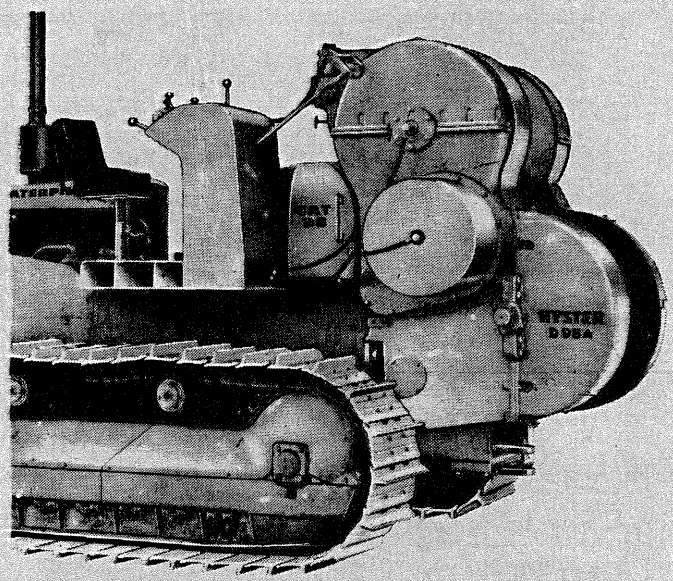
PARTS BOOK AND INSTRUCTION MANUAL

HYSTER®

D98A TRACTOR YARDER

For D9 and D8 "Caterpillar" Tractors



HYSTER COMPANY

FACTORIES

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

Form No. 892C Litho In U. S. A. 400-160

599210W

FOR PARTS AND SERVICE CONTACT

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 YARDERS *previously manufactured.*

_____

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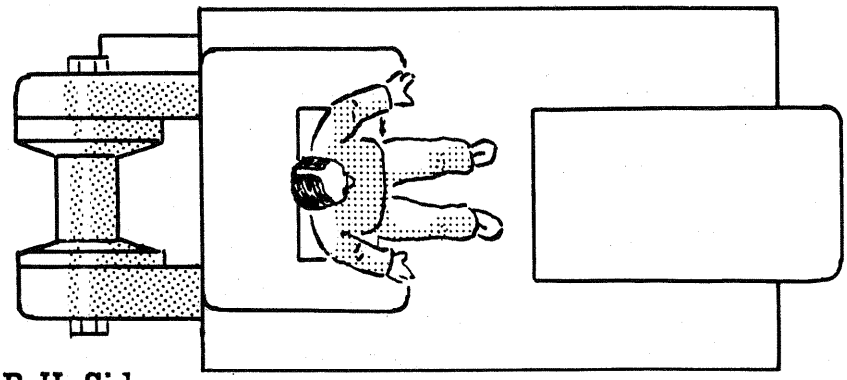
Parts Referred to in This Book as Right or Left Hand Parts Are in Accordance with the Sketch Below

L. H. Side



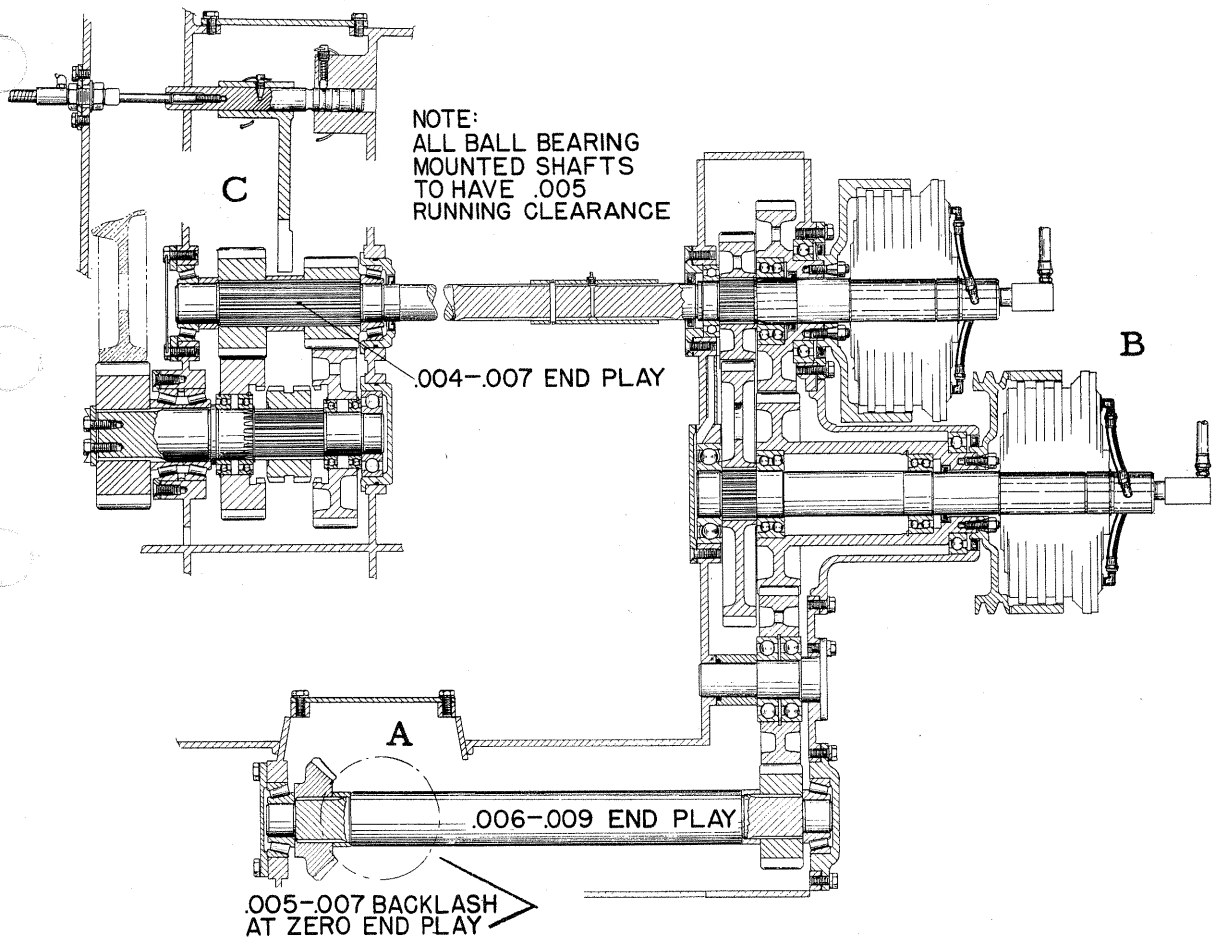
R. H. Side

CAUTION!

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

Strict Observance of this Rule will Prevent Accidents

GEAR TRAIN AND DRUM ARRANGEMENT



REF.	DESCRIPTION
A	Power Take-Off Group
B	High-Speed And Low-Speed Clutch Shafts
C	Compound Group

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SECTION A

SERVICE, OPERATION AND INSTALLATION INSTRUCTIONS

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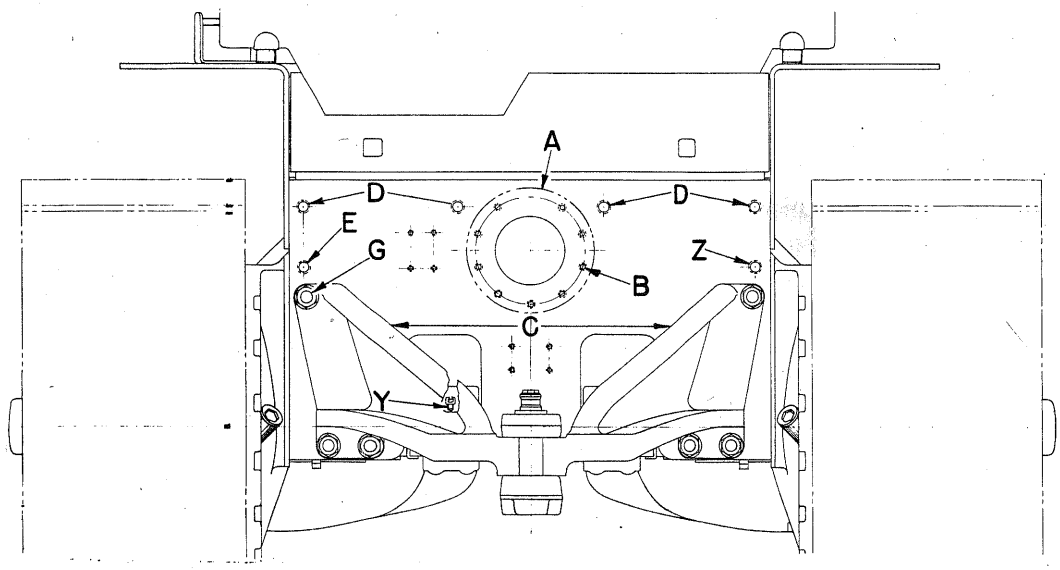
INSTALLATION INSTRUCTIONS

PREPARING TRACTOR

1. Remove tool box from left hand fender.
2. Burn off left hand arm rest.
3. Remove power take-off cover "A" and insert corks in tapped holes.
4. Remove Drawbar and Brackets "C".



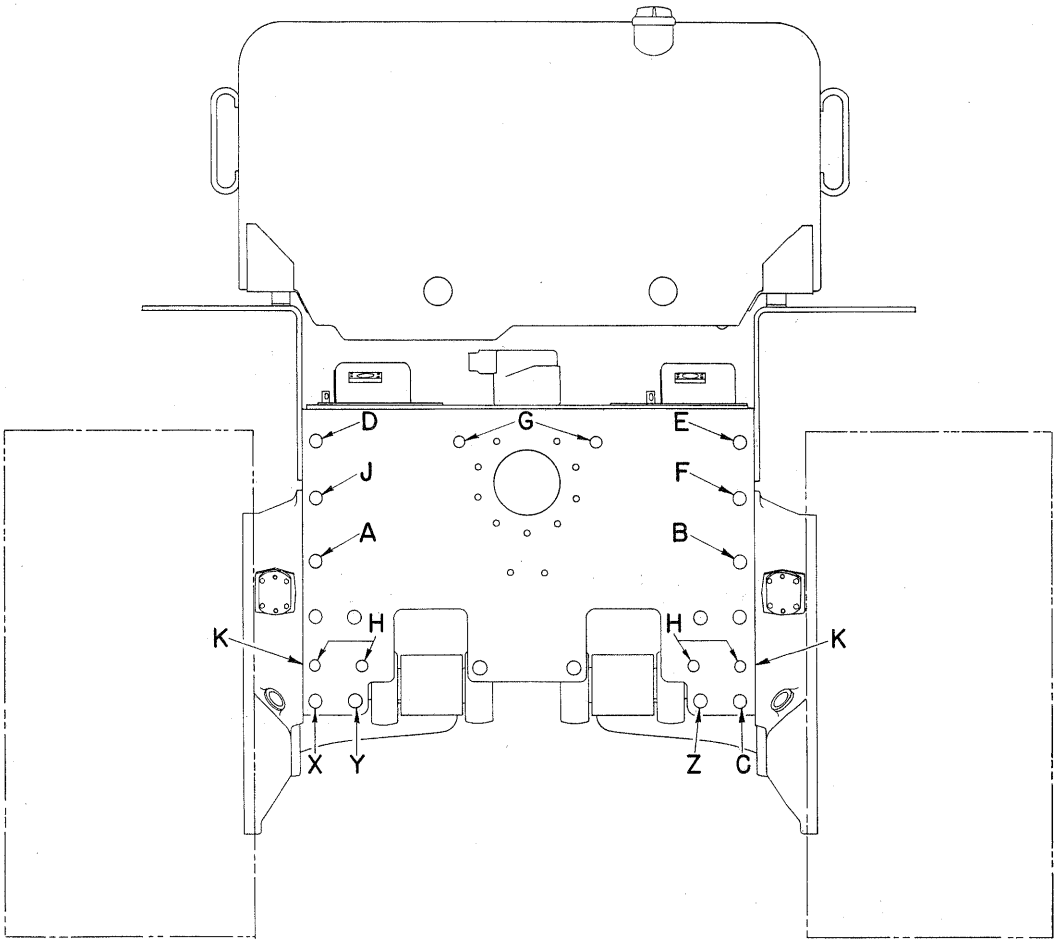
FOR ALL D8 TRACTORS

1. Remove two lubrication fittings from caps on cross shaft in rear of tractor transmission about 8" from center line just under the edge of transmission case. Install two elbow bodies "Y" in these locations. Thread the lubrication fittings removed from tractor into these elbow bodies.

For D8 Tractors Serial Number 14A, 15A

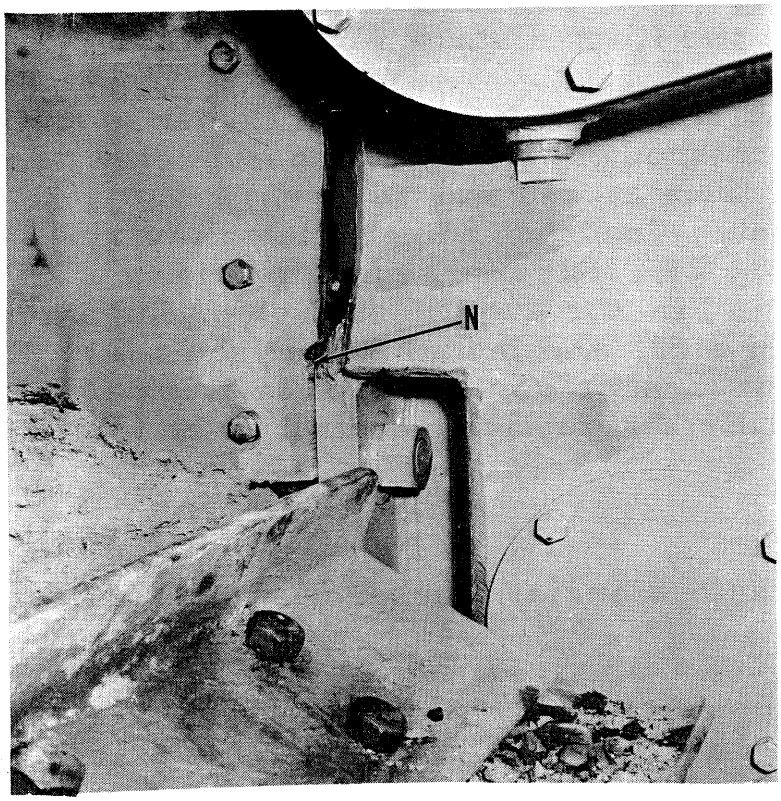
1. Remove one stud at "G" and install it at "Z".
2. Install four studs (1-1/4 x 4-5/8) at "D" and two studs (1-1/4 x 8-3/4) at "G" and "E".

For D8 Tractors Serial Number 22A, 35A, 36A, 46A, 52A



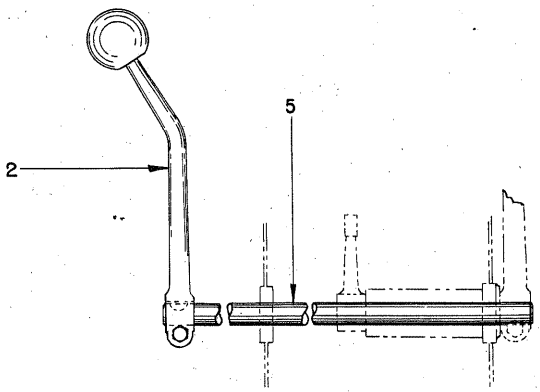
1. Remove flashing from both sides of tractor transmission rear face (at "K") where lower Yarder mounting pads hang over edge of transmission.
2. Remove drawbar studs "A", "B", and "C" and reinstall at "D", "E" and "F". Remove studs "X", "Y", "Z" and discard.
3. Install six studs (1-1/4 x 4-11/16) at "G" and "H". Install one stud (1-1/2 x 9-1/2) at "J". Use tractor nut and lockwasher from stud "X". Stud assembly Torque:
   Studs "G" and "H", 170 ± 20 Ft. Lbs.
   Studs "D", "E", "F" and "J", 250 ± 20 Ft. Lbs.

Fender Alterations
For D8 Tractors Serial Number 14A, 15A, 22A, 35A, 36A, 52A



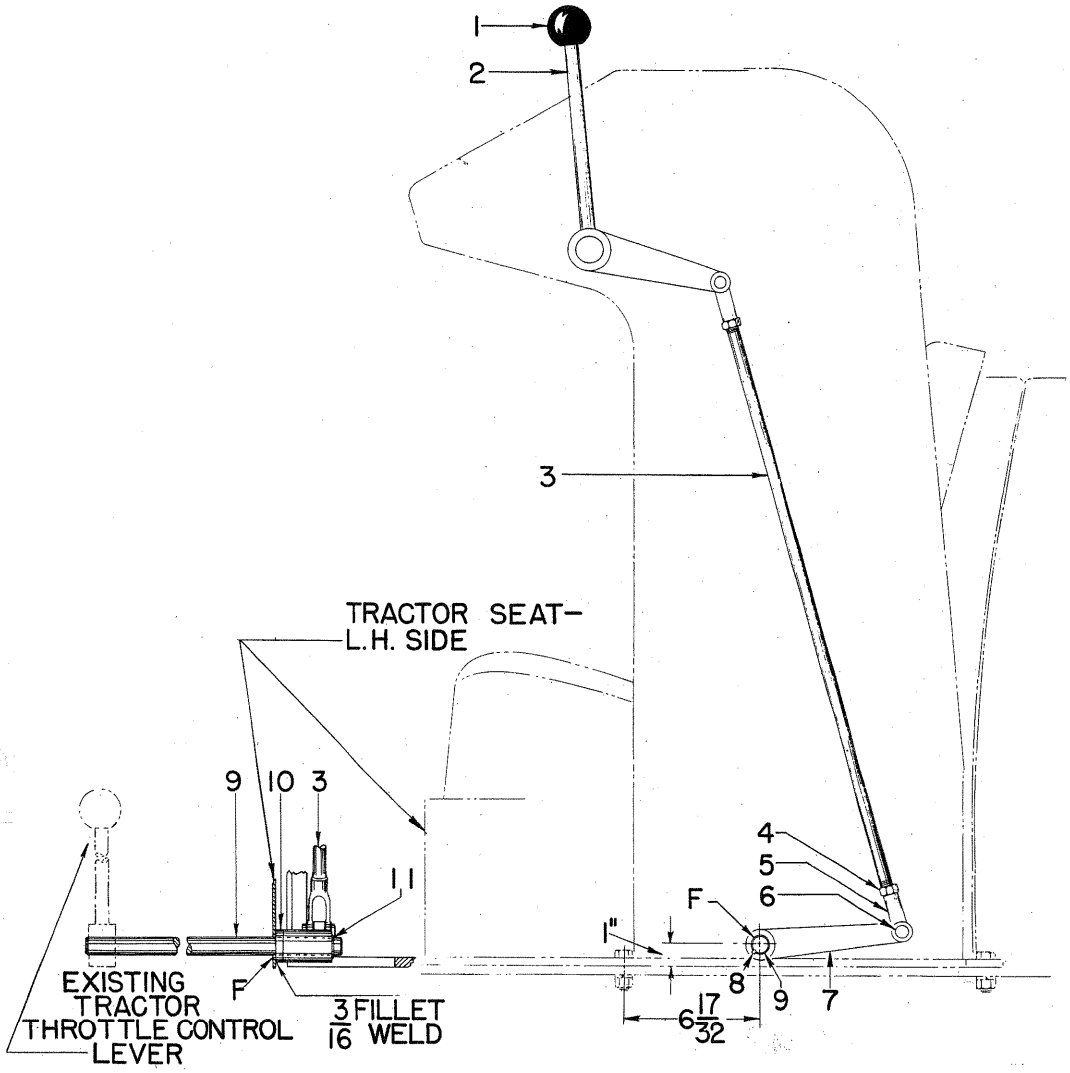
1. Notch L. H. fender flush with Tractor transmission case as shown at "N".

For D8 Tractors Serial Number 22A, 35A, 36A, 52A

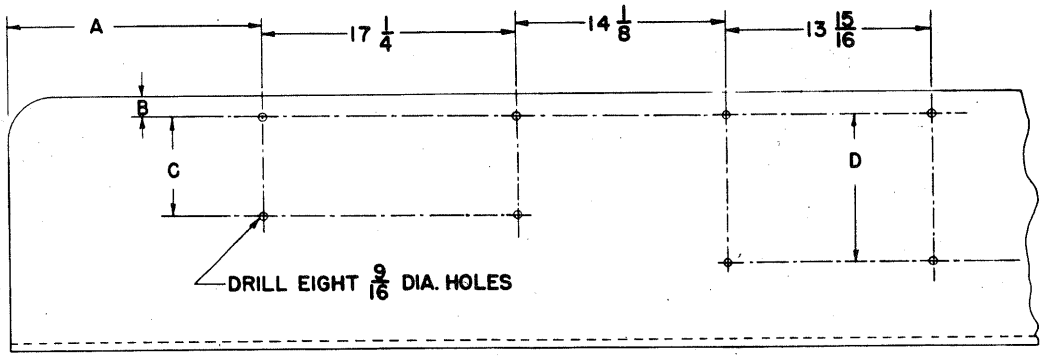


1. Remove tractor throttle control shaft ("Caterpillar" No. 5H6808) and install Hyster shaft (5). Replace tractor throttle control lever in original location and install duplicate control lever (2).

For D8 Tractors Serial Number 14A, 15A



1. Remove tractor arm rest and support plate.
2. Burn 1-1/4" Dia. hole "F" in left hand side of seat. Weld boss (10) to side of tractor seat as shown, using 3/16" fillet weld all around.
3. Remove tractor throttle control shaft ("Caterpillar" No. 5H6808) and install Hyster shaft (9). Replace tractor throttle control lever in original location and install Hyster duplicate control lever (2).



Drill eight 9/16" dia. holes in L. H. fender as follows:

For D8 Tractors Serial Number 14A, 15A
A = 17" - B = 1-7/16" - C = 6-5/8" - D = 9-15/16"

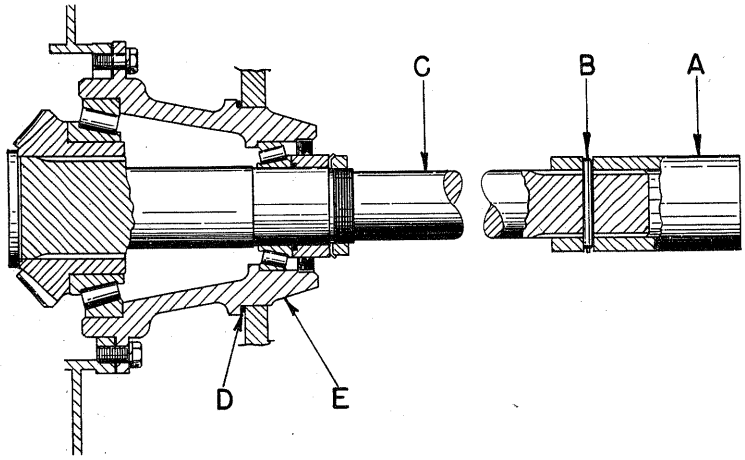
For D8 Tractors Serial Number 22A, 35A, 36A, 46A, 52A
A = 20-3/8" - B = 1-7/16" - C = 6-5/8" - D = 9-15/16"

For D9 Tractors Serial Number 18A, 19A
A = 20-7/8" - B = 3/4" - C = 6-5/8" - D = 9-15/16"

For D9 Tractors Serial Number 34A, 49A, 50A
A = 20-7/8" - B = 2-1/2" - C = 4-5/8" - D = 7-15/16"

For D9 Tractors Serial Number 66A
A = 24-1/2" - B = 1-9/16" - C = 4-5/8" - D = 7-15/16"

FOR ALL D8 AND D9 TRACTORS



1. Pack coupling "A" with grease and assemble on P. T. O. Shaft "C". Lock coupling on shaft with pin and lock Ring "B".
2. Wipe surfaces of yarder that fit against the rear face of tractor transmission case.
3. Install "O" Ring "D" on yarder P. T. O. Carrier "E".
4. Swing yarder into position back of tractor. Turn crank-shaft of tractor to line up splines on tractor P. T. O. shaft with splines in yarder coupling "A".
5. Check to see that fastening holes in yarder side frames line up with studs in tractor case as yarder moves into position.
6. Place lockwashers and nuts over studs and draw up tightly.
7. Install handling gear on L. H. fender, using holes drilled in Instruction above.
8. Install air tanks on R. H. fender. Using mounting brackets as template, drill four 9/16" Dia. holes through fender and fasten with capscrews (1/2 UNF x 1-1/2), nuts and lockwashers provided.
9. Connect hoses to proper fittings as shown in "Pneumatic Circuit", and connect push pull cables to strawdrum clutch and compound shifter.
10. Install Tool Box in some convenient location.
11. Check all Bolts and Connections, making sure that all Nuts and Lockwashers are in place and drawn up tightly.

OPERATING INSTRUCTIONS

1. Place all Hyster hand valves in neutral, close air tank valves, and start tractor engine.
2. Engage tractor master clutch and allow five minutes to fill air tanks and manifold to 135-145 P.S.I. pressure. If minimum pressure occurs (120 P.S.I.) open throttle to build pressure.
3. Note: Do not disengage the tractor master clutch while operating the yarder except for operation of the strawdrum with mechanical jaw clutch.

TO OPERATE:

1. Place compound lever in position desired: Push forward for low speed, pull back for high speed.
2. Place Hi-Lo Lever in position desired: Push forward for low, pull back for high.
3. Engage main, haulback or strawdrum lever. Note: These levers may be engaged before Hi-Lo Lever, if desired.

NOTE: To Operate Strawdrum with Mechanical Jaw Clutch

1. Disengage either tractor master clutch or Hyster Hi-Lo Clutches.
2. Engage strawdrum handlever. Strawdrum can now be operated by lever released in instruction 1. Note: Be sure Hi-Lo lever is in neutral before moving tractor.

MAIN AND HAULBACK BRAKES:

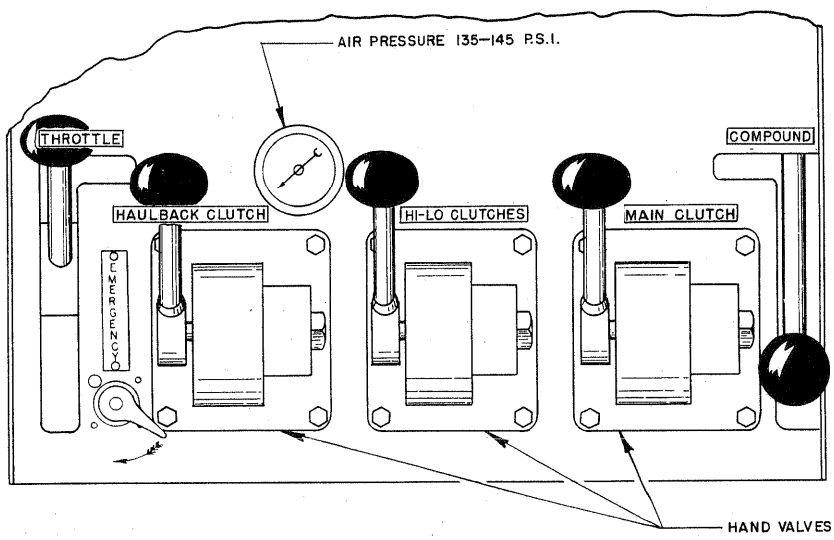
1. Push down on brake pedal until spring engages, to lock brake. Push on top part of spring to release.
2. If main or haulback brake fails, turn emergency brake lever. This will lock both brakes. Repair damage to regular brake air line before continuing operation.

When Leaving the Yarder Overnight with Rigging Suspended:

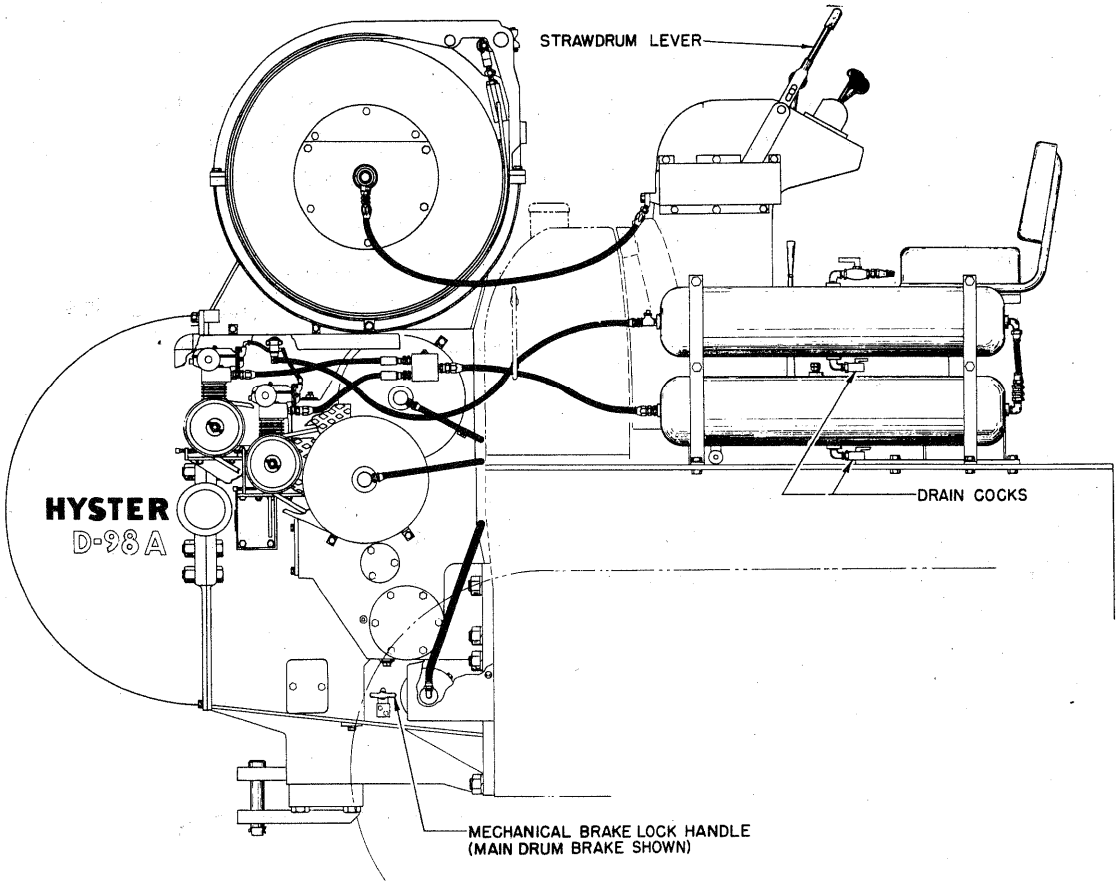
1. Push Hyster brake pedals until springs engage.
2. Set mechanical locks by pushing in on handles until they come up solid against brake link.
3. Tighten by turning handles clockwise.
4. Open drain cocks on all three air tanks.
   Note: When starting new shift close drain cocks and fill air tanks before releasing mechanical brake locks.

STRAWDRUM BRAKE

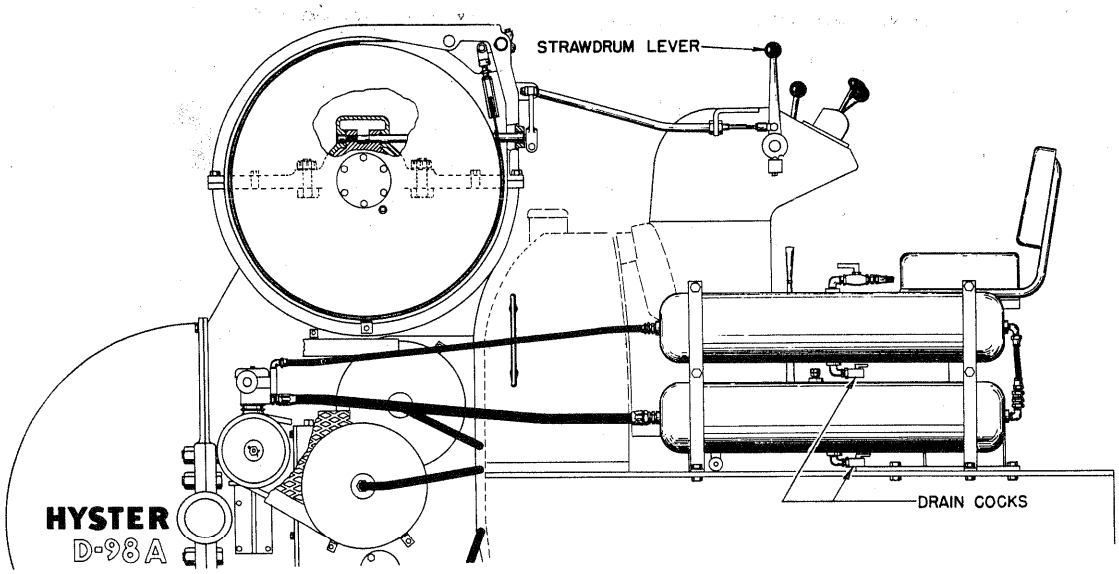
1. Press pedal and tip to engage ratchet teeth and lock in any position.



HYDRAULIC STRAWDRUM CLUTCH SHOWN



MECHANICAL STRAWDRUM CLUTCH SHOWN

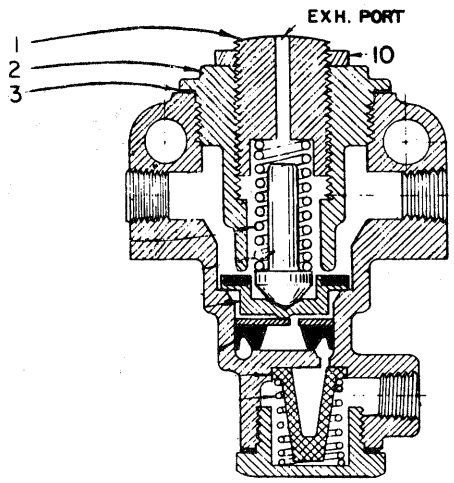


SERVICE INFORMATION

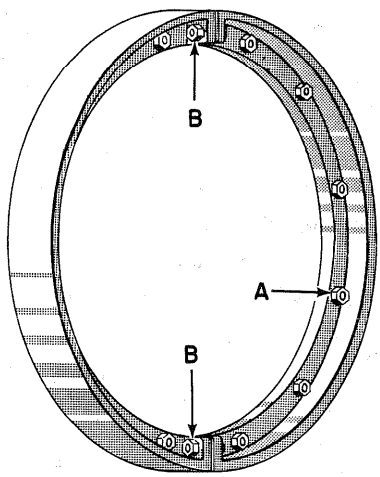
AIR PRESSURE ADJUSTMENT

Adjustment of the air system is controlled entirely by the governor assembly (Hyster No. 95364A) shown below. The unloader (Hyster No. 233803A) located on the compressor needs no adjustment.

The air system is set to a maximum of 145 P. S. I. with a 15 P. S. I. range. If adjustment is required, proceed as follows:



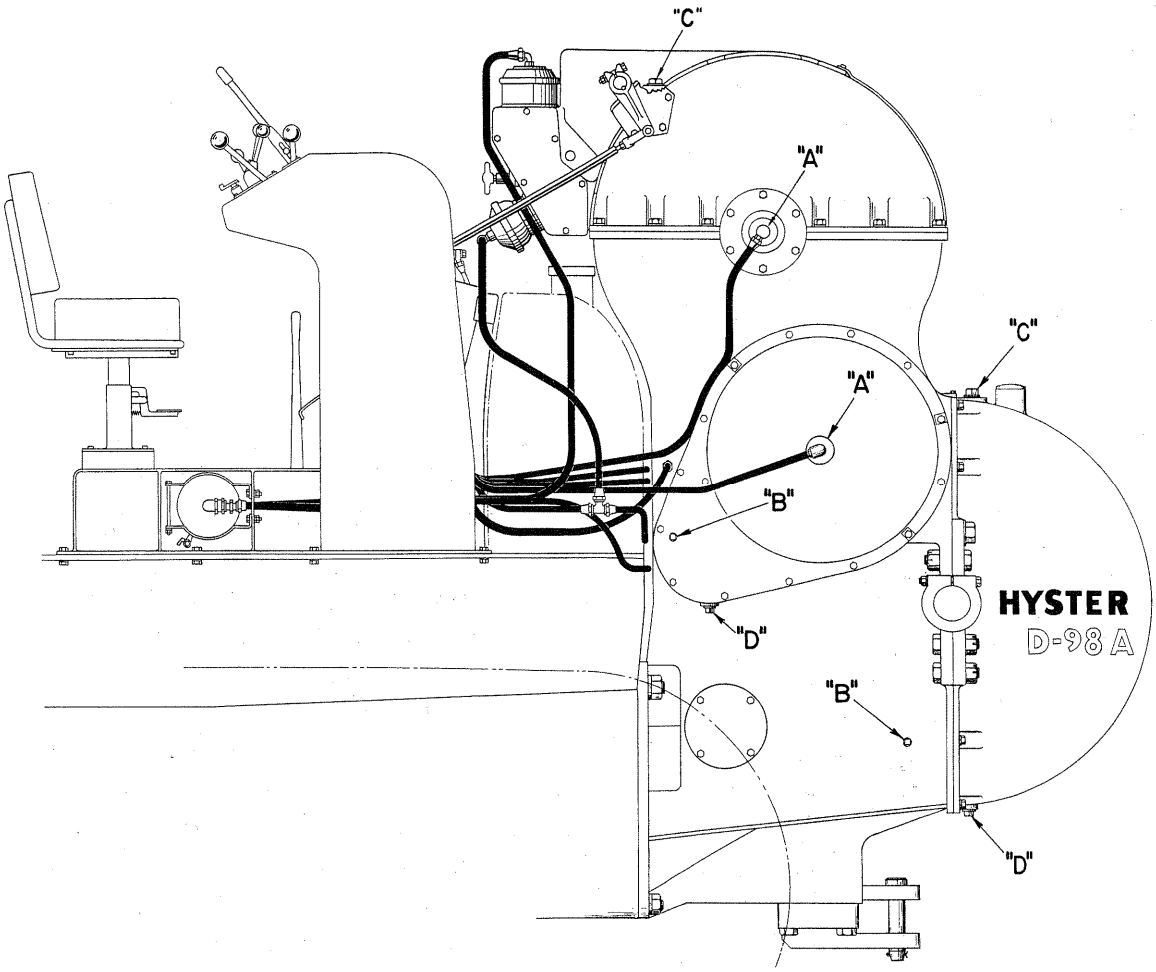
Maximum pressure is regulated by loosening locknut (10) and turning adjusting screw (1) to the right to increase and to the left to decrease. Range is adjusted by removing exhaust valve housing (2) and adding shims (3) to decrease range and removing shims to increase. It is recommended not to set the range closer than 15 P. S. I. as a cycling condition may occur.

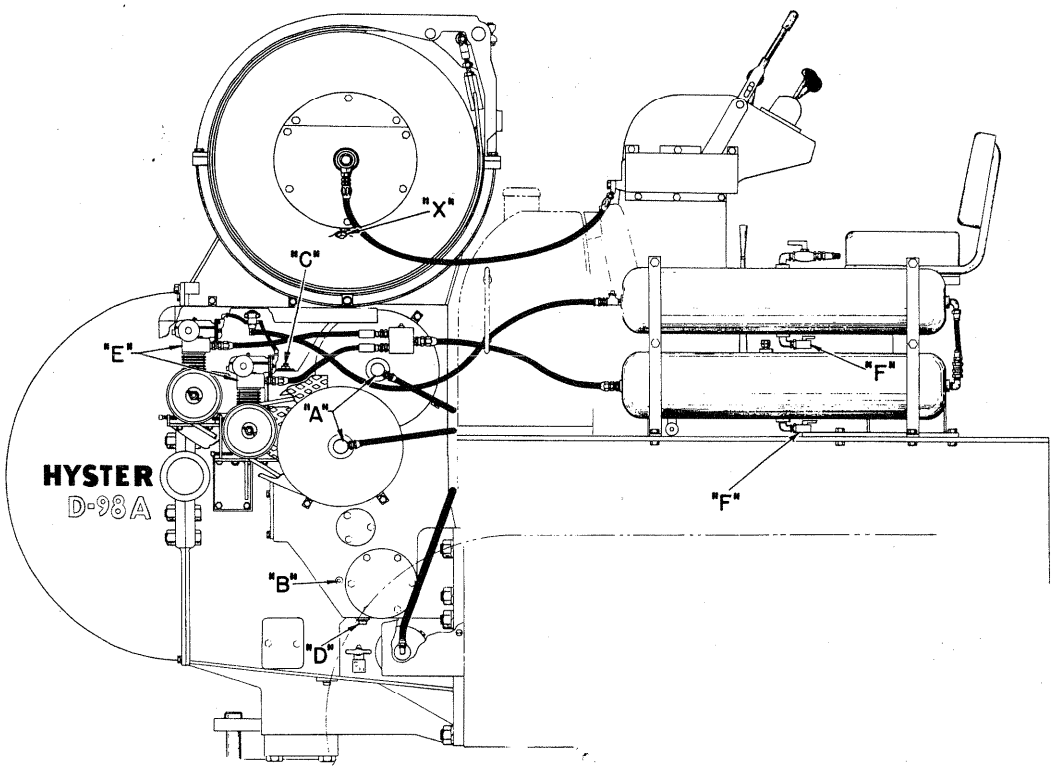


Replacing Brake Flange for Main or Haulback Drum

1. Install capscrews "A" but do not tighten nuts.
2. Tighten slotted nuts "B" to a minimum of 100 Ft. Lb. Torque dry.
3. Tighten twelve capscrews "A" securely.

