

PRIOR MODELS



Wheel Horse®

SECTION VI

ATTACHMENTS AND ACCESSORIES

HYDRAULIC UNITS

HY-3

HY-2

HY-2

(SUPPLEMENT)

HEAD AND TAIL LIGHTS

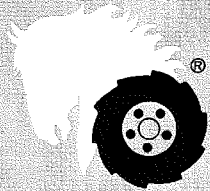
HL-6

HL-5

SPEED REDUCTION

SR-64

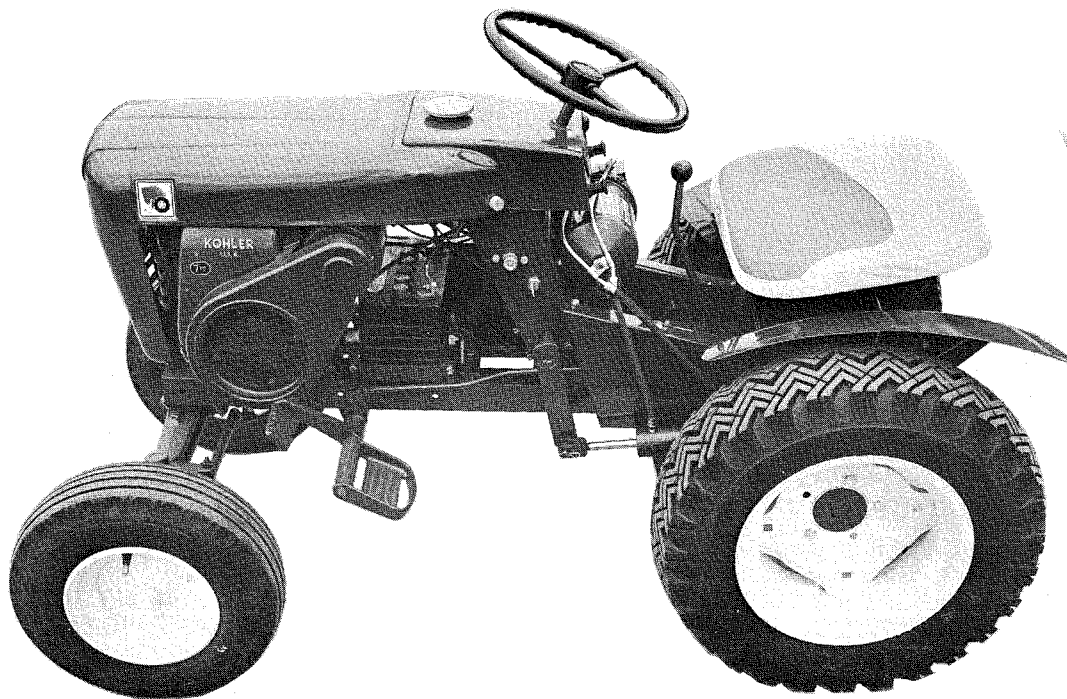
PARTS LIST AND INSTRUCTIONS



Wheel Horse

WHEELHORSE PRODUCTS, INC. • SOUTH BEND, IND.

HYDRAULIC UNIT HY-3



DESCRIPTION

The Hydraulic-Unit system is designed to give you hydraulic power for your attachments with fingertip control, eliminating the need for the manual lift lever. This unit is a completely self-contained hydraulic gear pump, directional control valve, and oil reservoir; with a companion hydraulic cylinder and hoses connecting the power unit to the cylinder. The unit has a built-in safety valve to eliminate overloading of the hydraulic system and tractor attachments. **Read instructions carefully.**

ASSEMBLY INSTRUCTIONS

1. Remove all parts from carton. Disconnect wire on positive battery terminal.
2. Remove tractor quadrant (part number 2274). (See Figure 1)
3. Remove tractor lift lever, (part number 2266), by removing the three (3) bolts and hair pin cotter. (See Figure 2)

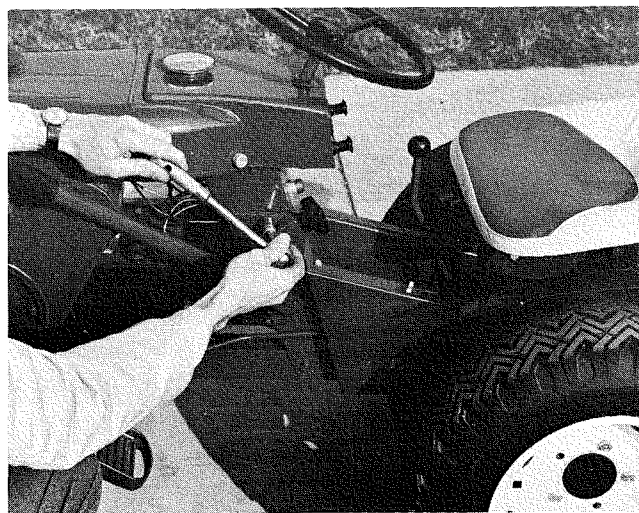


Figure 1

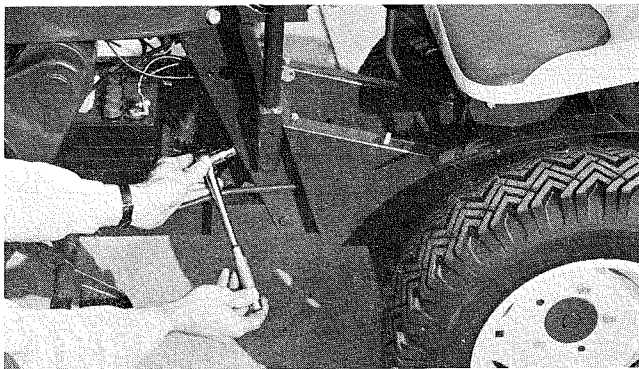


Figure 2

4. Install hydraulic lift lever, (part number 2265), using the same bolts and hair pin cotter. (See Figure 3)

5. Re-install starter button and ignition switch on the left side of the hood stand assembly in the holes provided as shown. (See Figure 3)

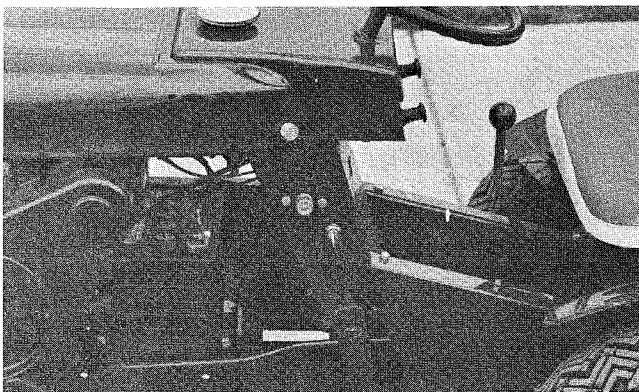


Figure 3

6. Mount cylinder support angle, (part number 4850), to front of axle, using rear mounting bar, (part number 2277), two (2) $\frac{3}{8}$ -16 x 3 Carriage bolts (part number 2279) and two (2) $\frac{3}{8}$ -16 nylock nuts, (part number 915113-6). This mounting bracket is similar to the mounting bracket used on the dozer blade. When the dozer blade is installed it replaces the left mounting bracket and therefore it will not be necessary to remove it. (See Figure 4)

7. Mount cylinder to support angle using the cylinder pin (part number 4872) and two (2) snap rings, (part number S-50-75). Turn rear street elbow on cylinder toward the front. (See Figure 4)

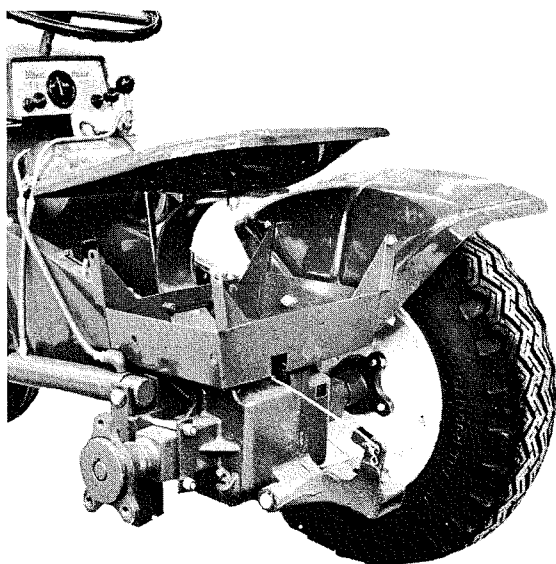


Figure 4

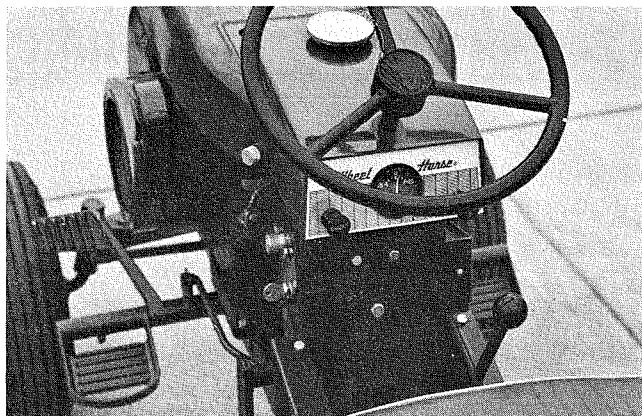


Figure 5

8. Bolt the pump mounting bracket (part number 4816) to the hood stand using the same holes where the switch and starter button were removed. Use two (2) $\frac{1}{4}$ -20 nylock nuts (part number 1406), two (2) $\frac{1}{4}$ -20 x $\frac{5}{8}$ Hex Head Cap Screws (part number 1428), the $\frac{3}{8}$ -16 x $\frac{3}{4}$ Hex Head Cap Screw (part number 1423), the $\frac{3}{8}$ flat washer (part number 1434), and the $\frac{3}{8}$ -16 nylock nut (part number 1408). (See Figure 5)

9. Bolt pump support (part number 4827), to pump using $\frac{5}{16}$ -18 x $\frac{5}{8}$ Hex Head Cap Screw (part number 908016-4) and the $\frac{5}{16}$ lock washers (part number 920082-4). Bolt pump to pump mounting bracket using the $\frac{3}{8}$ -16 x $\frac{3}{4}$ Hex Head Cap Screws (part number 908032-4) $\frac{3}{8}$ lockwashers (part number 920083-4) and the $\frac{3}{8}$ washers (part number 920009-4). (Do not tighten at this time) (See Figure 6)



Figure 6

10. Install the $2\frac{1}{4}$ pulley (part number 4811) to engine using square key (part number 1433) and set screw (part number 909848-4). Install the 5" pulley (part number 4812) to pump using $\frac{5}{16}$ set screw (part number 909862-4). Place the drive belt over the two pulleys and adjust belt by installing the $\frac{3}{8}$ -16 x $2\frac{3}{4}$ Hex Head Cap Screw (part number 1093) and tightening until belt has the proper tension. Tighten the two (2) $\frac{3}{8}$ -16 x $\frac{3}{4}$ Hex Head Cap Screws to secure pump. Install belt guard (part number 4814) using the $2\frac{1}{8}$ pipe spacer (part number 4828) in front, the $2\frac{1}{4}$ pipe spacer (part number 4829) towards the rear and the two (2) $\frac{5}{16}$ -18 x $2\frac{3}{4}$ Hex Head Cap Screws (part number 908026-4). (See Figure 7 and 9)

