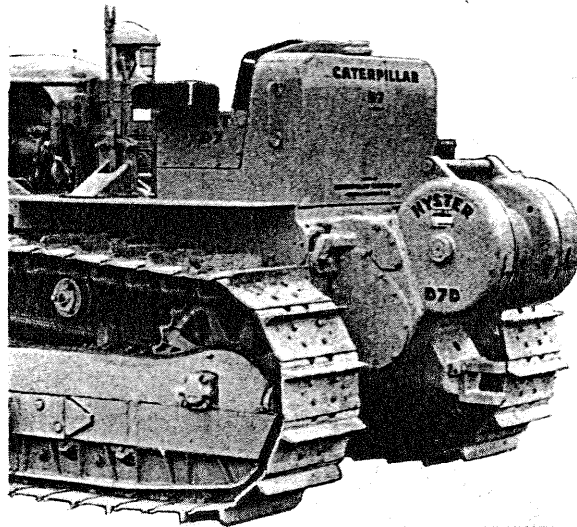


PARTS BOOK AND INSTRUCTION MANUAL

HYSTER[®]

D7D TOWING WINCH

DIRECT DRIVE ONLY



EFFECTIVE WITH
HYSTER NO. VWD-95457

HYSTER COMPANY

FACTORIES

Portland, Oregon ▪ Danville, Illinois ▪ Peoria, Illinois
Nijmegen, The Netherlands ▪ Sao Paulo, Brazil ▪ Irvine, Scotland
Kewanee, Illinois ▪ Sydney, Australia (licensee)

FORM 842C 4/61

LITHO IN U.S.A.

1000

599194W FOR PARTS AND SERVICE CONTACT

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 and name of part.

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

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.

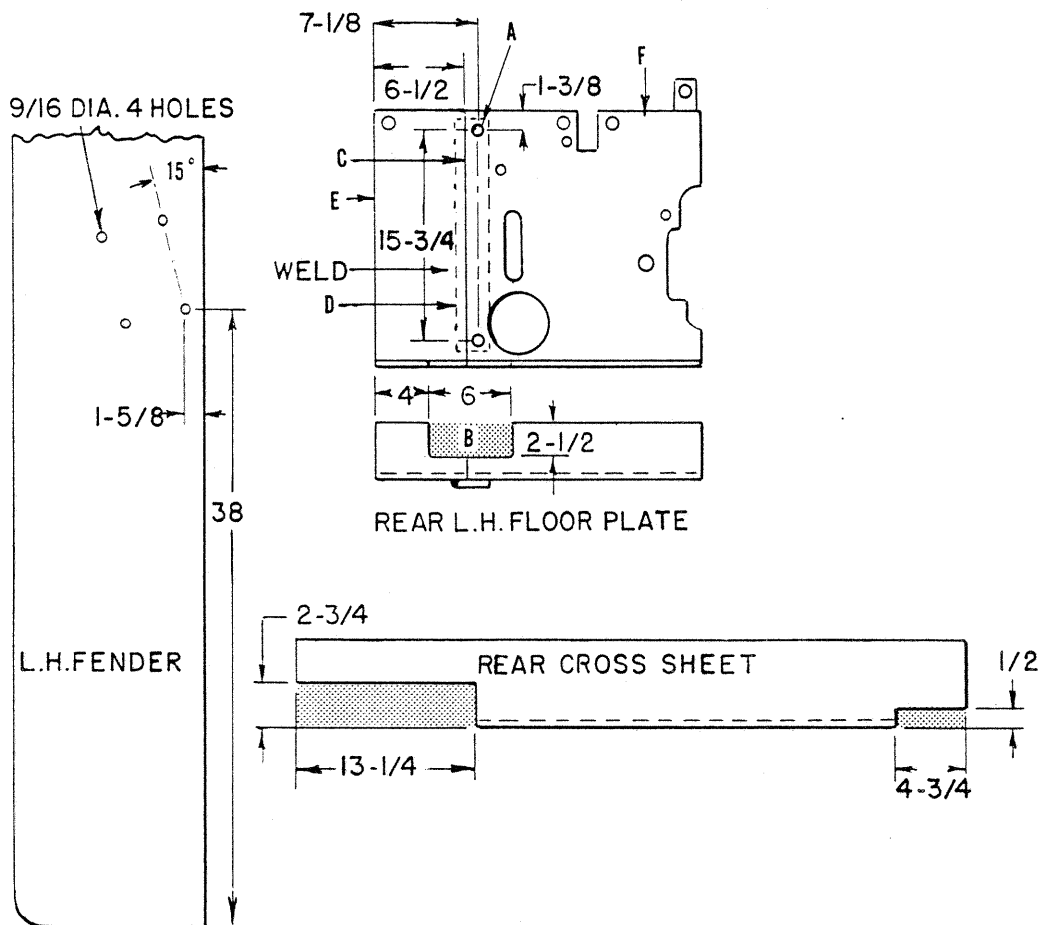
*We reserve the right to make changes in design or add improvements
without incurring the obligation to make such changes in
Winches previously manufactured.*

Section A

INDEX

GEAR TRAIN	A12
INSTALLATION OF WINCH	A1-A3
LUBRICATION INSTRUCTIONS	A9-A11
OPERATING INSTRUCTIONS	A4-A6
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INSTALLATION INSTRUCTIONS



D7 Tractor Alterations

NOTE: Burn out shaded areas.

1. Move tool box from L. H. to R. H. fender.
2. Remove rear cross sheet and alter as shown.
3. Remove rear L. H. floor plate and drill two 9/16" holes "A." Burn out area "B," and cut along line "C." Bolt bar "D," Hyster Part No. 96306, to under side of part "F" and weld both ends of bar "D" to part "E" with 3/16" fillet weld. Place 2 x 3 intermittent weld between. Do not weld bar "D" to part "F."
4. Drill four 9/16" holes in L. H. fender as shown, using handlever bracket as template.

GENERAL INDEX

SECTION A

Service, Operation and Installation Instructions

SECTION B

Winch Assembly, Mounting Studs

SECTION D

Gear Train and Shaft Groups

SECTION E

Brake and Clutch Shift Mechanism

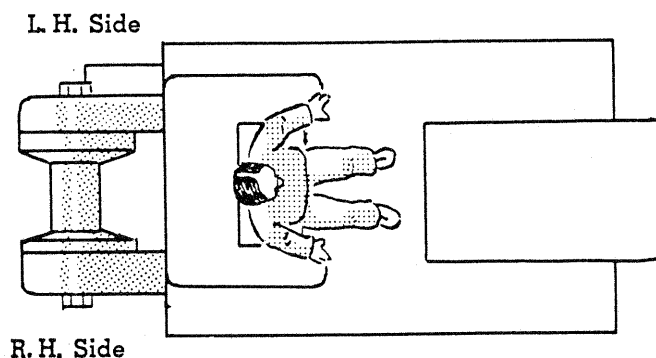
SECTION G

Optional Equipment

SECTION Q

Numerical Index

Parts Referred to in This Book as Right or Left Hand Parts
Are in Accordance with the Sketch Below



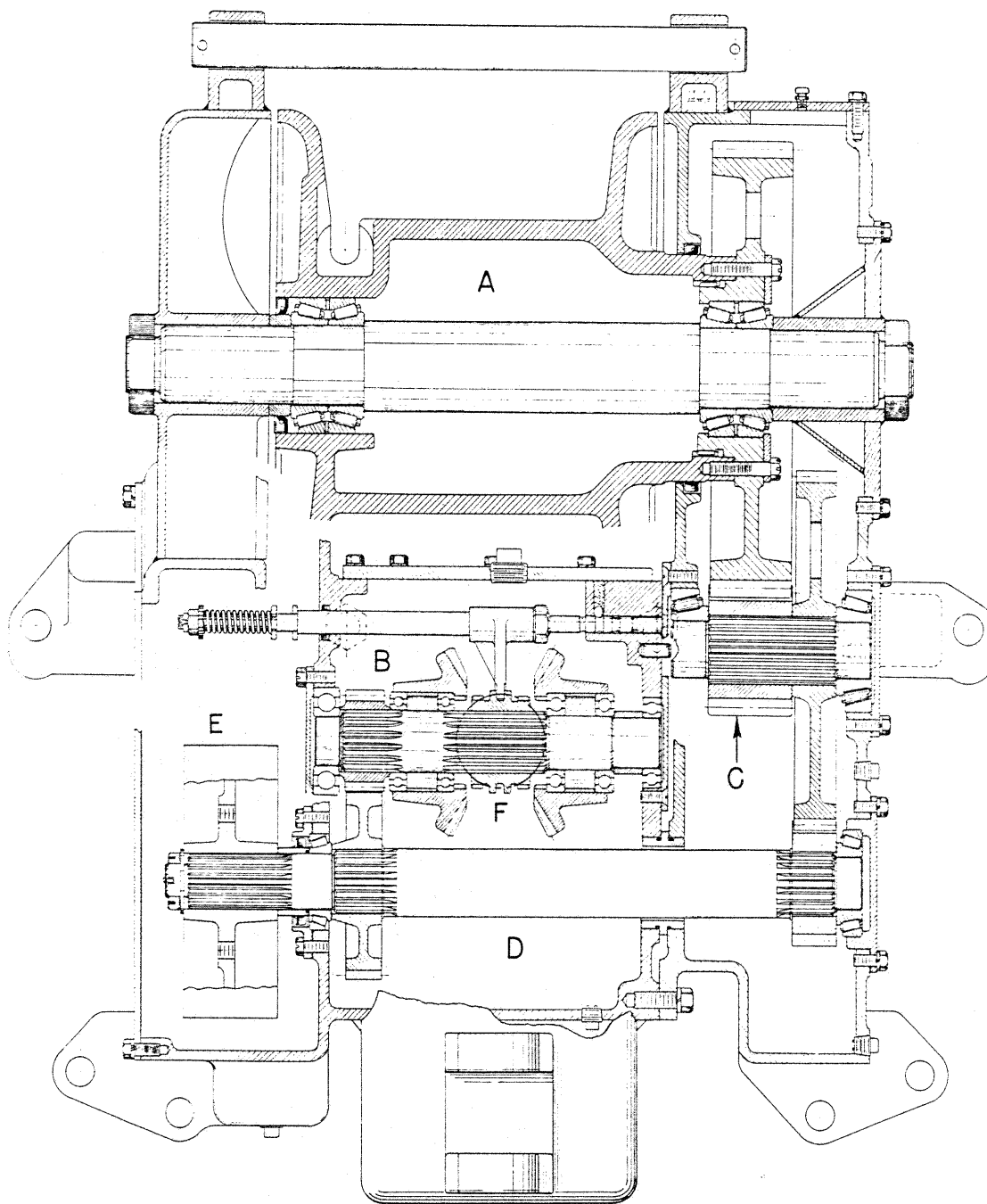
CAUTION!

Never Attempt to Clean, Oil or Adjust a Machine
While it is in Motion

Strict Observance of this Rule will Prevent Accidents

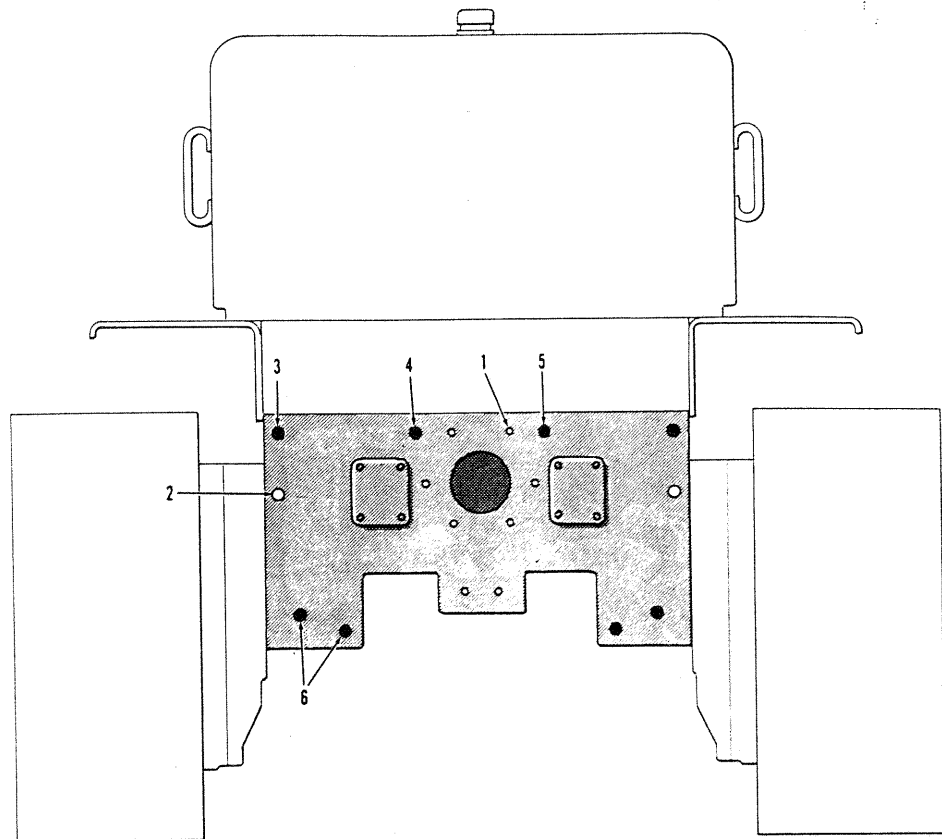
NOTE: All Studs and Capscrews used in this Winch
are Heat-treated.

