

Allied Systems
COMPANY
WINCH DIVISION

PARTS MANUAL

**TOWING WINCH
W12D / D89D
(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

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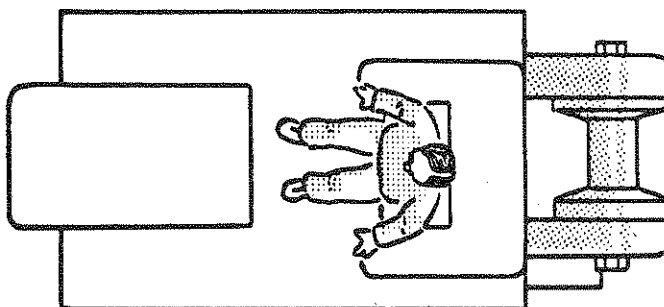
UNIT IDENTIFICATION
UNIT SERIAL NO.

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



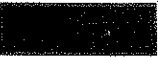
L. H. Side

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.

D895
Form 853
REVISION NO. 2
2/68

INDEX

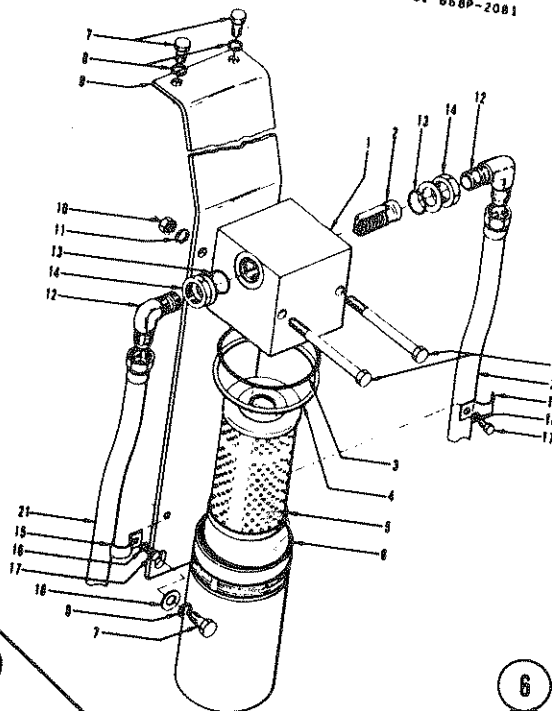
Service, Operation and Installation Instructions

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	19071	F3	89	
9455	D1	16386	D3	19987	D5	902C	
10389	D4	16397	D2	21420	D2	9221	
12479	D3	16440	F2	27187	D2	92606	
12480	D6	16446	F2	29582	F8	92671	
12623	D5	16482	F4	30059	F4	92720	
2898	F3	16484	F4	30080	D2	92720	
99	F6	16485	F10				
7	D2	16486					
	D1						

FILTER

FIRST USED ON WINCH SERIAL NO. 868P-2081



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

REF. NO.	HYSTER NO.	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		150760	LOCKWASHER-1/2	1
10		151713	PLATE	1
11		15057	NUT-7/16 UNC	1
		15157	LOCKWASHER	1

REF. NO.	HYSTER NO.	PART NO.	NAME OF PART	QTY.
12		16562	ELBOW	1
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 1/2	1
18		38760	WASHER	1
19		18578	CAPSCREW-7/16 UNC	1
20		167455	WASHER	1

When The Part Number Is Not Known

- 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.
- 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.

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Section B

FRAMES, COVERS AND MOUNTING STUDS

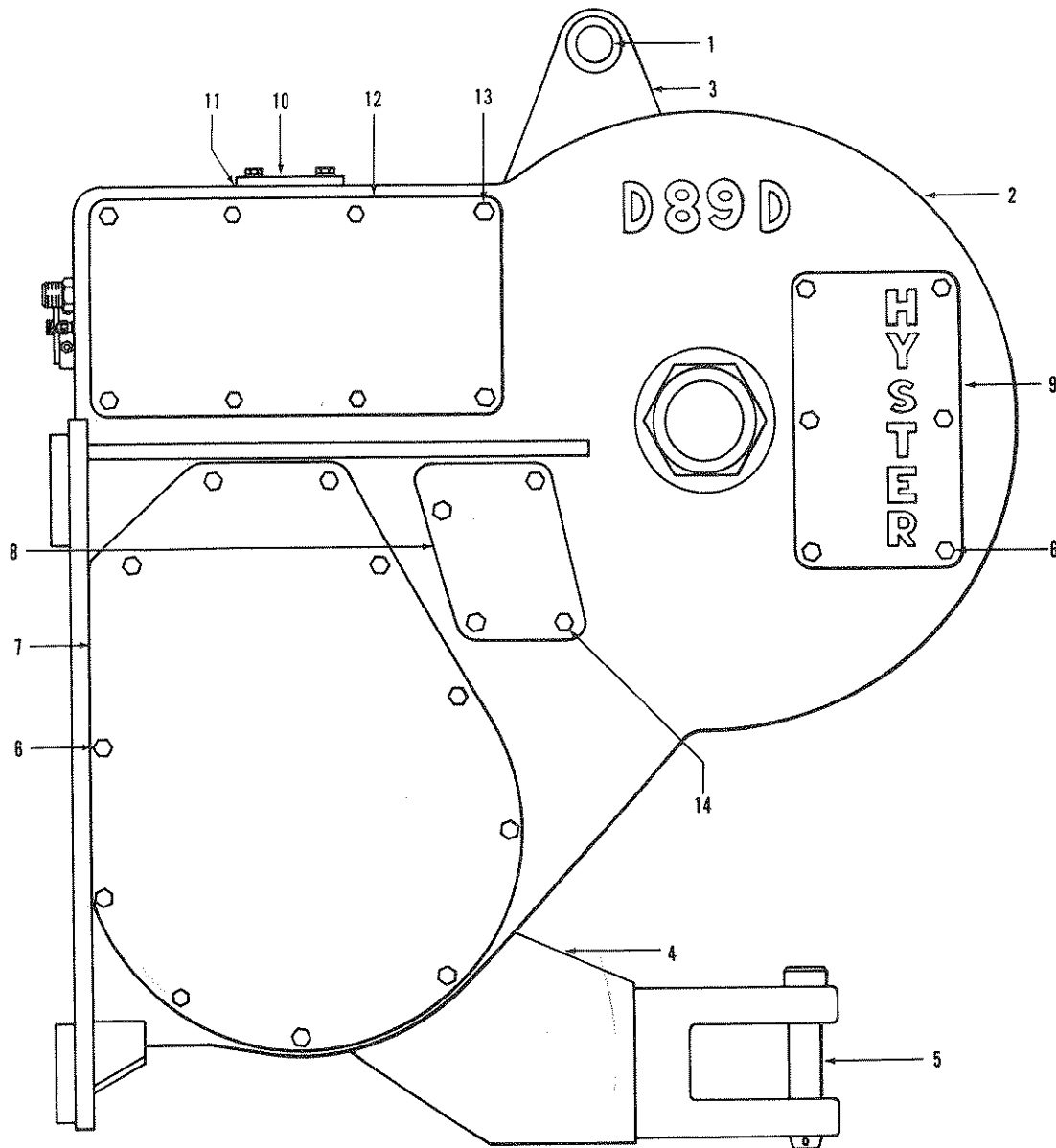
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Gskt Kit - Grom # A2-B-4

FRAMES AND COVERS

LEFT HAND SIDE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	92606	ROD-TIE	1
1	15272	COTTER-3/8 X 3	1
2	*	FRAME	1
3	173609	BRACKET-TIE ROD	1
4	182165	BRACKET-DRAWBAR	1
4	182859	BRACKET-DRAWBAR, SWIVEL	1
5	95959	PIN-DRAWBAR	1
5	15273	COTTER-3/8 X 2 1/2	1
6	178402	CAPSCREW-1/2 UNC X 1 1/4 G5	17
6	15158	LOCKWASHER-1/2	17
7	□ 182192	PLATE-COVER, POWER CONTROL	1
7	* 198379	PLATE-COVER, POWER CONTROL	1
7	□ 182193	GASKET-POWER CONTROL	1
7	* 198383	GASKET-POWER CONTROL	1
7	187455	PLATE-COVER, DIRECT DRIVE	1
7	* 187456	GASKET-DIRECT DRIVE	1
8	□ 95446	PLATE-COVER	1
8	* 95447	GASKET-COVER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
9	186459	PLATE-COVER	1
9	* 186460	GASKET	1
10	183843	COVER-DIRECT DRIVE	1
11	* 183844	GASKET-DIRECT DRIVE	1
12	164691	COVER-DIRECT DRIVE	1
12	* 164708	GASKET-DIRECT DRIVE	1
12	□ 182234	COVER-POWER CONTROL	1
12	* 164691	COVER-POWER CONTROL	1
12	□ 182235	GASKET-POWER CONTROL	1
12	* 164708	GASKET-POWER CONTROL	1
13	16828	CAPSCREW-3/8 UNC X 1 1/4 G5	8
13	15156	LOCKWASHER-3/8	8
14	□ 178402	CAPSCREW-1/2 UNC X 1 1/4 G5	4
14	□ 15158	LOCKWASHER-1/2	4

*FIRST USED ON SERIAL NO. D68P-1621.

□LAST USED ON SERIAL NO. D68P-1620.

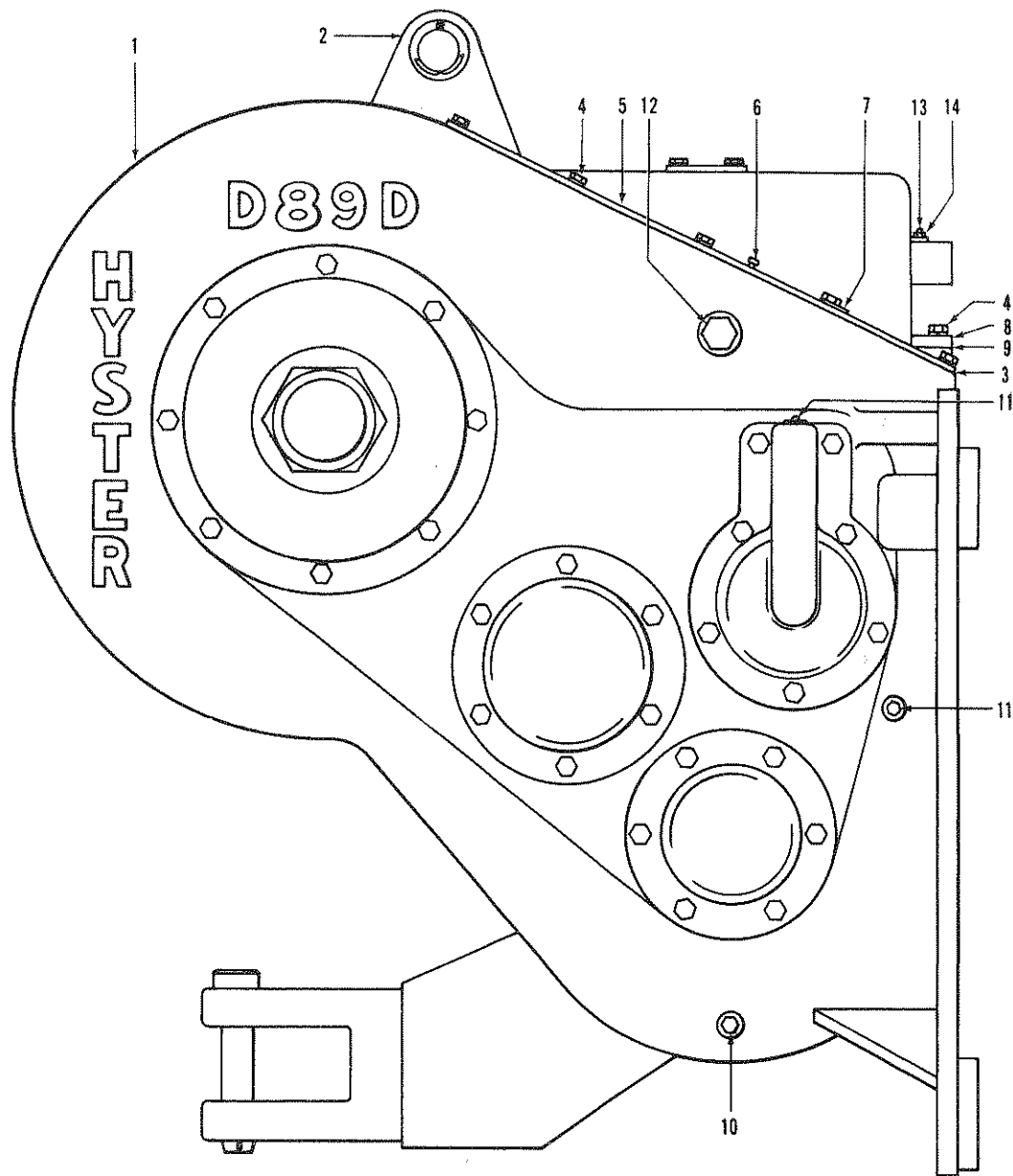
*INCLUDED IN GASKET KIT 209005.

HYSTER COMPANY
PORTLAND, OREGON

* 182169 Housing (P.C.)
182236 Housing (D.D.)

FRAMES AND COVERS

RIGHT HAND SIDE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
1	.....	FRAME	1
2	173609	BRACKET-TIE ROD	1
3	* 95455	GASKET	1
4	178402	CAPSCREW-1/2 UNC X 1 1/4 G5	17
4	178402	CAPSCREW-1/2 UNC X 1 1/4 G5	21
4	15158	LOCKWASHER-1/2	17
4	15158	LOCKWASHER-1/2	21
5	195408	COVER	1
6	21420	PLUG-VENT	1
7	15319	PLUG-PIPE, 1 1/2	1
8	182194	PLATE-COVER	1
8	206022	PLATE-COVER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	2	3	4
9	182195	GASKET-COVER	1
9	* 206023	GASKET-COVER	1
10	10389	PLUG-PIPE, MAGNETIC	1
11	15302	PLUG-PIPE, 3/8	2
12	166954	NUT-FLANGED, LOCK	2
13	16212	SETSCREW-3/8 UNC X 1 1/4	2
14	15086	NUT-JAM, 3/8 UNC	2

*INCLUDED IN GASKET KIT 209005.

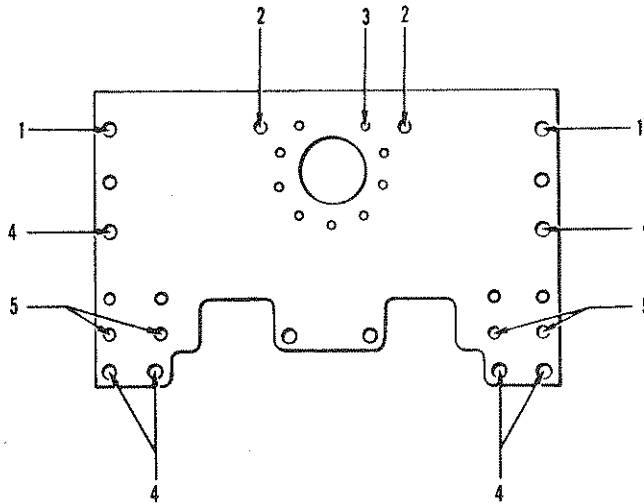
†FIRST USED ON SERIAL NO. 867P-1515, D68P-1621.