LUBRICATION CHART





LUBRICATION INSTRUCTIONS

EVERY EIGHT HOURS OR DAILY

Roto Couplings:

Lubricate with lightweight machine oil at "A" (Four Places)

Rod End Pins:

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

Compressors:

Check oil level daily. Add SAE 30 oil if required.

Air Tanks and Pressure:

Check for air leaks in the system by getting maximum pressure in the air tanks, then cutting the tractor engine and watching the air pressure gauge on the control panel. If it falls fairly rapidly the leak should be promptly found and repaired. At the end of each shift, open valves "F" and drain water from each tank, including the emergency tank.

EVERY 50 HOURS OR WEEKLY

Compressor Air Cleaners:

Wash air cleaner packing with cleaning fluid. Clean weekly during dusty conditions and monthly during normal conditions.

Yarder Oil Compartments:

Check oil in all compartments; add oil if necessary. "B" are level plugs, "C" filler plugs and "D" drain plugs. "X" serves all three purposes. Turn drum with plug "X" at top to fill, 45° below center for level check, and at bottom to drain. If Yarder is new, drain all compartments, flush and refill with new oil.

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

Cross Shaft Coupling:

Lubricate with pressure gun grease.

EVERY 400 HOURS OR EIGHT WEEKS

Compressor Belts:

Check alignment and tension on "V" belt drives. The belts should be adjusted tightly enough to be sure there is no slippage under maximum load. This is done by the use of set screws in the bracket holding the compressors.

Compressors:

Drain and refill compressors "E" with SAE 30 oil.

Yarder Oil Compartments:

Drain, flush and refill all YARDER oil compartments with new oil. A straight mineral oil (or if perfered, 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.

Approximate Capacities:

R. H. Side Transmission	20 Qts.
Haulback Drum Drive Compartment	20 Qts.
Final Drive Compartment	15 Qts.
Haulback and Strawdrum	12 Qts.
Compressors (each)	1/2 Pint

After overhaul, add 8 Qts. oil to main drum.

MAIN DRUM BRAKE

MAIN BRAKE ADJUSTMENT

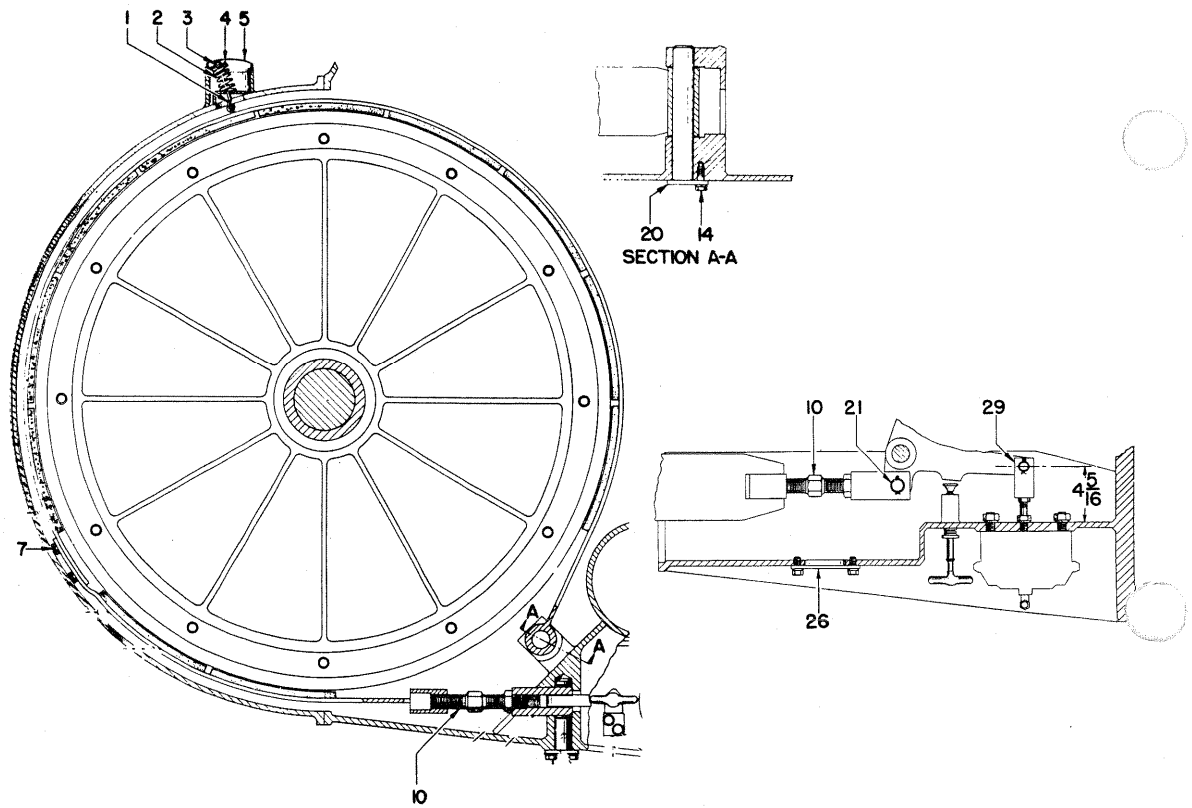
Remove cover (26), and adjusting link may be tightened as lining wears.

MAIN BRAKE BAND REMOVAL FOR RE-LINING.

Disconnect support linkage items 1, 2, 3, 4 and 5. Remove capscrew (14) and anchor pin (20). Remove cover (26), cotter and rod end pin (21), and remove adjusting link (10) from brake band.
Revolve band until it can be pulled over drum and remove locknuts (7) holding two parts of band.

AIR CHAMBER ROD END ADJUSTMENT

Remove pin, loosen jam nut and adjust rod end (29) to 4-5/16" dimension as shown.

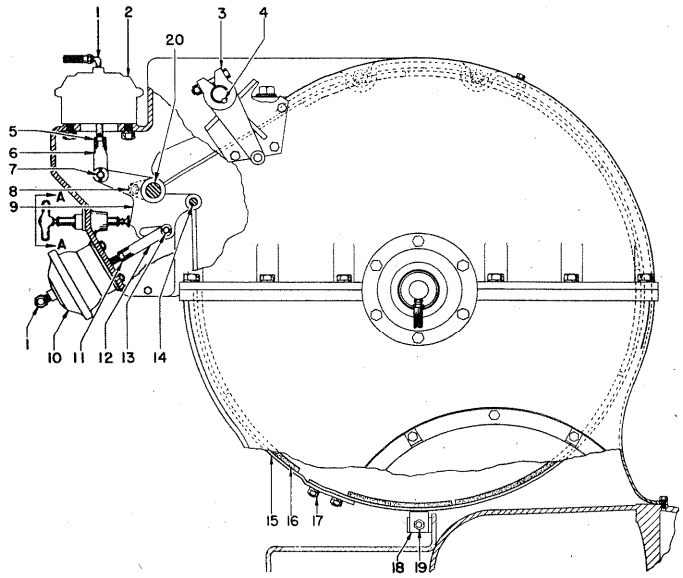


HAULBACK BRAKE ADJUSTMENT

Adjustment is usually not required, however if adjustment is required before lining is worn out, remove rod end pin (7), loosen jam nut (5) and turn rod end (6). Be sure to tighten jam nut after adjustment.

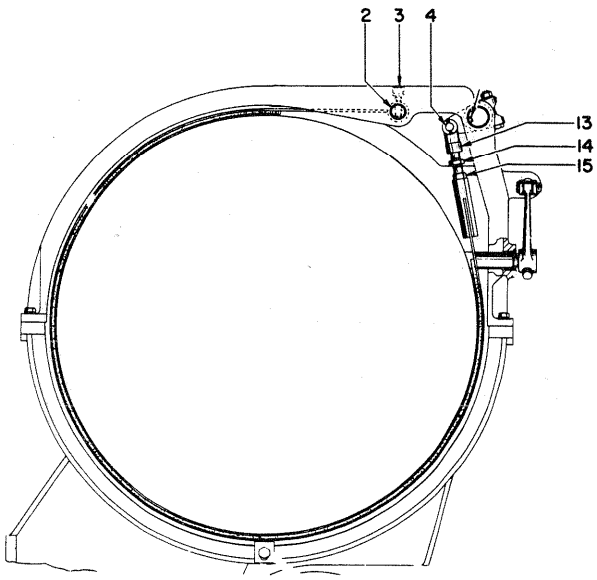
Haulback Brake Band Removal
Remove capscrews (8) and pins (14) and (20). Revolve band until it can be pulled over drum and remove locknuts (17) holding two parts of band.

Rod End Adjustment
To set emergeny chamber rod end, (12) correctly, main chamber rod end (6) must first be connected to crank (9) and brake band (15) be in released position.
Adjust rod end (12) so that rod end pin (13) fits freely and just clears end of slot.
No other adjustment of the rod end need ever be made, even if rod end (6) is later adjusted to get full wear of brake band lining.



Strawdrum Brake Adjustment
Loosen jam nut (15) and turn adjusting link (14) as required. After adjustment be sure to tighten jam nut (15).

Strawdrum Brake Band Removal
Remove capscrew (3), pin (2) and cotter and rod end pin (4) on rod end (13). Slide band over drum, spread band and remove.



Brake Band Clearance
With brake fully released, there should be approximately 1/16" clearance for all bands.

CLUTCHES

No adjustment of air clutches is required. When a clutch no longer holds, new driving plates are necessary. The driving plates are easily replaced without complete disassembly.

HIGH AND LOW SPEED CLUTCHES.

Disconnect air lines to roto couplings and remove guard covering clutch and air compressor. Unscrew the roto coupling by the hex section provided on the inside of the coupling.

Disconnect the air line between the clutch and shaft and loosen set screw from locknut (ring) (Fig. 1). Unscrew locknut (ring) and remove clutch front plate (Fig. 2). Slide the driving and driven plates from the shaft and spider. The low speed clutch is disassembled in the same manner (Fig. 3).

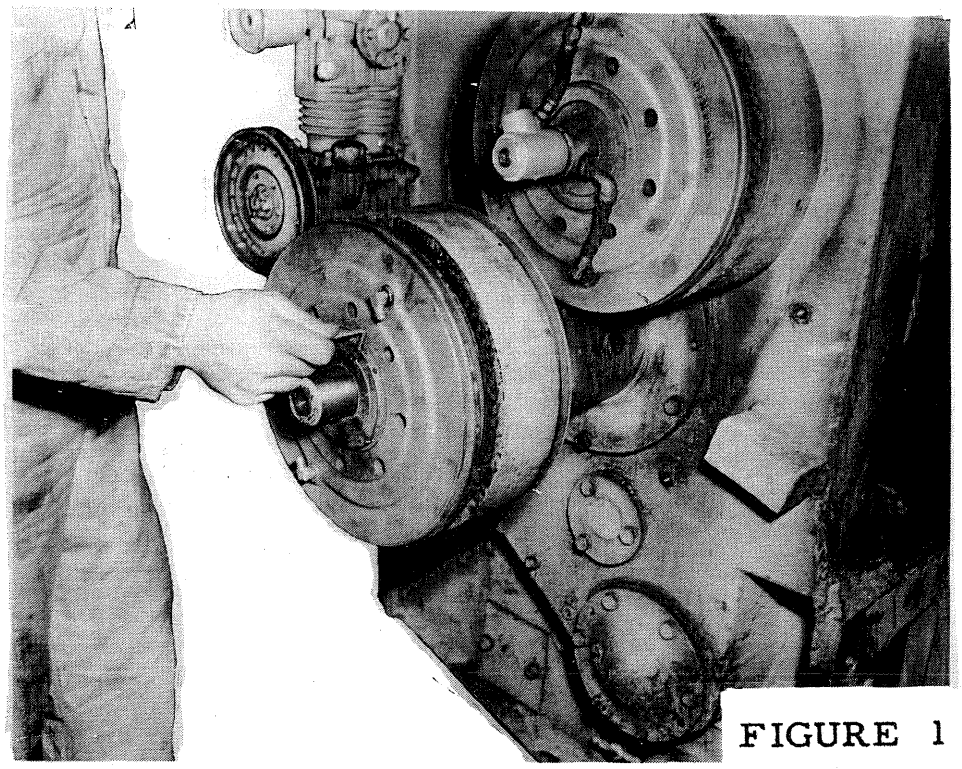


FIGURE 1

The main drum clutch is disassembled basically the same as the high-low. However, the clutch hub is retained on the shaft with a keeper instead of a lock ring. (Fig. 4).

SERVICING INSTRUCTIONS - Continued

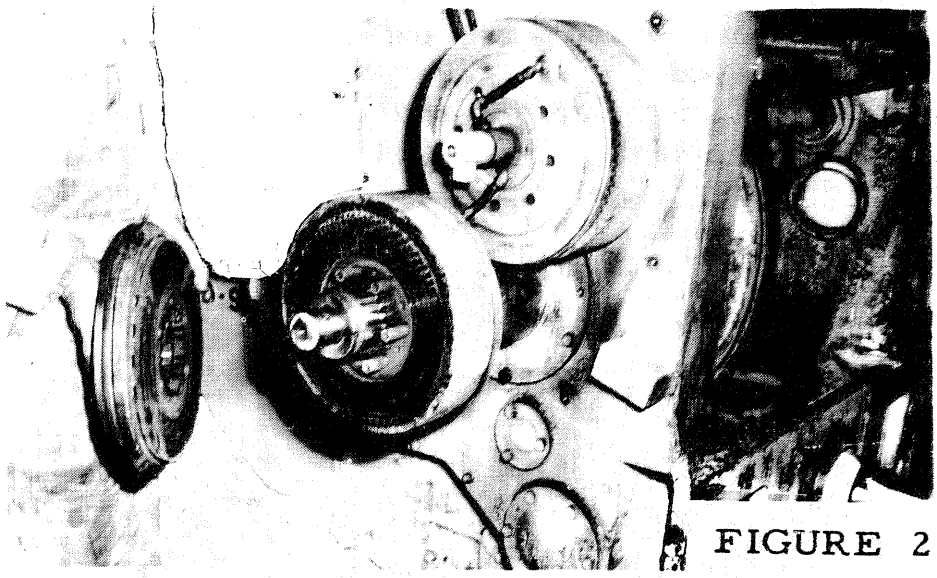


FIGURE 2

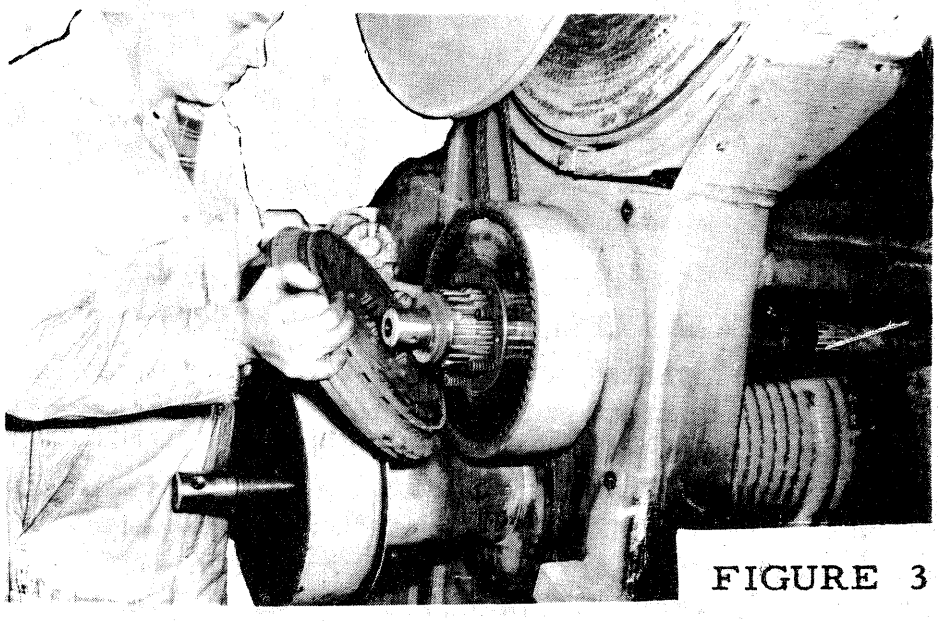


FIGURE 3

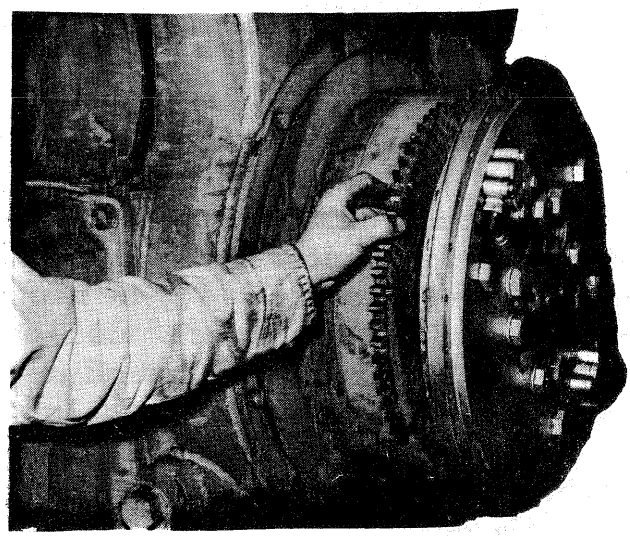


FIGURE 4

SERVICING INSTRUCTIONS-Continued

The haul back clutch is identical to the main drum clutch but driving plate removal is done by removing the clutch spider. The spider is in three pieces which may be removed separately. Remove one section of the spider (Fig. 5) and replace the three segments. Revolve the drum and remove the next section until all three sections have been replaced.

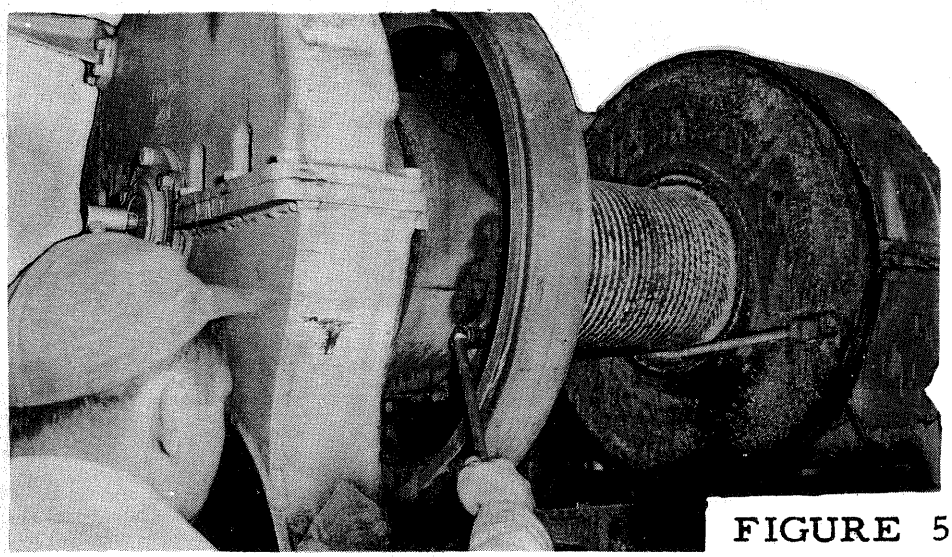


FIGURE 5

After servicing clutches, be sure all air lines are tight.

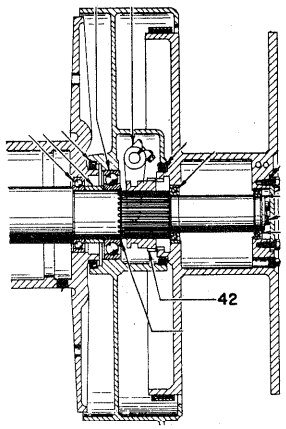
STRAWDRUM DENTAL CLUTCH

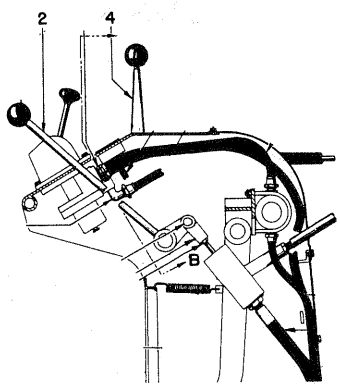
To adjust the Strawdrum Dental Clutch, move the clutch (42) into engagement with the teeth on the strawdrum, then disengage clutch (42) until strawdrum will turn freely. Attach one end of push-pull cable (23) to crank (16) on shaft (21), which actuates shifter fork (20) and strawdrum dental clutch. With the strawdrum clutch handlever (4) in disengaged position (vertical position as shown), adjust the push pull cable (23) to match, and attach to handlever.

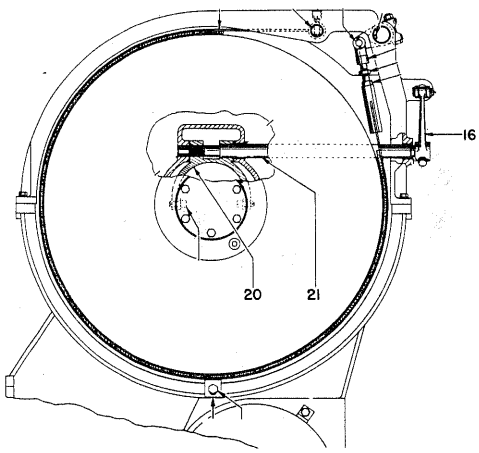
COMPOUND SHIFTER

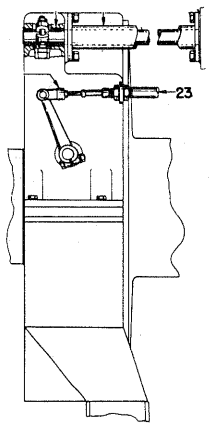
To adjust the compound shifter, move the shaft (20) so that the ball (8) is in the center groove of shaft (20). This will place the dental clutch (40) in neutral position between gears (38) and (41). Attach push-pull cable (1) to shifter shaft (20). Push compound shifter handlever, (2) all the way forward, and mark location, then all the way back, and mark location. Half way between will be neutral. With handlever in neutral position, adjust cable and attach to handlever.

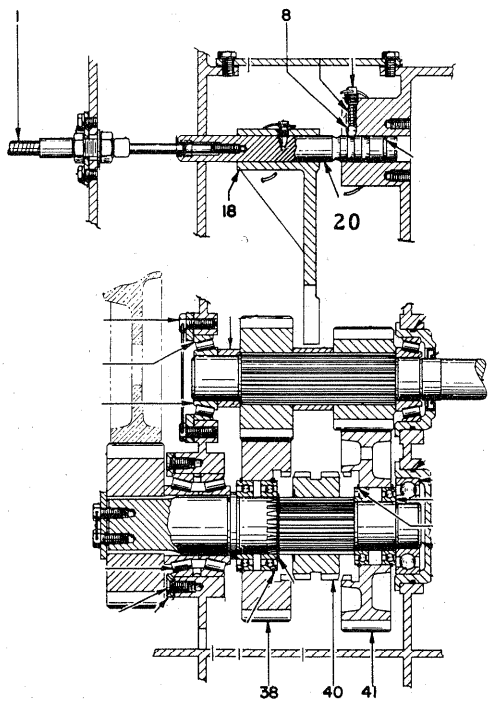
SERVICING INSTRUCTIONS - Continued





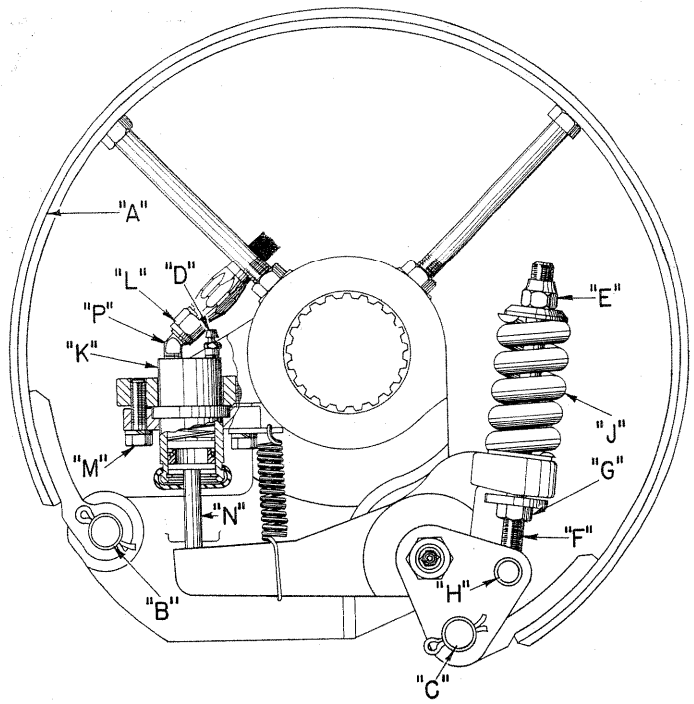






SERVICING INSTRUCTIONS - Continued

STRAWDRUM HYDRAULIC CLUTCH



To Remove Air From System:

1. Remove clutch Band "A" by removing cotters and pulling pins "B" and "C". If this is not done, hydraulic fluid may spill on the band and the lining may then have to be replaced.

2. Fill master cylinder with genuine Lockheed (*or equal) brake fluid and keep at least 1/4 full during bleeding operation. (Be careful that no dirt enters the system.)

3. Loosen the bleeder screw "D" one full turn and attach a rubber bleeder hose, allowing the end of the hose to rest in a glass jar partly filled with brake fluid.

4. Pull handlever slowly, circulating brake fluid through the system and forcing out the air. Return handlever to forward position slowly. Continue to pump, as directed, until no more air bubbles appear in the jar. Note: Keep end of hose below surface.

5. When bubbles cease to appear, tighten bleeder screw and fill master cylinder with brake fluid. Clutch is now ready for operation.

*If other than genuine Lockheed (or equal) brake fluid has been used (any mineral-base oil) rubber parts may swell and become inoperative. It will then be necessary to drain all line s and cylinders and flush with alcohol. New parts consisting of clutch cylinder repair kit and master cylinder repair kit must be installed. This is the only satisfactory way to repair a hydraulic system which has become fouled by a mineral-base oil. Always dip cylinder repair parts in brake fluid before assembly. Never install when dry.

Clean clutch surface and reinstall Band "A".

To Adjust the Clutch:

For ease of operation, the clutch should not be adjusted tighter than required to handle the job. Overadjustment makes it harder to engage the clutch, thereby putting unnecessary work on the operator and the machine.

1. Disengage clutch and loosen nut "E" on link "F".
2. Turn nut "G" which is part of link "F" into Trunion Nut "H".
3. Tighten nut"E" snugly against spring. Do not tighten excessively.

The spring "J" is pre-loaded at the factory and cannot be adjusted in the field. If a spring breaks, order a complete spring assembly which includes the center core and will come to you properly pre-loaded. The function of the spring is two-fold. First to compensate for temperature variations and a certain amount of normal wear, thus eliminating the necessity of frequent clutch adjustment. Second, the spring tends to limit the capacity of the clutch.

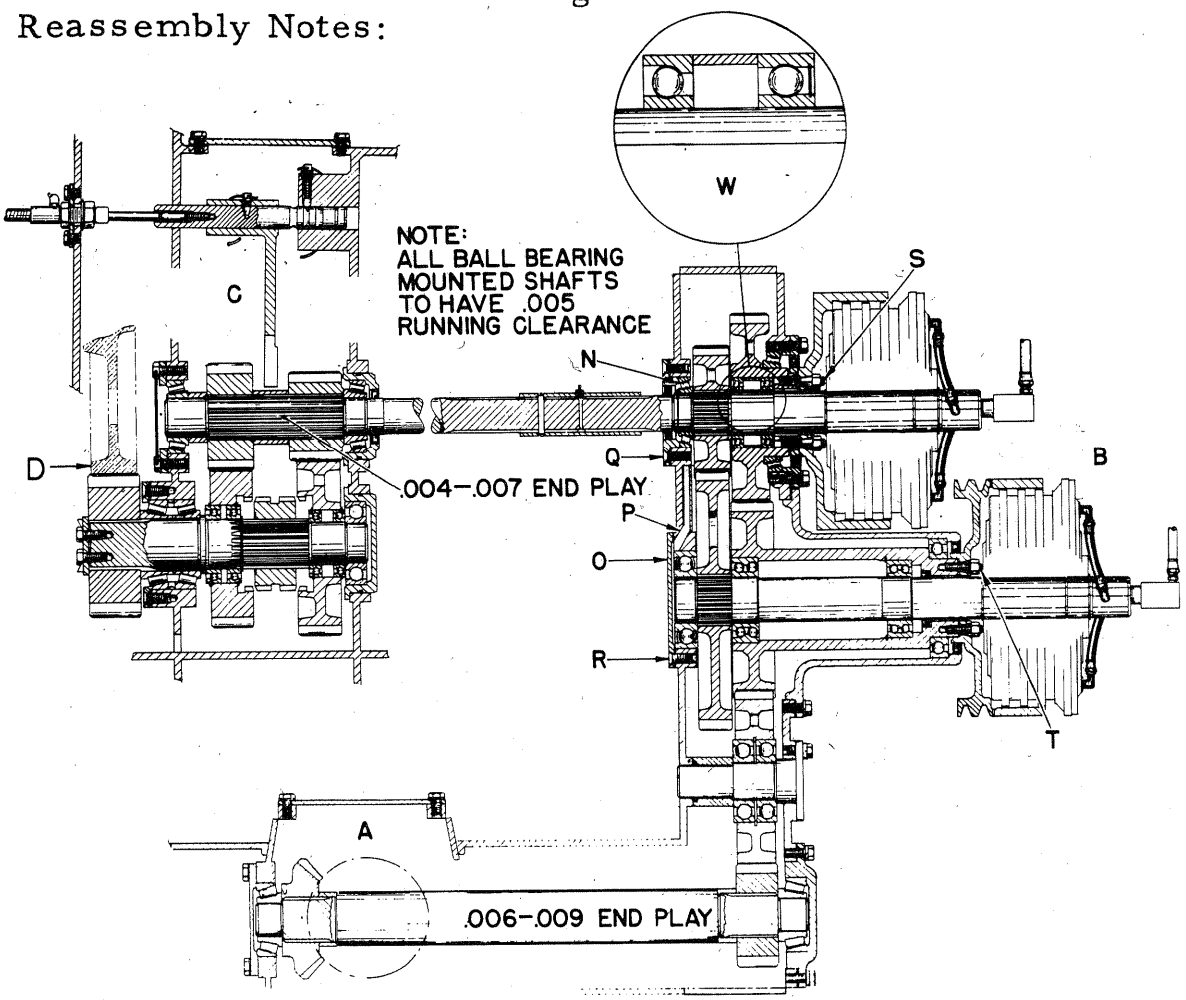
To Remove Slave Cylinder:

1. Remove Clutch Band "A" as directed above.
2. Disconnect hose fitting "L".
3. Remove Capscrews "M" and push rod "N" and remove cylinder. If necessary, remove fitting "P" and bleeder screw "D".

Caution: Before replacing clutch band, be sure clutch surface is clean and entirely free of hydraulic fluid that may have been spilled.

SERVICING INSTRUCTIONS - Continued

Gear Train and Drum Arrangement
Reassembly Notes:



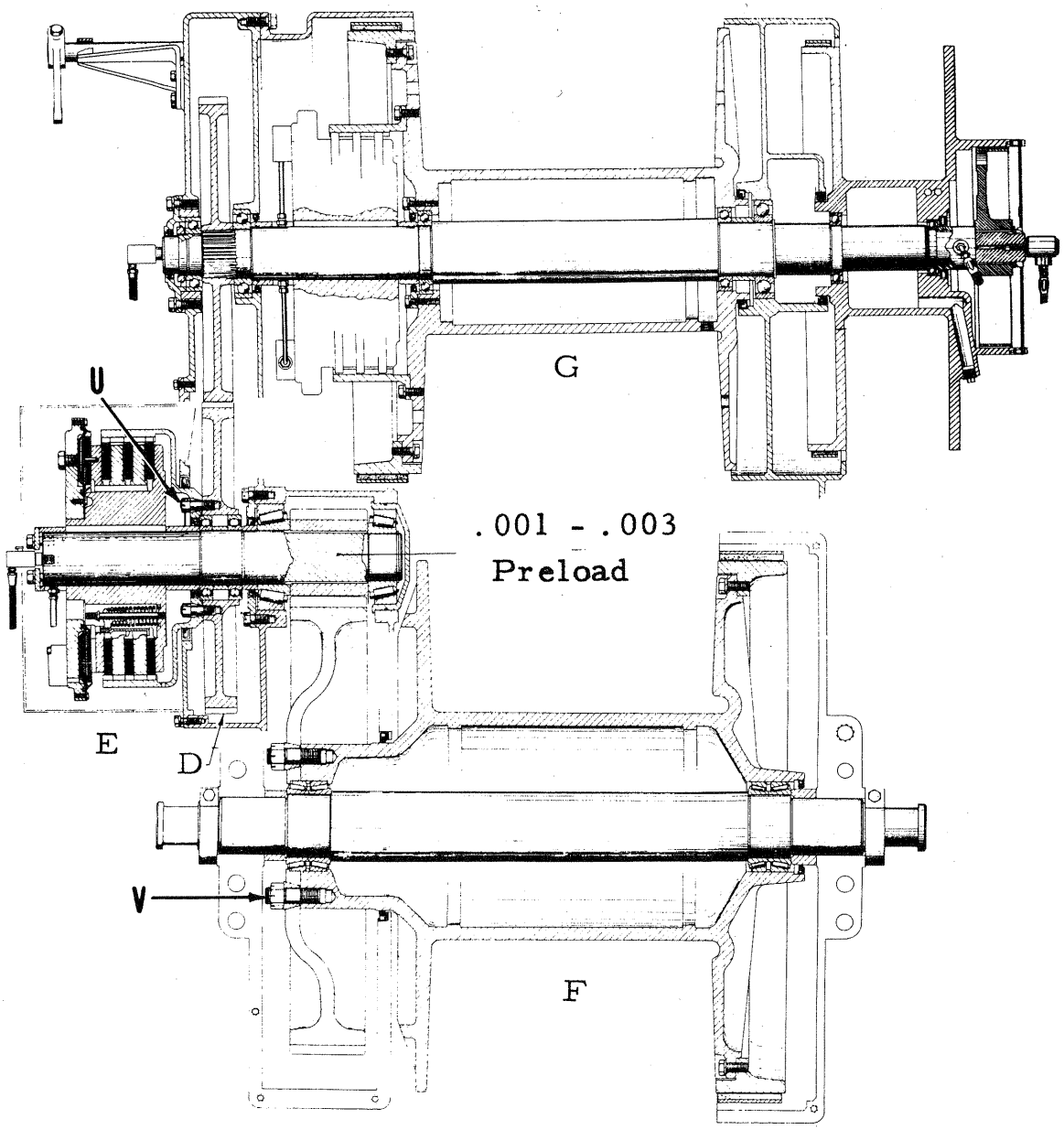
A. Power Take-Off Group (See Page A25)
For Standard Tractor Transmissions:
Bevel Gear .005-.007 backlash at zero end play.
For Torque Converter Tractor Transmissions:
Bevel Gear .008-.011 backlash at zero end play.
For P. T. O. Shaft and Bevel Gear on end of shaft:
Preload bearings 6 to 8 in. bl. torque.

B. High-Speed and Low-Speed Clutch Shafts
1. Roller bearing "N" must be installed with snap ring retainer facing oil seal.
2. Bearings at "W" must be installed as shown.
3. Slot in retainer "O" and in gasket must align with hole "P" in hub.
4. Stake flathead capscrews "Q" and "R" in place.
5. To install studs "S" and "T",
dimension "A" = 1-1/4 + 0 - 1/8.
Torque = 44 lb. ft. lubricated or 68 lb. ft. dry.

C. Compound Group

SERVICING INSTRUCTIONS - Continued

Gear Train and Drum Arrangement Reassembly Notes:



D. Gear - Compound Group to Main Drum Clutch Drive.

E. Main Drum Clutch Drive: to install studs "U", dimension "A" = 1-7/8 + 0 - 1/8.

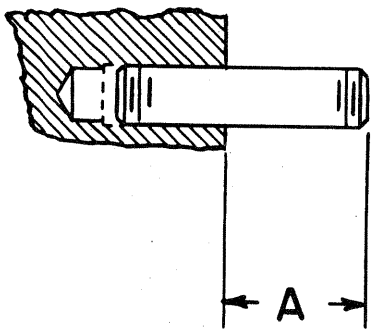
F. Main Drum Group: to install studs "V", dimension "A" = 2-3/8 + 0 - 1/8.