GEAR TRAIN



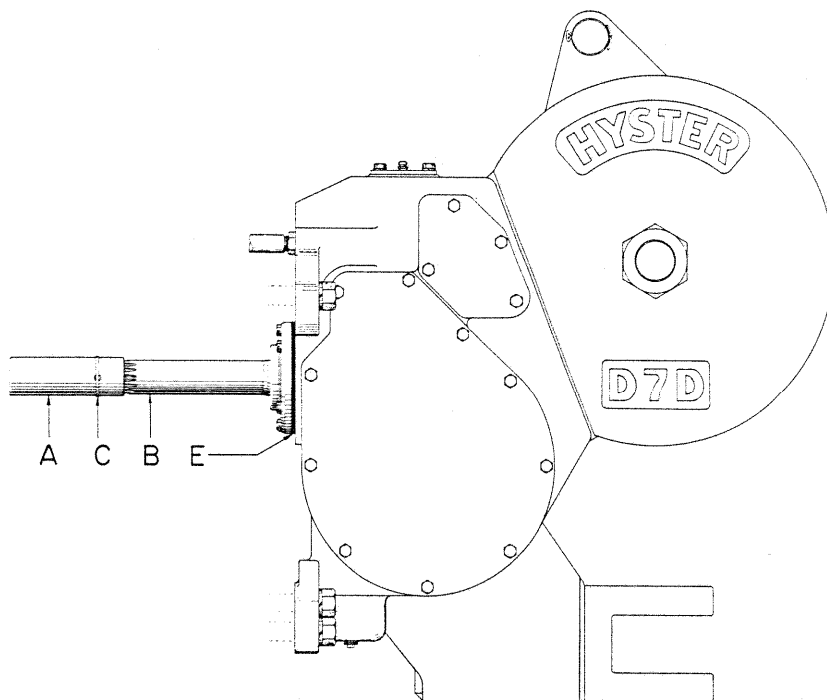
- | | | |
|---|-------|-----------------------------|
| A | | Drum Shaft Group |
| B | | Bevel Gear Shaft Group |
| C | | Intermediate Gear Group |
| D | | Brake Shaft Group |
| E | | Brake and Shifter Mechanism |
| F | | Power Take-off Group |

INSTALLATION INSTRUCTIONS—Continued
MOUNTING D7D WINCH ON D7 "CATERPILLAR" TRACTOR
Serial No. 7MI and Up

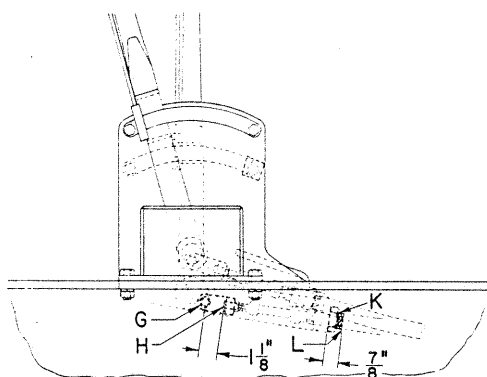


1. Remove the tractor drawbar brackets and drawbar.
2. Remove tractor power take-off cover and plug the six tapped holes at (1) with corks.
3. Remove two studs (2) and install them at (3). Plug holes at (2) with corks.
4. Install one stud $1\frac{1}{4}$ " dia. x $3\frac{1}{2}$ " long at (4) and one stud $1\frac{1}{4}$ " dia. x $4\frac{1}{8}$ " long at (5). Studs (6) are drawbar studs.
5. Check rear face of transmission case for high spots particularly of welds near mounting studs where winch pads are to make contact. Grind or file to insure proper fit.

INSTALLATION INSTRUCTIONS—Continued



1. Be sure that coupling "A" is secured to shaft "B" at "C" with pin and lock ring.
2. Install "O" ring seal on bearing carrier at "E."
3. Clean mounting surfaces and be sure that tractor P.T.O. cover bolt holes are plugged.
4. Attach sling, move winch toward tractor, and line up splines on tractor P.T.O. with splines on coupling "A."
5. When winch is in place, install nuts and lockwashers on the two upper mounting studs. Install nuts and lockwashers on the remaining mounting studs and tighten all mounting nuts securely.



6. Install handlever bracket and connect control cables as follows: Pass cables under seat and attach to handlevers with ends of cable in rod ends "H" $1\frac{1}{8}$ " from center line of pins "G," and nuts "K" $\frac{7}{8}$ " from threaded portions "L."
7. Check and adjust clutch shifter and brake lining.
8. Recheck to see that all fastenings are tight.

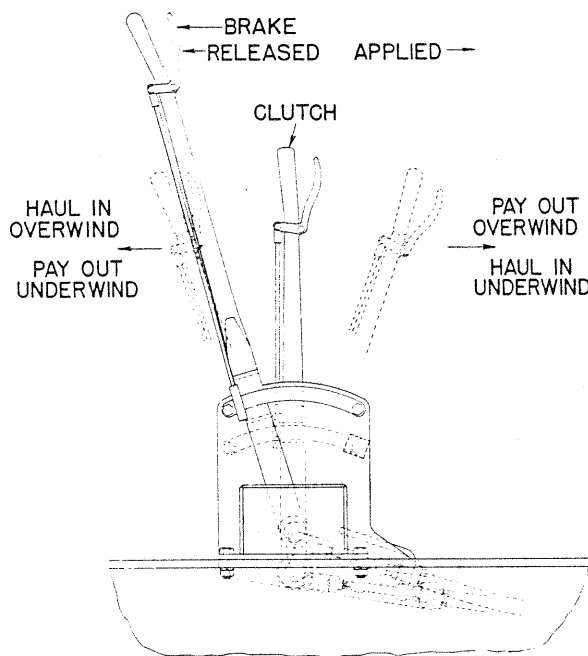
OPERATING INSTRUCTIONS

TRACTOR LUBRICATION

FOR STATIONARY WORK

CAUTION

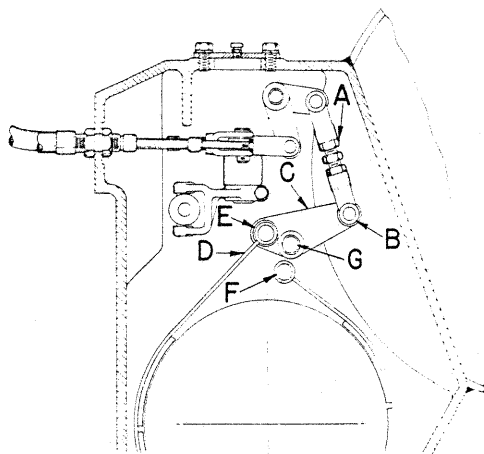
In order to provide adequate lubrication for the D7 tractor upper transmission shaft bearings, always engage flywheel clutch, leave forward-reverse lever in gear, and speed selector lever in neutral when operating winch or other rear-mounted attachments.



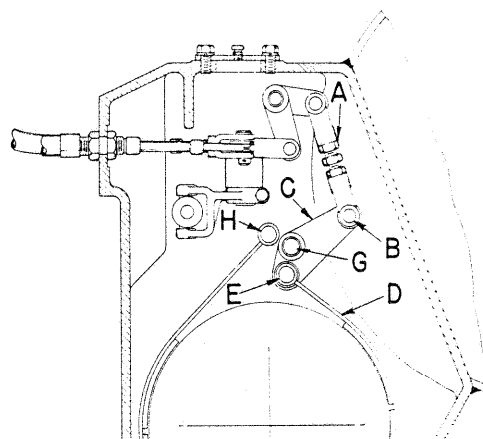
1. To apply the winch brake, pull the brake handlever back. Push forward to release.
2. **CAUTION:** With a standard brake, the brake handlever must be released before operating the winch. The tractor master clutch must be disengaged before the winch brake is applied to avoid stalling the tractor motor or burning the winch brake band.
3. The optional automatic brake should be applied while hauling in a load, but must be released to pay out line.
4. Disengage tractor master clutch before shifting gears in the winch.
5. To haul in a load, overwinding, push clutch handlever forward. Pull back to pay out line. For underwind, pull handlever back to haul in and push forward to pay out line.
NOTE: Unless otherwise specified, all winches are set to overwind the cable (over the top of the drum barrel).
6. Disengage winch clutch before moving tractor.

CAUTION: Do not apply more handlever effort than is necessary to adequately shift or brake winch. Excessive handlever loads will decrease push-pull cable life.

OPERATING INSTRUCTIONS—Continued



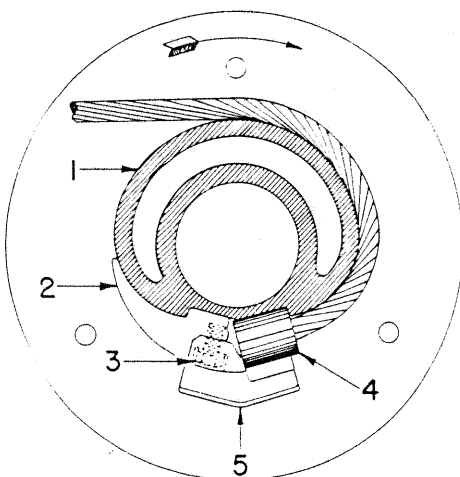
OVERWINDING ARRANGEMENT



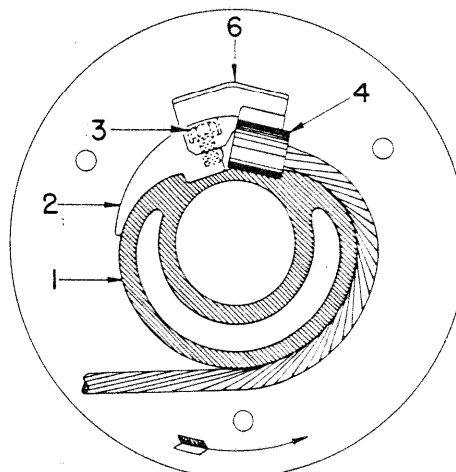
UNDERWINDING ARRANGEMENT

Brake Band Change From Overwind To Underwind

1. Remove pins "B," "E," "F" and "G."
2. Turn crank "C" over and re-install pins at "B," "E," "G," and "H."
3. Loosen jam nut on link "A" and adjust so there is approximately 1/32" clearance between brake lining and drum with brake handle in fully released position.



OVERWINDING

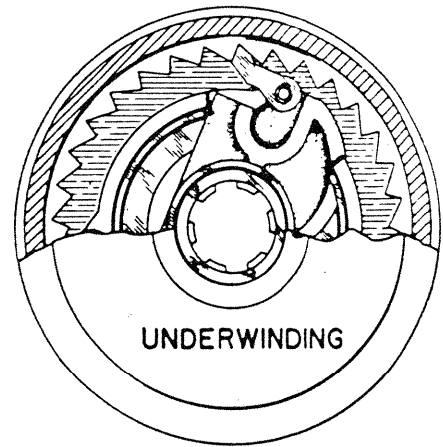


UNDERWINDING

Attaching Cable to Drum—Overwind or Underwind

1. Install ferrule (4) and lock in place with filler (2) and ferrule lock (5) for overwind [(6) for underwind] using capscrew (3).

