

PARTS MANUAL D89B

**POWER CONTROLLED
TOWING WINCH**

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.

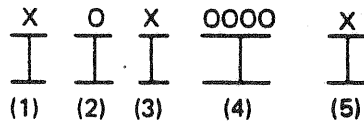
**We reserve the right to make changes in design or add improvements
without incurring the obligation to make such changes in
Winches previously manufactured.**

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SECTION A	Introduction	
SECTION B	Frames, Covers and Mounting Studs	
SECTION D	Gear Train and Shafts	
SECTION F	Brake and Hydraulic System	
SECTION G	Optional Equipment	
SECTION Q	Numerical Index	

UNIT IDENTIFICATION

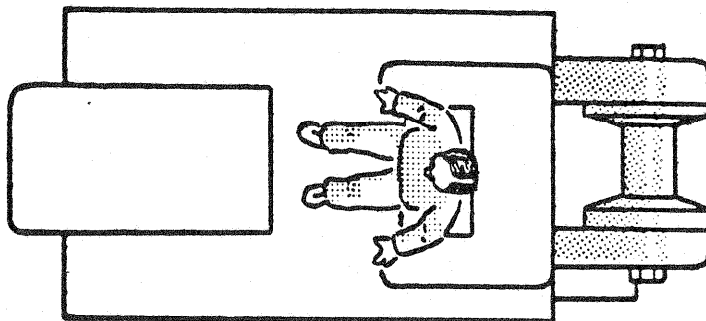
UNIT SERIAL NO.



- (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!

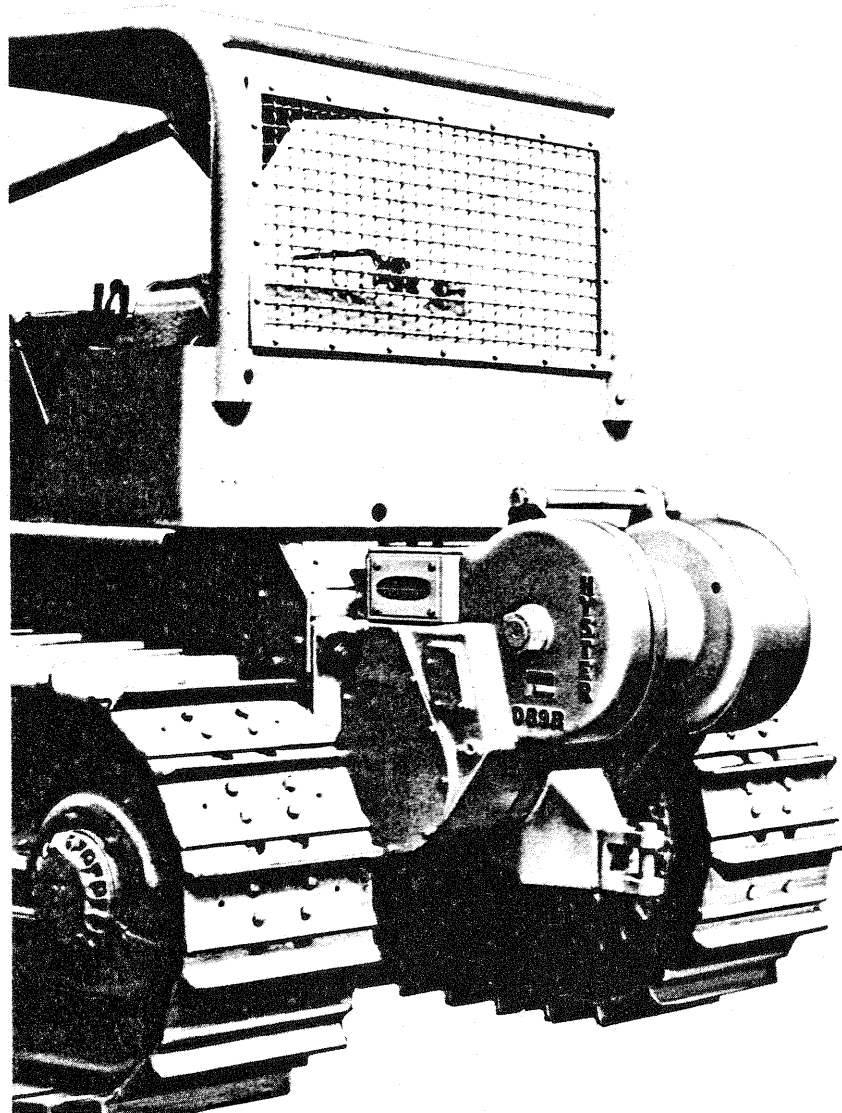
**Never Attempt To Clean, Oil Or Adjust A Machine
While It Is In Motion**

**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 953
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	897	
9413	F12	16352	D1	19871	F3	897	
9455	D1	16386	D3	19987	D5	9020	
10389	D4	16397	D2	21420	B2	92212	
12479	D3	16448	F2	27187	F8	92606	
12480	D3	16466	F2	29582	F4	92671	
12823	D5	16482	F4	30059	D2	92720	
2898	F3	16484	F4	30080	D2	92720	
99	F6	16485	F10				
7	D2						
7	D1						

FILTER

FIRST USED ON WINCH SERIAL NO. 868P-2081

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

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	147461	FILTER	1
2	149295	HEAD ASSEMBLY	1
3	149297	RELIEF VALVE ASSEMBLY	1
4	149298	O-RING	1
5	147463	RING-BACK UP	1
6	149296	ELEMENT	1
7	16829	CASE	1
8	15158	CAPSCREW-1/2 UNC X 1	1
9	154760	LOCKWASHER-1/2	1
10	151713	PLATE	1
11	15057	NUT-7/16 UNC	1
12	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 1/2	1
18	38760	WASHER	1
19	18578	CAPSCREW-7/16	1
20	147455	...	2

When The Part Number Is Not Known

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

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

When The Part Number Is Known

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

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

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

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

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

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

ORDERING PARTS:

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

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

Section B

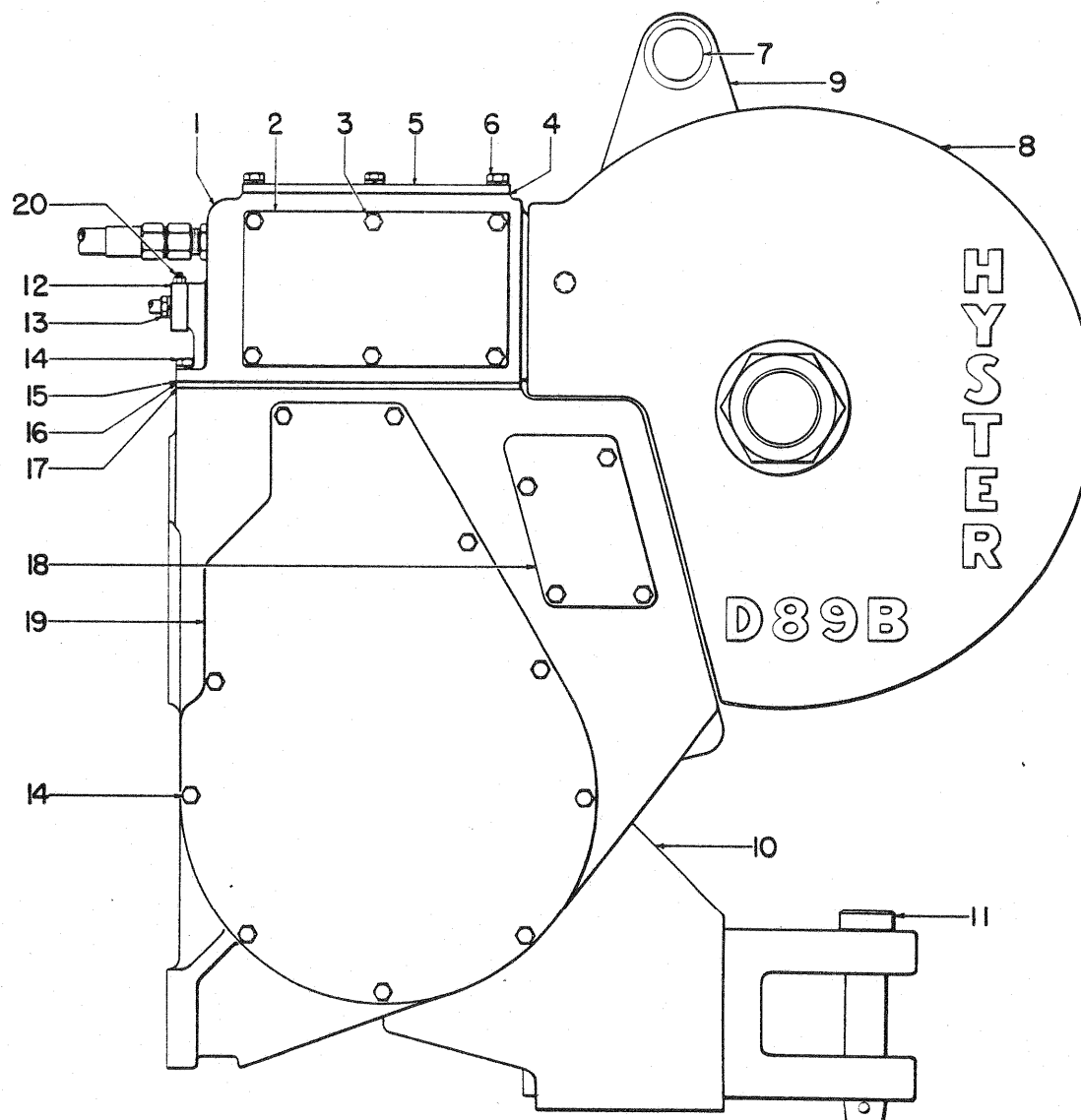
FRAMES, COVERS AND MOUNTING STUDS

INDEX

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FRAME AND COVERS

L.H. SIDE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	132017	HOUSING-VALVE	1
2	132021	PLATE-COVER	1
	*132020	GASKET	1
3	16805	CAPSCREW-HT, 3/8 UNC X 1	6
	15156	LOCKWASHER-3/8	6
4	*95451	GASKET	1
5	95450	PLATE-COVER	1
6	16805	CAPSCREW-HT, 3/8 UNC X 1	6
	15156	LOCKWASHER-3/8	6
7	92606	ROD-TIE	1
	15272	COTTER-3/8 X 3	2
8	131903	HOUSING	1
9	93771	BRACKET-TIE ROD	1
10	95844 W	BRACKET-DRAWBAR	1
11	94369	PIN-DRAWBAR	1
	15273	COTTER-3/8 X 2 1/2	1
12	96624	BLOCK	1
	166327	BLOCK	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
13	16085	CAPSCREW-HT, 1/2 UNC X 1 3/4	2 R3
	15158	LOCKWASHER-1/2	2
14	37562	CAPSCREW-HT, 1/2 UNF X 1 1/4	19
	15158	LOCKWASHER-1/2	19
15	*131993	GASKET	1
16	131994	PLATE	1
17	*131993	GASKET	1
18	95446	PLATE-COVER	1
	*95447	GASKET	1
19	96579	PLATE-COVER	1
	*95445	GASKET	1
20	18853	SETSCREW-5/16 UNC X 1 1/4	2
	15001	NUT-JAM, 5/16 UNC	2 R5

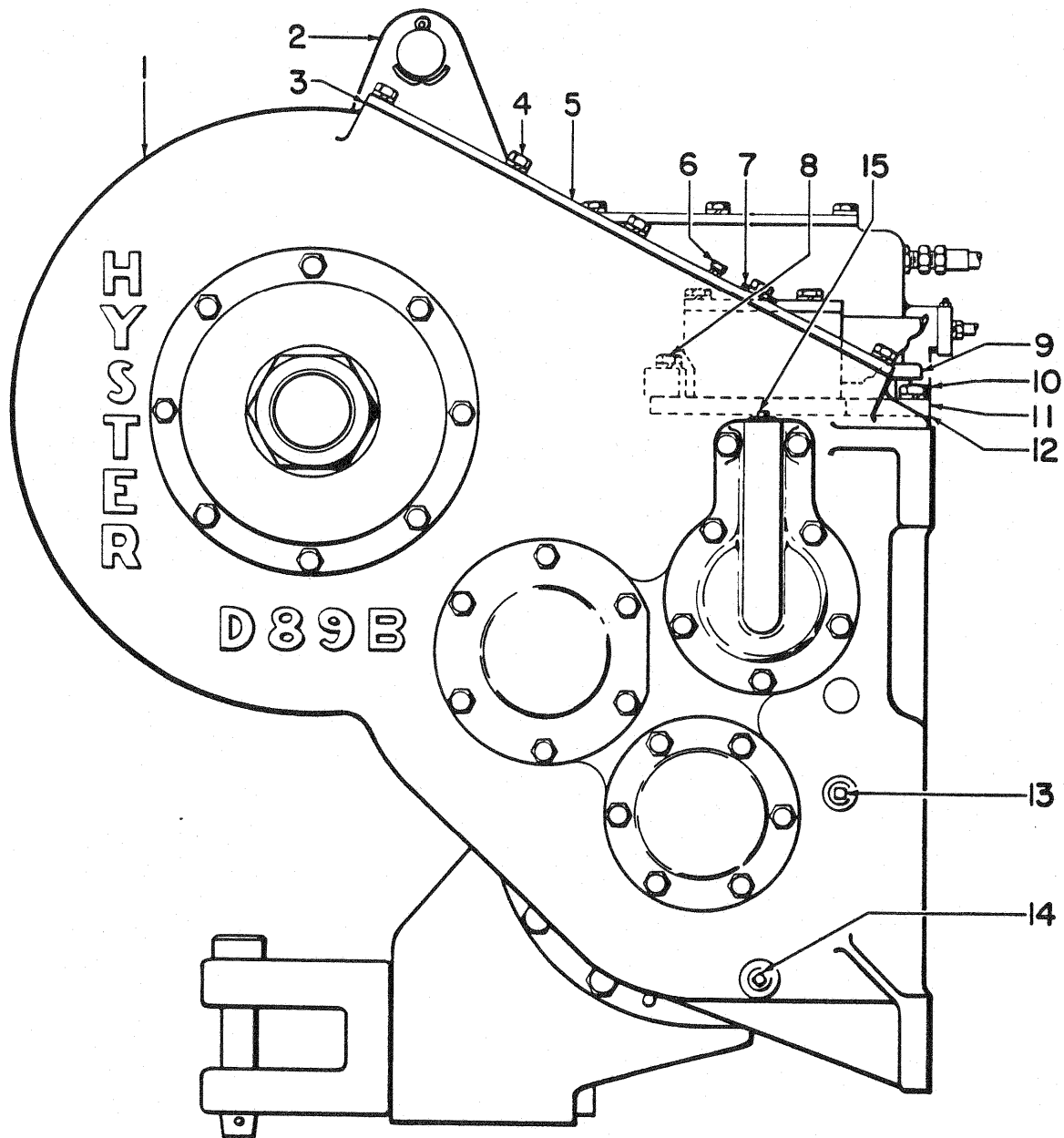
*INCLUDED IN GASKET SET 142798.

□FIRST USED ON WINCH SERIAL NO. 868P-2561 & 868A-1601.

HYSTER COMPANY
PORTLAND, OREGON

FRAME AND COVERS

R.H. SIDE



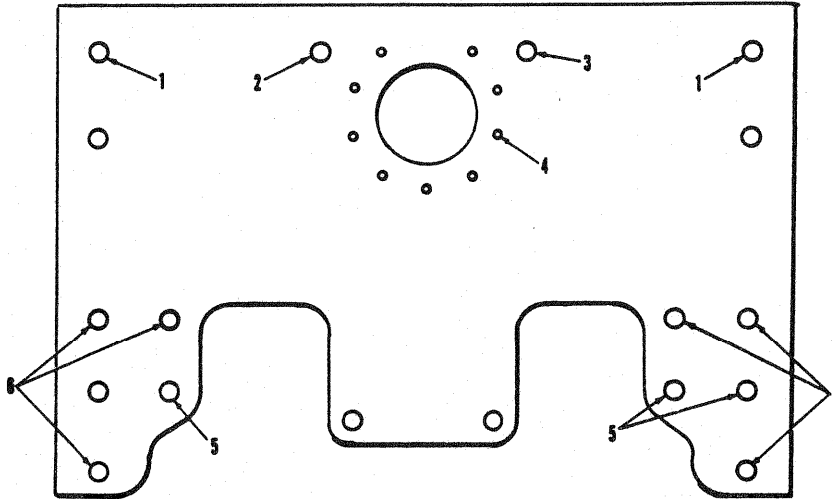
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	132067	FRAME	1
2	93771	BRACKET-TIE ROD	1
3	* 95455	GASKET	1
4	37562	CAPSCREW-1/2 UNF X 1 1/4	11
	15158	LOCKWASHER-1/2	11
5	95454	COVER	1
6	21420	PLUG-BREATHER	1
7	15319	PIPE PLUG-1 1/2	1
8	16824	CAPSCREW-1/2 UNF X 2 1/2	5
	15158	LOCKWASHER-1/2	5

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
9	15303	PLUG-PIPE, 1/2	1
10	16807	CAPSCREW-1/2 UNF X 1 1/2	6
	15158	LOCKWASHER-1/2	6
11	161833	PLATE-COVER	1
12	* 95453	GASKET	1
13	15303	PLUG-PIPE, 1/2	1
14	10389	PLUG-PIPE, MAGNETIC	1
15	15302	PLUG-PIPE, 3/8	1

*INCLUDED IN GASKET SET 142798.

