BLOCK	1
6	*167115	SHIM-.105	AR
7	140947	TUBE ASSEMBLY	1
8	133948	HOUSING-CONTROL VALVE	1
8	16397	CAPSCREW-HT, 1/2 UNF X 1 3/4	4
9	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	4
9	15158	LOCKWASHER-1/2	4

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10	140945	CONNECTOR-MALE, SPECIAL	1
10	16486	O-RING	1
10	16589	LOCKNUT	1
11	140946	PLATE-VALVE MOUNTING	1
11	* 96487	GASKET	2
11	16970	TEE	1
12	16484	O-RING	1
12	16586	LOCKNUT	1
13	.....	FLOW DIVIDER, SEE PAGE F2	1
14	16541	CONNECTOR-MALE	1
14	16484	O-RING	1
15	132005	HOSE ASSEMBLY	3
16	.....	VALVE-RELIEF, SEE PAGE F3	1
17	143471	HOSE	1
18	127045	CLAMP-HOSE	2

BRAKE AND HYDRAULIC SYSTEM

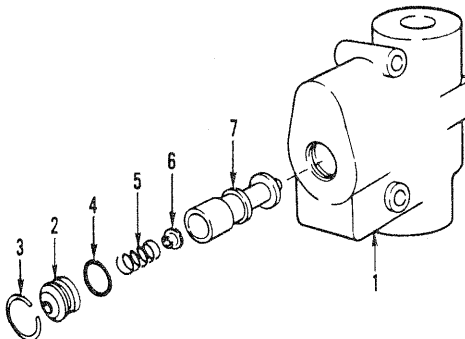
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
19	17309	ELBOW	3	33	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	5
20	.....	BRAKE ASSEMBLY-OIL, SEE PAGE D4	1	34	15158	LOCKWASHER-1/2	5
21	.....	VALVE-DUMP, SEE PAGE F2	1	35	95893	ELEMENT-FILTER	1
22	96491	COVER	1	36	133968	MANIFOLD-INTAKE	1
23	96492	GASKET	1	37	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	3
24	16829	CAPSCREW-HT, 1/2 UNC X 1	6	38	86229	WASHER-SEAL	3
25	15158	LOCKWASHER-1/2	6	39	*134116	GASKET	1
26	.....	VALVE-CONTROL, SEE PAGE F3	1	40	15302	PLUG-PIPE, 3/8	1
27	*141190	GASKET-VALVE MOUNTING	1	41	17315	CONNECTOR-MALE	1
28	16448	UNION-BULKHEAD	1	42	95736	HOSE ASSEMBLY-R.H. CLUTCH	1
29	14761	LOCKNUT	1	43	15936	LOCKWASHER-1	1
30	132000	ELBOW-SPECIAL	2	44	17344	ELBOW-45 DEG.	1
31	16484	O-RING	1	45	15036	NUT-JAM, 1 UNS	1
32	16586	LOCKNUT	1		132002	FITTING-SPECIAL	1
	14349	PLUG-PIPE, 1/8	2		132003	O-RING	1
	140948	TUBE ASSEMBLY	1				
	18889	CAPSCREW-3/8 UNC X 3 1/2	1				
	15156 B	LOCKWASHER-HC, 3/8	1				
	18789	CAPSCREW-3/8 UNC X 5	2				
	15156 B	LOCKWASHER-HC, 3/8	2				
	* 89023	GASKET	1				
	89025	COVER	1				

*INCLUDED IN GASKET SET 142797.

□FIRST USED ON WINCH SERIAL NO. C77P-1747.

#FIRST USED ON WINCH SERIAL NO. C77P-2672.

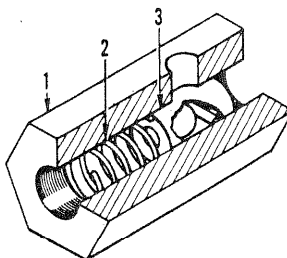
FLOW DIVIDER



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	132007	FLOW DIVIDER	1	4	*	O-RING	1
1	.....	BODY	1	5	* 87570	SPRING	1
2	87571	CAP-END	1	6	136378	ORIFICE	1
3	*	SCREW-CAP PULLER	1	7	87569	PISTON-CONTROL	1
	*	RING-RETAINER	1				

*INCLUDED IN REPAIR KIT 136381.

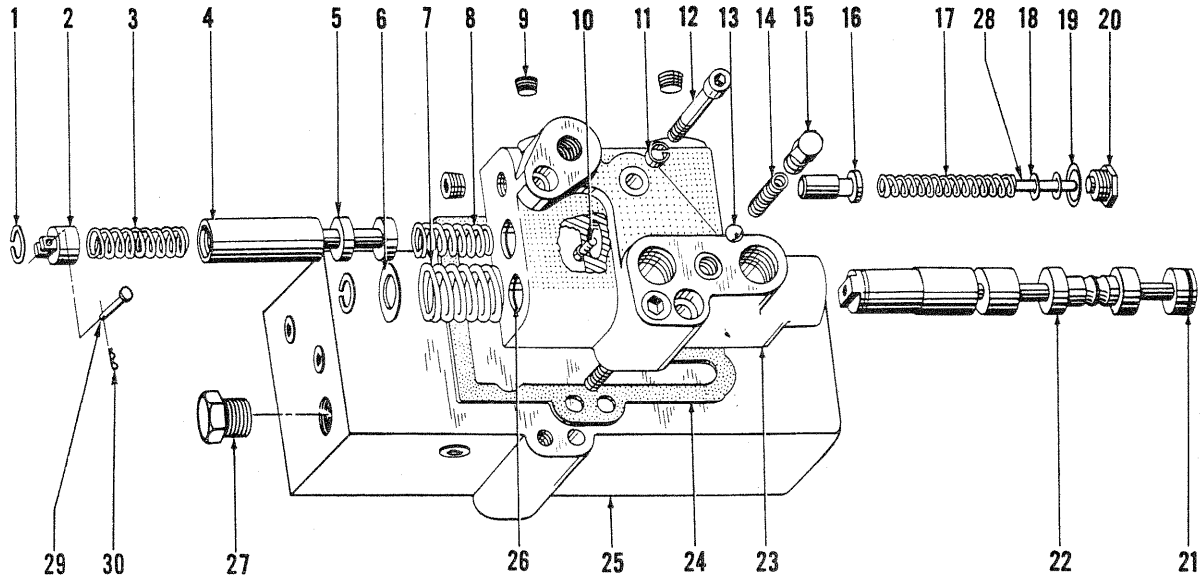
DUMP VALVE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	140208	DUMP VALVE	1	2	161857	SPRING	1
1	138542	BODY	1	3	140207	SPOOL	1

HYSTER COMPANY
PORTLAND, OREGON

CONTROL VALVE



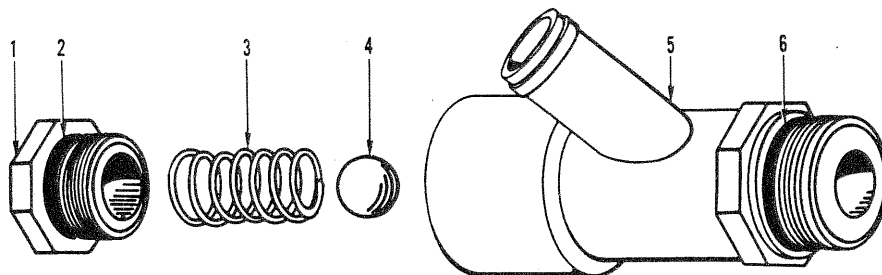
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	141167	VALVE-HYDRAULIC CONTROL	1
	□159748	VALVE-HYDRAULIC CONTROL	1
1	12992	SNAP RING	1
2	95720	PLUG	1
	□159746	PLUG	1
3	95719	SPRING	1
4	95718	SPOOL	1
5	58950	SNAP RING	1
6	95676	WASHER	2
7	95612	SPRING	1
8	95717	SPRING	1
9	152989	PIPE-PLUG	8
10	139197	CAPSCREW-SPECIAL	1
	15155	LOCKWASHER-5/16	1
11	15156 B	LOCKWASHER-3/8	2
12	17138	CAPSCREW-3/8 UNC X 3	2
13	55280	BALL-STEEL, 5/16	1
14	96234	SPRING	1
15	77736	PLUG	1
	16482	O-RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
16	95714	PISTON	1
17	95715	SPRING	1
18	108408	WASHER	AR
19	* 29582	GASKET-COPPER	1
20	108407	RETAINER-SPRING	1
21	95721	O-RING	1
22	77975	SPOOL	1
	□159745	SPOOL	1
23	141163	BODY-VALVE	1
24	* 95725	GASKET	1
25	140521	SUPPORT-VALVE	1
26	95716	O-RING	2
27	98624	FITTING-PLUG	1
	16485	O-RING	1
28	152649	ROD	1
29	□159747	PIN	2
30	□ 18821	COTTER	2

*INCLUDED IN GASKET SET 142797.

□FIRST USED ON SERIAL NO. C77P-2672.