OPERATING INSTRUCTIONS—Continued

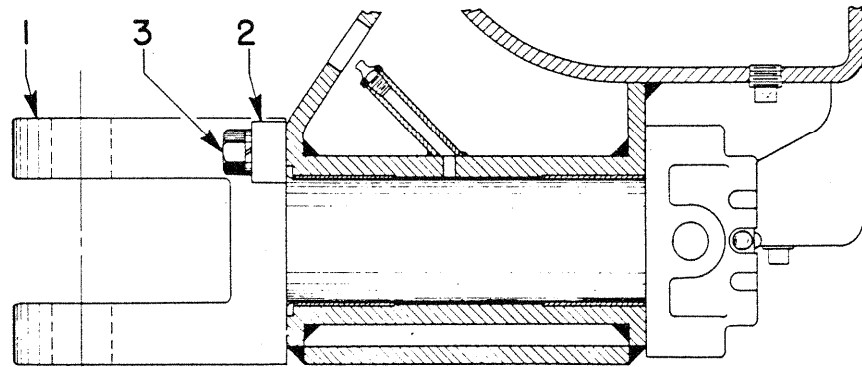


Automatic Brake—Optional

1. To change from overwind to underwind, remove automatic brake and reinstall with word "Underwind" to the outside.

Drawbar For Arch Service

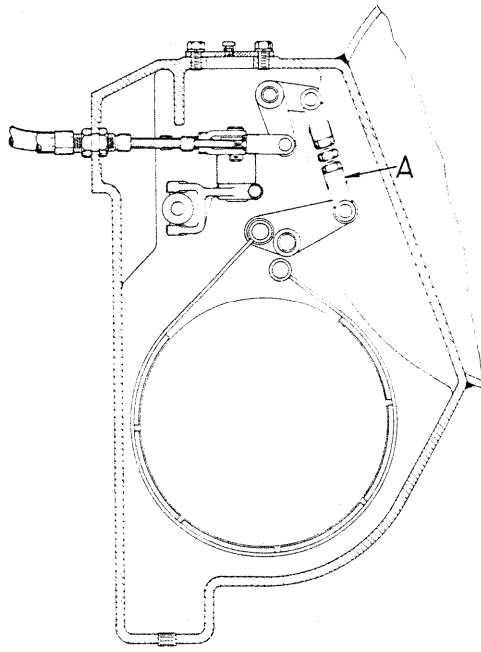
(For Winches prior to Serial No. A47P2148)



1. If coupler in logging arch is swiveling, lock drawbar with plates (2) and capscrews (3).
2. If coupler in logging arch is locked, remove capscrews (3) and plates (2).
3. Keep castellated nut on drawbar bolt tight and locked with cotter.

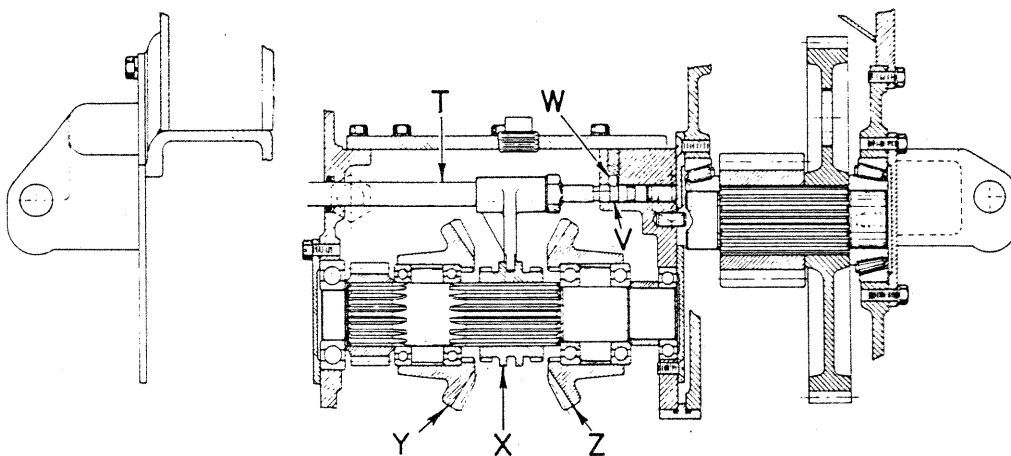
SERVICING INSTRUCTIONS

Brake Band Adjustment



1. Remove small cover on the L. H. side of winch.
2. Push brake handlever forward into the "release" position.
3. Loosen jam nut on link "A" and turn link as required. Allow sufficient clearance between drum and lining to prevent "dragging."

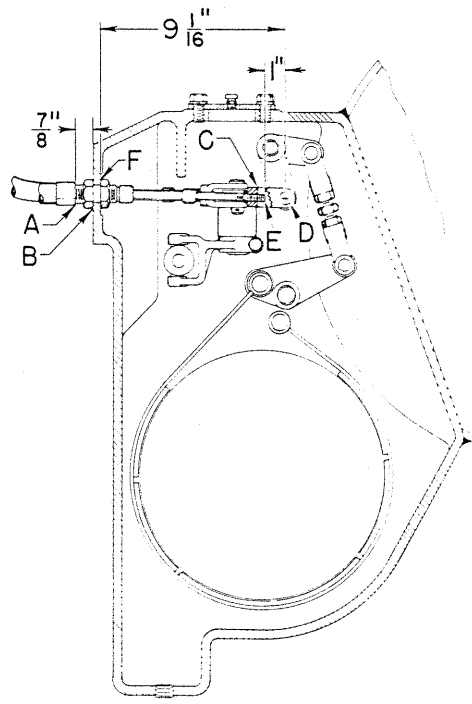
Shifter Adjustment



1. Engage clutch handlever in notch on quadrant.
2. Remove winch transmission top cover.
3. Engage ball "W" in center notch "V" and check to see if clutch "X" is in the exact center between gears "Y" and "Z." If not, proceed as follows:
4. Loosen jam nut holding shifter fork.
5. Turn shaft "T" until shifter fork centers clutch "X" and tighten jam nut.

SERVICING INSTRUCTIONS—Continued

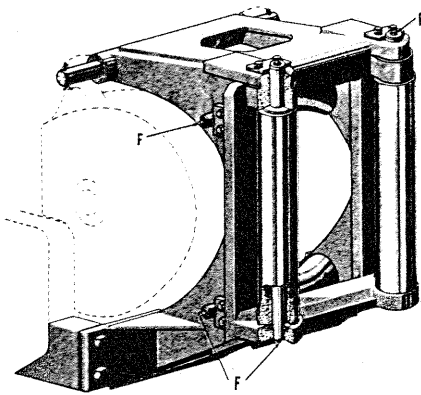
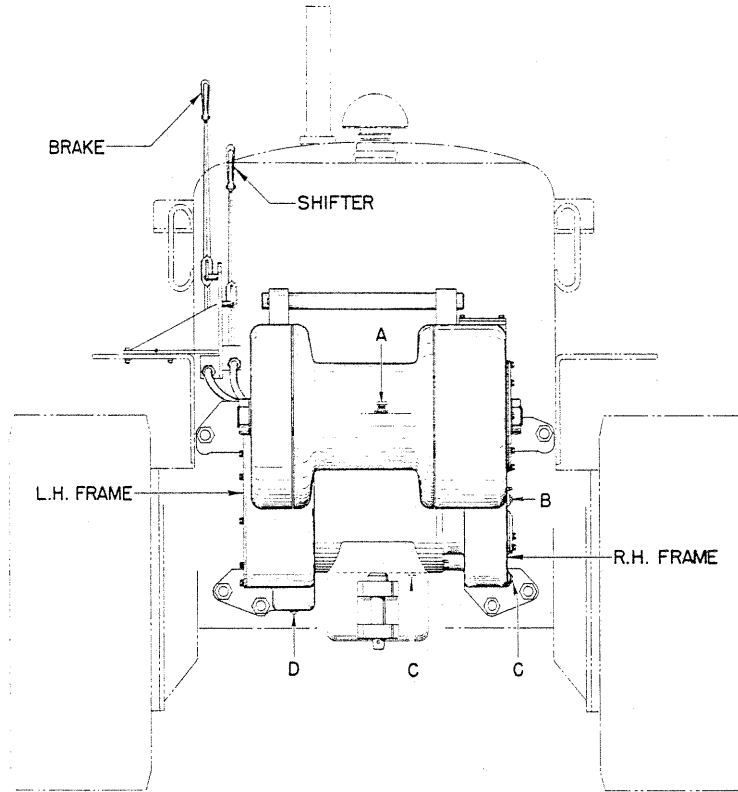
Resetting Control Cables



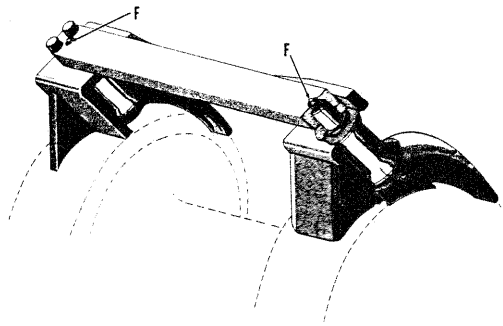
If Control Cables are replaced, reset as follows:

1. Place brake handlever in released position and clutch handlever in neutral.
2. At winch end, adjust both cables with end of threaded portion "A" $\frac{7}{8}$ " from milled face of winch case at "B." Adjust clutch cable rod end to match crank.
3. Set brake cable with end of cable "E" in rod end "C" 1 " from centerline of rod end pin "D" and $9\text{-}1/16$ " from center line of pin "D" to inside face of winch case "F."
4. At handlever end, set cables as given in installation instructions on Page A3.

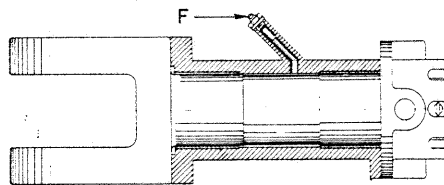
LUBRICATION CHART



Fairlead Assembly



Cable Guide Rolls



Swiveling Drawbar

LUBRICATION INSTRUCTIONS

Every Eight Hours or Daily

Swiveling Drawbar, Fairlead and Cable Guide Rolls (optional):

Lubricate with pressure gun grease.

Rod End Pins:

Rod end pins, shifter rods, lever fulcrums, pin connections and other moving parts should be lubricated with SAE 30 engine oil.

Every 50 Hours or Weekly

Transmission:

Check oil level at plug "B;" add oil if necessary.

If winch is new, drain, flush and refill with new oil.

Note: When checking oil level, if the tractor motor is running, throw out the master clutch so that winch gears are stationary; otherwise, a false reading will result.

Every 200 Hours or Four Weeks

Loosen plugs "C" and drain any accumulation of water in the transmission. Tighten plugs when oil appears, and check oil level.

Remove plug "D" and drain any water which may have accumulated in the brake compartment. Replace plug and tighten securely.

Every 1000 Hours or Six Months (Under Normal Conditions)

Transmission:

Drain, flush and refill with new oil. A straight mineral (or if preferred, same oil as used in tractor) should be used. SAE 90 mineral oil is satisfactory for temperatures down to +30°F; SAE 80 for temperatures below 32°F; SAE 80 diluted with kerosene to provide fluidity, for extremely cold temperatures.

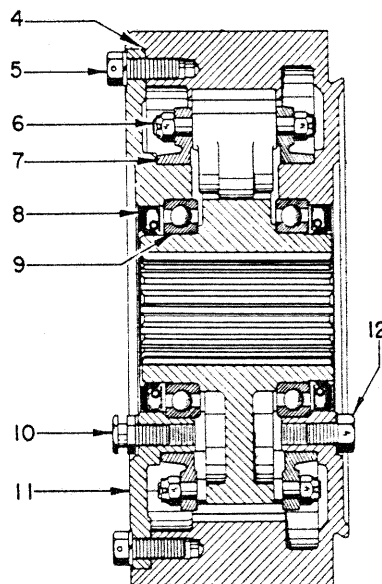
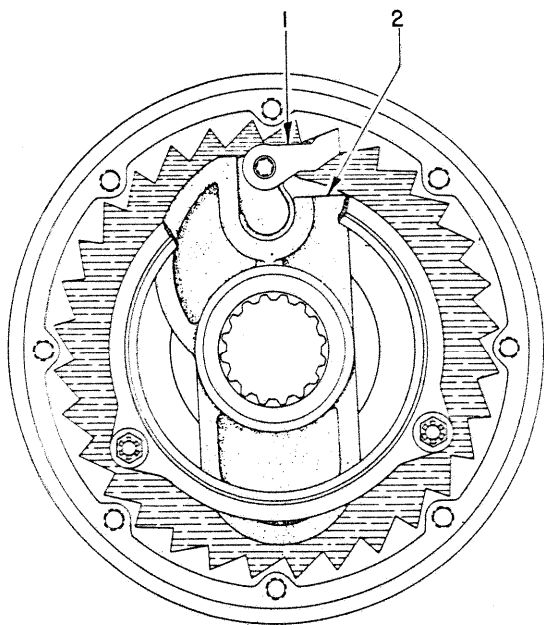
To simplify maintenance, use of identical oil as used in tractor transmission is recommended for all weather conditions.

Drain through plugs "C." Refill through plug "A" up to level plug "B."

CAPACITY 8 Gallons

SERVICING INSTRUCTIONS—Continued

Automatic Brake (Optional)



Every 1000 hours the brake should be cleaned and repacked with a high melting point grease. Proceed as follows:

1. Remove both covers on the L. H. side of winch.
2. Remove pins in the ends of brake band and remove brake band.
3. Remove cotter and castellated nut from end of brake shaft and pull the brake assembly out.
4. Remove lockwire and the six drilled head cover capscrews (5).
5. Remove the cover (11) with appropriate puller, being careful not to damage oil seals (8). Note: Capscrews (12) and fitting (10) fill puller holes. Be sure to replace copper gaskets.
6. Pull out hub (2) assembled with pawl (1) and drag rings (7). Remove castellated nuts and links (6) to replace drag rings, if required.
7. Clean all parts thoroughly and repack with one and a half pounds of high melting point grease. Apply carefully to bearings (9) and all wearing surfaces.