HYSTER COMPANY
PORTLAND, OREGON

& see preceding page

MOUNTING STUDS

FOR D8 TRACTOR SERIAL NO. 22A1 AND UP, 35A1 AND UP, 36A1 AND UP, 46A1 AND UP, 68A1003 AND UP, D8H TRACTORS WITH OPTIONAL RIP DOZER AND 583 PIPELAYER

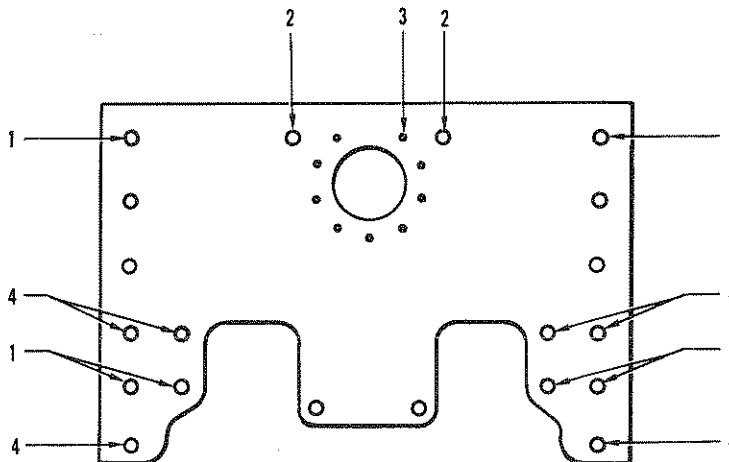


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	211513	STUD	2
1	136405	NUT-1 1/2 UNF	2
1	15170	LOCKWASHER-1 1/2	2
2	211234	STUD	2
2	134821	NUT-SLOTTED	2
2	15240	COTTER-5/32 X 2 1/2	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
2	55434	O-RING	2
3	136385	PLUG	9
4	18849	PLUG-CORK #20	6
5	211235	STUD	4
5	15018	NUT-1 1/4 UNF	4
5	15168	LOCKWASHER-1 1/4	4

MOUNTING STUDS

FOR D9 TRACTOR SERIAL NO. 66A1 AND UP, D9 TRACTORS WITH OPTIONAL RIP DOZER AND 594 PIPELAYER

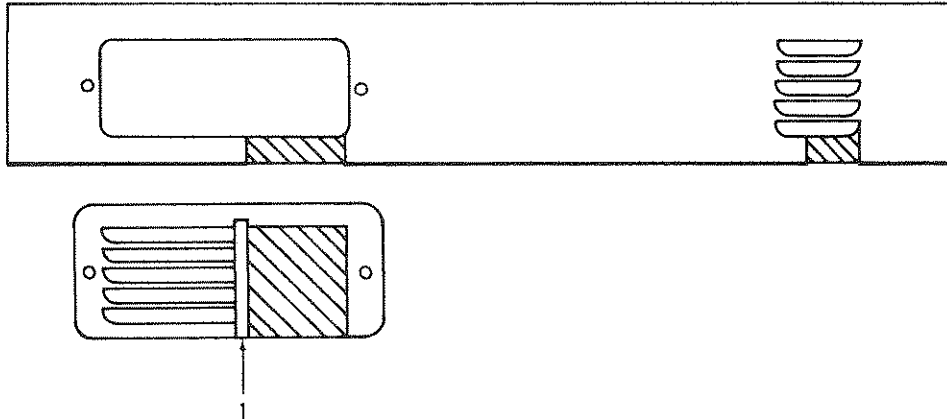


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	211513	STUD	6
1	15170	LOCKWASHER-1 1/2	6
1	136405	NUT-1 1/2 UNF	6
2	211234	STUD	2
2	55434	O-RING	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
2	134821	NUT-SLOTTED JAM, 1 1/4 UNF	2
2	15240	COTTER-5/32 X 2 1/2	2
3	136385	PLUG-STEEL	9
4	18849	PLUG-CORK #20	6

TRACTOR ALTERATIONS

FOR D8 TRACTOR SERIAL NO. 36A3936 TO 36A4468 INCLUSIVE, 46A6288 TO 46A10724 INCLUSIVE AND D9
TRACTOR SERIAL NO. 66A1 TO 66A3265 INCLUSIVE

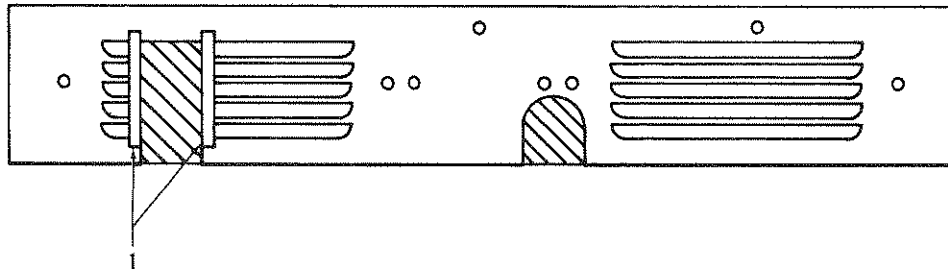


REF. NO.	HYSTER PART NO.	NAME OF PART				QTY.
		1	2	3	4	
1	135737	STRIP				1

REF. NO.	HYSTER PART NO.	NAME OF PART				QTY.
		1	2	3	4	

TRACTOR ALTERATIONS

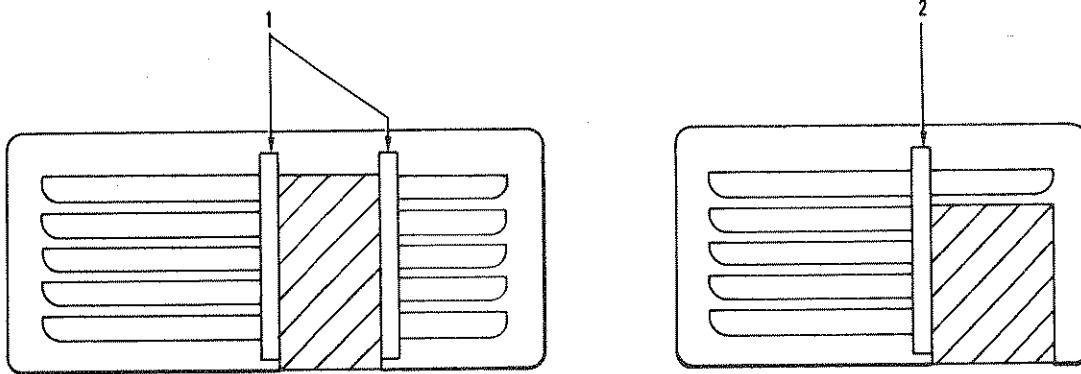
FOR D8 TRACTOR SERIAL NO. 36A4469 AND UP, 46A10725 AND UP, 68A1003 AND UP AND 583 PIPELAYER



REF. NO.	HYSTER PART NO.	NAME OF PART				QTY.
		1	2	3	4	
1	143398	STRIP-POWER CONTROL				2

REF. NO.	HYSTER PART NO.	NAME OF PART				QTY.
		1	2	3	4	
1	143398	STRIP-DIRECT DRIVE				1

TRACTOR ALTERATIONS



KEY

A-FOR D9 TRACTOR SERIAL NO. 66A3266 AND UP.

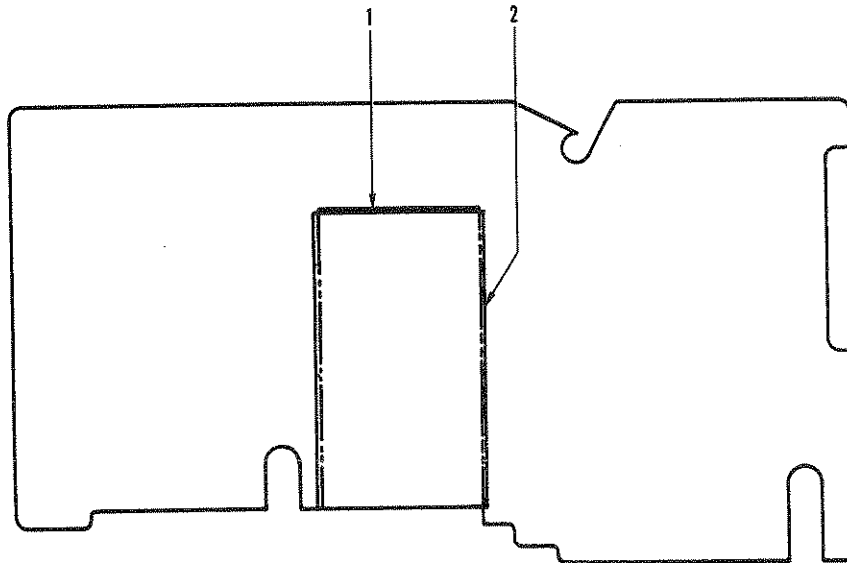
B-FOR 594 PIPELAYER SERIAL NO. 62H1 AND UP, ILLUSTRATED.

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

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

FLOOR PLATES

FOR D8 TRACTOR SERIAL NO. 36A4469 AND UP, 46A10725 AND UP, 68A1003 AND UP AND 583 PIPELAYER



REF. NO.	HYSTER PART NO.	NAME OF PART				QTY.
		1	2	3	4	
1	147962	PLATE				1

REF. NO.	HYSTER PART NO.	NAME OF PART				QTY.
		1	2	3	4	
2	147963	PLATE				1

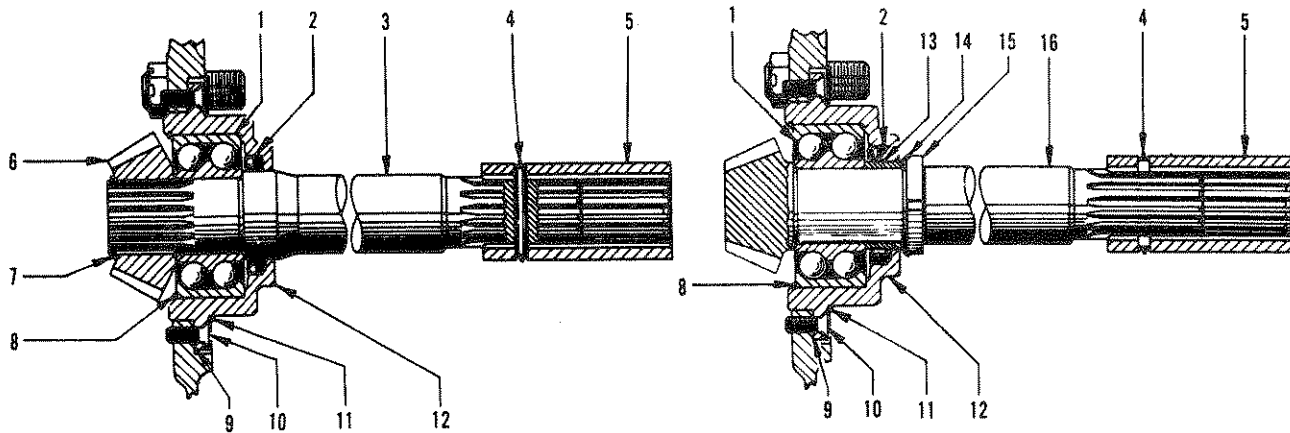
Section D

GEAR TRAIN AND SHAFTS

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INTERMEDIATE GEAR SHAFT.....	D4
OIL BRAKE-POWER CONTROL.....	D6
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POWER TAKE-OFF



KEY

A-FOR D8 TRACTOR SERIAL NO. 22A1 AND UP, 35A1 AND UP, 36A1 AND UP AND 52A1 AND UP.

B-FOR D8 TRACTOR SERIAL NO. 46A1 AND UP, 68A1 AND UP AND 583 PIPELAYER. ↓ 77V (D8K tractor)

C-FOR D9 TRACTOR SERIAL NO. 66A1 AND UP AND 594 PIPELAYER.

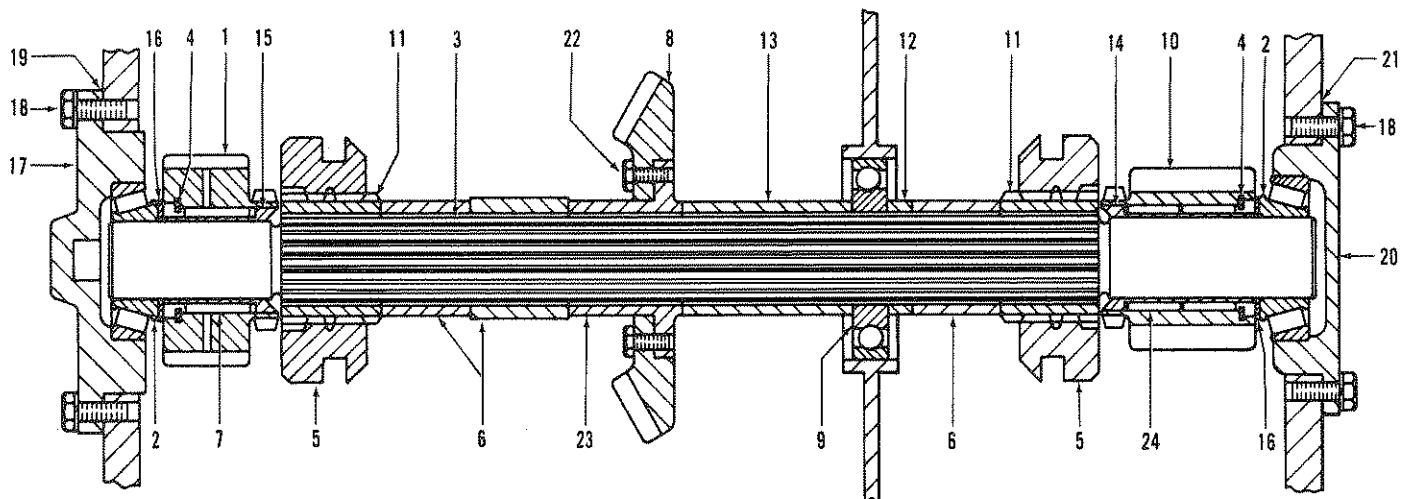
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
1	125402	BEARING	1	1	1
2	87355	SEAL-OIL	1	1	1
3	193587	SHAFT-P.T.O.	1	..	..
3	193590	SHAFT-P.T.O.	..	1	..
3	193589	SHAFT-P.T.O.	..	..	1
4	9450	PIN	1	1	1
4	90202	RING-LOCK	1	1	1
5	6327	COUPLING	1	1	1
6	95601	GEAR-SPIRAL	1	1	1
7	12940	SNAP RING	1	1	1
8	12981	SNAP RING	1	1	1
9	133256	SHIM-.005	AR	AR	AR
9	133257	SHIM-.007	AR	AR	AR

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			1	2	3
9	133258	SHIM-.020	AR	AR	AR
10	182220	CAPSCREW-1/2 UNC X 1 1/4	8	8	8
10	15929	LOCKWASHER-1/2	8	8	8
11	109453	O-RING	1	1	1
12	182191	CARRIER-BEARING	1	1	1
13	* 95813	SPACER	1	1	1
14	* 34055	LOCKWASHER	1	1	1
15	* 34056	LOCKNUT	1	1	1
16	* 95821	SHAFT-P.T.O.	1	..	..
16	* 95824	SHAFT-P.T.O.	..	1	..
16	* 95825	SHAFT-P.T.O.	..	..	1

*FOR LOW SPEED ONLY.

