

Wheel Horse®

LAWN AND GARDEN TRACTORS

Spark Plug H-10

RM-483 ^{Pit} Inner Deck Card 7

model 1963
953

Hydro-Unit
A4CCWH

Serial
42260

Serial 62- 292

wheel 4480 → 110506
grease fitting - 4566
Blade 4380 → 100202 → 3-6758



36 inch Snow Blower
Serial 297

Belt # 9691 ←

Belt length
66.95" x 1/2"

Power take off belt for
mower deck # 1595

OPERATION AND SERVICE MANUAL WITH PARTS LIST

Mower Deck Belt inside
1594



Convertible V60

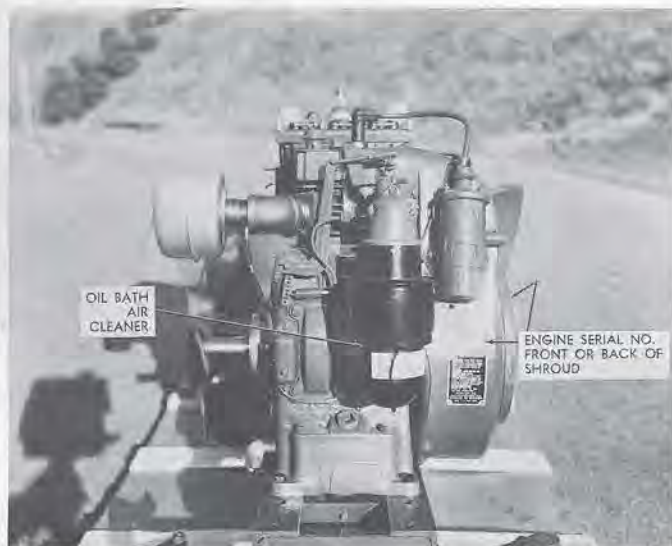
WHEEL-HORSE PRODUCTS, INC.

SOUTH BEND, IND.

Frank Rynor - Serv
Rt 31 - Washington NJ
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There is **NO OIL** in the crankcase of the engine when shipped from the factory. Read Engine Manual and follow all instructions pertaining to type of lubrication specified. The engine is the heart of your tractor and it is very important that you keep it in good condition.

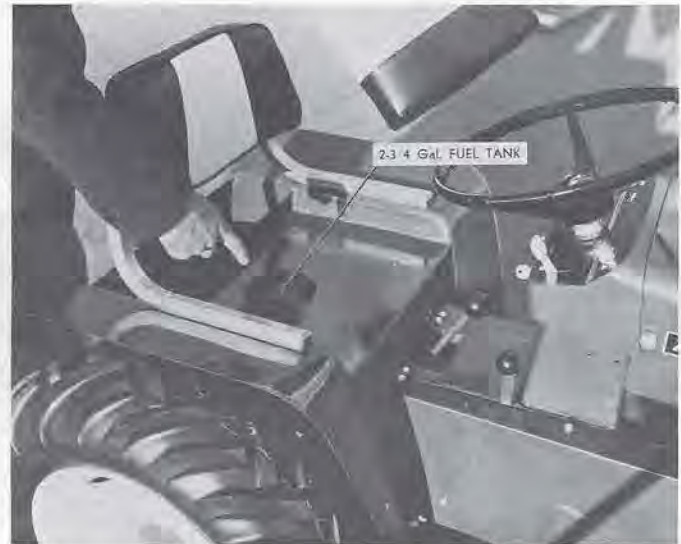
WARRANTY

We warrant WHEEL HORSE PRODUCTS for ONE YEAR from date of purchase against defective parts and workmanship. We will replace, free of charge, any defective part if returned to the factory PREPAID*. Wheel Horse Products, Inc., reserves the right to make changes or improvements upon its products without imposing any obligations upon itself to install the same upon its products that have been previously manufactured.

The engine and battery carry a separate warranty by the manufacturer. FOR ENGINE OR BATTERY SERVICE, CONTACT YOUR LOCAL ENGINE OR BATTERY SERVICE HEADQUARTERS.

*All warranty claims, work, shipments, must be handled through your authorized Wheel Horse dealer.

NOTE: 90 Day Warranty for Commercial Use.



TRANSMISSION

Remove oil filler plug, located at the left rear side of the transmission, and fill to level of hole with a good grade of S.A.E. 90 Gear Lube (will require about 3 pints).

The transmission should be checked after every 40 hours of use. The transmission should be drained once a year by removing plug on bottom to drain oil. Refill as above paragraph. This is a regular automotive type transmission with sliding gears and should have the same care as your car.