G. Haul back and Strawdrum Group.

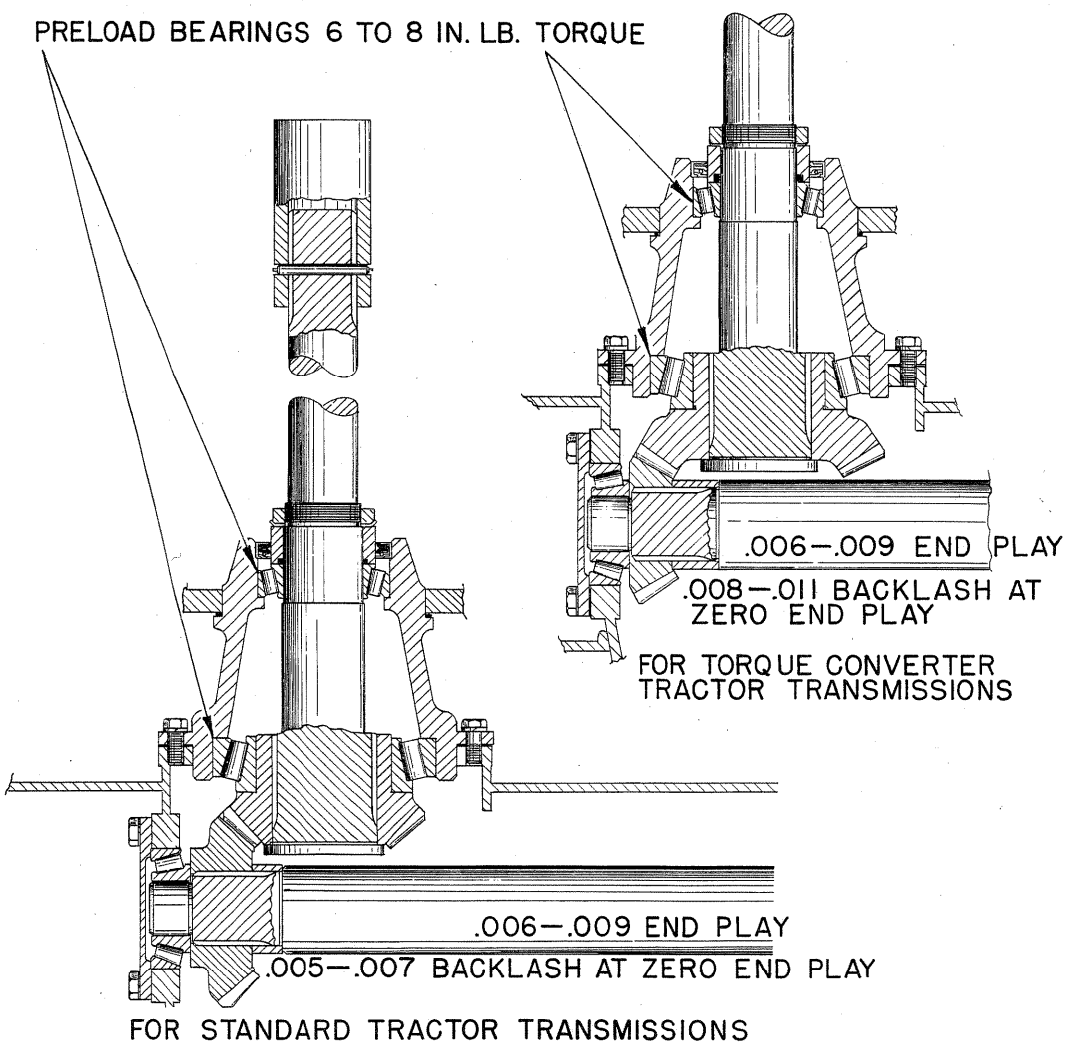
SERVICING INSTRUCTIONS - Continued

Reassembly Notes:

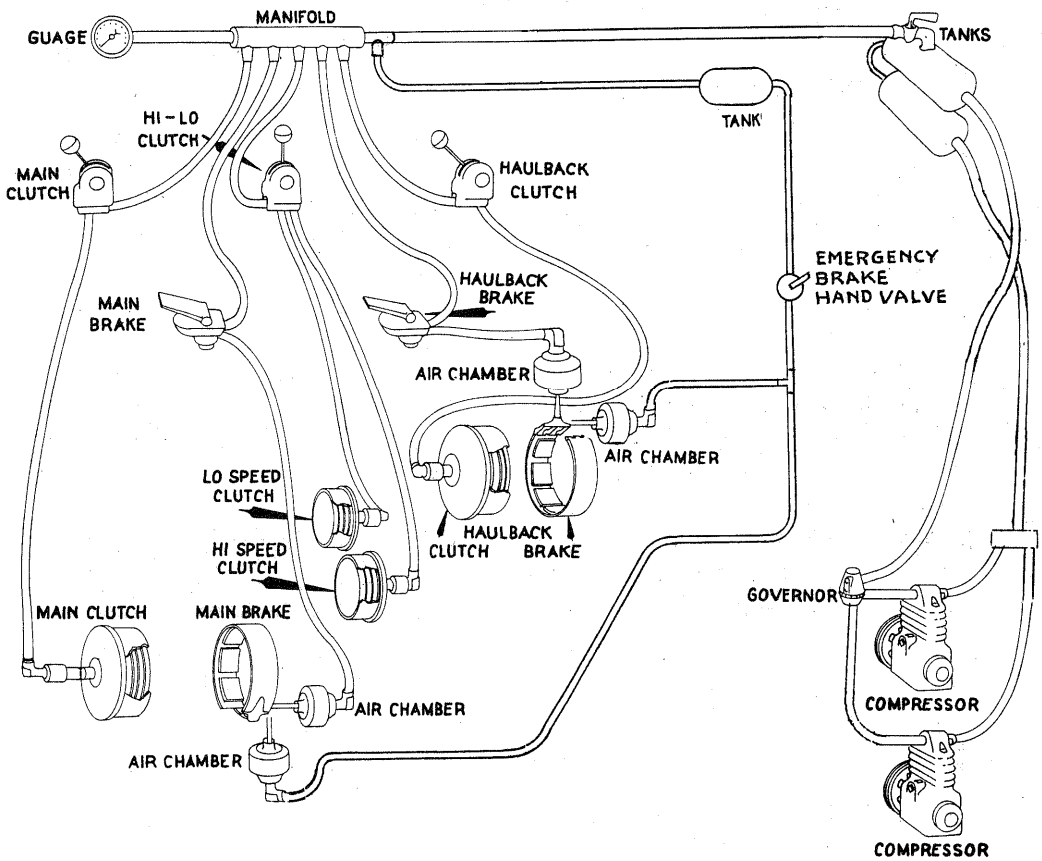
STUD INSTALLATION



P. T. O. SHAFT

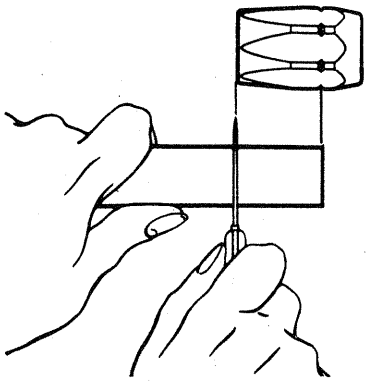


AIR CIRCUIT

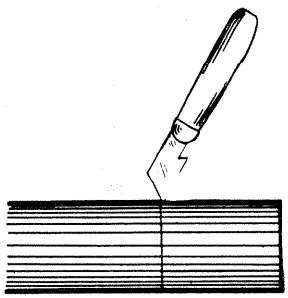

GUAGE
MANIFOLD
TANKS
TANK
HI-LO CLUTCH
MAIN CLUTCH
HAULBACK CLUTCH
EMERGENCY BRAKE HAND VALVE
MAIN BRAKE
HAULBACK BRAKE
AIR CHAMBER
AIR CHAMBER
LO SPEED CLUTCH
HAULBACK CLUTCH
HAULBACK BRAKE
HI SPEED CLUTCH
GOVERNOR
MAIN CLUTCH
MAIN BRAKE
AIR CHAMBER
COMPRESSOR
AIR CHAMBER
COMPRESSOR

Hose Fittings Installation:

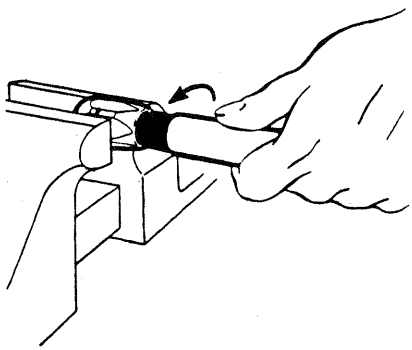
Hose - Double Wire Braid - I. D.	O.D.
1/2"	.937 to 1.000"
3/4"	1.218" to 1.281"
1"	1.515" to 1.609"



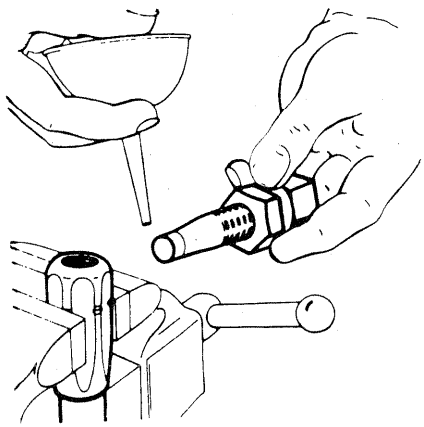
Step 1. Cut the hose to the length required. Locate the stripping point by putting the hose end next to the fitting socket as shown in Figure 1.



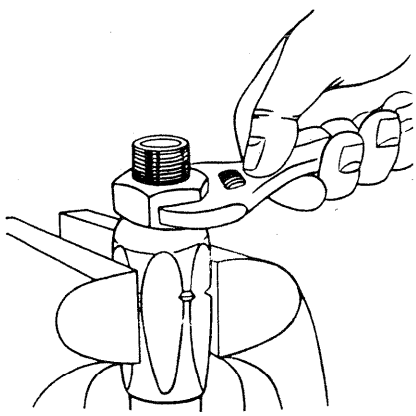
Step 2. To strip the hose, cut around down to the wire braid. Slit lengthwise, raise the flap and remove from the hose. Clean the wire with a steel brush or wire wheel. Be careful not to fray the wire braid.



Step 3. Put the socket in a vise and screw hose into socket counterclockwise until it bottoms.



Step 4. Oil nipple threads and inside of hose liberally.



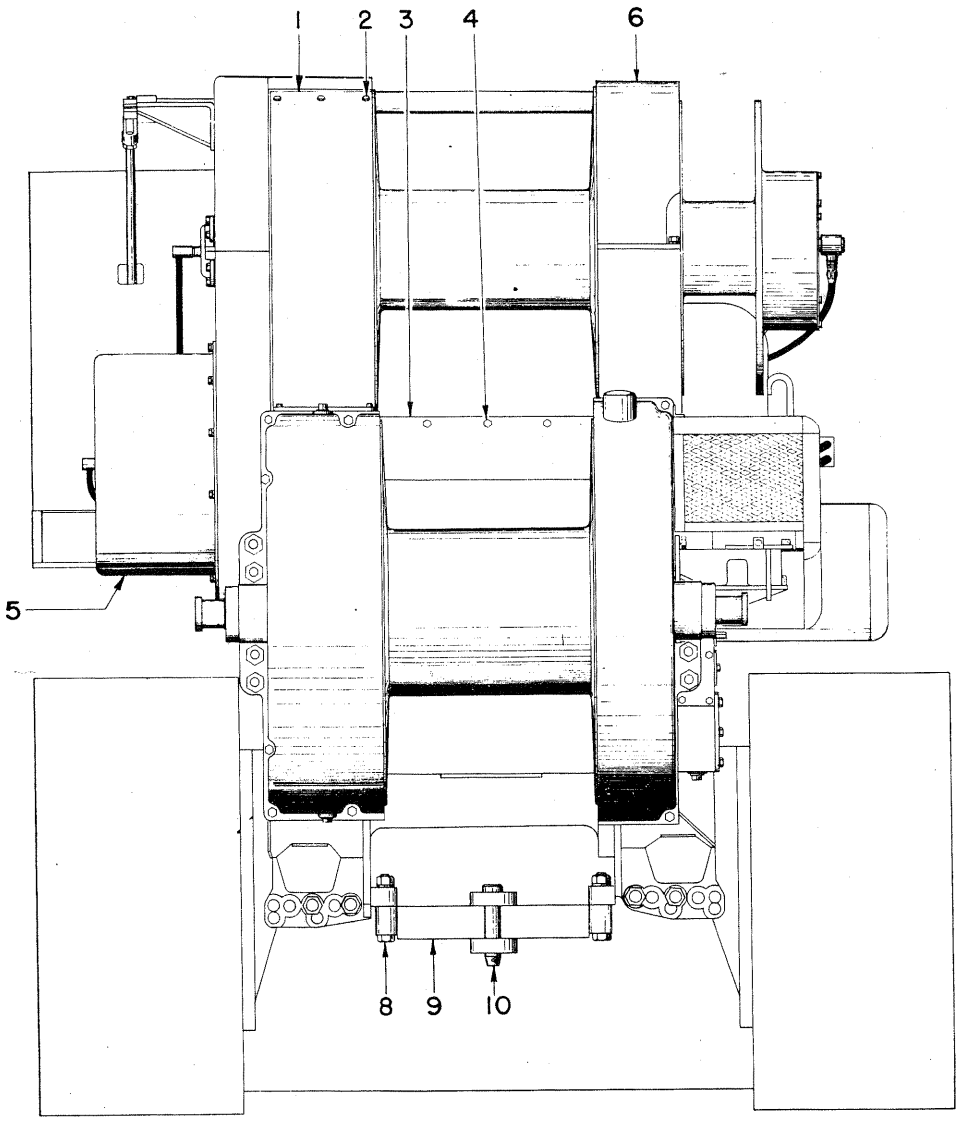
Step 5. Screw nipple into socket and hose. Leave 1/32" to 1/16" clearance for takeup.

SECTION B

FRAMES, COVERS AND MOUNTING STUDS

Covers, L. H. Side ----------B3
Covers, R. H. Side ----------B5
Mounting Studs, D8 Tractors ----------B7
Mounting Studs, D9 Tractors ----------B9
Rear Elevation----------B1
Seat and Pedestal Assembly ----------B10

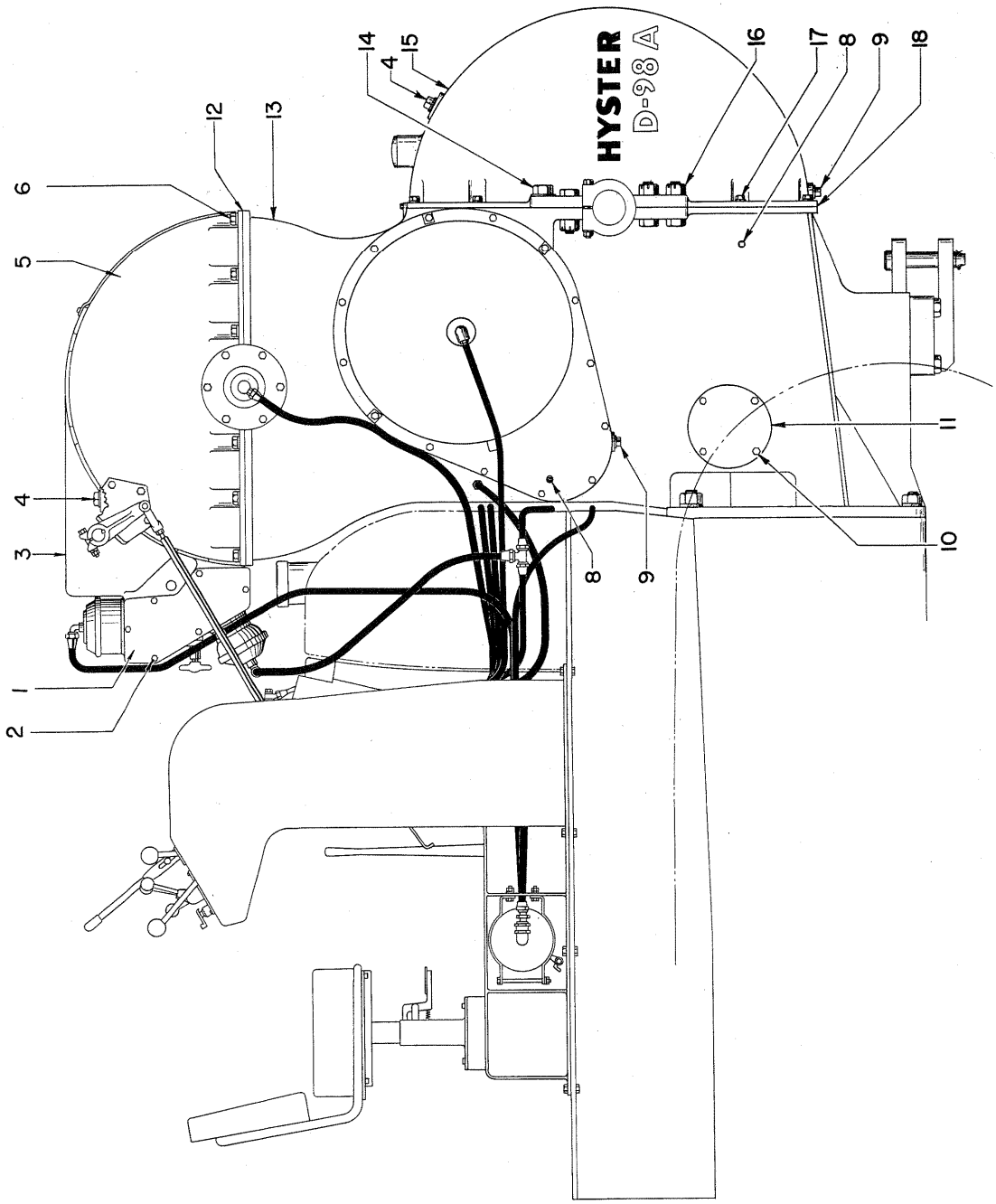
REAR ELEVATION



REAR ELEVATION

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	95206	Plate - Cover	1
2	(16820	Capscrew-1/2UNF x 1, Hardened	6
	(15158	Lockwasher - 1/2	6
3	95241	Plate - Guard	1
4	(16820	Capscrew-Hardened, 1/2UNF x 1	5
	(15158	Lockwasher - 1/2	5
5	95207W	Cover - Main Clutch	1
6	(96214	Cover (First Used on SN 49P-1519)	1
	(95212W	Cover (Last used on SN 49P-1518)	1
8	(16635	Capscrew-1-1/4 UNF x 6-1/2	4
	(15018	Nut-Hex, 1-1/4 UNF	4
	(15168	Lockwasher - 1-1/4	4
9	95249W	Drawbar	1
10	(94369	Pin - Drawbar	1
	(15273	Cotter - 3/8 x 2-1/2	1

COVERS AND FASTENINGS - LEFT HAND SIDE



COVERS AND FASTENINGS - LEFT HAND SIDE

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	(96340	Plate - Cover	1
		(First used on S. N. 49P1531)	
	(95171	Cover (Last used on S. N. 49P1530)	1
2	(16696	Capscrew-Hardened, 3/8UNFx7/8	6
	(15156	Lockwasher - 3/8	6
		(First used on S. N. 49P1531)	
	(37562	Capscrew - Hardened, 1/2 UNF x 1-1/4	2
	(15158	Lockwasher - 1/2	2
		(Last used on S. N 49P1530)	
3	* 96519	Cover - L. H. Haulback Brake	1
		(First used on S. N 49P1531	
4	32379	Pipe Plug - Vent	2
5	96741W [R]	Cover	1
6	(16831	Capscrew - 3/4 UNF x 1-3/4	16
	(15162	Lockwasher - 3/4	16
8	15303	Pipe Plug	2
9	35504	Pipe Plug - Magnetic	2
10	(16820	Capscrew - Hardened, 1/2 UNF x 1	4
	(15158	Lockwasher - 1/2	4
11	95174	Plate - Cover	1
12	95205	Gasket	2
13	95303	Housing and Frame	1
14	(16633	Capscrew - 1-1/4 UNF x 3	1
	(15168	Lockwasher - 1-1/4	1
15	95203W	Cover - L. H.	1
16	(16641	Capscrew - 1-1/4UNF x 4	3
	(67649	Nut - Lock, 1-1/4 UNF	3
17	(12479	Capscrew - 5/8 UNF x 1-3/4	6
	(15160	Lockwasher - 5/8	6
18	(95238	Gasket - Top, L. H.	1
	(95239	Gasket - Bottom, L. H.	1

* For replacement prior to S. N. 49P1531, also include 1-96337 crank, 1-96340 cover, 6-16696 capscrews, 6-15156 Lockwashers.

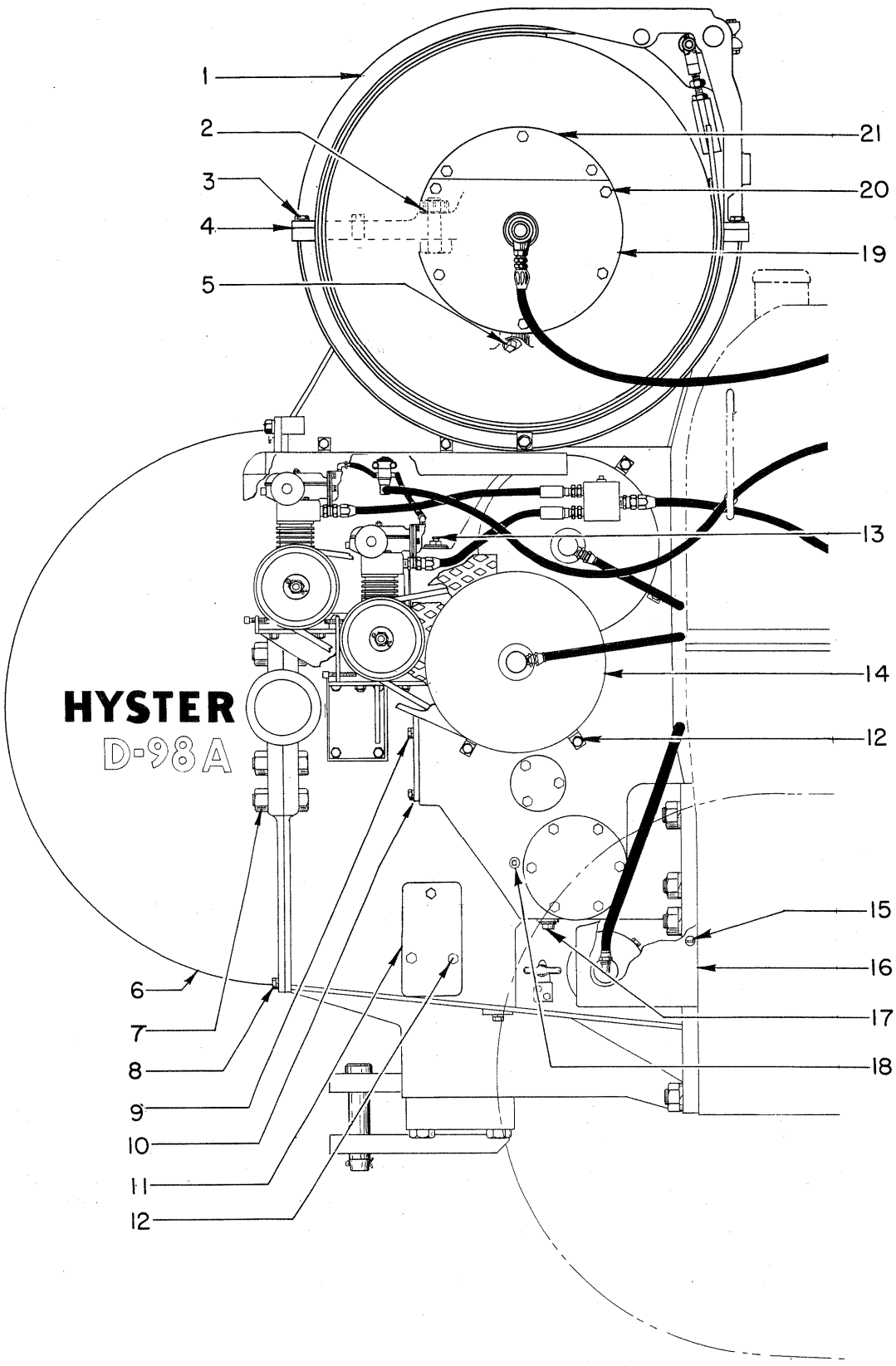
NOT ILLUSTRATED

	95386	Bracket - Seat (Angle 2-1/2 x 2-1/2 x 9-1/4" Long) 1

This bracket is furnished for reinstalling tractor arm rest if yarder is removed from tractor. Drill holes required, using bracket 95386 as template.

B5

COVERS - RIGHT HAND SIDE

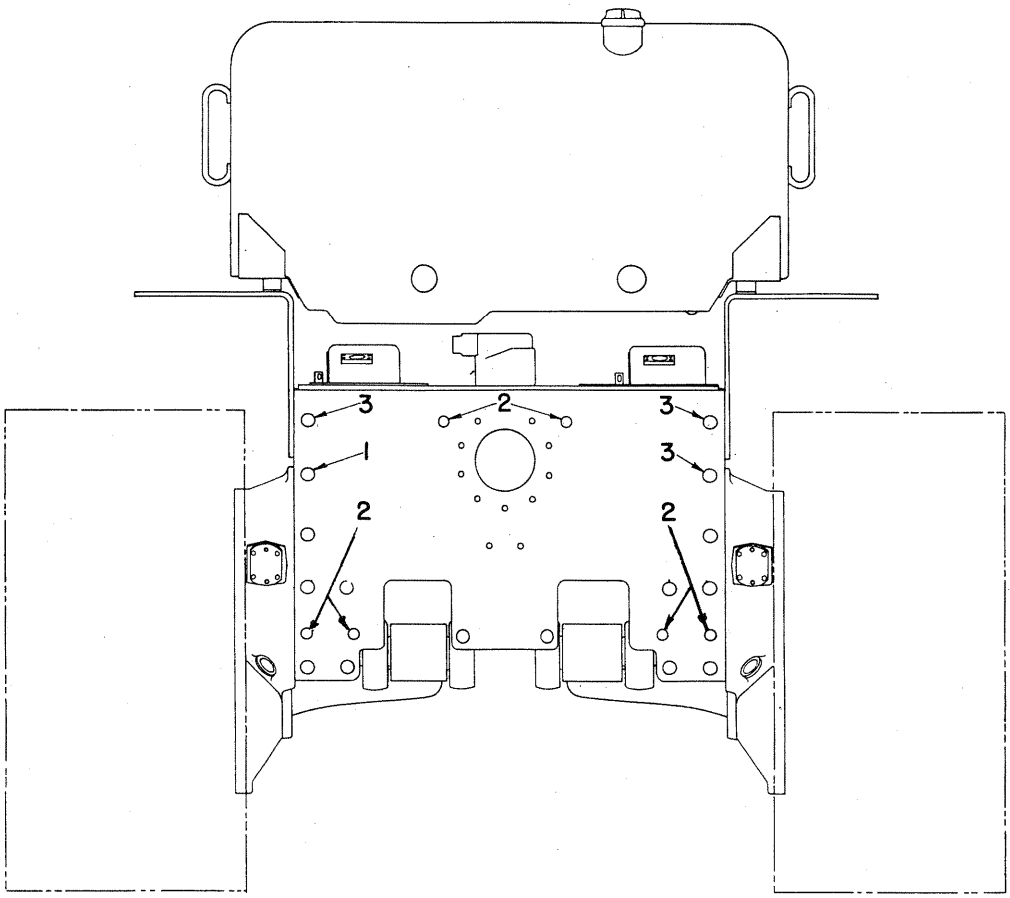


COVERS - RIGHT HAND SIDE

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	(96214	Cover (First used on S. N. B49P-1519)	1
	(95212W	Cover (Last used on S. N. B49P-1518	1
2	(16596	Capscrew-Hardened, 1-1/4UNF x 3-1/2	2
	(67649	Locknut - 1-1/4 UNF	2
3	(16807	Capscrew-Hardened, 1/2UNF x 1-1/2	6
	(15158	Lockwasher - 1/2	6
4	95213	Gasket - R. H.	2
5	15304	Fitting - Pipe Plug - 3/4	1
6	95210W	Cover - R. H.	1
7	(16641	Capscrew-1-1/4UNF x 4, Hardened	4
	(67649	Locknut - 1-1/4 UNF	4
8	(12479	Capscrew-5/8UNF x 1-3/4, Hardened	2
	(15160	Lockwasher - 5/8	2
9	(37562	Capscrew-1/2UNF x 1-1/4, Hardened	10
	(15158	Lockwasher - 1/2	10
10	(95214W	Cover	1
	(95216	Gasket	1
11	95753	Plate - Cover	1
12	(16820	Capscrew-1/2UNF x 1, Hardened	9
	(15158	Lockwasher - 1/2	9
13	(12567	Fitting-Pipe, Bushing	1
	(21420	Plug-Breather	1
14	95926W	Guard - Clutch	1
15	(15772	Capscrew-Flathead, 1/2UNF x 1-1/4	2
	(15929	Washer - 1/2	2
16	95240	Plate - Cover	1
17	35504	Fitting-Pipe Plug, Magnetic 1	1
18	15303	Fitting-Pipe Plug 1/2	1
19	96194W	Cover	1
20	(16663	Capscrew-Hardened, 5/16 UNF x 5/8	8
	(15155	Lockwasher - 5/16	8
21	96196	Cover	1

MOUNTING STUDS

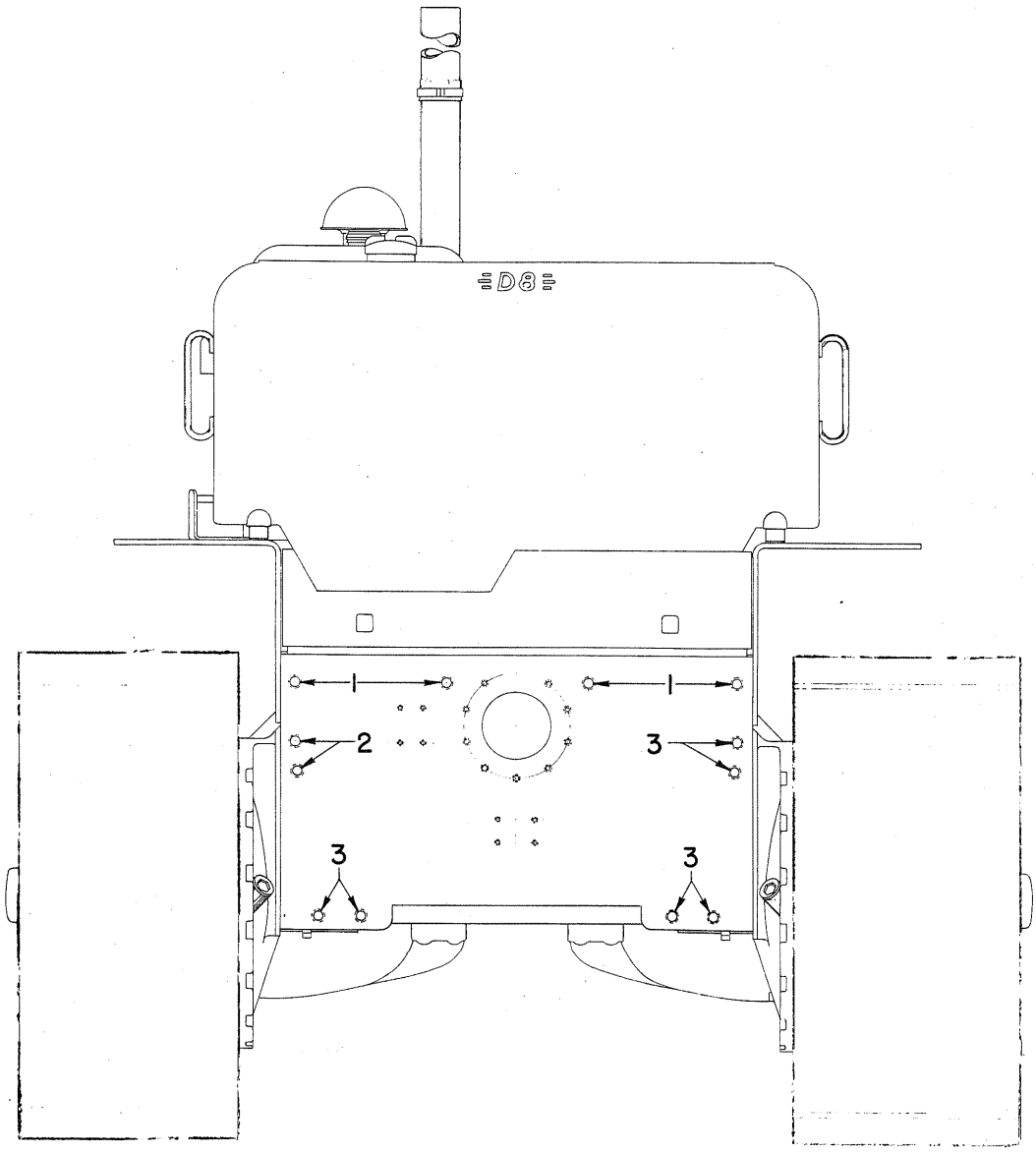
For D8 Tractors Serial Number 22A, 35A, 36A, 46A, 52A



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	95827	Stud-Taper Lock	1
2	(95837	Stud-Taper Lock	6
	(15168	Lockwasher - 1-1/4	6
	(15018	Nut - 1-1/4 UNF	6
3	(-----	Stud (Tractor Drawbar Studs)	3
	(15170	Lockwasher 1-1/2	4
	(5792B	Nut - 1-1/2 UNF	4
	95386	Bracket - Seat (Not Illustrated)	1

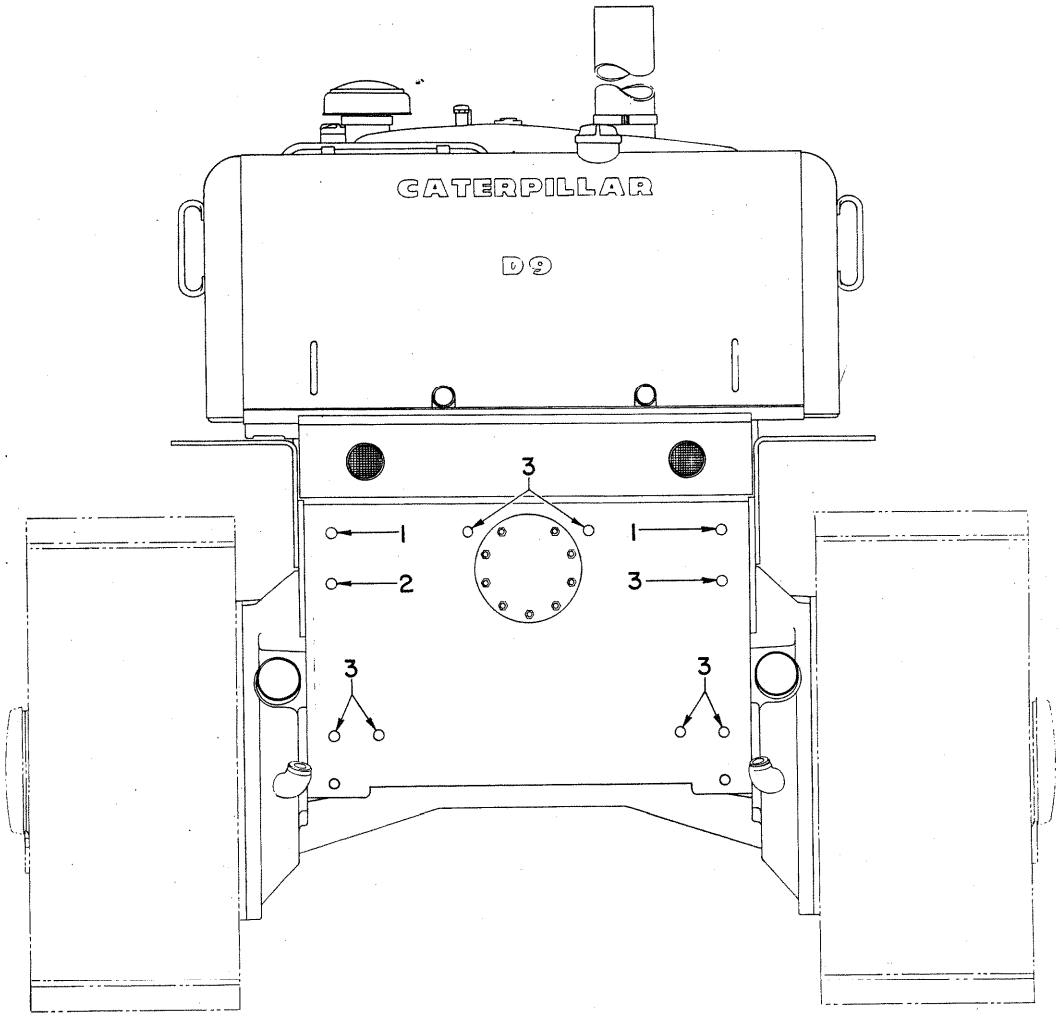
MOUNTING STUDS

For D8 Tractors Serial Number 14A, 15A



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	(6694B	Stud	4
	(15168	Lockwasher - 1-1/4	4
	(15018	Nut - Hex, 1-1/4-UNF	4
2	(95304	Stud	2
	(15168	Lockwasher - 1-1/4	8
	(15018	Nut - Hex, 1-1/4-UNF	8
3	-----	Studs Furnished With Tractor	
	95386	Bracket - Seat (Not Illustrated)	1

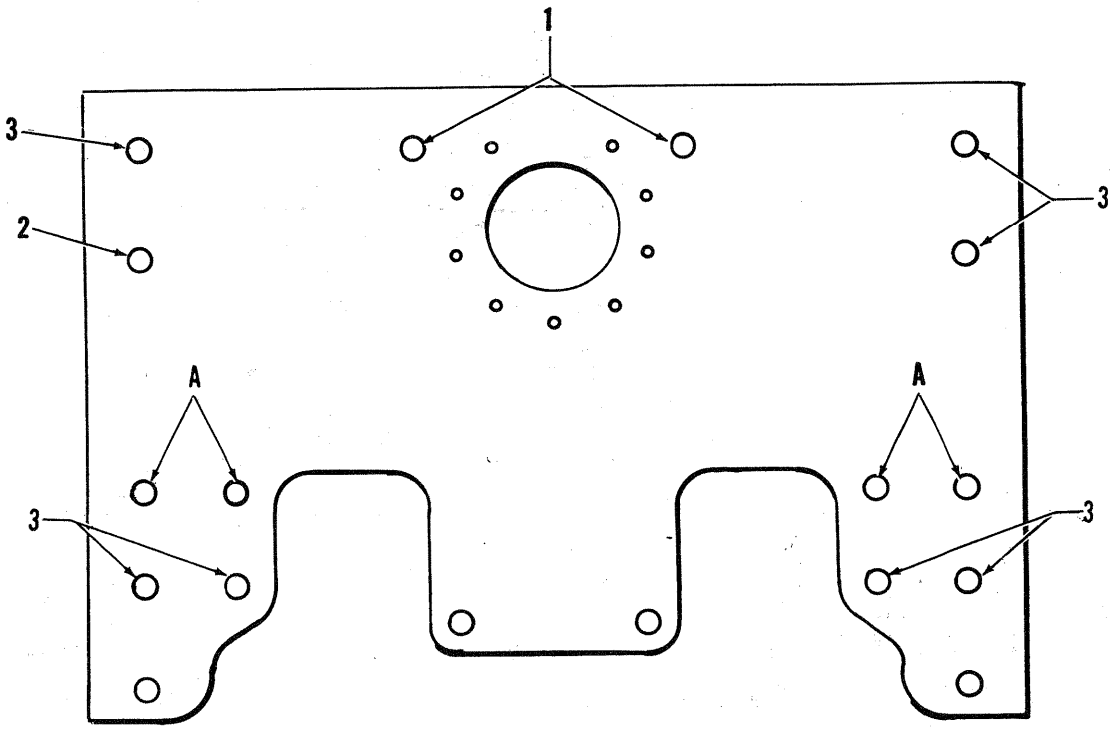
MOUNTING STUDS
For D9 Tractors Serial Number 18A, 19A



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	(93348	Stud	2
	(15170	Lockwasher - 1-1/2	2
	(5792B	Nut - 1-1/2 UNF	2
2	(95305	Stud	1
	(15168	Lockwasher - 1-1/4	8
	(15018	Nut - 1-1/4 UNF	8
3	-----	Stud - Furnished With Tractor	7
		Not Illustrated	
	95386	Bracket - Seat	1

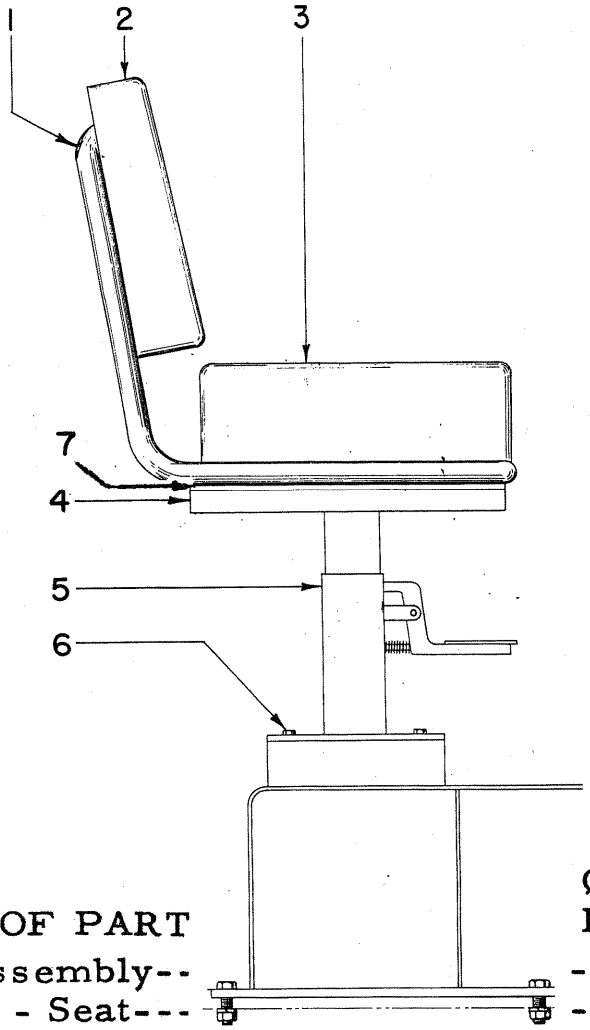
MOUNTING STUDS

D9 Tractors Serial Number Groups 34A, 49A, 50A, 66A



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	(95837	Stud - Taperlock	2
	(15168	Lockwasher - 1-1/4	2
	(15018	Nut - 1-1/4 UNF	2
2	(95827	Stud - Taperlock	1
	(15170	Lockwasher - 1-1/2	8
	(5792B	Nut - 1-1/2 UNF	8
3	-----	Stud (Furnished With Tractor)	7
		(Note: Four removed From "A")	
		Not Illustrated	
	95386	Bracket - Seat	1
		(Not Required for 66A SN Tractors)	

B11 [R]
SEAT AND PEDESTAL ASSEMBLY



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	(109983A	Seat Assembly--	---1
	*(233155	Frame - Seat---	---1
	*(233159	Stud - Sleeve	2
	*(233160	Nut - Acorn	2
2	*(233157	Cushion - Back	1
	*(233158	Clip - Back Cushion	2
	*(16709	Machine Screw - 1/4 NC x 3/4	4
3	* 233156	Cushion - Seat	1
4	(233126A	Rail Set	1
	*(233161A	Seat Adjuster Assembly - L. H.	1
	*(233163	Spring - Latch	1
	*(233164A	Seat Adjuster Assembly - R. H.	1
	*(233162	Bolt - Mounting	4
5	94943	Pedestal - Seat	1
6	(15572	Capscrew - 5/16 UNF x 3/4	4
	(15155	Lockwasher - 5/16	4
	(15005	Nut-Hex, 5/16 UNF	4
7	(95540	Plate	1
	(15005	Nut-Hex, 5/16 UNF	4
	(15155	Lockwasher - 5/16	4

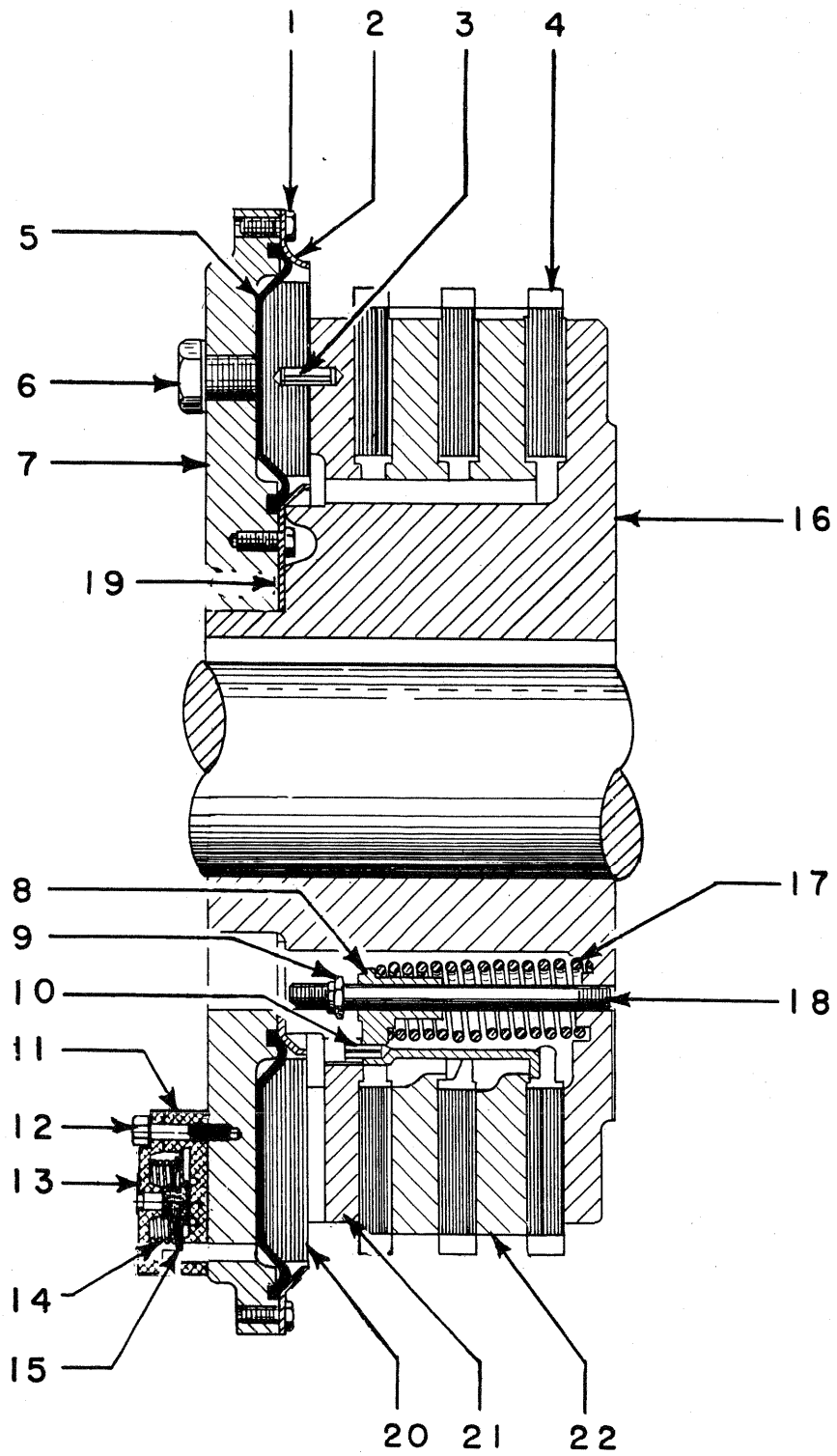
*Included In Assembly Under Which Listed.