MOUNTING STUDS

FOR D9 TRACTORS SERIAL NO. 34A1 AND UP-49A1 AND UP-50A1 AND UP-66A1 AND UP

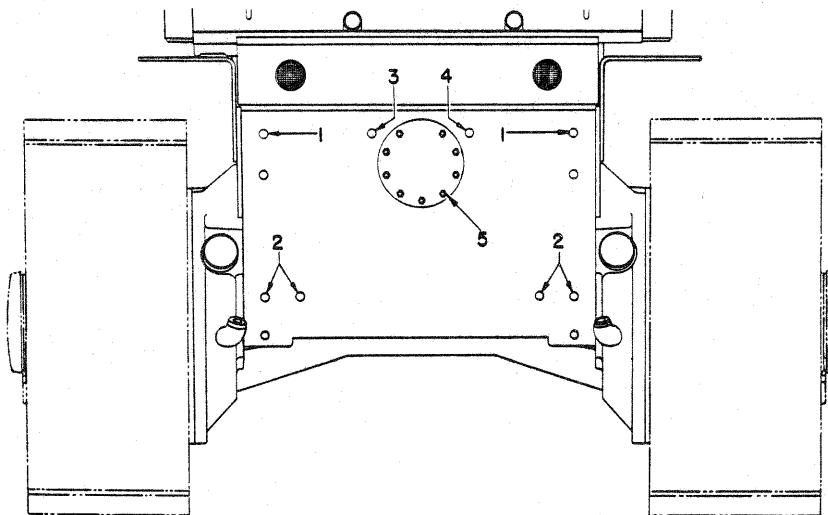


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
	1	2	3	4	
1	.....	STUD-DRAWBAR	2		
	136405	NUT-1 1/2 UNF	2		
	15170	LOCKWASHER-1 1/2	2		
2	95835	STUD-TAPERLOCK, 1 1/4 X 3 13/16	1		
	134821	NUT-SLOTTED	1		
	15240	COTTER-5/32 X 2 1/2	1		
	55434	O-RING	1		

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
	1	2	3	4	
3	95836	STUD-TAPERLOCK, 1 1/4 X 4 1/16	1		
	32796	NUT-JAM, 1 1/4 UNF	1		
	16088	LOCKWASHER-1 1/4	1		
4	136385	PLUG	9		
5	.....	STUD-DRAWBAR	4		
	136405	NUT-1 1/2 UNF	4		
	15170	LOCKWASHER-1 1/2	4		
6	18849	CORK-NO. 20	6		

MOUNTING STUDS

FOR D9 TRACTORS SERIAL NO. 18A1 AND UP-19A1 AND UP



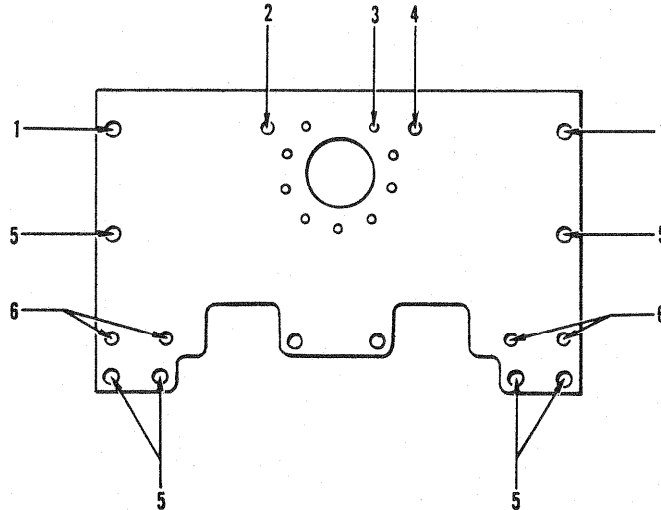
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
	1	2	3	4	
1	93348	STUD-1 1/2 X 5 1/4	2		
	136405	NUT-1 1/2 UNF	2		
	15170	LOCKWASHER-1 1/2	2		
2	.....	STUD-FURNISHED WITH TRACTOR	4		
	15018	NUT-1 1/4 UNF	4		
	15168	LOCKWASHER-1 1/4	4		

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
	1	2	3	4	
3	95841	STUD-1 1/4 X 3 19/32, DRILLED	1		
	134821	NUT-SLOTTED	1		
	15240	COTTER-5/32 X 2 1/2	1		
	55434	O-RING	1		
4	94371	STUD-1 1/4 X 3 7/8	1		
	32796	NUT-JAM, 1 1/4 UNF	1		
	16088	LOCKWASHER-1 5/16	1		
5	136385	PLUG	9		

HYSTER COMPANY
PORTLAND, OREGON

MOUNTING STUDS

FOR D8 TRACTORS SERIAL NO. 22A1 & UP, 35A1 & UP, 36A1 & UP, 46A1 & UP,
68A1003 & UP AND 583-H PIPELAYER

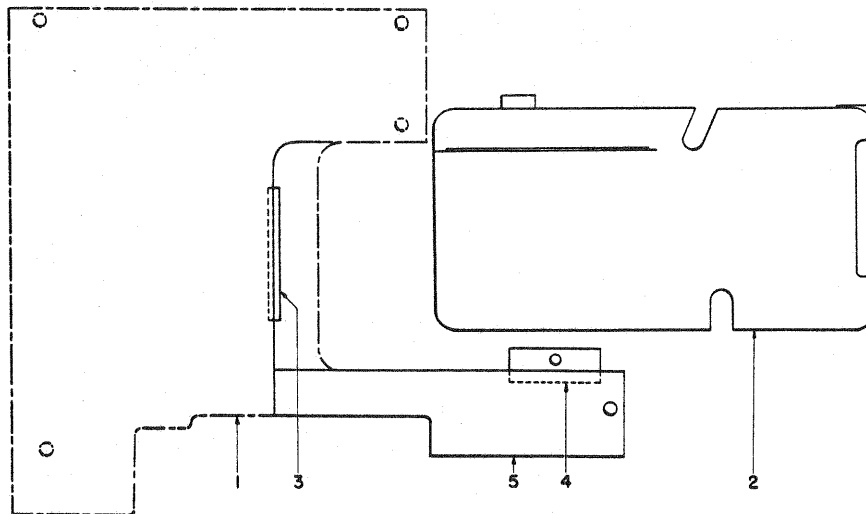


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	.....	STUD-FURNISHED WITH TRACTOR	2
1	136405	NUT-1 1/2 UNF	2
1	15170	LOCKWASHER-1 1/2	2
2	95835	STUD-TAPERLOCK, 1 1/4 X 3 13/16	1
2	134821	NUT-SLOTTED	1
2	15240	COTTER-5/32 X 2 1/2	1
2	55434	O-RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
3	136385	PLUG	9
4	95836	STUD-TAPERLOCK, 1 1/4 X 4 1/16	1
4	32796	NUT-JAM, 1 1/4 UNF	1
4	16088	LOCKWASHER-1 5/16	1
5	18849	PLUG-CORK, #20	6
5	95837	STUD-TAPERLOCK, 1 1/4 X 4 11/16	4
6	15018	NUT-1 1/4 UNF	4
6	15168	LOCKWASHER-1 1/4	4

TRACTOR FLOOR PLATES

FOR D8 TRACTOR SERIAL NO. 22A1 & UP, 35A1 & UP, 36A1-4468, 46A1-10724, 52A1 & UP AND 68A1-1002



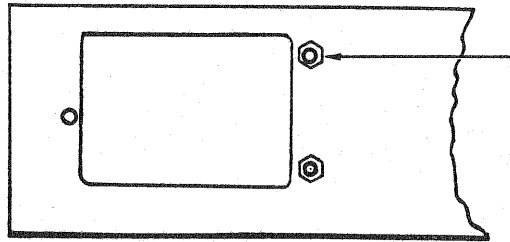
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	.....	FLOOR PLATE-CATERPILLAR 1M3115	1
2	132028	FLOOR PLATE	1
3	61708	PLATE	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
4	132027	PLATE	1
5	132026	FLOOR PLATE	1

HYSTER COMPANY
PORTLAND, OREGON

TRACTOR REAR CROSS SHEET ALTERATION

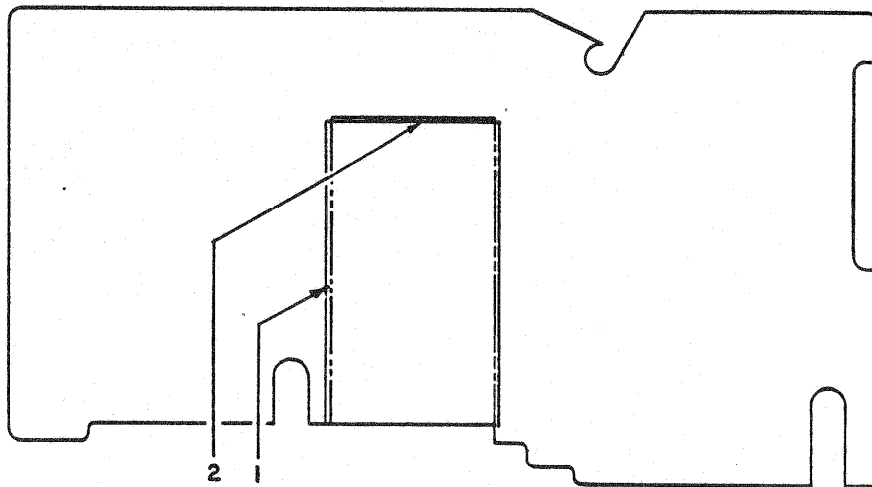
FOR D8 TRACTOR SERIAL NO. 36A3936 & UP AND 46A6288 & UP R3



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
1 {	140746	NUT-WELD, CAT. NO. 1F750	2
	16597	CAPSCREW-3/8 UNC X 3/4	2
	15156	LOCKWASHER-3/8	2

TRACTOR FLOOR PLATES

FOR D8 TRACTOR SERIAL NO. 36A4469 & UP, 46A10725 & UP AND 68A1003 & UP R3



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

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

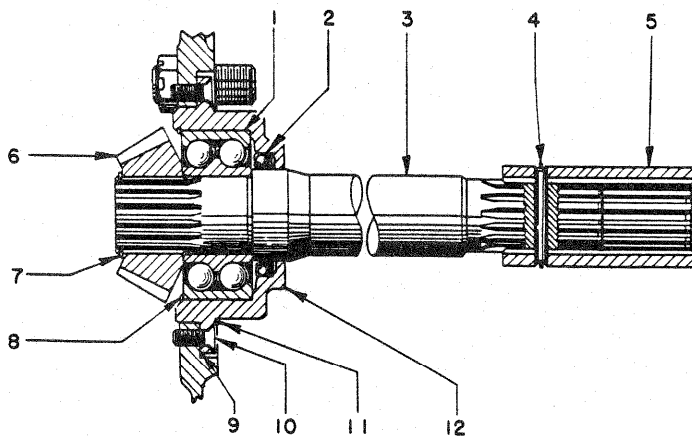
Section D

POWER TAKE-OFF, GEAR TRAIN AND DRUM

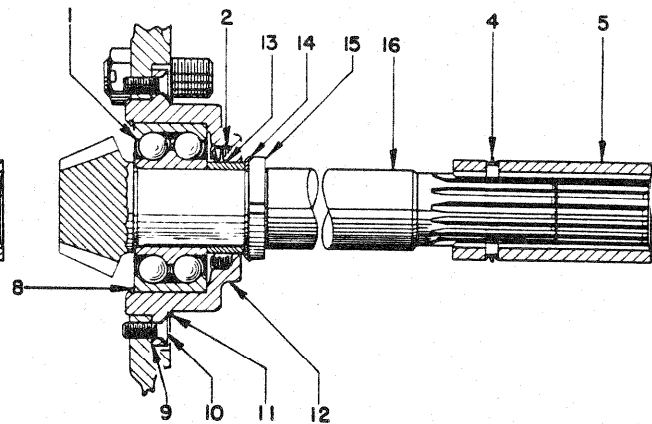
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POWER TAKE-OFF



STANDARD SPEED WINCH
46.1:1 GEAR RATIO



LO-SPEED WINCH
83.6:1 GEAR RATIO

KEY

- A-FOR D8 TRACTORS SERIAL NO. 22A, 35A, 36A, AND 52A.
 B-FOR D8 TRACTORS SERIAL NO. 46A, 68A, 77V, AND 583-61A, 78V
 C-FOR D9 TRACTORS SERIAL NO. 18A, 19A, 49A, AND 50A.
 D-FOR D9 TRACTORS SERIAL NO. 34A, 66A, 90V, AND 594-62H, 96V

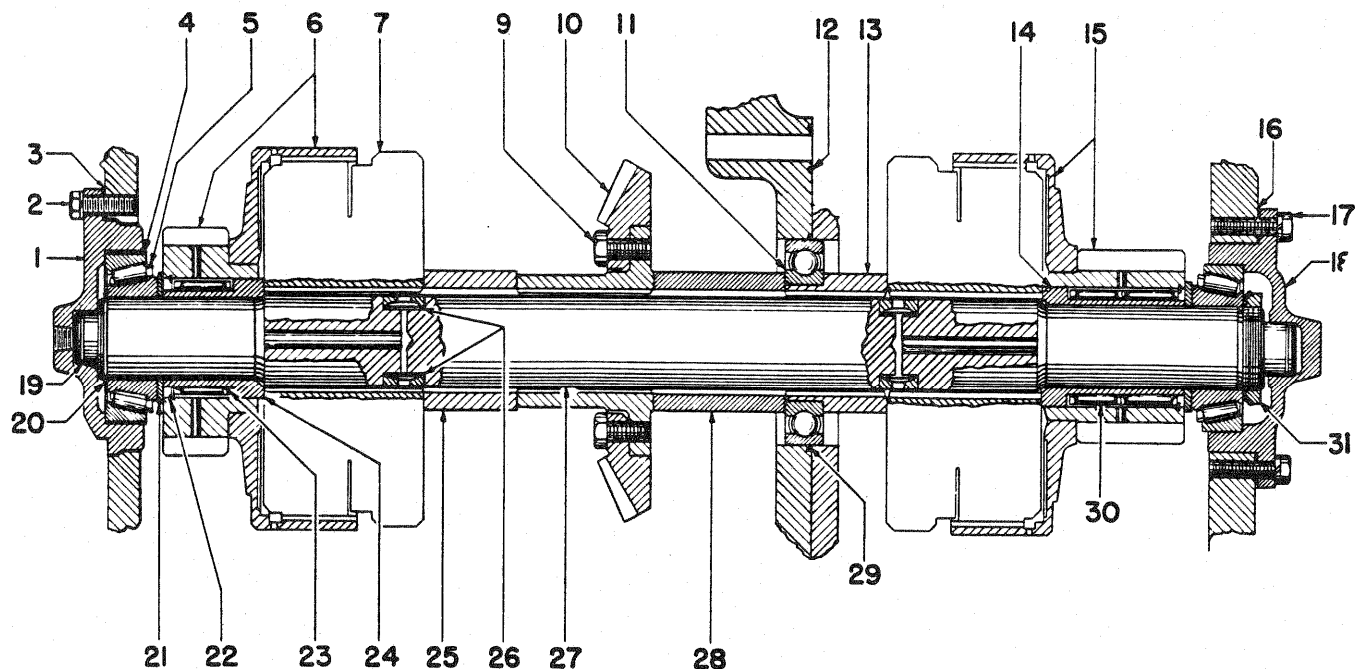
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			1	2	3	4
1	125402	BEARING	1	1	1	1
2	87355	OIL SEAL	1	1	1	1
3	193587	SHAFT-P.T.O.	1	..	..	..
	193590	SHAFT-P.T.O.	..	1	..	..
	193588	SHAFT-P.T.O.	..	..	1	..
	193589	SHAFT-P.T.O.	..	..	..	1
	9450	PIN-CAT #1A4599	1	1	1	1
4	90202	RING-LOCK, CAT NO. 8F737	1	1	1	1
5	6327	COUPLING- CAT NO. 187852	1	1	1	1
6	95601	GEAR-SPIRAL 21T	1	1	1	1
7	12940	SNAP RING	1	1	1	1
8	12981	SNAP RING	1	1	1	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
9	133256	SHIM-.005	AR	AR	AR	AR
	133257	SHIM-.007	AR	AR	AR	AR
	133258	SHIM-.020	AR	AR	AR	AR
10	16352	CAPSCREW-F.H., 1/2 UNF X 1.25	8	8	8	8
	15929	LKWHR-1/2, CTSK.	8	8	8	8
11	109453	O-RING	1	1	1	1
12	95458	CARRIER-BEARING	1	1	1	1
13	* 95813	SPACER	1	1	1	1
14	* 34055	LOCKWASHER	1	1	1	1
15	* 34056	LOCKNUT	1	1	1	1
16	* 95821	SHAFT-P.T.O. 16T	1	..	..	..
	* 95824	SHAFT-P.T.O. 16T	..	1	..	..
	* 95823	SHAFT-P.T.O.	..	..	1	..
	* 95825	SHAFT-P.T.O.	..	..	..	1