BEVEL GEAR SHAFT

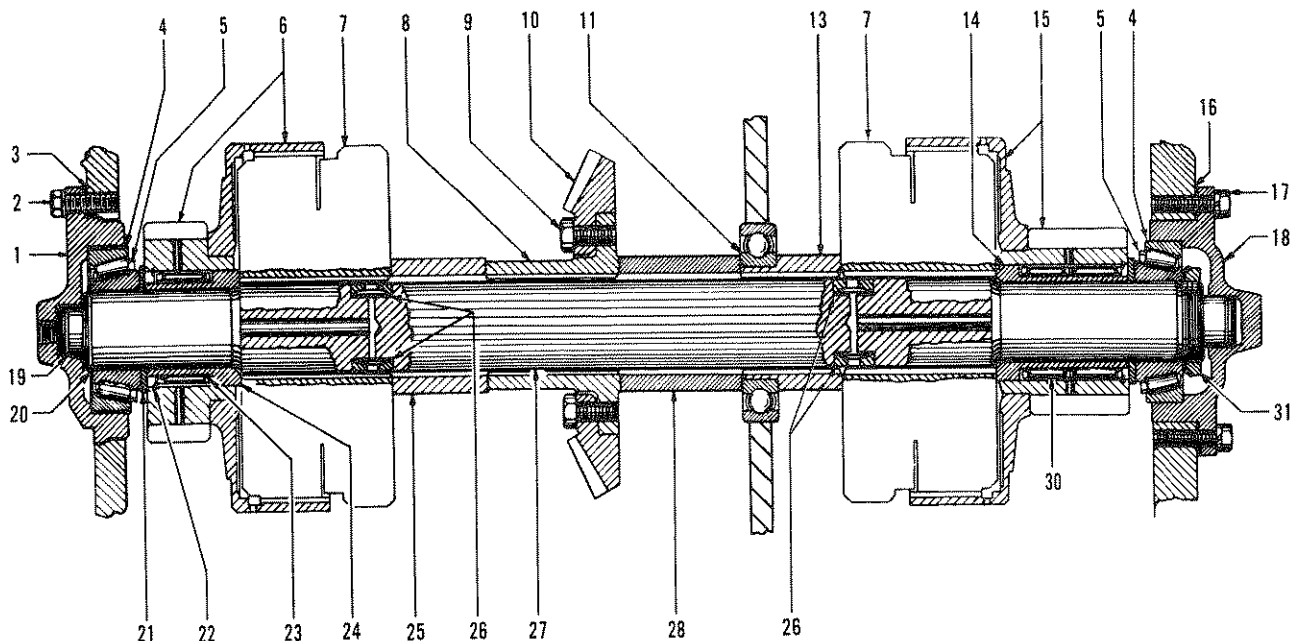
DIRECT DRIVE WINCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	95603	GEAR-2ND REDUCTION	1
1	95815	GEAR-2ND REDUCTION, LOW SPEED	1
2	30059	CUP-BEARING	2
2	30080	CONE-BEARING	2
3	95686	SHAFT-BEVEL GEAR	1
4	12990	SNAP RING	2
5	95688	CLUTCH-DENTAL	2
6	193601	SPACER	3
7	230393	BEARING-ROLLER	2
8	95762	GEAR-BEVEL <i>209014</i>	1
8	95814	GEAR-BEVEL, LOW SPEED <i>209015</i>	1
9	41217	BEARING-BALL	1
10	95690	GEAR-REVERSE PINION	1
11	95687	HUB-DENTAL CLUTCH	2
12	193603	SPACER	1
13	193602	SPACER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
14	95478	CARRIER-BEARING	1
15	95464	CARRIER-BEARING	1
16	175189	WASHER	2
17	95685	RETAINER-BEARING	1
18	182209	CAPSCREW-1/2 UNC X 1 1/2 G5	13
18	15158	LOCKWASHER-1/2	13
19	133266	SHIM-.005	AR
19	133267	SHIM-.007	AR
19	133268	SHIM-.020	AR
20	95691	RETAINER-BEARING	1
21	95033	SHIM-.005	4
21	95166	SHIM-.007	4
21	95034	SHIM-.020	1
22	86079	CAPSCREW-DRILLED HEAD G5	8
23	95761	HUB-BEVEL GEAR	1
24	230394	BEARING	2

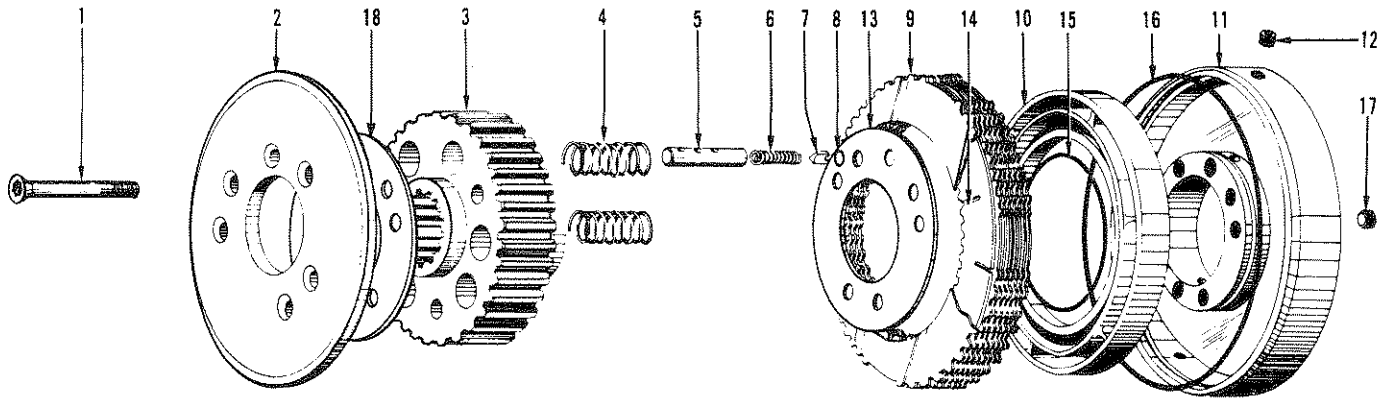
* U 209014 *Std Speed*
209015 *Low Speed*



REF. NC.	HYSTER PART NO.	NAME OF PART	QTY.
1	131918	CARRIER-BEARING	1
2	182209	CAPSCREW-1/2 UNC X 1 1/2 G5	5
2	15158	LOCKWASHER-1/2	5
3	131920	SHIM-.005	AR
3	131921	SHIM-.007	AR
3	131922	SHIM-.020	AR
4	30059	CUP-BEARING	2
5	30080	CONE-BEARING	2
6	193598	SPIDER-FORWARD (19 teeth)	1
6	193594	SPIDER-FORWARD, LOW SPEED (19 teeth)	1
7	.....	CLUTCH-SEE PAGE D4	2
8	95761	HUB-BEVEL GEAR	1
9	86079	CAPSCREW-DRILLED HEAD G5	8
9	.....	LOCKWIRE-18 GAGE X 18 IN. LONG	1
10	95762	GEAR-SPIRAL BEVEL	1
10	95814	GEAR-SPIRAL BEVEL, LOW SPEED	1
11	41217	BEARING-BALL	1
13	193603	SPACER	1
14	95478	CARRIER-BEARING	1
15	193591	SPIDER-REVERSE	1
16	133270	SHIM-.005	AR

CLUTCH

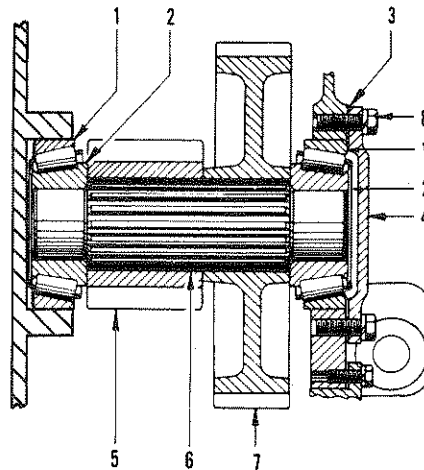
POWER CONTROL WINCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	175197	CLUTCH	2
1	95474	CAPSCREW-SPECIAL	8
2	95473	PLATE	1
3	175194	HUB-CLUTCH	1
4	95472	SPRING	8
5	89772	BODY-VALVE	1
6	95833	SPRING	1
7	89771	PLUNGER	1
8	89770	SNAP RING	1
9	131923	DISC-FRICTION (7" ID, 10 7/8" OD)	8

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10	95469	PISTON-CLUTCH	1
11	95468	PLATE-RETAINER	1
12	141348	PLUG-PIPE, 1/16	1
13	95467	RETAINER-SPRING	1
14	95471	PLATE-SEPARATOR	8
15	89776	O-RING	1
16	89775	O-RING	1
17	17118	SETSCREW-1/2 UNF X 1/2	8
18	96735	SHIM-.031	AR

INTERMEDIATE GEAR SHAFT

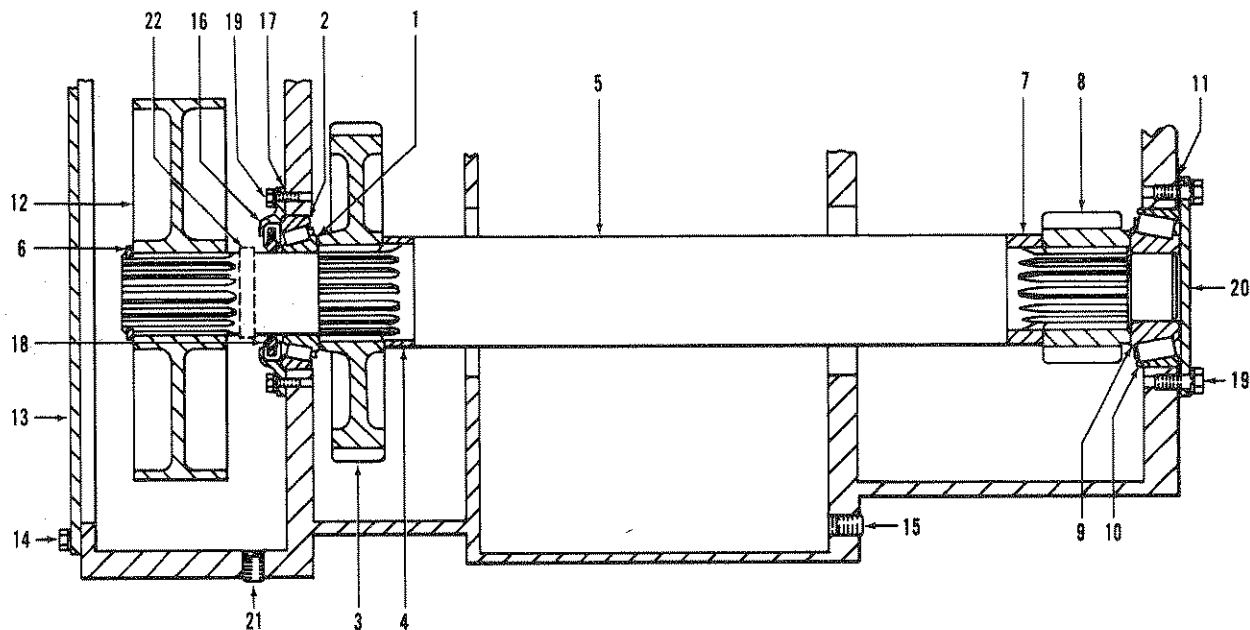


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	230327	CUP-BEARING	2
2	231011	CONE-BEARING	2
3	93284	SHIM-.005	AR
3	93285	SHIM-.007	AR
3	93286	SHIM-.020	AR
4	93287	RETAINER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
5	95493	GEAR-DRUM PINION, 14 TEETH	1
6	95492	SHAFT-INTERMEDIATE	1
7	95494	GEAR-INTERMEDIATE, 48 TEETH	1
8	182210	CAPSCREW-5/8 UNC X 1 3/4 G5	6
8	15160	LOCKWASHER-5/8	6

HYSTER COMPANY
PORTLAND, OREGON

BRAKE SHAFT



KEY

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

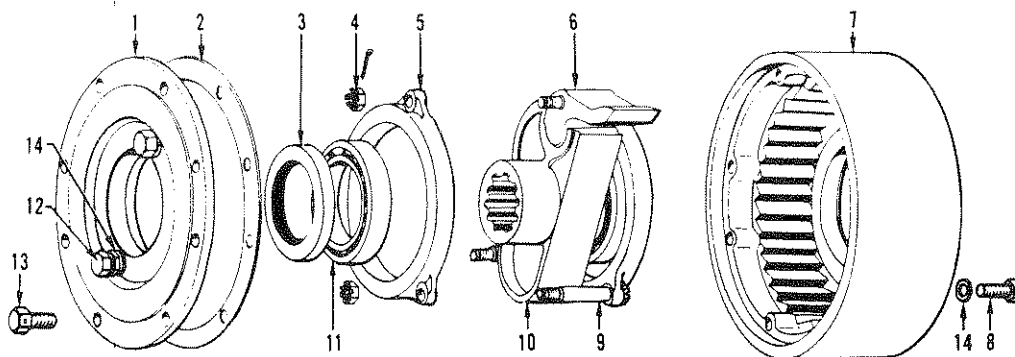
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	30101	CONE-BEARING	1	1
2	30100	CUP-BEARING	1	1
3	95604	GEAR-STANDARD 277496	1	1
3	95816	GEAR-LOW SPEED	1	1
4	95488	SPACER	1	1
5	95487	SHAFT <i>DD</i>	..	1
5	193605	SHAFT <i>P.C.</i>	1	..
6	58905	SNAP RING	1	..
7	94447	SPACER	1	1
8	95489	GEAR	1	1
9	230326	CONE-BEARING	1	1
10	30104	CUP-BEARING	1	1
11	95033	SHIM-.005	AR	AR
11	95166	SHIM-.007	AR	AR
11	95034	SHIM-.020	AR	AR
12	.....	BRAKE-OIL, SEE PAGE D6	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
12	.....	BRAKE-AUTOMATIC, SEE PAGE D6	1	..
12	95600	WHEEL-BRAKE	1	..
13	.....	PLATE-COVER, SEE PAGE B1	1	1
14	.....	CAPSCREW-SEE PAGE B1	11	11
15	10389	PLUG-PIPE, MAGNETIC-3/4	1	1
16	89728	RETAINER-OIL SEAL	1	..
17	* 93791	GASKET	1	..
18	44536	SEAL-OIL	1	..
19	182209	CAPSCREW-1/2 UNC X 1 1/2 G5	12	6
19	15158	LOCKWASHER-1/2	12	6
20	95490	RETAINER-BEARING	1	1
21	15316	PLUG-PIPE, 3/4	1	1
22	193604	SPACER-BRAKE SHAFT	..	1

*INCLUDED IN GASKET KIT 209005.