RELIEF VALVE



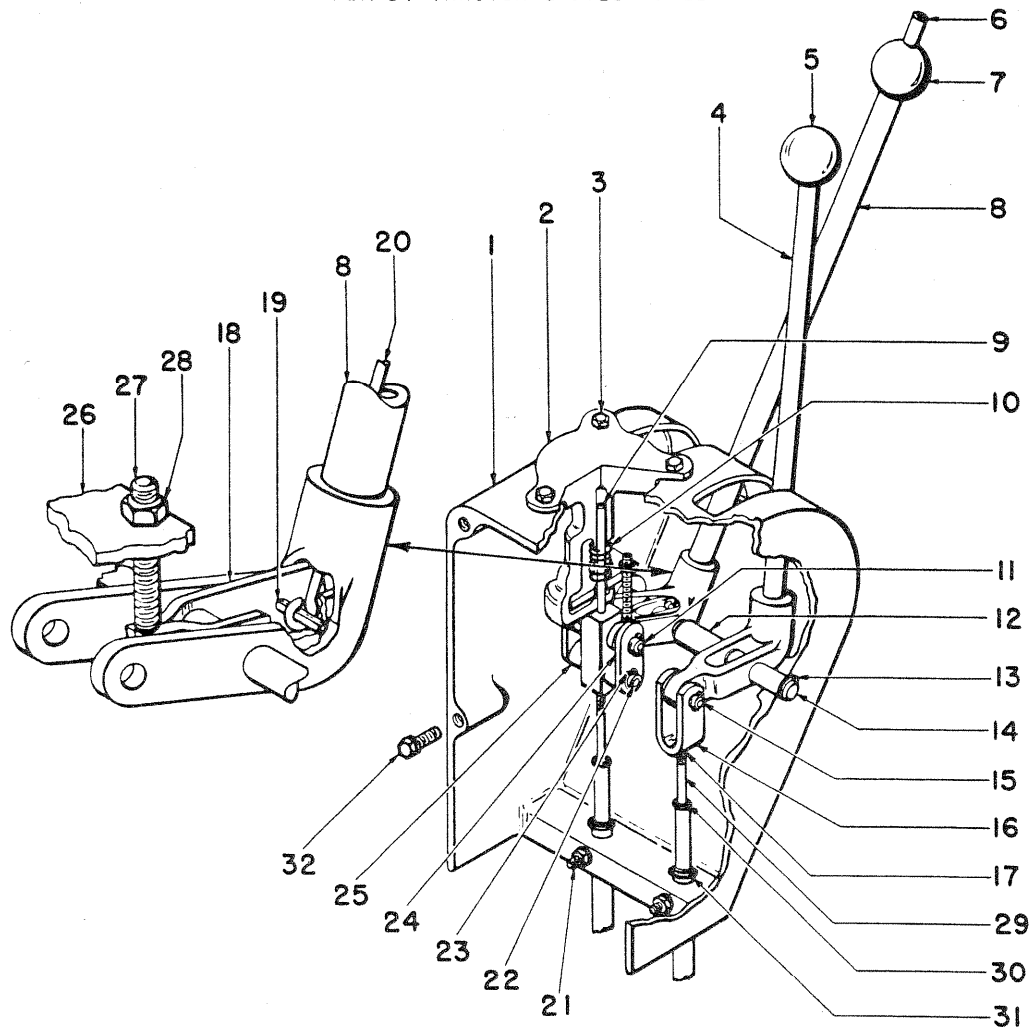
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	144017	RELIEF VALVE	1
1	144019	PLUG	1
2	16485	O-RING	1
3	116541	SPRING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
4	68965	BALL-STEEL, 5/8	1
5	144014	BODY-VALVE	1
6	16486	O-RING	1

HYSTER COMPANY
PORTLAND, OREGON

HANDLING GEAR

FOR D7 TRACTOR & 572E PIPELAYER



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
	133154	HANDLING GEAR ASSEMBLY	1
1	133138	HOUSING-HANDLEVER	1
2	133148	BLOCK-GUIDE	1
3	16805	CAPSCREW-3/8 UNC X 1	3
	15156	LOCKWASHER-3/8	3
	15086	NUT-JAM, 3/8 UNC	3
4	133150	LEVER-SELECTOR	1
5	131976	KNOB	1
6	*131955	BUTTON	1
7	*131957	KNOB	1
8	146211	KNOB	1
	*133141	LEVER-BRAKE	1
	146212	LEVER-BRAKE	1
9	133145	ROD-LOCKING	1
10	112421	SPRING	1
11	133144	PIN	2
	15212	COTTER-3/32 X 3/4	2
12	133152	SPACER	1
13	58951	SNAP RING	2
14	133153	PIN	1
15	142	PIN-ROD END	1
	15212	COTTER-3/32 X 3/4	1
16	131975	ROD END	1
17	15025	NUT-JAM, 5/16 UNF	2
18	133139	LEVER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
19	19871	ROLL PIN	1
20	133140	ROD	1
21	16254	SETSCREW-5/16 UNC X 1	3
	15001	NUT-JAM, 5/16 UNC	3
	15155	LOCKWASHER-5/16	3
22	133147	PIN	1
23	12898	SNAP RING	2
24	133143	LINK	2
25	133146	SPACER	2
26	131953	PLATE-LOCK	1
27	133149	SETSCREW-5/16 UNF X 2	1
28	15025	NUT-JAM, 5/16 UNF	1
29	95491	CABLE-PUSH PULL	2
	*159809	CABLE-PUSH PULL	2
30	95876	GROMMET-SMALL	2
31	94380	GROMMET-LARGE	2
32	16597	CAPSCREW-3/8 UNC X 3/4	4
	15156	LOCKWASHER-3/8	4

*LAST USED ON SERIAL NO. C77P-1938.

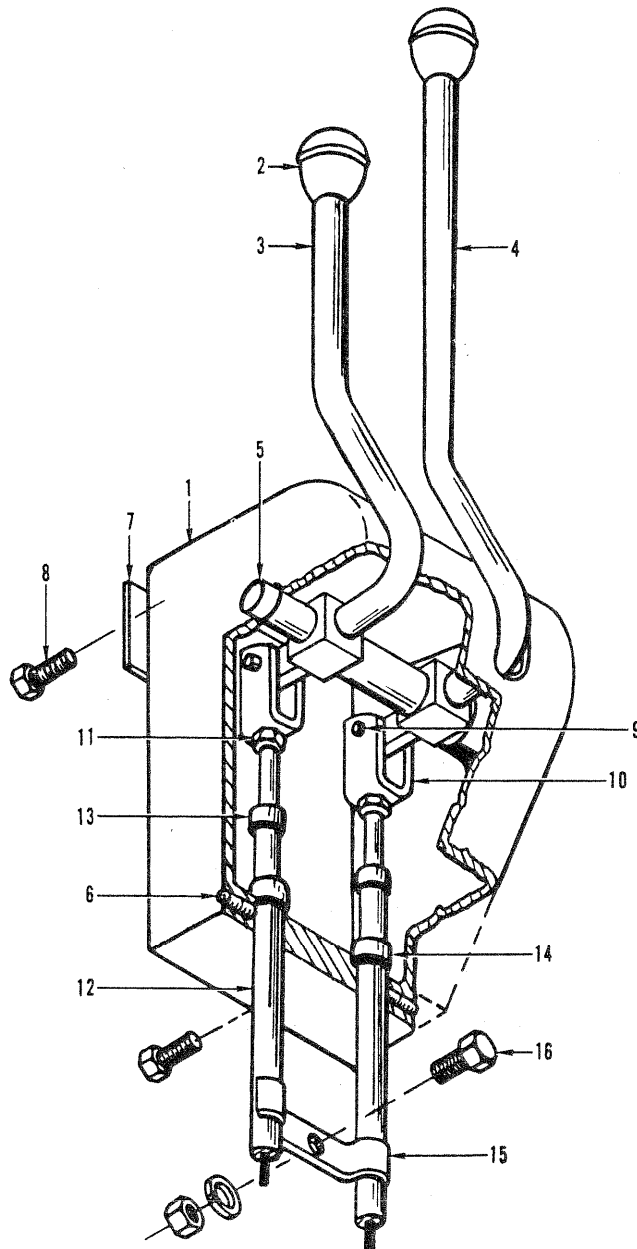
□FIRST USED ON SERIAL NO. C77P-1939.

#FIRST USED ON SERIAL NO. C77P-2672.

HYSTER COMPANY
PORTLAND, OREGON

HANDLING GEAR

FOR 977 TRAXCAVATOR



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	123279	HANDLEVER AND BRACKET ASSEMBLY	1
2	123278	BRACKET	1
3	66716	KNOB	2
4	123277	LEVER-SELECTOR	1
5	123276	LEVER-BRAKE	1
6	95708	PIN	1
7	58951	SNAP RING	2
8	95707	SPACER	1
9	16202	SETSCREW-5/16 UNC X 3/8	2
10	132932	PLATE	1
11	16597	CAPSCREW-3/8 UNC X 3/4	3
12	15156	LOCKWASHER-3/8	3
13	142	PIN-ROD END	2
14	15212	COTTER-3/32 X 3/4	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
15	95709	ROD END	2
16	15025	NUT-JAM, 5/16 UNF	2
17	96474	CABLE-PUSH-PULL	2
18	*159811	CABLE-PUSH-PULL	2
19	95876	GROMMET-SMALL	2
20	94380	GROMMET-LARGE	2
21	132933	CLAMP	1
22	18461	CAPSCREW-1/4 UNF X 3/4	1
23	15004	NUT-1/4 UNF	1
24	15154	LOCKWASHER-1/4	1

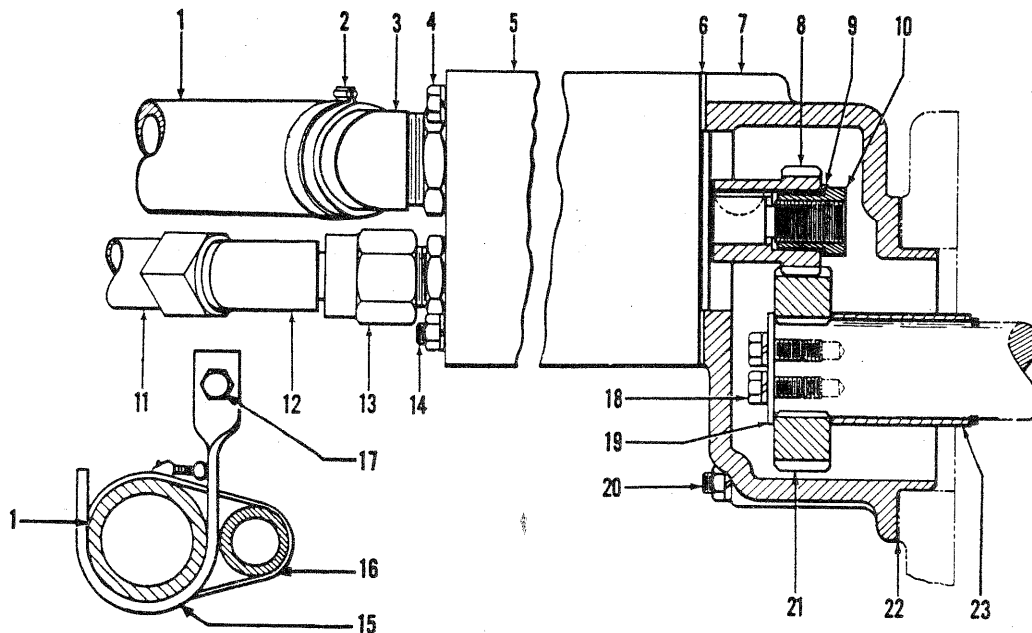
*FIRST USED ON SERIAL NO. C77P-2672.