*FOR LOW SPEED ONLY

□FOR STD. SPEED ONLY

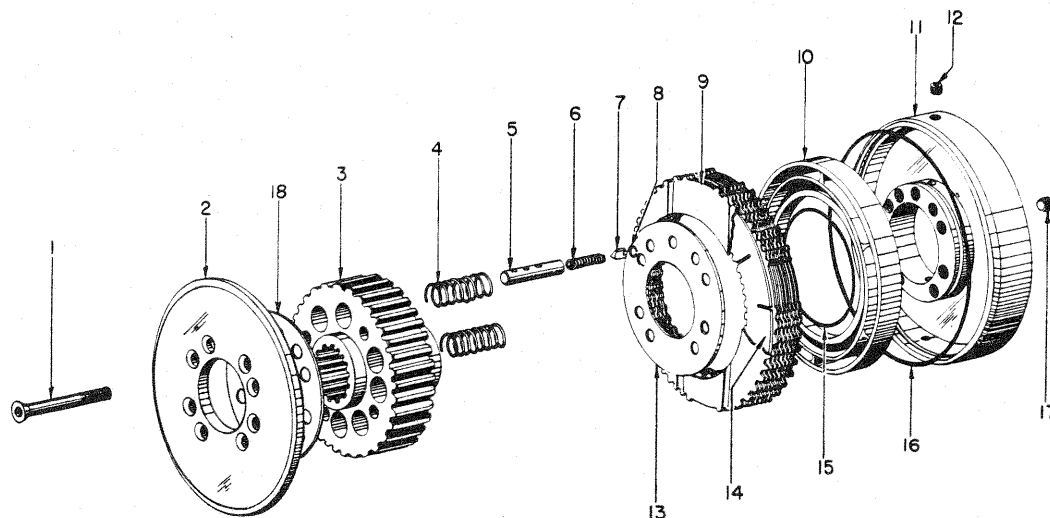
BEVEL GEAR SHAFT



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	131918	CARRIER-BEARING	1
2	16807	CAPSCREW-1/2 UNF X 1 1/2	5
	15158	LOCKWASHER-1/2	5
3	131920	SHIM-.005	AR
	131921	SHIM-.007	AR
	131922	SHIM-.020	AR
4	30059	CUP-BEARING	2
5	30080	CONE-BEARING	2
6	193598 W	SPIDER-FORWARD 24T	1
	193594 W	SPIDER-FORWARD, LO SPEED ONLY 19T	1
7	89774 A	CLUTCH ASSEMBLY	2
9	86079	CAPSCREW-DRILLED HEAD	8
	.....	LOCKWIRE-18 GA. X 18 IN. LONG	1
10	209014	GEAR-SPIRAL BEVEL 41T	1
	209015	GEAR-SPIRAL BEVEL, LO SPEED 41T	1
11	41217	BEARING-BALL	1
12	79980	O-RING	1
13	242590	SPACER	1
14	95478	CARRIER-BEARING	1
15	193591 W	SPIDER-REVERSE 17 TEETH	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
16	133270	SHIM-.005	AR
	133271	SHIM-.007	AR
	133272	SHIM-.020	AR
17	16397	CAPSCREW-1/2 UNF X 1 3/4	7
	15158	LOCKWASHER-1/2	7
18	95483	RETAINER-BEARING	1
	15302	PLUG-PIPE, 3/8	1
19	95581	RING-SEAL	2
20	175192	SNAP RING	1
21	175189	WASHER	2
22	12990	SNAP RING	2
23	230393	BEARING-ROLLER	1
24	95464	CARRIER-BEARING	1
25	193601	SPACER	1
26	96736	SEAL-TWO TEETH	2
	96737	SEAL-THREE TEETH	2
27	193607	SHAFT-BEVEL GEAR	1
28	193602	SPACER	1
29	131978	O-RING	1
30	230394	BEARING-ROLLER	2
31	175193	LOCKWASHER	1
	32967	LOCKNUT	1

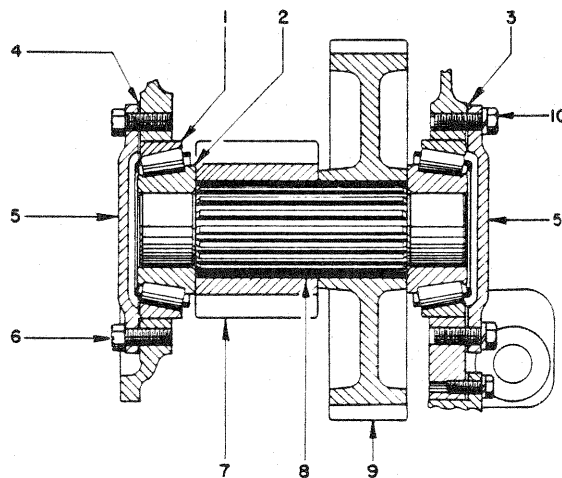
CLUTCH ASSEMBLY



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	89774 A	CLUTCH ASSEMBLY	2
1	95474	CAPSCREW-SPECIAL	8
2	95473	PLATE	1
3	95466	HUB-CLUTCH	1
	96735	SHIM-.031	AR
4	95472	SPRING	8
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	131923	DISC-FRICTION	8
10	95469	PISTON-CLUTCH	1
11	95468	PLATE-RETAINER	1
12	15961	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



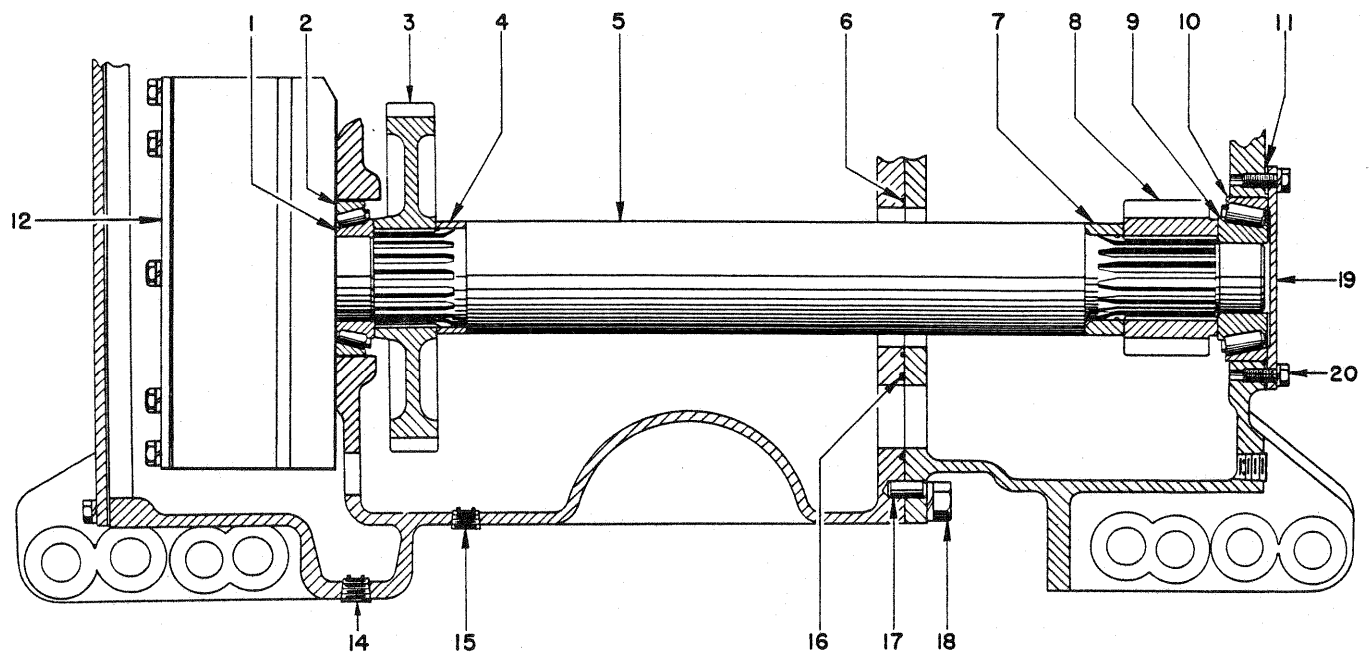
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	230327	CUP	2
2	231011	CONE-BEARING	2
3	93284	SHIM-.005	AR
	93285	SHIM-.007	AR
	93286	SHIM-.020	AR
4	* 93765	GASKET	1
5	93287	RETAINER	2
6	16386	PLACE BOLT-5/8 UNF X 1 1/2	6

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
7	95493	GEAR-DRUM PINION, 14 TEETH	1
8	95492	SHAFT-INTERMEDIATE	1
9	95494	GEAR-INTERMEDIATE, 48 TEETH	1
10	12479	CAPSCREW-5/8 UNF X 1 3/4	6
	15160	LOCKWASHER-5/8	6

*INCLUDED IN GASKET SET 142798.

HYSTER COMPANY
PORTLAND, OREGON

BRAKE SHAFT

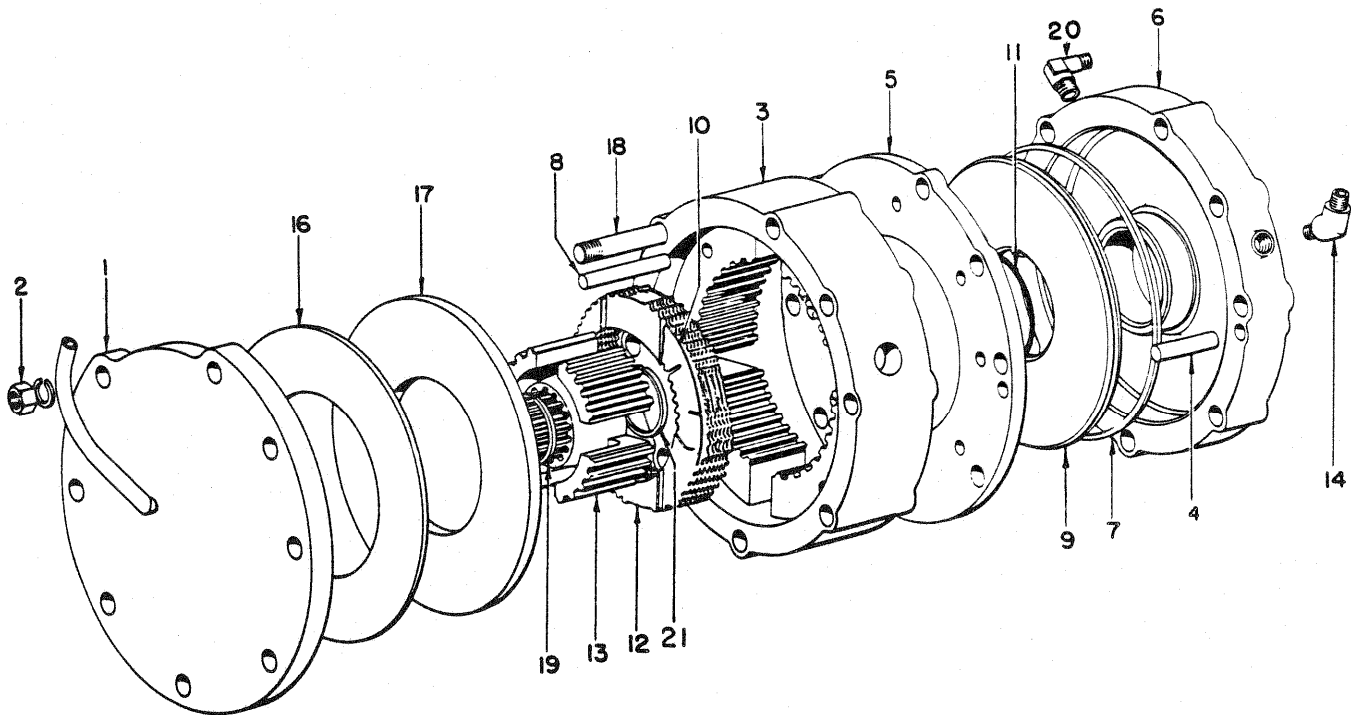


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	30101	CONE-BEARING	1
2	30100	CUP-BEARING	1
3	95604	GEAR-51 TEETH, STANDARD SPEED	1
4	95816	GEAR-56 TEETH, LO SPEED	1
5	95488	SPACER	1
6	308413	SHAFT	1
7	131977	O-RING	1
8	94447	SPACER	1
9	95489	GEAR-17 TEETH	1
10	230326	CONE-BEARING	1
11	30104	CUP-BEARING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
11	95033	SHIM-.005	AR
11	95166	SHIM-.007	AR
11	95034	SHIM-.020	AR
12	.....	BRAKE ASSEMBLY-SEE PAGE D5	1
14	15316	PLUG-PIPE, 3/4	1
15	10389	PLUG-PIPE, MAGNETIC, 3/4	2
16	132065	O-RING	1
17	95440	PIN DOWEL	1
18	16831	CAPSCREW-HT, 3/4 UNF X 1 3/4	7
18	15162	LOCKWASHER-3/4	7
19	95490	RETAINER-BEARING	1
20	16807	CAPSCREW-HT, 1/2 UNF X 1 1/2	6
20	15158	LOCKWASHER-1/2	6

*INCLUDED IN GASKET SET 142798.

BRAKE ASSEMBLY



KEY

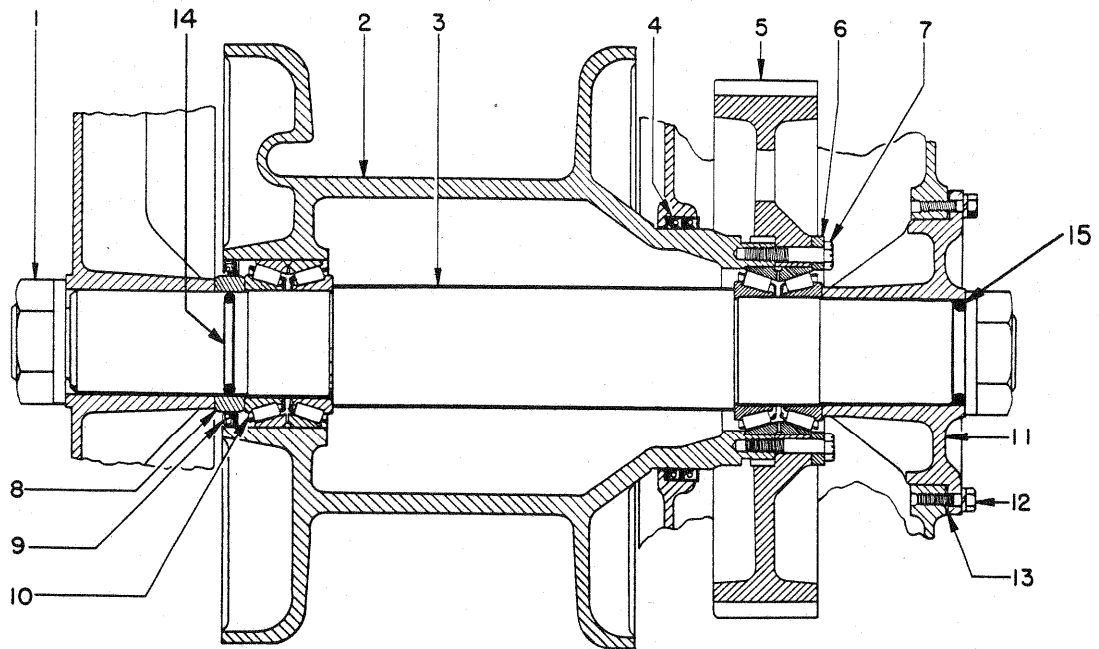
A—LAST USED ON WINCH SERIAL NO. 868P-1705 & 868A-1510.
 B—FIRST USED ON WINCH SERIAL NO. 868P-1706 & 868A-1511.

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.	
			A	B
1	138618	COVER	1	..
	142784	COVER	..	1
	133618	SHIM—.005	AR	..
	133619	SHIM—.007	AR	..
	133620	SHIM—.020	AR	..
2	199594	NUT-HT, 5/8 UNF	..	8
	15158	LOCKWASHER-1/2	8	..
	221775	WASHER-5/8 HT	..	8
3	131986	CAGE	1	..
	140398	CAGE	..	1
	17309	ELBOW-MALE	1	..
4	92867	PIN-DOWEL	2	2
5	131984	PLATE-PRESSURE	1	..
	140447	PLATE-PRESSURE	..	1
	131980	HOUSING-PISTON	1	..
	140397	HOUSING-PISTON	..	1
6	138747	STUD-HT, 1/2 UNF X 1 3/4	8	..
	138750	LOCKNUT-1/2 UNF	8	..
	53661	THIMBLE-DOWEL, TAPERED	8	..

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.	
			A	B
7	131982	RING-PISTON	1	1
8	131987	ROD	8	8
9	131981	PISTON	1	..
	140401	PISTON	..	1
10	131923	DISC-FRICTION	11	11
11	131983	O-RING	1	1
12	95471	PLATE-SEPARATOR	10	10
13	131985	HUB	1	1
14	170751	ELBOW-45 DEG., SPECIAL	1	1
16	131990	SPRING	2	2
17	131989	RING	1	1
18	138908	STUD-HT, 5/8 UNF X 8 3/4	..	8
	16827	CAPSCREW-HT, 1/2 UNF X 6	8	..
19	58905	SNAP RING	2	2
20	14505	ELBOW	1	..
21	193604	SPACER	..	1

NOTE—LATEST BRAKE ASSEMBLY ILLUSTRATED.