Caution! Do not fill brake completely with grease. Item (10) is a vent plug. Do not attempt to grease through this fitting.

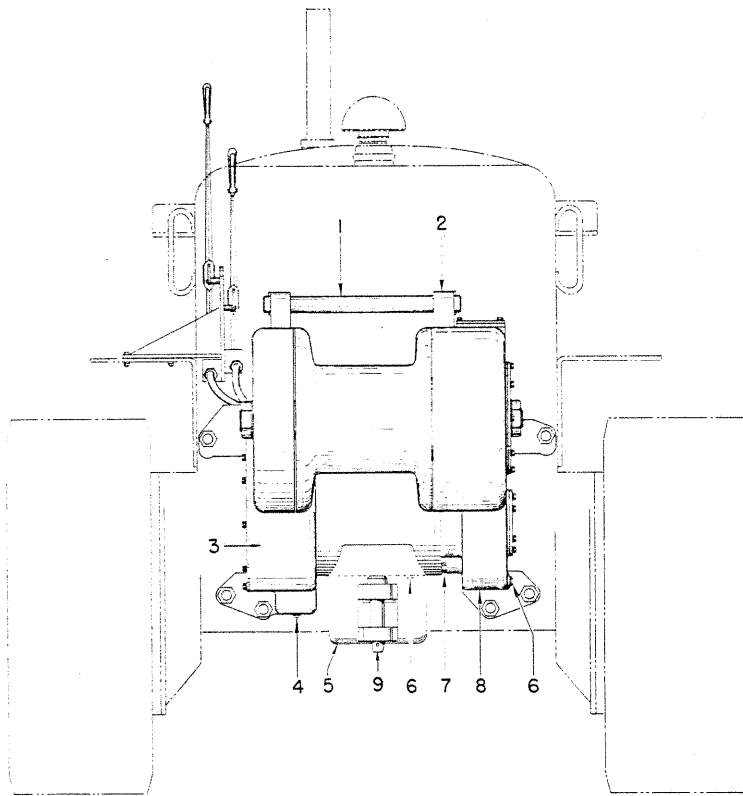
8. After servicing, replace center assembly removed in Instruction 6.
9. Clean gasket surfaces thoroughly and use new gasket (4). Install oil seals (8) with lips turned in as shown.
10. Coat both sides of gasket (4) with Plastic Lead Seal No. 2 and assemble cover (11) onto case being careful not to damage oil seals (8).
11. Use a liberal amount of Plastic Lead Seal No. 2 in each cover capscrew hole. Install capscrews (5) and tighten securely. Replace lockwire through capscrew heads.
12. Install assembled brake wheel on shaft with word "Overwind" to the outside for overwind operation. Lock in place with nut and cotter removed in Instruction 3.
13. Install brake band on brake wheel, anchoring with pins removed in Instruction 2.
14. Replace covers removed in Instruction 1.

Section B

INDEX

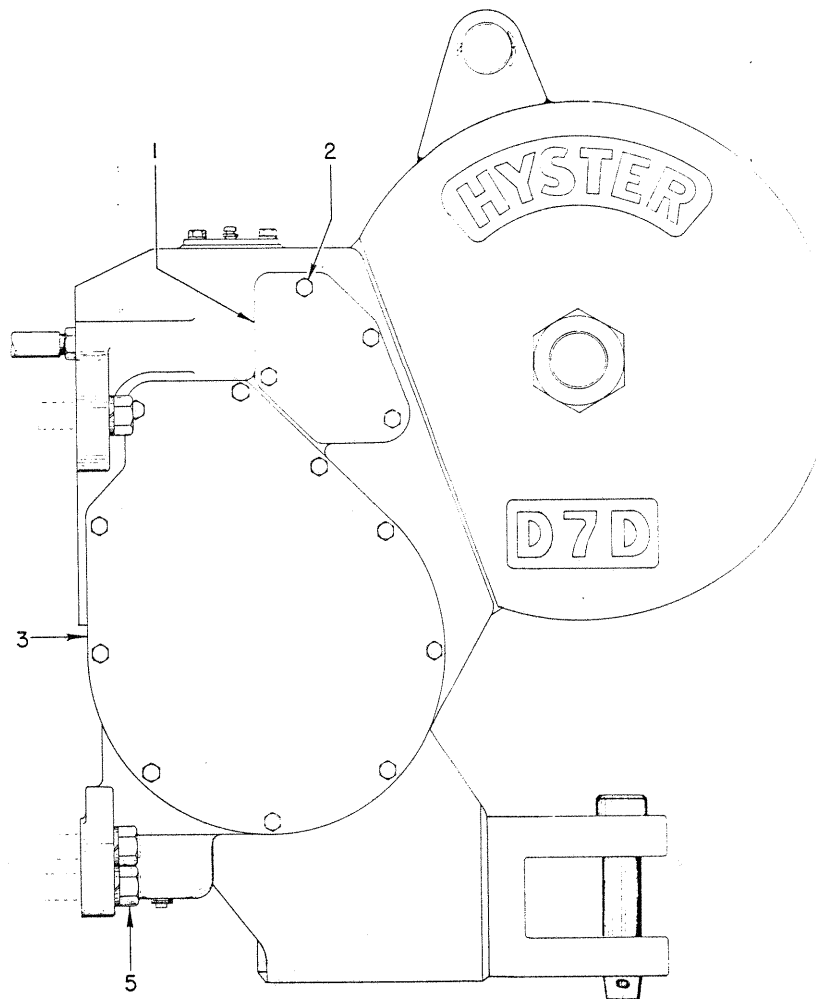
WINCH ASSEMBLY—REAR	B1
WINCH ASSEMBLY—L. H. SIDE	B2
MOUNTING STUDS	B3

WINCH ASSEMBLY — REAR



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	92606	Rod—Tie	1
	15272	Cotter— $\frac{3}{8}$ x 3	2
2	93771	Bracket—Tie Rod	2
3	95856W	Housing—Transmission	1
		(Standard—For Non-Swiveling Drawbar)	
3	94629W	Housing—Transmission	1
		(For use with "Caterpillar" Drawbar)	
4	15304	Pipe Plug— $\frac{3}{4}$	3
5	95851W	Bracket—Drawbar	1
		(First used on Serial No. A47P2148)	
	92598A	Bracket—Drawbar (Last used on S. N. A47P2147)	1
6	35503	Pipe Plug— $\frac{3}{4}$, Magnetic	2
7	16800	Capscrew—Hardened, $\frac{3}{4}$ UNF x 2	10
	15162	Lockwasher— $\frac{3}{4}$	10
8	92604A	Frame—Side, R. H. (With Hyster Drawbar)	1
	93957W	Frame—Side, R. H. (With "Caterpillar" Drawbar) ..	1
9	94369	Pin—Drawbar	1
	15273	Cotter— $\frac{3}{8}$ x $2\frac{1}{2}$	1

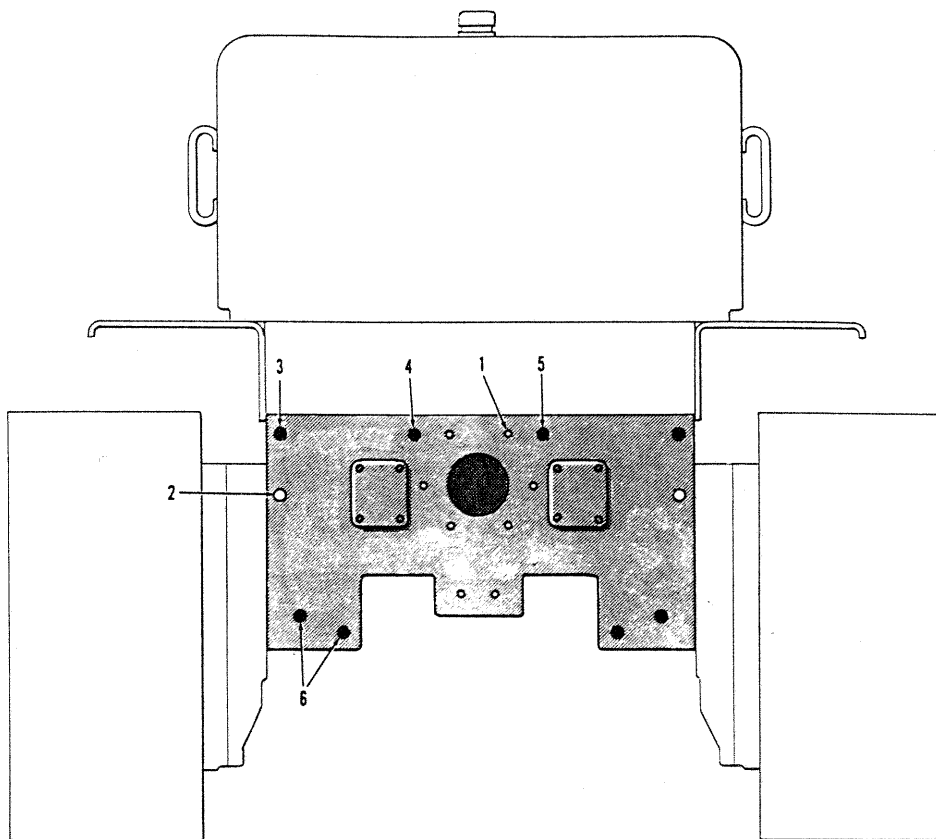
WINCH ASSEMBLY — L.H. SIDE



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	{ 92657	Plate—Cover	1
	* 92656	Gasket	1
2	{ 16280 16820	Capscrew—Hardened, 1/2 UNF x 1	14
	15158	Lockwasher—1/2	14
3	{ 92659	Plate—Cover	1
	* 92658	Gasket	1

*Included in Gasket Kit No. 92993A.

MOUNTING STUDS AND ALTERATION PARTS



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	18004	Cork	6
2	18001	Cork	2
3		Stud..... } Tractor Drawbar (From Location 2)..	2
	15018	Nut..... } 1 1/4 UNF	2
	15168	Lockwasher } 1 1/4	2
	92672	Stud	1
4	32796	Nut—Jam, 1 1/4 UNF	1
	16088	Lockwasher—1-5/16	1
	6694	Stud	1
5	32796	Nut—Jam, 1 1/4 UNF	1
	16088	Lockwasher—1-5/16	1
		Stud..... } Tractor Drawbar	4
6	15018	Nut..... } 1 1/4 UNF	4
	15158	Lockwasher } 1 1/4	4

PARTS NOT ILLUSTRATED (For Altering Tractor Floor Plate)

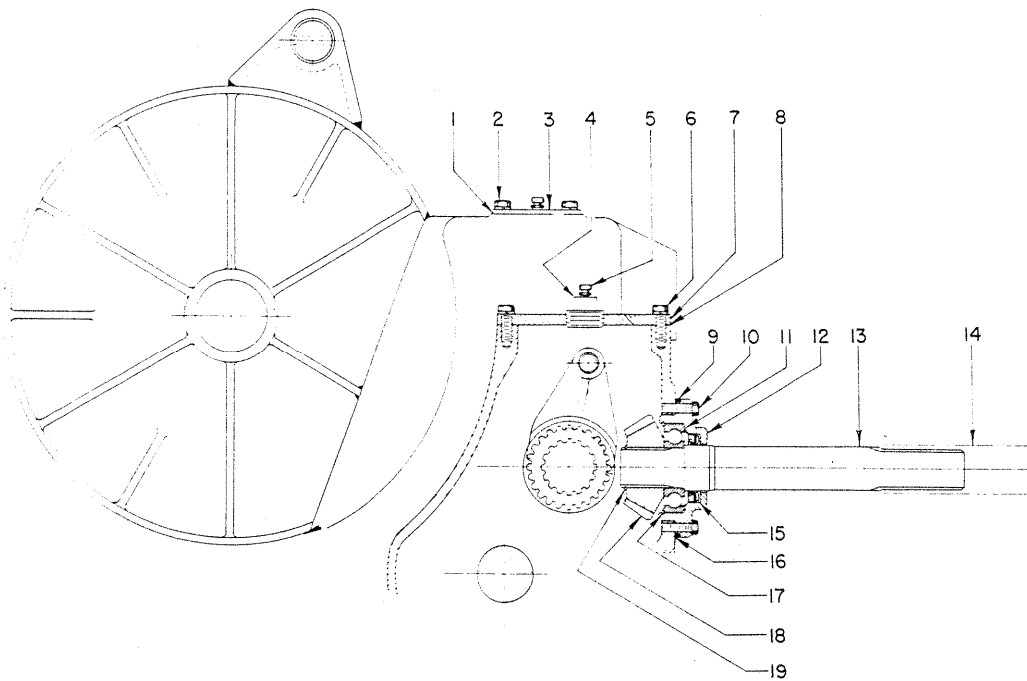
96306	Bar—Tapping Strip	1
16642	Capscrew—Hardened, 1/2 UNF x 3/4	2
15158	Lockwasher—1/2	2