HYSTER COMPANY
PORTLAND, OREGON

PUMP DRIVE AND HOSES

FOR D7 TRACTOR

USED ON WINCH SERIAL NO. C77P-1501 THRU 1747 AND OPTIONAL FOR WINCH SERIAL NO. C77P-1748 & UP



REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	164672	HOSE	1
2	142781	CLAMP-HOSE	2
3	141187	FITTING-SPECIAL	1
	16983	O-RING	1
4	18551	CAPSCREW-3/8 UNC X 5 1/2	1
	15156	LOCKWASHER-3/8	1
5	.....	PUMP-HYDRAULIC, SEE PAGE F10	1
6	*132044	GASKET	1
7	132037	HOUSING-PUMP DRIVE	1
8	132041	GEAR	1
9	132042	PLATE-LOCK	1
10	132043	NUT	1
11	155113	HOSE	1
12	17042	ELBOW	1
	16486	O-RING	1
13	142500	CONNECTOR	1

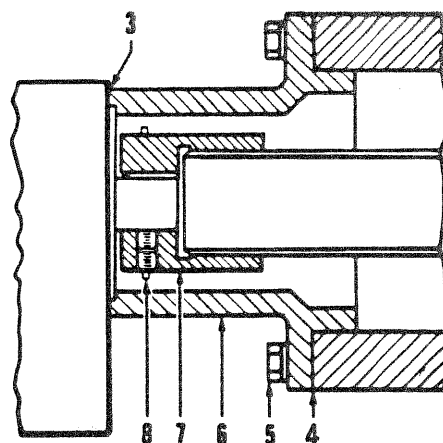
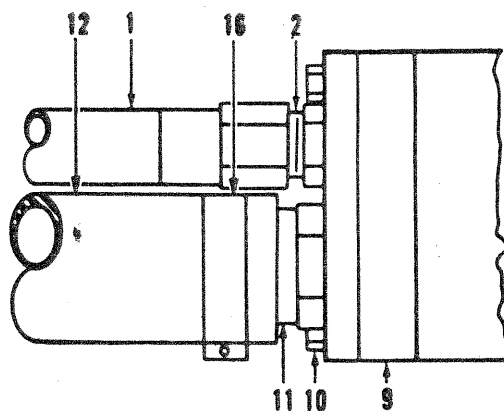
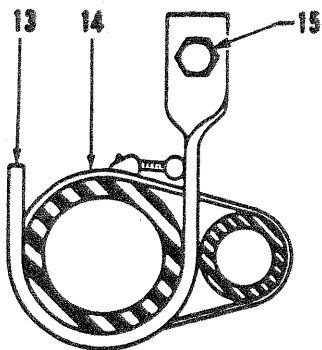
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
	132045	STUD	1
14	15086	NUT-JAM, 3/8 UNC	1
	15156	LOCKWASHER-3/8	1
15	143362	CLAMP	1
16	18994	CLAMP	1
17	18585	CAPSCREW-3/8 UNC X 2 3/4	1
18	16634	CAPSCREW-3/8 UNC X 1	2
	15156	LOCKWASHER-3/8	2
19	132036	RETAINER	1
	132039	STUD	4
20	15086	NUT-JAM, 3/8 UNC	4
	15156	LOCKWASHER-3/8	4
21	132035	GEAR	1
22	*132038	GASKET	1
23	132034	SPACER	1

*INCLUDED IN GASKET SET 142797.

PUMP DRIVE

FOR D7 TRACTOR

FIRST USED ON WINCH SERIAL NO. C77P-1748

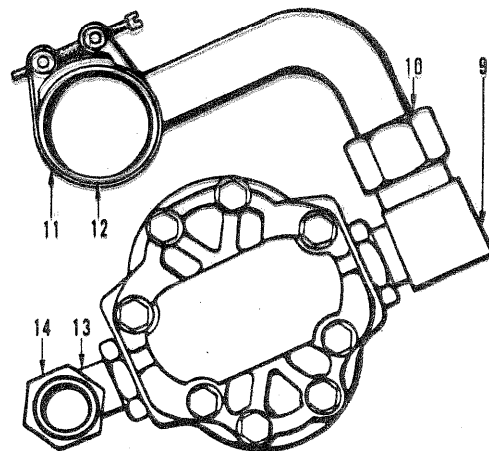
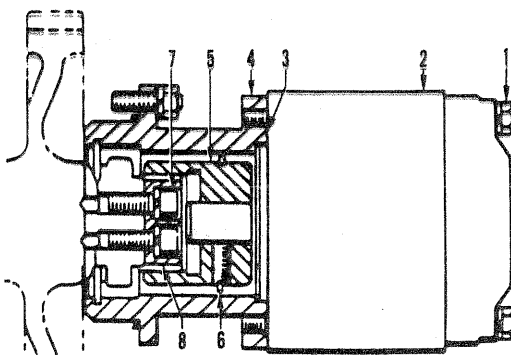
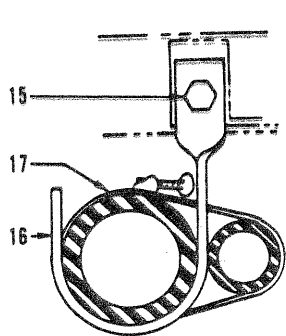


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	155113	HOSE	1
2	142500	CONNECTOR-MALE	1
3	95710	GASKET	1
4	95486	GASKET	1
5	16805	CAPSCREW-3/8 UNC X 1	6
	15156	LOCKWASHER-3/8	6
6	145351	ADAPTER-PUMP	1
7	145347	CONNECTOR	1
	54112	SNAP RING	1
8	16200	SETSCREW-S.H., UNC X 3/8	1
	136391	SETSCREW-S.H., UNC X 1/4	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
9	.....	PUMP-HYDRAULIC, SEE PAGE F10	1
10	133601	CAPSCREW-3/8 UNC X 5 1/8	2
	15156	LOCKWASHER-3/8	2
11	145350	HOSE FITTING-SPECIAL	1
12	164672	HOSE	1
13	143362	CLAMP-HOSE	1
14	18994	CLAMP-HOSE	1
15	18588	CAPSCREW-1/2 UNC X 1 1/2	1
16	142781	CLAMP-HOSE	4

PUMP DRIVE

FOR 572E PIPELAYER



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	18551	CAPSCREW-3/8 UNC X 5 1/2	2
	15156	LOCKWASHER-3/8	2
2	.....	PUMP-HYDRAULIC, SEE PAGE F10	1
3	*132044	GASKET	1
4	145478	HOUSING-PUMP	1
5	145477	COUPLING-PUMP	1
6	16200	SETSCREW-3/8 UNC X 3/8	2
	88837	SNAP RING	1
7	27187	CAPSCREW-S.H., 3/8 UNC X 1	2
	15156	LOCKWASHER-3/8	2
8	145476	SHAFT	1

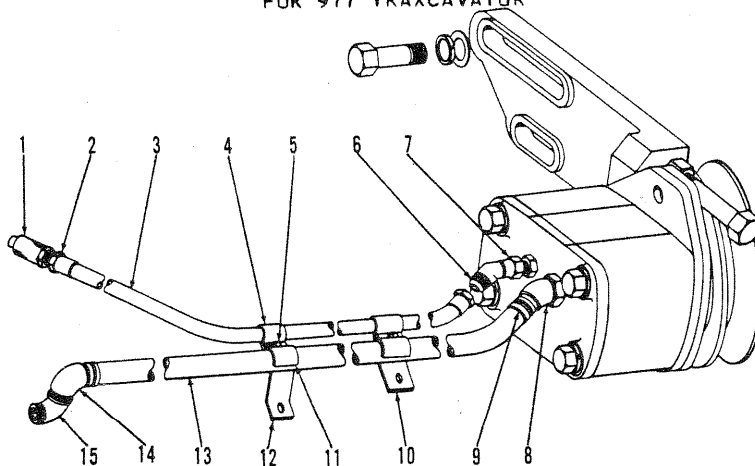
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
9	16949	ELBOW	1
10	146385	TUBE	1
11	142781	CLAMP-HOSE	4
12	164672	HOSE	2
13	16562	ELBOW	1
14	147467	HOSE	1
15	18588	CAPSCREW-1/2 UNC X 1 1/2	1
16	143362	CLAMP	1
17	18994	CLAMP	1

*INCLUDED IN GASKET SET 142797.

HYSTER COMPANY
PORTLAND, OREGON

HYDRAULIC HOSES

FOR 977 TRAXCAVATOR

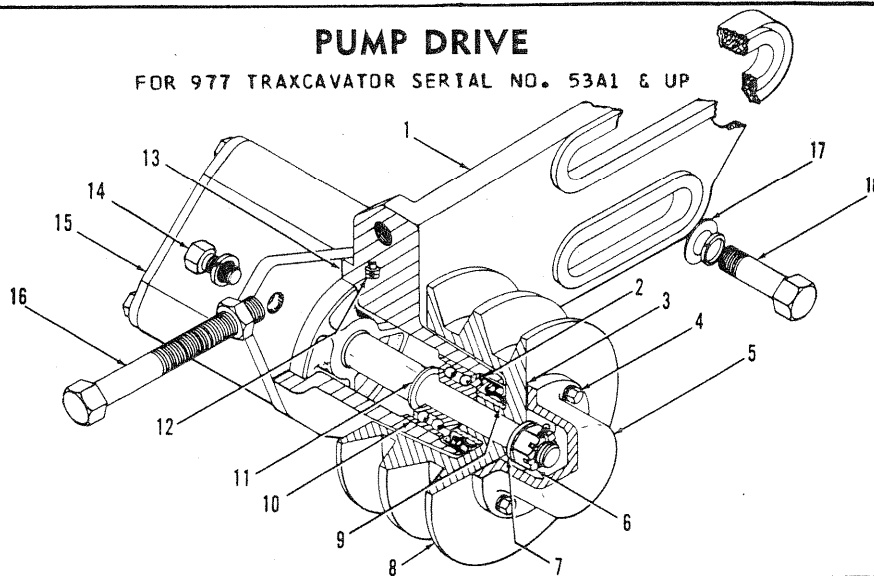


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	14494	NUT	1
2	17783	ADAPTOR	1
2	17303	NUT	1
2	17781	ADAPTOR	1
3	116047	HOSE	1
4	60016	CLAMP	2
5	18467	CAPSCREW-1/4 UNF X 1 1/4	2
5	15004	NUT-1/4 UNF	2
5	15154	LOCKWASHER-1/4	2
6	17038	ELBOW-45 DEGREE	1
7	16541	CONNECTOR	1
7	16484	O-RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
8	97961	FITTING-SPECIAL	1
8	16486	O-RING	1
9	89781	CLAMP-HOSE	2
10	132929	SUPPORT-CLAMP	1
11	15978	CLAMP	2
12	132930	SUPPORT-CLAMP	1
13	97963	HOSE	1
14	111330	NIPPLE-45 DEGREE	1
15	15476	ELBOW-45 DEGREE	1