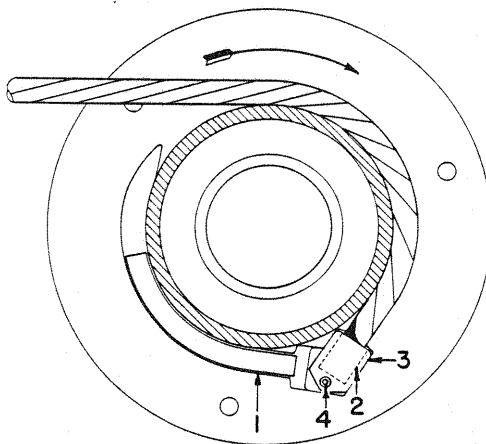
DRUM ASSEMBLY



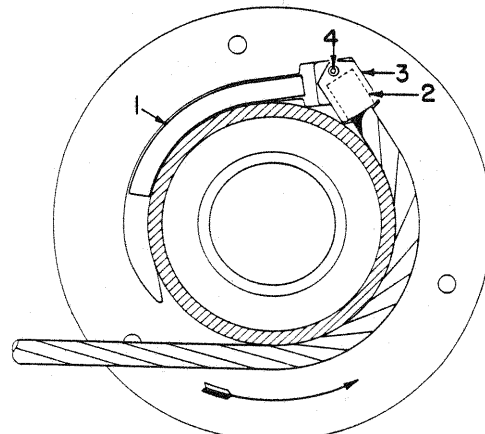
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	46398	NUT	2
2	95430	DRUM-14 INCH	1
	95826	DRUM-9 1/4 INCH, LO SPEED ONLY	1
3	172801	SHAFT-DRUM	1
4	141149	OIL SEAL	1
5	95496	GEAR-DRUM	1
6	95497	RETAINER	1
7	18807	PLACE BOLT-5/8 UNF X 3	8
8	93276	SPACER	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
9	44460	OIL SEAL	1
10	230329 A	BEARING	2
11	172802	RETAINER	1
12	12480	CAPSCREW-5/8 UNF X 2	8
	15160	LOCKWASHER-5/8	8
	133274	SHIM-.005	AR
13	133275	SHIM-.007	AR
	133276	SHIM-.020	AR
14	15888	O-RING	1
15	15886	O-RING	1

CABLE LOCK



OVERWINDING



UNDERWINDING

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

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
3	95499	LOCK FERRULE	1
4	18850	CAPSCREW-1/2 UNF X 3	1
	15158 B	LOCKWASHER-HI COLLAR, 1/2	1

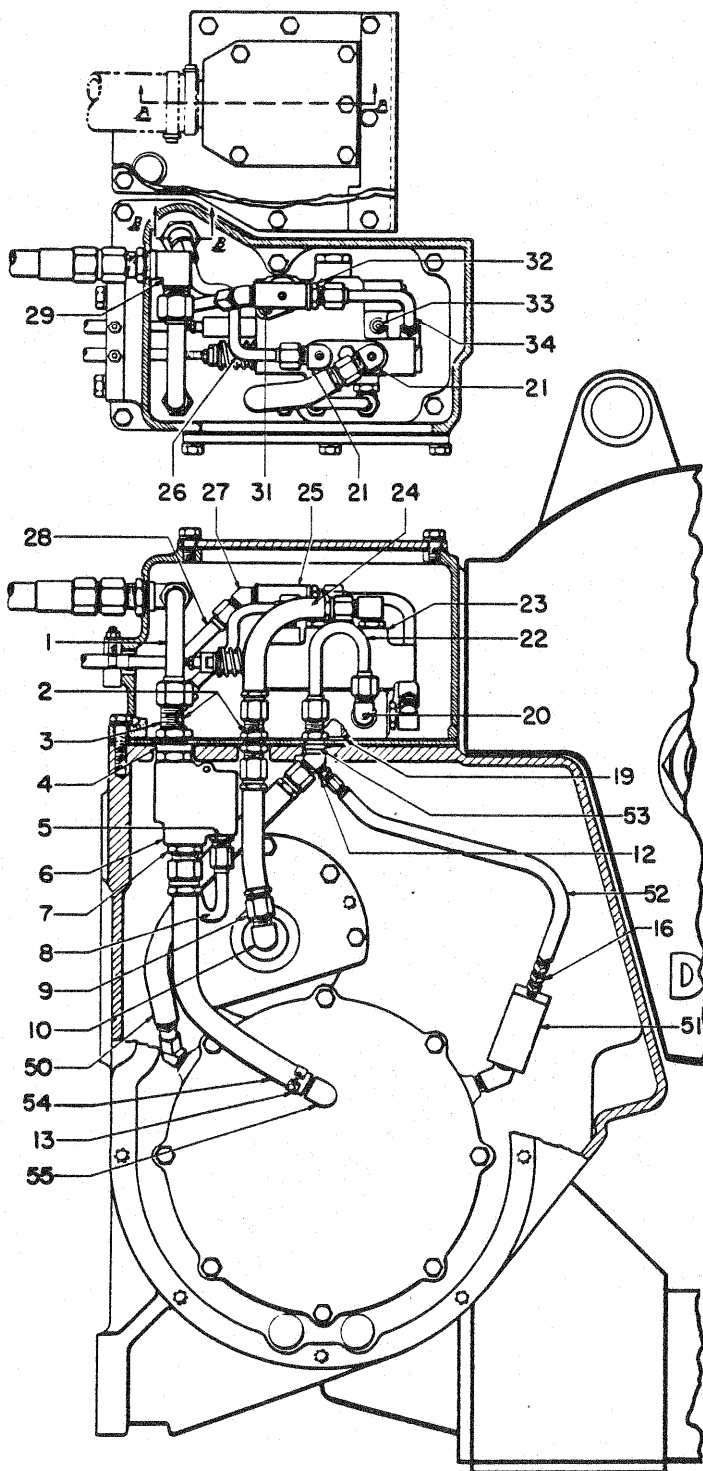
Section F

HYDRAULIC SYSTEM

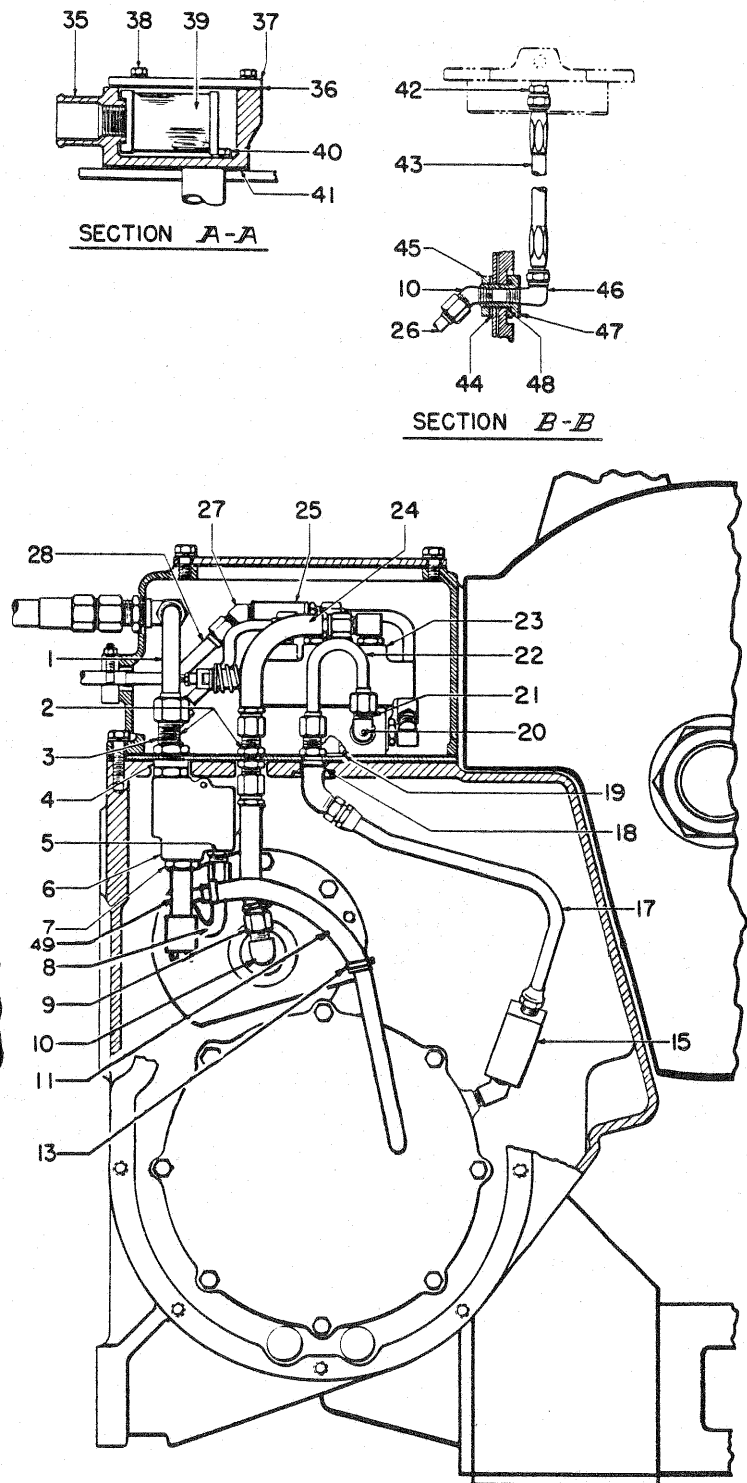
INDEX

CONTROL VALVE ASSEMBLY	F4
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PUMP ASSEMBLY	F12
PUMP DRIVE	F5-F8
RELIEF VALVE	F10
TEMPERATURE GAUGE	F11

HYDRAULIC SYSTEM



LAST USED ON SERIAL NO. B68P-1705.
& B68A-1510



FIRST USED ON SERIAL NO. B68P-1706.
& B68A-1511

HYDRAULIC SYSTEM

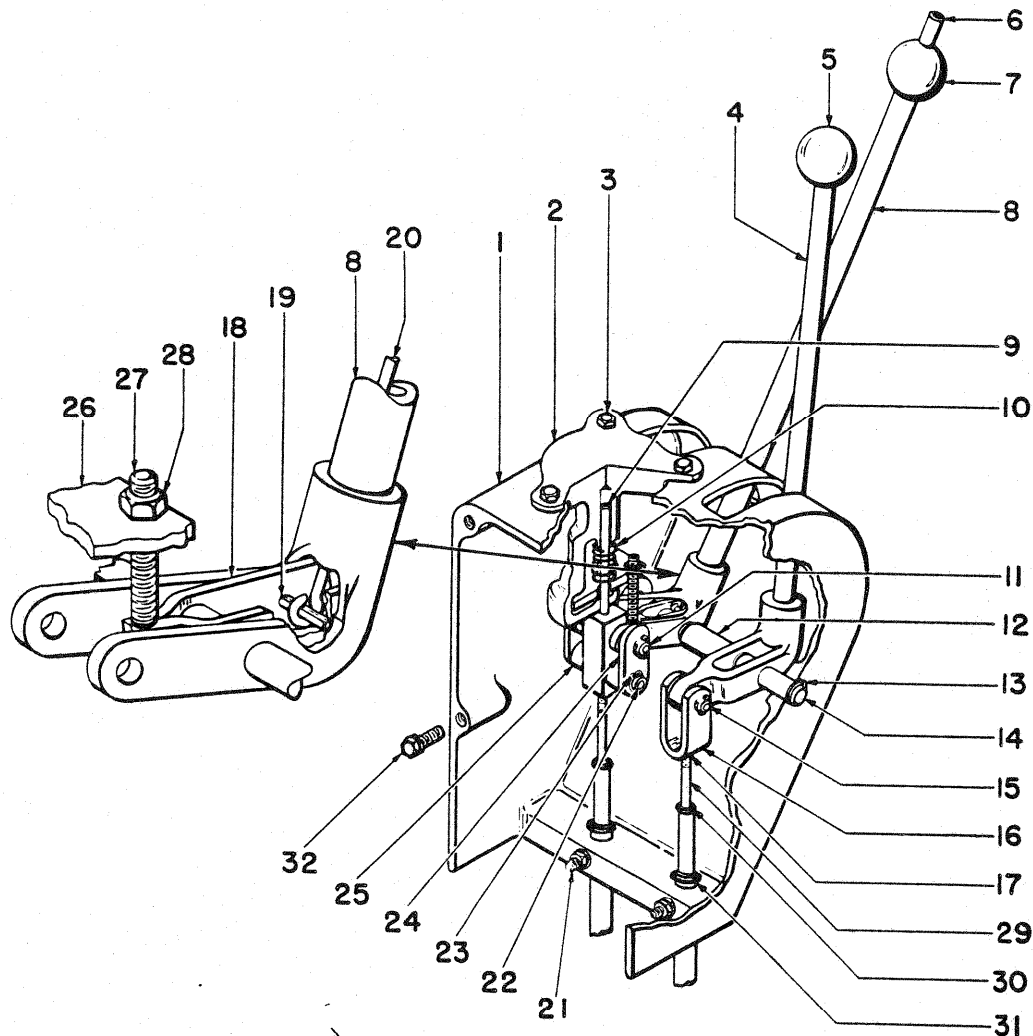
REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
1	132019	TUBE ASSEMBLY	1	31	{ 18789	CAPSCREW-3/8 UNC X 5	2
2	{ 16448	FITTING-BULKHEAD	2	{ 15156 B	LOCKWASHER-3/8		2
	14761	LOCKNUT	1	32	17302	CONNECTOR-MALE	1
3	{ 131997	FITTING-BULKHEAD	1	33	{ 18889	CAPSCREW-3/8 UNC X 3 1/2	1
	14763	LOCKNUT	1	{ 15156 B	LOCKWASHER-3/8		1
4	132770	SPACER	1	34	95727	TUBE ASSEMBLY-VALVE TO TEE	1
5	{ 16541	CONNECTOR-MALE	1	35	132774	MANIFOLD-INTAKE	1
	16484	O-RING	1	36	* 89023	GASKET	1
6	.....	FLOW DIVIDER-SEE PAGE F9	1	37	89025	PLATE-COVER	1
	{ 16570	ELBOW-45 DEGREE	1	38	{ 16820	CAPSCREW-HT, 1/2 UNF X 1	5
7	{ 16486	O-RING	1	{ 15158	LOCKWASHER-1/2		5
	16588	LOCKNUT	1	39	95893	CARTRIDGE-FILTER	1
8	132008	TUBE-SUPPORT TO DIVIDER	1	{ 37562	CAPSCREW-HT, 1/2 UNF X 1 1/4		1
9	132011	HOSE-SUPPORT TO BRAKE	1	40	{ 16820	CAPSCREW-HT, 1/2 UNF X 1	2
10	17344	ELBOW-45 DEGREE	2	{ 86229	WASHER SEAL		3
11	157706	HOSE-SUPPORT TO BRAKE	1	41	*133378	GASKET	1
12	□ 14670	CONNECTOR-MALE	1	{ 17315	CONNECTOR-MALE		1
13	{ 18999	CLAMP-HOSE	1	42	{ 19987	NIPPLE-CLOSE	1
	127045	CLAMP-HOSE	2	{ 14723	CONNECTOR		1
15	.....	VALVE-DUMP, SEE PAGE F9	1	43	189432	HOSE-SUPPORT TO R.H. CLUTCH	1
16	□ 14671	CONNECTOR-MALE	1	44	15936	LOCKWASHER-1 INCH	1
17	140463	HOSE-SUPPORT TO VALVE	1	45	15036	NUT-JAM, 1-14 UNS	1
18	{ 16466	FITTING-BULKHEAD	1	46	17309	ELBOW-MALE	1
	14761	LOCKNUT	1	47	132002	FITTING-SPECIAL	1
19	131998	O-RING	1	48	132003	O-RING	1
	{ 132000	ELBOW-SPECIAL	1	49	.....	VALVE-RELIEF, SEE PAGE F10	1
20	{ 16484	O-RING	1	50	□133943	HOSE-SUPPORT TO BRAKE	1
	16586	LOCKNUT	1	51	.....	VALVE-DUMP, SEE PAGE F9	1
	15483	PLUG-PIPE, 1/8	1	52	# 63649	HOSE-SUPPORT TO VALVE	1
	{ 132000	ELBOW-SPECIAL	2	53	{ #131996	ELBOW-BULKHEAD, 45 DEG.	1
21	{ 16484	O-RING	1	{ 14761	LOCKNUT		1
	16586	LOCKNUT	1	54	#132010	HOSE-FLOW DIVIDER TO BRAKE	1
	14349	PLUG-PIPE, 1/8	2	55	□ 16165	FITTING-90 DEGREE NIPPLE	1
22	132001	TUBE ASSEMBLY-VALVE TO SUPPORT	1				
23	.....	VALVE-CONTROL, SEE PAGE F4	1				
24	132011	HOSE-VALVE TO SUPPORT	1				
	{ 132069	FITTING-SPECIAL	1				
25	{ 14349	PLUG-PIPE, 1/8	1				
	15334	NIPPLE-CLOSE	1				
26	132004	TUBE ASSEMBLY-VALVE TO SUPPORT	1				
27	14550	ELBOW-MALE, 45 DEGREE	1				
28	132006	TUBE ASSEMBLY-VALVE TO SUPPORT	1				
	{ 132018	ELBOW-BULKHEAD, SPECIAL	1				
29	{ 14763	LOCKNUT	1				
	14349	PLUG-PIPE, 1/8	1				
30	14763	LOCKNUT	1				

*INCLUDED IN GASKET SET 142798.

□LAST USED ON WINCH SERIAL NO. 868P-1509.

#LAST USED ON WINCH SERIAL NO. 868P-1705 & 868A-1510.