AUTOMATIC BRAKE

DIRECT DRIVE WINCH



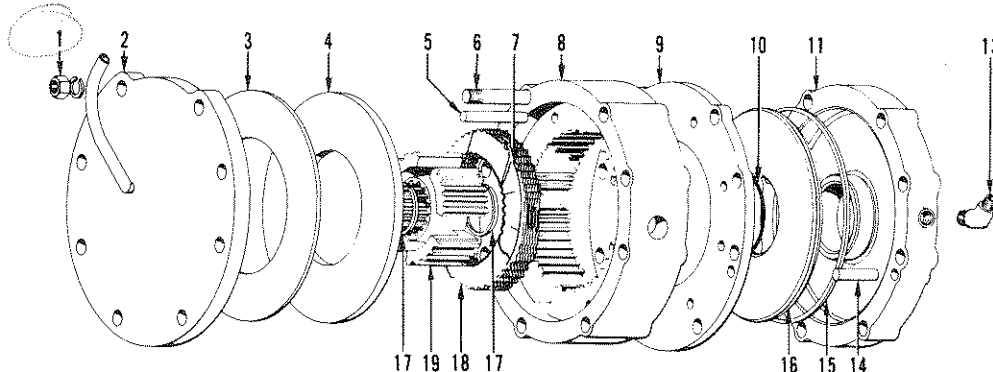
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	95431 A	BRAKE-AUTOMATIC	1
1	92941	COVER	1
2	* 92940	GASKET	1
3	31970	SEAL-OIL	1
4	15079	NUT-SLOTTED, 3/8 UNF	6
4	15212	COTTER-3/32 X 3/4	6
5	35876	RING-DRAW	2
6	35880	PAWL	1
7	92938 A	WHEEL-BRAKE	1
8	15515	CAPSCREW-1/2 UNF X 3/4	3

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
9	94600	LINK-SHOULDER	3
10	93247	HUB	1
11	35148	BEARING-BALL	2
12	59370	PLUG-VENT, SPECIAL	1
13	9718	CAPSCREW-DRILLED HEAD, 7/16 UNF X 1	8
13	.....	LOCKWIRE	1
14	* 35159	GASKET-COPPER	4

*INCLUDED IN GASKET KIT 209005.

OIL BRAKE

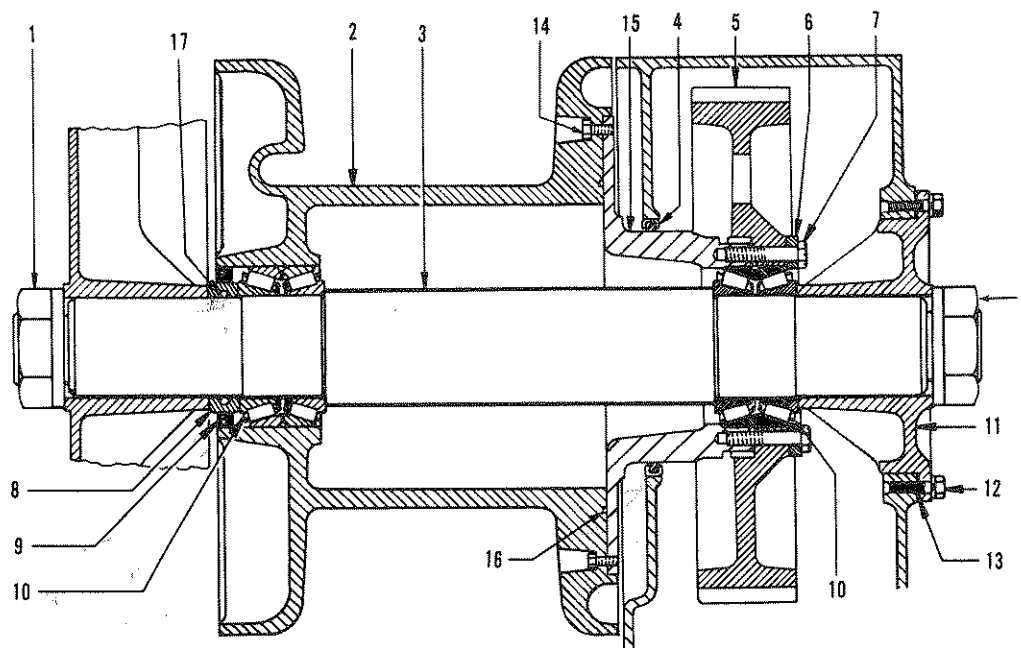
POWER CONTROL WINCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	17161	NUT-5/8 UNC	8
1	* 199594	NUT-UNF G8	8
1	15160	LOCKWASHER-5/8	8
1	* 199593	WASHER-5/8 HT	8
2	182198	COVER	1
3	131990	SPRING	2
4	131989	RING	1
5	131987	ROD	8
6	138908	STUD	8
7	131923	DISC-FRICTION	11
8	140398	CAGE	1
9	140447	PLATE-PRESSURE	1
10	131983	O-RING	1

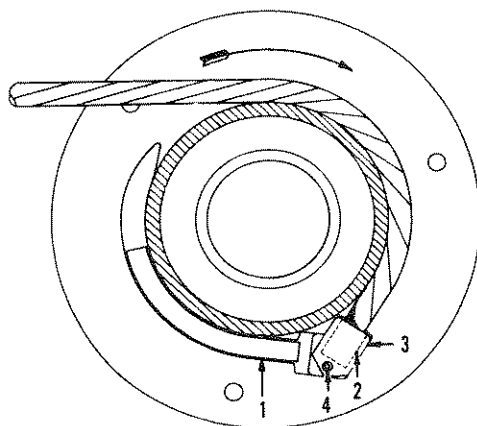
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
11	140397	HOUSING-PISTON	1
11	* 198368	HOUSING-PISTON	1
13	170751	ELBOW-STREET, 45 DEGREE	1
14	92867	PIN-DOWEL	2
15	131982	RING-PISTON	1
16	140401	PISTON	1
17	58905	SNAP RING	2
17	* 58905	SNAP RING	1
18	95471	PLATE-SEPARATOR	10
19	131985	HUB	1

*FIRST USED ON SERIAL NO. D68P-1621.

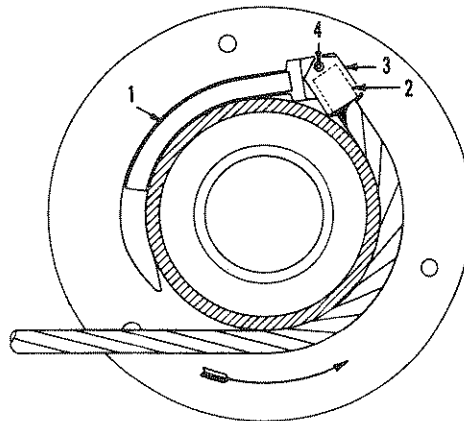
DRUM SHAFT

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	46398	NUT	2
2	182179	DRUM-14 INCH	1
2	182182	DRUM-9 1/4 INCH	1
3	186461	SHAFT-DRUM	1
4	141149	SEAL-OIL	2
5	95496	GEAR-DRUM	1
6	95497	RETAINER	1
7	18807	BOLT-PLACE, 5/8 UNF X 3	8
8	172800	SPACER	1
9	44460	SEAL-OIL	1
10	230329 A	BEARING	2

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
11	172802	RETAINER	1
12	182210	CAPSCREW-5/8 UNF X 2 G5	8
12	15160	LOCKWASHER-5/8	8
13	133274	SHIM-.005	AR
13	133275	SHIM-.007	AR
13	133276	SHIM-.020	AR
14	141675	CAPSCREW-5/8 UNF X 1 1/2	12
14	53559	DOWEL	12
15	182178	ADAPTER	1
16	182177	SEAL-RING	1
17	15888	O-RING	1

CABLE LOCK

OVERWINDING



UNDERWINDING

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	95763	FILLER-CABLE GROOVE	1
1	95822	FILLER-CABLE GROOVE, LOW SPEED	1
2	30509	FERRULE-JUNIOR	1

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
3	95499	LOCK-FERRULE	1
4	18262	CAPSCREW-1/2 UNC X 3	1
4	177949	LOCKWASHER-1/2	1

HYSTER COMPANY
PORTLAND, OREGON

Section E

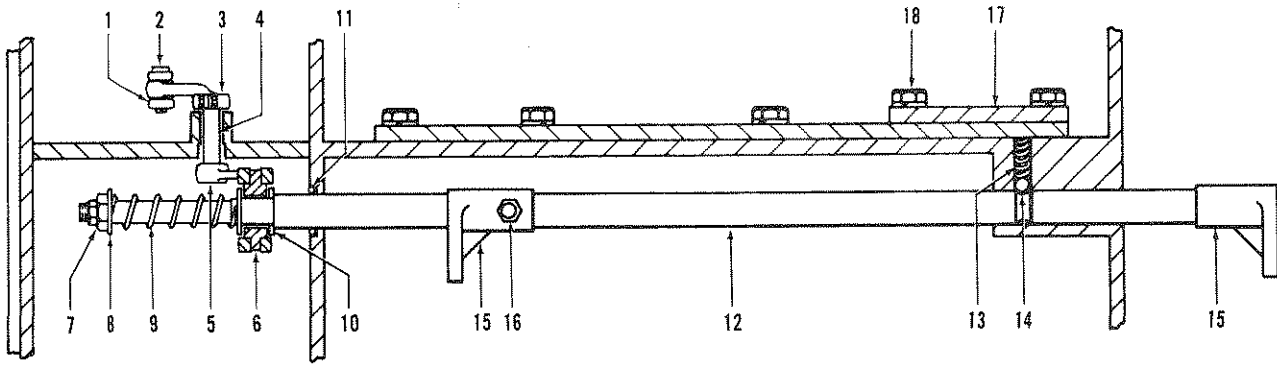
BRAKE AND SHIFTER MECHANISM
FOR DIRECT DRIVE WINCH

INDEX

BRAKE MECHANISM.....	E1
HANDLING GEAR.....	E2
SHIFTER MECHANISM.....	E1

USE HYSTER APPROVED PARTS... *it pays*

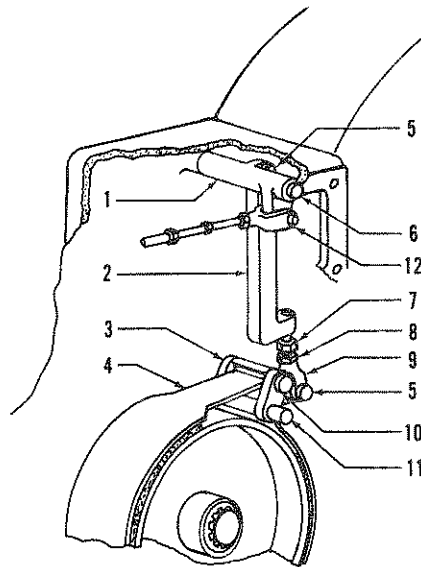
SHIFTER MECHANISM



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	.....	ROD END-PAGE E2 REF. 11	2	11	44494	SEAL-OIL	1
2	.....	PIN-ROD END, PAGE E2 REF. 12	2	12	96509	SHAFT-SHIFTER	1
2	.....	COTTER-1/8 X 1, PAGE E2 REF. 12	2	13	95746	SPRING	1
3	95635	CRANK-SHIFTER, UPPER	1	14	6347	BALL 6347	1
3	15580	CAPSCREW-3/8 UNC X 1 1/2	1	15	95694	FORK-SHIFTER	2
3	15156	LOCKWASHER-3/8	1	16	27936	LOCKSCREW	2
4	95615	BUSHING	2	17	177410	PLATE	1
5	95636	CRANK-SHIFTER, LOWER	1	17	* 177409	GASKET	1
6	33717	SHOE-SHIFTER	2	18	188665	CAPSCREW-1/2 UNC X 1 3/4 G5	3
7	63085	LOCKNUT-5/8 UNF	1	18	15158	LOCKWASHER-1/2	3
8	33682	WASHER	2				
9	94655	SPRING	1				
10	33681	WASHER	1				

*INCLUDED IN GASKET KIT 209005.

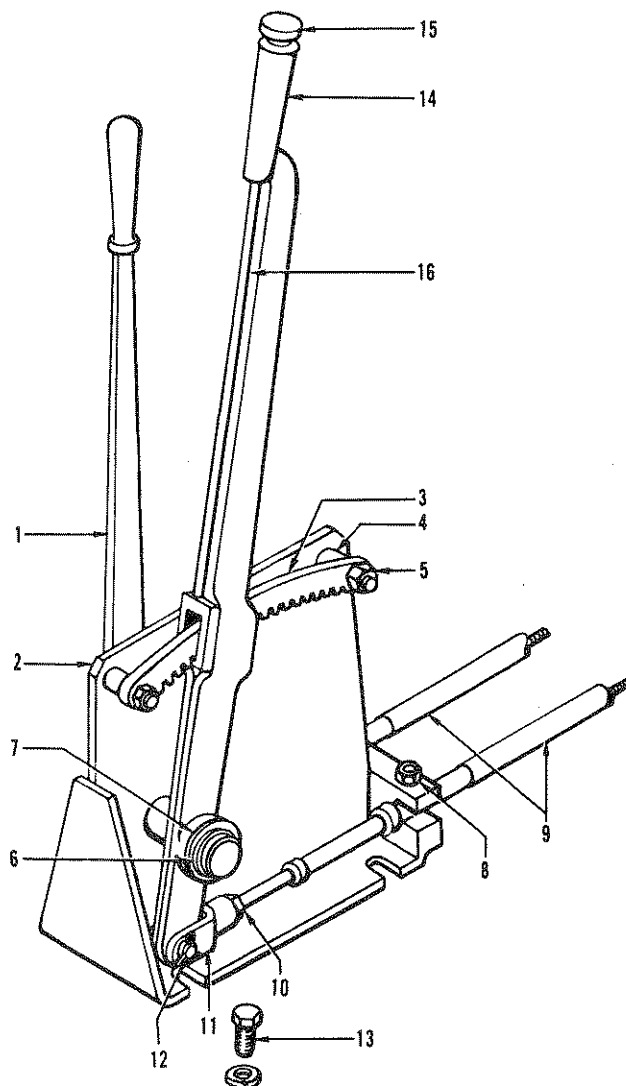
BRAKE MECHANISM



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	78280	CRANK-BRAKE	1	6	182717	PIN-BRAKE CRANK	1
1	92768	BUSHING	2	7	76696	LINK-ADJUSTING	1
2	78281	LINK-BRAKE	1	8	15030	NUT-JAM, 5/8 UNF	1
3	78283 A	LEVER-BRAKE	1	9	91629	ROD END	1
3	104607	BUSHING	4	10	96725	PIN-BRAKE LEVER	1
4	128404	BAND-BRAKE	1	10	15226	COTTER-1/8 X 1 3/4	1
4	90665	LINING SET	6	11	128393	PIN-BRAKE LEVER	1
4	15804	RIVET-3/16 X 3/8	48	12	.....	ROD END-PAGE E2 REF. 11	2
5	159	PIN-ROD END	2	12	.....	PIN-ROD END, PAGE E2 REF. 12	2
5	15223	COTTER-1/8 X 1	2	12	.....	COTTER-1/8 X 1, PAGE E2 REF. 12	2