PUMP DRIVE

FOR 977 TRAXCAVATOR SERIAL NO. 53A1 & UP



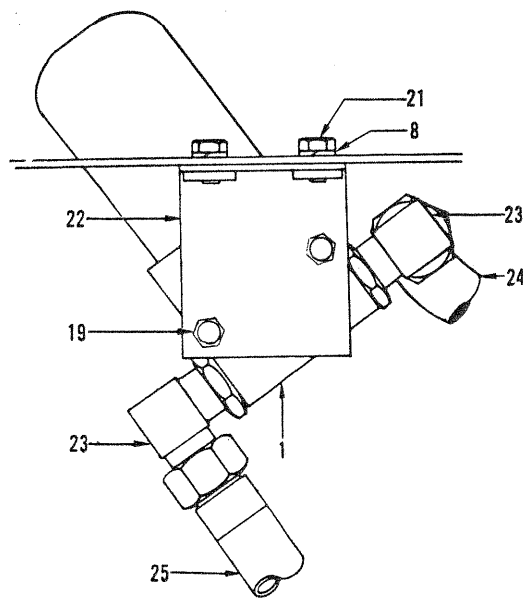
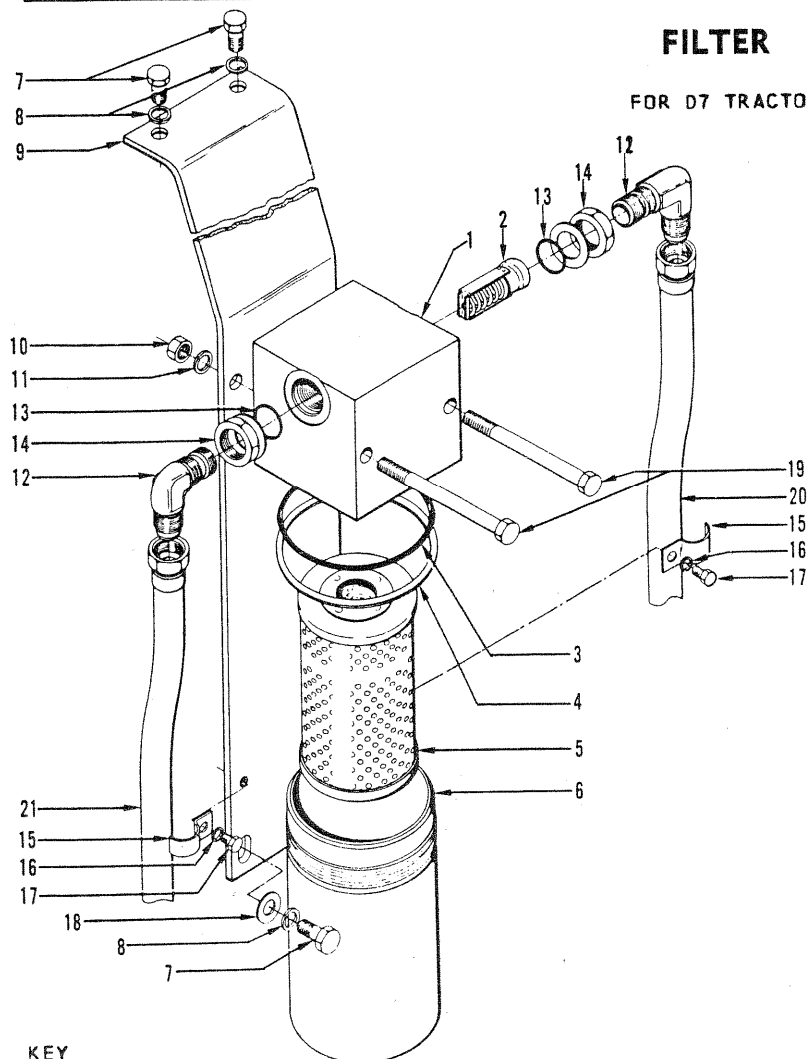
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	97950 A	PUMP & PULLEY ASSEMBLY	1
1	97953	BRACKET-PUMP DRIVE	1
2	97955	SEAL-OIL	1
3	97959	GASKET	1
4	18460	CAPSCREW-HT, 1/4 UNC X 3/4	4
4	15154	LOCKWASHER-1/4	4
5	97960	COVER-PULLEY	1
6	15078	NUT-SLOTTED, 1/2 UNF	1
6	15213	COTTER-3/32 X 1	1
7	15135	WASHER-1/2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

REF. NO.	HYSTER PART NO.	NAME OF PART	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 F10	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

HYSTER COMPANY
PORTLAND, OREGON

FILTER

FOR D7 TRACTOR



KEY

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

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	{ 147461	FILTER ASSEMBLY-HYDRAULIC	1	1
	{ 149295	HEAD ASSEMBLY	1	1
2	.....	VALVE ASSEMBLY-RELIEF	1	1
3	149297	O-RING	1	1
4	149298	RING-BACK-UP	1	1
5	147463	ELEMENT	1	1
6	149296	CASE	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	{ * 15056	NUT-3/8 UNC	2	2
	{ □ 15057	NUT-7/16 UNC	2	2
11	{ * 15156	LOCKWASHER-3/8	2	2
	{ □ 15157	LOCKWASHER-7/16	2	2
12	□ 16562	ELBOW	..	2
13	16487	O-RING	..	1
14	16589	LOCKNUT	..	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	{ * 18549	CAPSCREW-HT, 3/8 UNC X 5	2	2
	{ □ 18578	CAPSCREW-HT, 7/16 UNC X 5	2	2
20	% 155113	HOSE ASSEMBLY	..	2
	{ * 18586	CAPSCREW-HT, 1/2 UNC X 7/8	4	4
21	{ □ 16830	CAPSCREW-HT, 1/2 UNC X 1 1/4	4	..
	{ # 16830	CAPSCREW-HT, 1/2 UNC X 1 1/4	..	4

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
	{ *147464	BRACKET	1	1
	{ □148978	BRACKET-R.H.	1	..
22	{ □148980	BRACKET-L.H.	1	..
	{ #149018	BRACKET-R.H.	..	1
	{ #148982	BRACKET-L.H.	..	1
	{ * 16544	CONNECTOR-MALE	2	2
	{ 16487	O-RING	1	1
23	{ □ 16571	ELBOW-45 DEG.	2	..
	{ 16487	O-RING	1	..
	{ 16589	LOCKNUT	1	..
	{ 147449	HOSE ASSY.	1	..
24	{ *147447	HOSE ASSY.	..	1
	{ #148984	HOSE ASSY.	..	1
25	{ 147450	HOSE ASSY.	1	..
	{ #147448	HOSE ASSY.	..	1

*USED ON WINCH SERIAL NO. C77P-1501 THRU 1875, 1877 THRU 1887, 1889 THRU 1895 & 1897 THRU 1941.

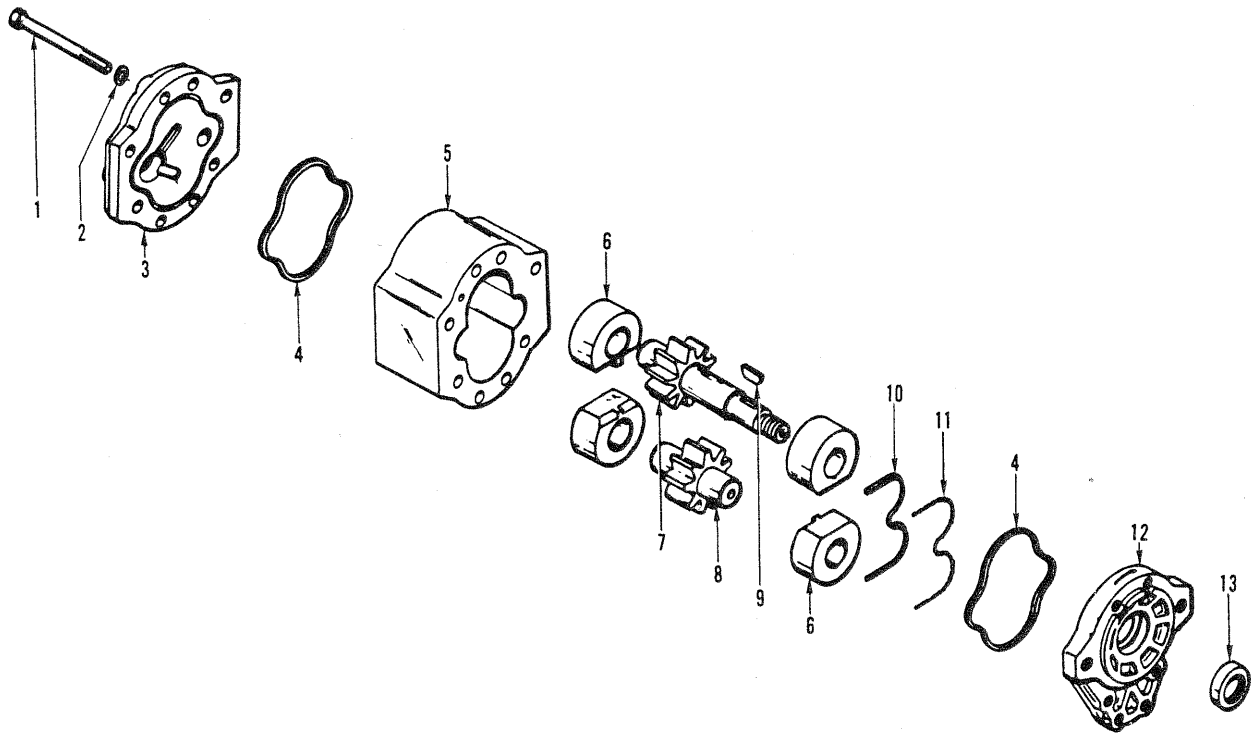
□USED ON WINCH SERIAL NO. C77P-1876, 1888, 1896 AND 1942 & UP.

#USED ON WINCH SERIAL NO. C77P-1942 THRU 2609, 2617 & 2630.

%USED ON WINCH SERIAL NO. C77P-2610 THRU 2616, 2618 THRU 2629 AND 2631 & UP.

HYSTER COMPANY
PORTLAND, OREGON

HYDRAULIC PUMP



KEY

A-FOR D7 TRACTOR WITH WINCH SERIAL NO. C77P-1501 THRU 1747 AND OPTIONAL FOR SERIAL NO. 1748 & UP.
 B-FOR D7 TRACTOR WITH WINCH SERIAL NO. C77P-1748 & UP.
 C-FOR 572E PIPELAYER.
 D-FOR 977 TRAXCAVATOR.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
	144600	PUMP-HYDRAULIC	1	..	..	..
	145344	PUMP-HYDRAULIC	..	1	..	..
	145479	PUMP-HYDRAULIC	..	..	1	..
	95951 A	PUMP-HYDRAULIC	..	..	..	1
1	123704	CAPSCREW	6	6	..	..
	127661	CAPSCREW	..	..	6	..
	124247	CAPSCREW	..	..	..	4
2	129447	WASHER	6	6	6	..
3	134276	COVER-REAR	1	..	..	..
	126445	COVER-REAR	..	1	..	..
	127658	COVER-REAR	..	..	1	..
	124241	COVER-REAR	..	..	..	1
4	□*	SEAL	2	2	2	2
5	□*	BODY	1	1	1	1
6	* □*	BEARING	4	4	4	4
7	#	GEAR-DRIVE	1	1	1	1
8	#	GEAR-DRIVEN	1	1	1	1
9	* 9413	KEY	1	1	..	..
	* 206	KEY	..	..	1	..
	* 124248	KEY	..	..	..	1
10	□*	GASKET	1	1	1	1
11	□*	SPACER	..	1	1	..