HANDLEVER ASSEMBLY

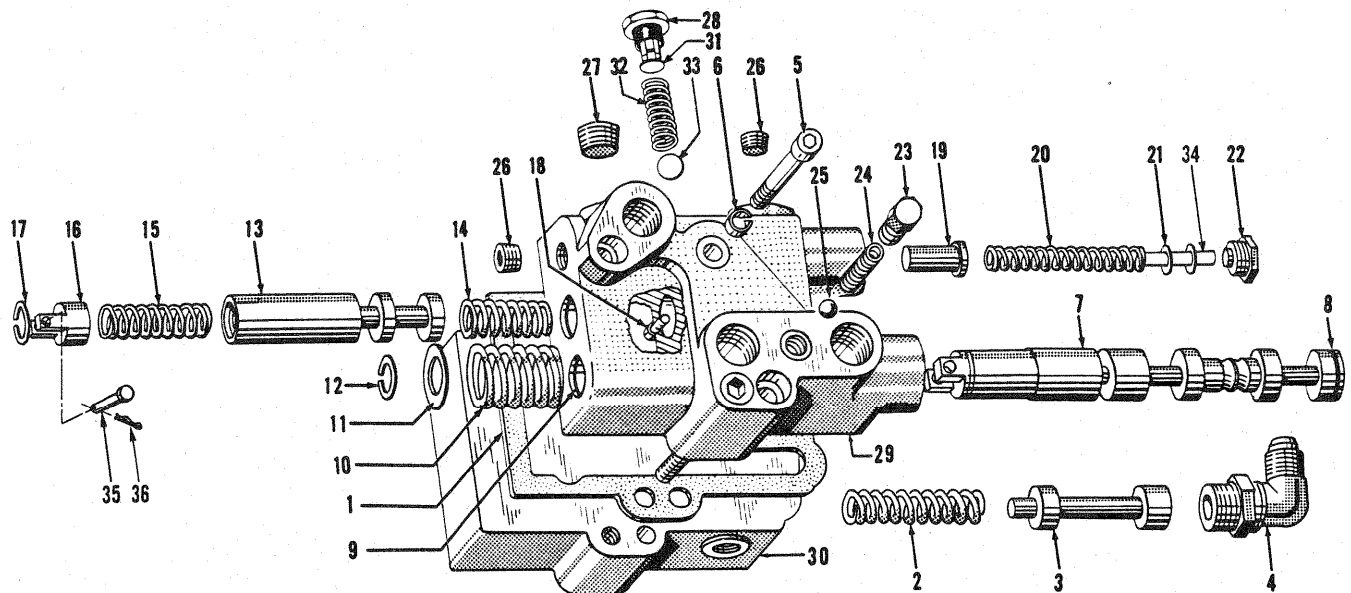


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	133154	HANDLEVER ASSEMBLY USE 179694	1
1	133138	HOUSING-HANDLEVER	1
2	133148	BLOCK-GUIDE	1
3	16805	CAPSCREW-3/8 UNC X 1	3
	15156	LOCKWASHER-3/8	3
	15086	NUT-JAM, 3/8 UNC	3
4	133150	LEVER-SELECTOR	1
5	131976	KNOB	1
6	*131955	BUTTON	1
7	*131957	KNOB	1
	146211	KNOB	1
8	133141	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	4
18	133139	LEVER	1
19	19871	ROLL PIN	1
20	*133140	ROD	1
	146212	ROD	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
21	16254	SETSCREW-5/16 UNC X 1	3
	15155	LOCKWASHER-5/16	3
	15001	NUT-JAM, 5/16 UNC	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
	15025	NUT-JAM, 5/16 UNF	1
29	164655	CABLE-PUSH PULL, FOR D8 TRACTORS	2
	159809	CABLE-PUSH PULL, FOR D8 TRACTORS	2
	166055	CABLE-PUSH PULL, FOR D9	2 R3
	159810	CABLE-PUSH PULL, FOR D9 TRACTORS, EXCEPT SERIES 66A	2
	96474	CABLE-PUSH PULL, FOR D9 TRACTORS SERIES 66A	2
30	159811	CABLE-PUSH PULL, FOR D9 TRACTORS SERIES 66A	2
	95876	GROMMET-SMALL	4
31	94380	GROMMET-LARGE	4
32	16597	CAPSCREW-3/8 UNC X 3/4	4
	15156	LOCKWASHER-3/8	4
	145782	DECAL, OPERATING	1
*LAST USED ON SERIAL NO. 868P-2035.			
□ FIRST USED ON SERIAL NO. 868P-2561.			

HYSTER COMPANY
PORTLAND, OREGON

CONTROL VALVE ASSEMBLY



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	131999	VALVE ASSEMBLY-CONTROL	1 R3
	#161699	VALVE ASSEMBLY-CONTROL	1 R3
1	* 95725	GASKET	1 R3
2	95675	SPRING	1
3	129198	PISTON	1
4	16559	FITTING-ELBOW	1
	16484	O-RING	1
	16586	LOCKNUT	1
5	17138	CAPSCREW-S.H., 3/8 UNC X 3	2
6	15156 B	LOCKWASHER-3/8	2
7	77975	SPOOL	1
	#159745	SPOOL	1 R3
8	95721	O-RING	1
9	95716	O-RING	2
10	95612	SPRING	1
11	95676	WASHER	1
12	58950	SNAP RING	1
13	95718	SPOOL	1
14	95717	SPRING-2 3/32 LONG	1
15	95719	SPRING	1
16	95720	PLUG	1
	#159746	PLUG	1 R3
17	12992	SNAP RING	1
	133469	CAPSCREW-1/4 UNC X 1/2	1
18	15154	LOCKWASHER-1/4	1
	#139197	CAPSCREW-SPL., 5/16 UNC X 1/2	1 R3
	15155	LOCKWASHER-5/16	1 R3
19	95714	PISTON	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
20	95715	SPRING	1
21	108408	WASHER	AR
22	108407	RETAINER-SPRING	1
	29582	GASKET-COPPER	1
23	77736	FITTING-PLUG	1
	16482	O-RING	1
24	96234	SPRING	1
25	55280	BALL-STEEL, 5/16	1
26	152989	PLUG-PIPE, 1/4	2 R3
27	15315	PLUG-PIPE, 1/2	1 R3
28	160490	FITTING-SPECIAL	1
	16982	O-RING	1
29	89778	BODY-VALVE	1
30	132024	SUPPORT-VALVE	1
31	160491	SHIM	AR
32	89767	SPRING-1 29/32 LONG	1
33	89769	BALL-STEEL, 13/16 DIAMETER	1
34	152649	ROD	1
35	#159747	PIN	2 R3
36	# 18821	COTTER	2 R3

*INCLUDED IN GASKET SET 142798.

□FIRST USED ON WINCH SERIAL NO. B68P-1816 & B68A-1517.

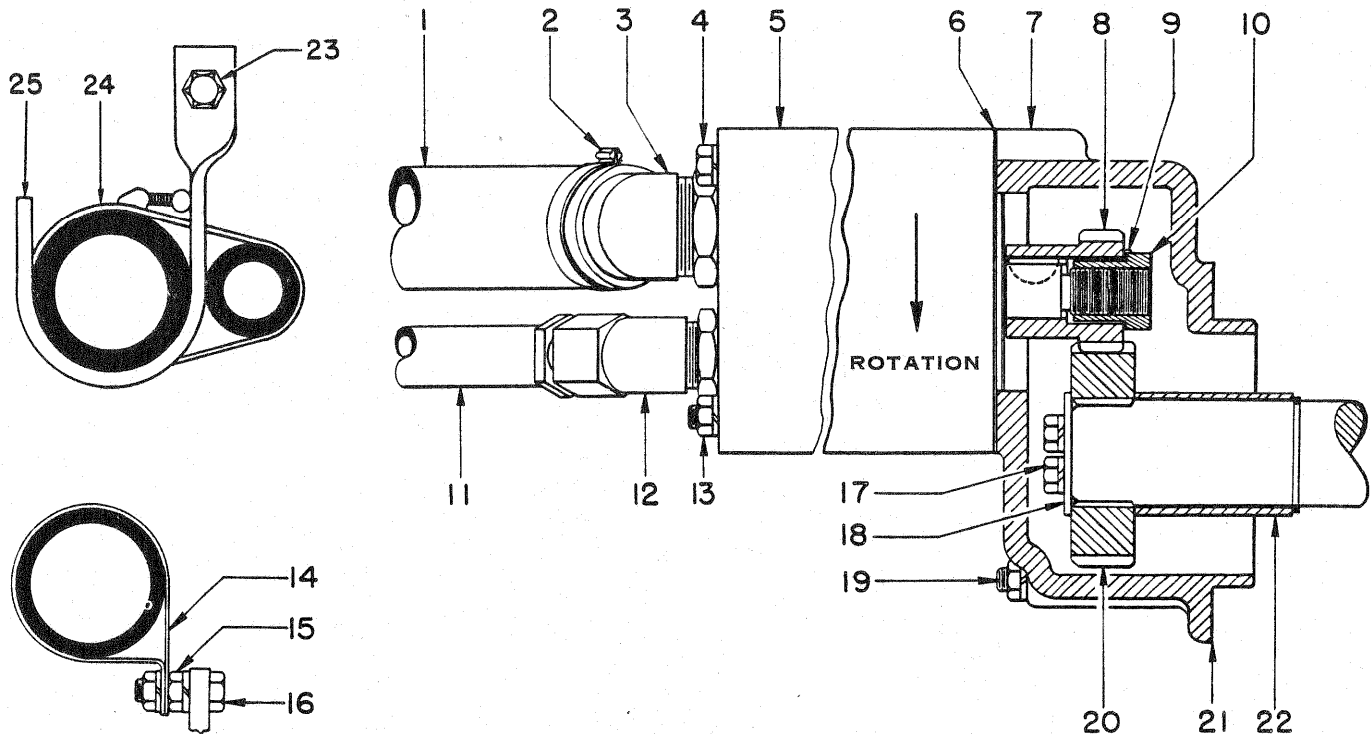
#FIRST USED ON WINCH SERIAL NO. B68P-2561 & B68A-1601. R3

OVERDRIVE PUMP GROUP

FOR D8 AND D9 TRACTORS

USED ON WINCH SERIAL NO. B68P-1501 THRU 1859, B68A-1501 THRU 1554 AND

OPTIONAL FOR WINCH SERIAL NO. B68P-1860 & UP, B68A-1555 & UP



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	.....	HOSE-TO PUMP, SEE PAGE F11	1
2	142781	CLAMP-HOSE	2
3	132046	FITTING-SPECIAL	1
3	16983	O-RING	1
3	16980	LOCKNUT	1
4	18551	CAPSCREW-HT, 3/8 UNC X 5 1/2	1
4	15156	LOCKWASHER-3/8	1
5	.....	PUMP-HYDRAULIC, CCW SEE PAGE F12	1
6	*132044	GASKET	1
7	132037	HOUSING-PUMP DRIVE	1
8	132041	GEAR	1
9	132042	PLATE-LOCK	1
10	132043	NUT-SPECIAL	1
11	144637	HOSE	1
12	16570	ELBOW-45 DEG.	1
12	16486	O-RING	1
12	16588	LOCKNUT	1
13	132045	STUD	1
13	15156	LOCKWASHER-3/8	1
13	15086	NUT-JAM, 3/8 UNC	1
14	*132064	CLAMP	1
15	*15056	NUT-3/8 UNC	2
15	15156	LOCKWASHER-3/8	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
16	*18538	CAPSCREW-HT, 3/8 UNC X 2 3/4	1
17	16634	CAPSCREW-HT, 3/8 UNF X 1	2
17	15156	LOCKWASHER-3/8	2
18	132036	RETAINER	1
18	132039	STUD	4
19	15086	NUT-JAM, 3/8 UNC	4
19	15156	LOCKWASHER-3/8	4
20	132035	GEAR	1
21	*132038	GASKET	1
22	132034	SPACER	1
23	#18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	1
24	#18994	CLAMP-HOSE	1
25	#143362	CLAMP-HOSE LOCATING	1

*INCLUDED IN GASKET SET 142798.

□FOR TRACTOR SERIAL NO. 22A1 & UP, 35A1 & UP, 36A1-4468, 46A1-10724, 52A1 & UP AND 68A1-1002.

#FOR TRACTOR SERIAL NO. 36A4469 & UP, 46A10725 & UP AND 68A1003 & UP ONLY.

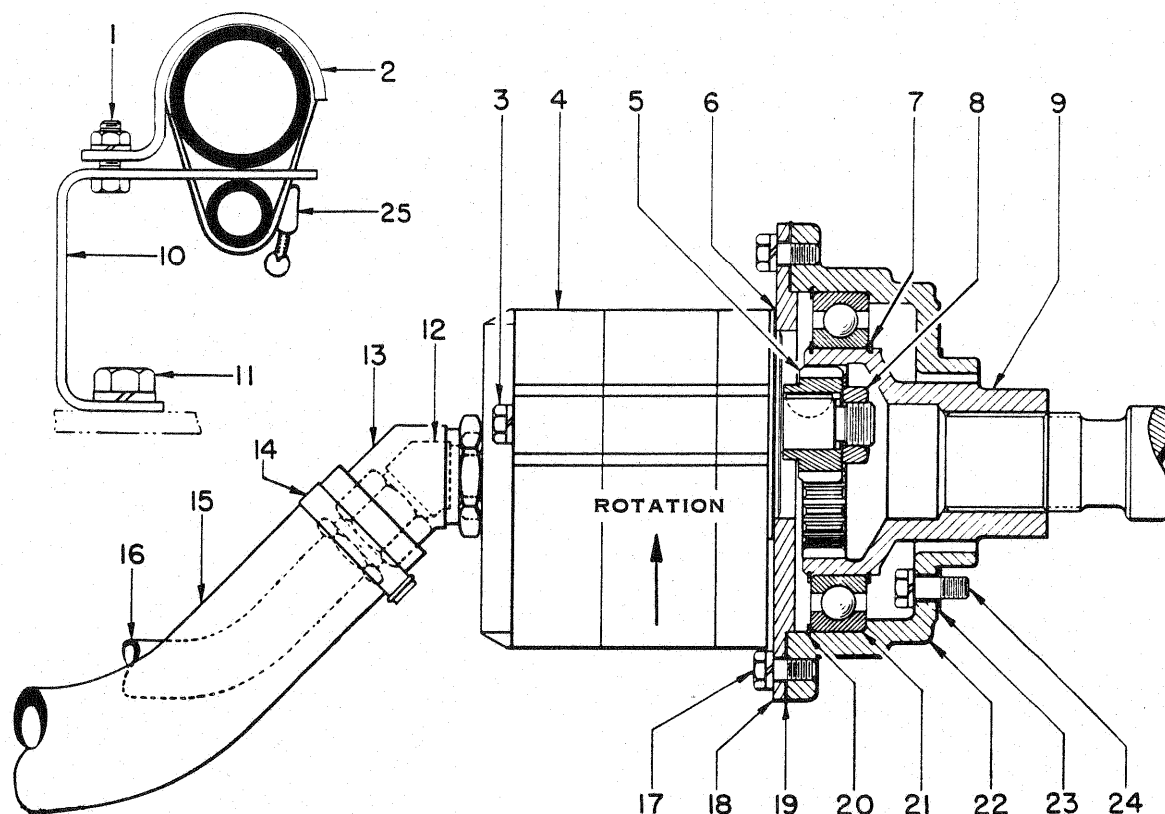
SEE GRAM AO-E-3R2 FOR INLINE PUMP CONVERSION

INLINE OVERDRIVE PUMP GROUP

FOR D8 AND D9 TRACTORS

USED ON WINCH SERIAL NO. B68P-1501 THRU 1859, B68A-1501 THRU 1554 AND

OPTIONAL FOR WINCH SERIAL NO. B68P-1860 & UP, B68A-1555 & UP



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	16805	CAPSCREW-HT, 3/8 UNC X 1	1 R3
	15156	LOCKWASHER-3/8	1
	15056	NUT-3/8 UNC	1
2	132772	CLAMP-HOSE LOCATING	1 R3
3	133681	CAPSCREW-HT, 3/8 UNC X 5 1/8	2
	15156	LOCKWASHER-3/8	2
4	.....	PUMP-HYDRAULIC, CW SEE PAGE F-12	1 R3
5	132059	GEAR	1
6	* 95710	GASKET	1
7	132056	SNAP RING	2
8	17422	LOCKNUT-3/4 UNF	1
9	132055	GEAR	1
10	132771	BRACKET	1
11	.....	CAPSCREW-FURNISHED WITH TRACTOR	1
	16570	ELBOW-45 DEG.	1 R3
12	16486	O-RING	1
	16588	LOCKNUT	1
	132046	ELBOW-45 DEG.	1 R3
13	16983	O-RING	1
	16980	LOCKNUT	1

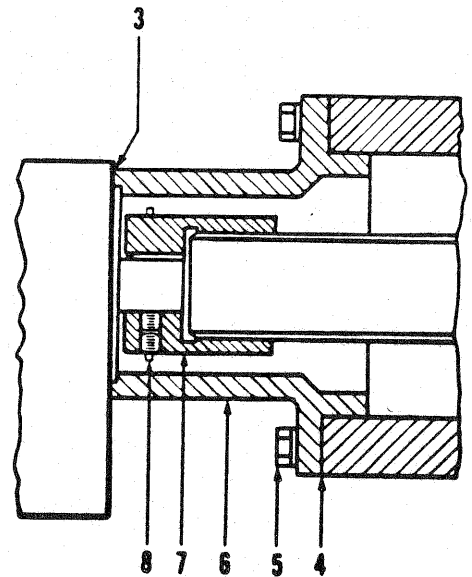
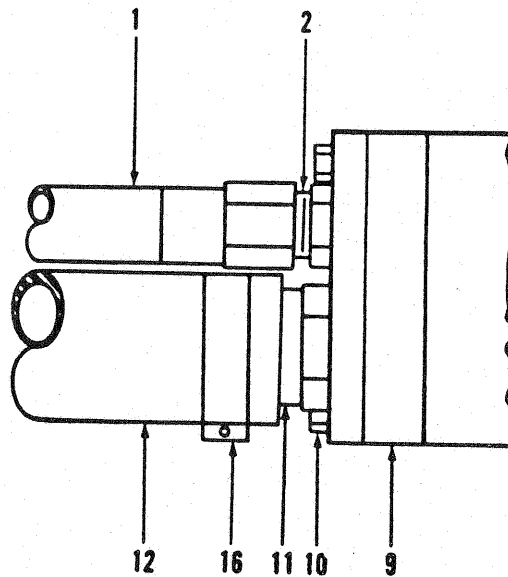
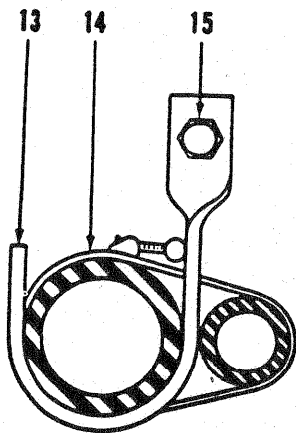
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
14	142781	CLAMP-HOSE	2
15	.....	HOSE-TO PUMP, SEE PAGE F11	1 R3
16	144639	HOSE-FOR TRACTORS S/N 18A, 19A, 34A, 49A, 50A	1 R3
	144638	HOSE-FOR TRACTORS S/N 66A	1 R3
17	16598	CAPSCREW-HT, 3/8 UNC X 7/8	8
	15156	LOCKWASHER-3/8	8
18	132058	COVER	1
19	*132057	GASKET	1
20	12899	SNAP RING	1
21	44320	BEARING	1
22	132054	HOUSING	1
23	* 95610	GASKET	1
24	16805	CAPSCREW-HT, 3/8 UNC X 1	5 R3
	15156	LOCKWASHER-3/8	5
25	18994	CLAMP-HOSE	1

*INCLUDED IN GASKET SET 142798.