HYSTER COMPANY
PORTLAND, OREGON

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-3/8 UNC X 2 G5	2
5	15156	LOCKWASHER-3/8	2
5	15056	NUT-3/8 UNC	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	189747	CABLE-CONTROL	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
10	15026	NUT-JAM, 3/8 UNF	4
11	92683	ROD END	4
12	159	PIN-ROD END	4
12	15223	COTTER-1/8 X 1	4
13	16376	CAPSCREW-3/8 UNC X 2 G5	2
13	15156	LOCKWASHER-3/8	2
13	15056	NUT-3/8 UNC	2
14	77187 A	HANDLEVER-BRAKE	1
15	79418	BUTTON	1
15	79417	SPRING	1
16	79416	PAUL AND ROD	1

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Section F

BRAKE AND HYDRAULIC SYSTEM
FOR POWER CONTROL WINCH

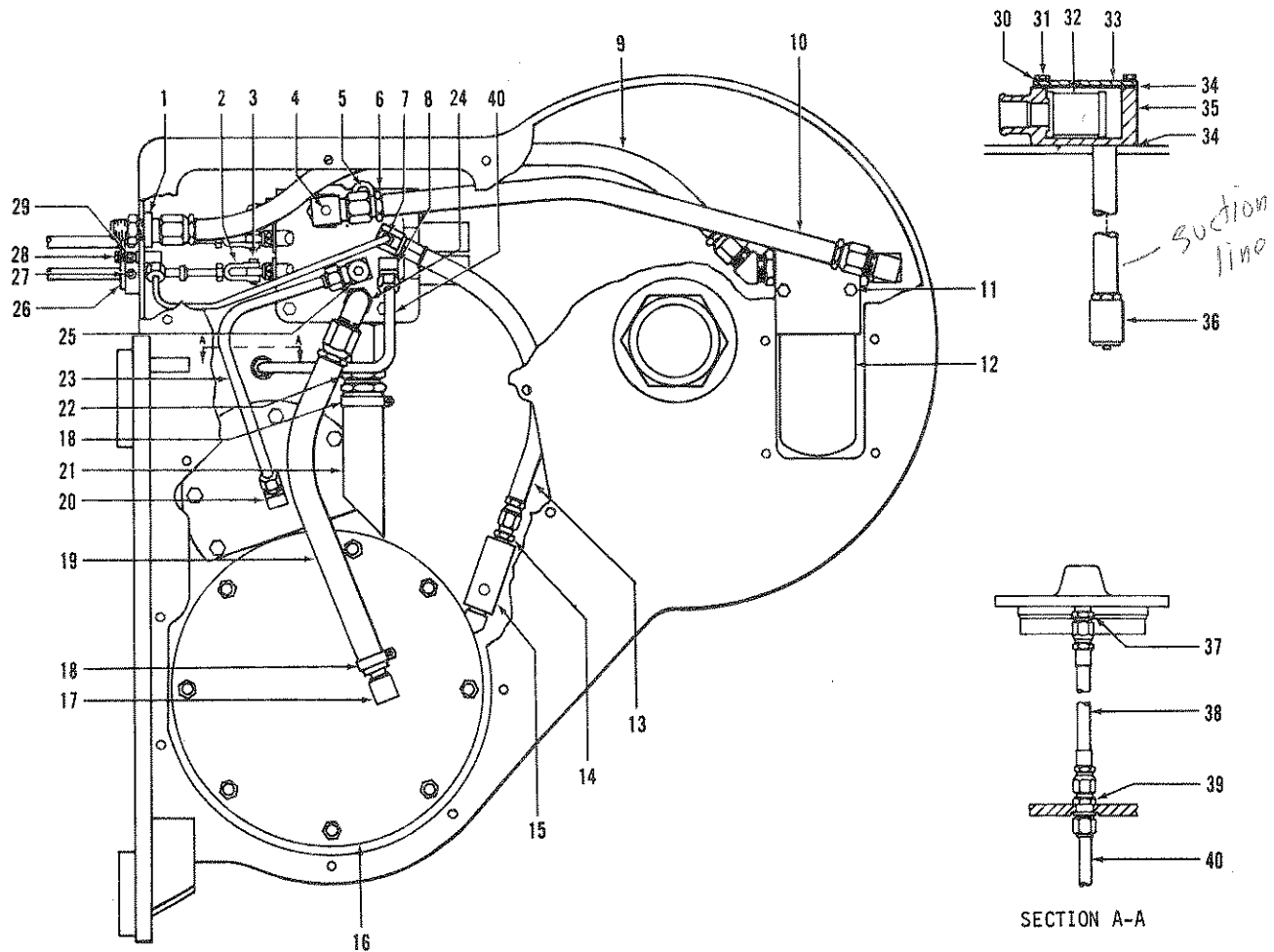
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BRAKE AND HYDRAULIC SYSTEM.....	F1-F4
CHECK VALVE.....	F2
CONTROL VALVE.....	F11-F12
DUMP VALVE.....	F7
FILTER AND HOSES.....	F10
HANDLING GEAR.....	F5-F6
HYDRAULIC PUMP.....	F9
PUMP DRIVE AND HOSES.....	F7-F8

USE HYSTER APPROVED PARTS... *it pays*

BRAKE AND HYDRAULIC SYSTEM

LAST USED ON SERIAL NO. D68P-1620



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	16450	UNION-BULKHEAD	1
1	14763	LOCKNUT	1
2	168737	ROD END	2
3	133683	PIN-ROD END	2
3	15211	PIN-COTTER, 3/32 X 1/2	2
4	164703	ELBOW-SPECIAL	1
4	16486	O-RING	1
4	16588	LOCKNUT	1
4	14349	PLUG-PIPE, 1/8	1
5	18522	CAPSCREW-5/16 UNC X 3 1/2 G5	3
5	15155	LOCKWASHER-5/16	3
6	.....	VALVE-CONTROL, SEE PAGE F11	1
7	14668	CONNECTOR-MALE	1
7	165497	TUBE	1
8	14349	PLUG-PIPE	1
8	16909	CONNECTOR-MALE	1
8	16485	O-RING	1
8	182206	ELBOW-SPECIAL	1
9	124588	HOSE-HYDRAULIC	1
10	176459	HOSE-HYDRAULIC	1
11	.....	CAPSCREW-PAGE F10 REF. 8	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
12	.....	FILTER-PAGE F10 REF. 10	1
13	182205	HOSE	1
14	17315	CONNECTOR-MALE	1
15	.....	DUMP VALVE-SEE PAGE F7	1
16	.....	OIL BRAKE-SEE PAGE D6	1
17	16165	NIPPLE	1
18	127045	CLAMP-HOSE	2
19	182204	HOSE-HYDRAULIC	1
20	17344	ELBOW-45 DEGREE	1
21	165654	HOSE	1
22	.....	CHECK VALVE-SEE PAGE F2	1
22	16487	O-RING	1
23	182208	TUBE	1
24	111331	ELBOW	1
25	14349	PLUG-PIPE, 1/8	1
25	16909	CONNECTOR-MALE	1
25	16485	O-RING	1
25	165662	ELBOW-SWIVEL	1
26	186319	PLATE	1
26	100154	O-RING	2

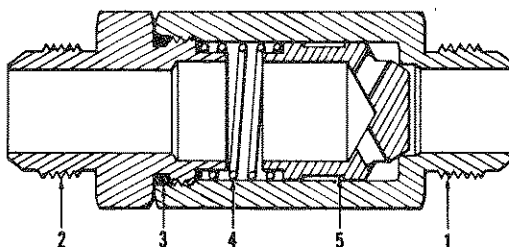
BRAKE AND HYDRAULIC SYSTEM

LAST USED ON SERIAL NO. D68P-1620

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	
27	18853	SETSCREW-5/16 UNC X 1 1/4	2	33	177410	COVER	1
27	15001	NUT-JAM, 5/16 UNC	2	34	177409	GASKET	2
28	159812	CAPSCREW-3/8 UNC X 3/4 G8	1	35	182231	MANIFOLD-INTAKE	1
28	15156	LOCKWASHER-3/8	1	36	177369	VALVE-FOOT	1
29	16455	ELBOW-BULKHEAD	1	37	19987	NIPPLE	1
29	14758	LOCKNUT	1	37	14723	CONNECTOR	1
30	15158	LOCKWASHER-1/2	4	38	192210	HOSE	1
31	18596	CAPSCREW-1/2 UNC X 5 G5	4	39	16448	UNION-BULKHEAD	1
32	160387	CARTRIDGE	1	40	182207	TUBE	1

CHECK VALVE

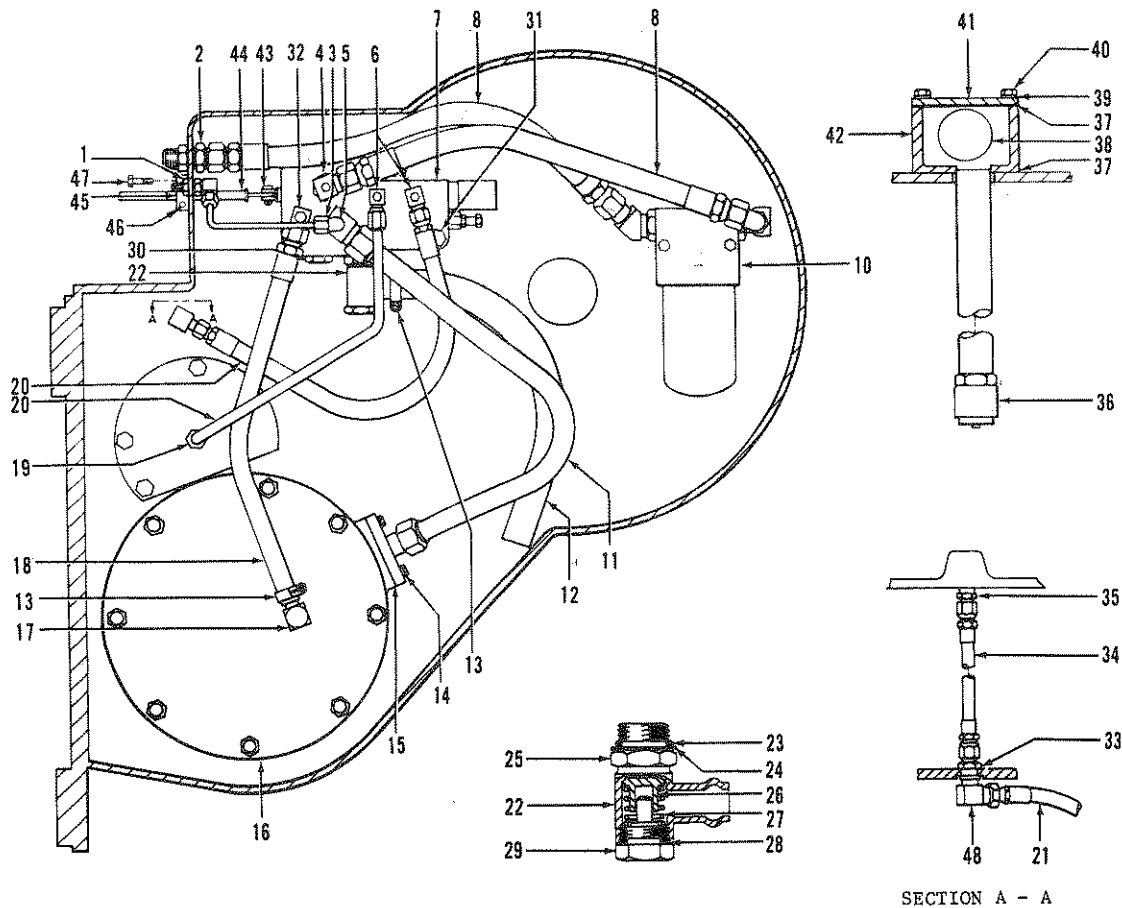
LAST USED ON SERIAL NO. D68P-1620



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	
	168730	VALVE-CHECK	1	3	16487	O-RING	1
1	.....	BODY	1	4	170543	SPRING	1
2	170545	CAP	1	5	170542	POPPET	1

BRAKE AND HYDRAULIC SYSTEM

FIRST USED ON SERIAL NO. D68P-1621



SECTION A - A

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	16455	ELBOW-BULKHEAD	1
2	16450	UNION-BULKHEAD	1
2	14763	LOCKNUT	1
3	140288	HOSE	1
4	198064	ELBOW-MODIFIED	1
4	14349	PLUG	1
5	198065	ELBOW-SPECIAL	1
5	14500	ELBOW-MALE	1
6	198063	ELBOW-SPECIAL	2
6	14349	PLUG	2
7	.....	VALVE-CONTROL, SEE PAGE F12	1
8	198387	HOSE	2
10	.....	FILTER-HYD., PAGE F10 REF. 10	1
11	198030	TUBE	1
12	77297	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

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
15	* 196022	GASKET	1
16	.....	OIL BRAKE-SEE PAGE D6	1
17	198384	NIPPLE	1
18	198386	HOSE	1
19	17309	ELBOW	1
20	132009	HOSE	2
22	196031	VALVE FITTING	1
23	16487	O-RING	1
24	196028	WASHER-BACK-UP	1
25	16589	LOCKNUT	1
26	198069	POPPET-CHECK VALVE	1
27	198066	SPRING	1
28	111331	ELBOW	1
29	14349	PLUG-PIPE, 1/8	1
30	.....	PLUG-SPECIAL, PAGE F12 REF. 31	1
31	198385	CAPSCREW-1/2 UNC X 3 1/2 G5	3
31	15158	LOCKWASHER-1/2	3
32	198062	ELBOW-SPECIAL	1
32	14349	PLUG	1

HYSTER COMPANY
PORTLAND, OREGON

BRAKE AND HYDRAULIC SYSTEM

FIRST USED ON SERIAL NO. D68P-1621

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
33	16448	UNION	1
34	192210	HOSE	1
35	19987	NIPPLE	1
35	14723	CONNECTOR	1
36	177369	VALVE-FOOT	1
37	177409	GASKET	2
38	160387	CARTRIDGE	1
39	15158	LOCKWASHER-1/2	4
40	18596	CAPSCREW-1/2 UNC X 5 G5	4
41	177410	COVER	1
42	182231	MANIFOLD-INTAKE	1

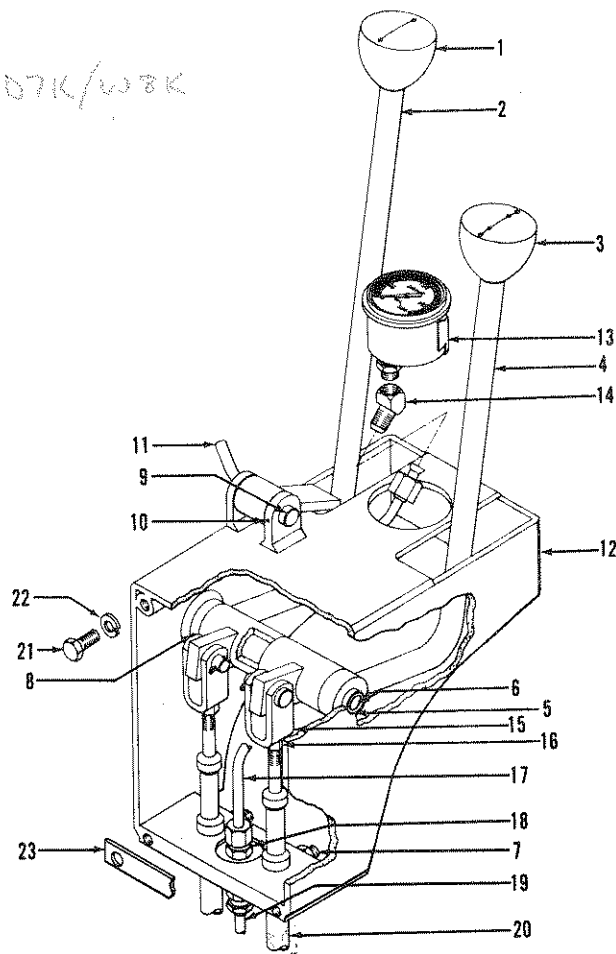
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
43	139	PIN-ROD END	1
43	15212	COTTER-3/32 X 3/4	1
44	.....	CABLE-CONTROL, PAGE F6 REF. 17	1
45	236417	BRACKET-CABLE	1
46	62499	ROLL PIN-5/16 X 1 1/4	1
47	16830	CAPSCREW-1/2 UNC X 1 1/4 G5	1
47	15158	LOCKWASHER-1/2	1
48	16989	ELBOW	1

*INCLUDED IN GASKET KIT 209005.