BATTERY

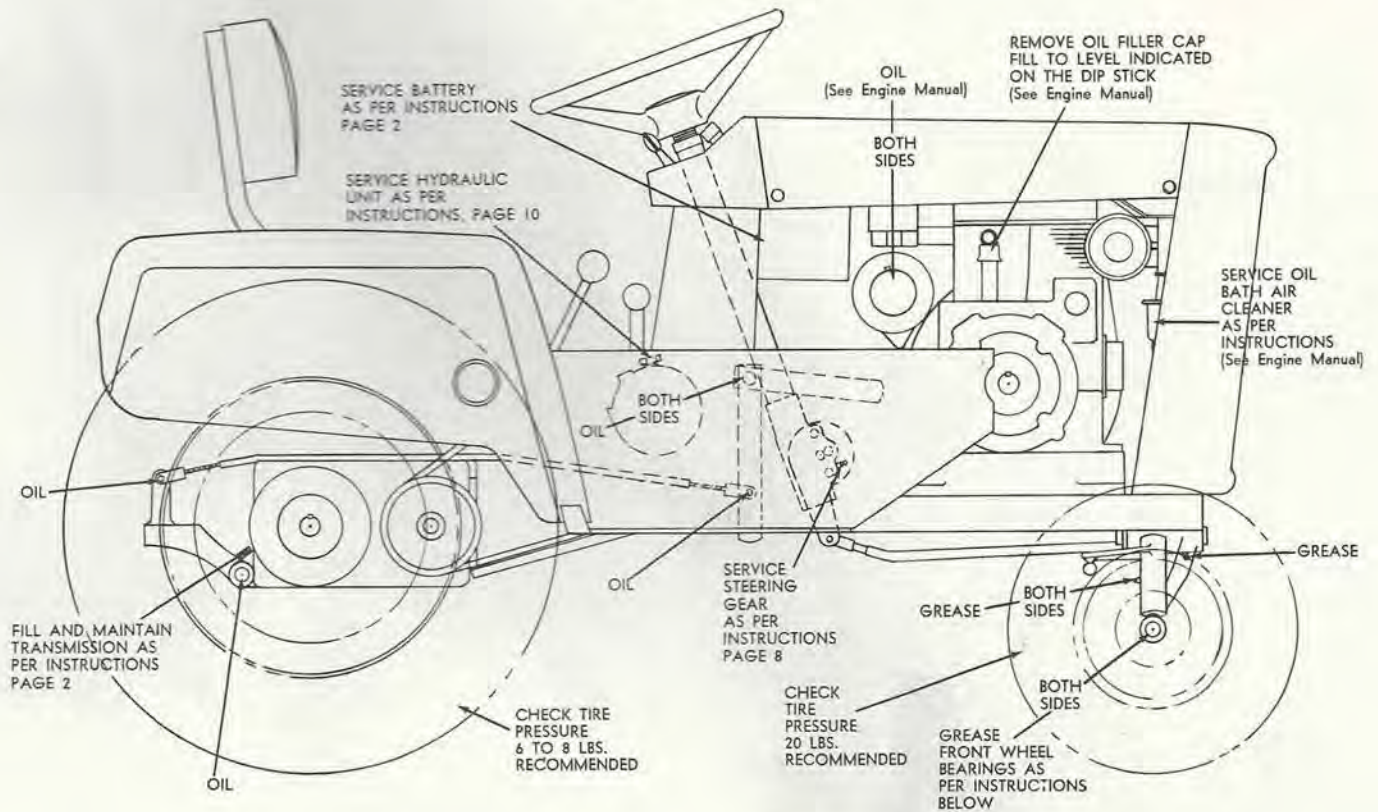
With proper care this battery should give the long service life built into it.

A battery which does not function properly is not necessarily worn out or defective. It may only need a good recharge. Therefore, if battery trouble is suspected, a full recharge and test by a competent battery man is recommended.

Putting Battery In Service

Remove wicks or tape covering from vent hole in filler caps. Make sure vent holes are open so that gas produced when battery is charging can escape. If necessary, run a fine wire in vent hole to be sure it is open and free of all obstructions.

BEFORE YOU START



Fill each cell with 1.265 specific gravity battery grade electrolyte to level indicator or $\frac{3}{8}$ " above top of separators. Battery and electrolyte temperature should be at least 70°F prior to filling.

Permit battery to stand for thirty minutes. Replace filler caps and recharge the battery at a rate not exceeding 4 amperes until the specific gravity of each cell reaches 1.250. If room, battery and electrolyte temperatures are below normal a longer charging period will be necessary to bring the specific gravity up to 1.250.

Warning

Under no conditions should battery be filled more than $\frac{3}{16}$ " over the plates. We cannot be responsible for damages if this warning is not observed.

Care In Service

A hydrometer test of the battery solution should be made monthly. If the specific gravity tests 1.225 or less, the battery should be removed and thoroughly recharged. At the same time the solution level should be examined and distilled water added when necessary to retain the level of $\frac{3}{16}$ " over the plates. When necessary to add distilled water, do it just prior to recharging so that the added water mixes with the solution.

When recharging is necessary and user does not have his own charging equipment, he should request service station to slow charge the battery at a rate of . . 2 . . to . . 3 . . amperes. Fast charging is **not** recommended.

Any collection of grease or any other substance should be removed from the top of the battery and the top kept dry and clean at all times. The battery should be kept snug in its cradle and not permitted to get loose. If removed for charging, it should be fastened snugly enough to prevent any movement when in use. Vent caps should be kept tight and the small vent holes in top or side of cap be kept open at all times to permit escape of gas formed in the battery.

Care should be exercised not to overfill the battery at any time and to always retain $\frac{3}{16}$ " of solution above the plates.

Winter Care

If battery will not be used during the winter months it should be removed and stored in a cool, dry place. Any collection of grease or other substance should be removed from the top of the battery.

The battery must be recharged monthly or whenever the hydrometer reads less than 1.225.

Before reinstalling the battery in the spring, it should always be given a thorough recharge.

STEERING GEAR LUBRICATION

Lubricate through the fitting in the housing. Fill housing slowly until lubricant begins to seep out. Keep housing full by adding lubricant periodically according to usage. Note: The gear is designed to use a "semi-fluid" lubricant.

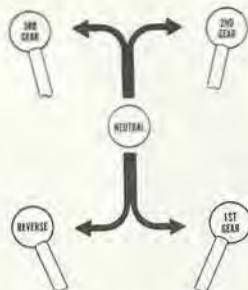
FRONT WHEEL BEARINGS

1. Remove bearing, nut, cotter key, and hub cap from parts box.
2. Lubricate bearing cone by working grease into rollers with palm of the hand. Pack until spaces between rollers are completely filled. (Use regular automotive wheel bearing grease.)
3. Since inside bearing is already installed in front hub, it must be lubricated by inserting grease into the hub and working it into the bearing rollers.
4. After both bearings are packed, slide wheel and bearing cone onto spindle and retain with slotted nut.
5. Adjust bearing by turning nut up tight against cone, then backing off one slot until cotter key can be inserted.
6. Check wheel for excessive play or tightness and if necessary readjust.
7. Bend ends of cotter key and install hub cap.