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
12	134275	COVER-FRONT	1	..	..	..
	126444	COVER-FRONT	..	1	..	..
	127657	COVER-FRONT	..	..	1	..
	124240	COVER-FRONT	..	..	..	1
13	□* 235933	SEAL-SHAFT	1	1	1	..
	145381	REPAIR KIT-MAJOR	1	1	..	..
	147401	REPAIR KIT-MAJOR	..	..	1	..
	124245	REPAIR KIT-MAJOR	..	..	..	1
	145382	REPAIR KIT-MINOR	1	1	..	..
	78035 A	REPAIR KIT-MINOR	..	..	1	..
	124249	REPAIR KIT-MINOR	..	..	..	1
	123699	GEAR KIT	1	..	..	..
	146896	GEAR KIT	..	1	..	..
	127659	GEAR KIT	..	..	1	..
	124242	GEAR KIT	..	..	..	1

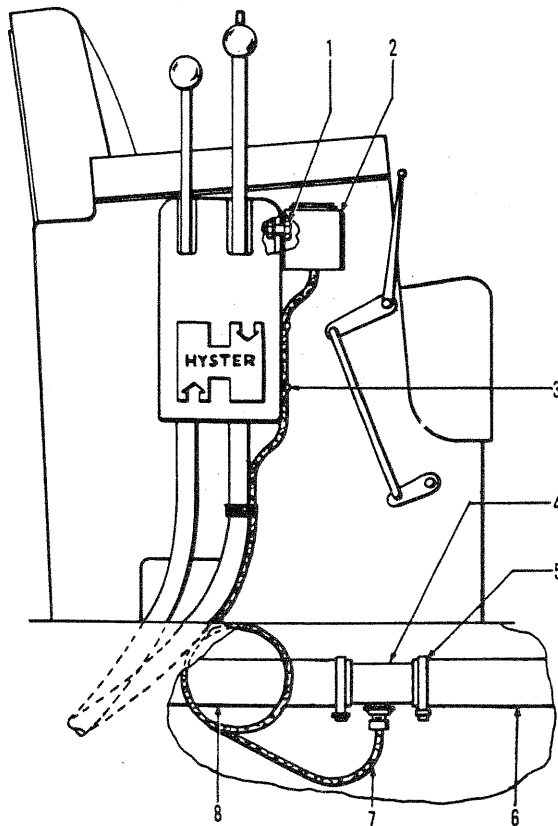
*INCLUDED IN MAJOR REPAIR KIT.

□INCLUDED IN MINOR REPAIR KIT.

#INCLUDED IN GEAR KIT.

TEMPERATURE GAUGE

FOR POWER CONTROL WINCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
1	18462	CAPSCREW-1/4 UNC X 7/8	2
	15000	LOCKWASHER-1/4	2
	15154	NUT-JAM, 1/4 UNC	2
2	133702	BRACKET	1
3	18903	CLAMP	2
	16651	SCREW-#10 UNF X 1/2	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
4	133706	FITTING-SPECIAL	1
5	142781	CLAMP-HOSE	4
6	164672	HOSE	1
7	133705	GAUGE-TEMPERATURE	1
8	164675	HOSE	1

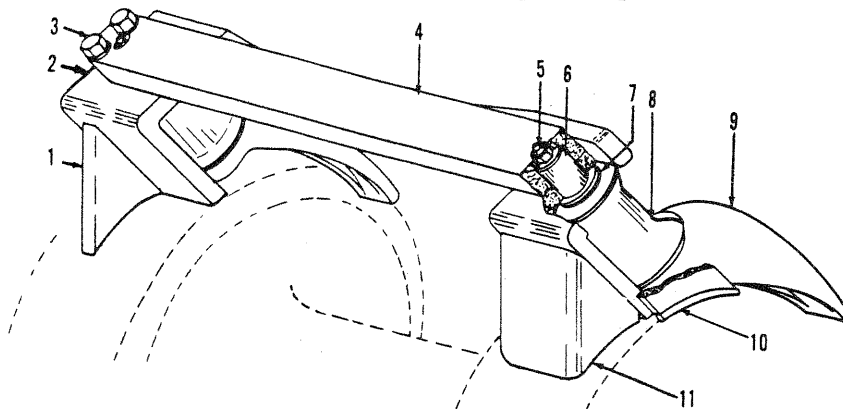
Section G

OPTIONAL EQUIPMENT

INDEX

BRAKE AND HYDRAULIC SYSTEM CONVERSION	G3
CABLE GUIDE ROLLERS	G1
CHECK VALVE	G4
CONTROL VALVE	G5
FAIRLEAD	G1
INTEGRAL ARCH	G2

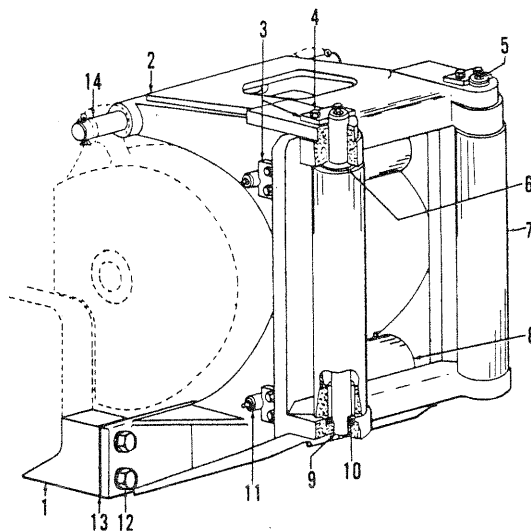
CABLE GUIDE ROLLERS



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	95877 A	ROLLER ASSEMBLY-CABLE GUIDE	1
1	95892	GUSSET	1
2	95883 W	BRACKET-R.H.	1
	95891	GUSSET	1
3	16645	CAPSCREW-5/8 UNF X 2 1/4	4
	15160	LOCKWASHER-5/8	4
4	95888 W	GUARD-CABLE	1
5	16006	FITTING-GREASE	2

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

FAIRLEAD



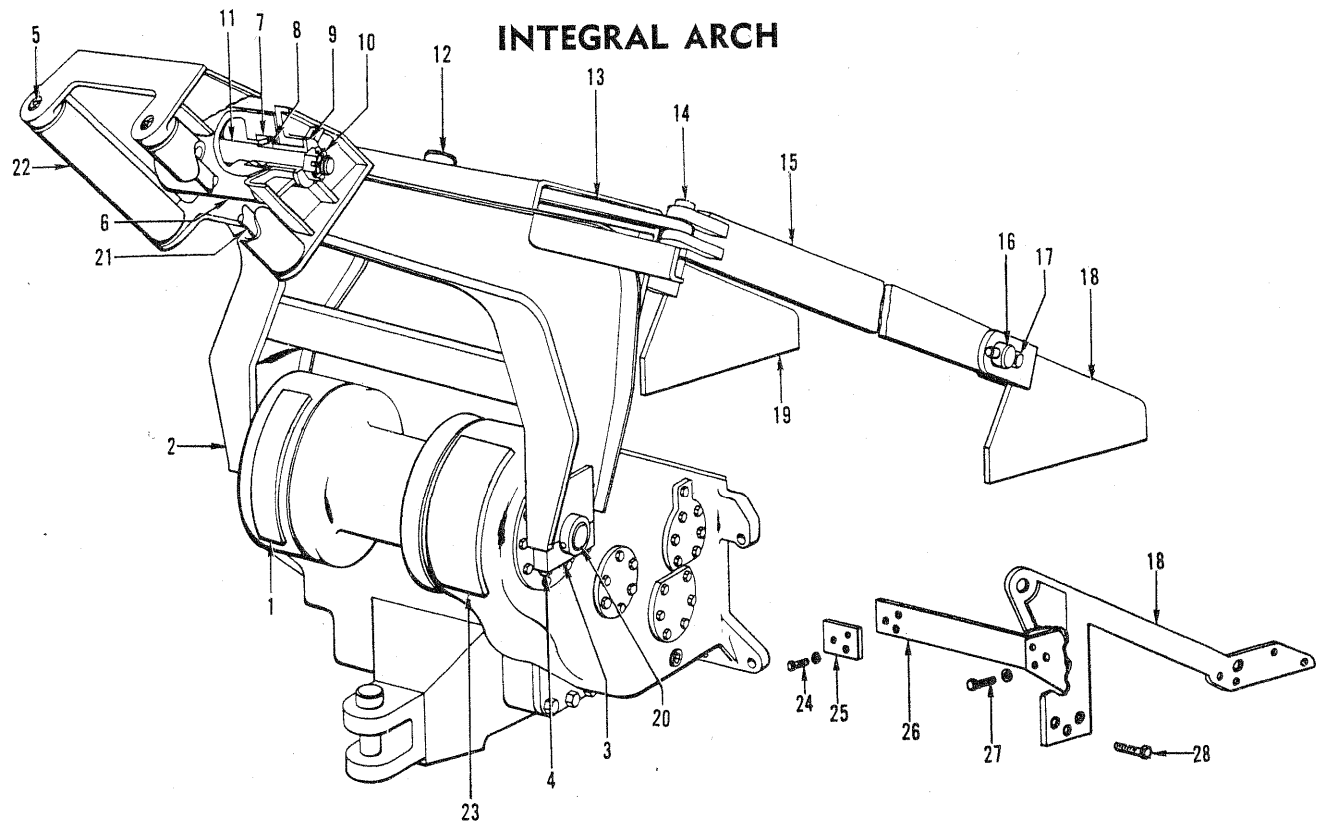
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	95894 A	FAIRLEAD ASSEMBLY	1
	*143184	FAIRLEAD ASSEMBLY	1
1	95793	PLATE-MOUNTING, L.H.	1
	95792	PLATE-MOUNTING, R.H.	1
	142808	BRACKET-MOUNTING, L.H.	1
	142809	BRACKET-MOUNTING, R.H.	1
2	95785 W	FRAME	1
3	93166	KEEPER	4
4	15514	CAPSCREW-1/2 UNF X 1 1/4	8
	15158	LOCKWASHER-1/2	8
5	16001	FITTING-GREASE	8
6	33394	WASHER	2
7	36206 A	ROLLER ASSEMBLY	2
	2570	BUSHING	4

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
8	92212 A	ROLLER ASSEMBLY	2
	59419	BUSHING	4
	92720	WASHER	4
9	93657	SHAFT-VERTICAL	2
10	230336	BEARING-THRUST	2
11	93658	SHAFT-HORIZONTAL	2
12	15571	CAPSCREW-1 UNF X 2 3/4	4
	15166	LOCKWASHER-1	4
13	93985	SHIM-.135	AR
14	92606	ROD-TIE	1
	15272	COTTER-3/8 X 3	2

*FIRST USED ON WINCH SERIAL NO. D47P-1613 AND C77P-1747.