SEE GRAM AO-E-3R2 FOR INLINE CONVERSION

PUMP DRIVE

FIRST USED ON WINCH SERIAL NO. B68P-1860 & B68A-1555 R3



KEY
A-FOR D8 TRACTORS.
B-FOR D9 TRACTORS AND 594 PIPELAYER.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
1	{ 141189	HOSE	1	1
	{ #144639	HOSE-FOR SERIES 18A, 19A, 34A, 49A AND 50A	..	1
	{ #144638	HOSE-SERIES 66A1 TO 66A3265	..	1
2	{ # 16543	CONNECTOR-MALE	1	..
	{ 16570	ELBOW-45	1	1
	{ 16486	O-RING	1	1
	{ 16488	LOCKNUT	1	1
3	{ * 95710	GASKET	1	1
4	{ * 95486	GASKET	1	..
	{ *145349	GASKET	..	1
	{ 16805	CAPSCREW-3/8 UNC X 1	6	..
5	{ 16316	CAPSCREW-3/8 UNC X 1 1/2	..	5
	{ 15156	LOCKWASHER-3/8	6	5
	{ 145351	ADAPTER-PUMP	1	..
6	{ #147965	ADAPTER-PUMP	1	..
	{ 145348	ADAPTER-PUMP	..	1
7	{ 145347	CONNECTOR USE W/ 145344 PUMP	1	1
	{ 54112	SNAP RING	1	1
8	{ 16200	SETSCREW-S.H., 3/8 UNC X 3/8	1	1
	{ 136391	SETSCREW-S.H., 3/8 UNC X 1/4	1	1
9	{	PUMP-HYDRAULIC, SEE PAGE F12	1	1 R3
10	{ 133681	CAPSCREW-3/8 UNC X 5 1/8	2	2
	{ 15156	LOCKWASHER-3/8	2	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	
			A	B
	{ #145350	HOSE FITTING-SPECIAL	1	..
	{ #147961	FITTING-SPECIAL	1	..
11	{ 132046	HOSE FITTING-SPECIAL	1	1
	{ 16983	O-RING	1	1
	{ 16980	LOCKNUT	1	1
12	{	HOSE-TO PUMP, SEE PAGE F11	1	1 R3
13	{ 143362	CLAMP-HOSE	1	..
	{ 132772	CLAMP-HOSE	..	1
14	{ 18994	CLAMP-HOSE	1	1
	{ 18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	1	..
15	{ 16805	CAPSCREW-HT, 3/8 UNC X 1	..	1
	{ 15156	LOCKWASHER-3/8	..	1
	{ 15056	NUT-3/8 UNC	..	1
16	{ 142781	CLAMP-HOSE	2	2
	{ 132771	BRACKET } NOT ILLUSTRATED	..	1
	{ #151779	BRACKET }	..	1

*INCLUDED IN GASKET SET 142798.

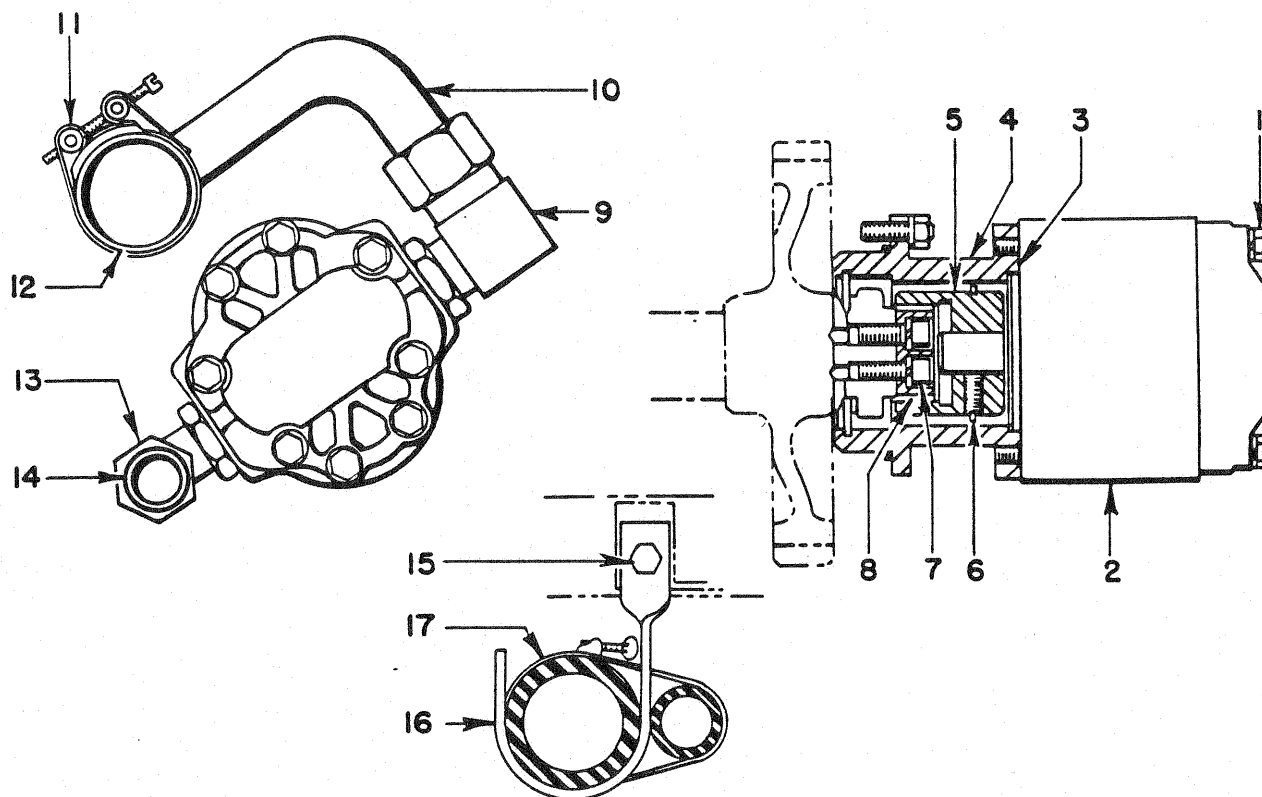
#FIRST USED ON D8H TRACTOR SERIAL NO. 46A-10725 AND UP AND 36A-4469.

#FIRST USED ON SERIAL NO. B68P-2348.

NOTE-PUMP DRIVE FOR D8 TRACTORS ILLUSTRATED.

PUMP DRIVE

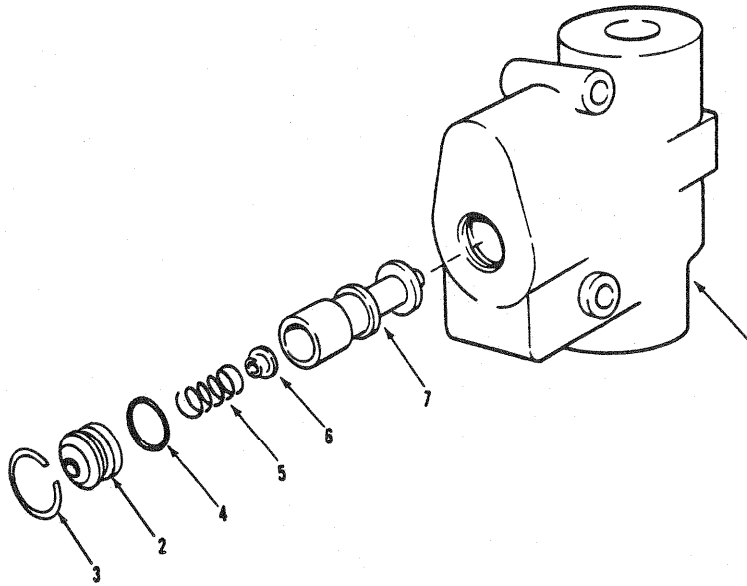
FOR 583-H PIPELAYER



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	18551	CAPSCREW-HT, 3/8 UNC X 5 1/2	2
2	15156	LOCKWASHER-3/8	2
3	.....	PUMP-HYDRAULIC, SEE PAGE F12	1
4	132044	GASKET	1
5	145478	HOUSING-PUMP	1
6	145477	COUPLING-PUMP	1
7	16200	SETSCREW-3/8 UNC X 3/8	2
8	88837	SNAP RING	1
9	27187	CAPSCREW-S.H., 3/8 UNC X 1	2
	15156	LOCKWASHER-3/8	2
	145476	SHAFT	1
	16949	ELBOW	1
	16983	O-RING	1 R3
	16980	LOCKNUT	1 R3

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10	146385	TUBE	1
11	142781	CLAMP-HOSE	2 R3
12	.....	HOSE-TO PUMP, SEE PAGE F11	1
13	201791	ELBOW	1
	16487	O-RING	1 R3
	16589	LOCKNUT	1 R3
14	144639	HOSE	1
15	18588	CAPSCREW-HT, 1/2 UNC X 1 1/2	1 R3
16	143362	CLAMP	1
17	18994	CLAMP	1

FLOW DIVIDER

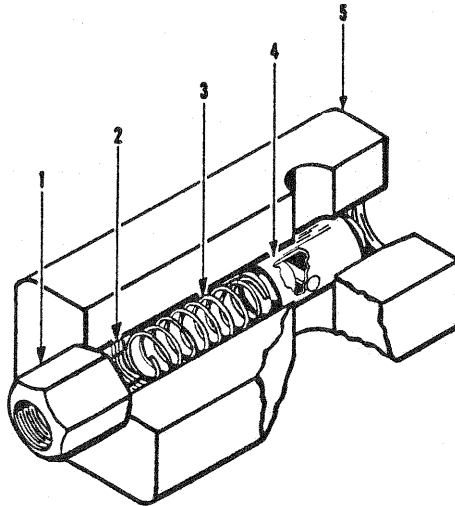


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	241979	FLOW DIVIDER	1
1	.....	BODY	1
2	87571	CAP-END	1
3	*	RING-RETAINER	1
4	*	O-RING	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
5	* 87570	SPRING	1
6	136378	ORIFICE	1
7	87569	PISTON-CONTROL	1

*INCLUDED IN REPAIR KIT 136381.

DUMP VALVE



KEY

A-LAST USED ON WINCH SERIAL NO. B68P-1570.

B-USED ON WINCH SERIAL NO. B68P-1571 THRU 1705 & B68A-1501 THRU 1510.

C-FIRST USED ON WINCH SERIAL NO. B68P-1706 & B68A-1511

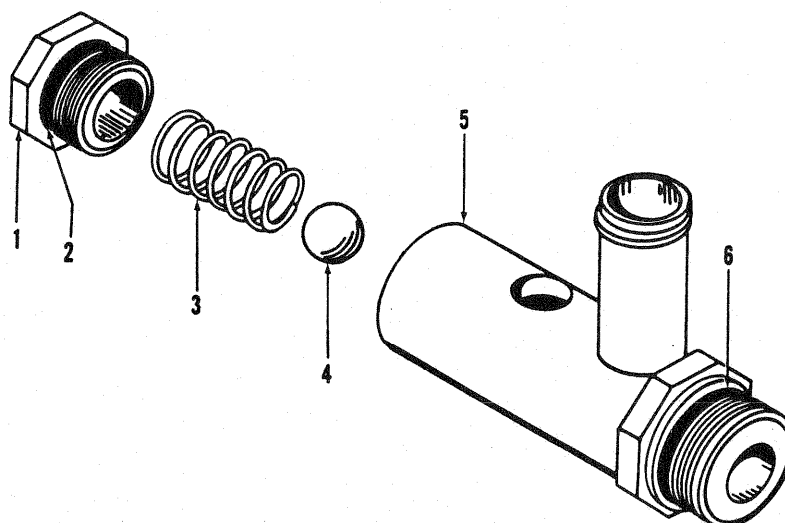
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	A B C
	181031	DUMP VALVE ASSEMBLY	1
	181031	DUMP VALVE ASSEMBLY	.. 1 ..
	181031	DUMP VALVE ASSEMBLY	 1
1	17694	ADAPTER	1 1 ..
2	132015	SHIM-.031	AR AR ..
3	108404	SPRING	1 1 ..
	161857	SPRING	 1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	A B C
	132014	SPOOL	1
4	138543	SPOOL	.. 1 ..
	181032	SPOOL	 1
5	132013	BODY	1
	138542	BODY	.. 1 1

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RELIEF VALVE

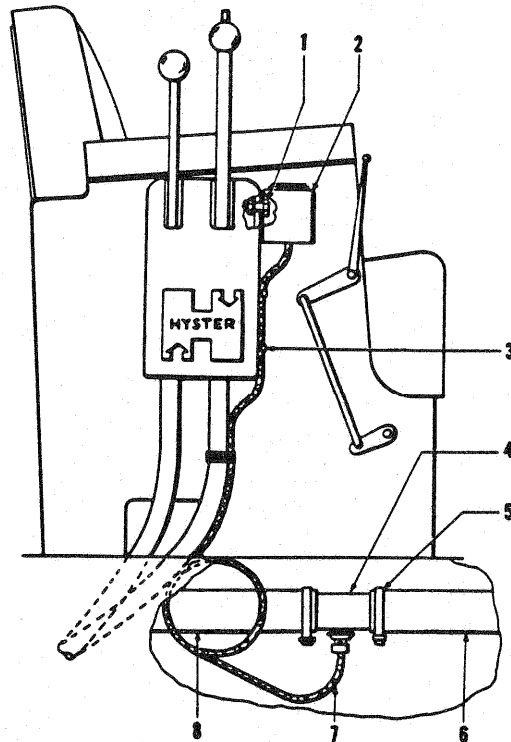
FIRST USED ON WINCH SERIAL NO. 868P-1706 & 868A-1511 R3



REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
	141254	RELIEF VALVE	1
1	144019	PLUG	1
2	16485	O-RING	1
3	116541	SPRING	1

REF. NO.	HYSTER PART NO.	NAME OF PART 1 2 3 4	QTY.
4	68965	BALL-STEEL, 5/8	1
5	144018	BODY-VALVE	1
6	16486	O-RING	1

TEMPERATURE GAUGE

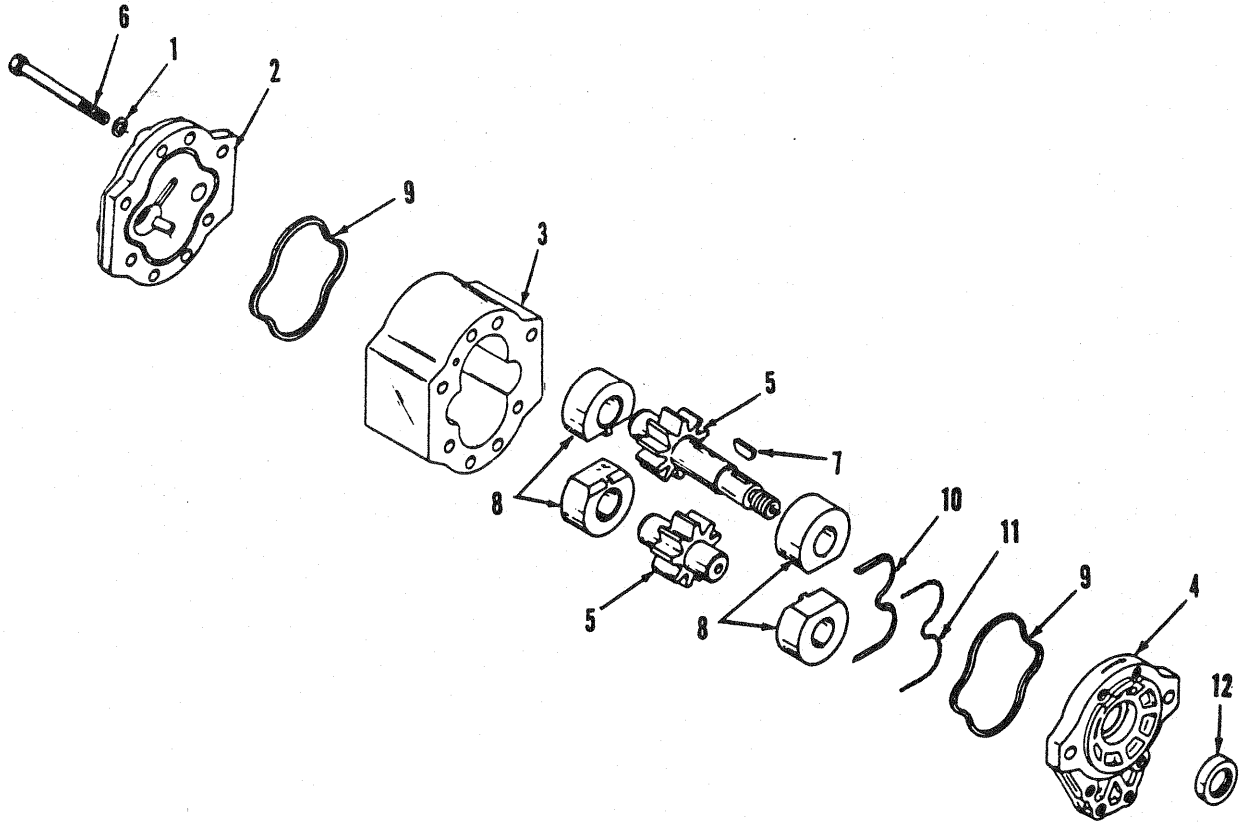


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	18462	CAPSCREW-HT, 1/4 UNC X 7/8	2
	15154	LOCKWASHER-1/4	2
	15000	NUT-JAM, 1/4 UNC	2
2	133702	BRACKET	1
3	18903	CLAMP	2
	16651	SCREW-SELF TAP, #10 UNF X 1/2	2
4	133706	FITTING-SPECIAL	1
5	142781	CLAMP-HOSE	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
6	164672	HOSE-TO PUMP	1
7	133705	GAUGE-TEMPERATURE	1
	157095	ADAPTER	1
	164673	HOSE-FOR D8 TRACTORS	1 R3
8	164677	HOSE-FOR D9 & 583-H PIPELAYER, EXCEPT 66A TRACTORS	1
	164675	HOSE-FOR D9 SERIES 66A TRACTORS & 594 PIPELAYER	1

SEE GRAM AO-D-14 FOR ONE PIECE SUCTION HOSE.