STARTING ENGINE

- (1) Before starting engine open valve on sediment bowl. (See Figure 11 Page 9 for location)
- (2) Place gear shift lever in neutral position.
- (3) Push throttle lever $\frac{1}{2}$ way forward in slot.
- (4) Push choke lever all the way forward to choke engine. If engine is warm and has been running, choking will not be necessary.
- (5) Turn key to on position and push starter button.
- (6) When engine starts, slowly pull choke lever back to off position and adjust throttle to desired speed.
- (7) Depress clutch pedal on left side of tractor before selecting desired gear range.
- (8) When starting tractor in winter it is desirable to depress clutch so engine does not have to turn transmission.



CLUTCHING

Don't force the gear shift lever if the gears do not immediately mesh. Depress clutch pedal all the way down and let up, then depress again and shift. To avoid sudden starts, release clutch pedal slowly. While in motion do not shift gears without depressing clutch pedal.

The clutch pedal also operates the brakes WHEN DEPRESSED ALL THE WAY DOWN. For this reason, you should depress the clutch pedal only $\frac{2}{3}$ OF THE WAY DOWN WHEN SHIFTING while in motion. This clutch-brake pedal combination makes clutching automatic as you apply the brakes to stop.

PARKING BRAKE

The parking brake is located on the left side of the tractor. To set the parking brake, depress the clutch brake pedal as far as possible and pull the parking brake lever toward the rear. To release the brake depress the clutch-brake pedal, parking brake will automatically release.

ATTACHING TOOLS

Complete information on the assembly, attachment, operation and service of the many attaching tools will be provided with each attachment.

OIL BATH AIR CLEANER

Remove cleaner cover and add oil until the level reaches the arrow marked on the air cleaner bowl.

TIRES

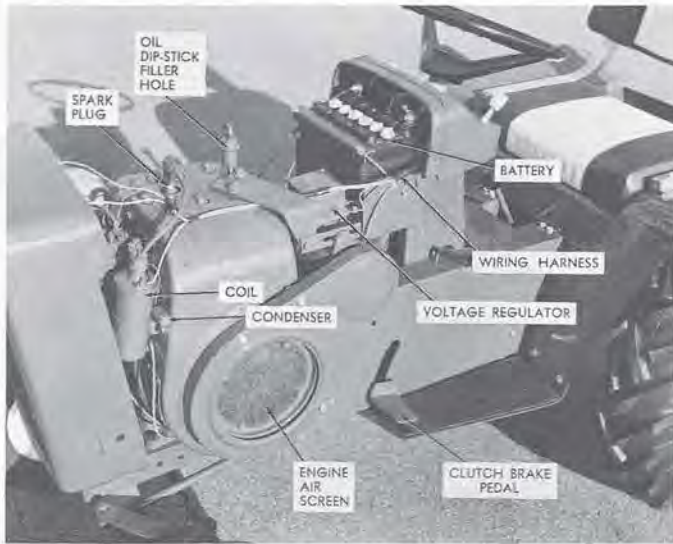
The front tires are 4:00 x 8 and should be inflated to 20 lbs. of air pressure. The rear tires are 6:40 x 15 and should have 6 to 8 lbs. of air pressure. The tires can also be filled with ballast if desired. Ordinarily this is not necessary as the weight of the operator will add sufficient weight for adequate traction.

HEAD AND TAIL LAMPS

The tractor is equipped with two headlamps and a tail lamp. The off-on switch is located on the left rear corner of the dash panel. To replace burned out headlamp bulbs, remove the three (3) screws on back side of lamp mounting bracket, remove lamp housing, replace the bulb and re-install housing. Tail lamp bulb is replaced by pulling bulb housing rearward from lens and replacing burned out bulb. Reassembly by pressing housing into lens as far as it will go.

CARE OF THE TRACTOR

- (1) Keep tractor greased and oiled regularly. See previous instructions for location of grease fittings. Check transmission and engine case oil levels.
- (2) Keep engine air filter clean. Dirty filters use excessive fuel and reduce engine power and life.
- (3) Keep tires properly inflated.
- (4) Keep tractor covered and in a dry place when not in use.
- (5) Keep grass and dirt out of engine cowling as they will stop the flow of cooling air and cause serious overheating.
- (6) BRAKE ADJUSTMENT: The brake band, located on the left side of the transmission, brakes the transmission and in turn stops the wheels. Adjust the nut on the brake rod so that, when you depress the clutch pedal all the way down, the band tightens around the brake drum just as the idler pulley releases the belt. Keep brake band and drum free from oil and dirt.
- (7) CLUTCH-BRAKE PEDAL ADJUSTMENT: The pedal rod may be moved in or out to adjust pedal to desired position. Remove pin from rod and remove rod from pedal lug, adjust rod and replace.
- (8) PARKING BRAKE ADJUSTMENT: After brake band and clutch-brake pedal have been adjusted, depress pedal until tractor brakes are locked. Pull parking brake lever back and adjust nut on bottom of lever shaft until lever will engage and hold pedal down.
- (9) HYDRAULIC BELT ADJUSTMENT: Proper belt tension is maintained by removing the right hand belt guard and loosening the four (4) bolts holding the pump body to the frame. Pump may now be moved forward and backward to adjust belt.
- (10) When replacing belts it is advisable to purchase them from your Wheel Horse dealer, as these belts are specifically designed for each tractor or attachment. A new drive belt may have a tendency to squeak during clutching, this will stop after an hour or two of operation as the belt seats in the pulley groove. When replacing bolts or mounting drive implements make sure all pulleys are in line.
- (11) Check battery liquid after every 40 hours of use. If tractor has been in storage it may be necessary to recharge.
- (12) Your tractor is only as good as the service you give it. See your Wheel Horse dealer for a thorough check-up after each season of use.