□FOR 143184 FAIRLEAD ONLY.

HYSTER COMPANY
PORTLAND, OREGON



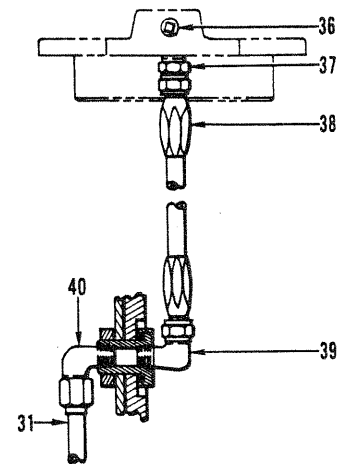
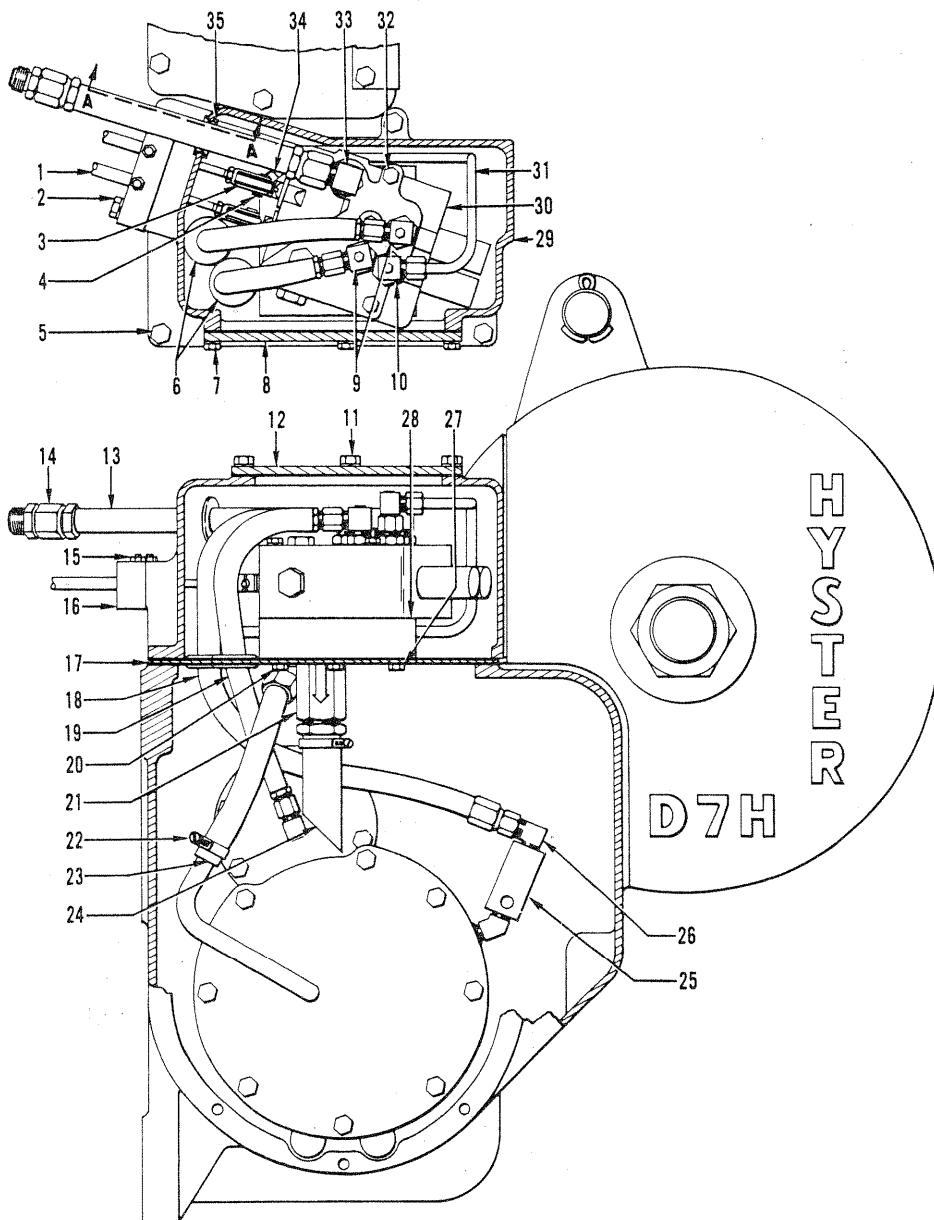
KEY

A-FOR D7 TRACTOR SERIAL NO. 47A1-47A635 AND 48A1-48A1158.
 B-FOR D7 TRACTOR SERIAL NO. 47A636 & UP AND 48A1159 & UP.
 C-FOR 977 TRAXCAVATOR.

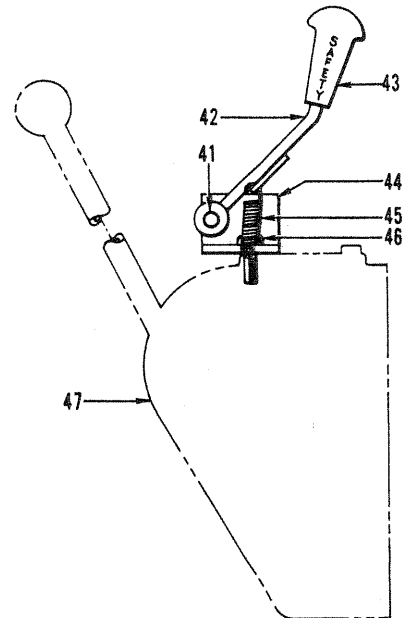
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
1	84923	PLATE-GUARD, L.H.	1	1	1
2	84872 W	FRAME-ARCH	1	1	1
3	84830 A	BLOCK ASSEMBLY-R.H.	1	1	1
	97791 A	BLOCK ASSEMBLY-L.H.	1	1	1
	18630	CPSCR-3/4 UNF	FOR		
		X 3 3/4	R.H.	2	2
	15162	LOCKWASHER-3/4	BLOCK	2	2
	98611	CPSCR-3/4 UNF	FOR		
		X 3 3/4	L.H.	1	1
	97800	CPSCR-3/4 UNF	BLOCK	1	1
		X 3 1/4			
	15162	LOCKWASHER-3/4		2	2
	.....	LOCKWIRE	1	1	1
5	16001	FITTING-GREASE	2	2	2
6	35725 B	ROLLER-HORIZONTAL	1	1	1
	15347	PLUG-PIPE, 1/4	1	1	1
7	30059	CUP-BEARING	2	2	2
	30084	CONE-BEARING	2	2	2
8	35738	SEAL-OIL	2	2	2
	35739	BUSHING	2	2	2
9	146897	SHIM-.020	AR	AR	AR
	146898	SHIM-.031	AR	AR	AR
	146899	SHIM-.062	AR	AR	AR
10	32282	NUT-SLOTTED, SPECIAL	2	2	2
	15257	COTTER-1/4 X 2 1/2	2	2	2
11	35743	SHAFT-HORIZONTAL ROLLER	1	1	1
	84907	PIN	1	1	1
12	80926	ANCHOR	1	1	1
	16823	CPSCR-HT, 5/8 UNF X 1 1/2	1	1	1
	15160	LOCKWASHER-5/8	1	1	1
	84901 A	BEAM ASSEMBLY-EQUALIZER	1	1	1
13	84905	BUSHING-CENTER	1	1	1
	84906	BUSHING-END	2	2	2
	84913	PIN	2	2	2
14	80926	ANCHOR	2	2	2
	16823	CPSCR-HT, 5/8 UNF X 1 1/2	2	2	2
	15160	LOCKWASHER-5/8	2	2	2
	84908 A	STRUT-BACKSTAY	2	..	..
	98604 A	STRUT-BACKSTAY, R.H.	..	1	..
	98605 A	STRUT-BACKSTAY, L.H.	..	1	..
	134157	STRUT-BACKSTAY	..	..	2
	84906	BUSHING	1	1	..
16	84912	PIN	2	2	..
	84913	PIN	..	..	2
	80926	ANCHOR	2	2	2
17	16823	CPSCR-HT, 5/8 UNF X 1 1/2	2	2	..
	12480	CPSCR-HT, 5/8 UNF X 2	..	..	2
	15160	LOCKWASHER-5/8	2	2	2
18	77859 W	BRACKET-TRACK, R.H.	1	1	..
	134145	BRACKET-TRACK, R.H.	..	..	1
19	77861 W	BRACKET-TRACK, L.H.	1	1	..
	134150	BRACKET-TRACK, L.H.	..	..	1
	138593	SHAFT-DRUM	1	1	1
20	138884	NUT-R.H., SPECIAL	1	1	1
	138883	NUT-L.H., SPECIAL	1	1	1
	59743	PIN	2	2	2
21	35749	KEEPER	2	2	2
	37562	CPSCR-HT, 1/2 UNF X 1 1/4	2	2	2
	15158	LOCKWASHER-1/2	2	2	2
	35728 A	ROLLER ASSEMBLY-VERTICAL	2	2	2
22	35726	BUSHING	2	2	2
	37546	WASHER	2	2	2
23	84922	PLATE-GUARD, R.H.	1	1	1
24	16800	CPSCR-HT, 3/4 UNF X 2	..	..	6
	15162	LOCKWASHER-3/4	..	..	6
25	134156	PLATE	..	..	2
26	134155	PLATE	..	..	2
	16052	CPSCR-HT, 3/4 UNF X 3	..	..	6
27	15162	LOCKWASHER-3/4	..	..	6
	17162	NUT-HT, 3/4 UNF	..	..	6
28	58294	BOLT-SPECIAL	..	..	14