HANDLING GEAR

LAST USED ON SERIAL NO. D68P-1620

See page F11 in D7K/W3K
Same assembly



KEY

A-FOR D8 TRACTOR SERIAL NO. 22A1 AND UP, 35A1 AND UP, 36A1 AND UP, 46A1 AND UP, 52A1 AND UP, 68A1 AND UP AND D8 TRACTORS WITH OPTIONAL RIP DOZER.

B-FOR D9 TRACTOR SERIAL NO. 66A1 TO 66A3265 INCLUSIVE AND D9 TRACTORS WITH OPTIONAL RIP DOZER.

C-FOR 583 PIPELAYER.

D-FOR 594 PIPELAYER.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
	189085	HANDLEVER	1	1	..	..
	189086	HANDLEVER	..	..	1	1
1	172744	KNOB-INCHING	1	1	1	1
2	183584	LEVER-INCHING	1	1	..	..
2	172757	LEVER-INCHING	..	..	1	1
3	172747	KNOB-FWD. AND REV.	1	1	1	1
4	172745	LEVER-SELECTOR	1	1	..	..
4	172759	LEVER-SELECTOR	..	..	1	1
5	174421	BUSHING	2	2	2	2
6	172748	PIN	1	1	1	1
7	173310	SETSCREW-5/16 UNC				
7		X 1	2	2	2	2
7	15001	NUT-JAM, 5/16 UNC	2	2	2	2
8	19981	ROLL PIN-1/8 X 1 1/4	1	1	1	1
9	172751	ROD	1	1	1	1
10	174564	ROLL PIN-3/32 X 1	1	1	1	1
11	172752	LEVER	1	1	1	1
12	196151	HOUSING	1	1	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
13	192407	GAUGE-OIL PRESSURE	1	1	1	1
14	172762	ELBOW-45 DEGREE	1	1	1	1
15	95709	ROD END-3/8	2	2	2	2
15	142	PIN-ROD END	2	2	2	2
15	15212	COTTER-3/32 X 3/4	2	2	2	2
16	15025	NUT-JAM, 5/16 UNF	4	4	4	4
17	192408	TUBE	1	1	1	1
18	16445	FITTING	1	1	1	1
19	165504	HOSE	1	..	1	..
19	165505	HOSE	..	1	..	1
20	187279	CABLE-PUSH PULL	2	..	2	..
20	187227	CABLE-PUSH PULL	..	2	..	2
21	15553	CPSCR.-5/16 UNC X 3/4	4	4	4	4
22	15155	LOCKWASHER-5/16	4	4	4	4
23	175171	SPACER	..	1	..	..
	172761	DECAL-OPERATING INSTRUCTIONS	1	1	1	1

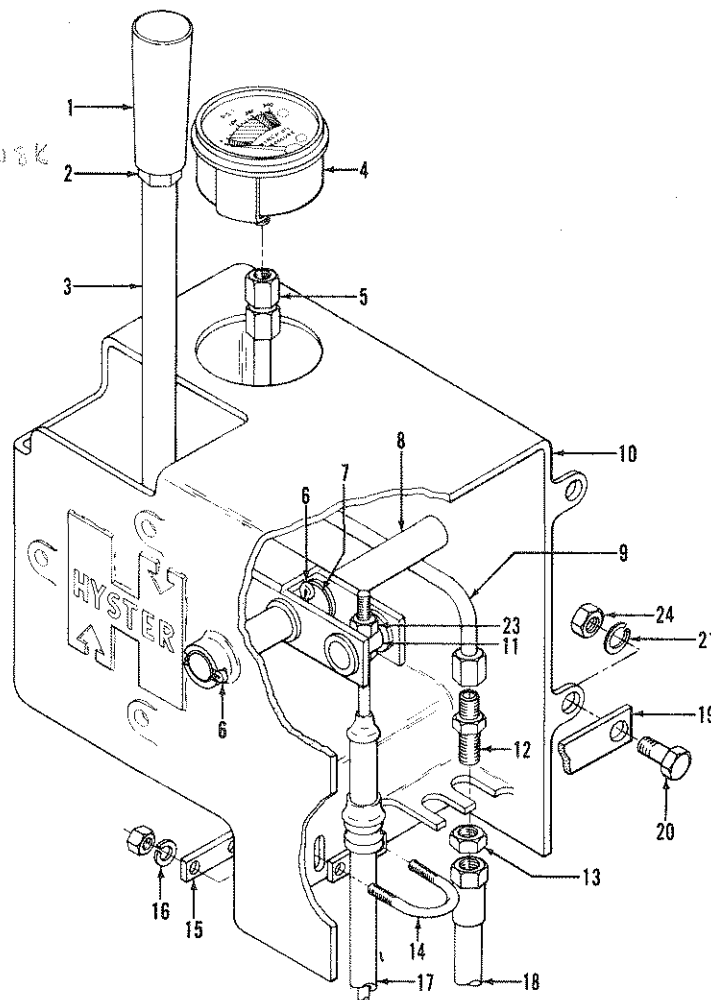
HYSTER COMPANY
PORTLAND, OREGON

HANDLING GEAR

FIRST USED ON SERIAL NO. D68P-1621

See page F12 in D7K/W8K

same assembly



* Included With This Lever Are 4 Little (Print In Pic)
Gray Nylon Bushings, P/N 196144

KEY

A-FOR D9 TRACTOR SERIAL NO. 66A1 AND UP, D9G TRACTORS WITH OPTIONAL RIP DOZER AND 594 PIPELAYER.
B-FOR D8 TRACTOR SERIAL NO. 35A1 AND UP, 46A1 AND UP, D8 TRACTORS WITH OPTIONAL RIP DOZER AND 583 PIPELAYER.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
	196462	HANDLEVER	1	1
1	196469	KNOB	1	1
2	15030	NUT-JAM, 5/8 UNF	1	1
3	196465	LEVER *	1	1
4	192407	GAUGE-OIL PRESSURE	1	1
5	14712	CONNECTOR	1	1
6	15223	COTTER-1/8 X 1	3	3
7	196132	SPACER	1	1
8	196468	PIN	1	1
9	196134	TUBE	1	1
10	196114	HOUSING	1	1
11	196128	PIN	1	1
12	16445	UNION-BULKHEAD	1	1
13	14758	LOCKNUT	1	1
14	196129	U-BOLT	1	1
15	196130	SPACER	2	2
16	15155	LOCKWASHER-5/16	2	2

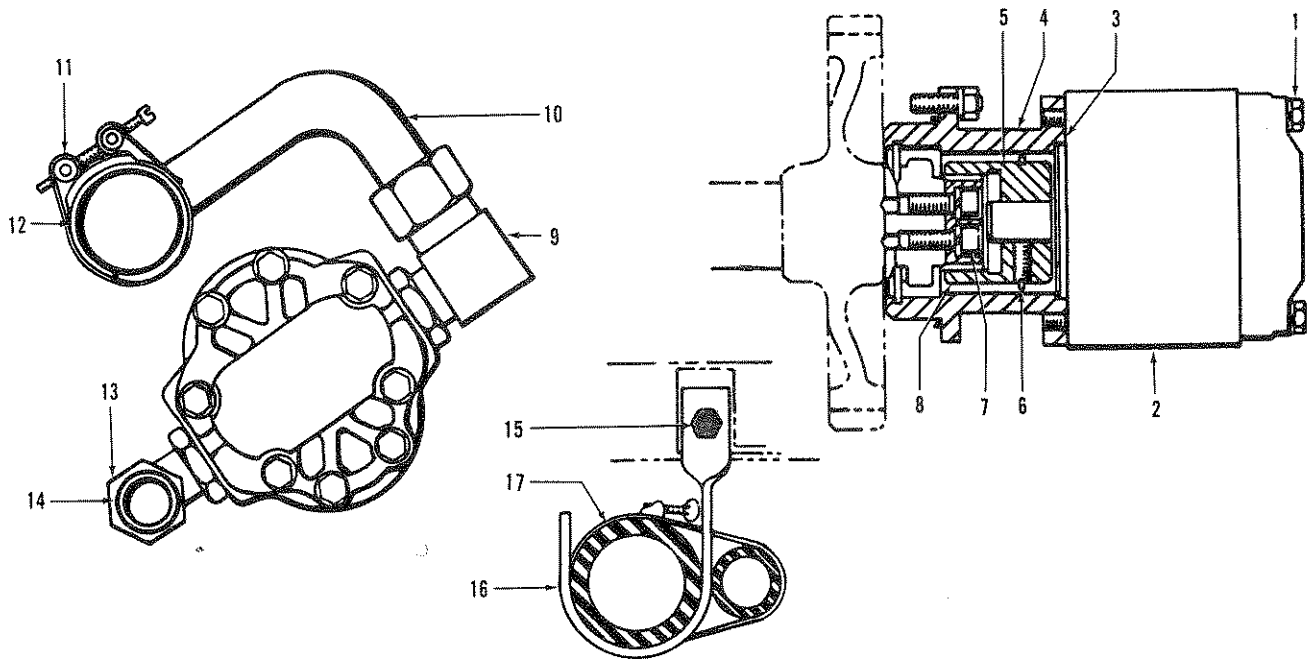
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
17	203227	CABLE-CONTROL	1	..
17	205005	CABLE-CONTROL	..	1
18	205006	HOSE	1	..
18	205004	HOSE	..	1
19	* 208020	SPACER	1	..
20	16805	CAPSCREW-3/8 UNC X 1 G5	4	4
20	* 16828	CAPSCREW-3/8 UNC X 1 1/4	4	..
21	15156	LOCKWASHER-3/8	4	4
23	15106	LOCKNUT-1/4 UNF	1	1
24	15056	NUT-3/8 UNC	4	4
24	□ 178779	NUT-3/8 UNC HT	4	..
	237288	DECAL-OPERATING INSTRUCTIONS	1	1
	□ 198932	DECAL-OPERATING INSTRUCTIONS	1	1

*FOR D9G TRACTORS WITH RIP DOZER.
□FOR 594 PIPELAYER.

HYSTER COMPANY
PORTLAND, OREGON

PUMP DRIVE AND HOSES

FOR 583 PIPELAYER

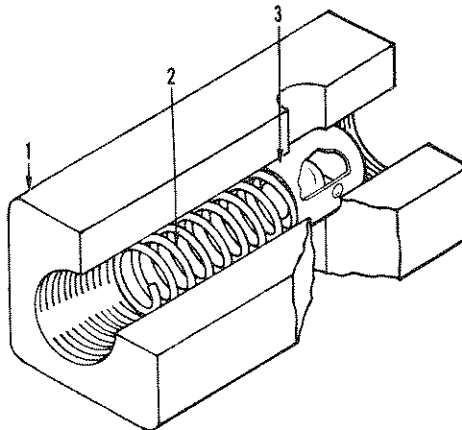


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	18551	CAPSCREW-3/8 UNC X 5 1/8 G5	2
1	15156	LOCKWASHER-3/8	2
2	.....	PUMP-HYDRAULIC, SEE PAGE F9	1
3	* 132044	GASKET	1
4	145478	HOUSING-PUMP DRIVE	1
5	145477	COUPLING-PUMP	1
6	88837	SNAP RING	1
6	16200	SETSCREW-3/8 UNC X 3/8	2
7	27187	CAPSCREW-3/8 UNC X 1	2
7	15156	LOCKWASHER-3/8	2
8	145476	SHAFT	1
9	16949	ELBOW	1
9	16983	O-RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
9	16980	LOCKNUT	1
10	146385	TUBE	1
11	142781	CLAMP-HOSE	2
12	165488	HOSE-MANIFOLD TO PUMP	1
13	201776	ELBOW	1
13	16487	O-RING	1
13	16589	LOCKNUT	1
14	165491	HOSE-PUMP TO CONTROL VALVE	1
15	18588	CAPSCREW-1/2 UNC X 1 1/2 G5	1
16	143362	CLAMP-HOSE LOCATING	1
17	18994	CLAMP-HOSE	1

*INCLUDED IN GASKET KIT 209005.

DUMP VALVE

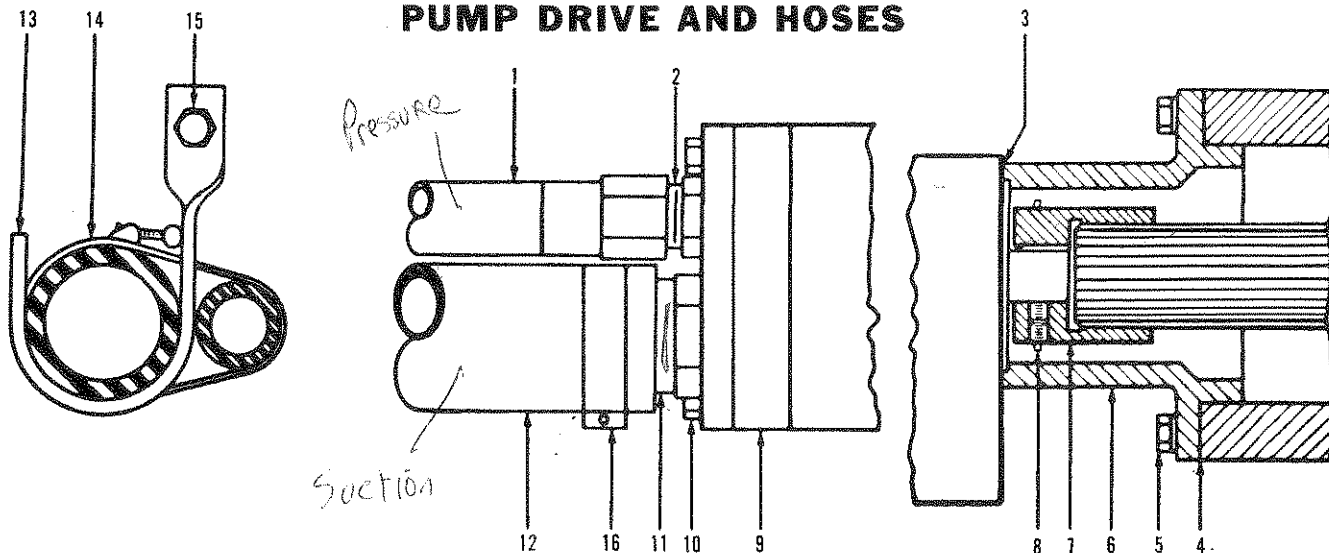


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	181031	VALVE-DUMP	1
	138542	BODY	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
2	161857	SPRING	1
3	181032	SPOOL	1