11. Fasten hoses to pump making sure that the longer hose is installed in the forward position on the pump and then fastened to the street elbow at the rear of the cylinder. The short hose is installed in the rear of the pump and is fastened to the front of the cylinder. Secure hoses to end of pump with tube clamps (part number 1472) and $\frac{3}{8}$ -16 Hex Pal Nut (part number 1471). (See Figure 4 and 8)

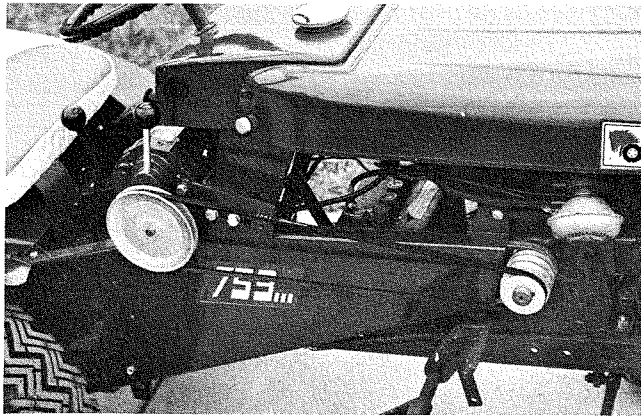


Figure 7

12. Remove the allen screw from the side of the pump and fill with hydraulic fluid. After filling replace and tighten screw. **CAUTION: USE ONLY WHEEL HORSE OIL (NUMBER 4822)** (See Figure 9)

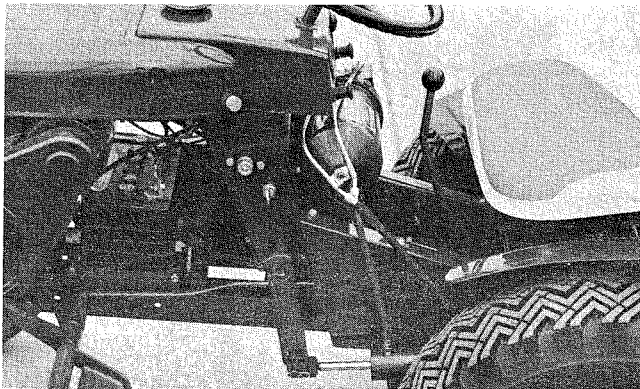


Figure 8

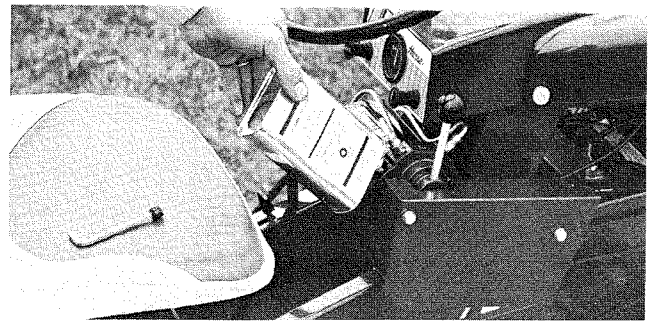


Figure 9

OPERATING INSTRUCTIONS

A. After unit is completely installed and filled with fluid, start tractor and adjust to fast idle.

B. To raise tractor attachments, pull handle toward you, upon release of handle it will return to the center or neutral position. A slightly sluggish action of the control lever returning to neutral may exist during the break-in period. A few hours of running time will eliminate this.

C. Make sure that all fittings are tight and no oil is escaping.

D. All attachments that normally work off of the tractor lift lever will operate in the same way with the hydraulic unit.

E. **IMPORTANT:** Never run unit without fluid or warranty will be voided.

F. **CAUTION:** Use only Wheel Horse oil (Number 4822)

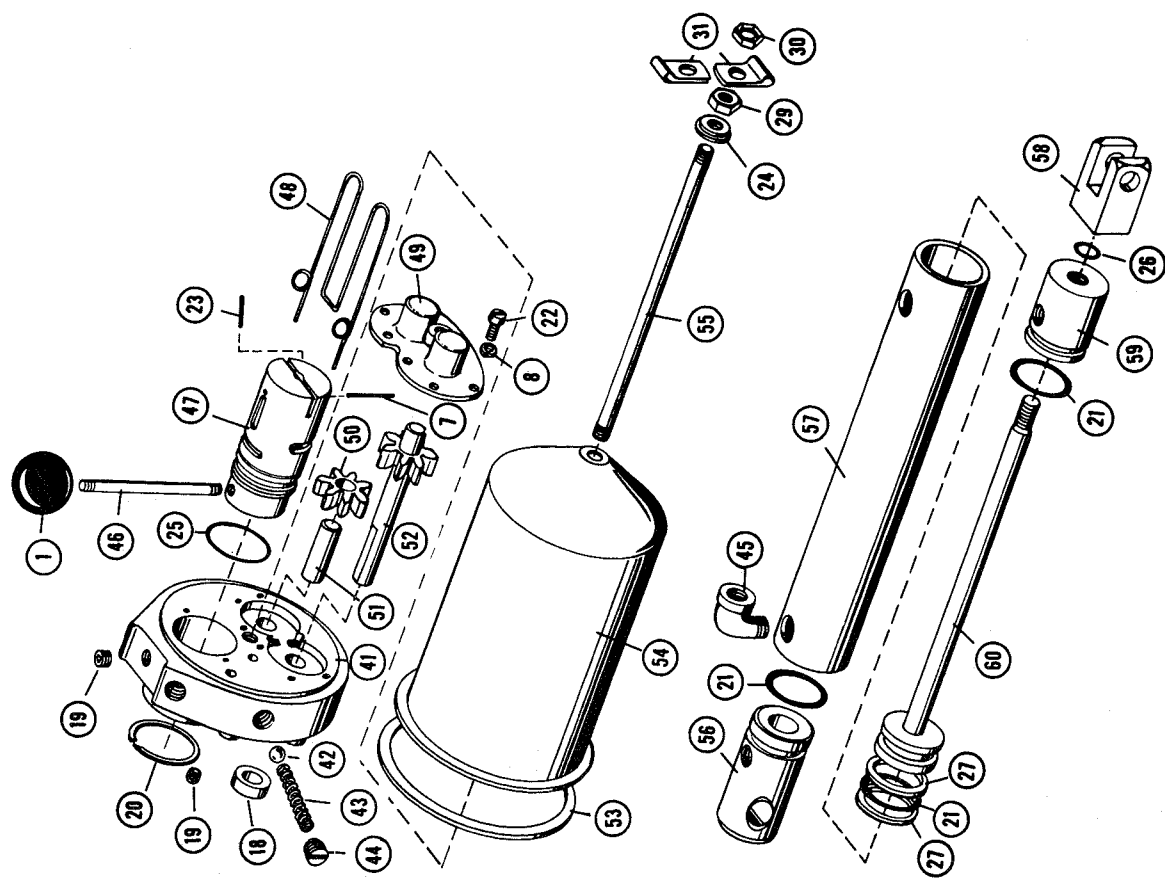
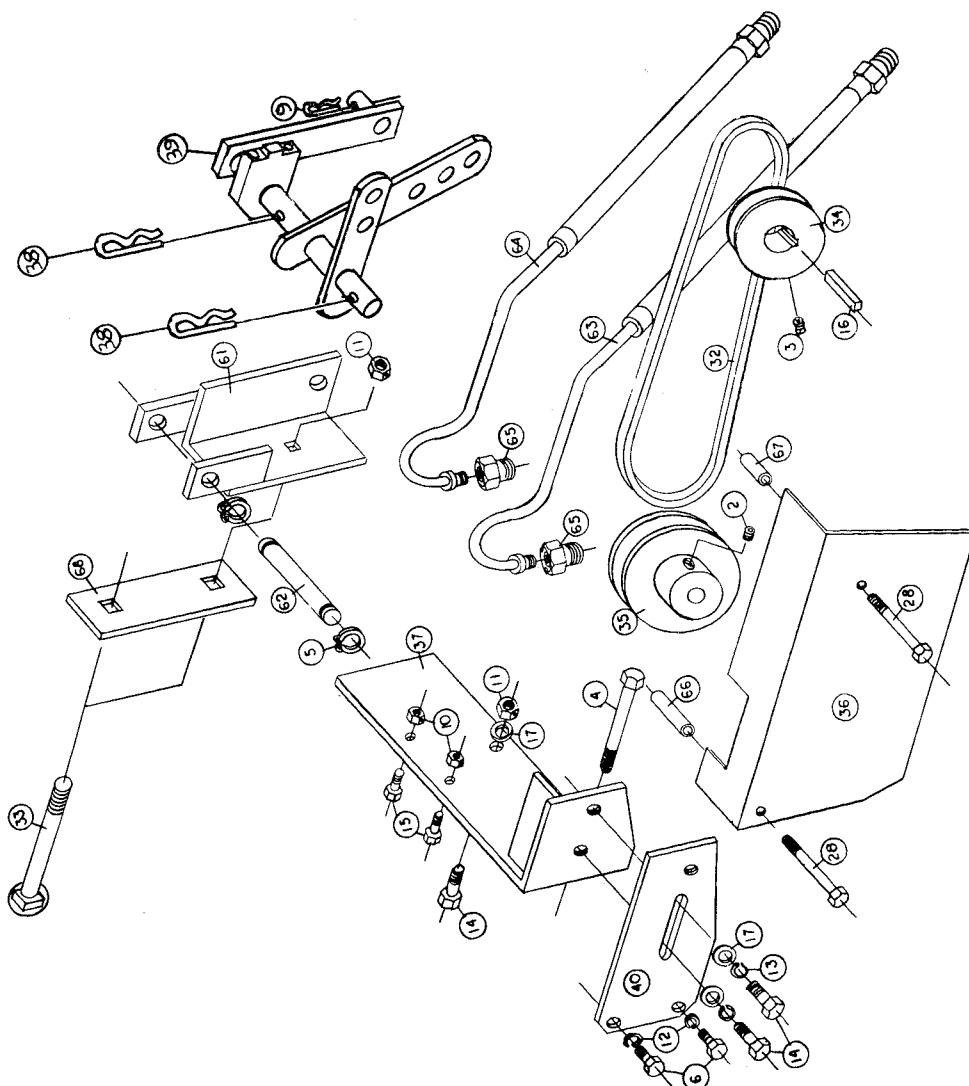
G. If unit is dismantled for service make sure all parts are clean before putting unit together again. After service it is advisable to install new fluid.

H. When raising or lowering attachments, after unit is either up or down, make sure handle is in neutral. Never hold open as this will harm the pump.