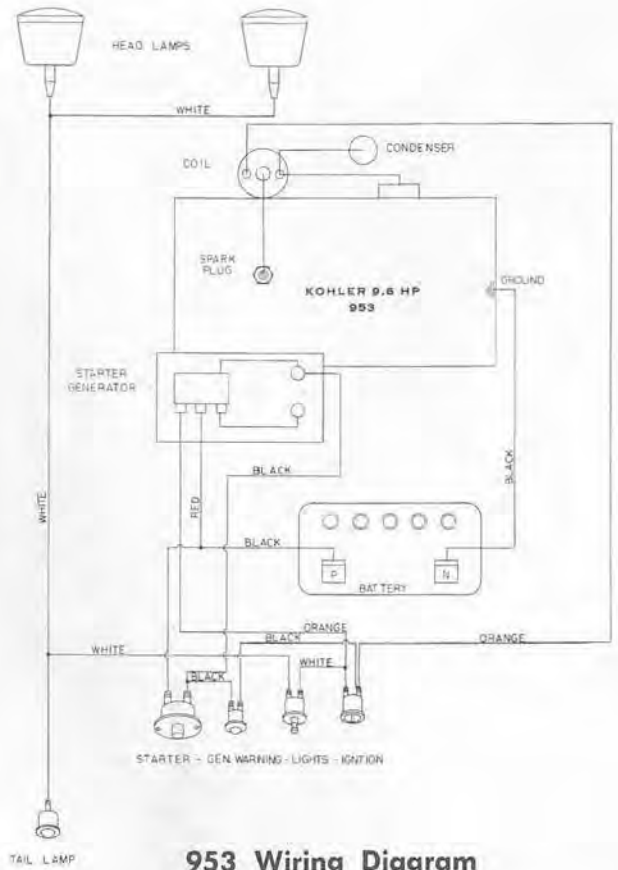


Tractor (Hood Removed)

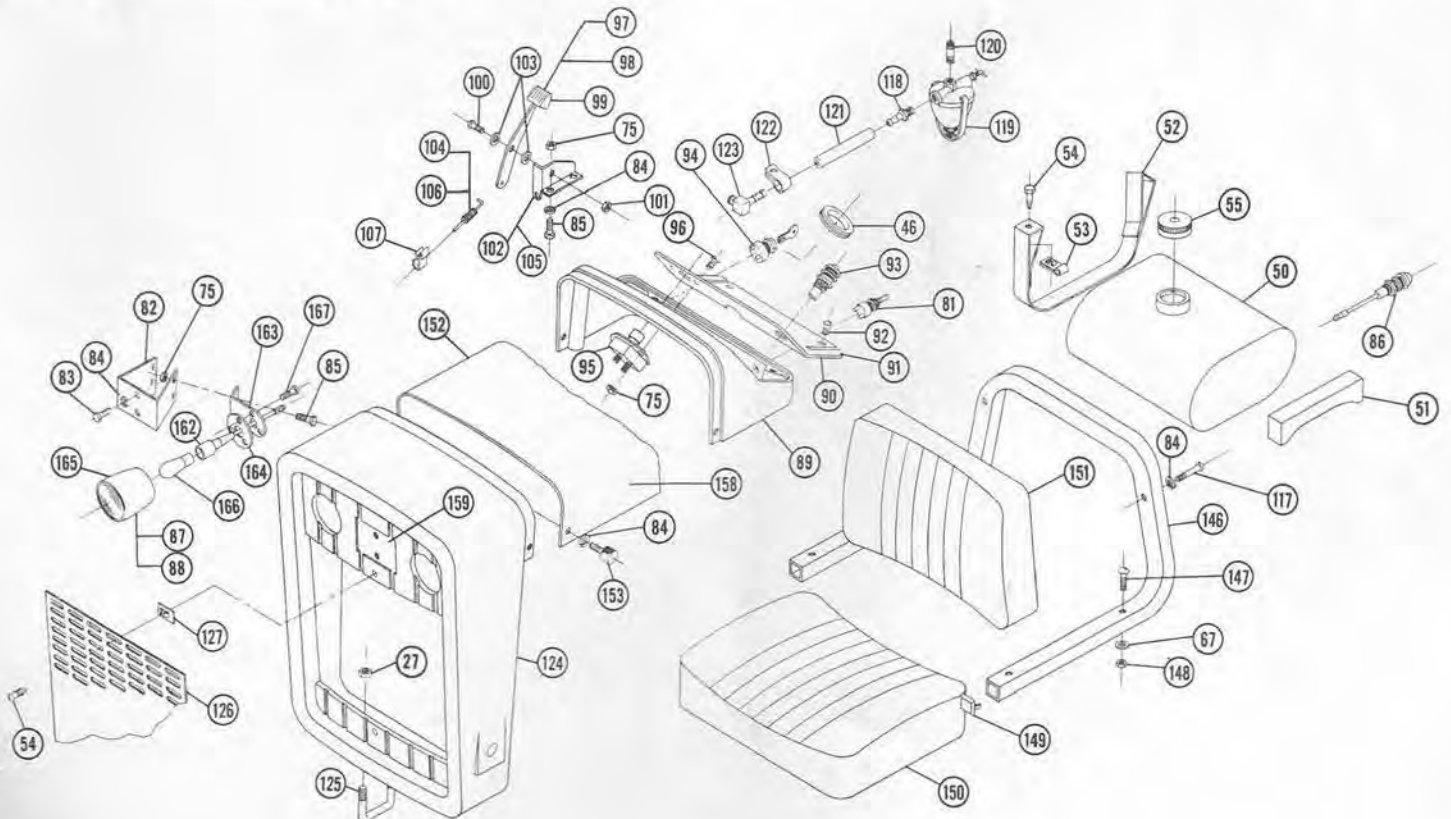
953 SPECIFICATIONS

(Specifications subject to change without notice.)