SECTION C

CLUTCHES

High and Low Speed Clutches ---------- C5
Main and Haulback Clutch ---------- C1
Strawdrum Hydraulic Clutch ---------- C3

MAIN AND HAULBACK CLUTCH ASSEMBLY-NO. 95013A



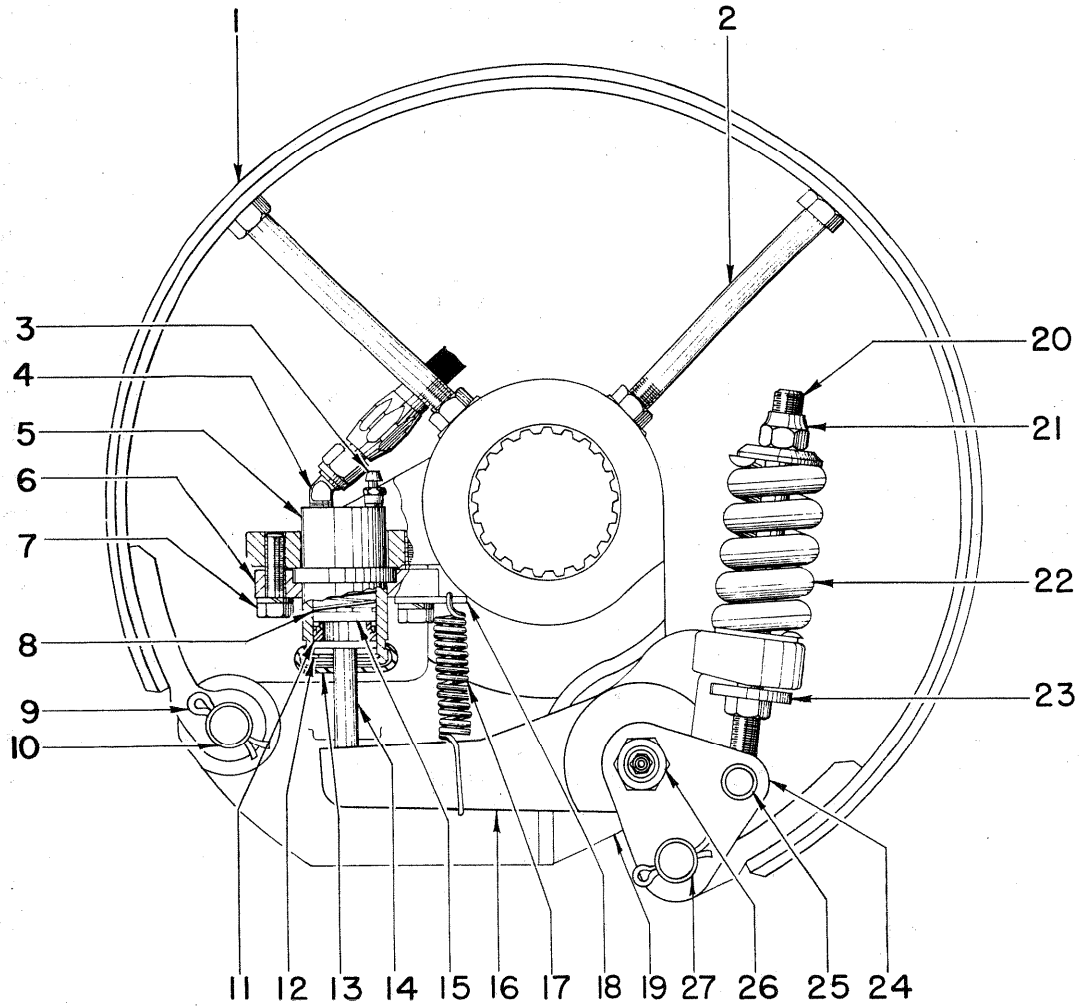
MAIN AND HAULBACK CLUTCH ASSEMBLY-NO. 95013A

REF. NO.	HYSTER PART NO.		NAME OF PART	QTY. REQ.
1	16597		Capscrew-3/8UNC x 3/4	32
2	233645		Ring - Outer Clamp	1
3	233646		Roll Pin, 1/2 x 1-1/8	9
4	233647		Plate - Driving	3
5	233648		Diaphragm	1
6	(233649		Capscrew - Special	3
	(16885		Capscrew - 7/8UNC x 3-1/2, Hardened	8
	(15130		Washer - Plain, 7/8	8
7	233650		Plate - Front	1
8	233651		Separator - Plate	4
9	233652		Nut	4
10	19899		Roll Pin, 1/4 x 5/8	4
11	(233653		Valve - Quick Release	2
	*(233654		Body	2
12	*(233655		Capscrew	8
	*(233656		Washer	8
13	*(233657		Cover	2
	*(233658		Gasket	4
14	*(233659		Spring	2
	*(233660		Seat - Spring	2
15	* 233661		Diaphragm	2
16	233662		Plate - Hub and Back	1
17	54081	Ⓡ	Spring - Release	4
18	233664		Stud - Release Spring	4
19	233665		Ring - Inner Clamp	1
20	233666		Plate - Insulator	1
21	(233667		Plate - Pressure	1
	(233668		Pin - Dowel, Tapered	2
22	54083	Ⓡ	Plate - Center	2

* Included in valve assembly No. 233653

C3

STRAWDRUM CLUTCH ASSEMBLY - NO. 96210A



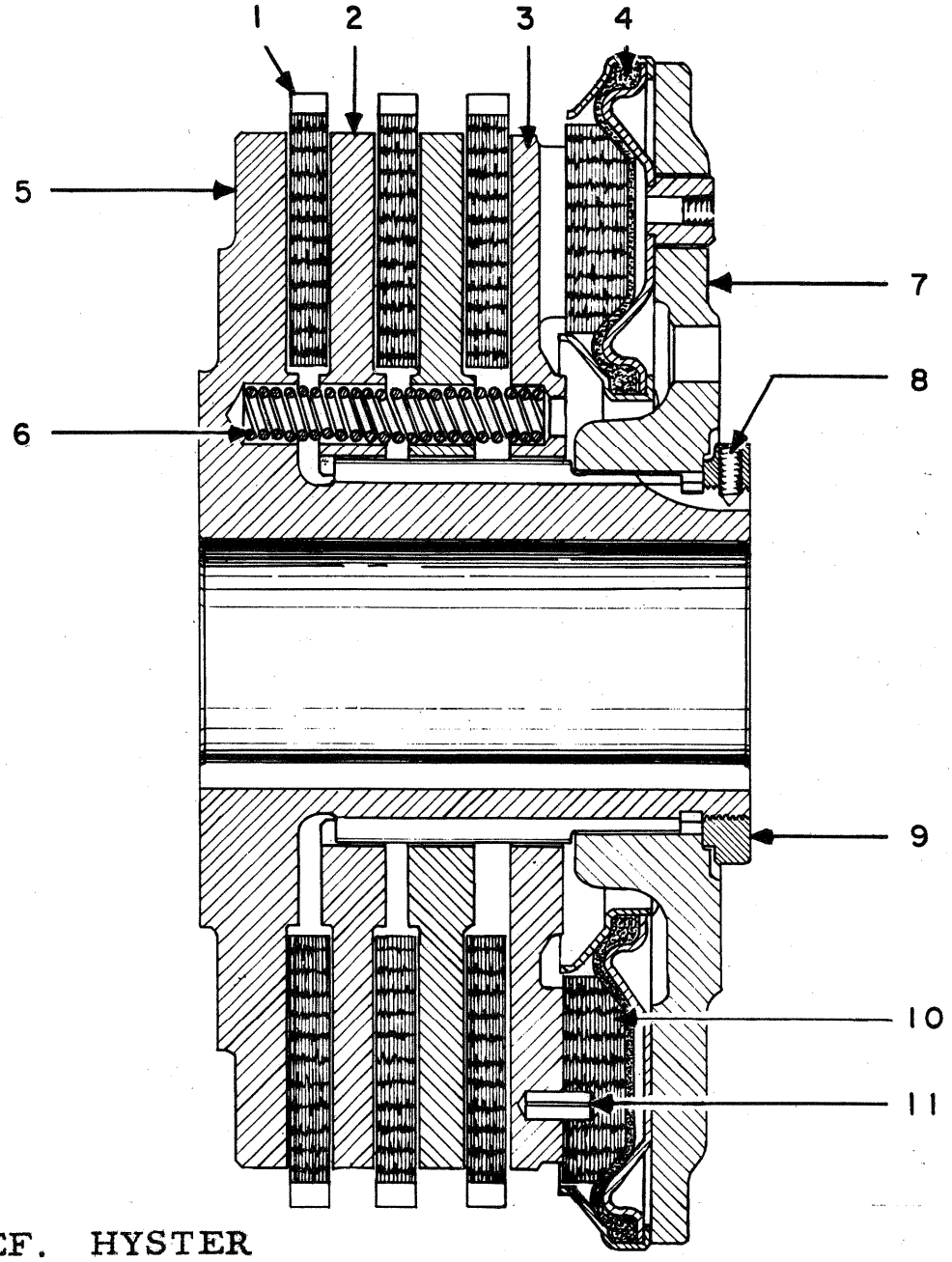
STRAWDRUM CLUTCH ASSEMBLY - NO. 96210A

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	(83327A	Band Assembly - Clutch	1
	*(82432A	Lining Set - Clutch	1
2	(15593	Capscrew - 1/2 UNF x 5-1/2	2
	(15028	Nut-Jam, 1/2 UNF	2
3	59651	Screw-Bleeder	1
4	17094 ®	Fitting-Male Elbow	1
5	96208	Cylinder-Slave	1
6	96192	Flange	1
7	(18202	Capscrew-Hardened,	
	(	3/8 UNF x 1-1/4	2
	(15156	Lockwasher - 3/8	2
8	59652	Spring	1
9	15243	Cotter - 3/16 x 1-1/4	2
10	48596C	Pin	1
11	**54570	Cup	1
12	**58926	Snap Ring	1
13	**59655	Boot	1
14	96197	Rod - Push	1
15	**59654	Piston	1
16	96182	Crank	1
17	96198	Spring	1
18	96193	Keeper	1
19	96181	Driver - Clutch	1
20	96203	Link	1
21	58311	Locknut - 1/2 UNF	1
22	58004A	Spring Assembly	1
23	96191	Washer	1
24	96202	Plate - Link	2
25	58021	Nut- Trunnion	1
26	(83312	Pin	1
	(230365	Bearing-Needle	1
	(17405	Locknut-Thin, 5/8 UNF	1
	(16041	Fitting - Lub.	1
27	48591C	Pin	1

* Included in band assembly No. 83327A

**Included in Cylinder Repair Kit - No. 92308A

HIGH AND LOW SPEED CLUTCH ASSEMBLY-NO. 95354A



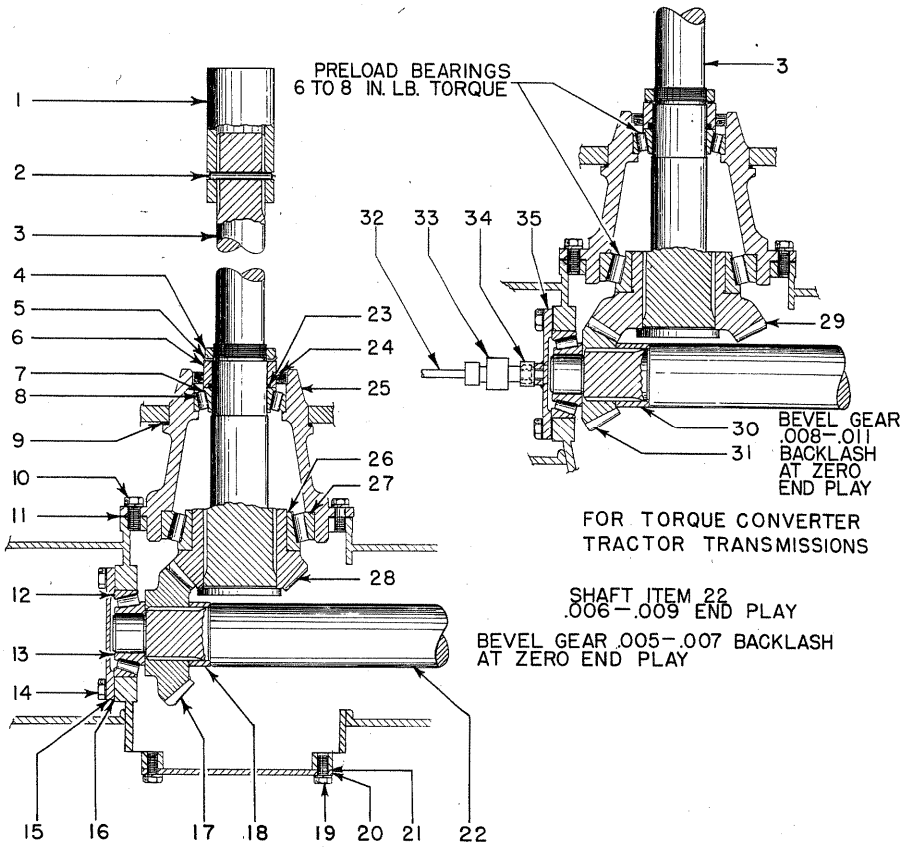
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ
1	233634	Plate - Driving	3
2	233635	Plate - Center	2
3	233636	Plate - Pressure	1
4	233637	Diaphragm Assembly	1
5	233638	Plate - Hub and Back	1
6	233639	Spring	6
7	233640	Plate - Front	1
8	233641	Set Screw	1
9	233642	Nut	1
10	233643	Plate - Insulator	1
11	233644	Roll Pin, 5/16 x 3/4	6

SECTION D

POWER TAKE-OFF, GEAR TRAIN AND DRUMS

Cable Lock Group ---------- D16
Compound and Shifter Shaft ---------- D 7
Haulback Drum and Strawdrum ---------- D 13 - 15
High Speed Clutch Shaft ---------- D 3
Low Speed Clutch Shaft ---------- D 5
Main Drum ---------- D11
Main Drum Clutch Drive ---------- D 9
Power Take-Off Group ---------- D 1

D1
POWER-TAKE-OFF GROUP



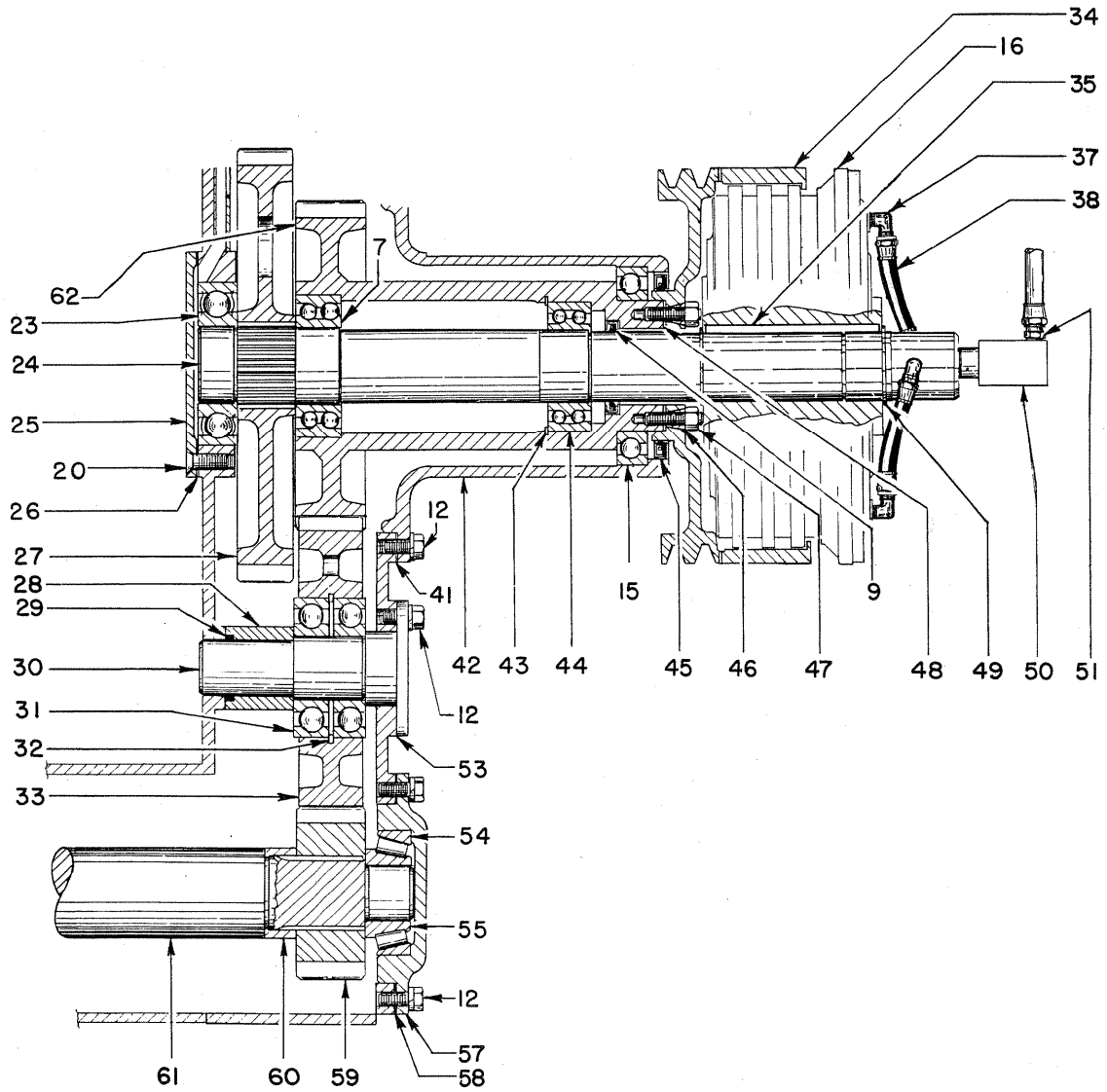
REF. NO.	HYSTER PART NO.		DESCRIPTION	QTY. REQ.
1	6327		Coupling ("Cat" No. 1B-7852)	1
2	(9450		Pin ("Cat" No. 1A-4599)	1
	(90202		Lock Ring ("Cat" No. 8F-737)	1
3	(94955		Shaft)For D8 Tractors S. N. 14A, 15A, 22A, 35A, 36A, 52A	1
	(96239		Shaft)For D8 Tractors S. N. 46A	1
	(96238	R	Shaft)For D9 Tractors S. N. 34A, 66A	1
	(94950		Shaft)For D9 Tractors S. N. 18A, 19A, 49A, 50A	1
4	34056		Locknut	1
5	34055		Washer	1
6	93269		Spacer	1
7	230325		Cone - Bearing	1
8	230324		Cup - Bearing	1
9	90937		"O" Ring	1

POWER - TAKE - OFF GROUP

REF. NO.		HYSTER PART NO.		DESCRIPTION	QTY. REQ.
10		(16823		Capscrew - 5/8 UNF x 1-1/2	8
		(15160		Lockwasher - 5/8	8
11		95022		Shim Set	1
12		30158		Cup - Bearing	1
13	x	(30157	R	Cone - Bearing	1
		(231006		Cone - Bearing	1
14		(37562		Capscrew - 1/2 UNF x 1-1/4	4
		(15158		Lockwasher - 1/2	4
15		95026		Retainer - Bearing	1
16		(95120		Shim - .005	3
		(95297		Shim - .007	1
17	*	-----		Gear)For D8 Tractors S. N. 14A,	1
18		94801		Spacer)22A, 36A. For D9 Tractors)S. N. 18A, 49A	
19		(37562		Capscrew - 1/2 UNF x 1-1/4	4
		(15158		Lockwasher - 1/2	4
20		95023		Plate - Cover	1
21		95024		Gasket	1
22	x	77553	R	Shaft	1
23		15879		"O" Ring	1
24		79385		Oil Seal	1
25		95021		Carrier - PTO	1
26		30126		Cone - Bearing	1
27		30124		Cup - Bearing	1
28	*	-----		Gear)For D8 Tractors S. N. 14A,)22A, 36A. For D9 Tractors)S. N. 18A, 49A	1
29	+	-----		Gear)For D8 Tractors S. N. 15A,	1
30		94803		Spacer)35A, 46A, 52A. For D9 Trac	1
31	+	-----		Gear)tors S. N. 19A, 34A, 50A, 66A	1
32		95527		Shaft - Drive, Tachometer	1
33		95526		Drive Joint	1
34		95530		Adapter	1
35		95504W		Retainer - Bearing	1

* Included in Gear Set No. 96630
\+ Included in Gear Set No. 96657
x (First Used On Yarder S. N. B49P-1558
(To Replace Shaft on Prior Units, Include Two Bearing Cones
(No. 30157

HIGH SPEED CLUTCH SHAFT



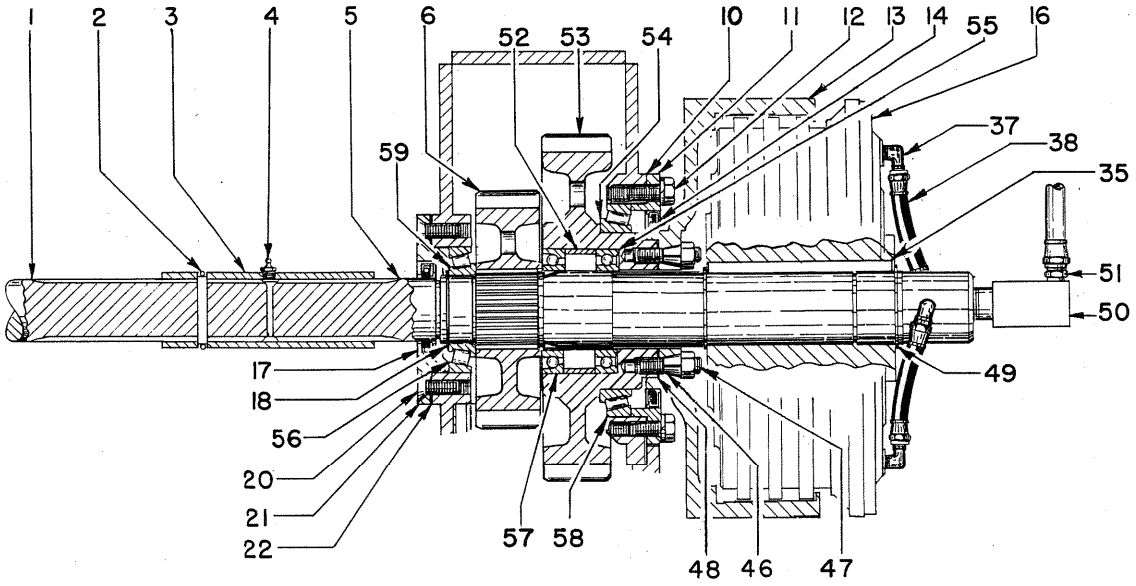
REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
7	45213	Bearing - Double Row	1
9	44523	Oil Seal	1
12	(37562	Capscrew - 1/2 UNF x 1-1/4	14
	(15158	Lockwasher - 1/2	14
15	44322P	Bearing	1
16	95354A	Clutch (See Page C5 for Parts)	1
20	16352	Capscrew - Flathead, 1/2 UNF x 1-1/4) (Stake in Place)	6
23	41313PP	Bearing	1
24	95080	Shaft	1
25	95083	Retainer - Bearing	1

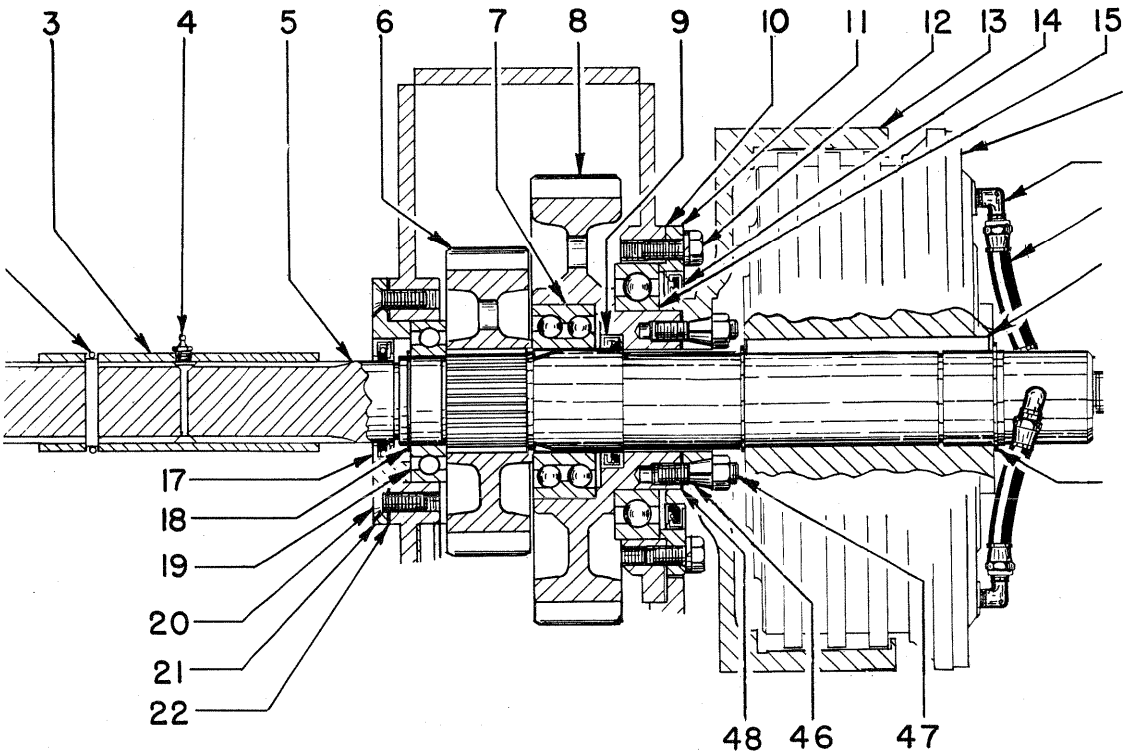
HIGH SPEED CLUTCH SHAFT

REF. NO.		HYSTER PART NO.		DESCRIPTION	QTY. REQ.
26		95084		Gasket	1
27		95085		Gear (56 Teeth)	1
28		95041		Spacer	1
29		92861		"O" Ring	1
30		95035		Shaft - Idler	1
31		41311		Bearing	2
32		12956		Snap Ring - Internal	1
33		95040		Gear - Idler (39 Teeth)	1
34		95918		Spider	1
35		95082		Key	1
37		52501		Fitting - Male Ell, 45°	4
38		95363		Hose	2
41		95086		Shim Set	1
42		95076		Carrier - Bearing	1
43		12919		Snap Ring	1
44		45212W		Bearing - Double Row	1
45		44526		Oil Seal	1
46		53661		Thimble - Tapered	6
47	(	95079		Stud	6
	(	15008		Nut - 1/2 UNF	6
	(	15158		Lockwasher - 1/2	6
48		95078		Gasket	1
49		12975		Snap Ring - External	2
50		94933A		Roto Coupling - 1/4 (See Page F12 for Parts)	1
51		16134		Fitting, Tube, Male Connector 45°	1
53		95039		Gasket	1
54		30158		Cup - Bearing	1
55	(	30157	R	Cone - Bearing (First Used on SN B49P-1558)	1
	(231006			Cone - Bearing (Used Prior to SN B49P-1558)	1
57		95031		Carrier - Bearing	1
58	(	95033		Shim - .005	3
	(	95166		Shim - .007	1
	(	95034		Shim - .020	3
59		95030		Gear (21 (Teeth)	1
60		94801		Spacer	1
61	+	77553	R	Shaft	1
62		235637A	R	Gear (42 Teeth) (Includes Studs, Item 47)	1

+ First Used on S. N. B49P-1558
For Prior Units, Include Two Bearing Cones 30157

LOW-SPEED CLUTCH SHAFT



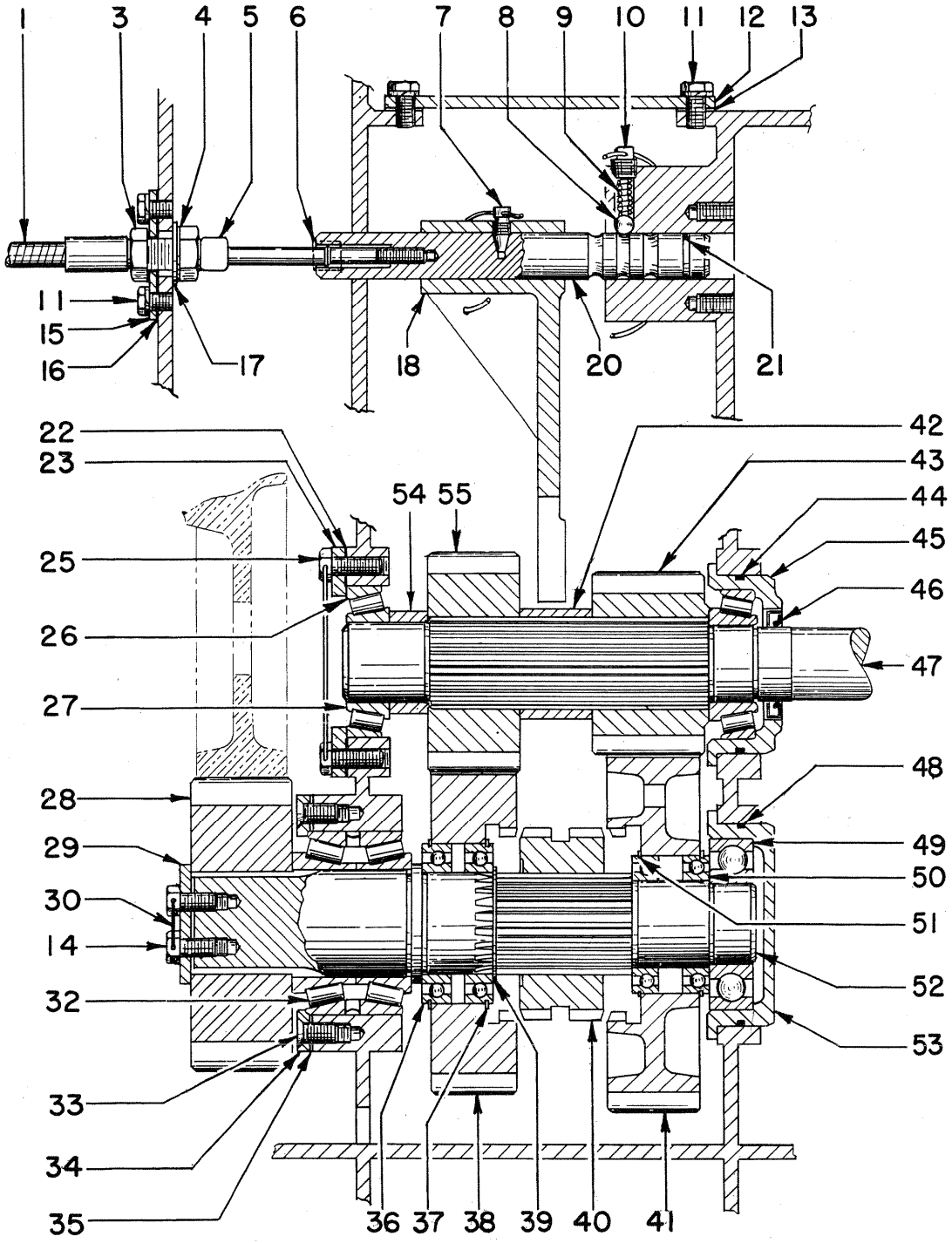


LOW-SPEED CLUTCH SHAFT

REF. NO.		HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1		95117	Shaft	1
2		(33786	Pin ("Cat" No. 1A4653)	1
		(9528	Snap Ring ("Cat" No. 1A5803)	1
3		95118	Coupling	1
4		16001	Fitting - Lubrication	1
5	R	*(89083	Shaft - Clutch	1
		+(95092	Shaft - Clutch	1
6		95091	Gear (28 Teeth)	1
7		+(45213	Bearing	1
8		+ 235638A	Gear Set (Includes studs 95079)	1
9		+ 44530	Oil Seal	1
10		95009	Shim Set	1
11	R	*(89079	Retainer - Bearing	1
		+(95005	Retainer - Bearing	1
12		(16807	Capscrew - 1/2 UNF x 1-1/2	6
		(15158	Lockwasher - 1/2	6
13		95051	Spider - Low Speed	1
14		44526	Oil Seal	1
15		+ 44322	Bearing	1
16		95354A	Clutch (See Page C5 for parts)	1
17		44529	Oil Seal	1
18		58924	Snap Ring	1
19		+ 41211	Bearing	1
20		16352	Capscrew - Flat Head 1/2 UNF x 1-1/4	6
21	R	*(89613	Retainer -Bearing	1
		+(94832	Retainer -Bearing	1
22		94835	Gasket	1
35		95082	Key	1
37		52501	Fitting - Male Ell, 45°	4
38		95363	Hose	2
46		53661	Thimble - Tapered	6
47		(95079	Stud	6
		(15008	Nut - 1/2 UNF	6
		(15158	Lockwasher - 1/2	6
48		95078	Gasket	1
49		12975	Snap Ring	2
50		94933A	Roto Coupling (See Page F12)	1
51		16134	Fitting - Tube, Male Connector	1
52	R	* 89081	Spacer	1
53	R	* 89092A	Gear Set (Includes Studs 95079)	1
54	R	* 89089	Bearing Cone	1
55	R	* 44313T	Ball Bearing	1
56	R	* 89090	Bearing Cup	1
57	R	* 44413	Ball Bearing	1
58	R	* 89591	Bearing Cup	1
59	R	* 89091	Bearing Cone	1

* First used on S. N. B49P1562 (Also used on B49P1555)
\+ Used prior to above serial numbers.