HYSTER COMPANY
 PORTLAND, OREGON

BRAKE AND HYDRAULIC SYSTEM CONVERSION



SECTION A-A



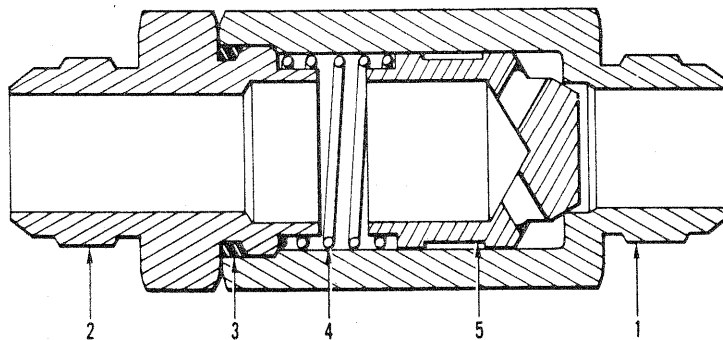
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	164655	CABLE-PUSH PULL	2
2	16813	CAPSCREW-HT, 1/2 UNC X 2	2
	15158	LOCKWASHER-1/2	2
3	165659	ROD END	2
4	133683	PIN-ROD END	2
	15211	COTTER-3/32 X 1/2	2
5	.....	CAPSCREW	4
	.....	LOCKWASHER	4
6	95737	GROMMET	2
7	.....	CAPSCREW	6
	.....	LOCKWASHER	6
8	.....	COVER	1
	.....	GASKET	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	164656	ELBOW-SPECIAL	2
9	16485	O-RING	1
	16587	LOCKNUT	1
	14349	PLUG-PIPE, 1/8	2
	165662	ELBOW-SPECIAL	1
10	14349	PLUG-PIPE, 1/8	1
	16909	CONNECTOR-MALE	1
	16485	O-RING	1
11	.....	CAPSCREW	6
	.....	LOCKWASHER	6
12	.....	COVER	1
	.....	GASKET	1
13	76225	HOSE ASSEMBLY	1
14	17635	UNION-REDUCER	1

BRAKE AND HYDRAULIC SYSTEM CONVERSION

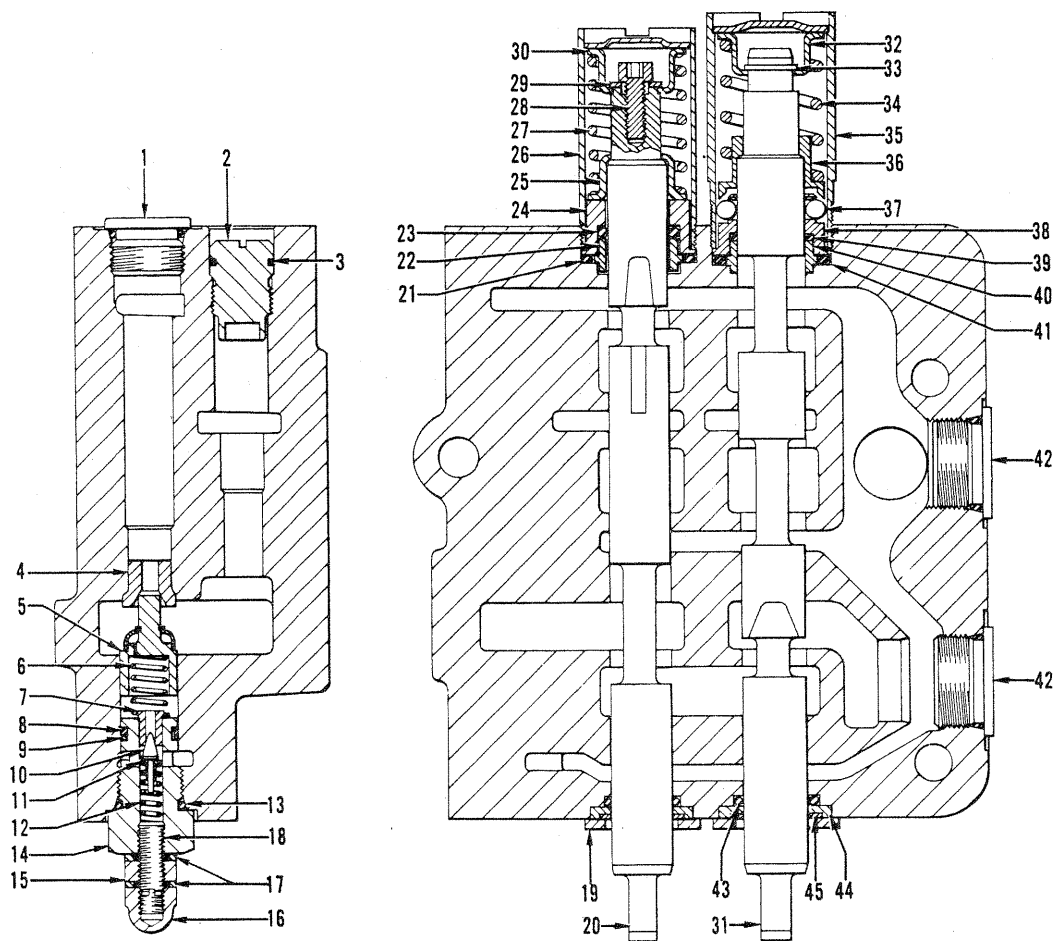
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
15	.....	SETSCREW	2	31	164659	TUBE ASSEMBLY	1
16	164653	NUT-JAM	2	32	18543	CAPSCREW-HT, 3/8 UNC X 3 3/4	3
17	164652	BLOCK	1		15156	LOCKWASHER-3/8	3
	.....	PLATE-VALVE MOUNTING	1		164657	ELBOW-SPECIAL	1
18	110230	GASKET-SEE PAGE F1	2	33	16486	O-RING	1
19	88297	HOSE ASSEMBLY-DUMP VALVE	1		16588	LOCKNUT	1
	16570	HOSE ASSEMBLY-L.H. CLUTCH	1		14349	PLUG-PIPE, 1/8	1
	16486	ELBOW-45 DEG.	1	34	14603	PLUG	1
20	16486	O-RING	1		16486	O-RING	1
	16588	LOCKNUT	1	35	164658	GROMMET-SPECIAL	1
21	.....	VALVE-CHECK, SEE PAGE G4	1	36	.....	PLUG-PIPE	1
	16487	O-RING	1	37	.....	CONNECTOR-MALE	1
22	127045	CLAMP-HOSE	2	38	.....	HOSE ASSEMBLY-R.H. CLUTCH	1
23	130363	HOSE ASSEMBLY-BRAKE	1	39	.....	ELBOW	1
24	164678	HOSE	1	40	17309	ELBOW	1
25	.....	VALVE-DUMP, SEE PAGE F2	1	41	58951	SNAP RING	2
26	.....	ELBOW-SEE PAGE F1	1	42	164668	LEVER-GATE	1
27	16598	CAPSCREW-HT, 3/8 UNC X 7/8	3	43	147766	KNOB	1
	15156	LOCKWASHER-3/8	3	44	164663	BRACKET-HANDLING GEAR GATE	1
28	164651	SUPPORT-CONTROL VALVE	1	45	147770	SPRING	1
29	133948	HOUSING-CONTROL VALVE	1	46	16828	CAPSCREW-HT, 3/8 UNC X 1 1/4	2
30	.....	VALVE-CONTROL, SEE PAGE G5	1	47	.....	HANDLING GEAR ASSY.-SEE PAGE F4	1

CHECK VALVE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	168730	VALVE ASSEMBLY-CHECK	1	3	170544	O-RING	1
1	.....	BODY	1	4	170543	SPRING	1
2	170545	CAP	1	5	170542	POPPET	1

HYDRAULIC CONTROL VALVE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
	168732	VALVE ASSEMBLY-CONTROL	1
1	233693	PLUG	4
	16485	O-RING	1
2	233492	CAP	2
3	118389	O-RING	2
4	166917	VALVE ASSEMBLY-RELIEF	1
	170988	SEAT	1
5	170989	POPPET ASSEMBLY	1
6	170993	SPRING	1
7	166919	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
	233508	PLATE-RETAINER	2
19	232460	LOCKWASHER	4
	166916	SCREW	4
20	166913	SPOOL ASSEMBLY-MODULATING	1
21	166912	O-RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
22	166909	RETAINER-SEAL	1
23	60836	O-RING	1
24	166910	RETAINER-SEAL	1
25	166905	RETAINER-SPRING	1
26	166906	CAP ASSEMBLY	1
27	166911	SPRING-SPOOL	1
28	166914	SCREW	1
29	166922	WASHER	1
30	166904	RETAINER-SPRING	1
31	170981	SPOOL ASSEMBLY-SELECTOR	1
32	166904	RETAINER-SPRING	1
33	233495	SNAP RING	1
34	166911	SPRING-SPOOL	1
35	170985	CAP ASSEMBLY	1
36	170983	SPACER-SELECTOR	1
37	170987	BALL-STEEL	8
38	170984	RETAINER-BALLS	1
39	60836	O-RING	1
40	170986	RETAINER-SEAL	1
41	166912	O-RING	1
42	163660	PLUG	2
	16486	O-RING	1
43	60836	O-RING	2
44	233506	RETAINER-SEAL	2
45	233505	WIPER	2
	166912	O-RING-VALVE TO SUPPORT	1