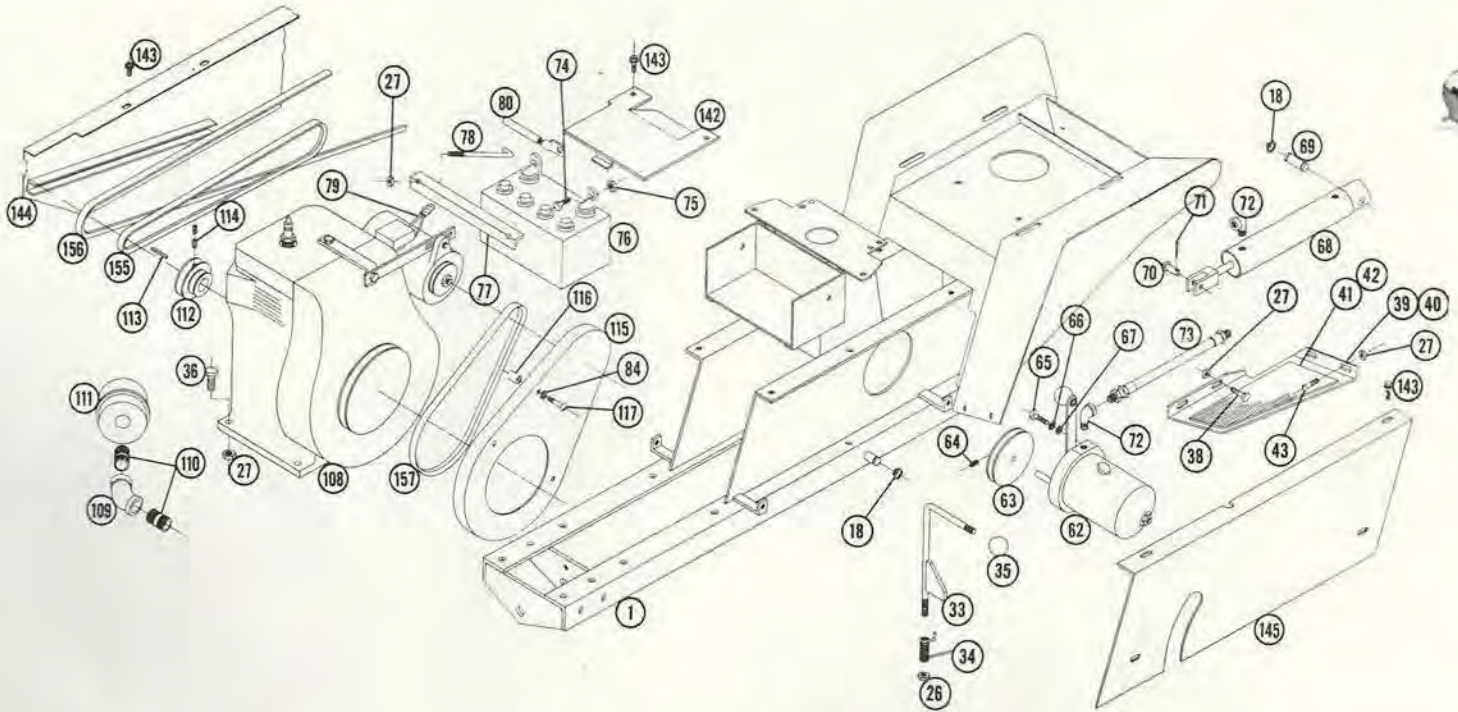
Length Overall	69 inches
Wheelbase	47 inches
Width Overall	36½ inches
Width at Front Wheels	33 inches
Height	42 inches
Height to Top of Hood	35 inches
Net Weight	656 lbs.
Crop Clearance	9½ inches
Frame Clearance	13¼ inches
Engine (4-cycle, single cylinder, air cooled)	9.6 H.P.
Fuel Capacity	2¾ gallons
Tires (front)	4:00 x 8" Pneumatic (16" wheel dia.)
Tires (rear)	6:40 x 15" Pneumatic (27" wheel dia.)