PUMP ASSEMBLY



KEY

A-FOR D8 & D9 TRACTORS. LAST USED ON WINCH SERIAL NO. B68P-1859 & B68A-1559.

B-FOR D8 & D9 TRACTORS. LAST USED ON WINCH SERIAL NO. B68P-1859 & B68A-1559.

C-FOR D8 & D9 TRACTORS & 594 PIPELAYER. FIRST USED ON SERIAL NO. B68P-1860 AND 594 PIPELAYER R3

D-FOR 583-H PIPELAYER.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
	144600	PUMP ASSEMBLY CCW	..	1	..	..
	144599	PUMP ASSEMBLY CW	1	..	..	..
	+145344	PUMP ASSEMBLY CW	..	..	1	..
	145479	PUMP ASSEMBLY	..	..	..	1
1 {	129447	WASHER	1	1	1	..
	147402	WASHER	..	..	..	1
	134276	COVER-REAR	1	..	..	..
2 {	126445	COVER-REAR	..	1	1	..
	127658	COVER-REAR	..	..	..	1
3 {	.....	BODY	1	1	1	1
	134275	COVER-FRONT	1	..	..	..
4 {	126444	COVER-FRONT	..	1	1	..
	127657	COVER-FRONT	..	..	..	1
	123699	GEAR KIT	1	1	..	..
5 {	146896	GEAR KIT	..	..	1	..
	127659	GEAR KIT	..	..	..	1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.			
			A	B	C	D
6 {	*123704	CAPSCREW	6	6	6	..
	*127661	CAPSCREW	..	..	..	6
7 {	* 9413	KEY	1	1	1	..
	* 206	KEY	..	..	..	1
8	*	BEARING	4	4	4	4
9	□*	SEAL	2	2	2	2
10	□*	GASKET	1	1	1	1
11	□*	SPACER	..	..	1	..
12	□*	SEAL-SHAFT	1	..	1	1
	145381	MAJOR KIT	1	1	1	..
	147401	MAJOR KIT	..	..	..	1
	158913	MINOR KIT	1	1	1	..
	78035 A	MINOR KIT	..	..	..	1

*INCLUDED IN MAJOR KITS 145381 AND 147401.

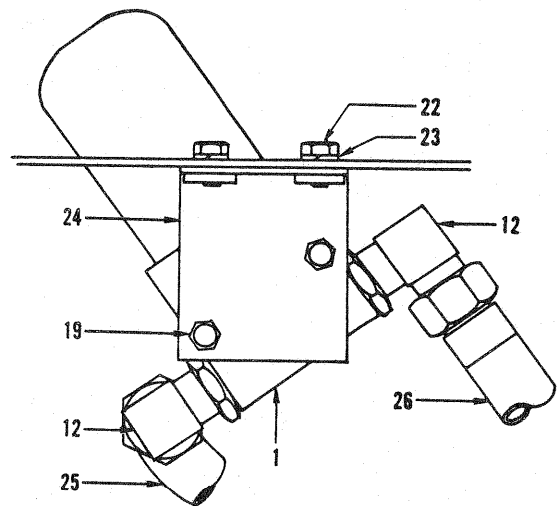
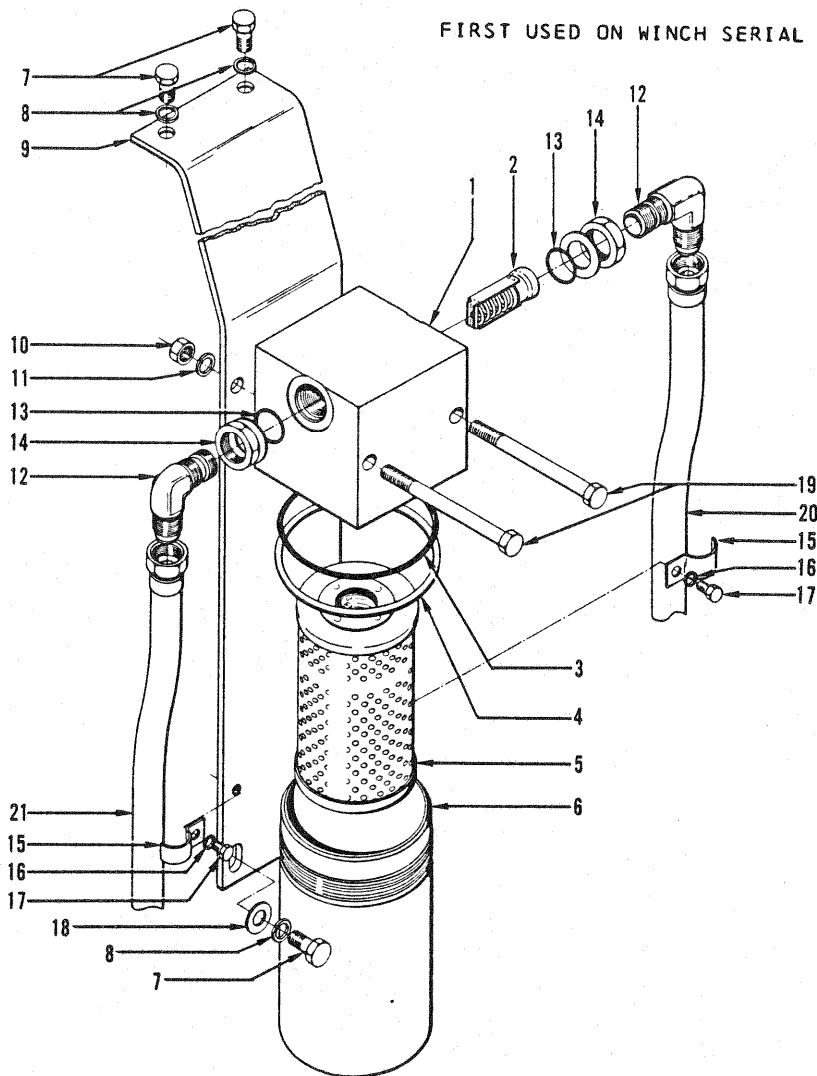
□INCLUDED IN MINOR KITS 158913 AND 78035A.

+REPLACED BY KIT 181892 WHICH CONSISTS OF:

- 1 - 239510 PUMP
- 1 - 181895 CONNECTOR
- 1 - 95710 GASKET
- 2 - 18547 CPSCR 3/8 UNC X 4 1/2
- 2 - 15156 LW 3/8

FILTER

FIRST USED ON WINCH SERIAL NO. B68P-2081



KEY

A-FOR D9 TRACTORS.

B-FOR D8 TRACTORS-LAST USED ON TRACTOR SERIAL NO. 36A-4468 AND 46A-10724, AND WINCH SERIAL NO. B68P-2496 AND B68A-1572. R3

C-FOR D8 TRACTORS-FIRST USED ON TRACTOR SERIAL NO. 36A-4469 AND 46A-10725 AND UP, AND WINCH SERIAL NO. B68P-2497 AND B68A-1573.

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
1	147461	FILTER ASSEMBLY	1	1	1
	149295	HEAD ASSEMBLY	1	1	1
2	.....	RELIEF VALVE ASSEMBLY	1	1	1
3	149297	O-RING	1	1	1
4	149298	RING-BACK UP	1	1	1
5	147463	ELEMENT	1	1	1
6	149296	CASE	1	1	1
7	16829	CAPSCREW-1/2 UNC X 1	4	..	4
8	15158	LOCKWASHER-1/2	4	..	4
9	154760	PLATE	..	..	1
	151713	PLATE	1	..	..
10	15057	NUT-7/16 UNC	2	2	2
11	15157	LOCKWASHER-7/16	2	2	2
12	16562	ELBOW	2	2	2
13	16487	O-RING	1	1	1
14	16589	LOCKNUT	1	1	1
15	151714	CLAMP	2	..	..

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.		
			A	B	C
16	15156	LOCKWASHER-3/8	2	..	..
17	16870	CAPSCREW-3/8 UNC X 1/2	2	..	..
18	38760	WASHER	2	..	..
19	18578	CAPSCREW-7/16 UNC X 5	2	2	2
20	147456	HOSE-OUTLET	..	..	1
	147456	HOSE-INLET	..	..	1
21	147459	HOSE-OUTLET	1	..	..
	147456	HOSE-INLET	1	..	..
22	18586	CAPSCREW-1/2 UNC X 7/8	..	4	..
23	15158	LOCKWASHER-1/2	..	4	..
24	148978	BRACKET-FRONT	..	1	..
	148980	BRACKET-REAR	..	1	..
25	147459	HOSE-OUTLET	..	1	..
26	147455	HOSE-INLET	..	1	..

NOTE- D8 FILTER ILLUSTRATED.

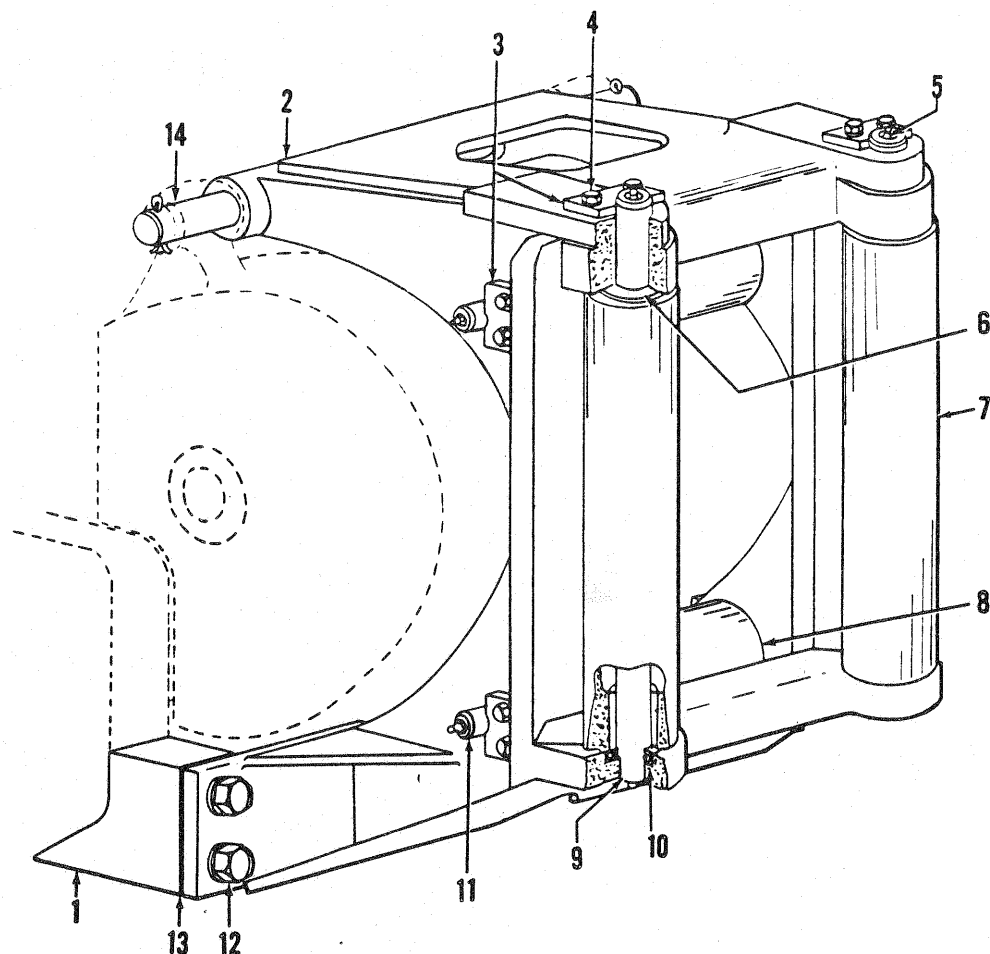
Section G

OPTIONAL EQUIPMENT

INDEX

BRAKE AND HYDRAULIC SYSTEM CONVERSION	G3
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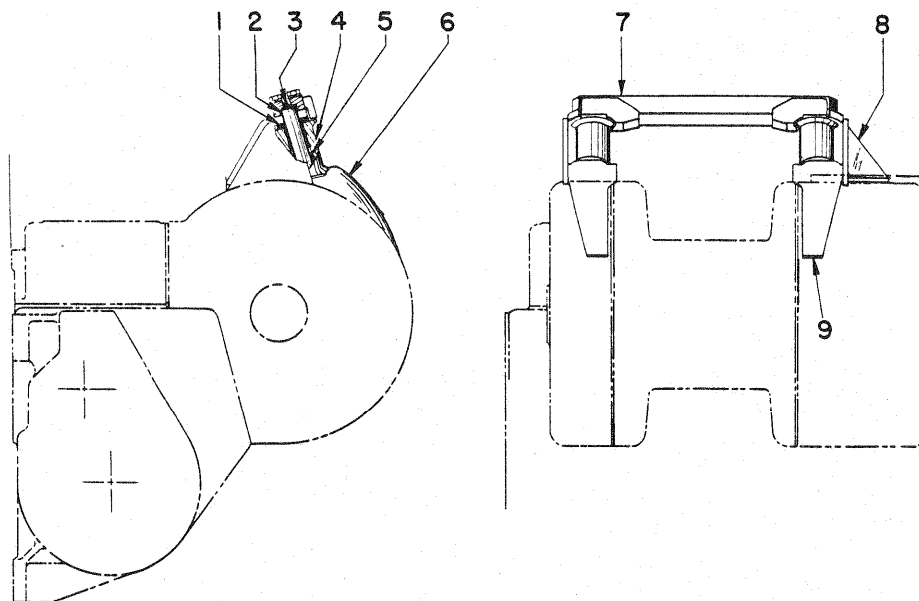
FAIR LEAD ASSEMBLY



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
1	95798 A	FAIRLEAD ASSEMBLY	1
1	95811	PLATE-MOUNTING, L.H.	1
2	95810	PLATE-MOUNTING, R.H.	1
2	95801 W	FRAME	1
3	93166	KEEPER	4
4	16820	CAPSCREW-1/2 UNF X 1 1/4	8
	15158	LOCKWASHER-1/2	8
5	16001	GREASE FITTING	8
6	38672	WASHER	2
7	93980 A	ROLLER ASSEMBLY	2
	93979	BUSHING	4

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	1 2 3 4		
8	92212 A	ROLLER ASSEMBLY	2
	59419	BUSHING	4
	92720	WASHER	4
9	93981	SHAFT-VERTICAL	2
10	230353	THRUST BEARING	2
11	93658	SHAFT-HORIZONTAL	2
12	15571	CAPSCREW-1 UNF X 2 3/4	4
	18457	CAPSCREW-1 UNF X 2 1/4	1
	15166	LOCKWASHER-1	4
13	96504	SHIM-.135	AR
14	92606	ROD-TIE	1
	15272	COTTER-3/8 X 3	2