When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	No. Req'd.
1	1001	Knob	1
2	909862-4	Set Screw $\frac{5}{16}$ -18 x $\frac{5}{16}$	1
3	909848-4	Set Screw $\frac{1}{4}$ -20 x $\frac{1}{4}$	1
4	908041-4	Hex. Hd. Cap Screw $\frac{3}{8}$ -16 x $2\frac{3}{4}$	1
5	S-50-75	Snap Ring $\frac{3}{4}$ I.D.	2
6	908016-4	Hex. Hd. Cap Screw $\frac{5}{16}$ -18 x $\frac{5}{8}$	2
7	933158	Roll Pin $\frac{1}{8}$ x $1\frac{1}{4}$	1
8	920079	Lock Washer #10	6
9	S-52-4	Hairpin Cotter	1
10	915111-6	Nut $\frac{1}{4}$ -20 Nylock	2
11	915113-6	Nut $\frac{3}{8}$ -16 Nylock	3
12	920082-4	Lock Washer $\frac{5}{16}$ Dia.	4
13	920083-4	Lock Washer $\frac{3}{8}$ Dia.	2
14	908032-4	Hex. Hd. Cap Screw $\frac{3}{8}$ -16 x $\frac{3}{4}$	3
15	908002-4	Hex. Hd. Cap Screw $\frac{1}{4}$ -20 x $\frac{5}{8}$	2
16	1433	Sq. Key. $\frac{1}{4}$ x $\frac{1}{4}$ x 1	1
17	920009-4	Washer Plain $\frac{3}{8}$ Dia.	3
18	1447	Seal	1
19	943459-4	Allen Hd. Pipe Plug $\frac{1}{8}$	2
20	1449	Snap Ring	2
21	1450	"O" Ring	3
22	1451	Machine Screw #10-32 x $\frac{3}{8}$ — Fillister Hd.	6
23	933169	Roll Pin $\frac{5}{32}$ x $\frac{7}{8}$	1
24	1453	Washer	1
25	1455	"O" Ring	1
26	1456	"O" Ring	1
27	1457	Back Up Washer	2
28	908026-4	Hex. Hd. Cap Screw $\frac{5}{16}$ -18 x $2\frac{3}{4}$	2
29	915236-4	Hex. Jam Nut $\frac{3}{8}$ -16	1
30	1471	Hex. Pal Nut $\frac{3}{8}$ -16	1
31	1472	Tube Clamp $\frac{1}{4}$ I.D.	2
32	1584	"V" Belt 5L-510	1
33	900071-4	Carriage Bolt $\frac{3}{8}$ -16 x 3	2
34	4811	Pulley $2\frac{1}{4}$ Dia.	1
35	4812	Pulley 5 Dia.	1
36	4814	Belt Guard	1

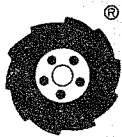
Ref. No.	Part No.	Description	No. Req'd.
37	4816	Pump Mounting Bracket	1
38	S-52-6	Hair Pin Cotter	2
39	2265	Ass'y. Lift Lever Hyd.	1
40	4827	Pump Support	1
41	4830	Body	1
42	4831	Ball	1
43	4832	Spring	1
44	4833	Plug	1
45	4834	Street Elbow $\frac{1}{4}$ x 90°	1
46	4835	Handle	1
47	4836	Spool Valve	1
48	4837	Spring	1
49	4838	Cover	1
50	4839	Gear	1
51	4840	Shaft	1
52	4841	Drive Shaft Ass'y.	1
53	4842	Gasket	1
54	4843	Reservoir	1
55	4844	Stud	1
56	4845	Head	1
57	4846	Tube	1
58	4847	Clevis	1
59	4848	Guide	1
60	4849	Piston Rod Ass'y.	1
61	4850	Cylinder Support	1
62	4852	Pin	1
63	4853	Hose	1
64	4854	Hose	1
65	4855	Tube Coupling	2
66	4828	Pipe Spacer $\frac{1}{4}$ Std. Blk. Pipe $2\frac{1}{8}$	1
67	4829	Pipe Spacer $\frac{1}{4}$ Std. Blk. Pipe $2\frac{1}{4}$	1
68	2277	Mounting Bar — Rear	1
	4822	Oil in Cans	
	2869	Decal	
	4805	Hydraulic Unit Ass'y.	
	4809	Cylinder Ass'y.	



TROUBLE SHOOTING CHART

Trouble	Probable Cause	Remedy
Slow action with low rise to normal operating speed	Belt slipping	Tighten Belt
	Improper type of oil	Replace Oil
	Low Oil Supply	Fill oil to proper level
	Air lock	Loosen allen screw on top and operate to release air
Attachment not holding in raised position	Slow engine RPM	Speed engine
	Oil leak in system	Check all connections
	Improper type of oil	Use Wheel Horse (4822)
Excessive noise or chattering	Oil leak at seals	Replace
	Insufficient oil	Fill with proper oil
Excessive Heating	Unit run at too high a RPM	Reduce shaft speed to recommended speed as originally equipped
	Improper oil	Drain and refill system with correct oil (4822)
Unit does not operate	Restriction in the system such as kinked or pinched lines	Replace defective hoses. Straighten kinked hoses and check fittings for obstruction
	Insufficient oil	Fill with 4822 to proper level
Unit does not operate	Low Oil	Check and fill
	"O" Rings worn in pump and cylinder	Replace with new "O" Rings
	Pulley loose on pump	Tighten

PARTS LIST AND INSTRUCTIONS

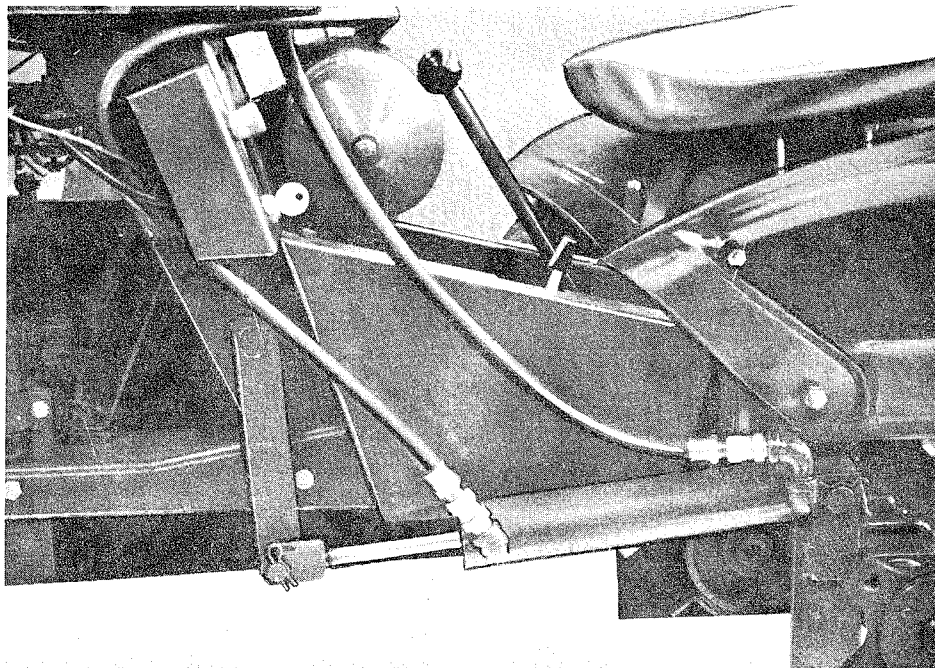


Wheel Horse®

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HYDRAULIC UNIT

HY-2



DESCRIPTION

The Hydraulic-Unit system is designed to give you hydraulic power for your attachments with fingertip control, eliminating the need for the manual lift lever. This unit is a completely self-contained hydraulic gear pump, directional control valve, and oil reservoir; with a companion hydraulic cylinder and hoses connecting the power unit to the cylinder. The unit has a built-in safety valve to eliminate overloading of the hydraulic system and tractor attachments. **Read instructions carefully.**

ASSEMBLY INSTRUCTIONS

1. Remove all parts from carton then remove hood from tractor and disconnect switch and starter button from instrument panel. Disconnect wire on positive side of battery first, then the wire from starter button to generator at the generator.

2. Lean tractor over and remove lift lever by knocking out roll pin (4231). After lever is removed, install lift link (4818) using same roll pin which was previously knocked out. See Figure 1.

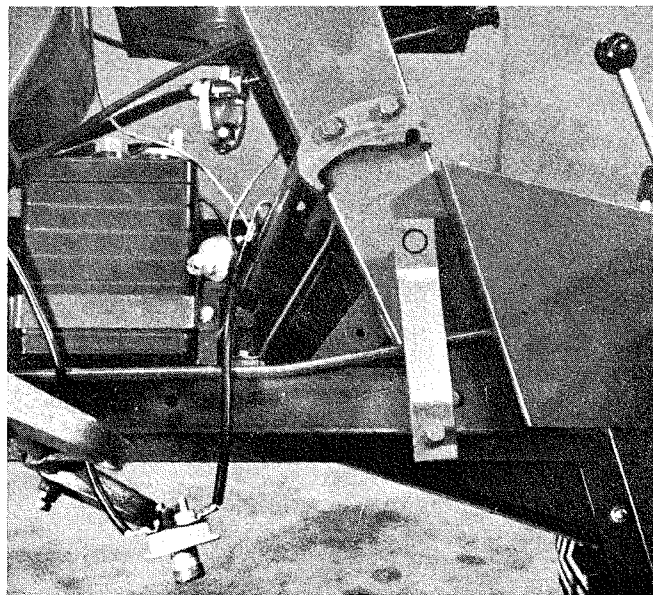


Figure 1

3. Remove left rear wheel from tractor, although this is not necessary, and mount cylinder support angle (4850) to axle, using "U" bolt (2378) and $\frac{3}{8}$ -16 lock nuts. This mounting bracket is the same as the one used on the dozer blade and when dozer is to be installed it will not be necessary to remove this bracket.

4. Mount cylinder to support angle using the cylinder pin (4872) and two hair pin cotters (1290) turning street elbows on cylinder toward the front.

5. Install switch and starter button into new instrument panel (4817) using same bolts which were removed from tractor.

6. Remove lift lever quadrant (4222) then bolt on new instrument panel in same two holes, again using same bolts which were in tractor. See Figure 2.

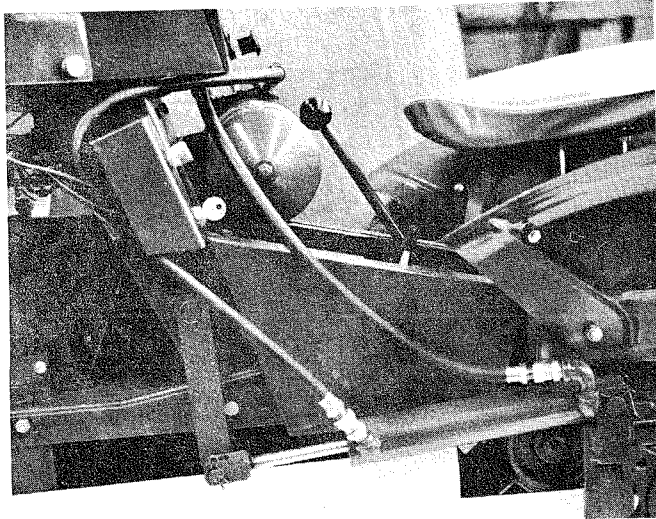


Figure 2

7. Bolt the pump mounting bracket to the hood stand using same holes where switch and starter button were removed. Using two $\frac{1}{4}$ -20 x $\frac{5}{8}$ Hex Head Cap Screws and two $\frac{1}{4}$ -20 Lock Nuts. Also the $\frac{3}{8}$ -16 x $\frac{3}{4}$ Hex Head Cap Screw and $\frac{3}{8}$ Flat Washers. See Figure 3.