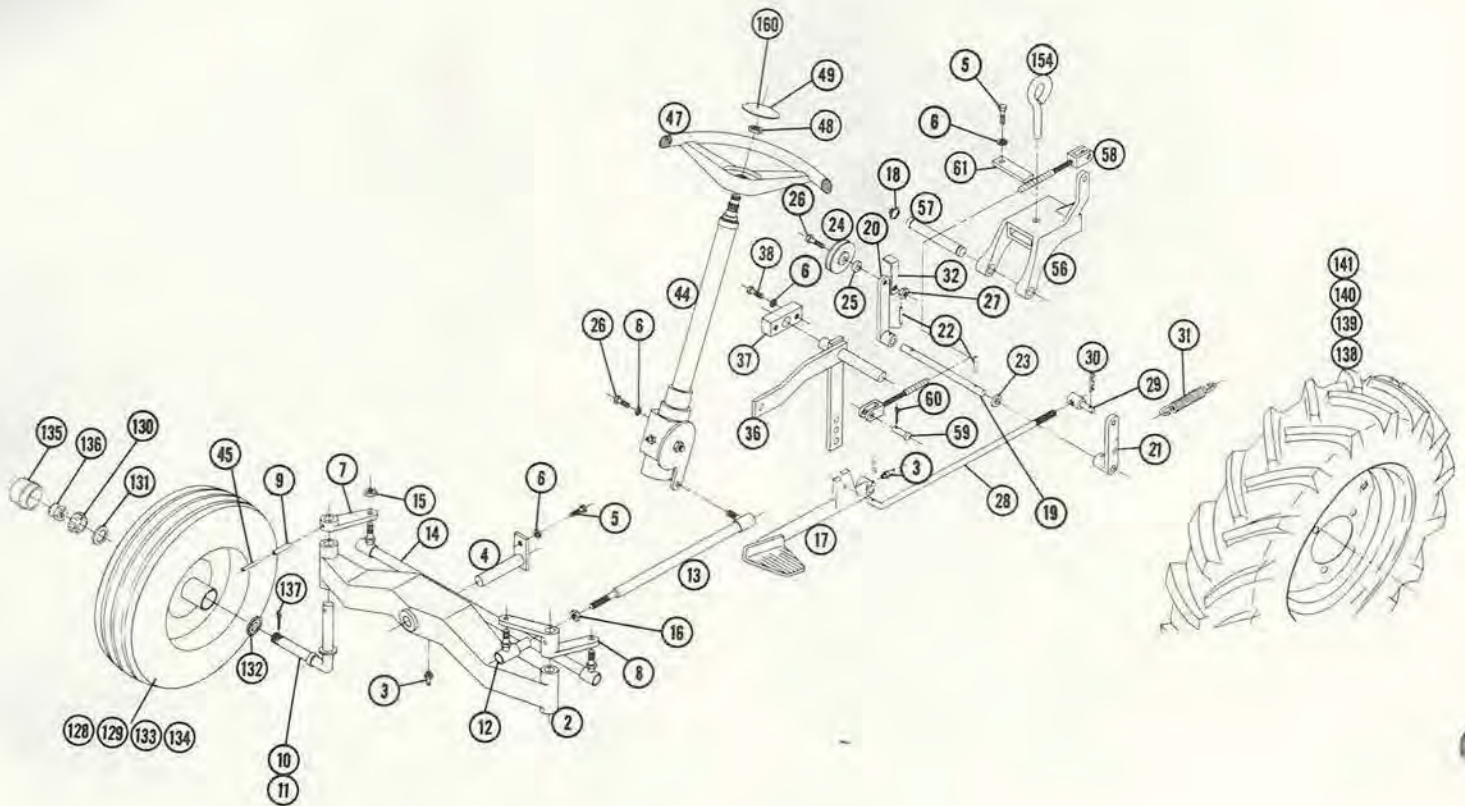
953 Wiring Diagram



Body & Seat Ass'y.



Main Frame Ass'y.



Steering & Wheel Ass'y.

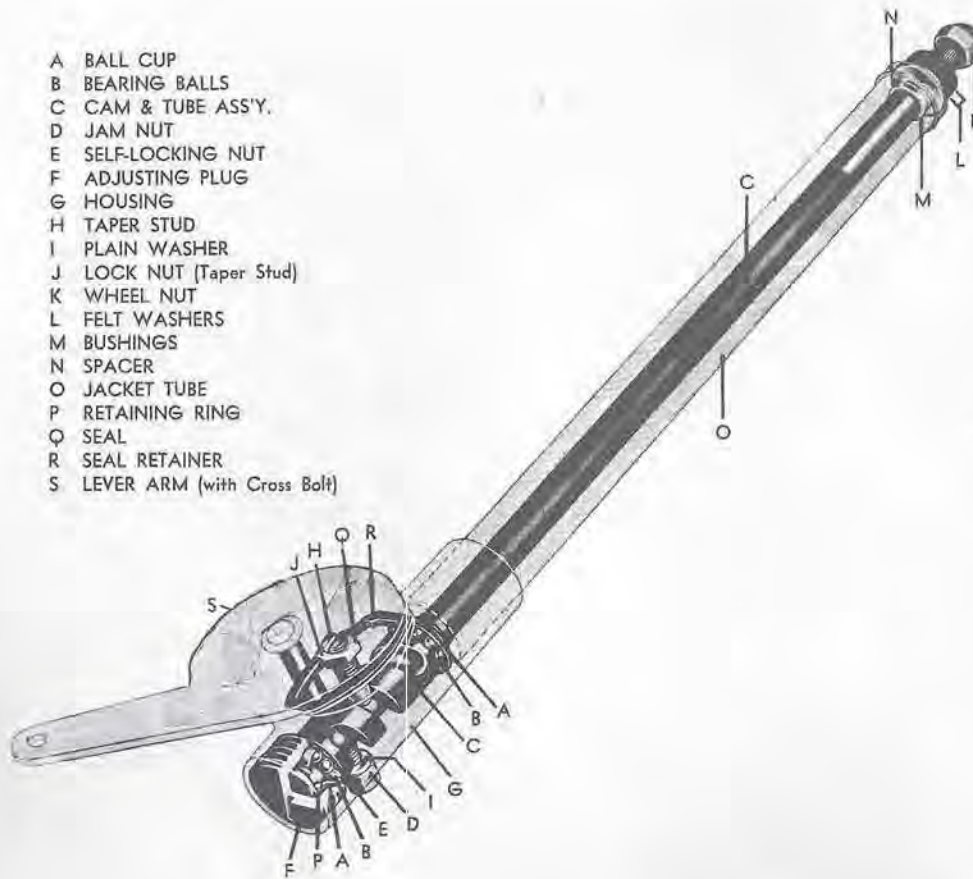
953 TRACTOR PARTS LIST

(See Page 12 for Transmission Parts List, Page 9 for Steering Gear Parts List and Page 11 for Hydraulic Unit Parts List)