HYSTER COMPANY
PORTLAND, OREGON

Section Q

NUMERICAL

INDEX

USE HYSTER APPROVED PARTS... *it pays*

NUMERICAL INDEX

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
142	F5	15295	B2	16830	F9	33618	B2	77736	F3
159	E2	15302	F2	16870	F9	33682	E1	77859 W	G2
206	F10	15304	B6	16909	G3	33717	E1	77861 W	G2
2570	G1	15305	B4	16949	F7	33783	D4	77975	F3
6348	E1	15306	F8	16970	F1	33785	D1	78022	D5
6607	D5	15315	B6	16983	F6	33786	D1	78035 A	F10
6697	D5	15319	B4	17038	F8	33787	B2	79389	D1
9413	F10	15347	G2	17042	F6	35030	D5	79416	E2
9528	D1	15451	B8	17118	D3	35135	G1	79417	E2
9554	D1	15476	F8	17138	F3	35159	D4	79418	E2
9563	D1	15500	D5	17161	D4	35503	B4	79972	D3
10389	B6	15514	G1	17162	G2	35573	D1	79979	D4
12480	G2	15515	D4	17303	F8	35725 B	G2	79980	B6
12823	D4	15527	E1	17309	G4	35726	G2	80926	G2
12898	F4	15571	G1	17315	F2	35728 A	G2	84830 A	G2
12915	D3	15929	D1	17344	F2	35738	G2	84872 W	G2
12916	D2	15936	F2	17635	G3	35739	G2	84901 A	G2
12940	D4	15978	F8	17781	F8	35743	G2	84905	G2
12944	D1	16001	G2	17783	F8	35749	G2	84906	G2
12992	F3	16002	B2	18000	B7	36000	D4	84907	G2
14349	G4	16006	G1	18001	B7	36006	D4	84908 A	G2
14494	F8	16052	G2	18004	B7	36007	D4	84912	G2
14603	G4	16085	F1	18005	B7	36206 A	G1	84913	G2
14761	F2	16200	F7	18202	B8	36240	B7	84922	G2
15000	F11	16202	F5	18451	E2	37546	G2	84923	G2
15001	F4	16212	E2	18460	F8	37562	F1	86229	F2
15004	F8	16254	F4	18461	F5	38760	F9	86543	B6
15006	E2	16352	D1	18462	F11	44316	D2	87569	F2
15008	E2	16397	F1	18467	F8	44484	D5	87570	F2
15015	F8	16448	F2	18543	G4	45303	F8	87571	F2
15016	B7	16482	F3	18549	F9	53559	D5	87656	D3
15018	B8	16484	G5	18551	F7	54112	F7	88297	G4
15025	F5	16485	G5	18578	F9	55280	F3	88837	F7
15026	E2	16486	G5	18585	F6	55434	B7	89023	F2
15030	E1	16487	G4	18586	F9	58294	G2	89025	F2
15036	F2	16541	F8	18588	F8	58907	E2	89727	D3
15056	F9	16544	F9	18630	G2	58938	D2	89770	D3
15057	F9	16562	F9	18789	F2	58950	F3	89771	D3
15078	F8	16570	G4	18821	F3	58951	G4	89772	D3
15079	D4	16571	F9	18850	D5	59370	D4	89773 A	D3
15086	F6	16586	F2	18853	F1	59397	D4	89777	D3
15135	F8	16587	G3	18863	D5	59419	G1	89781	F8
15154	F11	16588	G4	18889	F2	59425 A	D4	90267	E2
15155	F4	16589	F9	18903	F11	59432	D4	91629	E1
15156 B	F3	16597	F5	18994	F7	59743	G2	92212 A	G1
15157	F9	16598	G4	19871	F4	59802AB	E1	92606	G1
15158 B	D5	16634	F8	19987	D4	59927	D4	92608	D5
15160	G2	16645	G1	21013	D2	60016	F8	92617	D5
15162	G2	16651	F11	21014	D2	60836	G5	92618	D1
15166	G1	16748	B5	21420	B4	63085	E1	92619	D1
15168	B8	16800	G2	26379	D1	66716	F5	92620	D1
15211	G3	16805	F7	27187	F7	68965	F3	92621	D1
15212	F5	16807	B6	27936	E1	76225	G3	92623	D1
15213	F8	16813	G3	29582	F3	76695 A	E1	92649	D3
15223	E2	16820	B6	30059	G2	76696	E1	92652	D3
15226	E1	16821	B6	30080	D3	76697	E1	92671	B2
15240	B8	16823	G2	30084	G2	76699 A	E1	92683	E2
15257	G2	16824	B5	30091	D1	76706 W	E2	92684	D4
15272	G1	16828	G4	32282	G2	77187 A	E2	92705	E1
15273	B4	16829	F9	33394	G1	77188	E2	92712	D5

NUMERICAL INDEX

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
92713	D5	95892	G1	96460	D3	123276	F5	132930	F8
92714	D5	95893	F2	96461	D3	123277	F5	132931	B8
92716 A	D4	95894 A	G1	96462	D3	123278	F5	132932	F5
92720	G1	95905	E2	96463	D3	123279	F5	132933	F5
92867	D4	95942	B5	96464	D4	123699	F10	132935	B6
93166	G1	95944	D2	96466	D3	123704	F10	133138	F4
93657	G1	95945	D2	96467	D3	124240	F10	133139	F4
93658	G1	95946	D2	96468	D3	124241	F10	133140	F4
93771	B4	95948	B4	96469 W	D2	124242	F10	133141	F4
93985	G1	95951 A	F10	96472	B4	124245	F10	133143	F4
94369	B2	95959	B4	96474	F5	124247	F10	133144	F4
94380	F5	95961	D2	96479	F1	124248	F10	133145	F4
94381	E2	95962	D2	96487	F1	124249	F10	133146	F4
94601	D4	95963	D2	96491	F2	125399	D1	133147	F4
94655	E1	95964	D2	96492	F2	126444	F10	133148	F4
94891	E2	95969	D3	96495 W	D2	126445	F10	133149	F4
95440	B2	96020	D1	96497 W	D2	127045	G4	133150	F4
95486	F7	96021	D2	96524	D1	127657	F10	133152	F4
95491	F4	96028	D2	96526	D5	127658	F10	133153	F4
95499	D5	96234	F3	96624	F1	127659	F10	133154	F4
95581	D2	96367	D1	96725	E1	127661	F10	133179	B7
95612	F3	96368	D1	96783	D2	128383	E1	133529	B8
95615	E1	96369	B5	96784	D2	128391	E1	133681	F7
95636 W	E1	96370	B5	96785	D3	129447	F10	133683	G3
95638	E1	96371	D2	97553	D1	129859	B8	133702	F11
95666 A	G1	96372	D2	97554	B9	130363	G4	133705	F11
95668	G1	96373	E1	97791 A	G2	131953	F4	133706	F11
95669	G1	96374	E1	97800	G2	131955	F4	133898	D1
95676	F3	96375	E1	97842	E1	131957	F4	133911	B6
95707	F5	96377	E1	97843 A	E1	131975	F4	133913	B6
95708	F5	96378	B4	97950 A	F8	131976	F4	133914	B6
95709	F5	96379	B4	97952	F8	131982	D5	133915	B6
95710	F7	96382	E1	97953	F8	131998	E1	133917	D4
95714	F3	96391 W	B2	97954	F8	132000	F2	133918	D3
95715	F3	96402 W	B2	97955	F8	132002	F2	133920	B6
95716	F3	96409 W	B2	97956 A	F8	132003	F2	133921	B6
95717	F3	96413	D2	97958	F8	132005	F1	133925	D4
95718	F3	96414	D3	97959	F8	132007	F2	133926	D4
95719	F3	96415	D1	97960	F8	132020	B4	133927	D4
95720	F3	96416	D2	97961	F8	132021	B4	133928	D4
95721	F3	96417	D3	97963	F8	132034	F6	133929	D4
95725	F3	96418	D1	97964	F8	132035	F6	133930	D4
95736	F2	96420	D5	98362	D1	132036	F6	133931	D4
95737	G3	96422	B7	98604 A	G2	132037	F6	133936	D4
95750	E2	96423	B4	98605 A	G2	132038	F6	133937	D4
95751	E2	96424	B4	98611	G2	132039	F6	133948	G4
95785 W	G1	96425	B4	98624	F3	132041	F6	133952	B4
95792	G1	96426	B4	104607	E1	132042	F6	133960	B2
95793	G1	96430	D2	108407	F3	132043	F6	133963	B2
95833	D3	96431	D2	108408	F3	132044	F7	133965	B6
95835	B7	96432	D3	109453	D1	132045	F6	133968	F2
95837	B7	96433	B4	110230	G4	132908	D1	133970	B2
95876	F5	96435	D5	110934	B5	132909	D1	133971	B2
95877 A	G1	96436	D5	110935	B5	132911	B8	133972	B2
95879 W	G1	96437 A	D5	110936	B5	132921	B8	133974	B2
95883 W	G1	96438	D5	111330	F8	132922	B8	133975	B2
95888 W	G1	96439	D5	112421	F4	132923	B8	133976	B2
95889	G1	96451	D1	116047	F8	132924	B8	134070	D5
95890	G1	96452	D1	116541	F3	132927	B8	134071	D5
95891	G1	96458	D2	118389	G5	132929	F8	134072	D5

NUMERICAL INDEX

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
134074	D1	142736	B4	148980	F9	170543	G4		
134075	D1	142758	B6	148982	F9	170544	G4		
134076	D1	142759	B6	148984	F9	170545	G4		
134078	D1	142760	B4	149018	F9	170981	G5		
134079	D1	142761	B4	149295	F9	170983	G5		
134081	B4	142781	F11	149296	F9	170984	G5		
134082	B2	142797	F7	149297	F9	170985	G5		
134083	B4	142799	E1	149298	F9	170986	G5		
134107	B4	142808	G1	151714	F9	170987	G5		
134108	B4	142809	G1	151788	B5	170988	G5		
134109	B4	142854	D5	152649	F3	170989	G5		
134116	F2	142857	B5	152989	F3	170993	G5		
134118	B8	142861	B6	155112	F9	170994	G5		
134145	G2	142872	B4	155113	F9	170995	G5		
134150	G2	142879	B4	159745	F3	170996	G5		
134155	G2	142887	B4	159746	F3	170997	G5		
134156	G2	142888	B4	159747	F3	230309	D1		
134157	G2	142889	B4	159748	F3	230310	D3		
134201	B2	142890	B4	159809	F4	230311	D3		
134202	B2	142891	B4	159811	F5	230336	G1		
134203	B2	142892	B4	159858	G5	230351	D2		
134204	B2	143056	B8	159859	G5	230405	D2		
134220	D4	143184	G1	161848	B5	230407	D2		
134275	F10	143362	F7	161850	B6	232460	G5		
134276	F10	143471	F1	161857	F2	233492	G5		
134821	B7	144014	F3	163182	B6	233495	G5		
135737	B9	144017	F3	163660	G5	233502	G5		
135738	B9	144019	F3	164651	G4	233503	G5		
136378	F2	144034	B4	164652	G4	233505	G5		
136381	F2	144600	F10	164653	G4	233506	G5		
136391	F7	144773	B4	164655	G3	233508	G5		
138542	F2	145344	F10	164656	G3	233693	G5		
138593	G2	145347	F7	164657	G4	234823	G5		
138883	G2	145350	F7	164658	G4	235933	F10		
138884	G2	145351	F7	164659	G4				
138905	B2	145381	F10	164663	G4				
138959	D4	145382	F10	164668	G4				
139197	F3	145476	F7	164672	F11				
140184	D4	145477	F7	164675	F11				
140207	F2	145478	F7	164678	G4				
140208	F2	145479	F10	165659	G3				
140371	B2	146211	F4	165662	G3				
140521	F3	146212	F4	166904	G5				
140741	E1	146385	F7	166905	G5				
140944	F1	146896	F10	166906	G5				
140945	F1	146897	G2	166909	G5				
140946	F1	146898	G2	166910	G5				
140947	F1	146899	G2	166911	G5				
140948	F2	147401	F10	166912	G5				
141149	D5	147447	F9	166913	G5				
141163	F3	147448	F9	166914	G5				
141167	F3	147449	F9	166916	G5				
141187	F6	147450	F9	166917	G5				
141190	F2	147461	F9	166919	G5				
141325	D5	147463	F9	166920	G5				
141348	D3	147464	F9	166922	G5				
141357	D5	147467	F7	167115	F1				
141675	D5	147766	G4	168730	G4				
142500	F7	147770	G4	168732	G5				
142735	B4	148978	F9	170542	G4				