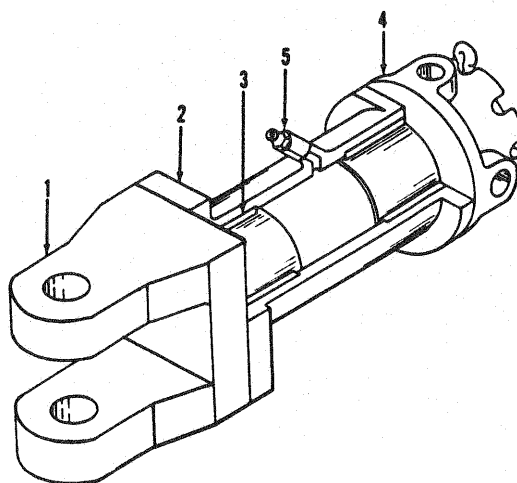
CABLE GUIDE ROLLS



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

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

SWIVELING DRAWBAR ASSEMBLY

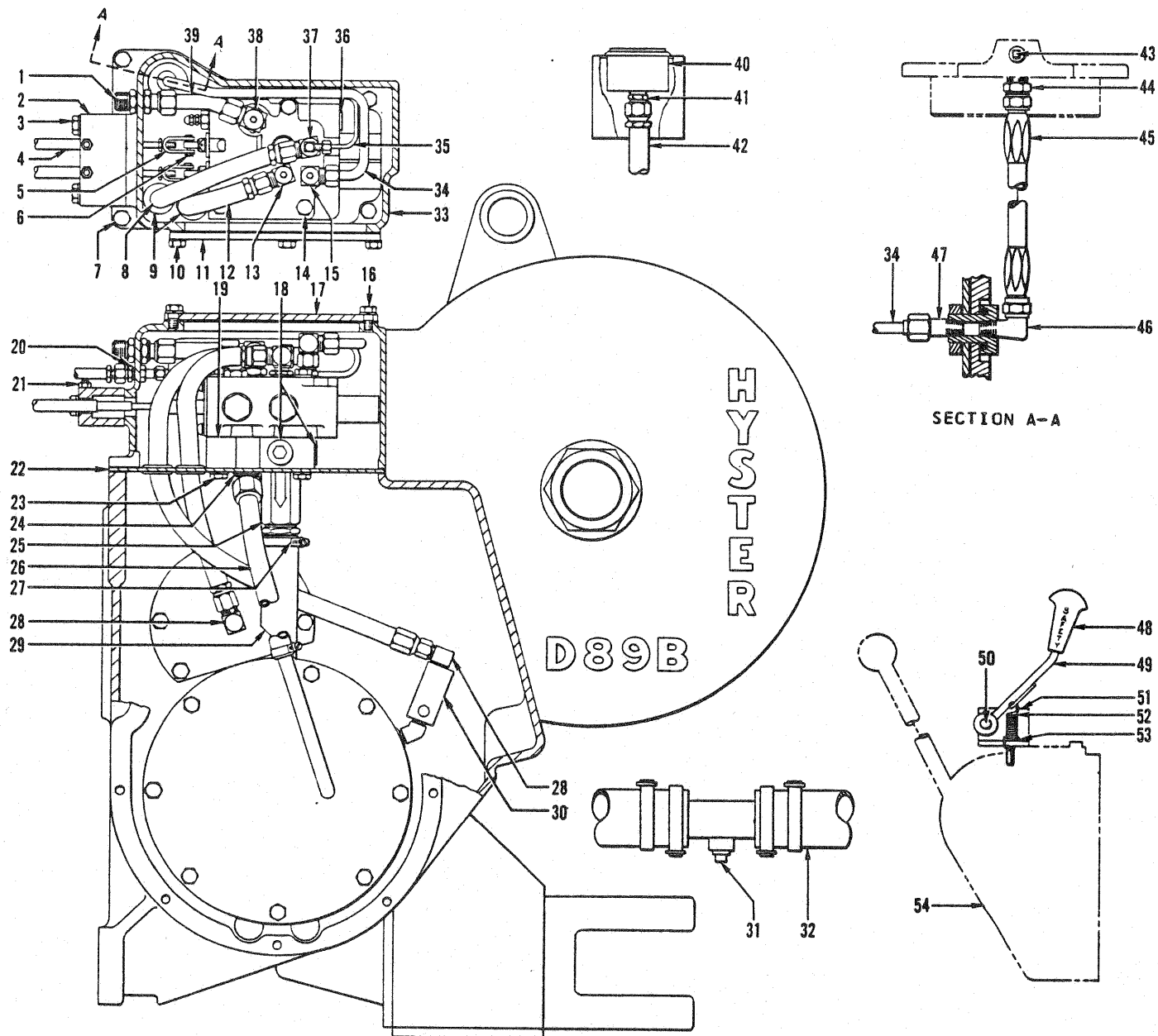


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
	96309 A	SWIVELING DRAWBAR ASSEMBLY	1
1	33787	DRAWBAR	1
2	96318 A	ADAPTER ASSEMBLY	1
3	92671	BUSHING	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
4	33618	NUT	1
	15295	COTTER-1/2 X 5	1
5	16002	GREASE FITTING	1

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HYDRAULIC SYSTEM CONVERSION



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
1	16450	UNION-BULKHEAD	1
2	14763	LOCKNUT	1
3	165653	BLOCK	1
4	18592	CAPSCREW-HT, 1/2 UNC X 3	2
	15158	LOCKWASHER-1/2	2
	*164655	CABLE-PUSH PULL	2
	165492	CABLE-PUSH PULL	2
	*166055	CABLE-PUSH PULL	2
5	165659	ROD END	2
6	133683	PIN-ROD END	2
	15211	COTTER-3/32 X 1/2	2
7	.....	CAPSCREW } SEE PAGE F1	4
	.....	LOCKWASHER }	4
8	110230	HOSE ASSEMBLY	1
9	95737	GROMMET	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
10	.....	CAPSCREW	6
	.....	LOCKWASHER	6
11	.....	COVER	1
	.....	GASKET	1
12	132009	HOSE ASSEMBLY	1
	164656	ELBOW	1
13	16485	O-RING	1
	16587	LOCKNUT	1
	14349	PLUG-PIPE, 1/8	1
14	18524	CAPSCREW-HT, 5/16 UNC X 3 3/4	3
	15155	LOCKWASHER-5/16	3
	16909	CONNECTOR-MALE	1
15	16485	O-RING	1
	165662	ELBOW-SWIVEL	1
	14349	PLUG-PIPE, 1/8	1

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HYDRAULIC SYSTEM CONVERSION

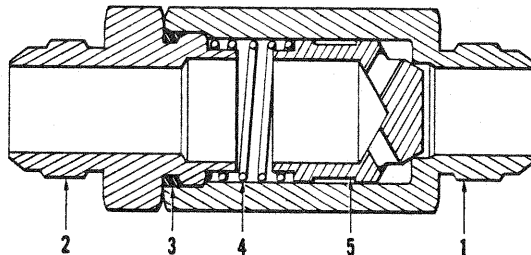
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.	REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
16	.....	CAPSCREW	6	38	164703	ELBOW-SPECIAL	1
17	.....	LOCKWASHER	6	16486	O-RING	1	1
18	.....	COVER	1	16588	LOCKNUT	1	1
18	.....	GASKET	1	14349	PLUG-PIPE, 1/8	1	1
18	233683	PLUG	2	39	165655	TUBE ASSEMBLY	1
19	16487	O-RING	1	40	165500	GAUGE-OIL PRESSURE	1
19	165658	SUPPORT-CONTROL VALVE	1	165501	DECAL	1	1
20	16445	UNION-BULKHEAD	1	41	14712	CONNECTOR-FEMALE	1
20	14758	LOCKNUT	1	*165504	HOSE ASSEMBLY	1	1
21	.....	SETSCREW	2	42	#165505	HOSE ASSEMBLY	1
21	.....	NUT-JAM	2	#146296	HOSE ASSEMBLY	1	1
22	166053	PLATE-VALVE MOUNTING	1	43	.....	PLUG-PIPE, 3/8, SEE PAGE B2	1
22	.....	GASKET-SEE PAGE B1	2	44	.....	CONNECTOR	1
23	18496	CAPSCREW-HT, 5/16 UNC X 7/8	3	45	.....	HOSE ASSY. } SEE PAGE F1	1
23	15155	LOCKWASHER-5/16	3	46	.....	ELBOW-MALE	1
23	164642	ELBOW-45 DEG., SPECIAL	1	47	17315	CONNECTOR-MALE	1
24	16487	O-RING	1	48	147766	KNOB	1
24	16589	LOCKNUT	1	49	164668	LEVER-GATE	1
25	.....	VALVE-CHECK, SEE PAGE G4	1	50	58951	SNAP RING	1
25	16487	O-RING	1	51	164663	BRACKET-HANDLING GEAR GATE	1
26	165660	HOSE ASSEMBLY	1	52	147770	SPRING	1
27	127045	CLAMP-HOSE	2	53	16828	CAPSCREW-HT, 3/8 UNC X 1 1/4	2
28	17309	ELBOW	2	54	.....	HANDLING GEAR ASSY.-SEE PAGE F3	1
29	165654	HOSE	1				
30	140208	VALVE-DUMP, SEE PAGE F9	1				
31	14387	PLUG-PIPE, 1/2	1				
32	.....	HOSE-TO PUMP, SEE PAGE F11	1				
33	.....	HOUSING-CONTROL VALVE, SEE PG.B1	1				
34	167574	TUBE ASSEMBLY	1				
35	165656	TUBE ASSEMBLY	1				
36	.....	VALVE-CONTROL, SEE PAGE G5	1				
36	164656	ELBOW	1				
37	16485	O-RING	1				
37	16587	LOCKNUT	1				
37	14500	ELBOW	1				

*FOR D8 TRACTOR SERIAL NO. 22A1 & UP, 35A1 & UP, 36A1-4468, 46A1-10724, 52A1 & UP, 68A1-1002 AND 583H PIPELAYER.

#FOR D8 TRACTOR SERIAL NO. 36A4469 & UP, 46A10725 & UP, 68A1003 & UP, D9 TRACTOR SERIAL NO. 66A1 & UP AND 594 PIPELAYER.

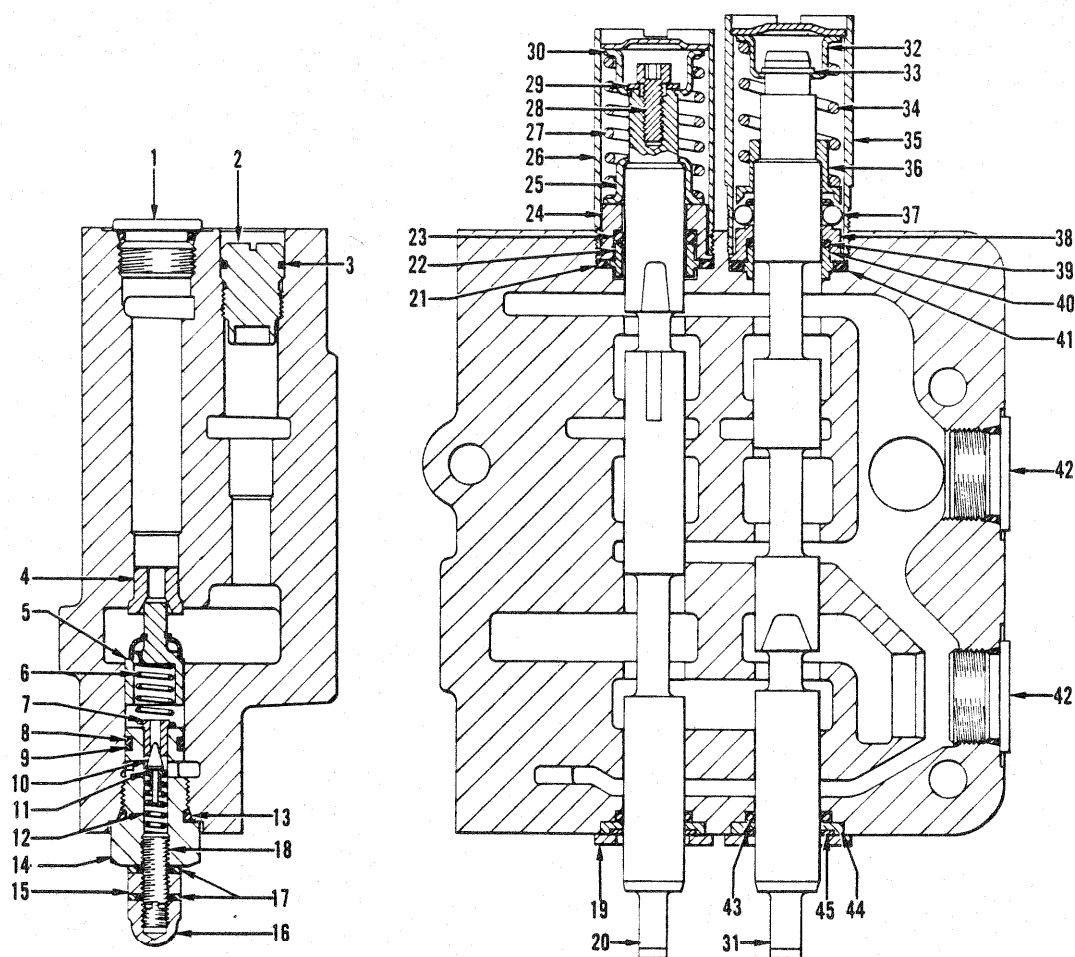
#FOR D9 TRACTOR SERIAL NO. 18A1 & UP, 19A1 & UP, 34A1 & UP, 49A1 & UP AND 50A1 & UP.

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

HYDRAULIC CONTROL VALVE

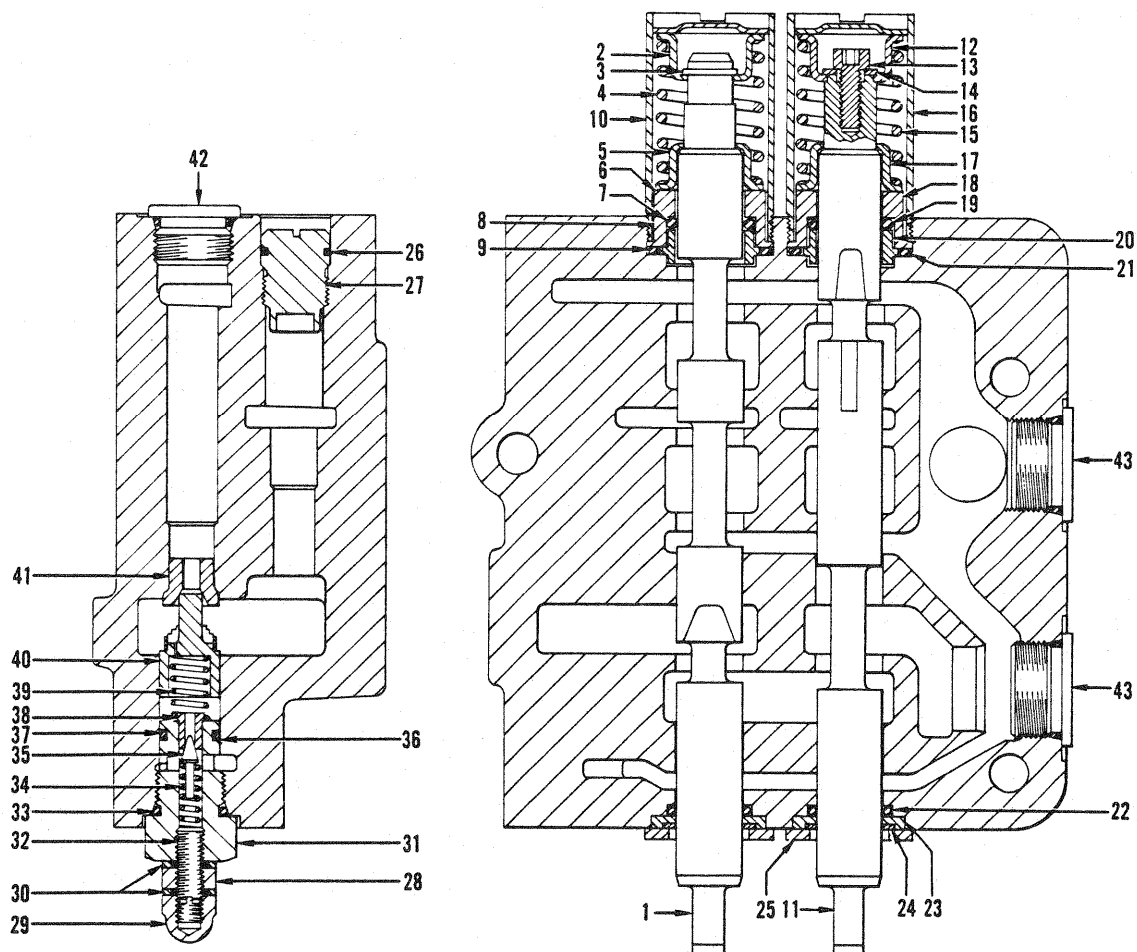


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
1	168732	VALVE ASSEMBLY-CONTROL	1
	233693	PLUG	4
	16485	O-RING	1
2	233492	CAP	2
3	118389	O-RING	2
4	166917	VALVE ASSEMBLY-RELIEF	1
	170988	SEAT	1
5	170989	POPPET ASSEMBLY	1
6	170993	SPRING	1
7	166919	SEAT-PILOT	1
8	159859	O-RING	1
9	159858	RING-BACK-UP	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

CONTROL VALVE



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
	164650	CONTROL VALVE ASSEMBLY	1
1	166903	SPOOL-SELECTOR	1
2	166904	RETAINER-SPRING	1
3	233495	SNAP RING	1
4	166911	SPRING-SPOOL	1
5	166905	RETAINER-SPRING	1
6	166910	RETAINER-SEAL	1
7	60836	O-RING	1
8	166909	RETAINER-SEAL	1
9	166912	O-RING	1
10	166906	CAP ASSEMBLY	1
11	166913	SPOOL-MODULATING	1
12	166904	RETAINER-SPRING	1
13	166914	SCREW	1
14	166922	WASHER	1
15	166911	SPRING-SPOOL	1
16	166906	CAP ASSEMBLY	1
17	166905	RETAINER-SPRING	1
18	166910	RETAINER-SEAL	1
19	60836	O-RING	1
20	166909	RETAINER-SEAL	1
21	166912	O-RING	1
22	60836	O-RING	2
23	233506	RETAINER-SEAL	2
24	233505	WIPER	2

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY.
		1 2 3 4	
25	233508	PLATE-RETAINER	2
	233460	LOCKWASHER	4
	166916	SCREW	4
26	118389	O-RING	2
27	233492	CAP	2
28	*233502	NUT-JAM	1
29	*233503	NUT-ACORN	1
30	*234823	SEAL	2
31	*234815	CAP	1
32	*159857	SETSCREW	1
33	*16484	O-RING	1
34	*166920	SPRING-PILOT	1
35	*234820	PLUNGER-PILOT	1
36	*159858	RING-BACK-UP	1
37	*159859	O-RING	1
38	*166919	SEAT-PILOT	1
39	*234814	SPRING	1
41	*166918	POPPET ASSEMBLY	1
42	*234812	SEAT	1
	233693	PLUG	4
	16485	O-RING	4
43	163660	PLUG	2
	16486	O-RING	2
	166912	O-RING-VALVE TO SUPPORT	1

*INCLUDED IN REPAIR KIT 166917.

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