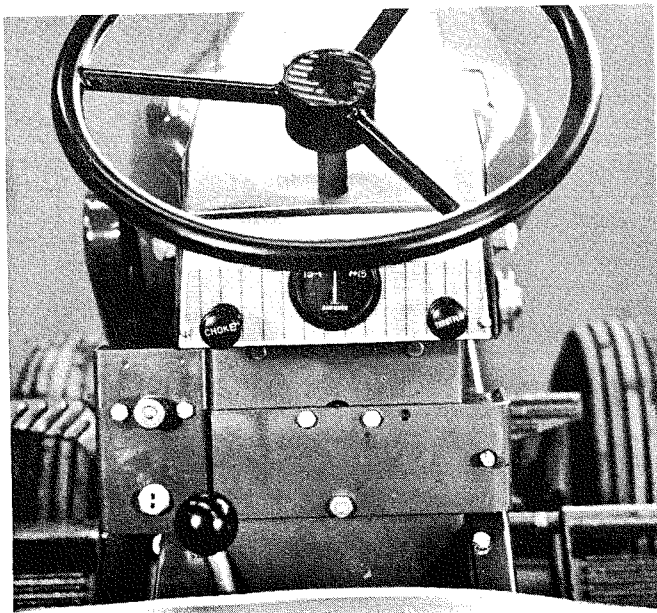


Figure 3

8. Bolt pump support (4827) to pump using $\frac{5}{16}$ -18 x $\frac{5}{8}$ Hex Head Cap Screw and $\frac{5}{16}$ Lock Washers. Install hoses to pump, placing the long hose to the front and the short one to the rear. Install operating handle. See Figure 4.

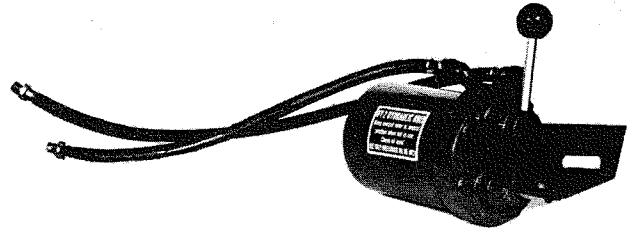


Figure 4

9. Bolt pump to pump mounting bracket using the $\frac{3}{8}$ -16 x $\frac{3}{4}$ Hex Head Cap Screw, $\frac{3}{8}$ Lock Washers and $\frac{3}{8}$ Flat Washers. Do not tighten at this time. See Figure 5.

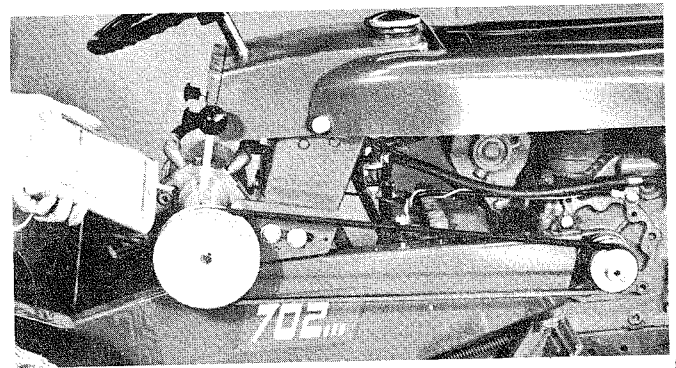


Figure 5

10. Fasten hoses to lift cylinder first installing the couplings into the street elbows on cylinder. Hook long hose to the front coupling and short one to the rear. See Figure 2. Make sure all hose connections are tight.

11. Install $2\frac{1}{4}$ " pulley to engine crank shaft and 5" pulley to pump. There are a few 552 engines in service with short crank shafts and on these it will be necessary to remove the 3 groove pulley from tractor and drill and tap and bolt the $2\frac{1}{4}$ " pulley to its outside faces. See Figure 6. This will not be necessary where crank shaft is long enough.

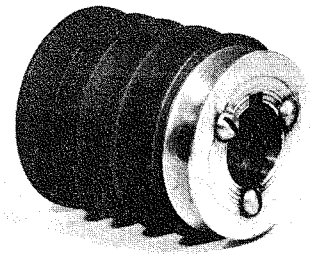


Figure 6

12. Place the drive belt over the two pulleys and take up the slack by tightening the $\frac{3}{8}$ -16 x $2\frac{3}{4}$ Hex Head Cap Screw in the rear of the pump mounting bracket (previously installed). Now tighten the two $\frac{3}{8}$ -16 x $\frac{3}{4}$ Hex Head Cap Screws to lock unit fast.

13. Remove the allen screw from the side of pump and fill pump with the (3) cans of hydraulic fluid as shown in Figure 5. After filling replace and tighten screw.

14. Insert belt guard in place using the short spacer in front and the long one in the rear and the two 5/16-18 x 2½ Hex Head Cap Screws and Lock Washers. See Figure 7.

15. On all tractors prior to Serial No. 62-2856, it will be necessary to bend the gear shift lever so that handle will clear the Hydraulic Unit and the seat. However; the proper gear shift lever may be ordered from Wheel Horse if so desired. Part No. 4440. See Figure 8.



Figure 7

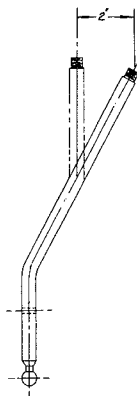


Figure 8

OPERATING INSTRUCTIONS

A. After unit is completely installed and filled with fluid, start tractor and adjust to fast idle.

B. To raise tractor attachments, pull handle toward you, upon release of handle it will return to the center or neutral position. A slightly sluggish action of the control lever returning to neutral may exist during the break-in period. A few hours of running time will eliminate this.

C. Make sure at this time that all fittings are tight and no oil is escaping.

D. All attachments that normally work off of the tractor lift lever will operate in the same way with the hydraulic unit.

E. **IMPORTANT:** Never run unit without fluid or warranty will be voided.

F. If unit is torn apart for service make sure all parts are completely clean before putting unit together again. After service it is advisable to install new fluid.

G. When raising or lowering attachments, after unit is either up or down, make sure handle is in neutral. Never hold open as this will cause considerable harm to unit over a long period of time.

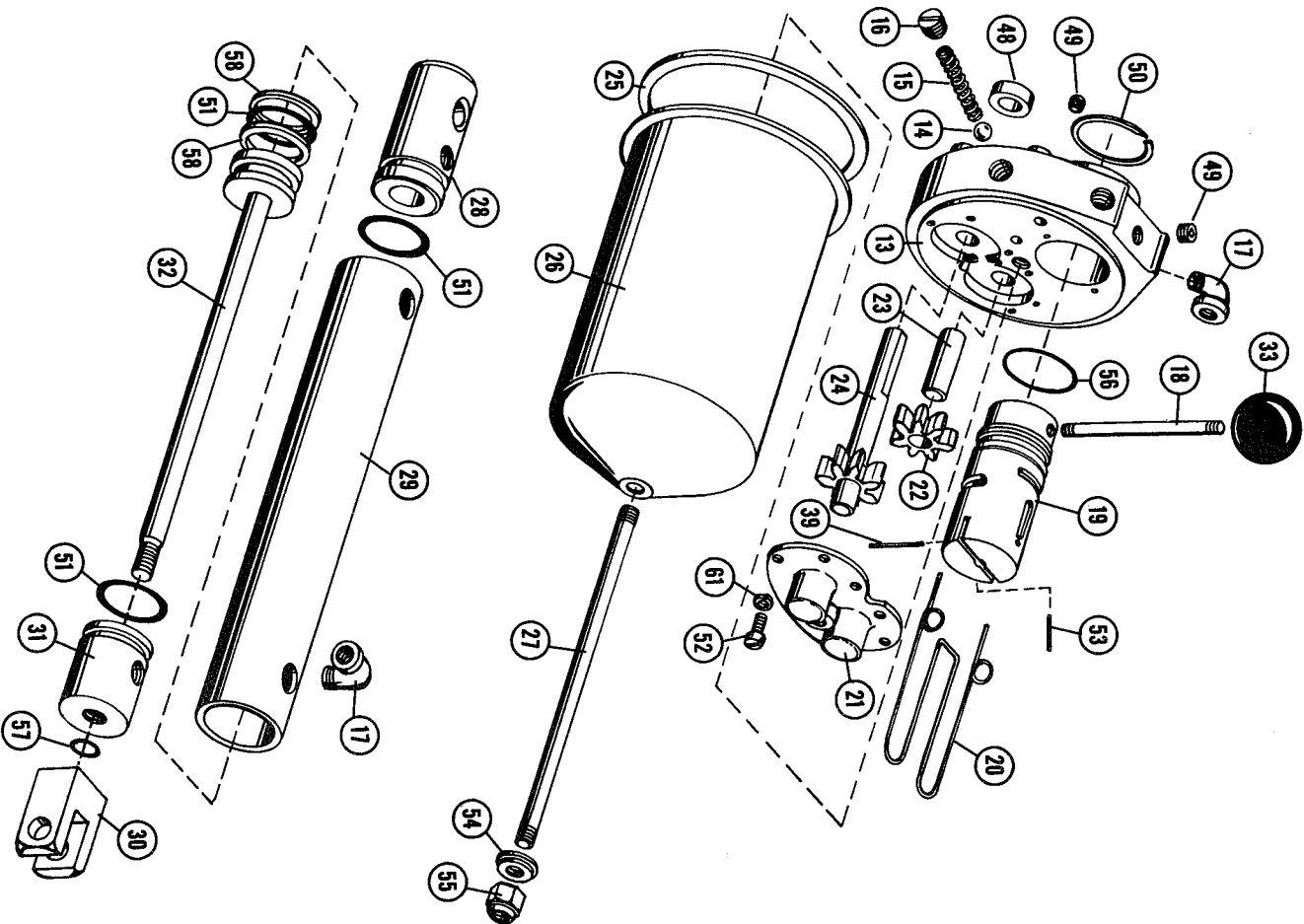
The hydraulic unit carries a separate warranty by the Hein Werner Corporation and all warranty claims should be handled through their service station. A list is available through your distributor.