D7
COMPOUND AND SHIFTER SHAFT GROUP

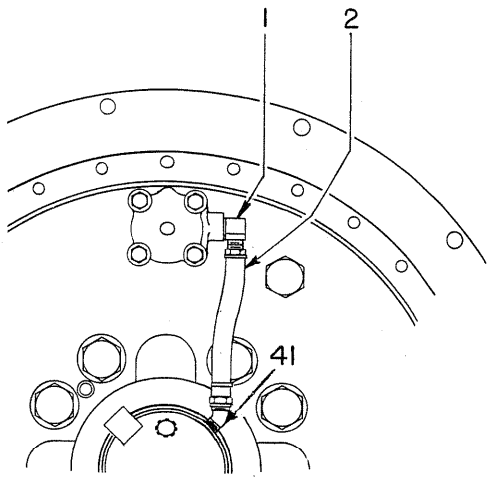


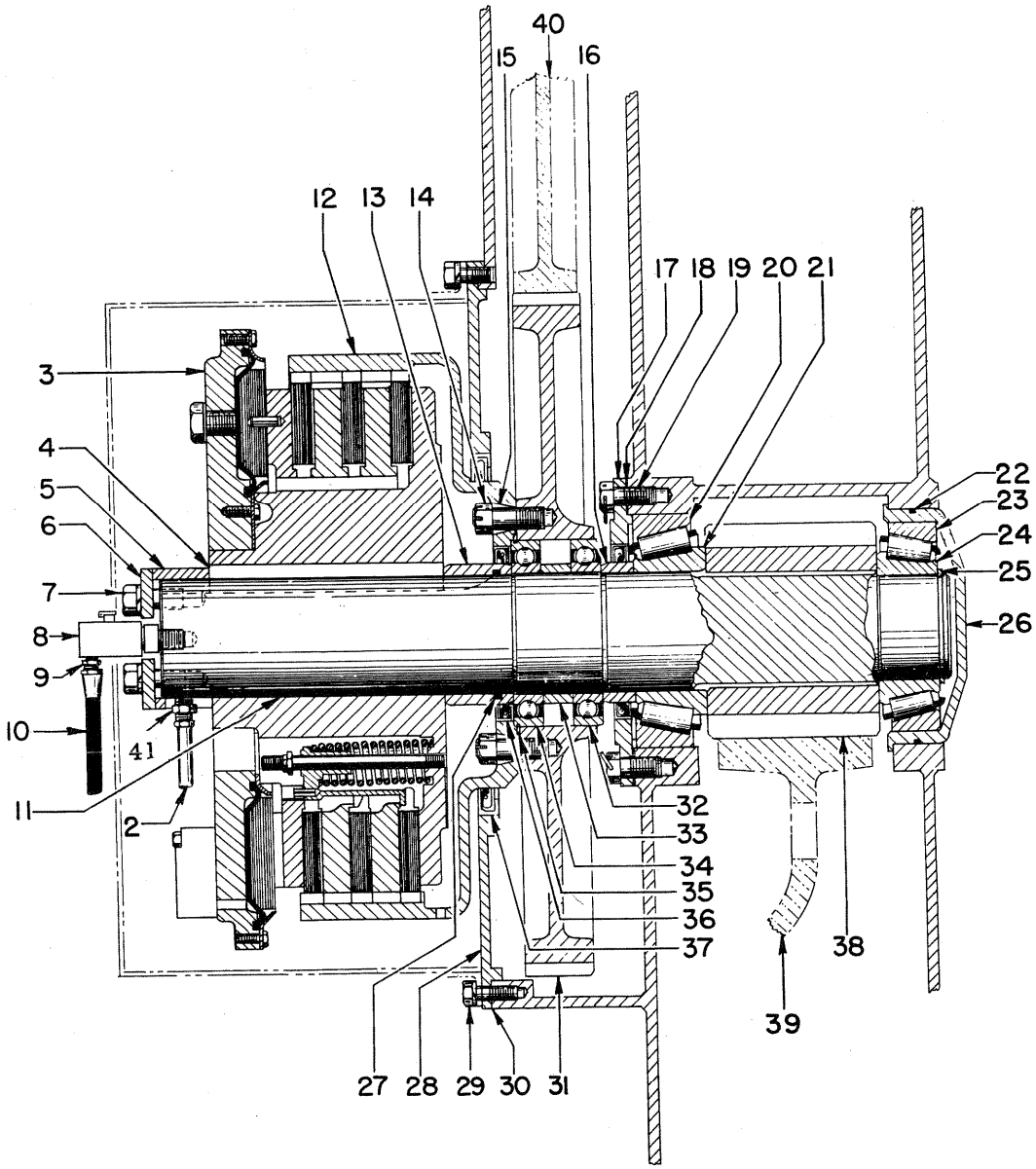
COMPOUND AND SHIFTER SHAFT GROUP

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	94123	Cable - Push Pull (83" Long)	1
3	* 15034	Nut - Jam, 7/8 UNF	4
4	* 15934	Lockwasher - Shakeproof, 7/8 (Two included w/cable)	4
5	* 94381	Grommet - Large	2
6	* 94380	Grommet - Small(Note:Remove Grommet at this location)	2
7	(27936	Lockscrew	1
	(	Lockwire - 18 Ga. x 9" Long	1
8	6348	Ball - 1/2" Dia.	1
9	6347C	Spring	1
10	(46578	Plug - Wired	1
	(	Lockwire - 18 Ga. x12" Long	1
11	(16820	Capscrew - 1/2 UNF x 1 - Hardened) Non-Current prior	8
	(15158	Lockwasher - 1/2) to SNB49P1531) use to plug holes	8
12	95099	Plate - Cover	1
13	95101	Gasket	1
14	(95362	Capscrew - Drilled Head	2
	(	Lockwire - 18 Ga. x 6" Long	1
15	94796	Plate (No longer required; see Item 11)	1
16	96511	Grommet (Prior to S. N. B49P1531-Include one of Item 17)	1
17	15130	Washer - 7/8	2
18	94949	Fork - Shifter	1
20	94794	Shaft - Shifter	1
21	61056	"O" Ring	1
22	(95120	Shim - .005	1
	(95297	Shim - .007	3
	(95121	Shim - .020	3
23	95122	Retainer	1
25	(9718	Capscrew - Drilled Head	4
	(	Lockwire - 18 Ga. x 18" Long	1
26	30260	Cup - Bearing	2
27	231005	Cone - Bearing	2
28	95098	Gear (22 Teeth)	1
29	93263	Plate - Lock	1
30		Wire - 18 Ga. x 6	1
32	230380A	Bearing - Roller	1
33	16352	Capscrew - Flathead, 1/2 UNF x 1-1/4	6
34	95097	Retainer - Bearing	1
35	(110934	Shim - .005	3
	(110936	Shim - .020	4
36	44314G	Bearing - Double Row (Includes Snap Ring)	2
37	33655	Snap Ring	2
38	94948	Gear (35 Teeth)	1
39	58905	Snap Ring	1
40	94947	Clutch - Dental	1
41	94946	Gear (39 Teeth)	1
42	95116	Spacer	1
43	95103	Gear (18 Teeth)	1
44	15890	"O" Ring	1
45	95102	Carrier - Bearing	1
46	44529	Oil Seal	1
47	95117	Shaft	1
48	57697	"O" Ring	1
49	41311	Bearing	1
50	44312G	Bearing - Double Row (Includes Snap Ring)	2
51	34490	Snap Ring	2
52	95095	Shaft	1
53	95094	Retainer - Bearing	1
54	94793	Spacer	1
55	94792	Gear (22 Teeth)	1

* Included in cable assembly No. 94123.

MAIN DRUM CLUTCH DRIVE



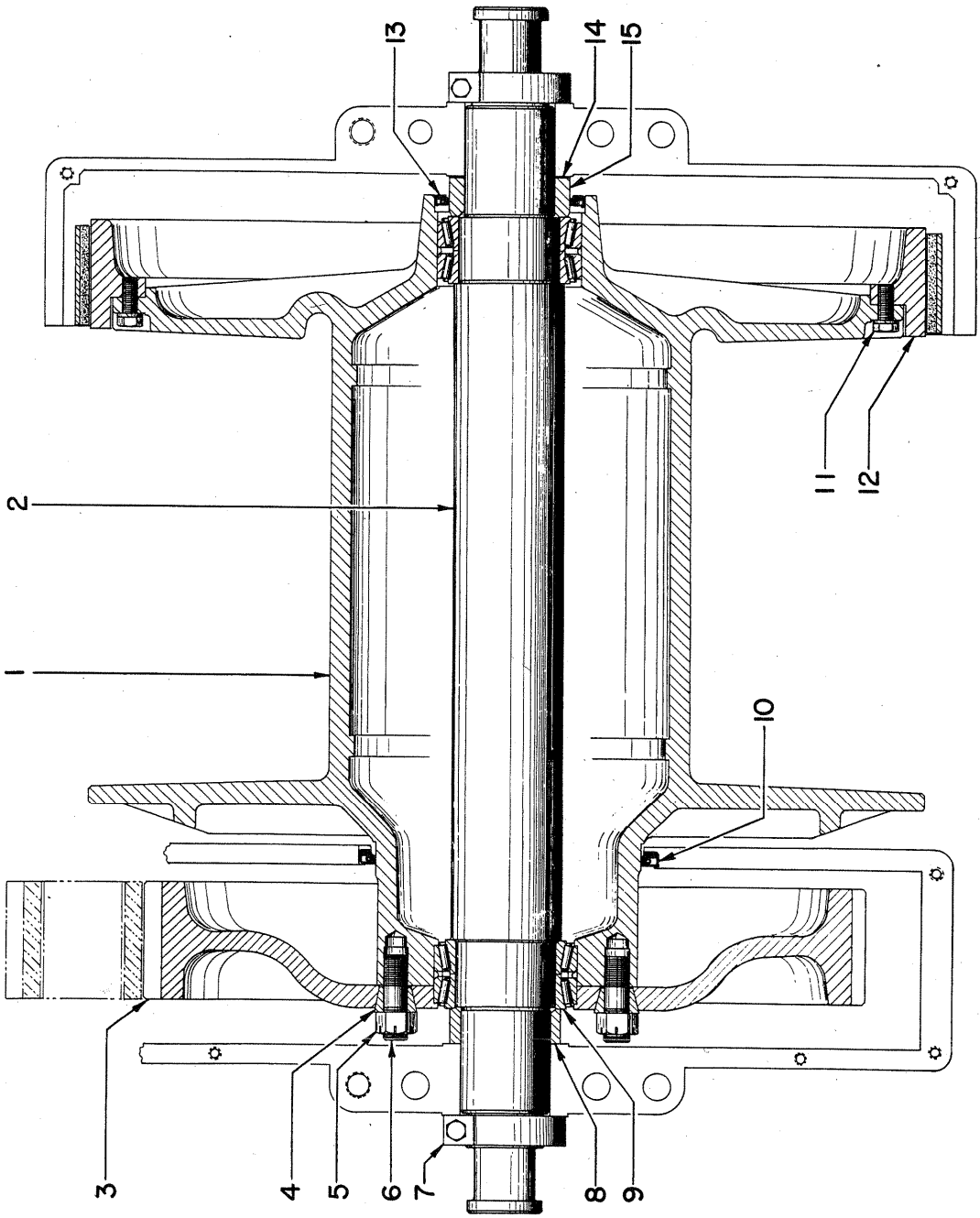


MAIN DRUM CLUTCH DRIVE

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	17314	Pipe Fitting - Elbow	2
2	95421	Hose Assembly	2
3	95013A	Clutch Assembly	1
4	95012	Key	1
5	95015	Spacer	1
6	95016	Plate - Lock	1
7	(16823	Capscrew-Hardened,5/8UNF x 1-1/2	2
	(15160	Lockwasher - 5/8	2
8	94933A	Roto Coupling	1
9	16134	Tube Fitting - Male Connector	1
10	94993	Hose Assembly	1
11	94902	Shaft	1
12	94905	Spider - Clutch	1
13	95007	S pacer	1
14	(95010	Stud	8
	(11277	Nut - Lock, 3/4 UNF	8
15	95011	Thimble - Tapered	8
16	95000	Spacer	1
17	94969	Retainer - Bearing	1
18	(95002	Shim - .005	2
	(95003	Shim - .007	2
	(95004	Shim - .020	3
19	(10236	Capscrew - Drilled Head	6
	(67355	Lockwire - 18 Ga. x 34"	1
20	30135	Cup - Bearing	1
21	231003	Cone - Bearing	1
22	16783	"O" Ring	1
23	30117	Cup - Bearing	1
24	231004	Cone - Bearing	1
25	12970	Snap Ring	1
26	94901	Carrier - Bearing	1
27	15887	"O" Ring	1
28	94904 W	Cover	1
29	(37562	Capscrew-Hardened, 1/2 UNF x 1-1/4	15
	(15158	Lockwasher - 1/2	15
30	235636A [R]	Gasket (Includes Studs, Item 14)	1
31	94903	Gear (72 Teeth)	1
32	44322	Ball Bearings	1
33	95006	Spacer	1
34	44322G	Ball Bearing (With Snap Ring)	1
35	58919	Snap Ring	1
36	44526	Oil Seal	2
37	44528	Oil Seal	1
38	94968	Gear (17 Teeth)	1
39	94960	Gear	1
40	94914	Gear	1
41	16863	Tube Fitting - Elbow	2

D11

MAIN DRUM GROUP



MAIN DRUM GROUP

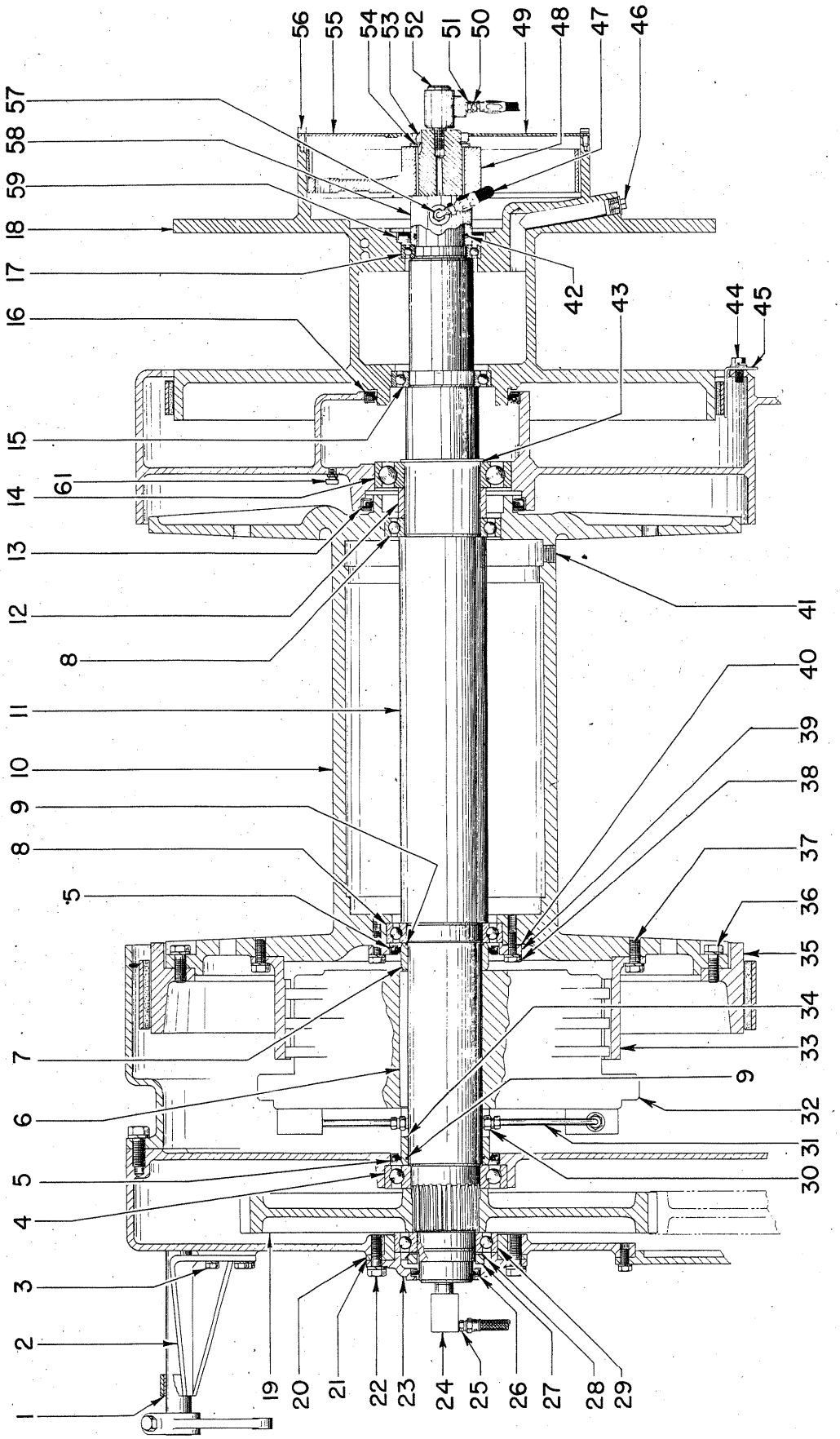
REF. NO.		HYSTER PART NO.	DESCRIPTION	REQ. QTY.
1		235635A	[R] Drum - Main (Includes Studs Item 6)	1
2		94961	Shaft - Main Drum	1
3		94960	Gear	1
4		94834	Thimble - Tapered	10
5	x	67649	Nut - Lock	10
6		94833	Stud	10
7	(	37111	Nut - Collar	2
	(	12488	Capscrew - 5/8 UNF x 5-1/2	2
	(	15010	Nut - 5/8 UNF	2
	(	15160	Lockwasher - 5/8	2
8		94838	Spacer	1
9		231002A	Bearing - Roller	2
10		44524	Oil Seal	1
11	(	16800	Capscrew - 3/4 UNF x 2	12
	(	15162	Lockwasher - 3/4	12
			(For One-Piece Flange)	
11	(	18627	Capscrew - 3/4 UNF x 3-1/4	12
	(	15012	Nut - 3/4 UNF	12
	(	15162	Lockwasher - 3/4	12
			(For Two-Piece Flange)	
12	+(	96262A	Flange Assembly	1
	*(	96260	Link	2
	*(	21229	Nut - Slotted, 5/8 UNF	4
	*(	15160	Lockwasher - 5/8	4
	*(	15224	Cotter - 1/8 x 1-1/4	4
13		44525	Oil Seal	1
14		94836	Shim Set	1
15		94837	Spacer	1

x Torque - - - - - - - 650-700 ft. lbs. dry

* Included in flange assembly 96262A

\+ Replace one piece flange with two-piece flange and include 12 each 18627 capscrew, 15012 nut, 15160 lockwasher

HAULBACK DRUM AND STRAWDRUM



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	92777	Bushing	1
2	x 94982W	Bracket	1
3	x(16820	Capscrew - Hardened, 1/2 UNF x 1	3
	(15158	Lockwasher - 1/2	3
4	41220	Bearing	1
5	44526	Oil Seal	2
6	95012	Key	1
7	95049	Spacer	1
8	44322	Bearing	2
9	15887	"O" Ring	2
10	94908W	Drum - Haulback	1
11	96183	Shaft - Drum	1
12	95052	Spacer	1
13	44527	Oil Seal	1
14	41222	Bearing	1
15	44319	Bearing	1
16	44522	Oil Seal	1
17	44315	Bearing	1
18	96184W	Drum - Straw	1
19	94914	Gear (72 Teeth)	1
20	94975	Carrier - Bearing	1
21	(93284	Shim - .005	4
	(93286	Shim - .020	3
22	(12480	Capscrew - Hardened, 5/8 UNF x 2	6
	(15160	Lockwasher - 5/8	6
23	94976	Retainer - Bearing	1
24	94933A	Roto-Coupling (See Page F12 for parts)	1
25	16134	Tube Fitting - Male Connector	1
26	44521	Oil Seal	1
27	38239	Locknut - Bearing	1
28	38240	Lockwasher - Bearing	1
29	43217	Bearing	1
30	16863	Tube Fitting - Elbow	2
31	95421	Hose Assembly	2
32	95013A	Clutch - Air (See Page C1 for Parts	1
33	94913	Segment - Spider - Haulback Clutch	3
34	95050	Spacer	1
35	+ (96261A	Flange Assembly	1
	*(96260	Link	2
	*(21229	Nut - Slotted, 5/8 UNF	4
	*(15160	Lockwasher - 5/8	4
	*(15224	Cotter - 1/8 x 1-1/4 (See note)	4
36	(12479	Capscrew - Hardened, 5/8 UNF x 1-3/4	8
	(15160	Lockwasher - 5/8 (For one-piece flange)	8
36	(18605	Capscrew - Hardened, 5/8 UNF x 2-3/4	10
	(15010	Nut - Hex, 5/8 UNF	10
	(15160	Lockwasher - 5/8 (For two-piece flange)	10
37	(16823	Capscrew - Hardened, 5/8 UNF x 1-1/2	18
	(15160	Lockwasher - 5/8	18
38	(16807	Capscrew - Hardened, 1/2 UNF x 1-1/2	6
	(15158	Lockwasher - 1/2	6
39	94974	Retainer - Bearing	1
40	95048	Gasket	1
41	15316	Pipe Plug - Countersunk, 3/4	1
42	55146	"O" Ring	1
43	12976	Snap Ring	1
44	(16820	Capscrew - Hardened, 1/2 UNF x 1	1
	(15158	Lockwasher - 1/2	1
	(15135	Washer - 1/2	2
45	95324	Bracket	2
46	15304	Fitting - Pipe Plug	1
47	96205	Hose	1
48	96210A	Clutch Assembly (See Page C4 For Parts)	1
49	96194W	Cover (Large Section)	1
50	14301 R	Fitting - Male Connector	1
51	15341	Fitting - Bushing (Non-Current - Not Required With New Connector)	1
52	96179	Union - Hydraulic	1
53	(32967	Locknut	1
	(32966	Lockwasher	1
54	90502	Washer	1
55	96196	Cover - Small Section	1
56	(16663	Capscrew - Hardened, 5/16 UNF x 5/8	8
	(15155	Lockwasher - 5/16	8
57	28584	Fitting - Adapter	1
58	96207	Spacer	1
59	44548	Oil Seal	1
60	17314	Fitting - Elbow	2
61	21420 R	Plug - Breather	1

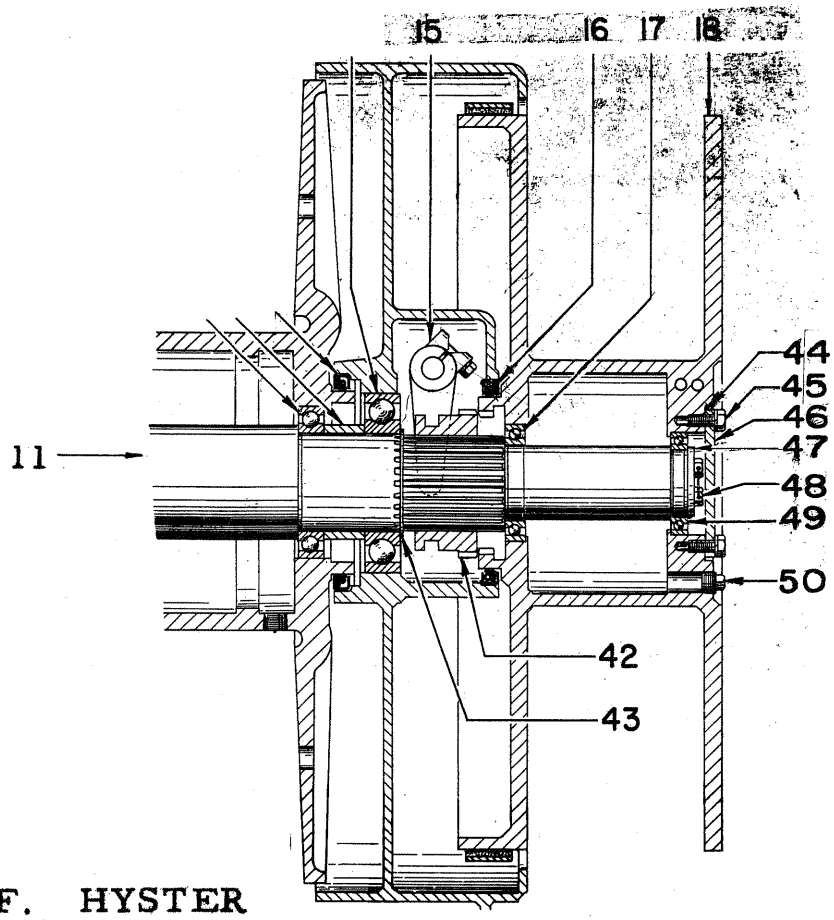
* Included in flange assembly No. 96261A.

\+ NOTE: Replace one piece flange with two-piece flange and include 10 each 18605 capscrews, 15010 nut, 15160 lockwasher.

x Non-current - new bracket is part of cover assembly 96741W

HAULBACK DRUM AND STRAWDRUM-Cont.

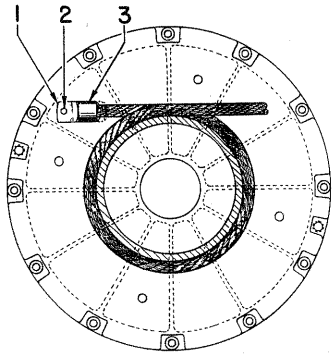
MECHANICAL STRAWDRUM CLUTCH



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
11	94912	Shaft	1
15	(95072A	Fork Assembly - Shifter	1
	*(15650	Capscrew - 1/2UNC x 1-3/4	1
	*(15158	Lockwasher - 1/2	1
16	44522	Oil Seal	1
17	44319	Bearing	1
18	94922 W	Drum - Straw	1
42	94977	Clutch - Dental	1
43	12976	Snap Ring	1
44	95071	Gasket	1
45	(16820	Capscrew-Hardened, 1/2UNF x 1	6
	(15158	Lockwasher - 1/2	6
46	95070	Cover	1
47	93263	Plate - Lock	1
48	(95362	Capscrew-Drilled Head	2
	(67355	Lockwire-18 Ga. x 5" Long	1
49	44315	Bearing	1
50	15304	Pipe Plug	1

* Included in fork assembly No. 95072A

CABLE - LOCK GROUP
For Main Drum - As Shown



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	94196W	Lock-Ferrule	1
2	(16823	Capscrew-Hardened, 5/8UNF x 1-1/2	1
	(15160	Lockwasher-5/8	1
3	30509	Ferrule	1

CABLE-LOCK GROUP
For Haulback Drum

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	95047	Lock-Ferrule	1
2	(16820	Capscrew-Hardened, 1/2UNF x 1	1
	(15158	Lockwasher-1/2	1
3	35506	Ferrule	1

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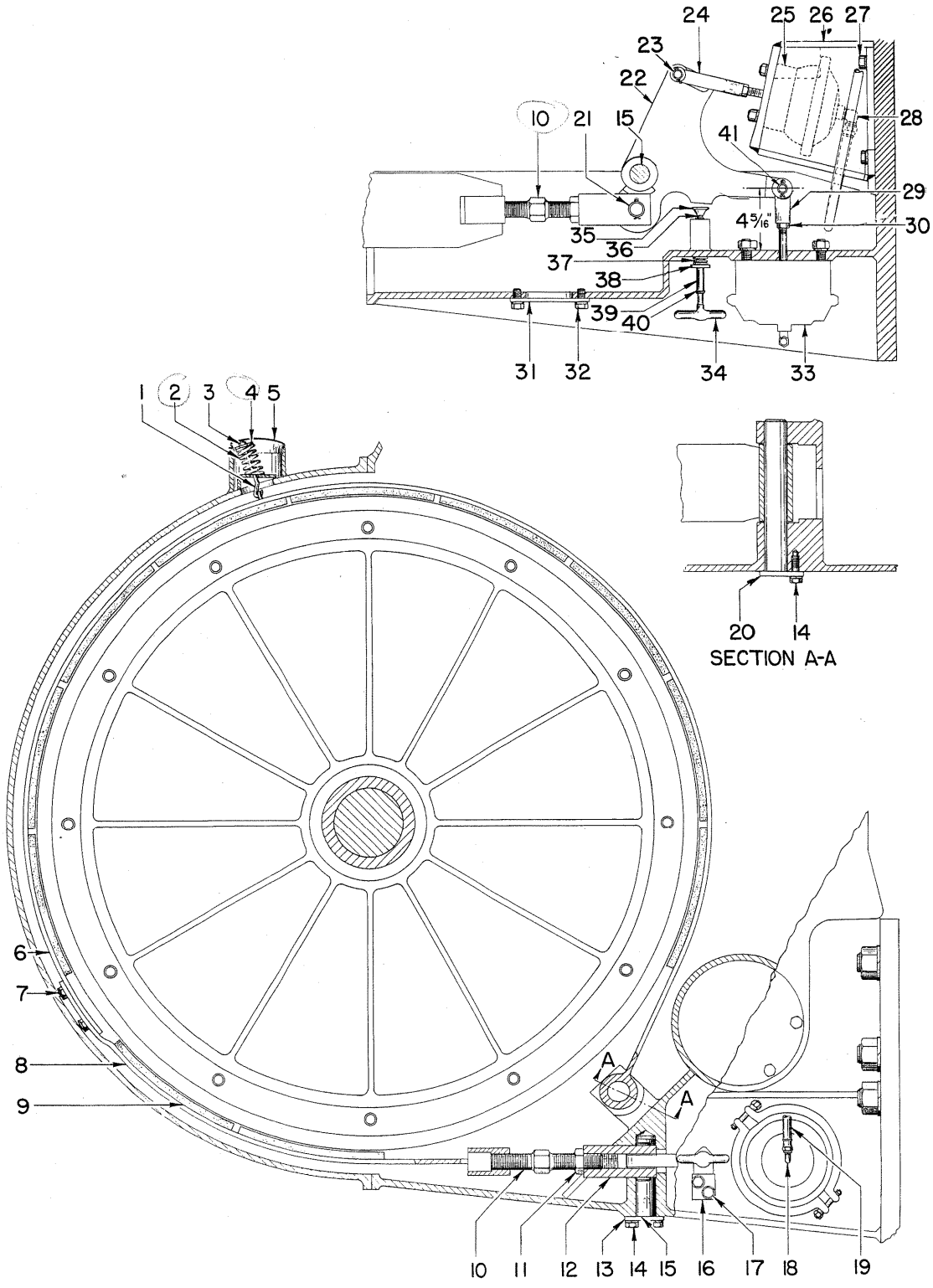
SECTION E

BRAKES

Haulback Drum Brake ---------- E3
Main Drum Brake ---------- E1
Strawdrum Brake and Jaw Clutch Shifter Group -------E5

E1

MAIN DRUM BRAKE ASSEMBLY



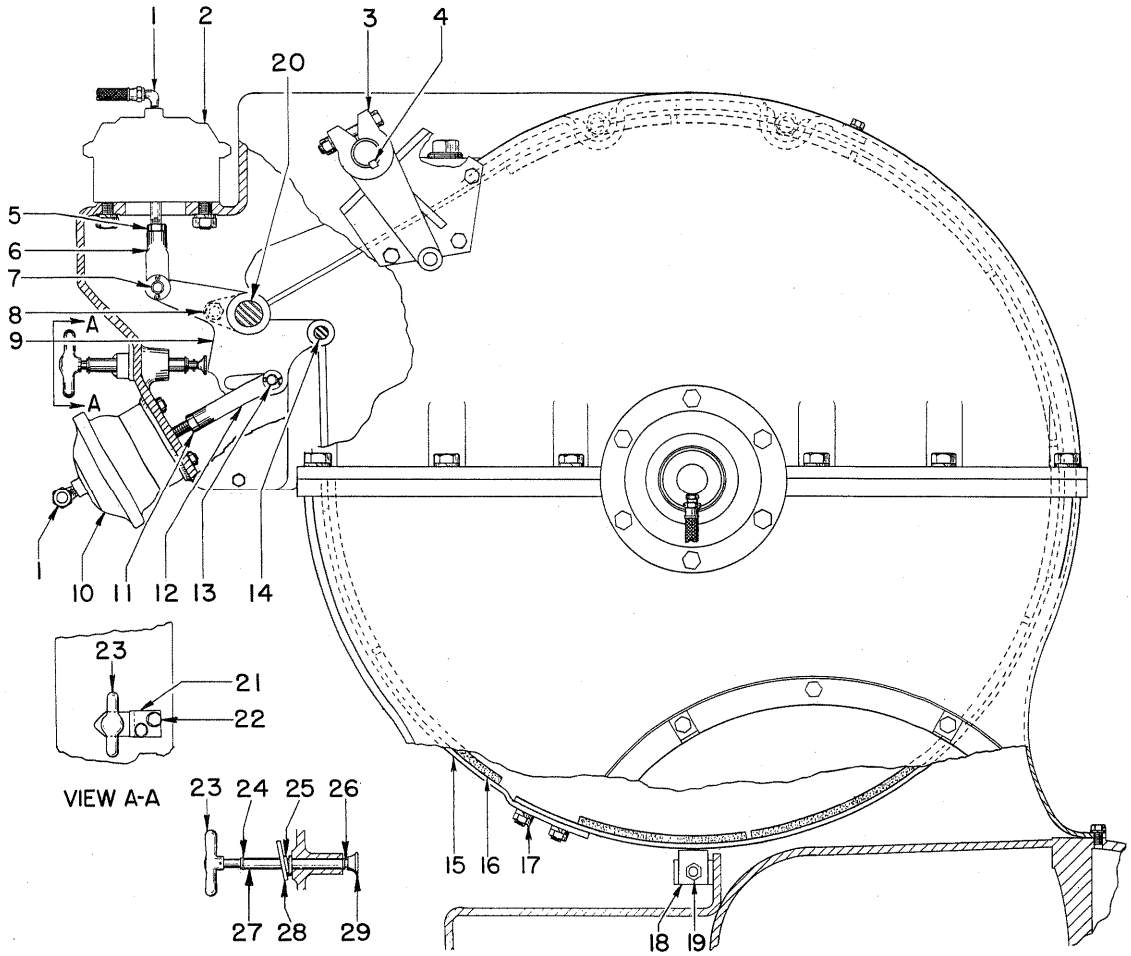
MAIN DRUM BRAKE ASSEMBLY

REF. NO.		HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1		37248	Bolt - Eye	1
2	(	95322	Spring	1
	(	95326W	Bracket - Spring Seat	1
3		15024	Jam Nut, 1/4 UNF	1
4		95323	Nut	1
5		69029	Cover	1
6		95337A	Brake Band Assy - Complete	1
7	*	16862	Locknut - 9/16 UNF	6
9	*	94845A	Lining Set - Brake (Drill at Assembly)	1
10		94851	Link - Adjusting	1
11		15036	Nut - Jam, 1" NF	1
12		94852	Rod End	1
13		94857	Cover	1
14	(	16820	Cpascrew - Hardened, 1/2 UNF x 1	3
	(	15158	Lockwasher - 1/2	3
15		94856	Pin	1
16		94840	Bar - Brake Lock	1
17	(	18202	Capscrew - Hardened, 3/8 UNF x 1-1/4	2
	(	15156	Lockwasher - 3/8	2
18		14358	Tube Fitting - Male Ell	1
19		94997	Hose Assembly	1
20		94848W	Pin - Anchor	1
21	(	6627	Pin - Rod End	1
	(	15235	Cotter - 5/32 x 1-1/2	1
22	(	96347W	Crank	1
	(231008		Bushing	1
23	+(	153	Pin - Rod End	1
	(	15223	Cotter - 1/8 x 1	1
24	+	96516	Rod End (Adjust so pin fits freely and just clears end of slot)	1
25	+	96339A	Air Chamber Assembly - Emergency Brake (See Page F11 for Parts)	1
26	+	96345W	Bracket	1
27	+(	16397	Capscrew - Hardened, 1/2 UNF x 1-3/4	3
	(	15158	Lockwasher - 1/2	3
28	+	14358	Tube Fitting	1
29		200891	Rod End (Adjust to dimensions shown)	1
30		15030	Nut - Jam, 5/8 UNF	1
31		95753	Plate - Cover	1
32	(	16820	Capscrew - Hardened, 1/2 UNF x 1	3
	(	15158	Lockwasher - 1/2	3
33		94932A	Air Chamber Assembly (See Page F11 for Parts)	1
34		96233	Handle - Clamp	1
35		96277	Button - Clamp	1
36		19971	Roll Pin	1
37		96275	Spring	1
38		96276	Lever - Locking	1
39		96274	Plunger - Clamp	1
40		58903	Snap Ring	2
41	(	159	Pin - Rod End	1
	(	15223	Cotter - 1/8 x 1	1

R + First used on S. N. 49P1531. To install emergency brake on prior units, order brake conversion group 96320A.

* Included in brake band assembly No. 95337A.

HAULBACK BRAKE



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	14358	Fitting - Tube , Male Ell	1
2	94932A	Air Chamber Assembly	1
		(See Page F11 For Parts)	
3	(77461W [R]	Crank - Strawdrum Brake	1
	(	(For D9 Tractors SN 34A, 49A, 50A,	
	(	66A)	
	(35670AB	Crank - Strawdrum Brake	1
	(	(For D9 Tractors SN 18A, 19A)	
	(	(For D8 Tractors S. N. 14A, 15A,	
	(	and Prior, Also for	
	(	S. N. 22A, 35A, 36A, 52A	
	(15503	Capscrew - 1/2 UNF x 2-3/4) Includ-	1
	(15158	Lockwasher - 1/2)ed with	1
	(15008	Nut - 1/2 UNF) crank	1
4	5269	Key	1
5	15030	Nut - Jam, 5/8 UNF	1
6	200891	Rod End	1
7	(159	Pin - Rod End	1
	(15223	Cotter - 1/8 x 1	1
8	(16820	Capscrew - 1/2 UNF x 1	1
	(15158	Lockwasher - 1/2	1

HAULBACK BRAKE - Continued

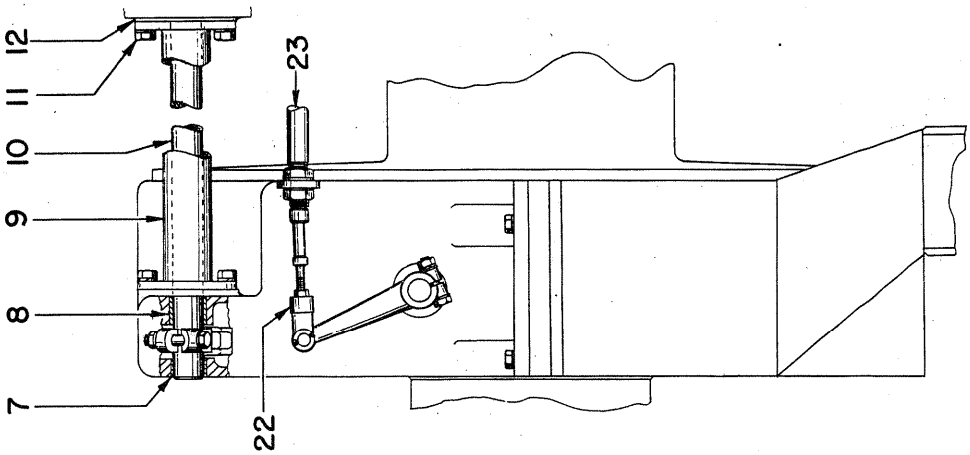
REF. NO.		HYSTER PART NO.	DESCRIPTION	QTY. REQ.
9	+(	96337W	Crank	1
	(	95058W	Crank (Used Prior to SN 49P1531)	1
10	+	96339A	Air Chamber	1
11	+	15028	Nut - Jam, 1/2 UNF	1
12	+	96516	Rod End	1
13	+(	153	Pin - Rod End	1
	(	15223	Cotter - 1/8 x 1	1
14	(	95065	Pin	1
	(	15246	Cotter - 3/16 x 2	1
15		95353A	Band Assembly - Brake	1
16	*	95056A	Lining Set(Drill at Assembly)	1
			Note: Redrill band for No. 10-10 Rivets, if required.	
17	*	16862	Nut - Lock, 9/16UNF, Thin	4
18	(	95324	Bracket - Band Support	1
	(	15135	Washer - 1/2	1
19	(	16820	Capscrew - 1/2 UNF x 1, Hardened	1
	(	15158	Lockwasher - 1/2	1
20		95062W	Pin - Anchor	1
21		94840	Bar - Brake Lock	1
22	(	18202	Capscrew - Hardened, 3/8UNF x 1-1/4	2
	(	15156	Lockwasher - 3/8	2
23		96233	Handle - Alteration	1
24		58903	Snap Ring	2
25		96275	Spring	1
26		19971	Roll Pin	1
27		96274	Plunger	1
28		96276	Lever - Locking	1
29		96277	Button - Clamp	1

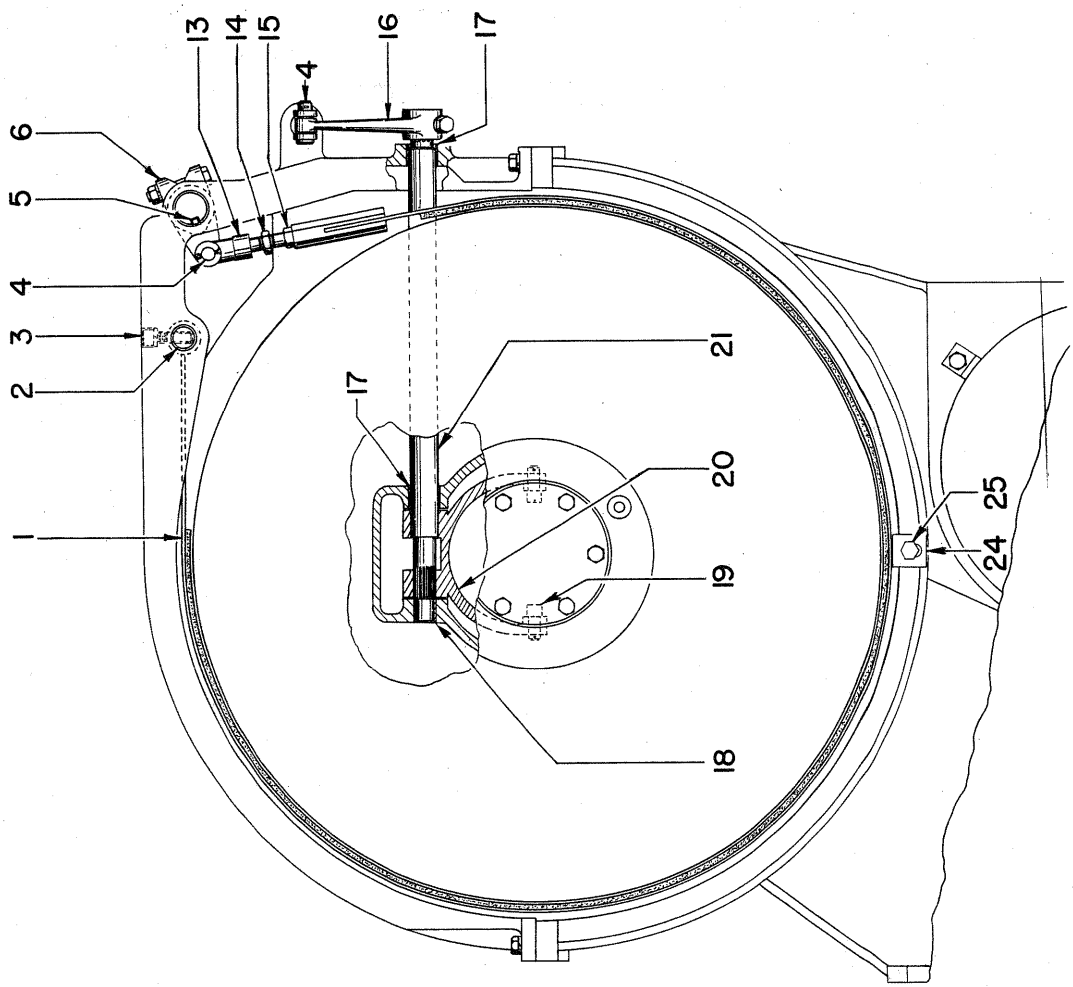
* Included in Brake Band Assembly 95353A.