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

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	2840	Ass'y. Frame	1	83	908001-4	Bolt - Hex. 1/4-20 x 1/2	2
2	2773	Axle - Front	1	84	920081-4	Lockwasher 1/4 Dia.	17
3	1030	Fitting - Grease	4	85	908003-4	Bolt - Hex. 1/4-20 x 3/4	10
4	2736	Ass'y. Pin & Plate - Axle Mt'g.	1	86	2775	Ass'y. Lamp - Tail Light	1
5	908032-4	Bolt - Hex. 3/8-16 x 3/4	2	87	2580	Ass'y. Head Light & Brkt. R.H.	1
6	920083-4	Lockwasher 3/8 Dia.	8	88	2581	Ass'y. Head Light & Brkt. L.H.	1
7	2733	Arm - Steering R.H.	1	89	2798	Housing - Control Panel	1
8	2732	Arm - Steering L.H.	1	90	2870	Panel - Control	1
9	933230	Roll Pin 3/16 x 1 1/2	2	91	2871	Decal - Panel	1
10	3364	Ass'y. Spindle R.H.	1	92	2874	Bolt - Rd. Hd. #10-24 x 3/8	4
11	3365	Ass'y. Spindle L.H.	1	93	2774	Ass'y. Lamp - Gen. Warning	1
12	2710	Ass'y. Ball Joint	1	94	1747	Ass'y. Switch - Ignition	1
13	2771	Rod - Drag Link	1	95	1751	Ass'y. Switch - Starter	1
14	2711	Ass'y. Tie - Rod	1	96	2846	Bolt - Rd. Hd. 1/4-20 x 3/4	2
15	915002-6	Nut - Hex. - Nylock 3/8-24	4	97	2784	Ass'y. Lever Control R.H. Throttle	1
16	915004-6	Nut - Hex. - Nylock 1/2-20	1	98	2785	Ass'y. Lever Control L.H. Throttle	1
17	2777	Pedal - Clutch	1	99	3797	Lever & Knob Ass'y.	2
18	S-50-75	Snap Ring - Truarc 3/4 Shaft	5	100	3329	Screw - Special	2
19	3017	Shaft	1	101	915000-6	Nut Hex. Nylock 1/4-28	2
20	2891	Arm	1	102	4190	Bracket - Control R.H.	1
21	3979	Arm - Clutch Rod Pivot	1	103	3330	Washer	4
22	933158	Roll Pin 1/8 x 1 1/4	2	104	3798	Cable - Ass'y. Control - Throttle	1
23	2731	Washer	1	105	4191	Bracket - Control L.H.	1
24	1623	Pulley - Idler	1	106	4034	Cable Ass'y. Control - Choke	1
25	1536	Bushing	1	107	3023	Retainer - Cable	2
26	908035-6	Bolt - Hex. 3/8-16 x 1 1/4 Nylock	7	108	1770	Engine 9.6 H.P. Kohler	1
27	915113-6	Nut - Hex. - Nylock 3/8-16	20	109	3939	Elbow 1"-45° - Exhaust	1
28	2741	Rod - Clutch	1	110	3947	Nipple 1" Close - Exhaust	2
29	1861	Stud - Clutch Rod	1	111	2873	Muffler	1
30	S-52-3	Hair Pin Clip	2	112	2720	Pulley - Engine	1
31	1129	Spring - Clutch	1	113	1349	Key - Straight 1/4 x 1/4 x 1 1/2	1
32	2291	Bracket - Idler Belt Throw - Out	1	114	909862-4	Set Screw 3/16-18 x 3/8	2
33	2830	Ass'y. Lever - Parking Brake	1	115	2834	Guard - Engine	1
34	2835	Spring - Torsion	1	116	2833	Spacer	3
35	1001	Knob	1	117	909060-4	Bolt 1/4-20 x 1 1/2 Rd. Hd.	5
36	2758	Ass'y. Lift - Hydraulic	1	118	1787	Fitting 1/8-27 Straight - Nylon	1
37	2754	Block - Lift Pivot	2	119	1786	Ass'y. Fuel Strainer	1
38	908033-4	Bolt - Hex. - 3/8-16 x 3/8	8	120	943289-4	Nipple - Fuel Strainer	1
39	2744	Foot Rest R.H.	1	121	2739	Hose - Fuel Line	1
40	2745	Foot Rest L.H.	1	122	4256	Clip	2
41	2796	Pad - Rest R.H.	1	123	1217	Fitting - Elbow - Fuel Pump	1
42	2799	Pad - Rest L.H.	1	124	2815	Housing - Grille	1
43	909083-4	Bolt - Rd. Hd. 3/8-16 x 5/8	4	125	3764	"U" Bolt	2
44	2713	Ass'y. Steering (See page 9 for Breakdown)	1	126	2810	Grille	1
45	933192	Roll Pin 3/16 x 1 1/2	2	127	3699	Speed Nut	2
46	2708	Grommet	1	128	3368	Ass'y. Wheel Tire & Tube - Front	2
47	2817	Steering Wheel	1	129	3369	Ass'y. Wheel & Bearing	2
48	915235-4	Nut - Hex. - Jam 3/8-18	1	130	3370	Cone & Bearing	4
49	2847	Insert - Steering Wheel	1	131	3371	Cup - Bearing	4
50	2718	Fuel Tank	1	132	3373	Seal - Bearing	2
51	2728	Block - Wood	2	133	1656	Tire	2
52	2717	Strap	2	134	1657	Tube	2
53	3698	Speed Nut	4	135	3372	Hubcap	2
54	926317-4	Screw - #14 x 3/4 Rd. Hd. Self Tapping	6	136	915035-4	Nut - Castle 3/4-16	2
55	2714	Cap - Tank	1	137	932019-4	Cotter Pin 1/8 x 1 1/2	2
56	3926	Hitch	1	138	2845	Ass'y. Wheel & Tire - Rear	2
57	3988	Pin	1	139	2715	Wheel	2
58	2814	Ass'y. Cable & Yoke	1	140	2722	Tire	2
59	932121-4	Pin - Clevis 3/16 Dia.	2	141	2723	Tube	2
60	932001-4	Cotter Pin 1/16 x 3/4	2	142	2792	Ass'y. Cover - Shift Stick	1
61	3665	Clip - Cable	1	143	1385	Bolt - Hex. - Sems 1/4-20 x 1/2	11
62	2719	Ass'y. Pump - Hydraulic (See page 11 for Breakdown)	1	144	2795	Ass'y. Guard R.H.	1
63	4812	Pulley	1	145	2783	Guard	1
64	909861	Set Screw 3/16-18 x 1/4	2	146	2727	Frame - Seat	1
65	908015-4	Bolt - Hex. 3/16-18 x 1/2	4	147	908021-4	Bolt - Hex. Hd. 3/16-18 x 1 1/2	4
66	920082-4	Lockwasher 3/16 Dia.	4	148	915112-6	Nut - Hex. Nylock 3/16-18	4
67	920008-4	Washer - Plain 3/16	8	149	2818	Plug - Square Button	2
68	2721	Ass'y. Cylinder - Hydraulic	1	150	2787	Cushion - Seat	1
69	2747	Pin - Pivot	1	151	2788	Cushion Back	1
70	932124-4	Pin - Clevis 1/2 Dia.	1	152	2841	Cover - Hood	1
71	932017-4	Cotter Pin 1/8 x 1 1/2	1	153	1345	Thumb Screw	4
72	4834	Street Elbow 1/4 NPTF	2	154	1813	Pin - Tool	1
73	2729	Ass'y. Hose - Hydraulic	2	155	1591	Belt 47" Hyd.	1
74	908002-4	Bolt - Hex. 1/4-20 x 3/8	2	156	1592	Belt 82" Drive	1
75	915111-6	Nut - Nylock 1/4-20	10	157	1593	Belt Engine to Gen.	1
76	2712	Battery	1	158	2829	Decal - "953"	2
77	2725	Angle - Battery Clamp	1	159	4410	Decal - Wheel Horse Emblem	1
78	2724	Hook - Battery	2	160	2843	Decal - Steering Wheel Insert	1
79	2848	Ass'y. Wiring Harness	1	161	4418	Decal - Shift & Serial Number	1
80	4432	Wire - Ground	1	162	4058	Wire Ass'y.	2
81	4802	Switch - Push - Pull	1	163	4045	Bracket - Head Light	2
82	2836	Bracket - Headlight	1	164	2895	Gasket - Head Light	2
				165	4801	Lens & Housing Ass'y.	2
				166	2894	Bulb - Head Light	2
				167	926359-4	Screw	6