HY-2 HYDRAULIC UNIT PART'S LIST

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
	4805	Hydraulic Power Unit, Assembly Complete	1	33	1001	Knob	1
1	4806	Hose ¼" x 27" long	1	34	1018	⅜ SAE Washer	3
2	4807	Hose ¼" x 23" long	1	35	1042	Socket Head Set Screw 5/16-18 x 5/16	1
3	4808	¼" NPT Pipe Couplings	2	36	1066	Socket Head Set Screw ¼-20 x ¼	1
	4809	Cylinder Assembly Complete	1	37	1093	Hex Head Cap Screw ⅜-16 x 2¾	1
4	4811	"V" Pulley 2¼" OD dia.	1	38	1238	Hex Head Cap Screw 5/16-18 x ⅝	2
5	4812	"V" Pulley 5" OD dia.	1	39	1350	Roll Pin ⅜ x 1¼ long	1
	4813	Caution—Decal	1	40	1386	Hair Pin Cotter Key	1
6	4814	Belt Guard	1	41	1406	Lock Nut ¼-20	2
7	4816	Pump Mounting Bracket	1	42	1408	Lock Nut ⅜-16	3
8	4817	Instrument Mounting Bracket	1	43	1417	Lock Washer 5/16	2
9	4818	Lift Link W/A	1	44	1418	Lock Washer ⅜	2
10	4827	Pump Support Bracket	1	45	1423	Hex Head Cap Screw ⅜-16 x ¾	3
11	4828	Pipe Spacer ¼ x 2⅝ lg	1	46	1428	Hex Head Cap Screw ¼-20 x ⅝	2
12	4829	Pipe Spacer ¼ x 2¼ lg	1	47	1446	Hex Head Cap Screw 5/16-18 x 2½	2
13	4830	PU-100 Pump Body	1	48	1447	B-44 Seal	1
14	4831	125-1 Pump Ball	1	49	1448	Allen Head Pipe Plug ⅜ NPT	2
15	4832	5111 Pump Spring	1	50	1449	Snap Ring (Spirolox) US175	1
16	4833	388 Plug	1	51	1450	"O" Ring ARP-568-218	3
17	4834	Street Elbows ¼ NPTF 90°	5	52	1451	Fillister Head Machine Screw 10-32 x ⅜	6
18	4835	PU-107 Handle	1	53	1452	Roll Pin 5/32 x ⅝	1
19	4836	PU-101 Spool	1	54	1453	Washer	1
20	4837	PU-110 Spring	1	55	1454	Hex Head Lock Nut ⅜-16	1
21	4838	PU-102 Cover	1	56	1455	"O" Ring ARP-568	1
22	4839	PU-104 Gear	1	57	1456	"O" Ring ARP-568-112	1
23	4840	PU-106 Shaft	1	58	1457	Back Up Washer	2
24	4841	15A59 Drive Shaft Assembly	1	59	1584	"V" Belt 3L-510	1
25	4842	PU-108 Gasket	1	60	1433	Square Key ¼ x ¼ x 1	1
26	4843	PU-103 Reservoir	1	61	1353	Shakeproof Washer 10-32	6
27	4844	PU-109 Stud ⅜" dia.	1	62	4850	Cylinder Support	1
28	4845	C-17006 Head	1	63	4852	Cylinder Pin	1
29	4846	C-18011 Cylinder Tube	1	64	1290	Hair Pin Cotter	2
30	4847	C-26001 Cylinder Clevis	1	65	2378	"U" Bolt	1
31	4848	C-22007 Guide	1				
32	4849	12A76 Rod & Piston Assembly (Cylinder)	1				

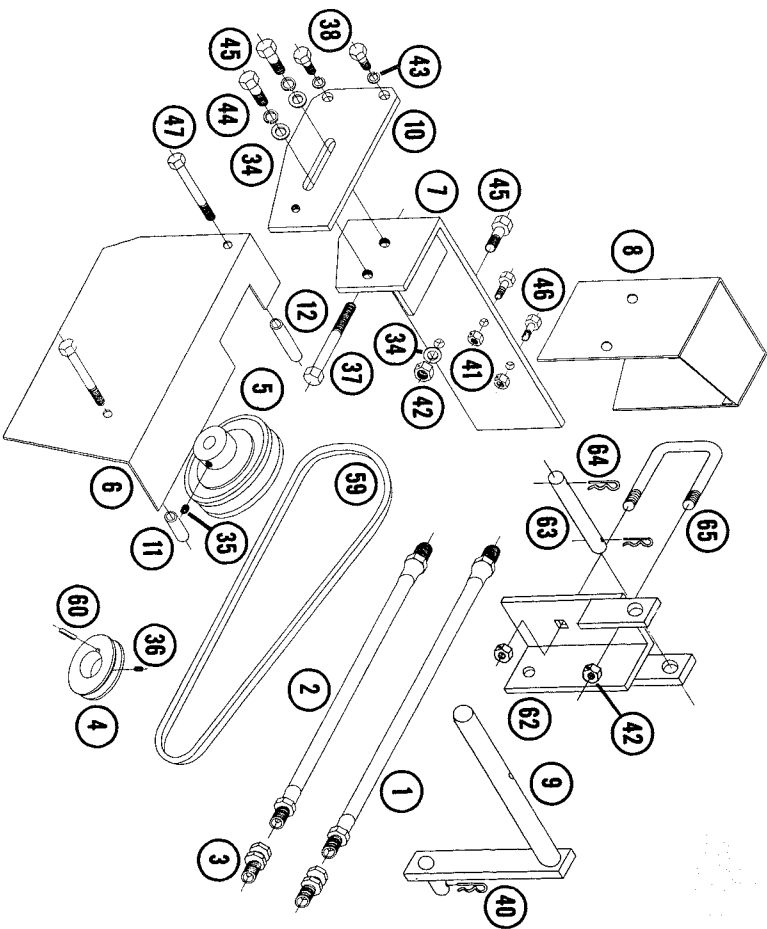
Order all parts in Figure 9 from Hein Werner service stations.

Figure 9



Order all parts in Figure 10 from Wheel Horse.

Figure 10



PARTS LIST AND INSTRUCTIONS



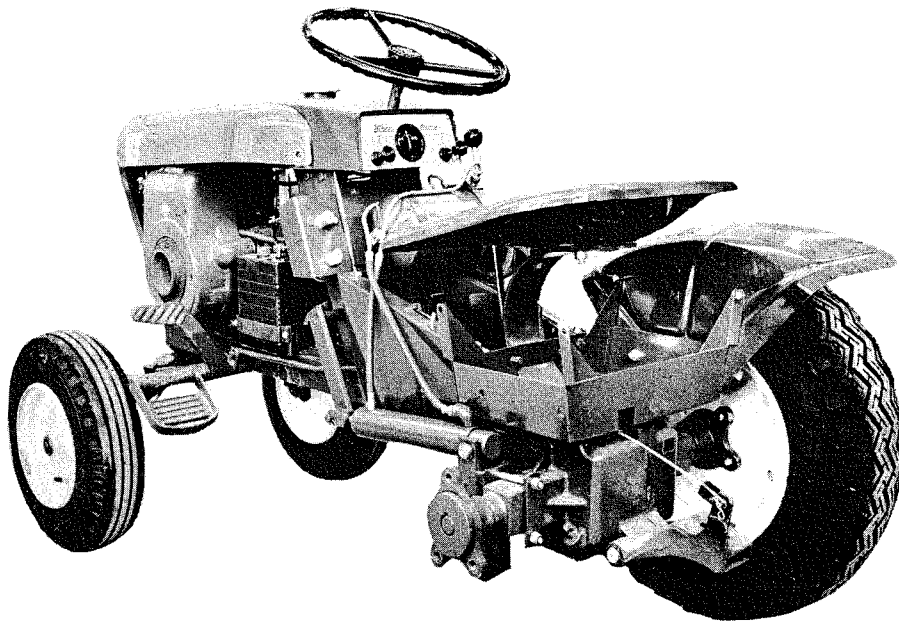
Wheel Horse

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HYDRAULIC UNIT

HY-2

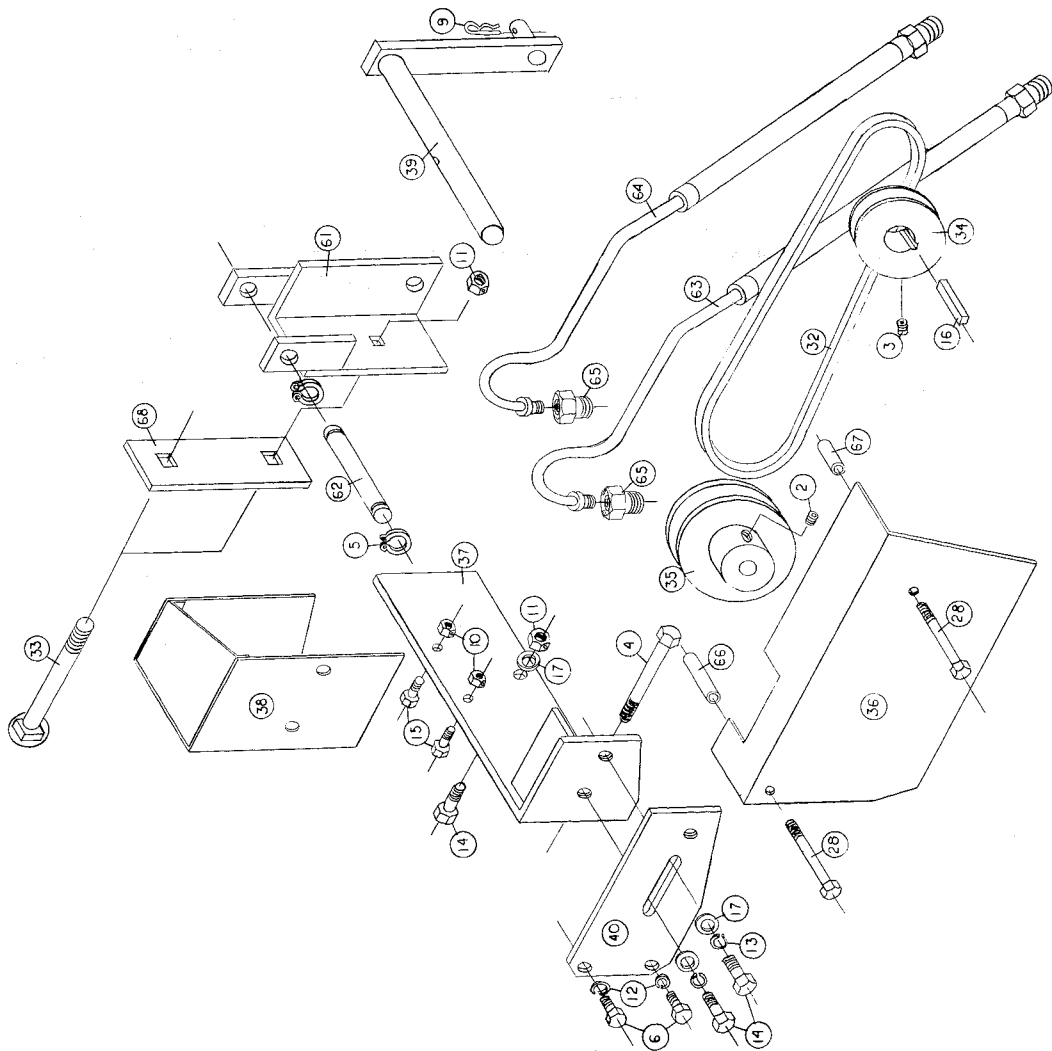
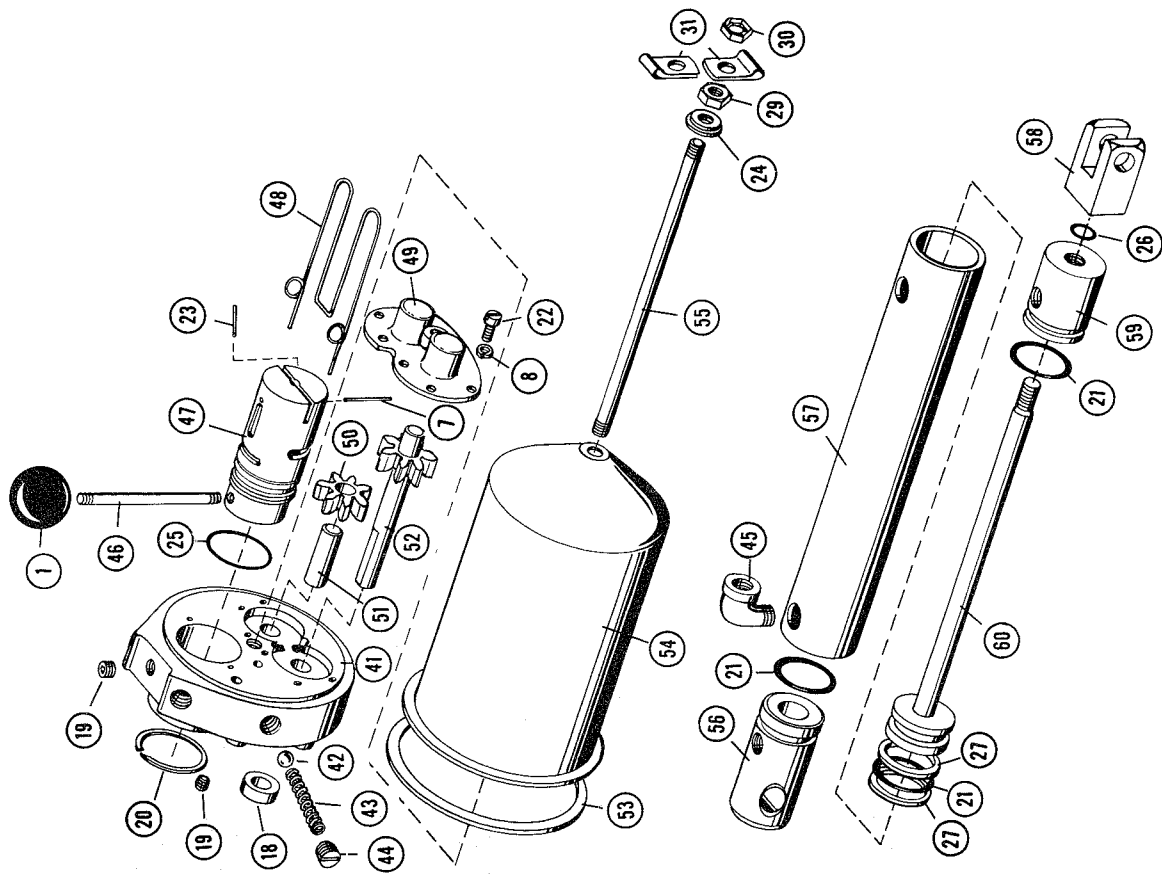
(SUPPLEMENT)