Section D

INDEX

BEVEL GEAR SHAFT GROUP	D2
BRAKE SHAFT GROUP	D4
CABLE-LOCK GROUP	D6
DRUM SHAFT GROUP	D5
INTERMEDIATE GEAR GROUP	D3
POWER TAKE-OFF GROUP	D1

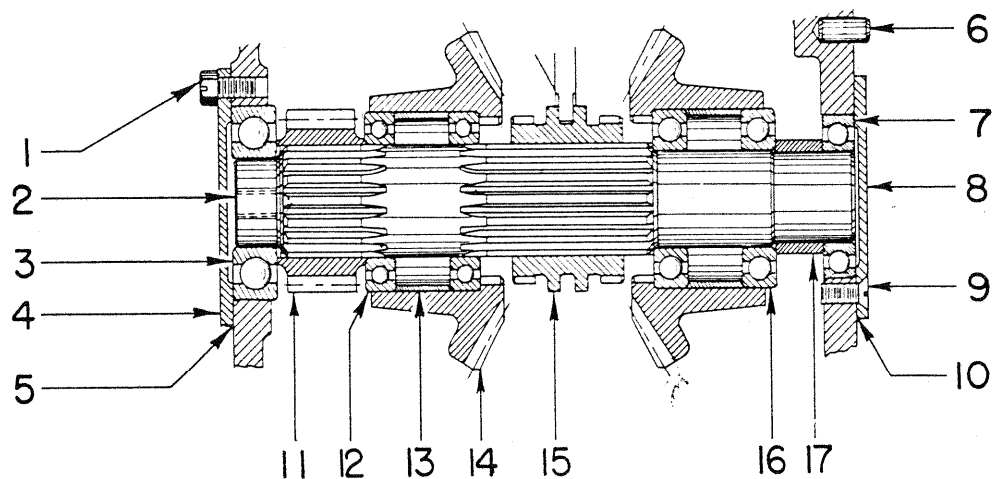
POWER TAKE-OFF



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	* 92664	Gasket	1
2	{ 16820	Capscrew—Hardened, 1/2 UNF x 1	4
	{ 15158	Lockwasher—1/2	4
3	92665	Plate—Cover	1
4	93738	Plug—Vent	1
5	21420	Plug—Breather	2
6	{ 16807	Capscrew—Hardened, 1/2 UNF x 1 1/2	9
	{ 15158	Lockwasher—1/2	9
7	92661	Plate—Cover	1
8	* 92660	Gasket	1
9	46389	"O" Ring	1
10	{ 26379	Capscrew—Drilled Head	6
	{	Lockwire	1
11	41310L	Bearing	1
12	92668	Carrier—Bearing	1
13	92669	Shaft—Power Take-off	1
	{ 33785	Coupling ("Caterpillar" No. 7B-2719)	1
14	{ 33786	Pin ("Caterpillar" No. 1A-4653)	1
	{ 9528	Snap Ring ("Caterpillar" No. 1A-5803)	1
15	44552	Oil Seal	1
16	92667	Shim Set	1
17	35573	Snap Ring	1
18	92666	Gear—Bevel (24 teeth)	1
19	12916	Snap Ring	1

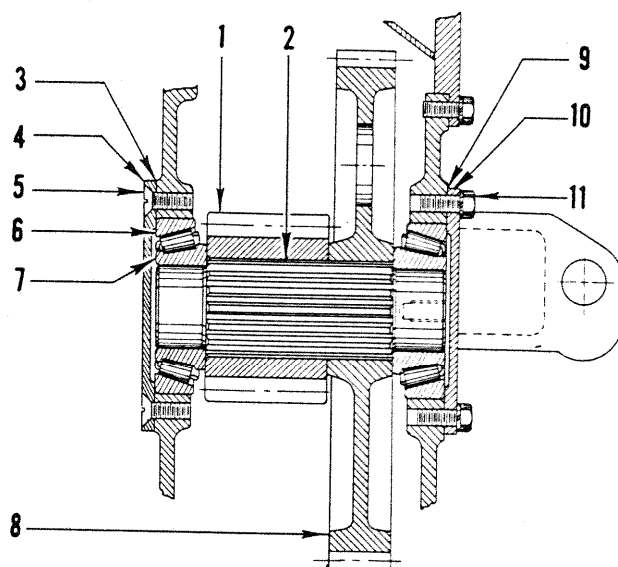
*Included in Gasket Kit No. 92993A.

BEVEL GEAR SHAFT GROUP



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	12496	Place Bolt— $\frac{1}{2}$ UNF x 1	6
2	92635	Shaft	1
3	41311	Bearing	1
4	92634	Retainer	1
5	92633	Shim Set	1
6	46224	Pin—Dowel	1
7	41211	Bearing	1
8	92642	Plate—Cover	1
9	{ 16352	Capscrew—Flat Head, $\frac{1}{2}$ UNF x $1\frac{1}{4}$, Hex Socket ..	6
	{ 15929	Lockwasher— $\frac{1}{2}$, Countersunk	6
10	92641	Shim Set	1
11	92636	Gear (20 Teeth)	1
12	44314	Bearing	2
13	92638	Spacer	2
14	92637	Gear—Bevel (41 teeth)	2
15	92639	Clutch—Sliding	1
16	43212	Bearing	2
17	92640	Spacer	1

INTERMEDIATE GEAR GROUP



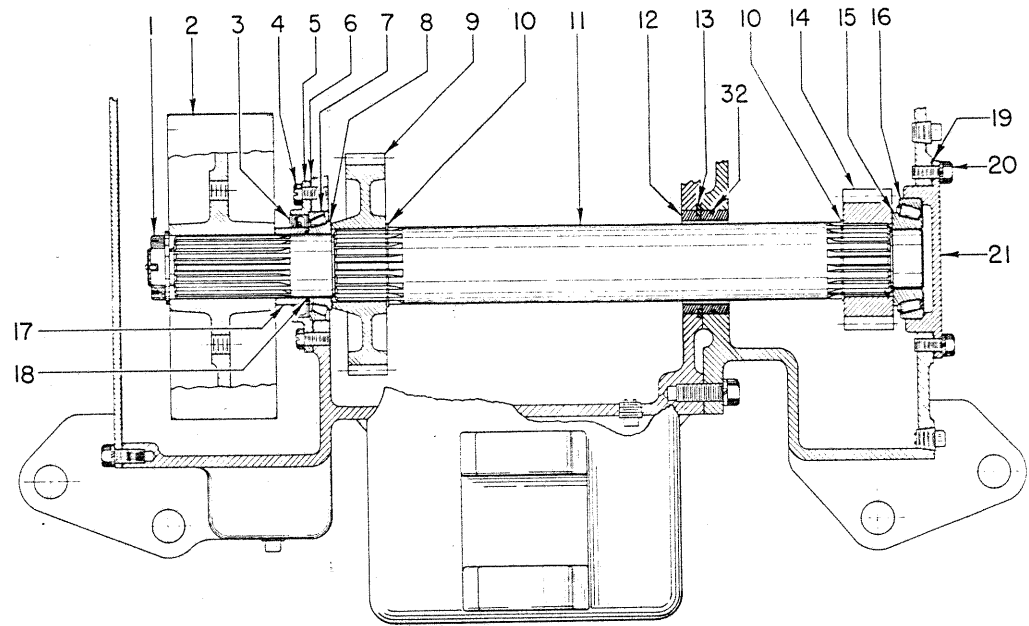
Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	92621	Gear (15 teeth)	1
2	92620	Shaft—Intermediate	1
3	‡ 92618	Gasket	1
4	92619	Cover	1
5	{ 16352	Capscrew—Flat head, 1/2 UNF x 1 1/4	6
	{ 15929	Lockwasher—1/2	6
6	30091	Bearing Cup	2
7	230309	Bearing Cone	2
8	{* 92622	Gear (61 teeth) (Standard Winch)	1
	{† 93480	Gear (64 teeth) (Lo-Speed Winch)	1
9	92624	Shim Set	1
10	92623	Cover	1
11	{ 37562	Capscrew—Hardened, 1/2 UNF x 1 1/4	6
	{ 15158	Lockwasher—1/2	6

*Part of Standard Speed Gear Set 94647A.

†Part of Optional Lo-Speed Gear Set 93371A.

‡Included in Gasket Kit No. 92993A.

BRAKE SHAFT GROUP



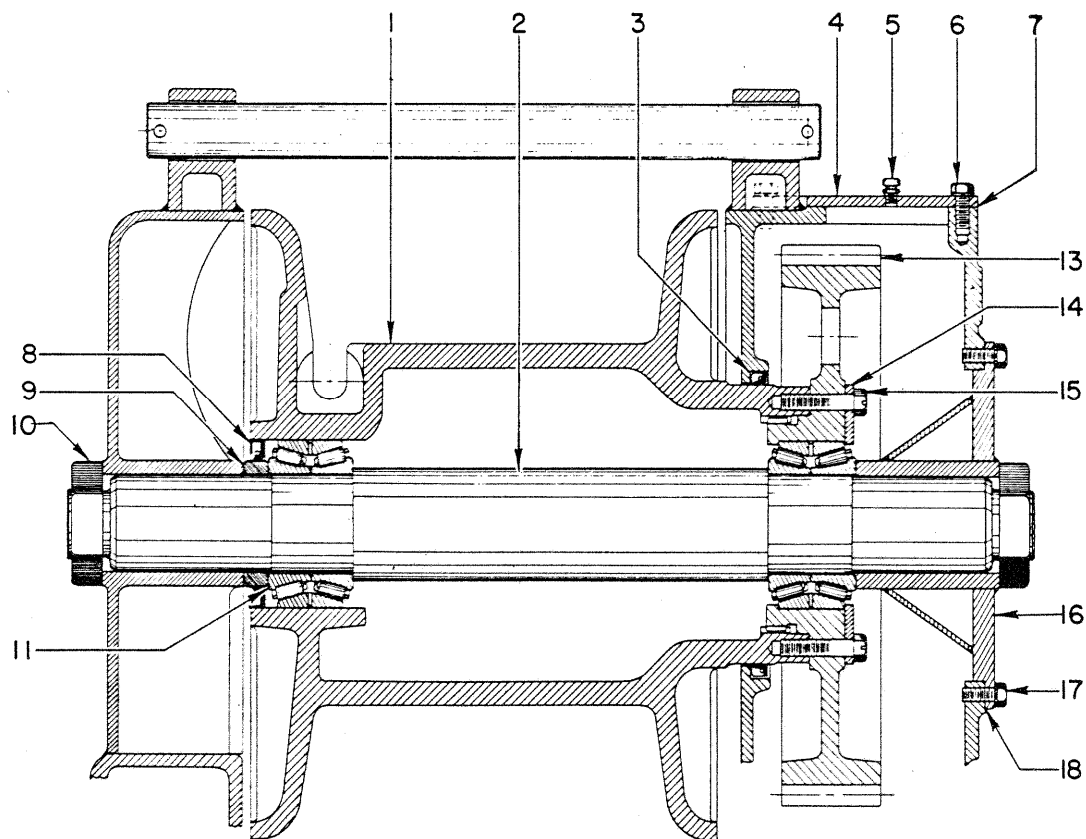
Ref. No.	Hyster Part No.	NAME OF PART	Qty. Req'd.
1	{ 6466	Nut	1
	{ 15250	Cotter—3/16 x3	1
2	92652	Wheel—Brake	1
3	44485	Oil Seal	1
4	12496	Place Bolt—1/2 UNF x 1	6
5	92650	Retainer—Oil Seal	1
6	‡ 92649	Gasket	1
7	230311	Bearing Cup	1
8	230310	Bearing Cone	1
9	92647	Gear (41 teeth)	1
10	12915	Snap Ring	2
11	92643	Shaft—Brake	1
12	93788	Spacer	1
13	23107	Snap Ring	1
14	{* 92646	Gear (20 teeth) (Standard Winch)	1
	{† 93479	Gear (17 teeth) (Lo-Speed Winch)	1
15	30078	Bearing Cone	1
16	30079	Bearing Cup	1
17	92651	Spacer	1
18	46388	"O" Ring	1
19	92625	Shim Set	1
20	{ 37562	Capscrew—Hardened, 1/2 UNF x 1 1/4	6
	{ 15158	Lockwasher—1/2	6
21	92626	Retainer—Bearing	1
32	92482	"O" Ring	1

*Part of Standard Speed Gear Set 94647A.

†Part of Optional Lo-Speed Gear Set 93371A.

‡Included in Gasket Kit No. 92993A.