\+ First used on SN 49P1531. To install emergency brakes on prior units, order brake conversion group 96320A.

STRAWDRUM BRAKE AND JAW CLUTCH SHIFTER GROUP

Note: Brake parts are the same for Hydraulic Clutch.





STRAWDRUM BRAKE AND JAW CLUTCH SHIFTER GROUP

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	(94927A	Brake Band Assembly	1
	*(95109A	Lining Set - Strawdrum Brake	1
2	95111	Pin	1
3	(37297 Ⓡ	Capscrew-1/2 UNF x 1 -1/2	1
	(15158B	Lockwasher - 1/2	1
4	(159	Pin - Rod End	1
	(15223	Cotter - 1/8 x 1	1
5	5269	Key	1
6	(92779A	Crank Assembly	1
	*(15503	Capscrew - 1/2 UNF x 2-3/4	1
	*(15158	Lockwasher - 1/2	1
	*(15008	Nut - Hex, 1/2 UNF	1
7	95179	Bushing	1
8	92777	Bushing	1
9	94984W	Support Assembly	1
10	95074	Shaft	1
11	(16820	Capscrew - Hardened, 1/2 UNF x 1	6
	(15158	Lockwasher - 1/2	6
12	95115	Shim Set	1
13	92688	Rod End - Left Hand	1
14	92687	Link - Adjusting	1
15	15030	Nut - Jam, 5/8 UNF	1
16	(95073A	Crank Assembly	1
	*(15527	Capscrew - 3/8 UNF x 1-3/4	1
	*(15156	Lockwasher - 3/8	1
	*(15006	Nut - Hex, 3/8 UNF	1
17	95178	Bushing	2
18	104607	Bushing	1
19	(32307D	Shoe - Shifter	2
	(15213	Cotter - 3/32 x 1	2
20	(95072A	Fork Assembly - Shifter	1
	*(15650	Capscrew - 1/2 UNC x 1-3/4	1
	*(15158	Lockwasher - 1/2	1
21	94980	Shaft - Shifter	1
22	92683	Rod End	1
23	94124	Cable (See Page F14 For Parts)	1
24	(95324	Bracket - Band Support	1
	(15135	Washer - 1/2	1
25	(16820	Capscrew - 1/2 UNF x 1, Hardened	1
	(15158	Lockwasher - 1/2	1

*Included In Assembly Under Which Listed.

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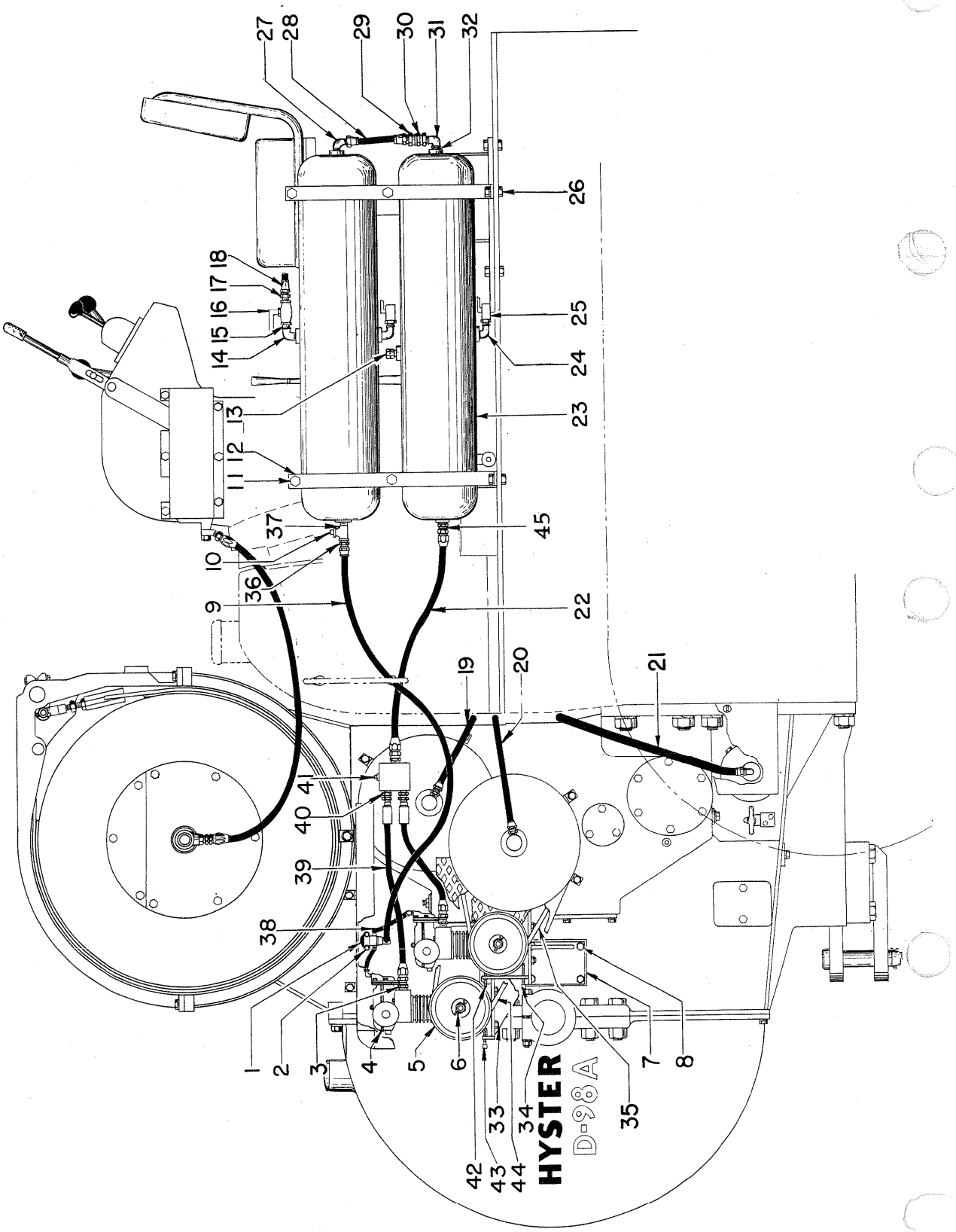
SECTION F

PNEUMATIC AND HYDRAULIC SYSTEM

Air Chamber Assembly ---------- F11
Air Compressor Assembly ---------- F5
Air Compressor Governor ---------- F9
Air Tanks, hoses and Fittings ---------- F1
Check Valve ---------- F12
Foot Valve ---------- F21
Handling Gear ---------- F13
Hand Valves ---------- F17
Hydraulic Cylinder Assembly ---------- F23
Pneumatic Circuit, Manifold and Fittings ---------- F4
Roto Coupling ---------- F12

AIR TANKS, HOSES AND FITTINGS

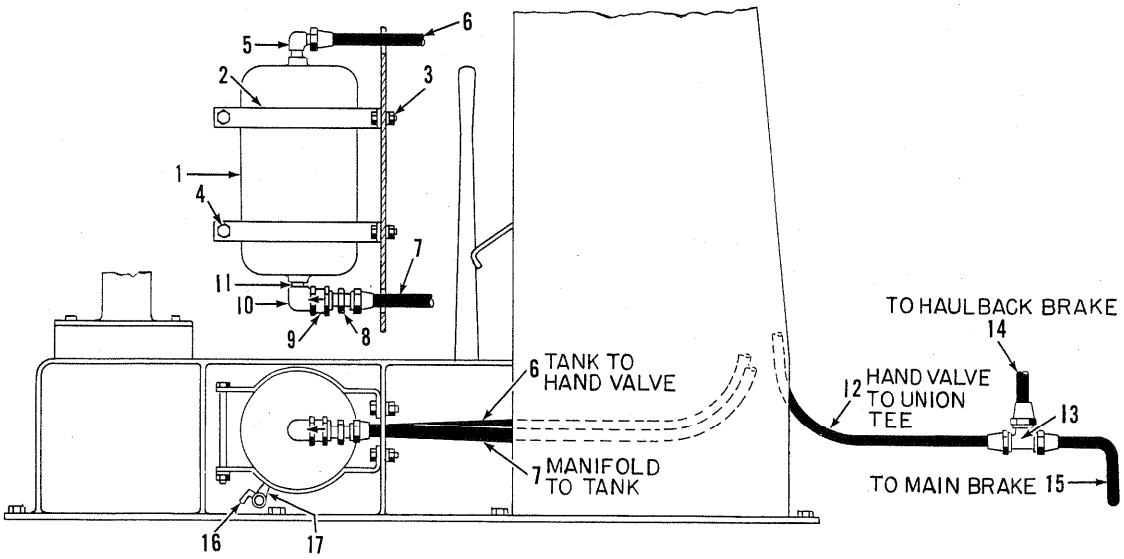


AIR TANKS, HOSES AND FITTINGS

REF. NO.	HYSTER PART NO.		DESCRIPTION	QTY. REQ.
1	(95364A		Governor Assembly (See Page F9 for parts)	1
	(14303		Fitting - Male Connector	1
2	(15622		Capscrew - 5/16 UNF x 2	2
	(15155		Lockwasher - 5/16	2
3	16294		Tube Fitting - Male Connector	2
4	94819A		Compressor - Air (See Pages F5 to F10 for parts)	2
5	94820		Pulley	2
6	15217		Cotter - 3/32 x 1-1/2	2
7	95916W		Bracket - Air Compressor	1
8	(37562		Capscrew - Hardened, 1/2 UNF x 1-1/4	6
	(16397		Capscrew - Hardened, 1/2 UNF x 1-3/4	1
	(15158		Lockwasher - 1/2	7
9	(94814		Hose Assembly (For D9 Tractors)	1
	(94811		Hose Assembly (For D8 Tractors)	1
10	15302		Pipe Plug	1
11	(18227		Capscrew - 1/2 UNF x 6-1/2	4
	(15158		Lockwasher - 1/2	4
	(15008		Nut - Hex, 1/2 UNF	4
	(15028		Nut - Jam, 1/2 UNF	4
12	94823		Bracket	4
13	94826		Valve - Safety	1
14	16499		Pipe Fitting - Reducing Street Ell	1
15	15334		Pipe Fitting - Close Nipple	1
16	94827		Aircock - Vented	1
17	14305		Tube Fitting - Male Connector	1
18	(95347	R	Hose Assembly - (For D9 Tractors SN 66A1 And Up)	1
	(94992		Hose Assembly - (For All Tractors Except D9 SN 66A)	1
19	94995		Hose Assembly	1
20	94996		Hose Assembly	1
21	94997		Hose Assembly	1
22	*(95921		Hose Assembly - (For D9 Tractors)	1
	(95922		Hose Assembly - (For D8 Tractors)	1
23	94822		Tank - Air	2
24	17314		Pipe Fitting - Street Ell (Non-Current - No Longer Required)	2
25	78103	R	Valve - Drain	2
26	(16807		Capscrew - Hardened, 1/2 UNF x 1-1/2	4
	(15158		Lockwasher - 1/2	4
	(15008		Nut - Hex, 1/2 UNF	4
27	24272		Tube Fitting - Male Elbow	1
28	94825		Hose Assembly	1
29	21798		Tube Fitting - Male Connector	1
30	94824		Valve - Check (See Page F11 for parts)	1
31	16143		Pipe Fitting Street Ell	1
32	19987		Pipe Fitting - Close Nipple	1
33	(16814		Capscrew - Hardened, 3/8 UNF x 1-1/2	8
	(15176		Washer - 3/8	8
	(15156		Lockwasher - 3/8	8
	(15006		Nut - Hex, 3/8 UNF	8
34	(18813		Setscrew - 3/8 UNC x 2-1/4	1
	(15086		Nut - Jam 3/8 UNC	1
35	(95924		Belt - V - (For Dual Compressors)	1
	(94821		Belt - V - (For Single Compressors)	1
36	21798		Fitting - Male Connector	1
37	19535		Fitting - Tee	1
38	(95541		Hose	2
	(16126		Fitting - Male Connector, 1/4 x 1/4	2
	(52501		Fitting - Male Connector, 1/4 x 1/8	2
39	95923		Hose Assembly - Special	2
40	14681		Fitting - Male Connector	3
41	15303		Fitting - Pipe Plug, 1/2	1
42	(15955		Setscrew - 3/8 UNC x 1-3/4	1
	(15086		Nut - Jam, 3/8 UNC	1
43	(16276		Setscrew - 3/8 UNC x 2	2
	(15086		Nut - Jam, 3/8 UNC	2
44	95925		Belt - V	1
45	16396		Fitting - Male Connector	1

* For single compressor include one hose 95923

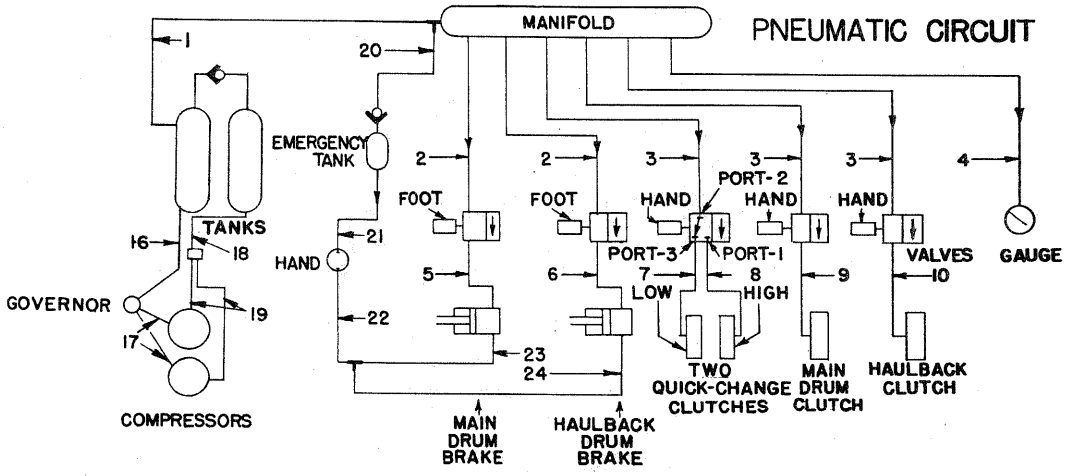
EMERGENCY BRAKE LINES AND FITTINGS
(First Used on S. N. 49P1531)

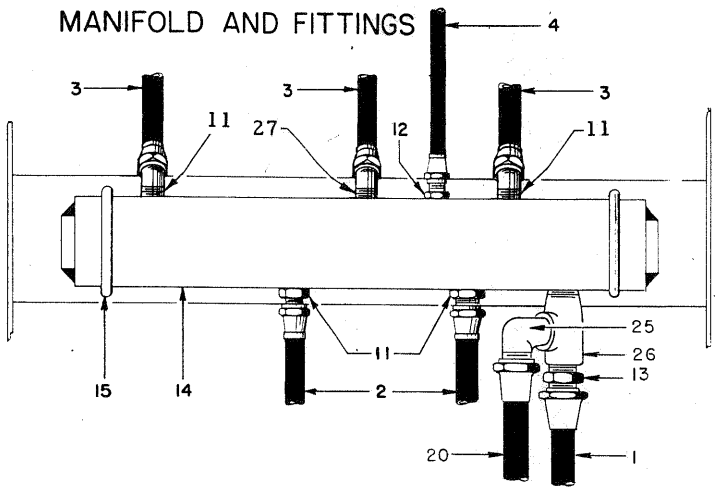


REF. NO.		HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1		96322	Tank - Emergency	1
2		96323	Bracket	4
3	(	16634	Capscrew - 3/8 UNF x 1	4
	(	15006	Nut - 3/8 UNF	4
	(	15156	Lockwasher - 3/8	4
4	(	15739	Capscrew - 3/8 UNF x 5-1/2	2
	(	15006	Nut - 3/8 UNF	2
	(	15156	Lockwasher - 3/8	2
5		24272	Fitting - Male Ell	1
6		96325	Hose	1
7		96324	Hose	1
8		17074	Fitting - Male Connector	1
9	*	94824	Valve - Check	1
10		16143	Fitting - Street Ell	1
11		19987	Fitting - Close Nipple	1
12		96327	Hose	1
13		14382	Fitting - Union Tee	1
14		96328	Hose	1
15		94994	Hose	1
16		78103 [R]	Valve - Drain	1
17	(	17314	Fitting - Street Ell	1
	(		(Non-Current - No Longer Required)	

* Note: Install Valve With Arrow Pointed as shown.

PNEUMATIC CIRCUIT MANIFOLD AND FITTINGS



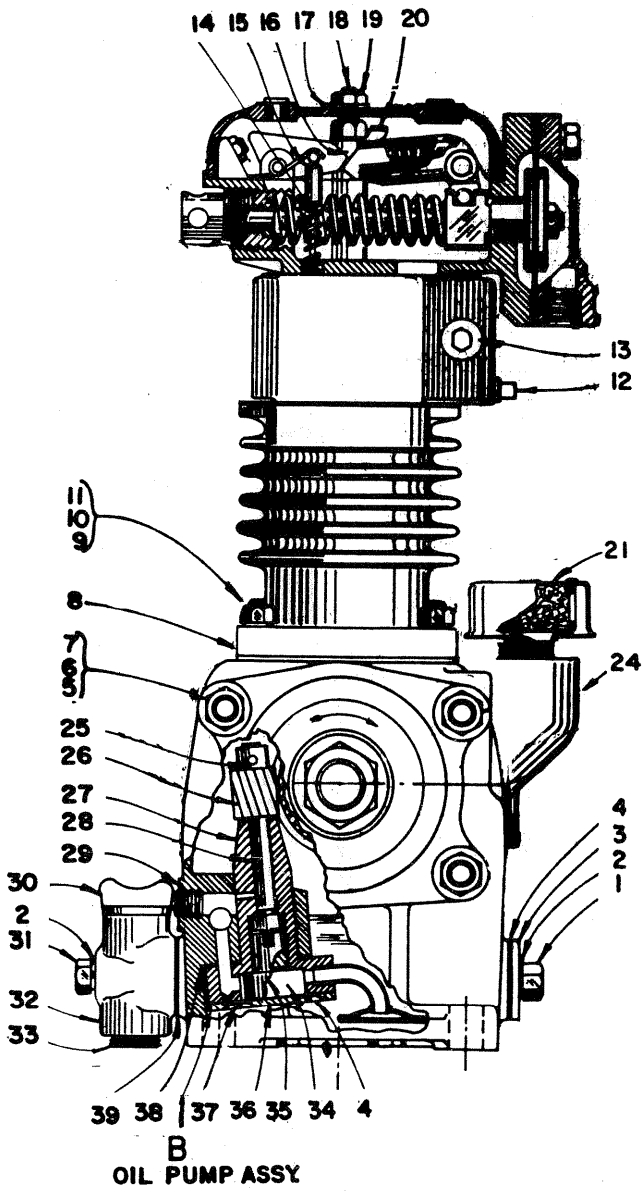


REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	94992	Hose	1
2	94990	Hose	2
3	94989	Hose	3
4	94991	Hose	1
5	94997	Hose	1
6	94998	Hose	1
7	94995	Hose	1
8	94996	Hose	1
9	94993	Hose	1
10	94994	Hose	1
11	16134	Fitting	4
12	16124	Fitting	1
13	14305	Fitting	1
14	95019W	Manifold	1
15	(94898	Bolt - U	2
	(15025	Nut-Jam, 5/16 UNF	8
16	(94811	Hose (For D8)	1
	(94814	Hose (For D9)	1
17	95541	Hose (Governor to Compressor)	2
18	* 95922	Hose (For D8)	1
	* 95921	Hose (For D9)	1
19	95923	Hose (Special)	2
20	96324	Hose	1
21	96325	Hose	1
22	96327	Hose	1
23	94994	Hose	1
24	96328	Hose	1
25	14360	Fitting	1
26	19536	Fitting	1
27	16863	Fitting	1

* For Single Compressor Include 1-95923 Hose

AIR COMPRESSOR ASSEMBLY - NO. 94819A

(Two Required)

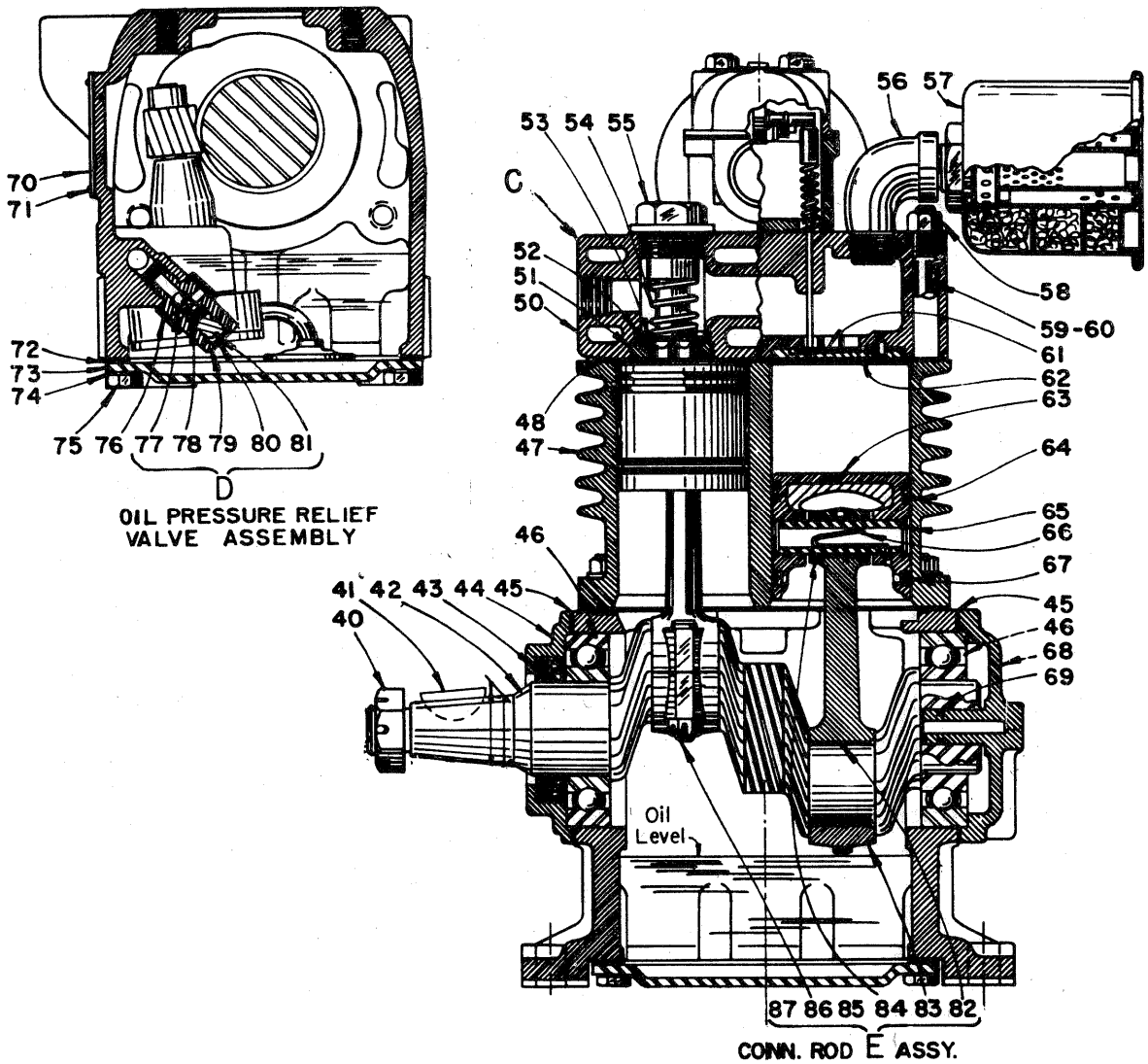


REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	233509	Screw - 1/4 - 20	2
2	15154	Lockwasher - 1/4	4
3	233510	Plate-Oil Filler Cover	1

AIR COMPRESSOR ASSEMBLY - NO. 94819A (Continued)

(Two Required)

REF. NO.	HYSTER PART NO.		NAME OF PART	QTY. REQ.
4	233543		Screw	2
5	15056		Nut - 3/8 UNC	8
6	233512		Stud	8
7	15156		Lockwasher - 3/8	8
8	233513		Gasket	1
9	15005		Nut - 5/16 UNF	6
10	233514		Stud	6
11	15155		Lockwasher - 5/16	6
12-13	12877	R	Plug - 3/8	2
14	233520		Spring - Plunger	2
15	233519		Plunger - Inlet Valve	2
16	233518		Spacer	2
17	15154		Lockwasher - 1/4	2
18	233517		Stud	2
19	15004		Nut - 1/4 UNF	4
20	233516		Stop - Governor Trigger	1
21	233524		Breather - Crankcase	1
22	233525		Coupling - Breather Pipe	1
23	233526		Pipe - Crankcase Breather	1
24	233527		Crankcase	1
25	233529		Pin	1
26	233530		Gear - Pump Drive	1
27	233531		Body - Oil Pump	1
28	233532		Shaft - Pump	1
29	233533		Plug	1
30	233534		Cap - Oil Filler	1
31	15687	R	Capscrew - 1/4 UNC x 1-1/2	2
32	233536		Body - Oil Filler	1
33	233515		Plug - Drain	1
34	233542		Vane - Pump	1
35	233541		Rotor - Pump	1
36	233540		Plate - Pump Cover	1
37	233539		Screw	2
38	233538		Gasket - Oil Pump	1
39	233511		Gasket	1
A	------		GOVERNOR AND UNLOADER (See Page F10)	
B	233528		Oil Pump Assembly Consists Of Items 25, 26, 27, 28, 34, 35, 36, 37, 38 and 39.	



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
40	15012	Nut-3/4 UNF	1
41	206	Key - Woodruff #15	1
42	233545	Crankshaft	1
43	233546	Seal	1
44	233547	Cap-Front Bearing	1
45	233548	Gasket-Bearing Cap	2
46	233549	Bearing-Crankshaft	2
47	233550	Block-Cylinder	1
48	233551	Gasket-Cylinder Head	1
50	233553	Head	1
51	233554	Seat-Exhaust Valve	2
52	233555	Washer	2
53	233556	Valve-Exhaust	2

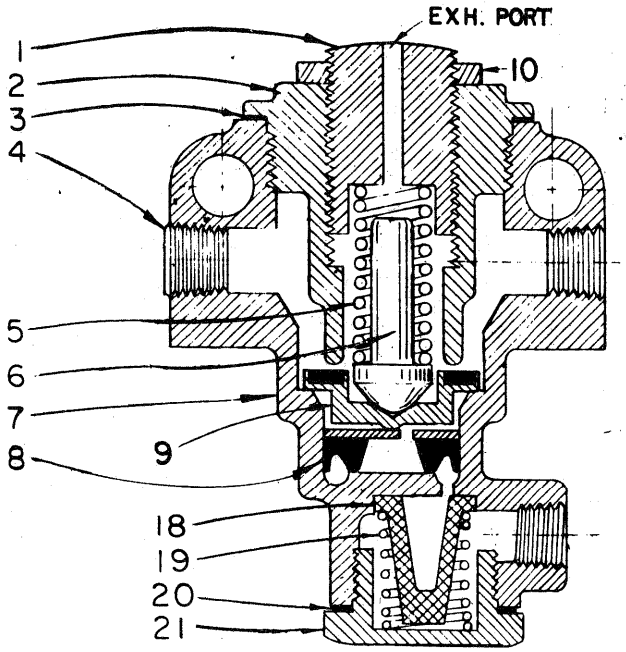
AIR COMPRESSOR ASSEMBLY - NO. 94819A - Continued

REF. NO.		HYSTER PART NO.	NAME OF PART	QTY. REQ.
54		233557	Spring - Exhaust Valve	2
55		233558	Cage - Exhaust Valve	2
56		233559	Elbow - Air Cleaner	1
57		233560	Air Cleaner Assembly	1
58		15005	Nut - 5/16 UNF	6
59		233561	Stud - Long	5
60		233562	Stud - Short	1
61		233563	Valve - Inlet	2
62		233564	Guard And Pin Assembly	2
63		233565	Piston	2
64	*	------	Ring - Compression	4
65		233567	Pin - Piston	2
66		233568	Lockwire ------	2
67	*	------	Ring - Oil	2
68		233570	Cap - Rear Crankshaft Bearing	1
69		233571	"O" Ring	1
72		233572	Gasket - Cover Plate	1
73		233573	Plate - Crankcase Cover	1
74		15154	Lockwasher - 1/4	12
75		233509	Screw - 1/4-20	12
76		233574	Cup - Splash Shield	1
77		233576	Ball	1
78		233577	Spring	1
79		233578	Body	1
80		233579	Plug	1
81		233580	Pin	1
82		233582	Bearing Insert	4
84		233583	Bushing - Piston Pin	2
85		233584	Bolt - Connecting Rod	4
86		233585	Nut - Connecting Rod	4
87		15212	Cotter - 3/32 x 3/4	4
C		233552A	Head Assembly (Consists Of Items 13, 50, 51, 52, 53, 54, 55, 61 and 62)	1
D		233575A	Valve-Oil Pressure Relief (Consists Of Items 77, 78, 79, 80 and 81)	1
E		233581A	Connecting Rod And Bearing Assy. (Consists Of Items 82, 83, 84, 85, 86 and 87. Note: Connecting Rod, Item 83 Not Serviced Separately)	2

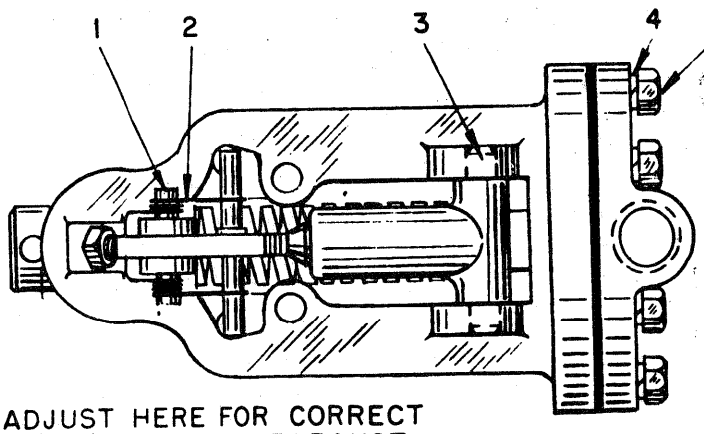
* Included In Ring Set 233566A [R]
(Complete Set For One Compressor)

INTERCHANGEABLE AS 1 UNIT ONLY

AIR COMPRESSOR GOVERNOR ASSEMBLY-NO. 95364 A



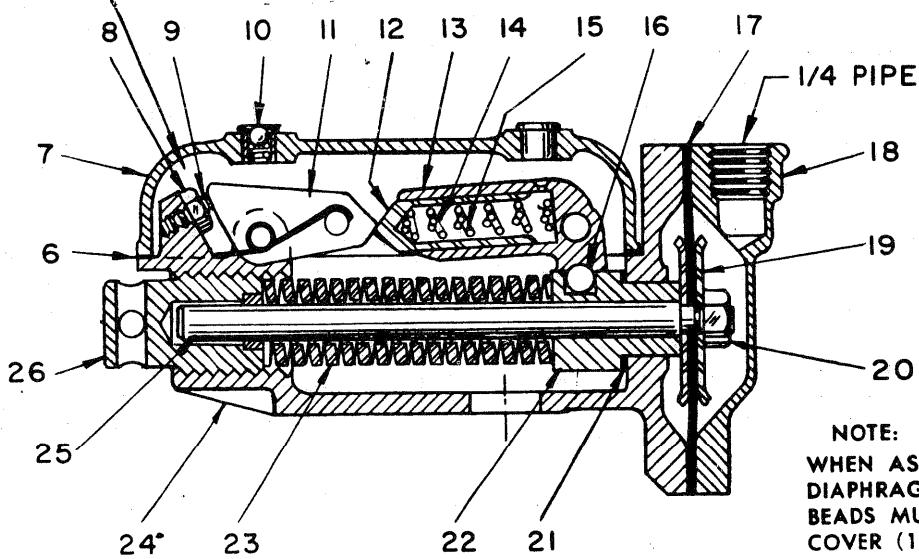
AIR COMPRESSOR UNLOADER-NO. 233803A



TOP VIEW WITH COVER REMOVED

NOTE:
Do not change adjustment of adjusting screw 26. This is pre-set at the factory.

ADJUST HERE FOR CORRECT INLET VALVE CLEARANCE



NOTE:
WHEN ASSEMBLING DIAPHRAGM (17) BEADS MUST FACE COVER (18)

AIR COMPRESSOR GOVERNOR ASSEMBLY NO. 95364A

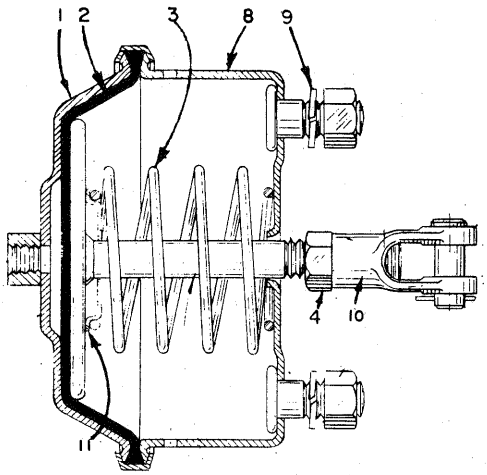
REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	233587	Screw - Adjusting	1
2	233588	Housing - Exhaust Valve	1
3	233589	Shims	1
4	15483	Pipe Plug - 1/8, Countersunk	1
5	233590	Spring	1
6	233591	Plunger	1
7	233592	Body	1
8	233593	Valve - Inlet	1
9	*233594	Valve - Exhaust	1
10	233595	Locknut	1
18	233596	Filter - Metalic	1
19	233597	Spring	1
20	*233598	Washer	1
21	233599	Cap - End	1

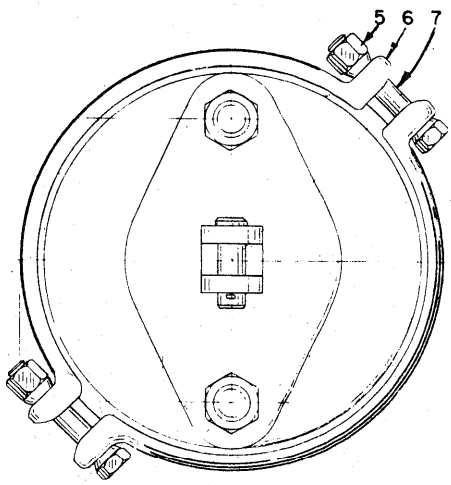
U-131037 REPAIR KIT

AIR COMPRESSOR UNLOADER NO. 233803A

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	233804	Pin - Hinge	1
2	233805	Spring - Trigger	1
3	233806	Pin - Hinge	1
4	15154	Lockwasher - 1/4	6
5	15552	Capscrew - 1/4 UNC x 3/4	6
6	233807	Gasket	1
7	233808	Cover and Oiler Assembly	1
8	15052	Nut-Hex, 10-24	1
9	17117	Setscrew - 10-24 x 7/16	1
10	233809	Oil Cup	1
11	233810	Trigger Assembly	1
12	233811	Plunger	1
13	233812	Housing - Plunger	1
14	233813	Spring - Plunger, Inner	1
15	233814	Spring - Plunger, Outer	1
16	233815	Pin	1
17	[R] 76608	Diaphragm	1
18	233817	Cover - End	1
19	233818	Washer - Diaphragm	1
20	15004	Nut-Hex, 1/4 UNF	1
21	233819	Spacer	1
22	233820	Piston	1
23	233821	Spring	1
24	233822	Body	1
25	233823	Rod - Push	1
26	233824	Screw Assembly - Adjusting	1

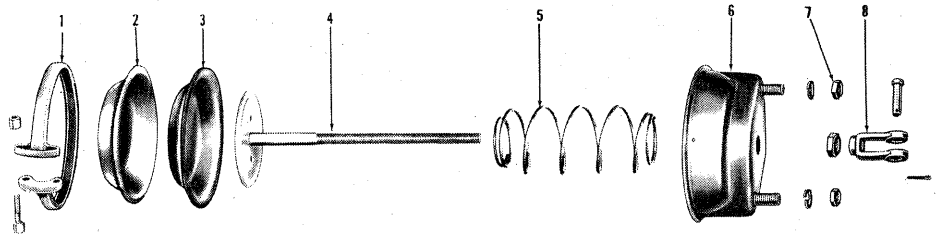
AIR CHAMBER ASSEMBLY - No. 94932A
(Quantities listed are for one chamber: Two required)





REF. NO.		HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1		233424	Cover Assembly	1
2		233425	Diaphragm	1
3		233426	Spring	1
4		15030	Nut - Jam, 5/8 UNF	1
5		233427	Nut	2
6		233428	Band - Clamp	2
7		233429	Bolt	2
8		233430	Body Assembly	1
9		(15010	Nut - Hex, 5/8 UNF	2
		(15160	Lockwasher - 5/8	2
10		(200891	Rod End	1
	R	(122852	Push Rod	1
		(159	Pin - Rod End	1
		(15223	Cotter - 1/8x 1	1
11		202762	Retainer - Spring	1

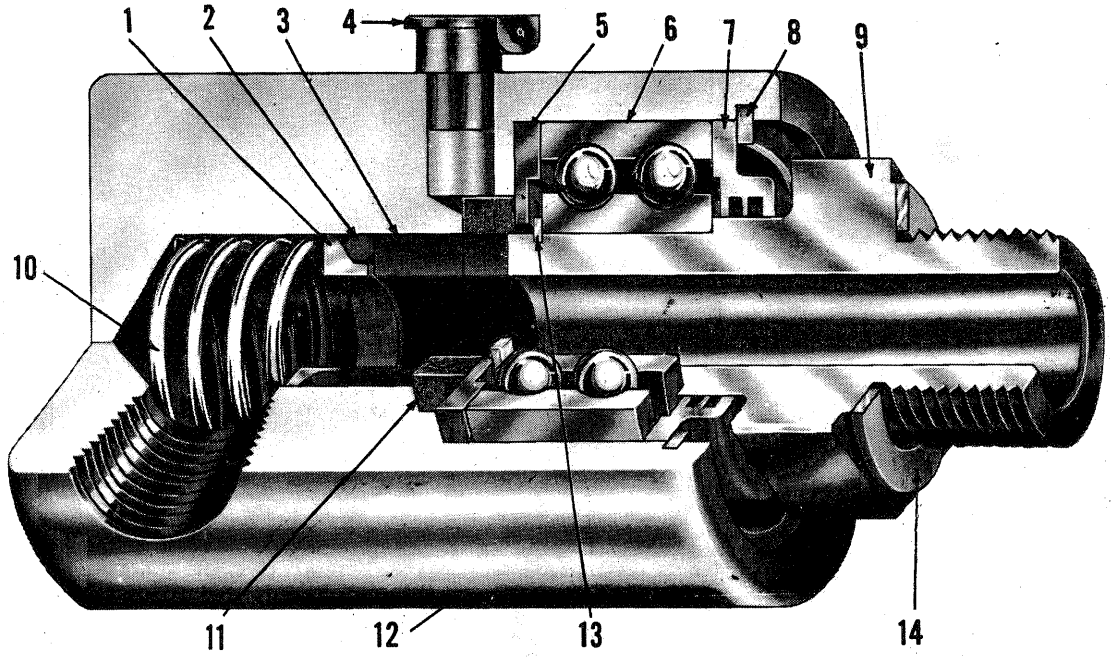
AIR CHAMBER ASSEMBLY - No. 96339A
(Quantities listed are for one chamber; Two required)
First Used on SN 49P1531