ORDER ALL PARTS FROM YOUR DISTRIBUTOR OR HEIN-WERNER SERVICE STATION

REVISED PARTS LIST

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	1001	Knob	1	37	4816	Pump Mounting Bracket	1
2	1042	Set Screw 5/16 - 18 x 5/16	1	38	4817	Instrument Panel Mounting Bracket	1
3	1066	Set Screw 1/4 - 20 x 1/4	1	39	4818	Lift Link	1
4	1093	Hex Hd. Cap Screw 3/8 - 16 x 2 3/4	1	40	4827	Pump Support	1
5	1127	Snap Ring 3/4 I.D.	2	41	4830	Body	1
6	1238	Hex Hd. Cap Screw 5/16 - 18 x 5/8	2	42	4831	Ball	1
7	1350	Roll Pin 1/8 x 1 1/4	1	43	4832	Spring	1
8	1353	Lock Washer # 10 - 32	6	44	4833	Plug	1
9	1386	Hair Pin Cotter	1	45	4834	Street Elbow 1/4 x 90°	1
10	1406	Nylock Nut 1/4 - 20	2	46	4835	Handle	1
11	1408	Nylock Nut 3/8 - 16	3	47	4836	Spool Valve	1
12	1417	Lock Washer 5/16	4	48	4837	Spring	1
13	1418	Lock Washer 3/8	2	49	4838	Cover	1
14	1423	Hex Hd. Cap Screw 3/8 - 16 x 3/4	3	50	4839	Gear	1
15	1428	Hex Hd. Cap Screw 1/4 - 20 x 5/8	2	51	4840	Shaft	1
16	1433	Key 1/4 x 1 1/4 x 1	1	52	4841	Drive Shaft Assembly	1
17	1434	Flat Washer 3/8 S.A.E.	3	53	4842	Gasket	1
18	1447	Seal	1	54	4843	Reservoir	1
19	1448	Allen Hd. Pipe Plug 1/8	2	55	4844	Stud	1
20	1449	Snap Ring	2	56	4845	Head	1
21	1450	O Ring	3	57	4846	Tube	1
22	1451	Machine Screw # 10 - 32 x 3/8	6	58	4847	Clevis	1
23	1452	Roll Pin 5/32 x 7/8	1	59	4848	Guide	1
24	1453	Washer	1	60	4849	Piston Rod Assembly	1
25	1455	O Ring	1	61	4850	Cylinder Support	1
26	1456	O Ring	1	62	4852	Pin	1
27	1457	Back Up Washer	2	63	4853	Hose	1
28	1463	Hex Hd. Cap Screw 5/16 - 18 x 2 3/4	2	64	4854	Hose	1
29	1470	Hex Jam Nut 3/8 - 16	1	65	4855	Tube Coupling	2
30	1471	Hex Pal Nut 3/8 - 16	1	66	4828	Pipe Spacer 1/4 Std. Elk Pipe 2 1/8	1
31	1472	Tube Clamp 1/4 I.D.	2	67	4829	Pipe Spacer 1/4 Std. Elk Pipe 2 1/4	1
32	1584	"V" Belt 5L-510	1	68	2277	Mounting Bar - Rear	1
33	2279	Carriage Bolt 3/8 - 16 x 3	2		4822	Oil In Cans	
34	4811	Pulley 2 1/4 Dia.	1		4813	Decal	
35	4812	Pulley 5 Dia.	1		4805	Hydraulic Unit Assembly	
36	4814	Belt Guard	1		4809	Cylinder Assembly	



PARTS LIST AND INSTRUCTIONS



Wheel Horse

WHEELHORSE PRODUCTS, INC. • SOUTH BEND, IND.

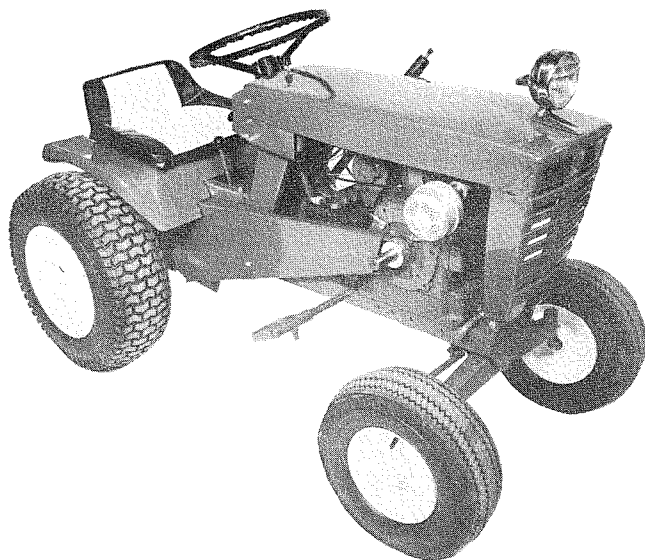


Figure I

DESCRIPTION

The HL-6 consists of one deluxe head light, a safety tail light, wiring harness, and mounting hardware to adapt it to all Wheel Horse compact tractors beginning with 1961 models equipped with electric starting.

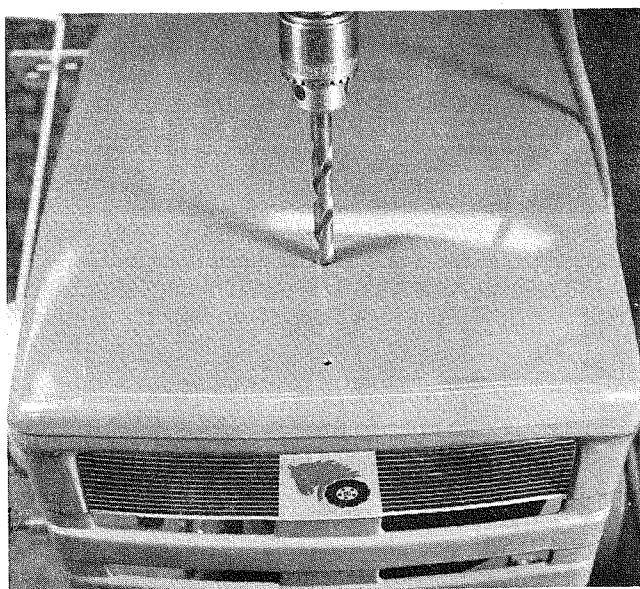


Figure II

ASSEMBLY

1. Remove hood ornament from top of hood. Enlarge the rear hole to $\frac{13}{32}$ diameter as shown in figure II.

HEAD & TAIL LIGHT HL-6

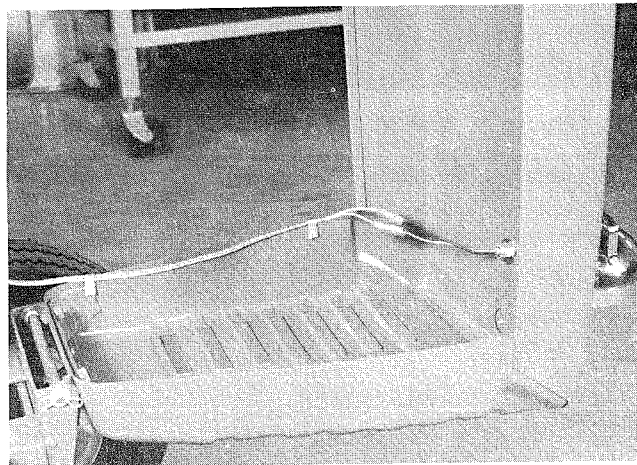


Figure III

2. Mount headlight assembly by threading the wire leads and the $\frac{3}{8}$ -16 hollow bolt, Part Number 6919, through the $\frac{13}{32}$ diameter hole. Secure in place with the flat washer, Part Number 5202, $\frac{3}{8}$ -16 elastic stop nut, Part Number 915663-4, and the round head, self tapping screw, Part Number 926233-4. See figure III.