DRUM UNIT

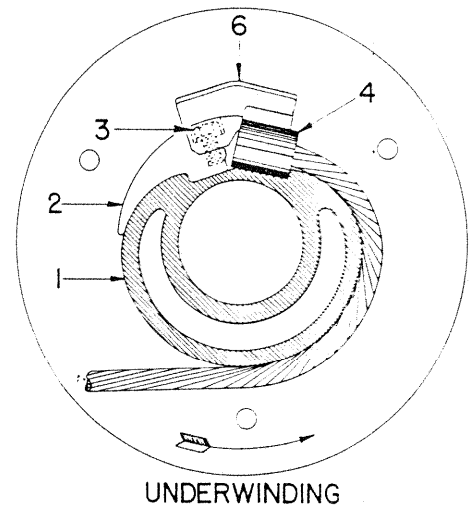
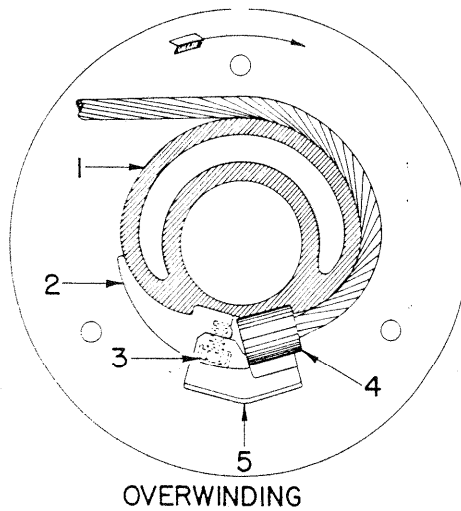


Ref. No.	Hyster Part No.	NAME OF PART	Qty. Req'd.
1	{ 92617	Drum (Standard Winch)	1
	{ 94582	Drum (Lo-Speed Winch)	1
2	92607	Shaft—Drum	1
3	35030	Oil Seal	1
4	92612	Plate—Cover	1
5	21420	Plug—Breather	1
6	{ 16820	Capscrew—Hardened, ½ UNF x 1	10
	{ 15158	Lockwasher—½	10
7	* 92648	Gasket	1
8	44484	Oil Seal	1
9	92608	Spacer	1
10	6607	Nut	2
11	230319A	Roller Bearing Assembly	2
13	92609	Gear—Drum (58 teeth)	1
14	92610	Plate—Retainer	1
15	92590	Place Bolt—⅝ UNF x 2½	8
16	92613A	Retainer	1
17	{ 37562	Capscrew—Hardened, ½ UNF x 1¼	8
	{ 15158	Lockwasher—½	8
18	92616	Shim Set	1

*Included in Gasket Kit No. 92993A.

NOTE: Add two quarts of SAE 90 oil to inside of drum at assembly to insure adequate lubrication of bearings at start of operation.

CABLE LOCK GROUP



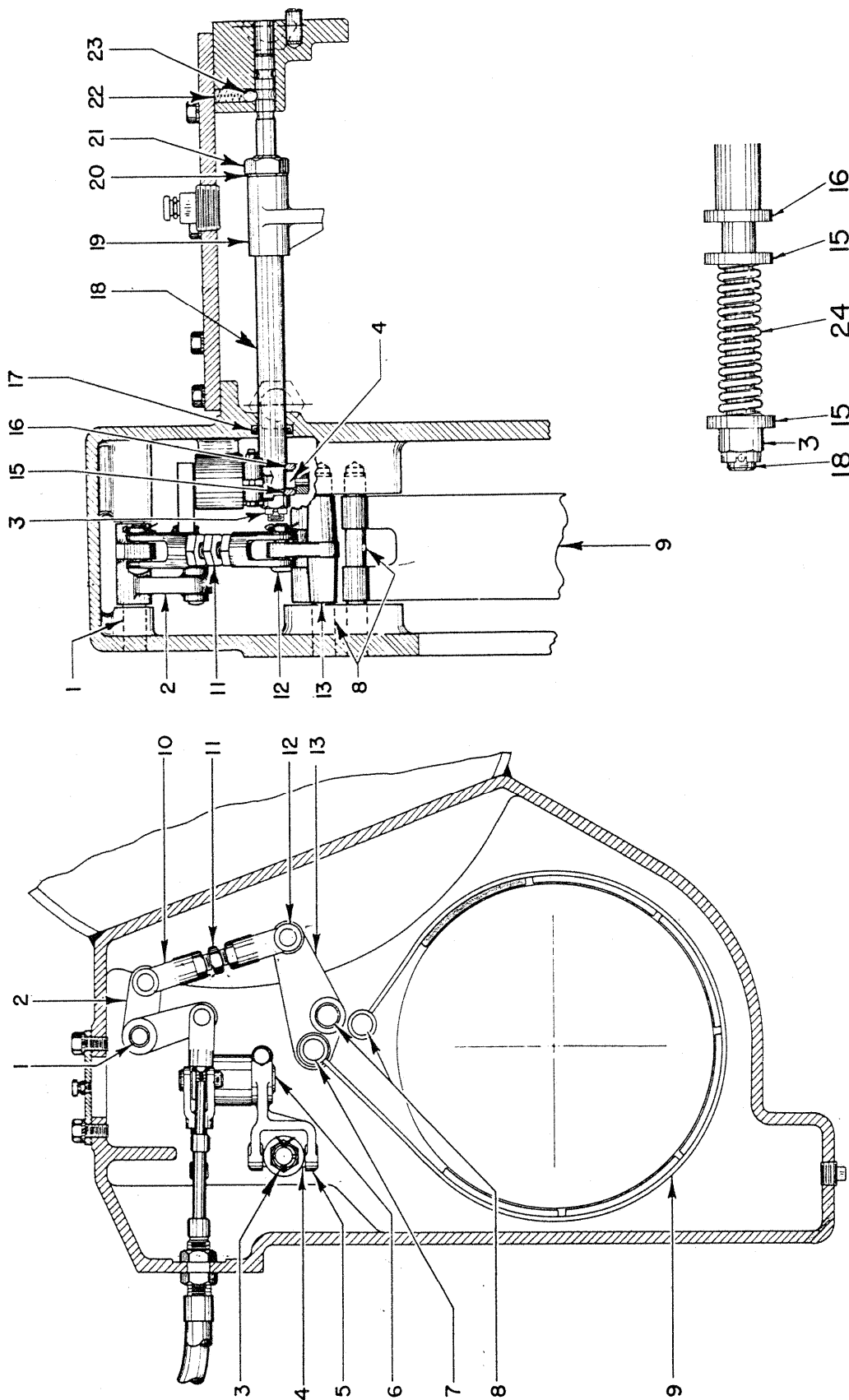
Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1		Drum Assembly	1
2	92712	Filler—Cable Groove (Standard Winch only)	1
3	{ 15500	Capscrew— $\frac{5}{8}$ UNF x $1\frac{1}{2}$	1
	{ 15160	Lockwasher— $\frac{5}{8}$	1
4	6697	Ferrule—Cable	1
5	92713	Lock—Ferrule (Overwind) } Standard	1
6	92714	Lock—Ferrule (Underwind) } Winch only	1
<i>Not illustrated:</i>			
	94196W	Lock—Ferrule (Lo-Speed Winch only)	1

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BRAKE AND SHIFTER MECHANISM

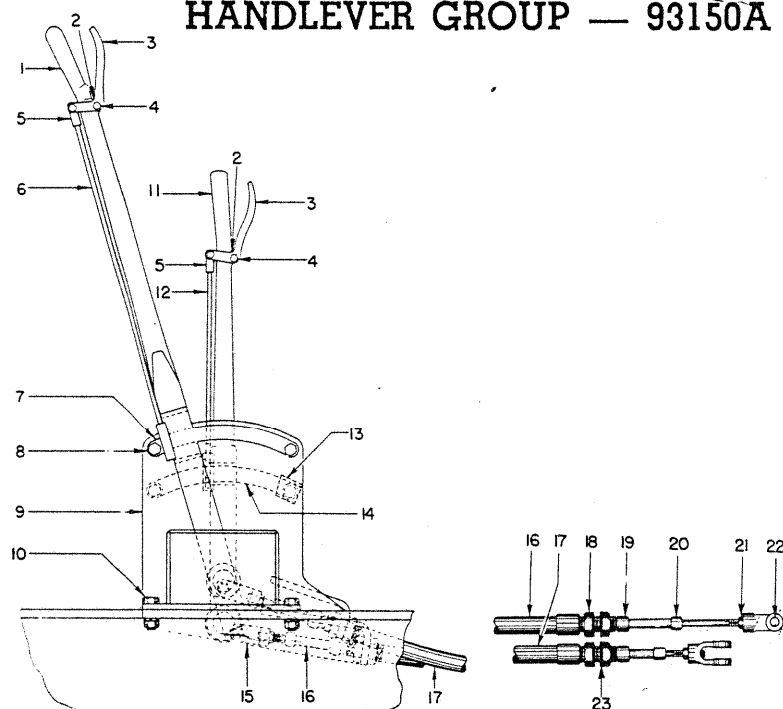


BRAKE AND SHIFTER MECHANISM

Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	92694	Pin	1
2	{ 93125A	Crank Assembly (Includes Bushing)	1
	{ 92695	Bushing—Split Type	2
3	{ 37474	Nut—Castellated, $\frac{5}{8}$ UNF	1
	{ 15224	Cotter— $\frac{1}{8}$ x $1\frac{1}{4}$	1
4	33717	Shoe—Shifter	2
	{ 92699	Fork—Shifter	1
5	{ 15580	Capscrew— $\frac{3}{8}$ UNC x $1\frac{1}{2}$	1
	{ 15156	Lockwasher— $\frac{3}{8}$	1
6	{ 92696A	Crank	1
	{ 92707	Bushing—Split Type	1
7	{ 92706	Pin—Brake (Loose End)	1
	{ 15246	Cotter— $\frac{3}{16}$ x 2	1
8	92704	Pin—Brake	2
-9	{ 92708A	Band Assembly—Brake (includes Lining Set)	1
	{ 59802AB	✓Lining Set (Drill at Assembly)	1
	{ 92686A	Link Assembly	1
	* 92688	Rod End—Left Hand Thread	1
10	* 32414	Nut—Jam, $\frac{5}{8}$ UNF Left Hand Thread	1
	* 92689	Rod End—Right Hand Thread	1
	* 15030	Nut—Jam, $\frac{5}{8}$ UNF Right Hand Thread	1
11	* 92687	Link—Adjusting	1
12	* 159	Pin—Rod End	2
	* 15223	Cotter— $\frac{1}{8}$ x 1	2
13	{ 93142A	Lever Assembly—Brake (Includes Bushing)	1
	{ 92705	Bushing—Split Type	2
15	33682	Washer— $\frac{41}{64}$ I.D.	2
16	33681	Washer— $\frac{49}{64}$ I.D.	1
17	23206	Oil Seal	1
18	94654	Rod—Shifter (First used on Serial No. 116278. Prior to this S. N., include item 24 & one item 15)	1
19	92629	Fork—Shifter	1
20	15936B	Lockwasher—1", Shakeproof	1
21	15036	Nut—Jam, 1" UNF	1
22	6347C	Spring	1
23	6348	Ball— $\frac{1}{2}$	1
24	94655	Spring (used after Serial No. 115707)	1

*Included in Link Assembly 92686A.