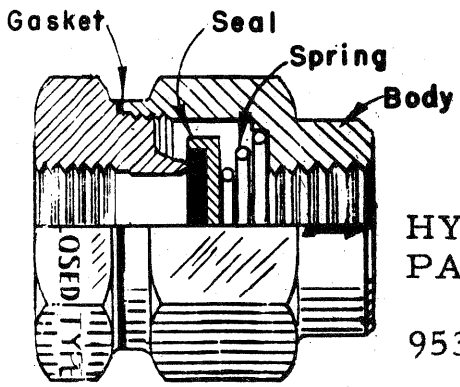
REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	(202731	Ring - Clamping (Includes bolts and nuts)	1
	(202732	Bolt	2
	(202733	Nut	2
2	202734	Plate - Pressure	1
3	202735	Diaphragm	1
4	202736	Push Rod	1
5	202737	Spring	1
6	202738	Plate - Non Pressure	1
7	(15007	Nut - 7/16 UNF	2
	(15157	Lockwasher - 7/16	2
8	(15028	Nut - Jam, 1/2 UNF	1
	*(96516	Rod End	1
	*(153	Pin - Rod End	1
	* 15223	Cotter - 1/8 x 1	1

* Not Included with 96339A

ROTO COUPLING - NO. 94933A



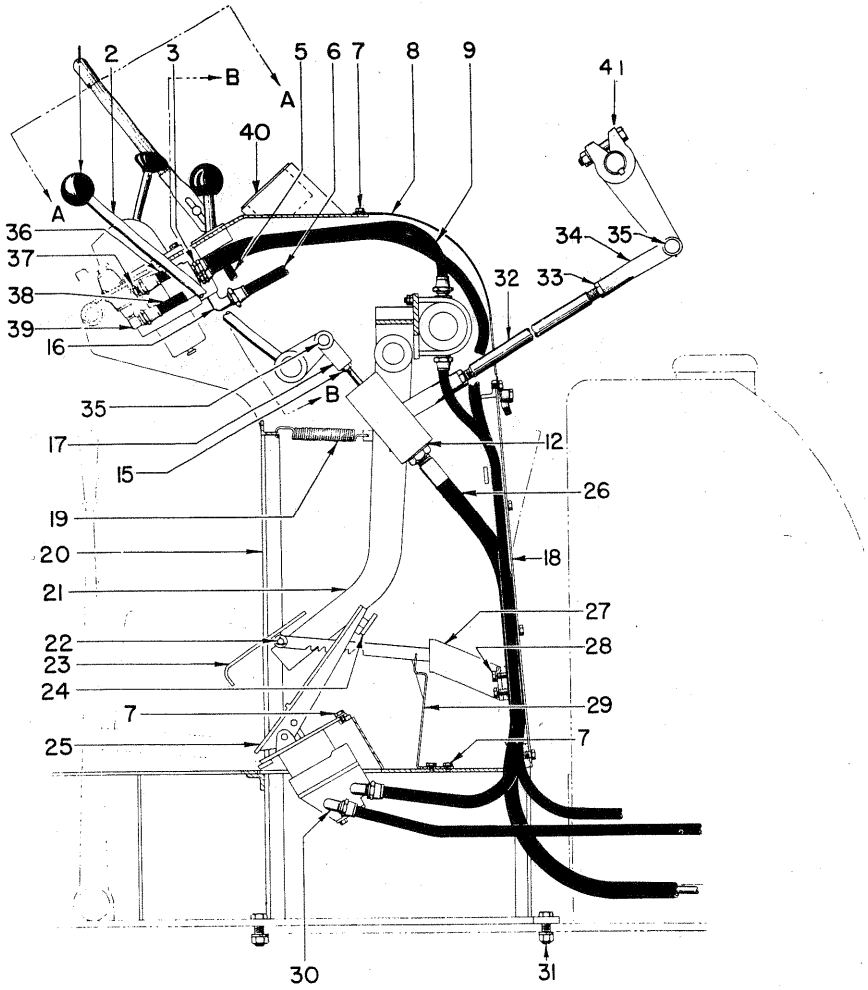
REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	233411	Retainer - "O" Ring	1
2	233418	"O" Ring - Snap ring	1
3	233413	Ring - Carbon	1
4	233414	Cup - Oil	1
5	233415	Retainer - Bearing	1
6	233416	Bearing	1
7	233417	Retainer - Bearing	1
8	12977	Snap Ring	1
9	233419	Coupling	1
10	233420	Spring	1
11	233421	Seal - Felt	1
12	233422	Housing	1
13	12978	Snap Ring	1
14	233423	Washer	1



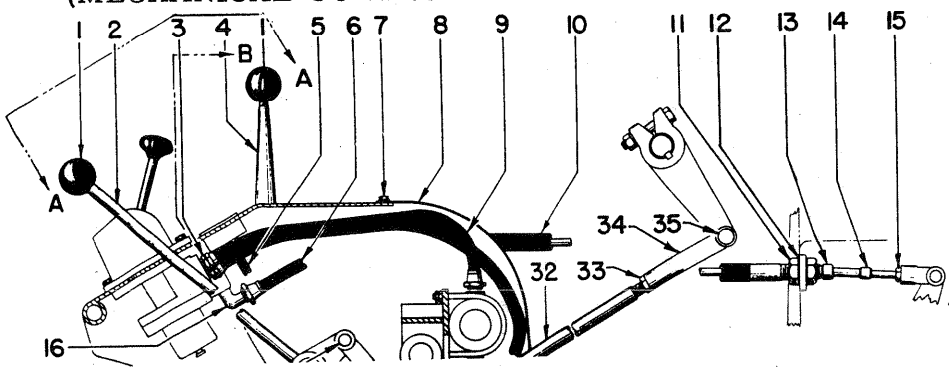
CHECK VALVE - NO. 94824

HYSTER PART NO.	NAME OF PART
95361	Repair Kit - Check Valve

HANDLING GEAR



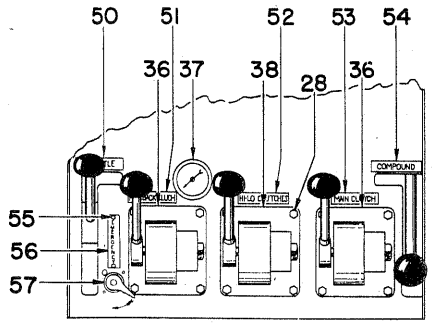
HANDLING GEAR
(MECHANICAL CONTROLS FOR STRAWDRUM SHOWN)



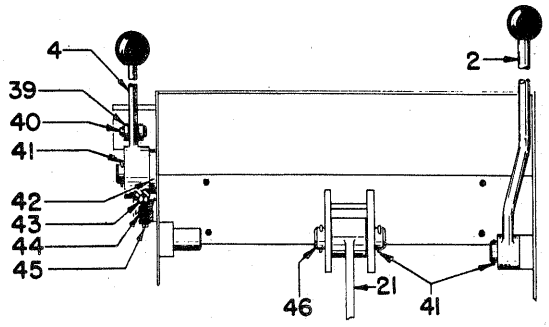
REF. NO.		HYSTER PART NO.		DESCRIPTION	QTY. REQ.
		94321		Knob	2
		94798W		Lever	1
		16134		Fitting - Male Connector	6
4	*	95018W		Lever - Strawdrum Clutch	1
5		94991		Hose Assembly	1
6		94995		Hose Assembly	1
7	(	15583		Capscrew - 5/16 UNF x 1/2	25
	(	15155		Lockwasher - 5/16	25
	(	18515		Washer - 5/16	5
8		94941		Cover	1
9		94989		Hose Assembly	1
10	*(	94124		Cable - Push Pull - STRAWDRUM (Includes Items 11, 12, 13 and 14)	1
11	*	15034		Nut - Jam 7/8 UNF	4
12	*	15934		Lockwasher - Shakeproof, 7/8 (Four furnished with cables)	7
	*	94381		Grommet - Large	4
14	*	94380		Grommet - Small	4
15		15026		Nut - Jam, 3/8 UNF	3
16		14358		Tube Fitting - Male Ell	1
17		92683		Rod End	1
18		94942		Cover	1
19		64037		Spring	1
20		96217W		Panel - Control	1
21		94987W		Lever	1
22	(	94894		Pin	1
	(	15222		Cotter - 1/8 x 3/4	2
23		94890W		Pedal	1
24	(	95543		Plate	2
	(	16367		Capscrew - 1/4 UNF x 1, Flat Head	4
	(	15004		Nut - Hex, 1/4 UNF	4
	(	15154		Lockwasher - 1/4	4
25		94986A		Valve - Foot (See Page F21 for Parts)	2
26		94123		Cable - Push Pull (Includes Items 11, 12, 13, 14)	1
27		94882W		Bracket	1
	(	15572		Capscrew - 5/16 UNF x 3/4	16
	(	15155		Lockwasher - 5/16	16
29		94881		Spring	2
30		24272		Tube Fitting - Male Ell	4
31	(	16807		Capscrew - Hardened, 1/2 UNF x 1-1/2	8
	(	15158		Lockwasher - 1/2	8
	(	15008		Nut - Hex, 1/2 UNF	8
32	(	77668A	R	Link Assembly - Strawdrum Brake (For D9 Tractors S.N. 34A, 49A, 50A)	1
	(	77669A	R	Link Assembly - Strawdrum Brake (For D9 Tractors S.N. 66A)	1
	(	36188A		Link Assembly - Strawdrum Brake (For D9 Tractors S.N. 18A, 19A) (For D8 Tractors S.N. 22A, 35A, 36A, 52A)	1
	(	37198A		Link Assembly - Strawdrum Brake (For D8 Tractors Prior to S.N. 22A)	1
33	x	15010		Nut - Hex, 5/8 UNF	2
34	x	158		Rod End	2
35	x (	159		Pin - Rod End) Two Included	3
	(	15223		Cotter - 1/8 x 1) With Link	3
	+	96327		Hose (Hand Valve to "T" Fitting)	1
	+	14303		Fitting - Male Connector	1
38	+	96325		Hose (Hand Valve to Emergency Tank)	1
39	+	14357		Fitting - Male Ell	1
40		95525		Tachometer	1
41	(	77461W	R	Crank)For	1
	(	5269	R	Key)D9 Tractors	1
	(	16748	R	Capscrew - 1/2 UNF x 2-3/4)Serial Number	1
	(	15008		Nut - 1/2 UNF)34A, 49A,	1
	(	15158		Lockwasher - 1/2)50A, 66A	1
	(	35670AB		Crank Assembly)For D8 Tractors	1
	(			(Includes Capscrew))Serial Number 14A, 15A	
	(	15503		Capscrew - 1/2 UNF x 2-3/4)& Prior, 22A, 35A, 36A, 52A	1
	(	15158		Lockwasher - 1/2)and D9 Tractors	1
	(	15008		Nut - 1/2 UNF)Serial Number 18A, 19A	1

* Mechanical Strawdrum Clutch Parts (Non-Current)
\+ Emergency Brake Parts First Used on SN49P1531)
x Included in Link Assembly

HANDLING GEAR -Continued



VIEW A-A

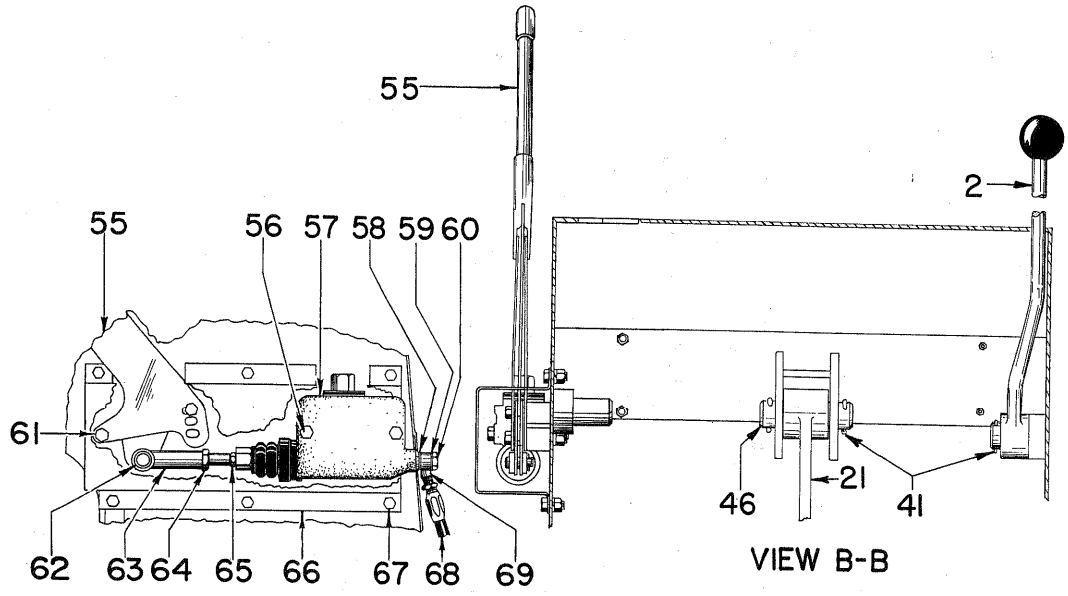


VIEW B-B

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
2	94798W	Lever - ------ -	1
4	* 95018W	Lever	1
21	94987W	Lever	1
28	(15572	Capscrew - 5/16 UNF x 3/4	12
	(15155	Lockwasher - 5/16	12
	(15005	Nut - 5/16 UNF	12
36	(94899A	Valve - Hand (See Note 1)	2
	x(16134	Fitting - Male Connector	4
	+(14358	Fitting - Male Ell	4
37	116153	Gauge - Air Pressure	1
38	(88642A	Valve - Hand (See Note 2)	1
	x(96348	Plate	1
	x(18461	Capscrew - 1/4 UNF x 3/4	4
	x(15154	Lockwasher - 1/4	4
	x(15004	Nut - 1/4 UNF	4
	x(14372	Fitting - Female Ell	2
	+(16134	Fitting - Male Connector	2
	x(15380	Fitting - Nipple, 1/4 x 1-1/2	1
	x(15453	Fitting - Nipple, 1/4 x 2-1/2	1
	+(17314	Fitting - Street Ell	1
39	* 92886	Rod End	1
40	* 153	Pin - Rod End	1
	*(15223	Cotter - 1/8 x 1	2
41	15246	Cotter - 3/16x 2	4
42	* 66284	Washer	1
43	* 6348	Ball - Steel, 1/2" Dia	1
44	* 6347B	Spring	1
45	*(46578	Plug - Drilled	1
	*(-----	Wire - Lock	1
46	94895	Pin	1
50	95384	Name Plate - Throttle	1
51	95385	Name Plate - Haulback Clutch	1
52	95382	Name Plate - Hi-Lo Clutches	1
53	95381	Name Plate - Main Clutch	1
54	95383	Name Plate - Compound	1
55	16602	Screw - Drive, No. 6 x 1/4	12
56	96520	Name Plate - Emergency	1
57	(96326	Valve - Hand, Emergency Brake	1
	(16853	Machine Screw - No. 8-32 x 1/2	3

* Mechanical Strawdrum parts, non-current
x First Used on S. N. B49P 1557
\+ Last Used on S. N. B49P 1556
Note 1: To replace valve 94899AB on units prior to S. N. B49P 1557. Furnish 1-94899A Valve, 3-16134 Fittings.
Note 2: To replace valve 96510A on units prior to S. N. B49P 1557. Furnish 1-88642A Valve, 1-15380 Nipple, 1-15453 Nipple, 2-14372 Female Elbows, 1-96348 Adapter Plate, 4-18461 Capscrews 1/4 UNF x 3/4

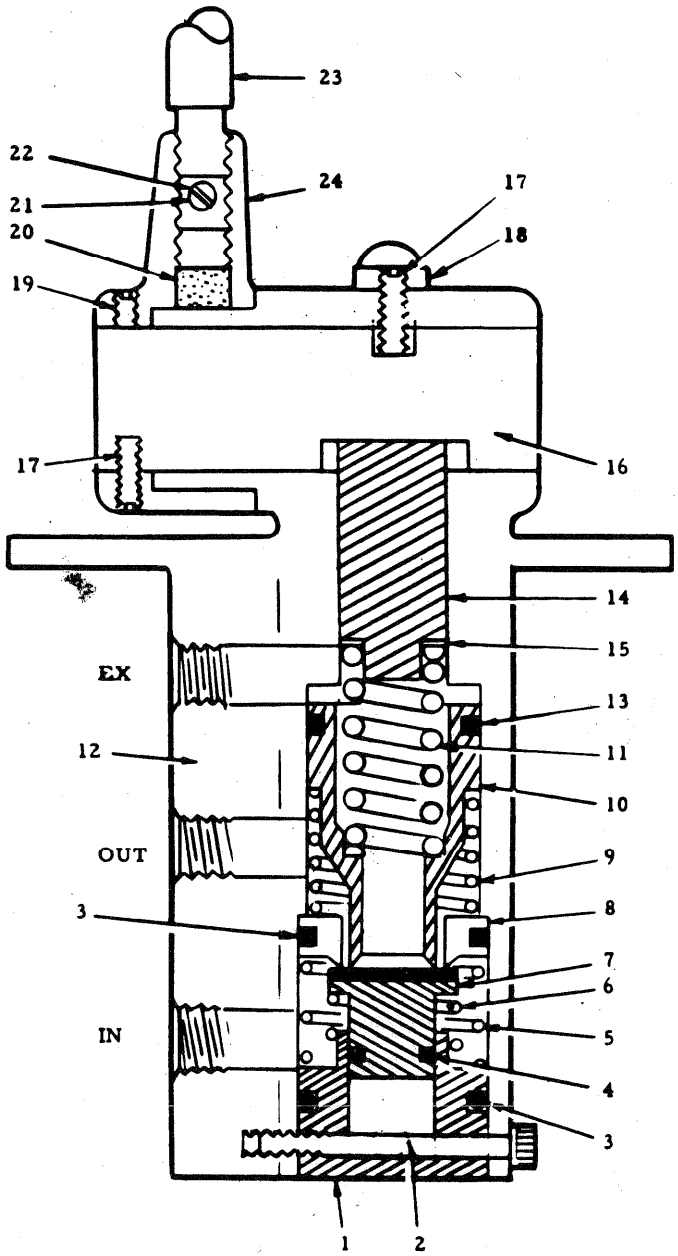
HANDLING GEAR - CONTINUED
FOR HYDRAULIC STRAWDRUM CLUTCH



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
55	96213	Lever	1
56	(17155	Capscrew - 3/8 UNF x 3-1/4	2
	(15006	Nut - Hex, 3/8 UNF	2
	(15156	Lockwasher - 3/8	2
57	96199A	Cylinder-Master (See Page F23 for Parts)	1
58	24092	Gasket	1
59	29582	Gasket	1
60	29583	Bolt - Fitting	1
61	(96200	Spacer	2
	(17154	Capscrew - 3/8 UNF x 2-1/2	2
	(15006	Nut - Hex, 3/8 UNF	2
	(15156	Lockwasher - 3/8	2
62	(142	Pin - Rod End	1
	15212	Cotter - 3/32 x 3/4	1
63	141	Rod End	1
64	15026	Nut - Jam, 3/8 UNF	1
65	96201	Link	1
66	96209	Cover	1
67	(16818	Capscrew - 5/16 UNF x 3/4	6
	(15005	Nut - Hex, 5/16 UNF	6
	(15155	Lockwasher - 5/16	6
68	96204	Hose	1
69	42075	Fitting	1

F 16.1

HAND VALVE ASSEMBLY - No. 94899AB
First Used on S.N. B49P 1541
Last Used on S.N. B49P 1556
Replace with 1-94899A Valve and 3-16134 Fittings

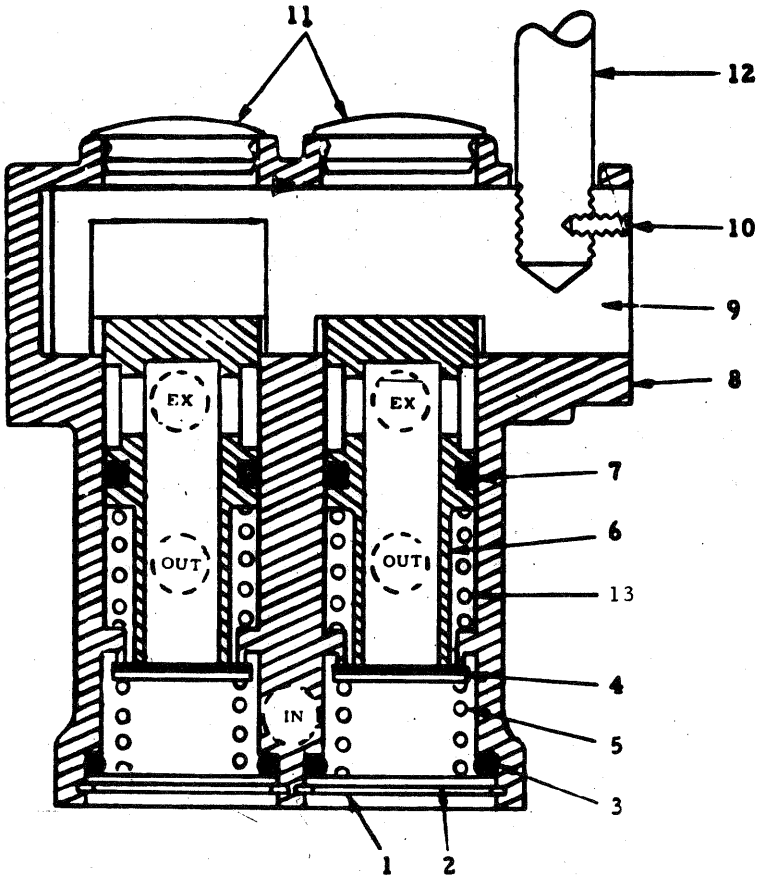


HAND VALVE ASSEMBLY - NO. 94899AB

REF. NO.		HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1		235182	Cap	1
2		53159	Capscrew - 1/4-20 x 2 Socket Head	2
3	*	------	"O" Ring	2
4	*	------	"O" Ring	1
5		235183	Spring	1
6		235184	Spring	1
7	*	------	Valve	1
8		235186	Seat	1
9		235187	Spring	1
10		235188	Piston	1
11		235189	Spring - Main	1
12		235190	Body	1
13	*	------	"O" Ring	1
14		245191	Push Rod	1
15		(235192	Shim	AS
		(235193	Shim	NEEDED
16		235194	Cam	1
17		53153	Set Screw - 10-32 x 5/8	2
18		53160	Nut - Acorn, 10-32 (Brass)	1
19		53154	Set Screw - 10-32 x 3/16	1
20	*	------	Disk - Brake	1
21		53161	Screw - 4-40 x 1/4 Flat Head Brass	1
22		53162	Lockwasher - Shakeproof # 4 External	1
23		235196	Knob Assembly	1
24		235197	Handle	1

* Included in Repair Kit No. 235198

HAND VALVE ASSEMBLY - No. 96510A
First Used on S. N. B49P 1541
Last Used on S. N. B49P 1556
To Replace, Furnish 1-88642A Valve, 1-15380 Nipple, 1-15453 Nipple, 2-14372 Elbow, 1-96348 Plate, 4-18461 Capscrew



REF. NO.	HYSTER PART NO.		DESCRIPTION	QTY. REQ.
1	58916		Snap Ring	2
2	235174		Plate	2
3	61056		"O" Ring	2
4	235175		Valve	2
5	235176		Spring	4
6	235177		Piston	2
7	100153		"O" Ring	2
8	235178		Body	1
9	235179		Cam	1
10	53153		Set Screw - 10 - 32 x 5/8.	1
11	235180		Cap	2
12	235181		Knob Assembly	1
13	235964	R	Spring	2

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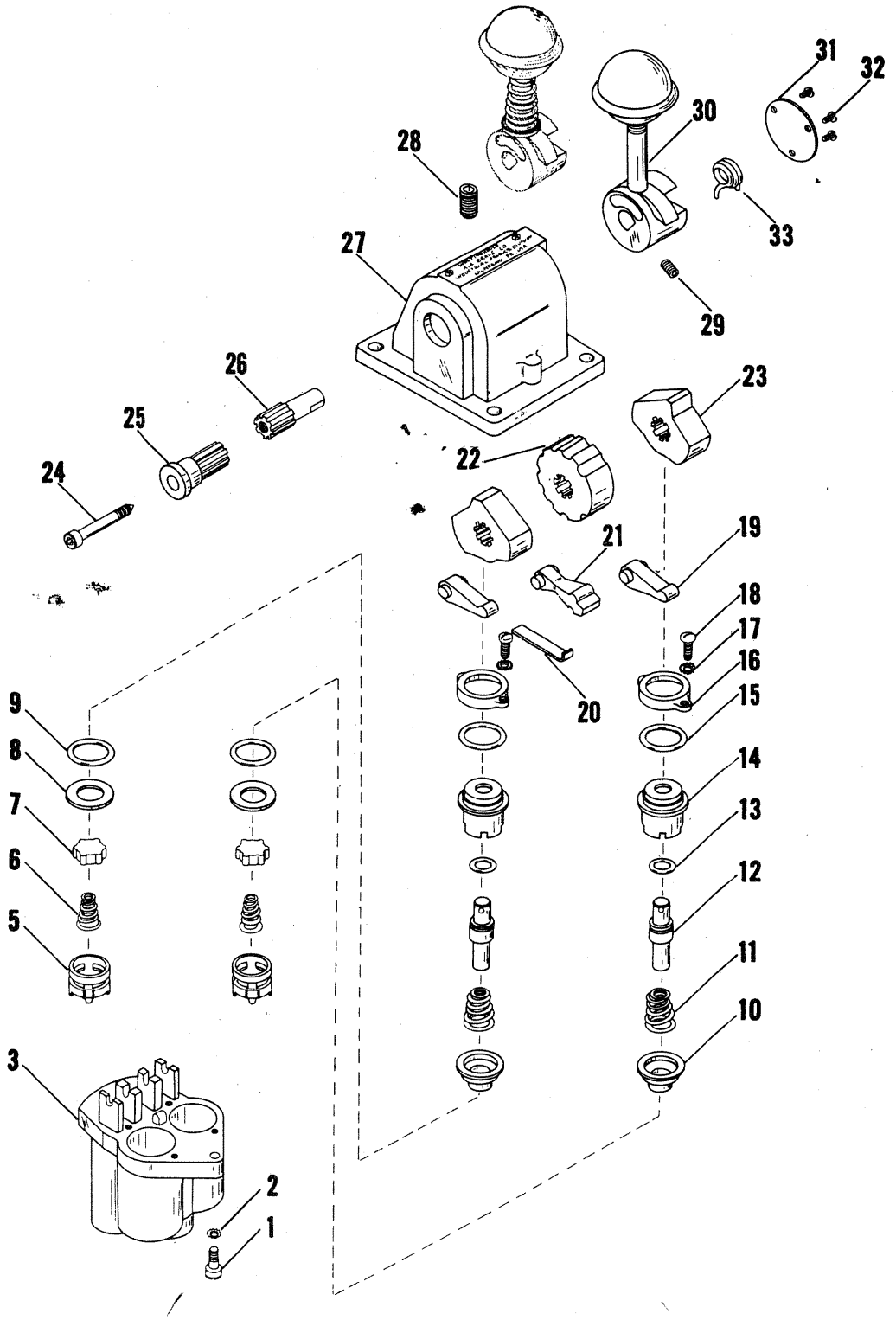
F 16.5 [R]

HAND VALVE ASSEMBLY - No. 86642A

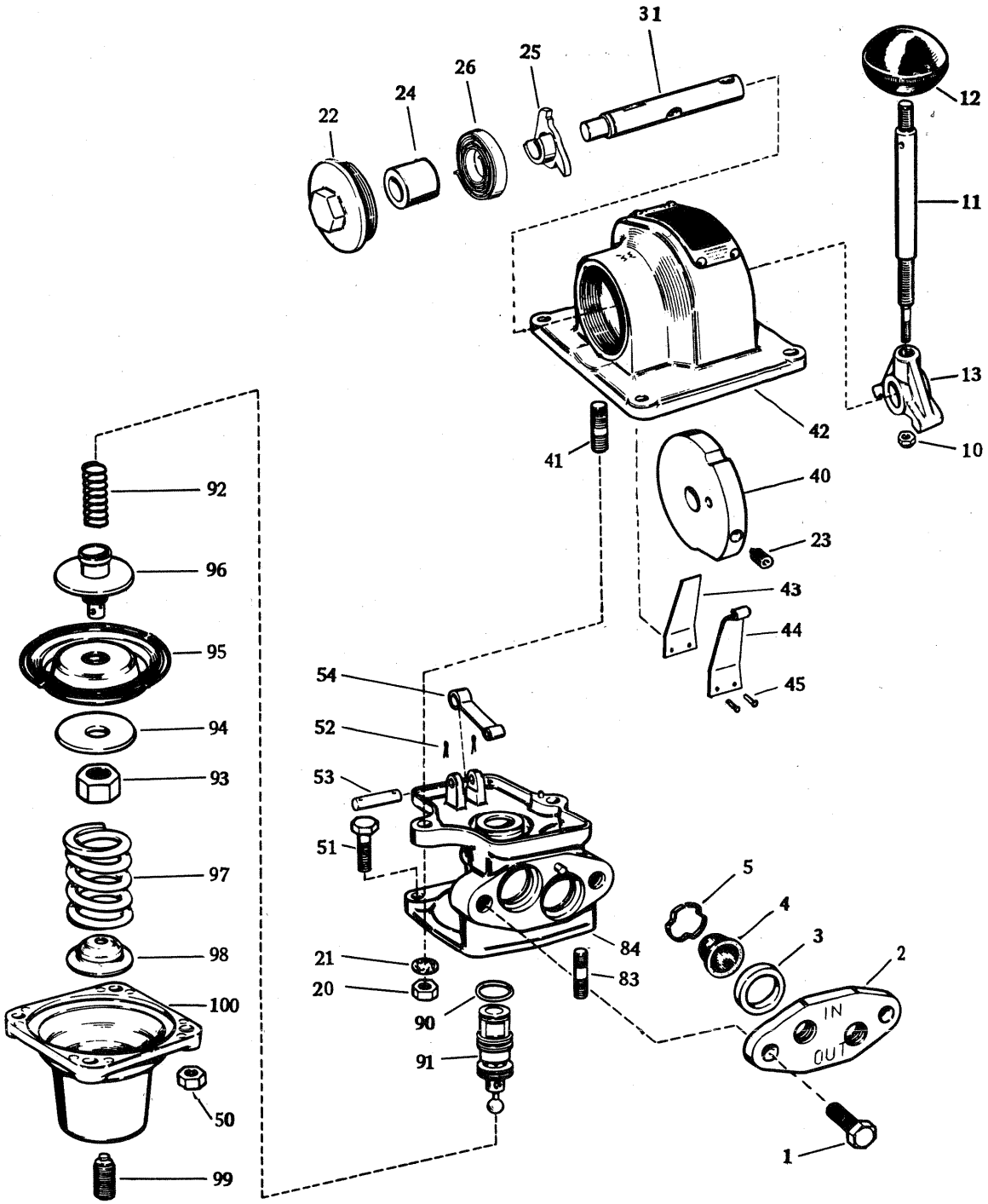


F 16.6 [R]

HAND VALVE ASSEMBLY - No. 88642A
FIRST USED ON S. N. B49P 1557

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	86629	Machine Screw - #10 UNC x 3/4	2
2	15931	Lockwasher - External Tooth, #10	2
3	86630	Body	1
5	86631	Spacer - Valve	2
6	233478	Spring - Inlet Valve	2
7	86632	Valve - Inlet	2
8	86633	Washer	2
9	86634	Ring - Packing, 7/8" O.D.	2
10	86635	Seat - Inlet Valve	2
11	86636	Spring - Exhaust Valve	2
12	86637	Plunger - Valve	2
13	86638	Ring - Packing, 7/16" O.D.	2
14	86639	Guide - Plunger	2
15	86640	Ring - Packing, 15/16" O.D.	2
16	86641	Flange - Valve Retaining	2
17	16743	Lockwasher - External Tooth, #6	4
18	86852	Machine Screw - #6 UNC x 3/8	4
19	86853	Follower - Cam	2
20	86854	Spring - Detent	1
21	86855	Follower - Detent Cam	1
22	86856	Cam - Detent	1
23	86857	Cam	1
24	17948	Capscrew - Socket Head, #10 UNF x 1-1/2	1
25	86859	Shaft - Cam	1
26	86860	Shaft - Handle	1
27	86861	Housing	1
28	86862	Setscrew - #6 UNC x 1/2	1
29	86863	Setscrew - "Nylok", #10 UNF x 1/4	1
30	86864	Handle Assembly	1
32	86865	Screw - Self Tap #2-56 NC x 1/4	3

HAND VALVE ASSEMBLY - No. 94899A
Note: For S. N. B49P 1541 to B49P 1556 incl.
Include 3-16134 Fittings

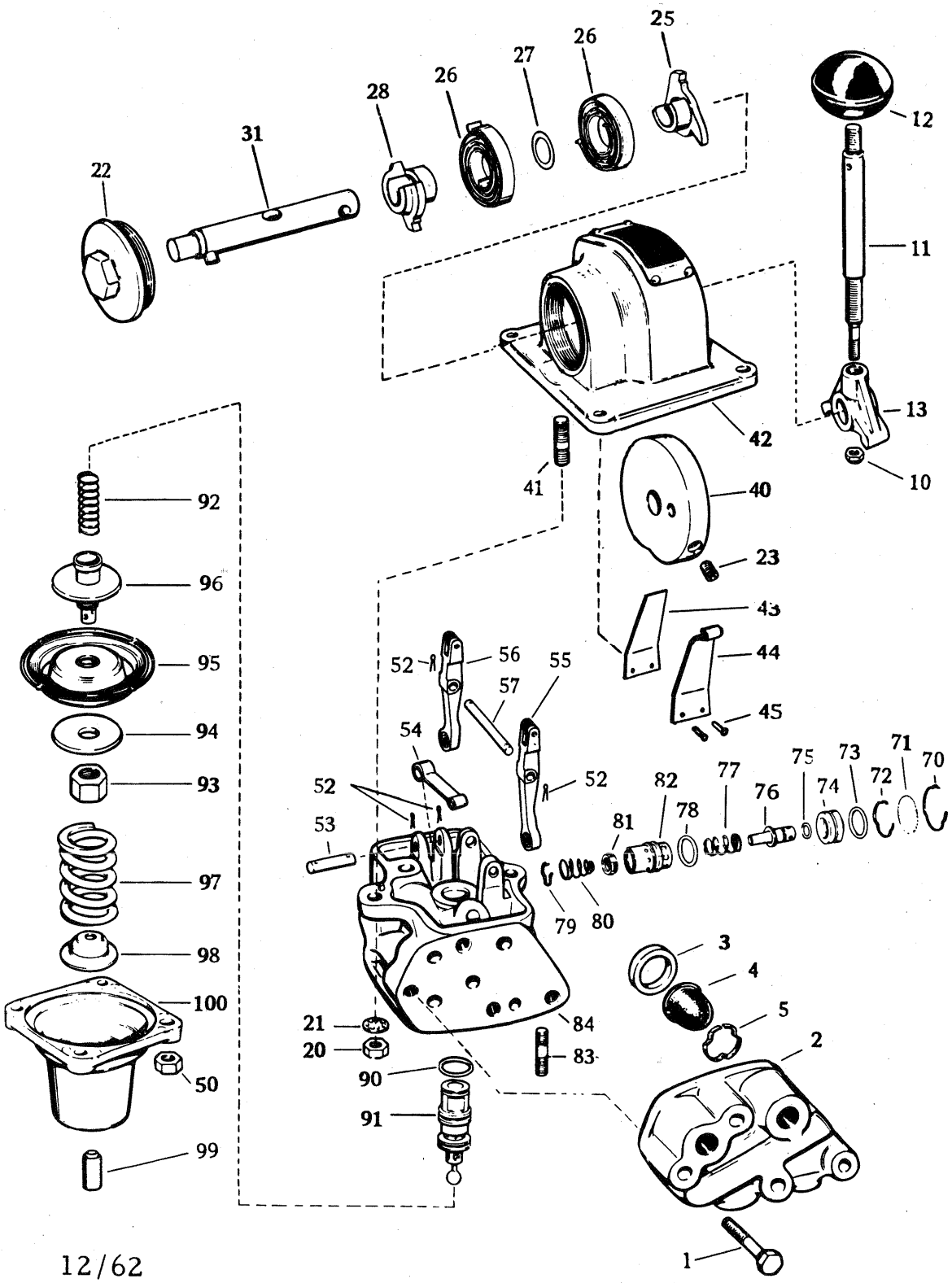


HAND VALVE ASSEMBLY - No. 94899A
Note: For S. N. B49P 1541 to B49P 1556 incl.
Include 3-16134 Fittings

REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	54982	Capscrew - 3/8 UNC x 1-1/8	2
2	233431	Bracket - Pipe	1
3	233432	Gasket - Strainer	2
4	233433	Strainer	2
5	233434	Ring - Strainer Retaining	2
10	86620	Nut	1
11	233435	Shaft - Handle	1
12	233436	Ball - Handle	1
13	233437	Yoke - Handle	1
20	86621	Nut	2
21	15918	Lockwasher - 5/16, Shakeproof	2
22	233438	Nut - Cam Housing Cap	1
23	54980	Set Screw - Self Locking	1
24	233439	Sleeve	1
25	233440	Arbor	1
26	233441	Spring - Handle Return	1
31	233442	Shaft - Cam	1
40	233443	Cam (With Pin)	1
41	233444	Stud	2
42	233445	Housing - Cam (Includes One Each Items 43, 44 and Two Each Items 20, 41, 45)	1
43	233446	Spring - Latch Booster	1
44	233447	Latch - Spring	1
45	14524	Rivet - 3/32 x 3/4 Countersunk Head	2
50	86624	Nut	4
51	54983	Capscrew - 5/16 UNC x 1-1/8	2
52	15200	Cotter - 1/16 x 1/2	2
53	233448	Pin - Cam Dog	1
54	233449	Dog - Cam	1
83	233450	Stud	2
84	233451	Body	1
90	86625	Ring - Packing	2
91	233452	Valve Unit (Includes Two of Item 90)	1
92	233453	Spring - Exhaust Valve	1
93	54981	Nut - Special	1
94	233454	Follower - Diaphragm	1
95	233455	Diaphragm	1
96	233456	Seat - Exhaust Valve	1
97	233457	Spring - Diaphragm, 125 PSI	1
98	233458	Seat - Diaphragm Spring	1
99	233460	Screw - Adjusting	1
100	233459	Housing - Spring	1

HAND VALVE ASSEMBLY - No. 94900A
LAST USED ON S. N. B49P 1540

For S. N. B49P 1519 to B49P 1540 inclusive, replace with 88642A Valve and 1-15380 Nipple, 1-15453 Nipple, 2-14372 Elbow, 1-96348 Plate, 4-18461 Capscrews.
For all units with jaw clutch (prior to S. N. B49P 1519) replace with 94900A Valve.