HYSTER COMPANY
PORTLAND, OREGON

PUMP DRIVE AND HOSES



KEY

A-FOR D8 TRACTOR SERIAL NO. 22A1 AND UP, 35A1 AND UP, 36A1 TO 36A4468 INCLUSIVE, 46A1 TO 46A10724, 52A1 AND UP AND 68A1 TO 68A1002 INCLUSIVE. *Also 77V*
 B-FOR D8 TRACTOR SERIAL NO. 36A4469 AND UP, 46A10725 AND UP AND 68A1003 AND UP. *77V1 UP*
 C-FOR D9 TRACTOR SERIAL NO. 66A1 AND UP.
 D-FOR 594 PIPELAYER.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			1	2	3	4
1	139725	HOSE-PUMP TO FILTER	1	1	..	..
1	165491	HOSE-PUMP TO FILTER	..	..	1	..
1	* 123043	HOSE-PUMP TO FILTER	..	..	1	1
2	16543	CONNECTOR-MALE	1	1	..	..
2	16570	ELBOW-45 DEGREE	..	..	1	1
2	16486	O-RING	1	1	1	1
2	16588	LOCKNUT	..	..	1	1
3	% 95710	GASKET	1	1	1	1
4	% 95486	GASKET	1	1	..	..
4	% 145349	GASKET	..	..	1	1
5	16805	CPSCR.-3/8 UNC X 1 G5	6	6	..	..
5	16316	CPSCR.-3/8 UNC X 1 1/2	..	..	5	5
5	15156	LOCKWASHER-3/8	6	6	..	..
5	177947	LOCKWASHER-3/8	..	..	5	5
6	145351	ADAPTER	1	..	..	..
6	147965	ADAPTER	..	1	..	..
6	145348	ADAPTER	..	..	1	1
7	181895	COUPLING	1	1	1	1
8	54112	SNAP RING <i>3/8 ID on pump end</i>	1	1	1	1
8	16200	SETSCREW-3/8 UNC X 3/8	1	1	1	1
8	136391	SETSCREW-3/8 UNC X 1/4	1	1	1	1
9	.....	PUMP-HYD., SEE PAGE F9	1	1	1	1
10	18551	CAPSCREW-3/8 UNC X 5 1/2 G5	2	2	2	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
10	15156	LOCKWASHER-3/8	2	2	2	2
11	145350	NIPPLE-HOSE, SPECIAL	1	..	..	..
11	147961	NIPPLE-HOSE, SPECIAL	..	1	..	..
11	132046	NIPPLE-HOSE, SPECIAL	..	..	1	1
11	16983	O-RING	1	1	1	1
12	166061	HOSE <i>See Dwg 161601</i>	1	1	..	..
12	* 166060	HOSE	..	..	1	..
12	□ 165490	HOSE	..	..	1	1
13	143362	CLAMP-HOSE LOCATING	1	1	..	..
13	132772	CLAMP-HOSE TO BRACKET	..	..	1	1
14	18994	CLAMP-HOSE	1	1	2	3
15	18588	CAPSCREW-1/2 UNC X 1 1/2 G5	1	1	..	..
15	16805	CPSCR.-3/8 UNC X 1 G5	..	..	1	1
15	15156	LOCKWASHER-3/8	..	..	1	1
15	15056	NUT-3/8 UNC	..	..	1	1
16	142781	CLAMP-HOSE	2	2	2	2
	151779	BRACKET-HOSE CLAMP, NOT ILLUSTRATED	..	..	1	1

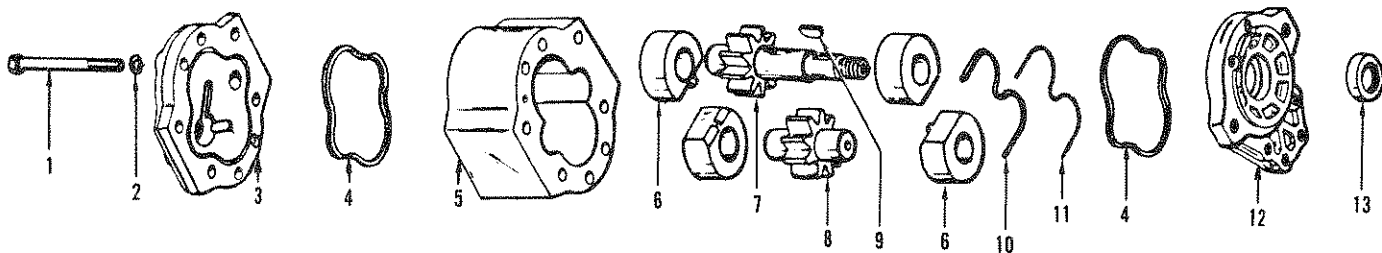
*FOR D9 TRACTOR SERIAL NO. 66A1 TO 66A3265 INCLUSIVE.

□FOR D9 TRACTOR SERIAL NO. 66A3266 AND UP.

%INCLUDED IN GASKET KIT 209005.

HYDRAULIC PUMP

FOR 583 PIPELAYER



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	145479	PUMP-HYDRAULIC	1
1	127660	CAPSCREW	6
2	129447	WASHER	6
3	127658	COVER-REAR	1
4 □*	.....	SEAL	2
5	.....	BODY	1
6 *	.....	BEARING	4
7 %	.....	GEAR-DRIVE	1
8 %	.....	GEAR-DRIVEN	1
9 *	206	KEY	1
10 □*	.....	GASKET	1

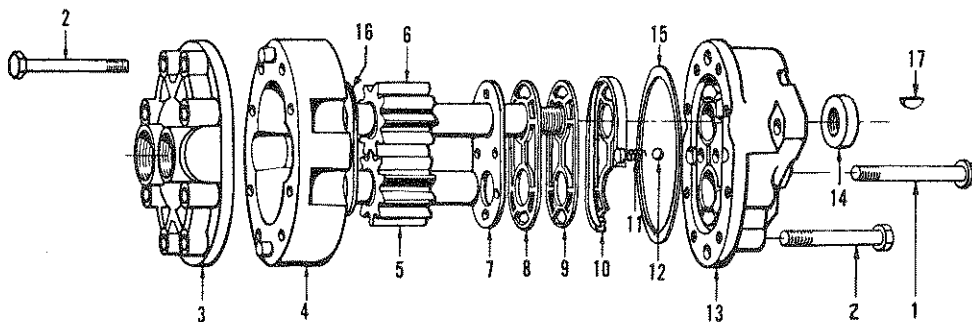
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
11 □*	.....	SPACER	1
12	127657	COVER-FRONT	1
13 □*	235933	SEAL-SHAFT	1
	147401	REPAIR KIT-MAJOR	1
	78035 A	REPAIR KIT-MINOR	1
	127659	GEAR KIT	1

*INCLUDED IN MAJOR REPAIR KIT.

□INCLUDED IN MINOR REPAIR KIT.

%INCLUDED IN GEAR KIT.

HYDRAULIC PUMP



from A0-E-7

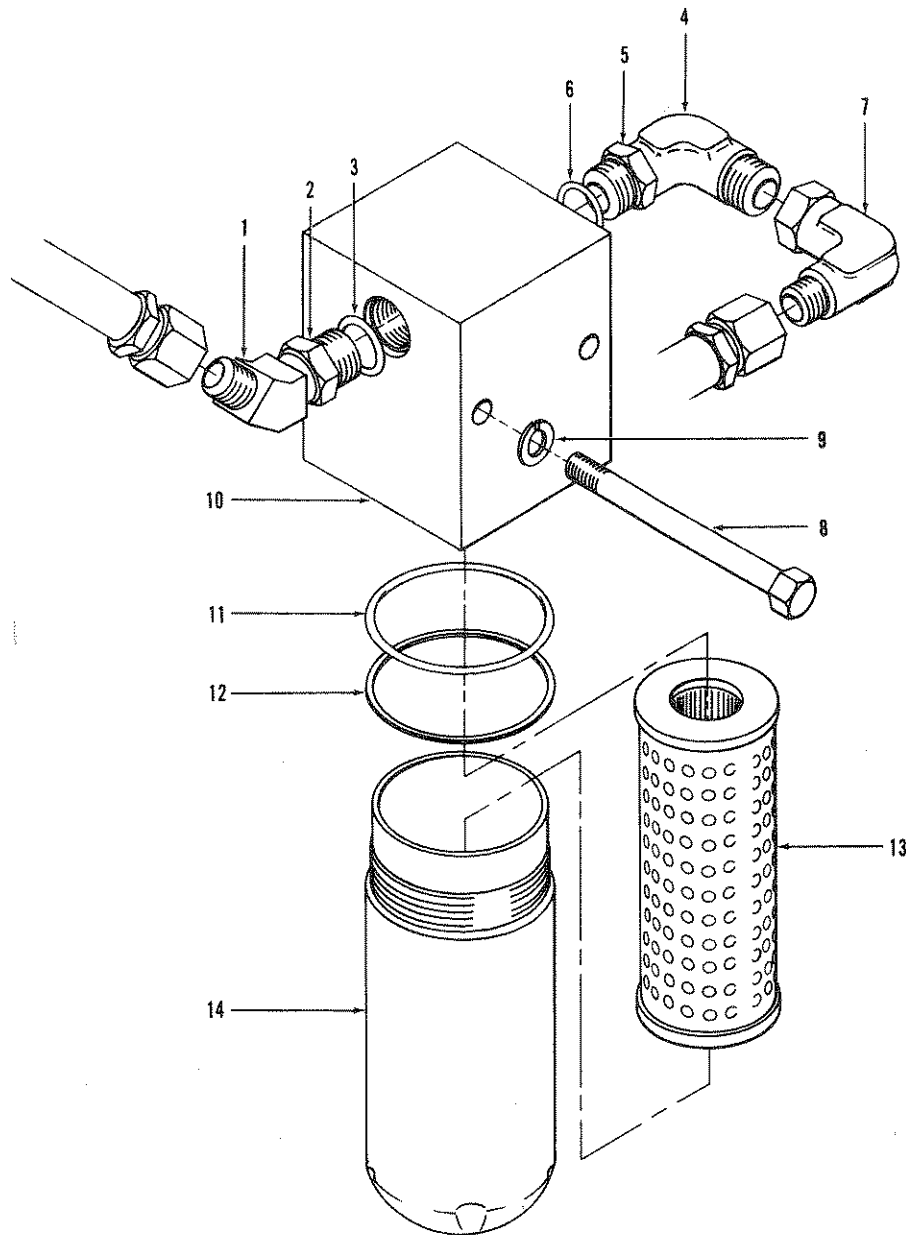
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
*	181894	PUMP-HYDRAULIC	1
1	184130	CAPSCREW-5/16 UNC X 3	2
2	184131	CAPSCREW-5/16 UNC X 2 1/2	4
3*	184125	BACK PLATE	1
4	184126	BODY	1
4	184129	PIN-DOWEL	2
5	184127	GEAR-IDLER	1
6	184128	GEAR-DRIVE	1
7 *	184134	DIAPHRAGM	1
8 *	184133	GASKET-BACK UP	1
9 *	184139	GASKET-PROTECTOR	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10 *	184136	SEAL-DIAPHRAGM	1
11 *	160759	SPRING	1
12 *	68964	BALL	1
13	184124	PLATE-FRONT	1
14 *	184135	SEAL-SHAFT	1
15 *	184138	O-RING	2
16 *	184137	PLATE-THRUST	1
17	184123	KEY	1

*INCLUDED IN SEAL REPAIR KIT 184132.

HYSTER COMPANY
PORTLAND, OREGON

FILTER AND HOSES



See form

40-2-1971

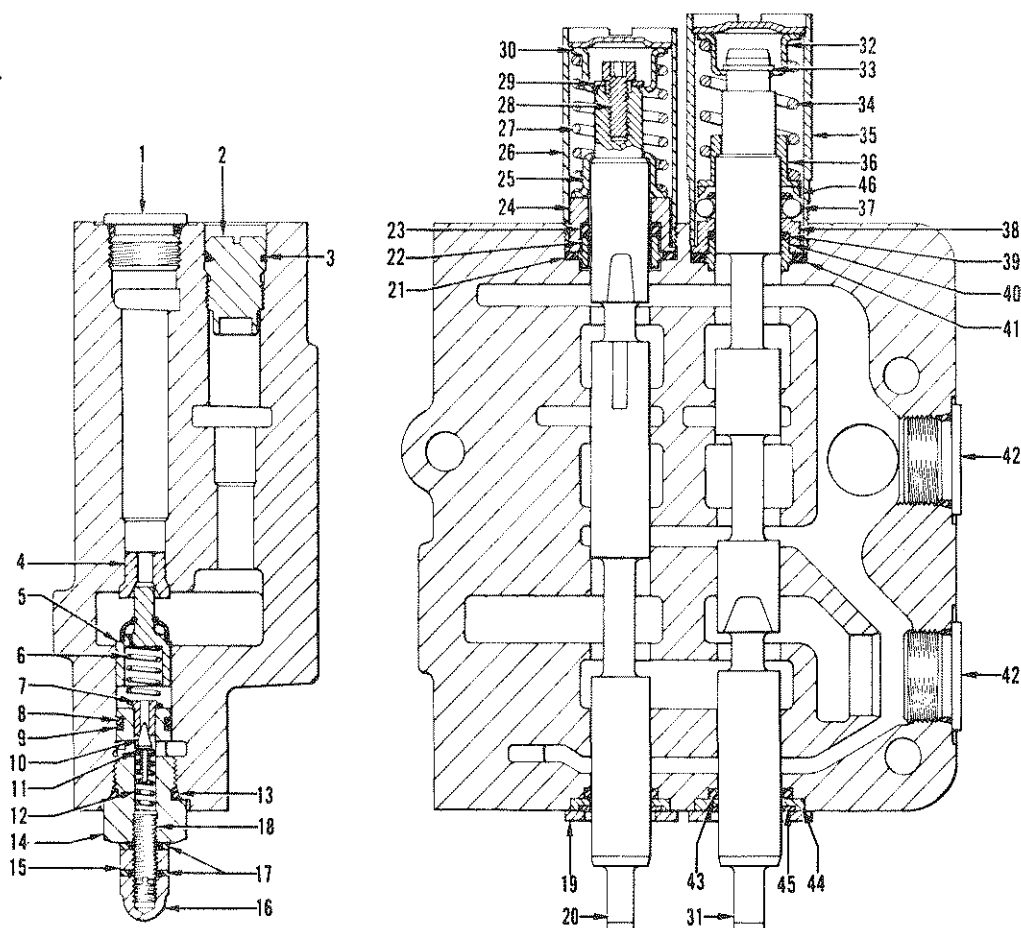
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	164642	ELBOW-45 DEGREE	1
2	16589	LOCKNUT	1
3	16487	O-RING	1
4	201776	ELBOW	1
5	16589	LOCKNUT	1
6	16487	O-RING	1
7	83857	ELBOW	1
8	18547	CAPSCREW-3/8 UNC X 4 1/2 G5	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
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