HANDLEVER GROUP — 93150A



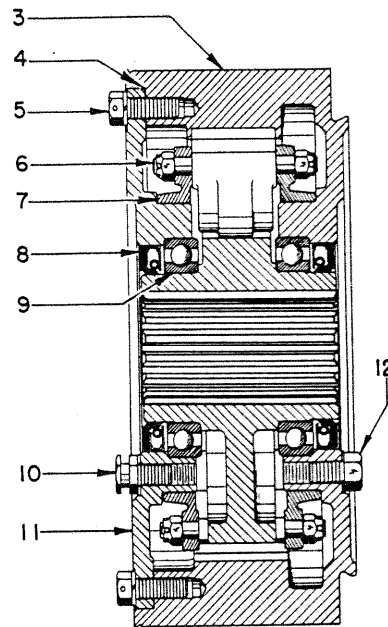
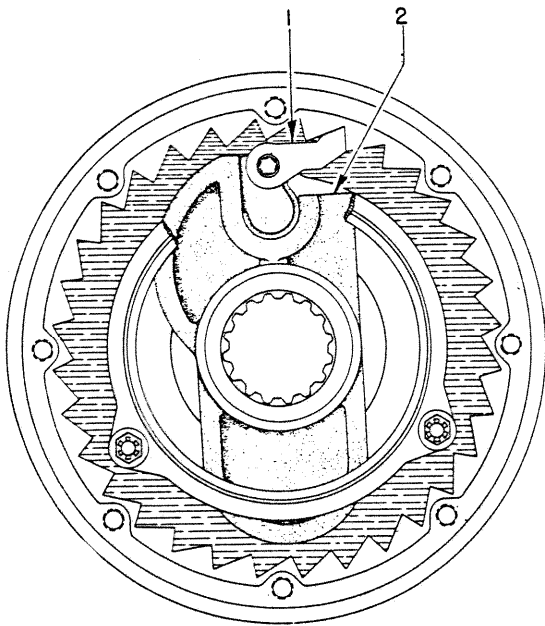
Ref. No.	Hyster Part No.	NAME OF PART	Qty. Req'd.
1	92557A	Handlever—Brake (Includes items 2, 3, 4, 5, 6)	1
2	32695	Spring	1
3	32694	Handle	1
4	{ 37476	Capscrew—Special	2
	{ 15052	Nut—No. 10-24	2
5	32693	Rod End	1
6	92561	Rod—Pawl	1
7	92564	Quadrant—Ratchet, Brake	1
8	{ 15518	Capscrew— $\frac{3}{8}$ UNF x $\frac{7}{8}$	4
	{ 15156	Lockwasher— $\frac{3}{8}$	4
9	92673A	Bracket—Quadrant	1
	{ 15509	Capscrew— $\frac{1}{2}$ UNF x $1\frac{1}{2}$	4
10	{ 15158	Lockwasher— $\frac{1}{2}$	4
	{ 15008	Nut— $\frac{1}{2}$ UNF	4
11	46381AD	Handlever—Clutch (Includes items 2, 3, 4, 5, 12) . .	1
12	92566	Rod—Pawl	1
13	93909	Clip	1
14	92682	Quadrant—Clutch	1
15	92683	Rod End	4
16	92718 ✓	Cable—Brake } Includes items <i>Portland Only</i>	1
17	92685 ✓	Cable—Clutch } 18, 19 and 20	1
18	{ 15034	Nut—Jam, $\frac{7}{8}$ UNF	8
	{ 15934	Lockwasher—Shakeproof, $\frac{7}{8}$	4
19	94381	Grommet	4
20	94380	Grommet	4
21	15026	Nut—Jam, $\frac{3}{8}$ UNF	4
22	{ 159	Pin—Rod End	4
	{ 15223	Cotter— $\frac{1}{8}$ x 1	4
23	15934	Lockwasher—Shakeproof, $\frac{7}{8}$	4

Section G

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INTEGRAL ARCH	G7
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AUTOMATIC BRAKE — 92716A

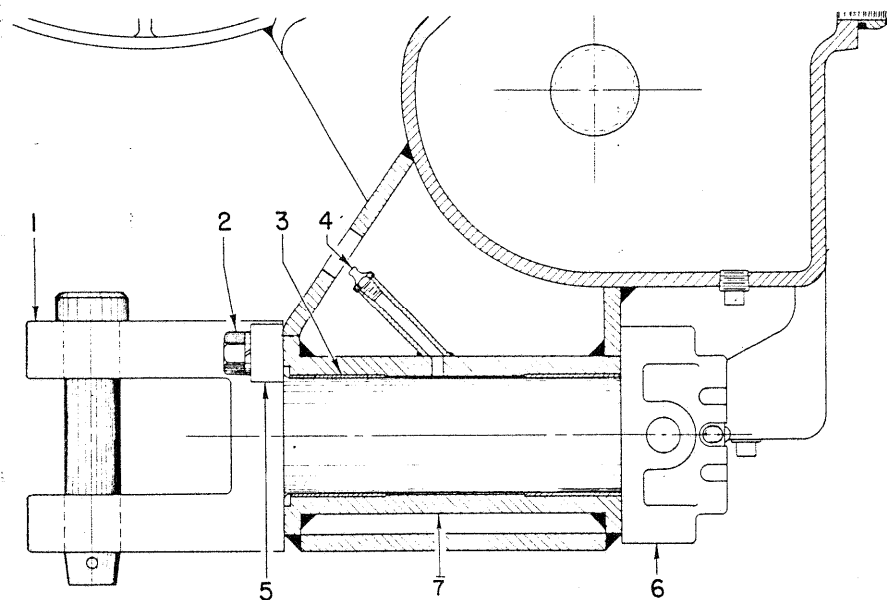


Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	36007	Pawl	1
2	92684	Hub	1
3	59425A	Wheel Assembly—Brake	1
4	59432	Gasket—Cover	1
5	† 59927	Capscrew—Drilled Head	8
	67355	Lockwire—18 ga. x 36" long	1
	† 94601	Link—Shoulder	3
6	15079	Nut— $\frac{3}{8}$ UNF Slotted	6
	15212	Cotter— $\frac{3}{32}$ x $\frac{3}{4}$	6
7	36006	Ring—Drag	2
8	33783	Oil Seal	2
9	36000	Bearing	2
10	59370	Vent Plug	1
	35159	Gasket	1
11	59397	Cover—Side	1
12	15515	Capscrew— $\frac{1}{2}$ UNF x $\frac{3}{4}$	3
	35159	Gasket	3
	58700	Grease—3 Lb. Can (High Melting Point)	

†Replace links without cotter holes with complete set of links, nuts and cotters.

‡Replace place bolts with complete set of drilled head capscrews.

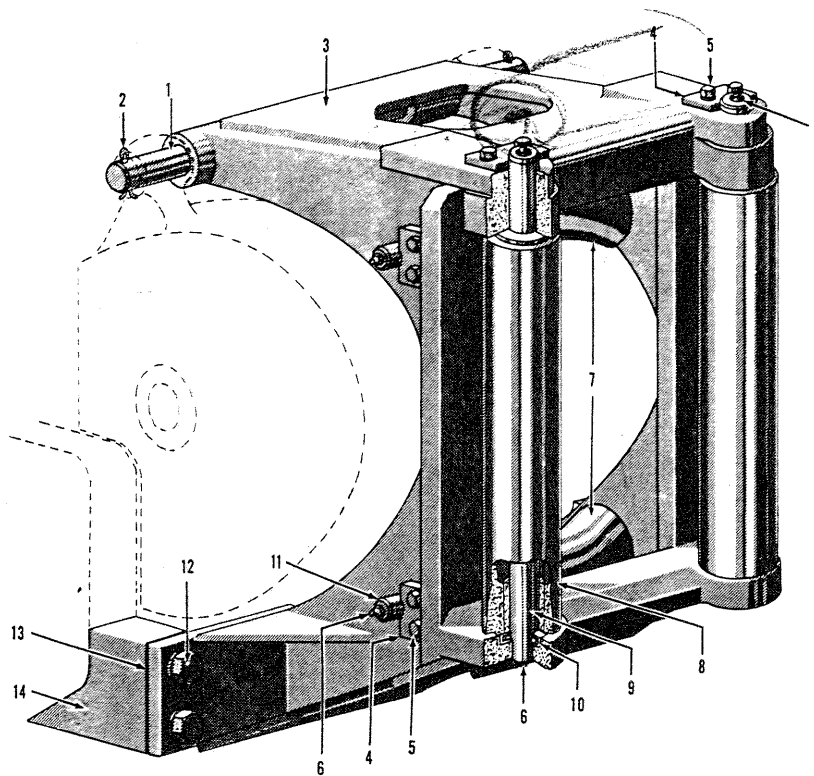
SWIVELING DRAWBAR GROUP — 96309A



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Req'd.
1	33787	Drawbar	1
2	{ * 16800	Capscrew—Hardened, $\frac{3}{4}$ } Last used on	4
	{ * 15162	Lockwasher— $\frac{3}{4}$ } S. N. A47P2147	4
3	92671	Bushing—Split Type	2
4	16002	Grease Fitting	1
5	* 92670	Keeper (Last used on Serial No. A47P2147)	2
6	{ 33618	Nut	1
	{ 15295	Cotter— $\frac{1}{2}$ x 5	1
7	96318A	Adapter Assembly (Includes item 3)	1
		(First used on S. N. A47P2148)	

*Not included in Group No. 96309A.

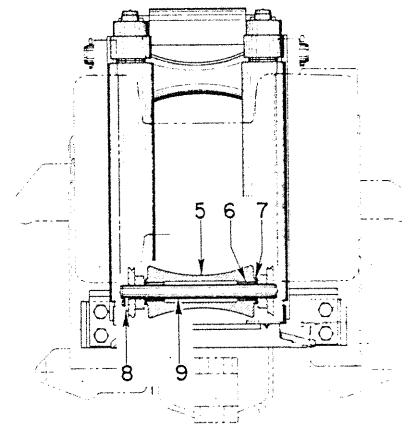
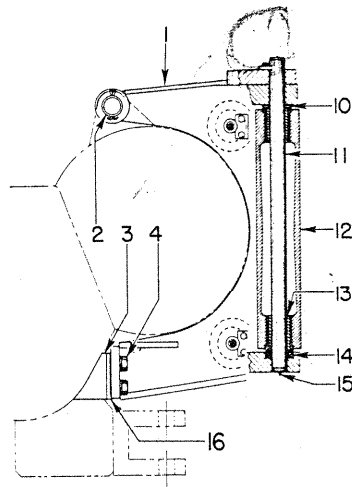
FAIRLEAD ASSEMBLY — 93430AB



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	* 92606	Rod—Tie	1
2	15272	Cotter— $\frac{3}{8}$ x 3	2
3	95785W	Frame	1
4	93166	Keeper	4
5	{ 15514	Capscrew— $\frac{1}{2}$ UNF x $1\frac{1}{4}$	8
	{ 15158	Lockwasher— $\frac{1}{2}$	8
6	16001	Grease Fitting	8
7	{ 92212A	Roller Assembly—Includes Bushings	2
	{ 59419	Bushing	4
	{ 92720	Washer	4
8	{ 36206A	Roller Assembly—Includes Bushings	2
	{ 2570	Bushing	4
	{ 33394	Washer	2
9	93657	Shaft	2
10	230336	Bearing—Thrust	2
11	93658	Shaft	2
12	{ 15571	Capscrew—1" NF x $2\frac{3}{4}$	4
	{ 15166	Lockwasher—1"	4
13	93985	Shim Set	2
14	{ 95795	Bracket—Mounting, L. H.	1
	{ 95794	Plate—Mounting, R. H.	1

*Not included in 93430AB.

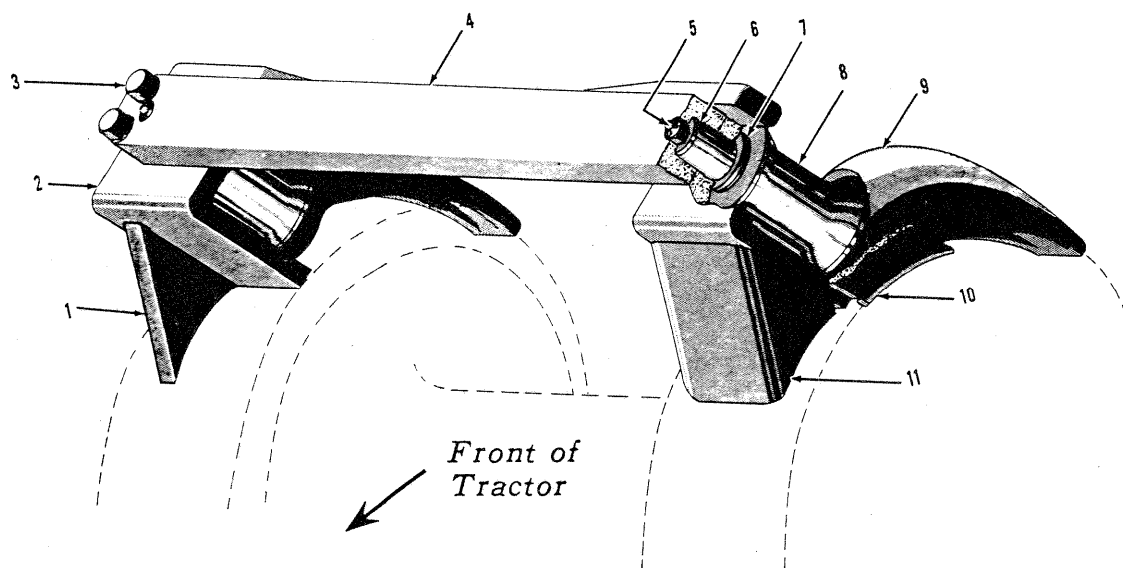
FAIRLEAD ASSEMBLY — 93430A (Non-Current)