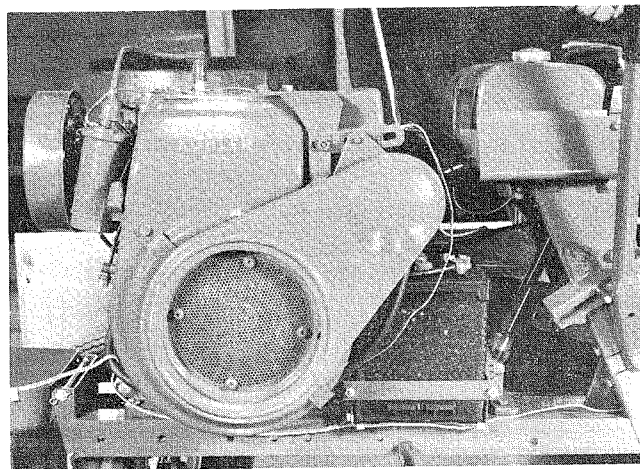


Figure IV

3. Attach two connectors, Part Number 6922, to the head light leads and plug in the red lead of the harness to the red lead of the head light. Now plug in the remaining wire to the black lead of the head light. Thread wire along the side of grill edge, holding in place with two clips, Part Number 3023. See figure III.
4. Figure IV and V illustrates how the wiring harness is strung along the tractor frame and also where the wire clips are to be located. On ten and twelve horsepower note how the wire is strung over the fuel line. On all Kohler engine tractors, the red lead with the spade terminal is connected to the first terminal of the voltage regulator. See figure VIII. On all Lauson engines, the red lead connects to the top post of the rectifier panel. See figure IX.

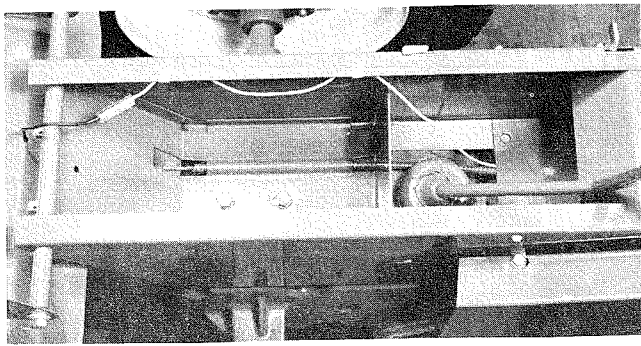


Figure V Standard Transmission Models

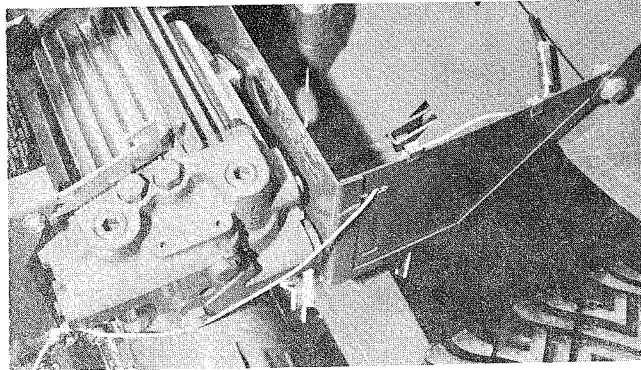


Figure VII Wheel-a-Matic Models

5. Figure VII illustrates the tail light wiring for the Wheel-a-Matic tractors. Three clips are used, two on the tool box and one on the lower back edge of the hood-stand panel. For standard transmission models See figure V.

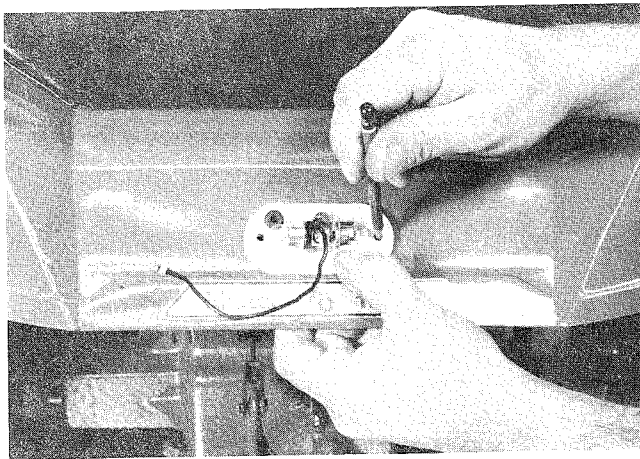


Figure VI

6. To mount the tail light, three $\frac{3}{32}$ dia. holes will have to be drilled through the fender. Two for holding down the base and one for threading the tail light lead. To locate these holes, use the tail light base as a template and mark hole locations with a pencil as shown in figure VI. Secure the tail light base to fender with the two #10-32 bolts, nuts and lockwashers. Connect wires with a connector as shown.

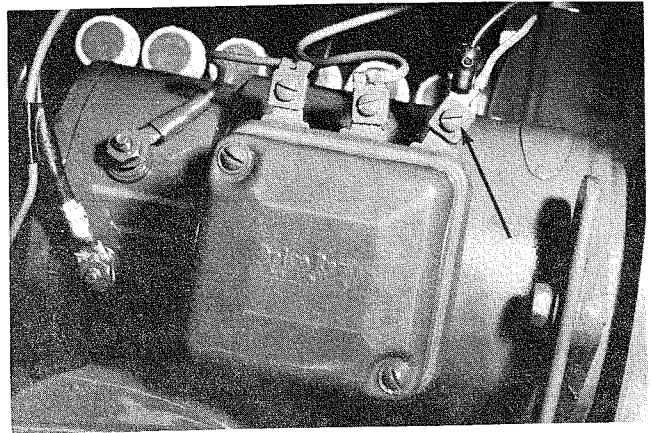


Figure VIII

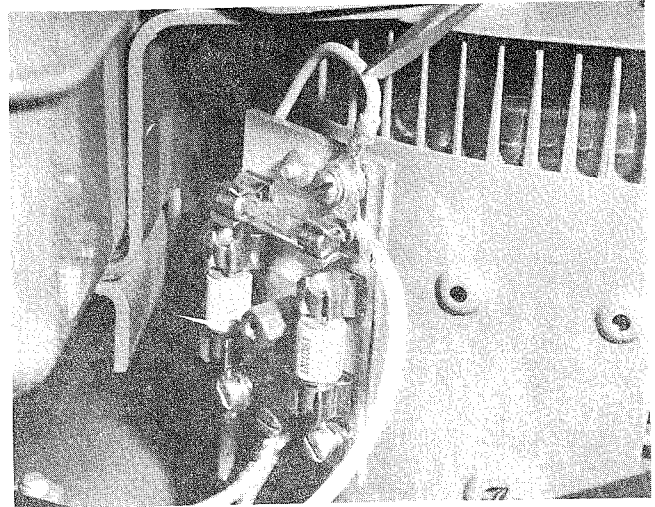


Figure IX

OPERATION

The headlight is turned off and on by the switch located on the headlight. To replace a burned out Seal Beam headlight, remove the screw holding the lens cover, remove lens, and replace. The tail light lens can be removed by prying with a screw driver in the notch provided.

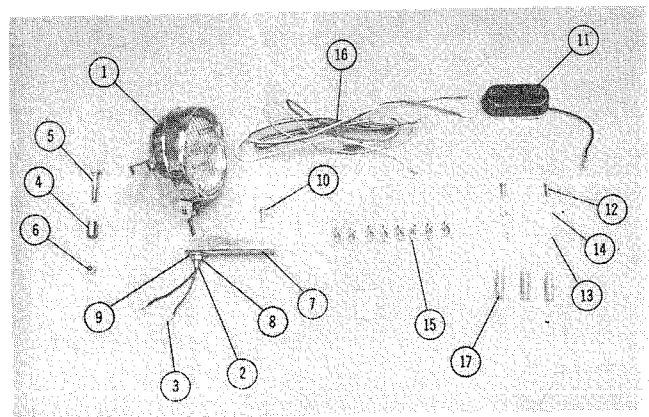


Figure X

Ref. No.	Part No.	Description	No. Req'd.
1	6916	Ass'y Lamp — Headlight	1
2	6919	Bolt — Hex — Hollow $\frac{3}{8}$ -16 x $\frac{3}{4}$	2
3	6921	Terminal — Bullet Type	2
4	6917	Tube — Spacer	1
5	908007-4	Bolt — Hex $\frac{1}{4}$ -20 x $1\frac{1}{2}$	1
6	915661-4	Nut — Elastic Stop $\frac{1}{4}$ -20	1
7	6918	Bracket	1
8	915663-4	Nut — Elastic Stop $\frac{3}{8}$ -16	1
9	5202	Washer — Special	1

Ref. No.	Part No.	Description	No. Req'd.
10	926233-4	Screw — Round Head 10-12 S.T.	1
11	6920	Assembly Lamp — Tail Light	1
12	909138-4	Bolt Round Head #10-32 x $\frac{5}{8}$	2
13	915551-4	Nut Hex #10-32	2
14	920079-4	Lockwasher #10	2
15	3023	Clip — Wire	8
16	6925	Ass'y — Wiring Harness	1
17	6922	Connector	1

PARTS LIST AND INSTRUCTIONS



Wheel Horse

WHEELHORSE PRODUCTS, INC. • SOUTH BEND, IND.

HEAD & TAIL LIGHT HL-5



Figure 1

DELUXE HEAD LIGHTS & TAIL LIGHT

DESCRIPTION

The HL-5 consists of a pull type switch, 2 Deluxe head lights, a safety tail light and mounting hardware to adapt it to all Wheel Horse Tractors beginning with 1961 Models equipped with electric starting.

Sufficient lead wire is provided on the lights so that the tail light and switch may be installed in positions other than those illustrated to "Customize" your installation.

ASSEMBLY

1. Remove the hood. Swing the head lights around to the outside of the U shaped mounting bracket before installing. (See Figure 3.) Place bracket, #5489, between frame angles (Figure 3) and set head light bracket over the two bolts. Fasten with two nuts. Replace hood and adjust before securing. Wrap wiring around the bracket and run along belt shield securing with clip #3023.

2. To assemble tail light — first remove the red cover and using the base assembly as a template, mark the two holes on the rear of the tool box with

the edge flush with the top. The two $\frac{7}{32}$ holes are $1\frac{3}{8}$ " apart and $1\frac{1}{16}$ " down from the top edge. Secure the tail light with two #10 round head bolts, two #10 lock washers and two #10 hex nuts. The wire should extend down from the light. Thread the wire under the tool box along the belt guard side of the transmission, up between the two frame angles and up the inside of the hood stand. Use the second wire clip as shown in Figure 1 to secure.