CONTROL VALVE

LAST USED ON SERIAL NO. D68P-1620

2 Spool



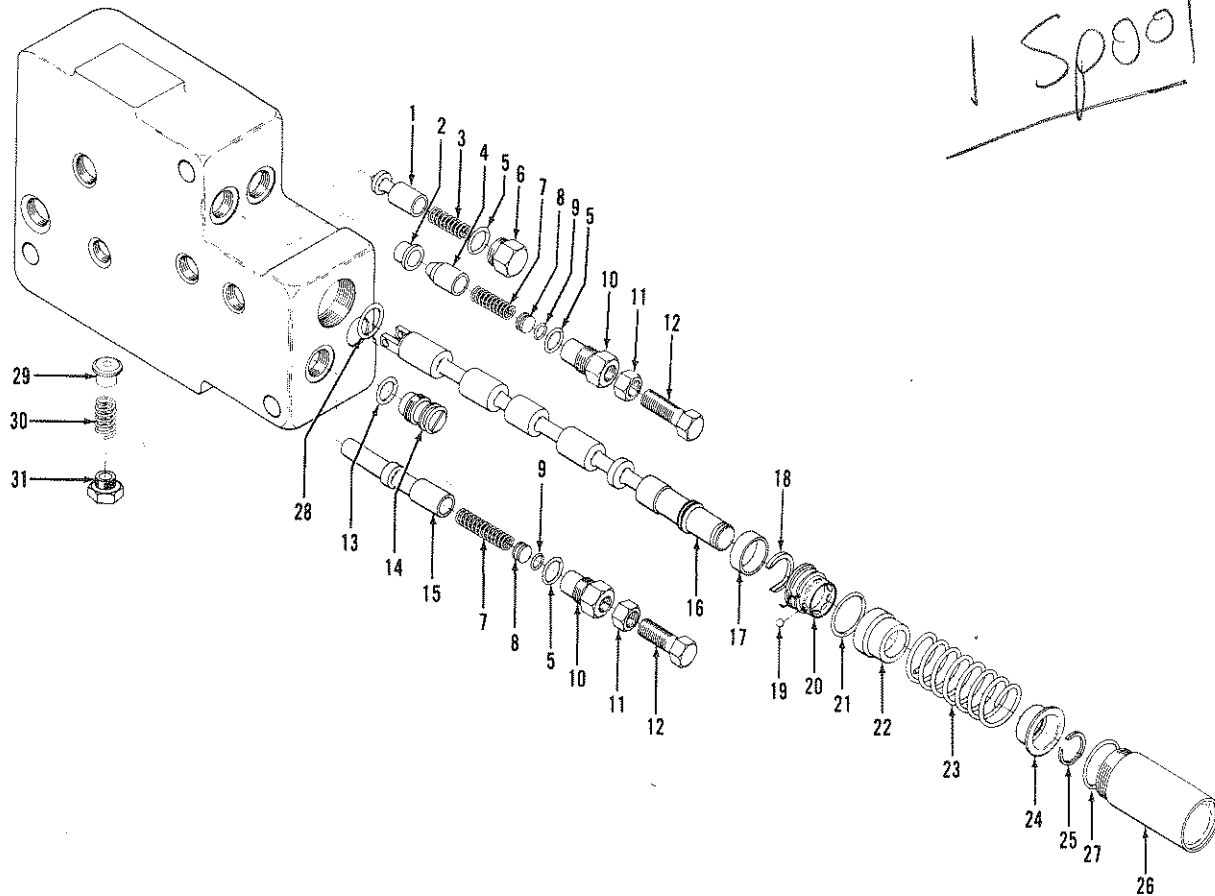
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	168741	VALVE-CONTROL	1
1	233693	PLUG	4
1	16485	O-RING	1
2	233492	CAP	2
3	118389	O-RING	2
4	166917	VALVE-RELIEF	1
4	170988	SEAT	1
5	170989	POPPET	1
6	170993	SPRING	1
7	166919	SEAT-PILOT	1
8	159859	O-RING	1
9	159858	RING-BACK-UP	1
10	170995	PLUNGER-PILOT	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
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. D68P-1621



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	196014	VALVE-CONTROL	1
1	196006	SPOOL-FORWARD MODULATING	1
2	195990	SEAT-RELIEF	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	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

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
16	195996	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	PLUG	1

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Section G

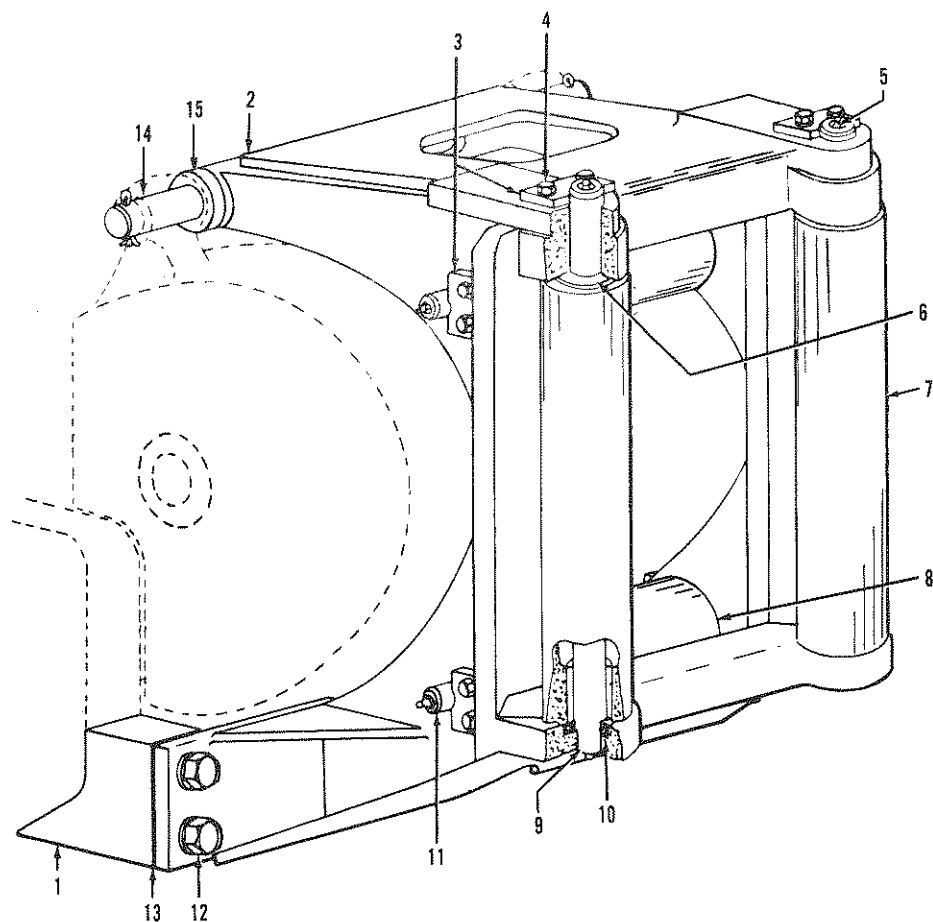
OPTIONAL EQUIPMENT

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CABLE GUIDE ROLLERS.....	G2
FAIRLEAD.....	G1
SWIVELING DRAWBAR.....	G2

USE HYSTER APPROVED PARTS... *it pays*

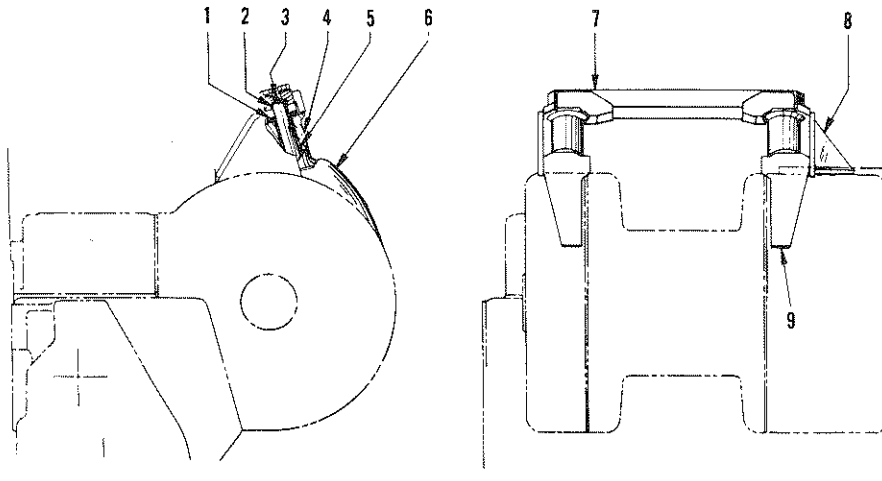
FAIRLEAD



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
	95800	FAIRLEAD	1
1	182733	PLATE-MOUNTING	2
2	95801 W	FRAME	1
3	93166	KEEPER	4
4	16820	CAPSCREW-1/2 UNF X 1 G5	8
4	15158	LOCKWASHER-1/2	8
5	16001	FITTING-LUBE	8
6	38672	WASHER	2
7	93980 A	ROLLER	2
7	93979	BUSHING	4
8	92212 A	ROLLER	2
8	59419	BUSHING	4

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
8	92720	WASHER	4
9	93981	SHAFT-VERTICAL	2
10	230353	BEARING-THRUST	2
11	93658	SHAFT-HORIZONTAL	2
12	18670	CAPSCREW-1 UNC X 2 3/4 G5	2
12	18667	CAPSCREW-1 UNC X 2 1/4 G5	2
12	15166	LOCKWASHER-1	4
13	96504	SHIM-.135	AR
14	92606	ROD-TIE	1
14	15272	COTTER-3/8 X 3	2
15	173608	SPACER	2

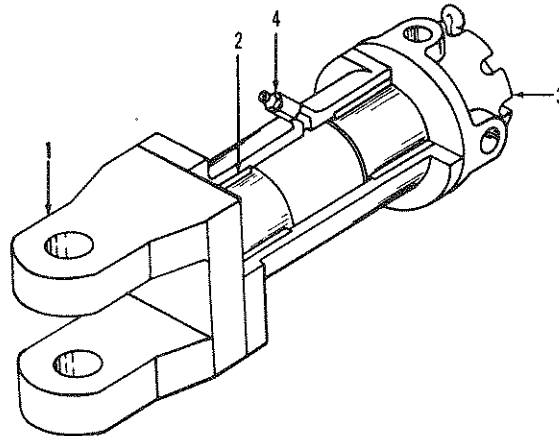
CABLE GUIDE ROLLERS



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
	95850 A	ROLLERS-CABLE GUIDE	1
1	95668	WASHER	4
2	95669	PIN-ROLLER	2
3	16006	FITTING-LUBE	2
4	95666 A	ROLLER	2
5	35135	BUSHING	4

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
6	95656 W	BRACKET-LH	1
7	95888 W	GUARD-TIE	1
7	16645	CAPSCREW-5/8 UNF X 2 1/4 G5	4
7	15160	LOCKWASHER-5/8	4
8	95665	GUSSET	1
9	95662 W	BRACKET-RH	1

SWIVELING DRAWBAR



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
	182857	DRAWBAR-SWIVELING	1
1	33787	DRAWBAR	1
2	92671	BUSHING	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
3	33618	NUT	1
3	15273	COTTER-3/8 X 2 1/2	1
4	16002	FITTING-LUBE	1

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Section Q

NUMERICAL
INDEX

USE HYSTER APPROVED PARTS... *it pays*

NUMERICAL INDEX

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9450	D1	4	16485	F1	8	39376	F12	27	93979	G1	7	95761	D2	23
9718	D6	13	16486	F1	4	41217	D2	9	93980	A G1	7	95762	D2	8
10389	B2	10	16487	F1	22	44460	D7	9	93981	G1	9	95763	D7	1
12940	D1	7	16543	F8	2	44494	E1	11	94447	D5	7	95800	G1	
12981	D1	8	16570	F8	2	44536	D5	18	94600	D6	9	95801	W G1	2
12990	D2	4	16588	F1	4	46398	D7	1	94655	E1	9	95813	D1	13
14349	F1	4	16589	F3	25	53559	D7	14	94891	E2	4	95814	D2	8
14500	F3	5	16645	G2	7	54112	F8	8	95033	D2	21	95815	D2	1
14668	F1	7	16805	F6	20	55434	B3	2	95034	D2	21	95816	D5	3
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14723	F2	37	16828	B1	13	58907	E2	6	95431	A D6		95822	D7	1
14758	F2	29	16830	F4	47	59370	D6	12	95446	B1	8	95824	D1	16
14763	F1	1	16909	F1	8	59419	G1	8	95447	B1	8	95825	D1	16
15001	F2	27	16949	F7	9	60836	F11	23	95455	B2	3	95833	D4	6
15018	B3	5	16980	F7	9	62499	F4	46	95464	D2	15	95850	A G2	
15025	F5	16	16983	F7	9	63085	E1	7	95467	D4	13	95888	W G2	7
15026	E2	10	16989	F4	48	68964	F9	12	95468	D4	11	95959	B1	5
15027	F12	11	17118	D4	17	76696	E1	7	95469	D4	10	96504	G1	13
15030	E1	8	17161	D6	1	77187	A E2	14	95471	D4	14	96509	E1	12
15056	E2	5	17309	F3	19	77188	E2	3	95472	D4	4	96725	E1	10
15079	D6	4	17315	F1	14	77297	F3	12	95473	D4	2	96735	D4	18
15086	B2	14	17344	F1	20	78035	A F9		95474	D4	1	96736	D3	26
15106	F6	23	18262	D7	4	78280	E1	1	95478	D3	14	96737	D3	26
15155	F1	5	18522	F1	5	78281	E1	2	95483	D3	18	100154	F1	26
15156	B1	13	18547	F10	8	78283	A E1	3	95486	F8	4	104607	E1	3
15158	B1	6	18551	F7	1	79416	E2	16	95487	D5	5	109453	D1	11
15160	D4	8	18588	F7	15	79417	E2	15	95488	D5	4	111331	F1	24
15166	G1	12	18596	F2	31	79418	E2	15	95489	D5	8	118365	F12	21
15168	B3	5	18667	G1	12	83857	F10	7	95490	D5	20	118389	F11	3
15170	B3	1	18670	G1	12	86079	D2	22	95492	D4	6	123043	F8	1
15211	F1	3	18807	D7	7	87355	D1	2	95493	D4	5	124588	F1	9
15212	D6	4	18849	B3	4	88837	F7	6	95494	D4	7	125402	D1	1
15223	E1	5	18853	F2	27	89728	D5	16	95496	D7	5	127045	F1	18
15226	E1	10	18994	F7	17	89770	D4	8	95497	D7	6	127657	F9	12
15240	B3	2	19981	F5	8	89771	D4	7	95499	D7	3	127658	F9	3
15272	B1	1	19987	F2	37	89772	D4	5	95581	D3	19	127659	F9	
15273	B1	5	21420	B2	6	89775	D4	16	95600	D5	12	127660	F9	1
15302	B2	11	27187	F7	7	89776	D4	15	95601	D1	6	128393	E1	11
15316	D5	21	27936	E1	16	90202	D1	4	95603	D2	1	128404	E1	4
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15580	E1	3	30101	D5	1	92212	A G1	8	95636	E1	5	131921	D3	3
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16006	G2	3	33682	E1	8	92938	A D6	7	95685	D2	17	131989	D6	4
16165	F1	17	33717	E1	6	92940	D6	2	95686	D2	3	131990	D6	3
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