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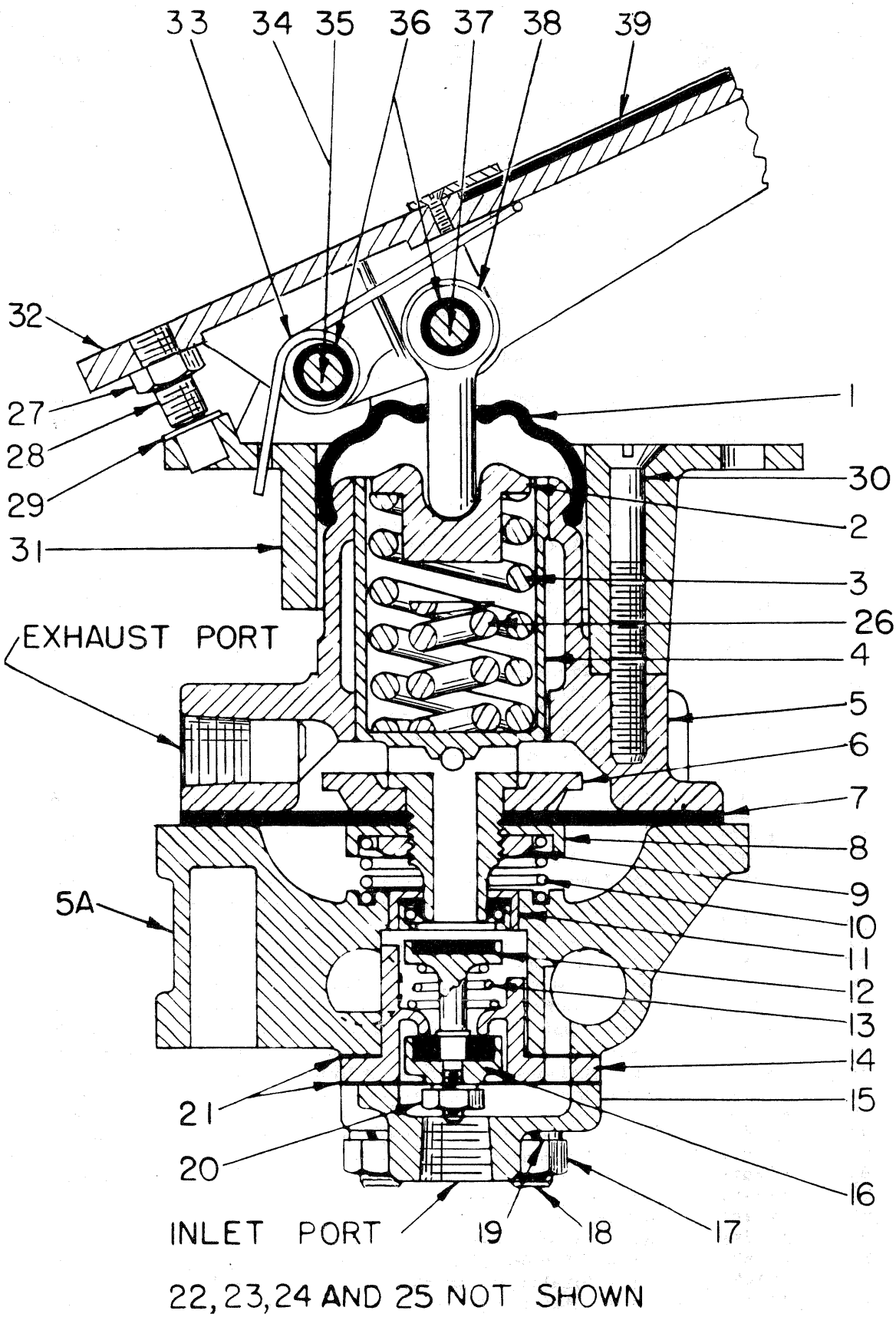
F20

HAND VALVE ASSEMBLY-NO. 94900A

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	54979	Capscrew	4
2	233461	Bracket - Pipe	1
3	233432	Gasket - Strainer	5
4	233433	Strainer	5
5	233434	Ring-Strainer Retainer	5
10	17416C	Nut-Lock, 1/4 UNF	1
11	233435	Shaft - Handle	1
12	233436	Ball - Handle	1
13	233462	Yoke - Handle	1
20	15055	Nut-Hex, 5/16 UNC	2
21	15155	Lockwasher - 5/16	2
22	233438	Nut-Cam Housing Cap	1
23	54980	Set Screw - Self Locking	1
25	233440	Arbor	1
26	233441	Spring - Handle Return	2
27	233463	Washer	1
28	233464	Arbor	1
31	233465	Shaft - Cam	1
40	233466	Cam (With Pin)	1
41	233444	Stud	2
42	233467	Housing-Cam (Includes One Each Items 43, 44 and Two Each 20, 41, 45)	1
43	233446	Spring - Latch Booster	1
44	233447	Latch - Spring	1
45	14524	Rivet, 3/32 x 3/4, Countersunk Head	2
50	15055	Nut-Hex, 5/16 UNC	4
52	15200	Cotter - 1/16 x 1/2	4
53	233448	Pin - Cam Dog	1
54	233449	Dog - Cam	1
55	233468	Lever - Left, Pilot Air	1
56	233469	Lever - Right, Pilot Air	1
57	233470	Pin - Pilot Air Lever	1
70	233471	Ring - Retaining	2
71	233472	Protector - Exhaust	2
72	233473	Ring - Retaining	2
73	60836	"O" Ring	2
74	233474	Guide - Pilot Air Plunger	2
75	15859	"O" Ring	2
76	233475	Plunger - Pilot Air	2
77	233476	Spring - Plunger	2
78	100154	"O" Ring	2
79	233477	Ring - Retaining	2
80	233478	Spring - Supply Valve	2
81	233479	Valve - Supply	2
82	233480	Seat - Pilot Air Valve	2
83	233450	Stud	4
84	233481	Body (Includes Four Each Of Items 50 and 83).	1
90	104681	"O" Ring	2
91	233452	Valve Unit (Includes Two Of Item 90)	1
92	233453	Spring - Exhaust Valve	1
93	54981	Nut - Special	1
94	233454	Follower - Diaphragm	1
95	233455	Diaphragm	1
96	233456	Seat - Exhaust Valve	1
97	233457	Spring - Diaphragm, 125 P.S.I.	1
98	233458	Seat - Diaphragm Spring	1
99	233460	Screw - Adjusting	1
100	233459	Housing - Spring	1

FOOT VALVE ASSEMBLY-NO. 94986A
(Two Valves Required)



22, 23, 24 AND 25 NOT SHOWN

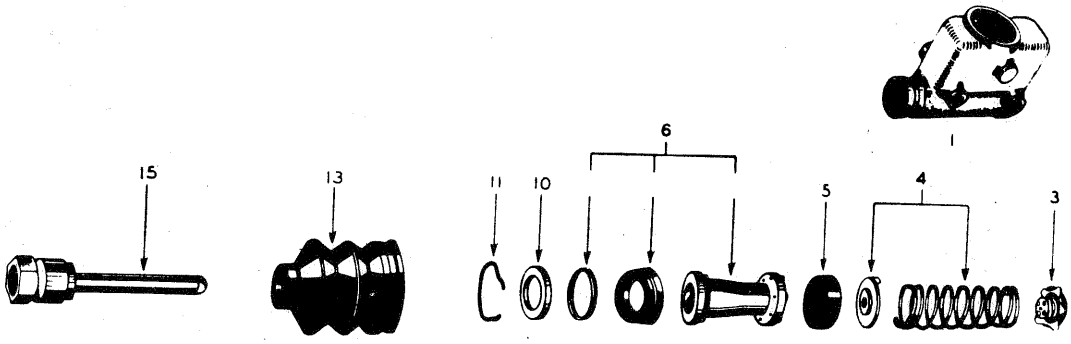
FOOT VALVE ASSEMBLY-NO. 94986A

(Two Valves Required)

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	*------	Boot	1
2	233601	Cup - Rod	1
3	233602	Spring	1
4	233603	Piston	1
5	233604	Cover	1
5A	233605	Body	1
6	233606	Washer - Diaphragm	1
7	*------	Diaphragm	1
8	233608	Washer - Cup	1
9	233609	Nut	1
10	233610	Spring	1
11	*------	Seal	1
12	*------	Valve Assembly	1
13	*------	Spring	1
14	*------	Cage - Valve	1
15	233614	Cover - Inlet	1
16	*------	Valve Assembly	1
17	15004	Nut - Hex, 1/4 NF	4
18	233616	Stud	4
19	15154	Lockwasher - 1/4	4
20	*------	Locknut - #8 - 32	1
21	*------	Gasket	2
22	233618	Screw	6
23	15004	Nut - Hex, 1/4 NF	6
24	15154	Lockwasher - 1/4	6
25	233619	Stud	6
26	233620	Spring	1
27	233621	Nut	1
28	233622	Screw - Stop	1
29	233623	Button - Stop	1
30	16875	Screw - 5/16 NC x 2-1/4	3
31	233624	Bracket - Mounting	1
32	233625	Treadle	1
33	233626	Spring	1
34	233627	Pin - Pivot	1
35	15212	Cotter - 3/32 x 3/4	2
36	233628	Bushing	4
37	233629	Pin - Pivot	1
38	233630	Pin - Operating	1
39	(233631	Pad - Treadle	1
	(233632	Clip	1
	(233633	Screw	2

*Included In Repair Kit No. 233910A

CYLINDER ASSEMBLY - NO. 96199A



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	96230	Cylinder and Tank	1
3	*54572	Valve Assembly-Check	1
4	54573	Spring Assembly	1
5	*54574	Cup-Primary	1
6	*54575A	Piston Assembly	1
10	54576	Plate-Stop	1
11	*54577	Wire-Lock	1
13	*54579	Boot	1
15	96231	Rod-Push	1
16	54705	Plug-Filler	1
17	54659	Gasket-Filler Plug	1

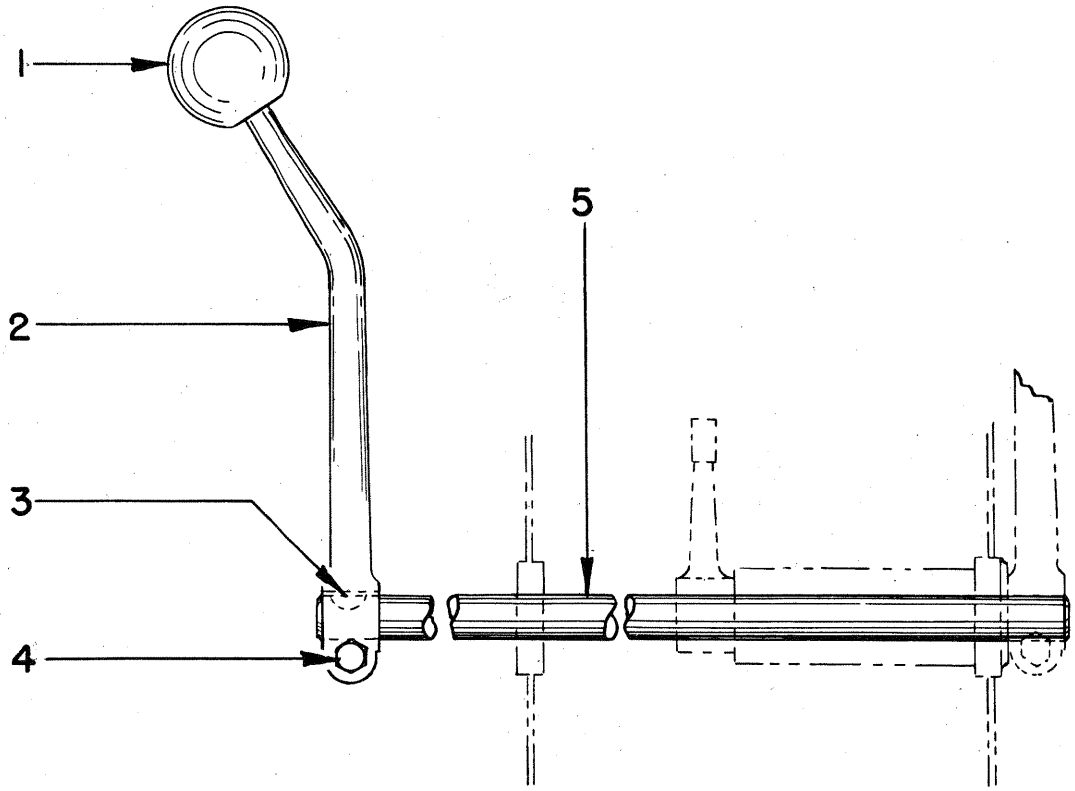
* Included In Cylinder Repair Kit - No. 54584

SECTION G

OPTIONAL EQUIPMENT

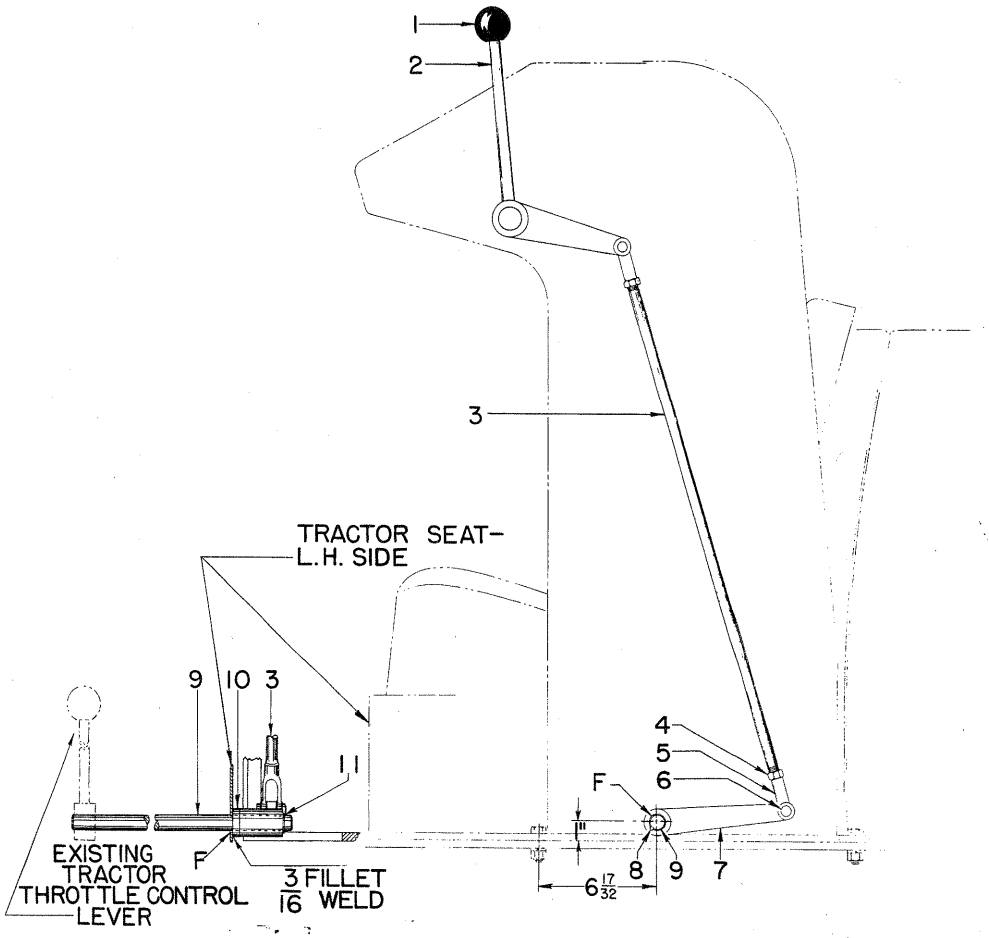
Fairlead and Bracket ---------- G 7
Throttle Control Group For D9 Tractors ---------- G 6
Throttle Control Groups for D8 Tractors ---------- G1

THROTTLE CONTROL
For D8 Tractors Serial Number 22A, 35A, 36A, 52A



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.
1	94321	Knob	1
2	94808	Lever ("Caterpillar" No. 5H6804)	1
3	32415	Key	1
4	(15527	Capscrew - 3/8 UNF x 1-3/4	1
	(15006	Nut-Hex, 3/8 UNF	1
	(15156	Lockwasher - 3/8	1
5	95860	Shaft	1

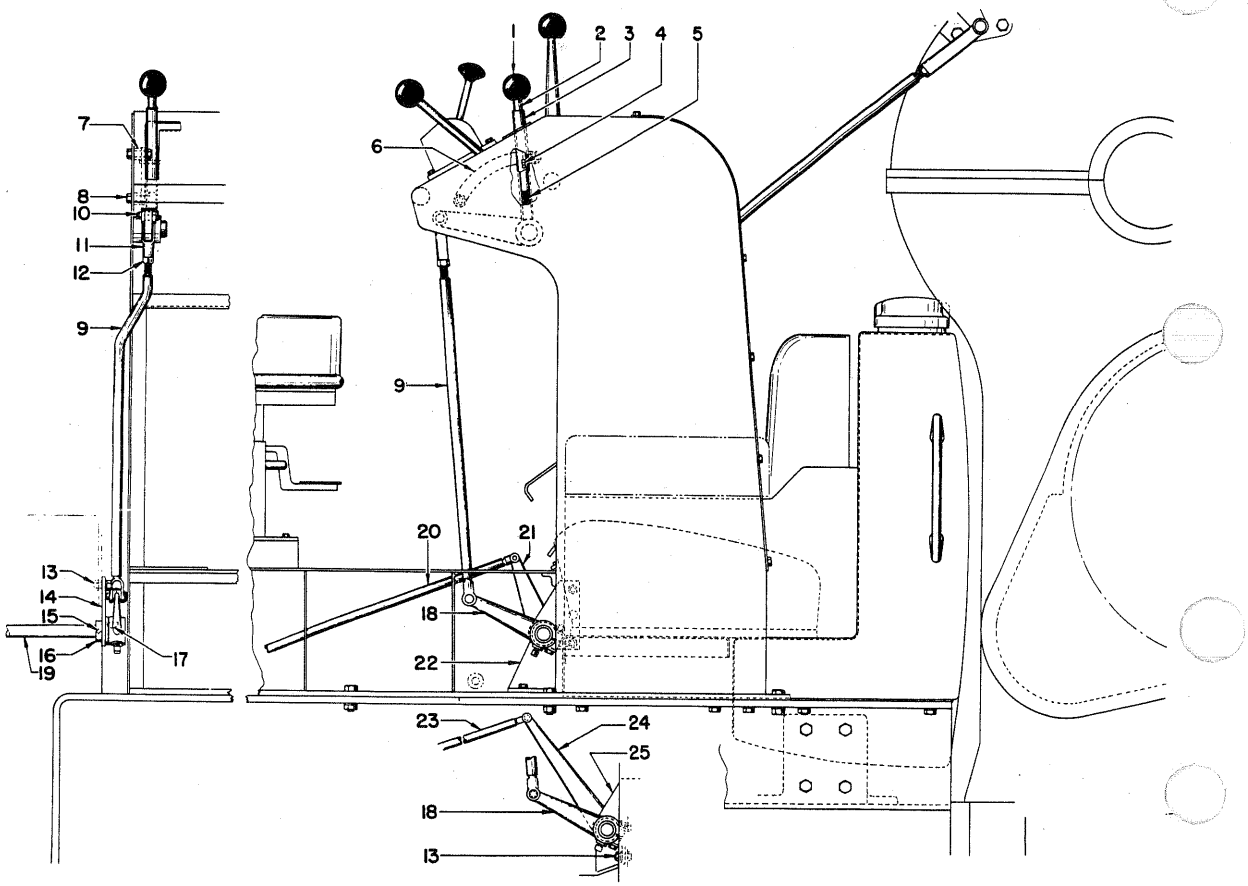
THROTTLE CONTROL
For D8 Tractors Serial Number 14A, 15A



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	94321	Knob	1
2	(94777W	Lever	1
	(15246	Cotter - 3/16 x 2	1
3	9272AB	Link Assembly	1
4	* 15008	Nut - Hex, 1/2 UNF	2
5	* 152	Rod End	2
6	*(153	Pin - Rod End	2
	*(15223	Cotter - 1/8 x 7/8	2
7	94774W	Crank	1
8	9413	Key	1
9	94772	Shaft	1
10	94773	Spacer	1
1	58902	Snap Ring	1

*Included In Assembly Under Which Listed.

THROTTLE CONTROL GROUPS
FOR D8 TRACTORS PRIOR TO S. N. 14A1-15A1



REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
1	(95392A	Lever Assembly	1
	*(94321	Knob	1
2	* 95395	Rod	1
3	* 95393W	Lever	1
4	* 19909	Roll Pin	1
5	* 5782	Spring	1
6	59288	Ratchet Bar	1
7	80647	Spacer	2
8	(25052	Capscrew-3/8 UNF x 1-1/2	2
	(15006	Nut-Hex, 3/8 UNF	2
	(15156	Lockwasher - 3/8	2
9	95396A	Link Assembly	1
10	*(153	Pin-Rod End	2
	*(15223	Cotter - 1/8 x 1	2
11	* 152	Rod End	1
12	* 15028	Nut-Jam, 1/2 UNF	1

THROTTLE CONTROL GROUPS
FOR D8 TRACTORS PRIOR TO S. N. 14A1-15A1

REF. NO.	HYSTER PART NO.	NAME OF PART	QTY. REQ.
13	(15513	Capscrew - 3/8 UNF x 3/4	4
	(15006	Nut-Hex, 3/8 UNF	4
	(15156	Lockwasher	4
14	95391W	Plate	1
15	16415	Set Screw - Sq. Hd. 5/16 UNC x 1/2	1
16	59290	Bushing	1
17	7882	Key	2
18	(95400A	Crank Assembly	1
	*(15528	Capscrew-3/8 UNF x 2	1
	*(15006	Nut-Hex, 3/8 UNF	1
	*(15156	Lockwasher - 3/8	1
	*(16416	Setscrew-Sq. Hd. 3/8 UNC x 5/8	1

These Parts For Tractors S. N. 2U21513 To And Including All 13A Tractors

19	93155	Shaft	1
20	93157A	Link	1
21	(93162A	Lever	1
	(16414	Setscrew-Sq. Hd. 5/16 UNC x 5/8	1
22	(93159A	Bracket	1
	(25062	Capscrew-3/8 UNC x 1-1/4	2
	(15156	Lockwasher - 3/8	2

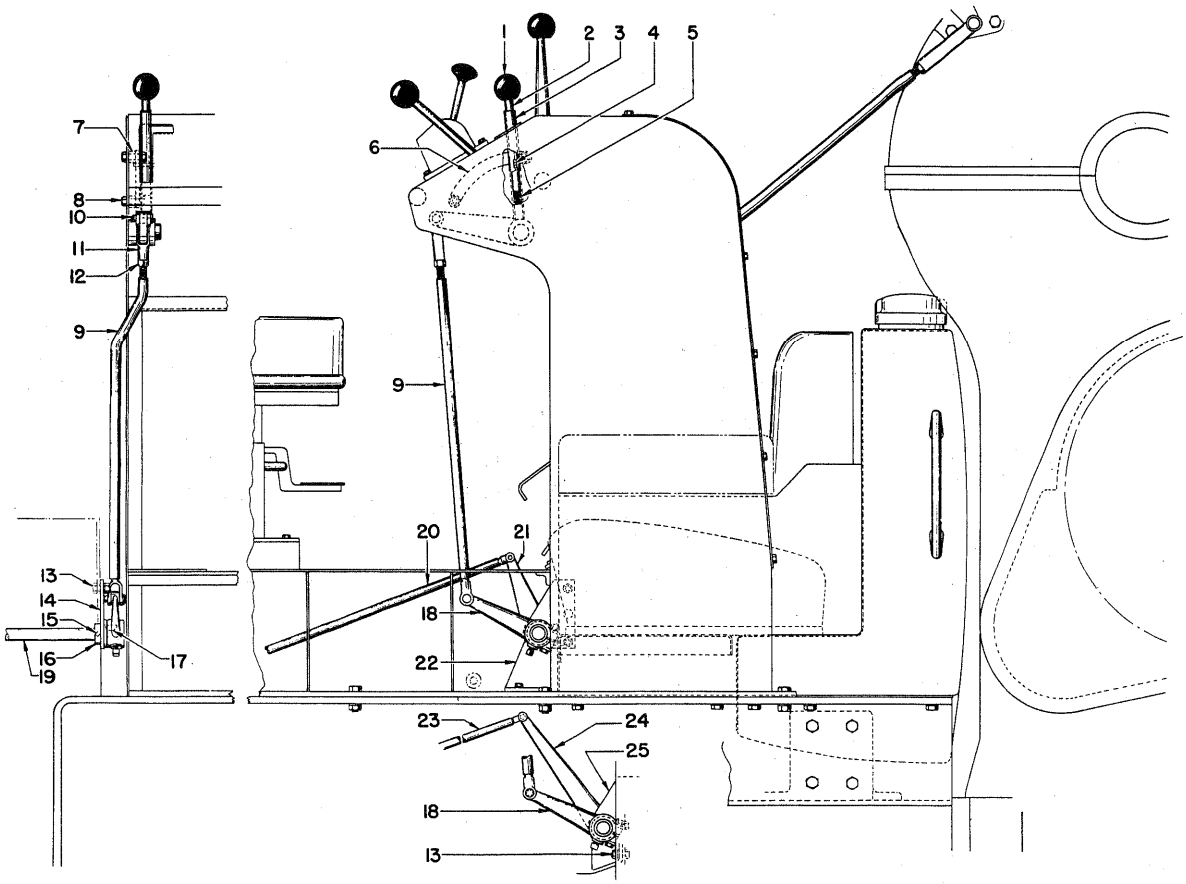
These Parts For Tractors S. N. 2U 7488 To 2U 21512, Incl.

19	59291	Shaft	1
23	91833A	Link	1
24	(59293	Lever	1
	(16414	Setscrew-Sq. Hd., 5/16 UNC x 5/8	1
25	59292	Bracket	1

*Included In Assembly Under Which Listed.

(See Installation Instructions On Page G5).

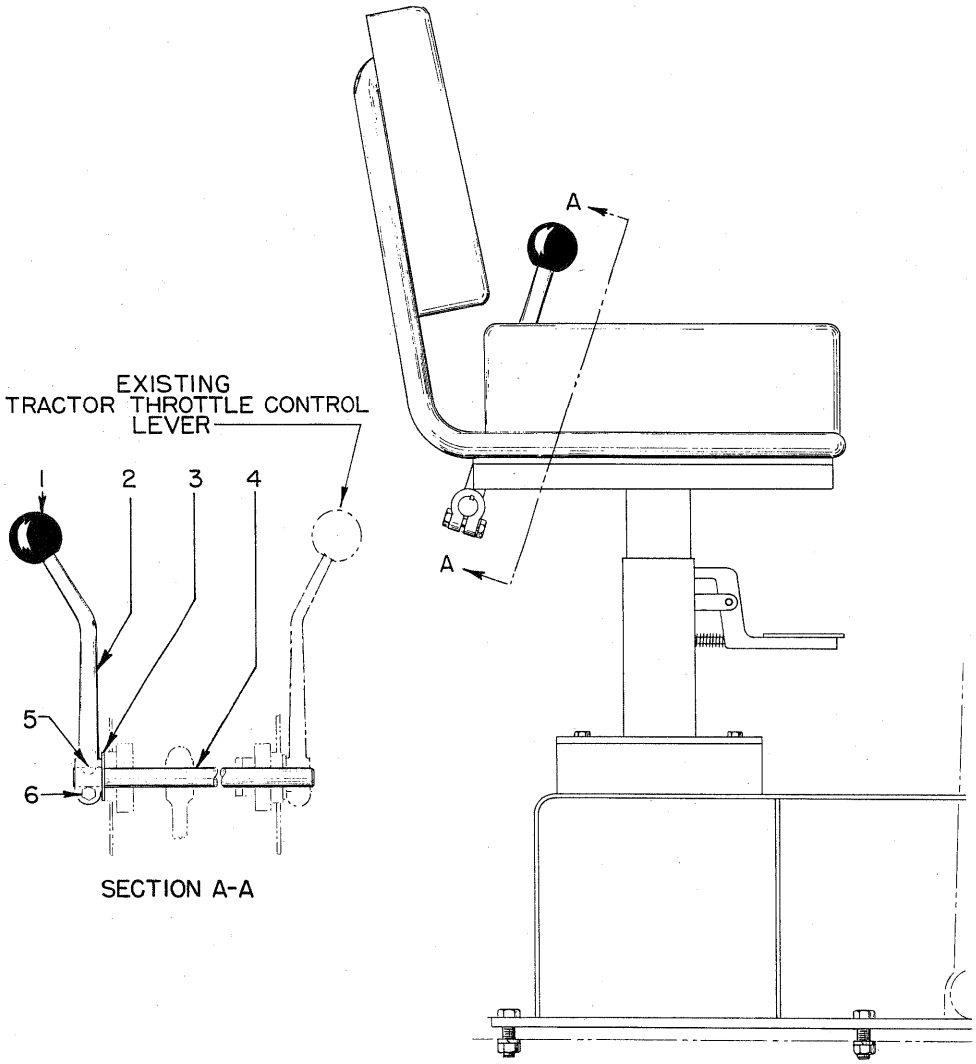
THROTTLE CONTROL GROUPS FOR D8 TRACTORS PRIOR TO S. N. 14A1-15A1



INSTALLATION INSTRUCTIONS

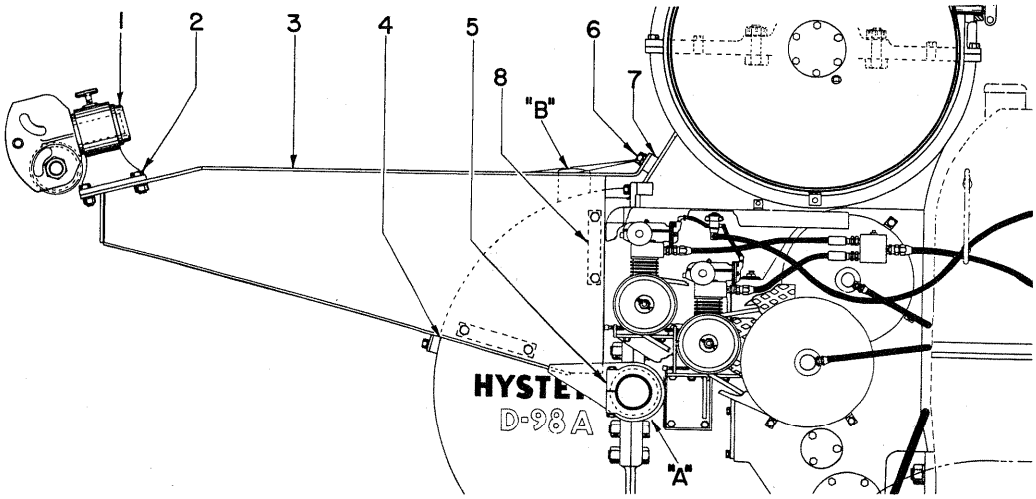
1. Attach Hyster Bracket (22 or 25), Plate (14) and Shaft (19) with Bushing (16) and Setscrew (15).
2. Remove "Caterpillar" connecting rod by pulling rod end pins at each end. Use these pins to attach Hyster Link (20 or 23) between Hyster Lever (21 or 24) and "Caterpillar" Lever, thus by passing the "Caterpillar" friction control.
3. Engage Pawl of Lever (1) in notch on Ratchet Bar (6) and connect Link (9) to Lever (1) in approximate position shown. Adjust Link (9) if necessary.
4. Press down Link (20 or 23) until fuel is shut off. Clamp Crank (18) tightly to Bushing (16), using capscrew and Setscrew provided with Crank. Be sure that Keys (17) are in place.

THROTTLE CONTROL
For D9 Tractors Serial Number 18A, 19A, 34A, 49A, 50A, 66A



REF. NO.	HYSTER PART NO.		DESCRIPTION	QTY. REQ.
1	94321		Knob	1
2	94808		Lever ("Caterpillar" No. 5H6804)	1
3	15136		Washer - 3/4	1
4	(94807		Shaft	1
	(15246	[R]	Cotter - 3/16 x 2	1
5	32415		Key	1
6	(15527		Capscrew - 3/8 UNF x 1-3/4	1
	(15006		Nut - 3/8 UNF	1
	(15156		Lockwasher - 3/8	1

FAIRLEAD AND BRACKET GROUP-NO. 95521A (OPTIONAL)



REF. NO.	HYSTER PART NO.	DESCRIPTION	QTY. REQ.	
1	95508AB	Fairlead	1	
2	(16800	Capscrew - 3/4 UNF x 2	4	
	(15012	Nut - 3/4 UNF	4	
	(15162	Lockwasher - 3/4	4	
3	95509W	Bracket	1	
4	x(96627	Plate	1	
	+(95520	Plate	1	R
5	(95519	Nut - Special	1	
	(12488	Capscrew - 5/8 UNF x 5-1/2	1	
	(15010	Nut - 5/8 UNF	1	
	(15160	Lockwasher - 5/8	1	
6	x(12447	Capscrew - 5/8 UNF x 1	10	
	+(16804	Capscrew - 5/8 UNF x 1-1/4	11	R
	(15160	Lockwasher - 5/8	11	
7	95413	Bar	1	R
8	96626	Bar	2	R

x For bracket without bars (7) and (8).
\+ For bracket using bars (7) and (8).

INSTALLATION INSTRUCTIONS

There are two methods of installation, depending on the bracket (3). Some brackets have four holes (Type "X") in the side and these use bars (7) and (8). The other brackets have five holes (Type "Z") and do not use bars (7) and (8). To install proceed as follows:

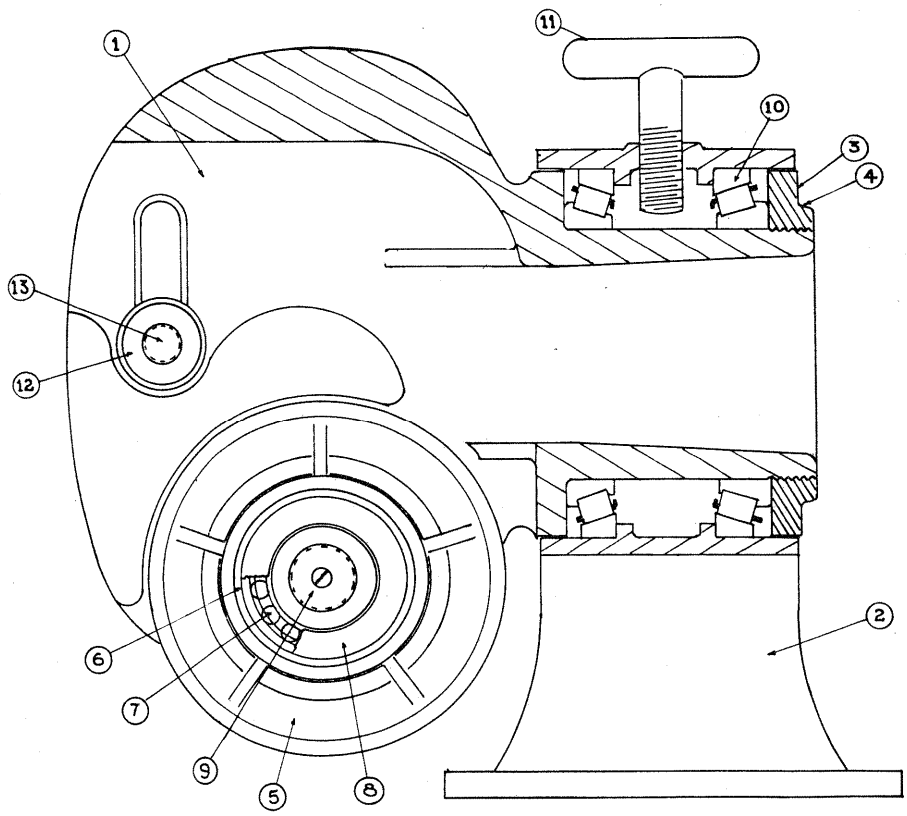
1. Remove drum shaft nut at "A".
2. Remove cap "B".
3. Mount bracket (3) over drum shaft and over pipe from which cap "B" was removed. Installed nut (5) with capscrew, nut and lockwasher from old nut.

4a. For Type "X": Locate plates (4), (7) and (8) and tack weld in place on yarder. Remove bracket (3) and complete welding. Remount bracket (3).

4b. For Type "Z": Locate plate (4) and weld in place on yarder. Using bracket (3) as a template, drill and tap eight 5/8-18 UNF holes and install capscrews (6).

5. Mount Fairlead (1) using capscrews (2).
6. Replace cap "B".

FAIRLEAD ASSEMBLY-NO. 95508AB



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1	200070	Head-Swivel, Fairlead	1
2	200071	Base - Fairlead	1
3	200072	Closure - Rear, Fairlead	1
4	16246	Set Screw-1/4UNC x 1/2, Cup Point	3
5	200073	Sheave - Fairlead	1
6	200074	Sleeve - Fairlead	1
7	(30156	Cup - Roller Bearing	1
	(230399	Cone - Roller Bearing	1
	(200068	Tube - Roller Bearing	1
8	200069	Seal - Roller Bearing	2
9	200075	Pin - Sheave (With Nuts)	1
10	(30218	Cone - Roller Bearing	1
	(30219	Cup - Roller Bearing	1
11	200076	Screw - Lock - Fairlead	1
12	200077	Sheave - Idler, Fairlead	1
13	200078	Bolt-Idler (With Nuts) Fairlead	1

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153	E2	14358	E3	15030	E2	15158	D16
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96233	E2	104607	E6	233419	F12	233459	F18
96233	E4	104681	F20	233420	F12	233459	F20
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96239	D1	110934	D8	233422	F12	233460	F20
96260	D12	110936	D8	233423	F12	233461	F20
96260	D14	116153	F15	233424	F11	233462	F20
96261 A	D14	122852	F11	233425	F11	233463	F20
96262 A	D12	200068	G8	233426	F11	233464	F20
96262 A	D12	200069	G8	233427	F11	233465	F20
96274	E2	200070	G8	233428	F11	233466	F20
96274	E4	200071	G8	233429	F11	233467	F20
96275	E2	200072	G8	233430	F11	233468	F20
96275	E4	200073	G8	233431	F18	233469	F20
96276	E2	200074	G8	233432	F18	233470	F20
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INTENTIONALLY BLANK

SPECIFICATIONS: D9A TRACTOR-TARDER

DRUM SIZES:	Main	Haulback	Straw
Barrel diameter	18"	13"	10"
Barrel length	22"	23"	8"
Flange diameter	42"	35"	32"

CABLE CAPACITY	Main	Haulback	Straw
	1100 ft. 1⅜" 1320 ft. 1¼" 1640 ft. 1⅛"	4070 ft. ⅝" 2820 ft. ¾"	3440 ft. ⅜" 4950 ft. 5/16"

On Caterpillar D9 Tractor, Series D, direct drive.

	LINE PULLS (pounds)			LINE SPEEDS (ft. per min.)		
MAIN DRUM	Bare	Average	Full	Bare	Average	Full
Low gear	123,000	90,150	57,300	85	133	181
Second	90,500	66,750	43,000	116	181	247
Third	61,500	45,300	29,100	171	267	362
Fourth	45,200	31,800	21,400	233	363	493
HAULBACK DRUM						
Low gear	32,800	23,000	13,200	320	560	800
Second	24,200	16,950	9,700	435	760	1,080
Third	16,500	11,550	6,600	650	1,115	1,590
Fourth	12,100	8,450	4,800	870	1,520	2,160
STRAW DRUM						
Low gear	43,600	28,950	14,300	242	490	740
Second	32,200	21,350	10,500	328	664	1,000
Third	21,800	14,450	7,100	483	980	1,470
Fourth	16,100	10,650	5,200	655	1,330	2,000

On Caterpillar D8 Tractor, series F, direct drive.

	LINE PULLS (pounds)			LINE SPEEDS (ft. per min.)		
MAIN DRUM	Bare	Average	Full	Bare	Average	Full
Low gear	76,000	56,200	36,400	83	129	175
Second	56,400	41,550	26,700	113	175	238
Third	38,400	28,300	18,200	164	257	350
Fourth	28,200	20,750	13,300	226	351	476
HAULBACK DRUM						
Low gear	20,200	14,150	8,100	310	540	770
Second	14,900	10,450	6,000	420	732	1,045
Third	10,100	7,100	4,100	620	1,080	1,540
Fourth	7,450	5,225	3,000	840	1,465	2,090
STRAW DRUM						
Low gear	27,200	18,000	8,800	234	474	713
Second	20,000	13,250	6,500	316	642	967
Third	13,600	9,000	4,400	466	946	1,425
Fourth	10,000	6,600	3,200	634	1,284	1,935

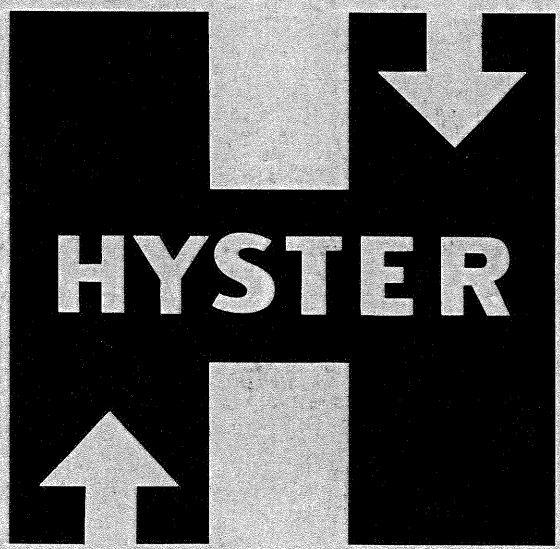
WEIGHT, approximate (without cable and optional strawline fairlead)

NET ..... 11,300 lbs.

STRAWLINE FAIRLEAD (optional) .... 300 lbs.

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.


HYSTER