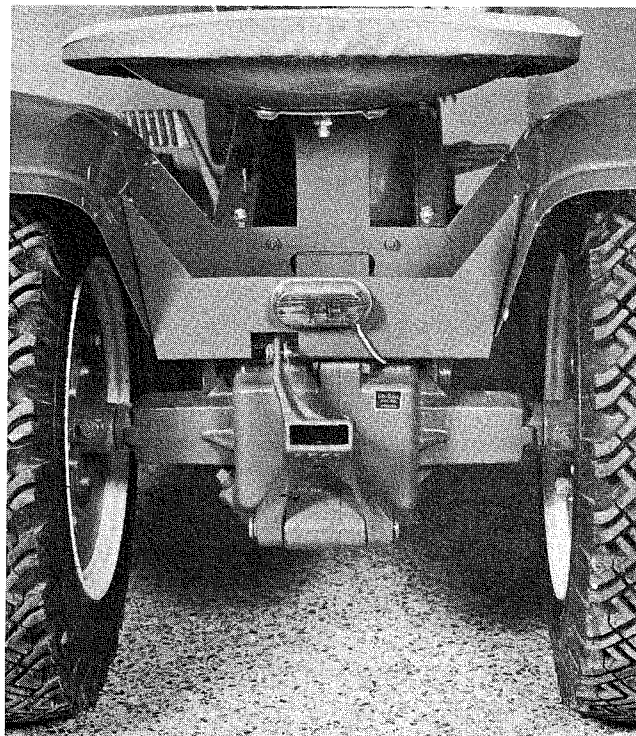


Figure 2

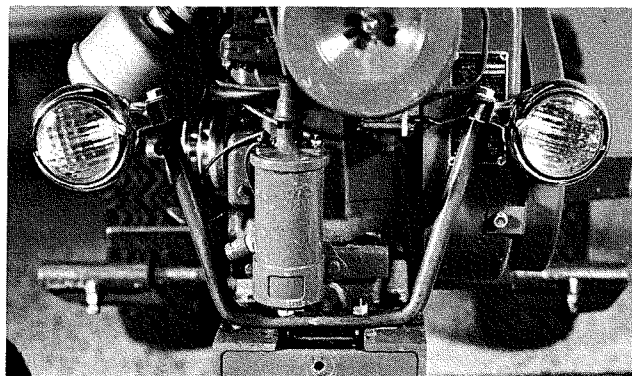


Figure 3

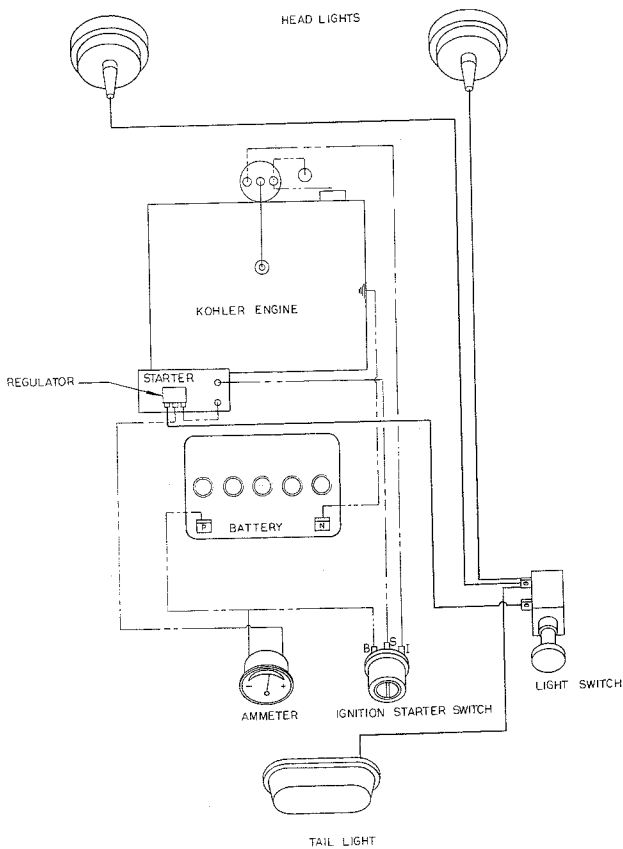


Figure 4

3. Install the switch using two $\frac{1}{4}$ -20 x $\frac{3}{4}$ Hex Screws to the right side of the hood stand in the tapped holes provided. For a neater installation, you may drill a $\frac{25}{64}$ diameter hole in the hood stand instead of using the switch mounting bracket.

4. The head light and tail light leads can now be secured to the switch. First pull tight up to the switch terminal and cut off allowing about 2 inches extra length. Strip the installation from the last $\frac{1}{2}$ inch of each lead. Insert the ends of each wire in the spade terminal and crimp securely with a pair of pliers. Fasten to one of the switch terminals and tighten the screw.

5. The $14\frac{1}{2}$ " wire is now fastened to the remaining terminal of the switch. Make sure the two ends do not touch and that each terminal is clear of tractor parts to prevent shorting. Make sure the switch

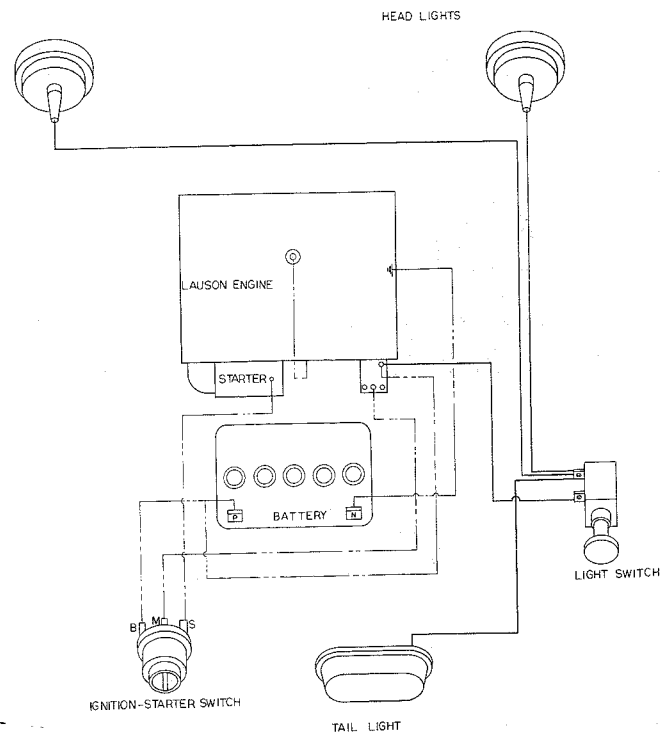
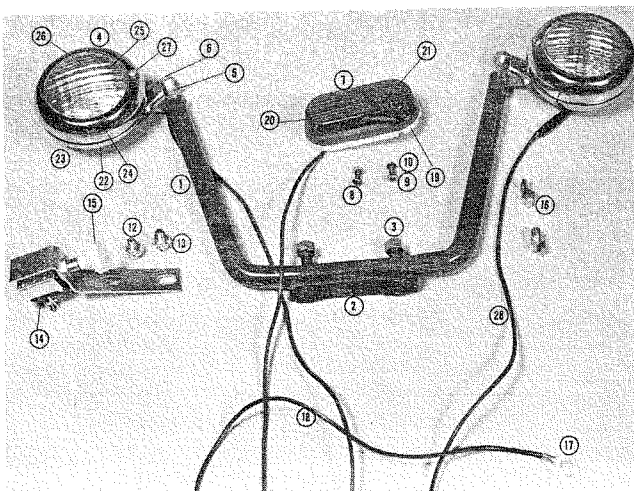


Figure 5

is pushed in to the off position. For Kohler Engines route the other end of the Voltage Regulator and secure to the left outside terminal, See Figure 4. On Lauson Engines route to the rectifier panel on the engine. Remove plastic cover and secure to top terminal in the panel. See Figure 5.

Pull switch to turn on lights and check for shorts. Push to off and tighten all connections and bolts.

PARTS LIST

When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	No. Req'd.
1	5478	Bracket — Head Light Mt'g.	1
2	5489	Clamp Assembly	1
3	915112-6	Nut $\frac{5}{16}$ -18 Nylok	2
4	5472	Head Light Assembly	2
5	5479	Tube — Spacer	2
6	908020-6	Bolt — Hex. $\frac{5}{16}$ -18 x $1\frac{1}{4}$ Nylok	2
7	5485	Tail Light Assembly	1
8	909138-4	Bolt — Rd. Hd. #10-32 x $\frac{3}{8}$	2
9	915551-4	Nut — Hex #10-32	2
10	920079-4	Lockwasher #10	2
11	4803	Bracket — Switch	1
12	908015-4	Bolt Hex. — $\frac{5}{16}$ -18 x $\frac{1}{2}$	2
13	920155-4	Lockwasher $\frac{5}{16}$ Int. Tooth	2
14	5273	Switch	1
15	5274	Knob	1
16	3023	Clip — Wiring	4
17	5492	Terminal — #8 Spade Type	2
18	2896	Wire Assembly — SW to VR	1
19	5486	Base Assembly — Tail Light	1
20	5487	Cover — Amber — Tail Light	1
21	5488	Bulb — 12V Tail Light (Not shown)	2
22	5473	Base Assembly — Head Light	1
23	5474	Bulb — 12V Head Light (Not shown)	1
24	5475	Housing — Lens — Head Light	1
25	5476	Lens — Clear	1
26	5477	Retainer — Lens (Wire — Not shown)	4
27	908987-4	Screw — Rd. Hd. Sl'td #6-32 x $\frac{3}{4}$	1
28	5521	Wire & Contact Ass'y.	1

PARTS LIST AND INSTRUCTIONS



Wheel Horse

WHEELHORSE PRODUCTS, INC. • SOUTH BEND, IND.

SPEED REDUCTION SR-64

FOR USE ON ALL FRONT ENGINE TRACTORS (EXCEPT MODELS 953 & 1054)

1963 MODELS REQUIRE REMOVAL OF WELDED STUD ON FRAME.

INSTALLATION

See **Illust. I** on **Page 2**:

Remove drive belt shield being sure to save bolts as they will be used to install new shield later. Remove drive belt (A). Remove 4" pulley (B) from transmission shaft (C). Remove bolt (D) from tractor frame. The tractor is now ready for the installation of the speed reduction attachment.

See **Illust. II** on **Page 2**:

Install 7½" pulley (E) on the transmission shaft (C) making sure that key is still in shaft. Tighten set screw in pulley hub securely. Insert ¾" x 1¼" bolt in hole from which bolt (D) on Illust. I had been removed with head on inside of tractor frame. Place idler pulley assembly (F) on ¾" x 1¼" bolt. Install new 76" "V" belt (H). Now rotate the idler pulley assembly (F) clockwise until clutch idler (J) is approximately 2" below shield flange (K). Holding this position, tighten spacer (G) securely. Install new belt guard (L) using original bolts except at (M) where new ¾" x ½" bolt is used. (**NOTE:** Bracket (N) is used on Lauson Engine Tractors and bracket (P) is used on Kohler Engine Tractors)

OPERATION

NOTE: Start the tractor and check for interferences and proper clutching action before operating. Interferences and improper clutch action can be corrected by rotating the idler pulley assembly (F) about the ¾" x 1¼" bolt as required.

The SR-64 Speed Reduction Attachment reduces the ground speed by almost 50% in all gears. The low speed thus produced by first gear is very useful when using a snow thrower, rotary tiller or other attaching tools requiring slow ground speed to avoid stalling of the engine or for satisfactory performance of the attaching tool.

PARTS LIST — See Illust. III on Page 2:

Ref. No.	Part No.	Description	No. Req'd.
1	5254	Belt Guard	1
2	1629	"V" Pulley 7½" O.D.	1
3	909862-6	Set Screw ⅝-18 x ⅝ Nyllok	1
4	908030-4	Hex Hd. Cap Screw ⅜-16 x ½	1
5	4474	Spacer	1
6	908034-4	Hex Hd. Cap Screw ⅜-16 x 1	2

Ref. No.	Part No.	Description	No. Req'd.
7	3542	Idler Pulley	2
8	1536	Idler Bushing	2
9	908035-4	Hex Hd. Cap Screw ⅜-16 x 1¼	1
10	920083-4	Lockwasher ⅜	1
11	4473	Mounting Plate	1
12	1586	"V" Belt A Sec. 76"	1