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Reqd.
1	93431W	Frame—Fairlead	1
	* 92606	Rod—Tie	1
2	15272	Cotter— $\frac{3}{8}$ x 3	2
	32533	Washer—Spacer (Non-current)	2
3	93662	Bracket—R. H.	1
	93659	Bracket—L. H.	1
4	15598	Capscrew—1" NF x $2\frac{1}{2}$	4
	15166	Lockwasher—1"	4
5	92212A	Roller Assembly—Horizontal (Includes Bushing (6))	2
6	59419	Bushing	4
7	92720	Washer	4
	93166	Keeper	4
8	15511	Capscrew— $\frac{1}{2}$ NF x 1	8
	15158	Lockwasher— $\frac{1}{2}$	8
9	93658	Shaft—Horizontal	2
10	33394	Washer	2
11	93657	Shaft—Vertical	2
12	36206A	Roller Assembly—Vertical (Includes Bushing (13))	2
13	2570	Bushing	4
14	230336	Bearing—Thrust	2
15	16001	Grease Fitting	8
16	93878	Shim (use as required)	

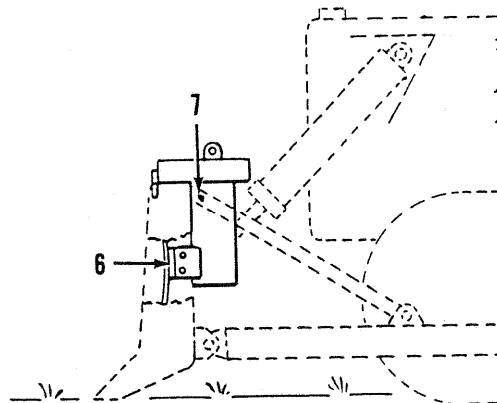
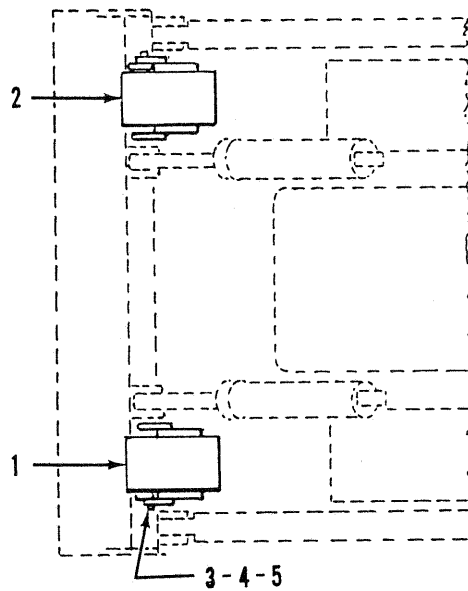
*Not included in 93430A.

CABLE GUIDE ROLL GROUP — 95877A



Ref. No.	Hyster Part No.	NAME OF PART	Qty. Req'd.
1	95892	Gusset	1
2	{ 95883W	Bracket—R. H.	1
	{ 95891	Gusset	1
3	{ 16645	Capscrew— $\frac{5}{8}$ UNF x $2\frac{1}{4}$	4
	{ 15160	Lockwasher— $\frac{5}{8}$	4
4	95888W	Guard	1
5	16006	Grease Fitting	2
6	95669	Pin—Roller	2
7	95668	Washer	6
8	{ 95666A	Roller Assembly—Includes Bushing	2
	{ 35135	Bushing	4
9	95879W	Bracket—L. H.	1
10	95889	Bar—Filler	1
11	95890	Gusset	1

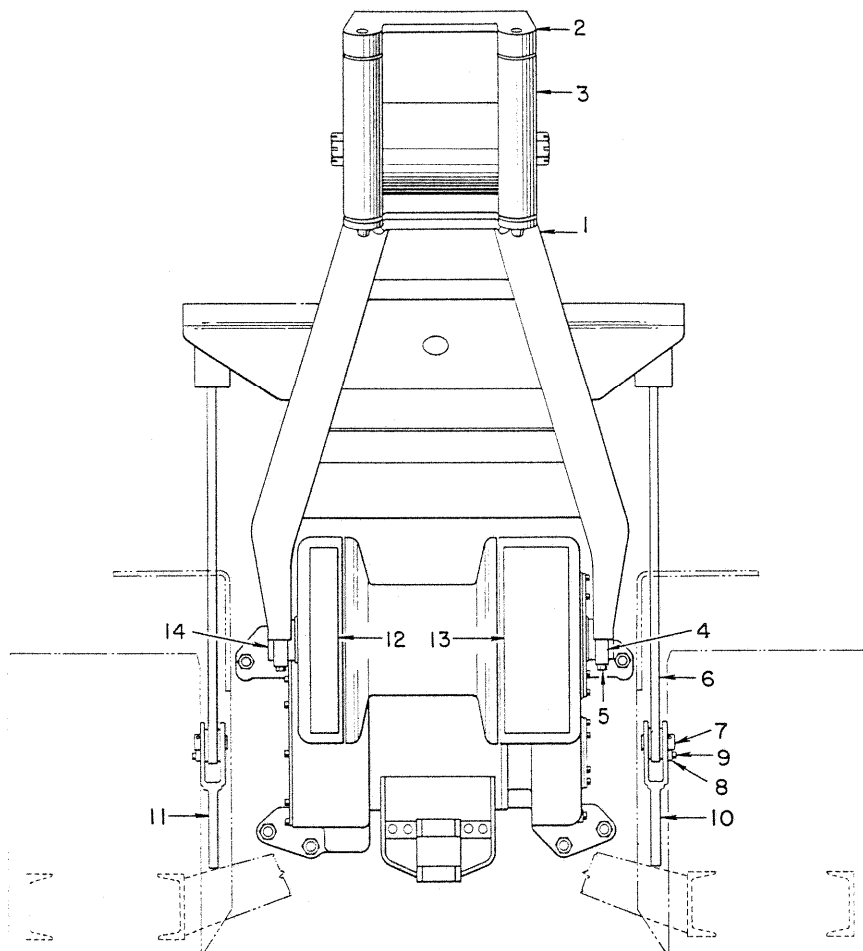
COUNTERWEIGHT GROUP No. 84924A
 OPTIONAL FOR D7 INTEGRAL ARCH
 ON 7S CABLE DOZER
 AND 75 HYDRAULIC DOZER



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	84926W	Counterweight - L. H.-----	1
2	84930W	Counterweight - R. H.-----	1
3	15522	Capscrew 3/4 UNF x 2-----	4
4	15162	Lockwasher 3/4-----	4
6	* 84931	Plate-----	2
7	16022	Fitting - Lubrication-----	2

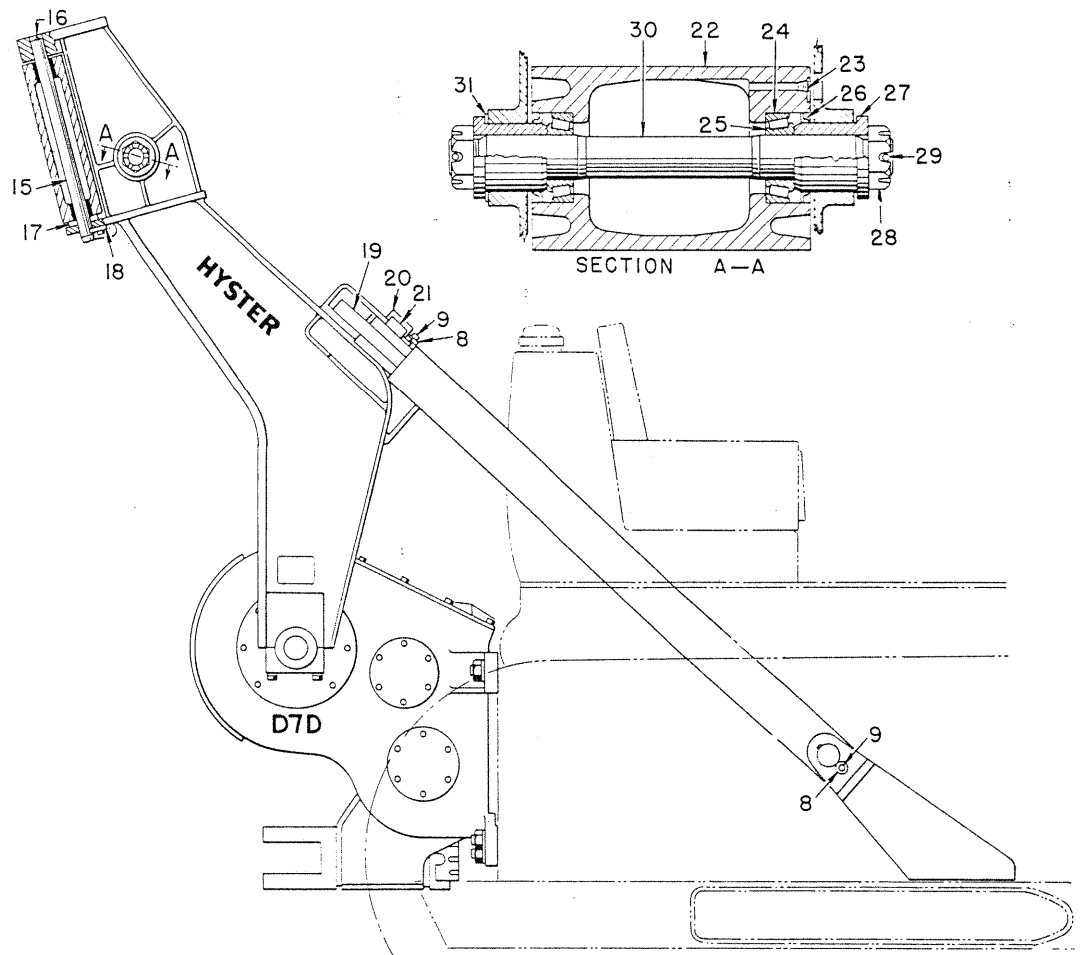
* Not Used on Cable Dozer

INTEGRAL ARCH Rear View



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	84872W	Frame - Arch-----	1
2	84887W	Frame - Fairlead (Welded to Arch Frame)---	1
3	(35728A	Roller Assembly - (Includes Bushing)-----	2
	(35726	Bushing-----	4
4	84830A	Block Assembly (Welded to Arch Frame) Includes Item 5) -----	2
5	(18630	Capscrew - 3/4 UNF x 3-3/4-----	2
	(15162	Lockwasher - 3/4-----	2
6	(84908A	Bar Assembly - Support (Includes Bushing)---	2
	(84906	Bushing-----	2
7	84912	Pin-----	2
8	80926	Anchor-----	5
9	(16823	Capscrew - 5/8 UNF x 1-1/2-----	5
	(15160	Lockwasher - 5/8-----	5
10	84914W	Bracket - R. H.-----	1
11	84920W	Bracket - L. H.-----	1
12	84923	Plate-----	1
13	84922	Plate-----	1
14	84921	Nut - Special -----	2

INTEGRAL ARCH Side View



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
15	59743	Pin-----	2
16	16001	Fitting - Lubrication-----	2
17	35746	Washer-----	2
	(35749	Keeper-----	2
18	(37562	Capscrew - 1/2 UNF x 1-1/4-----	2
	(15158	Lockwasher - 1/2-----	2
19	(84901A	Equalizer Assembly (Includes Bushings)-----	1
	(84905	Bushing - Center-----	1
	(84906	Bushing - End-----	2
20	84907	Pin-----	1
21	84913	Pin-----	2
22	35725B	Roll - Horizontal-----	1
23	15347	Pipe Plug - 1/4 NPT, Hex Socket-----	1
24	30059	Cup - Roller Bearing-----	2
25	30084	Cone - Roller Bearing-----	2
26	35738	Oil Seal-----	2
27	35739	Sleeve-----	2
28	32282	Nut-----	2
29	15257	Cotter - 1/4 x 2-1/2"-----	2
30	35743	Shaft-----	1
31	35740	Shim-----	1

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SPECIFICATIONS

HYSTER MODELD7D Towing Winch

DRUM SIZE:	Standard Winch	Lo-Speed Winch
Barrel Diameter	12 "	8 "
Flange Diameter	22½"	22½"
Barrel Length	12¾"	10⅝"
CABLE CAPACITY, MAXIMUM LINE	382 ft. 7/8"	402 ft.
	or 293 ft. 1"	308 ft.

Allowance should be made for loose or unevenly spooled line in towing service.

AVAILABLE LINE PULLS (With 1" Line):	Standard Winch	Lo-Speed Winch
Bare Drum	*46,800 lbs.	†85,000 lbs.
Full Drum	*28,200 lbs.	†40,100 lbs.

LINE SPEEDS:

Bare Drum	* 99 F.P.M.	† 37 F.P.M.
Full Drum	*164 F.P.M.	† 88 F.P.M.

(Line Speeds and Pulls are the same when overwinding or underwinding.)

The above specifications are based on: *140 H.P. @ 1200 R.P.M. for Standard Winch.
†800 R.P.M. Max. Torque Speed for Lo-Speed Winch.

NOTE: IMPORTANT

Available line pulls may be greater than the breaking point of cable used. Line pulls should be limited by winch owner to comply with all safety laws applicable where the equipment is being used.

NET WEIGHT (without cable)2,160 LBS.