- A BALL CUP
- B BEARING BALLS
- C CAM & TUBE ASS'Y.
- D JAM NUT
- E SELF-LOCKING NUT
- F ADJUSTING PLUG
- G HOUSING
- H TAPER STUD
- I PLAIN WASHER
- J LOCK NUT (Taper Stud)
- K WHEEL NUT
- L FELT WASHERS
- M BUSHINGS
- N SPACER
- O JACKET TUBE
- P RETAINING RING
- Q SEAL
- R SEAL RETAINER
- S LEVER ARM (with Cross Bolt)



510200 3

ADJUSTMENT AND LUBRICATION OF STEERING GEAR

ADJUSTMENTS

When making adjustment free the steering gear of all load, preferably by disconnecting the lever arm, and loosen the bracket clamp on steering gear jacket tube.

If the ball thrust bearings (A, B) on the cam (C) must be adjusted, make the adjustment I before making the side adjustment II.

I. ADJUSTMENT OF BALL THRUST BEARINGS ON CAM.

Adjust to a barely perceptible drag but allow the steering wheel to turn freely (with the thumb and forefinger lightly gripping the rim).

Before making this adjustment, loosen (approx. 2 turns) the jam nut (D) and the cross bolt self-locking nut (E) to free the taper stud in the cam groove.

Using a "wide blade" screw driver carefully turn clockwise the adjustable plug (F) in the bottom end of the housing (G) and, at the same time, test the adjustment by turning the steering wheel as described above. When adjustment is correct, restake adjusting plug.

Follow this with Adjustment No. II.

II. ADJUSTMENT FOR MINIMUM BACKLASH OF TAPERED STUD IN CAM GROOVE. (See Fig. 1 for access hole.)

Adjust so that a very slight drag is felt through the mid-position while turning the steering wheel slowly from one extreme position to the other.

Backlash of stud (H) in the groove shows up as backlash at steering wheel and at end of lever arm (Fig. 1).

The groove in the cam (C) is purposely cut shallower, therefore narrower, in the mid-position range of stud travel to provide close adjustment where usually the straight-ahead-driving action takes place. It also makes this close adjustment possible after normal wear occurs without causing a bind elsewhere.

Therefore, adjust through the mid-position. Do not adjust in the end positions as backlash at these points is normal and not objectionable.

To adjust to take up backlash, slide a .100" thick spacer between lever and housing face. Tighten self-locking nut (E) (approx. 30-35 inch lbs.) until space is tight. Loosen nut just enough to remove the spacer. Then assemble jam nut (D) and tighten to 40 pounds torque. Next, loosen lock nut (J) on taper stud (H). With gear in straight-ahead position, turn stud (H) clockwise until adjustment is correct. Hold stud from turning and tighten nut (J) to 40 ft. lbs. torque. Give gear final test by turning through full range of travel.

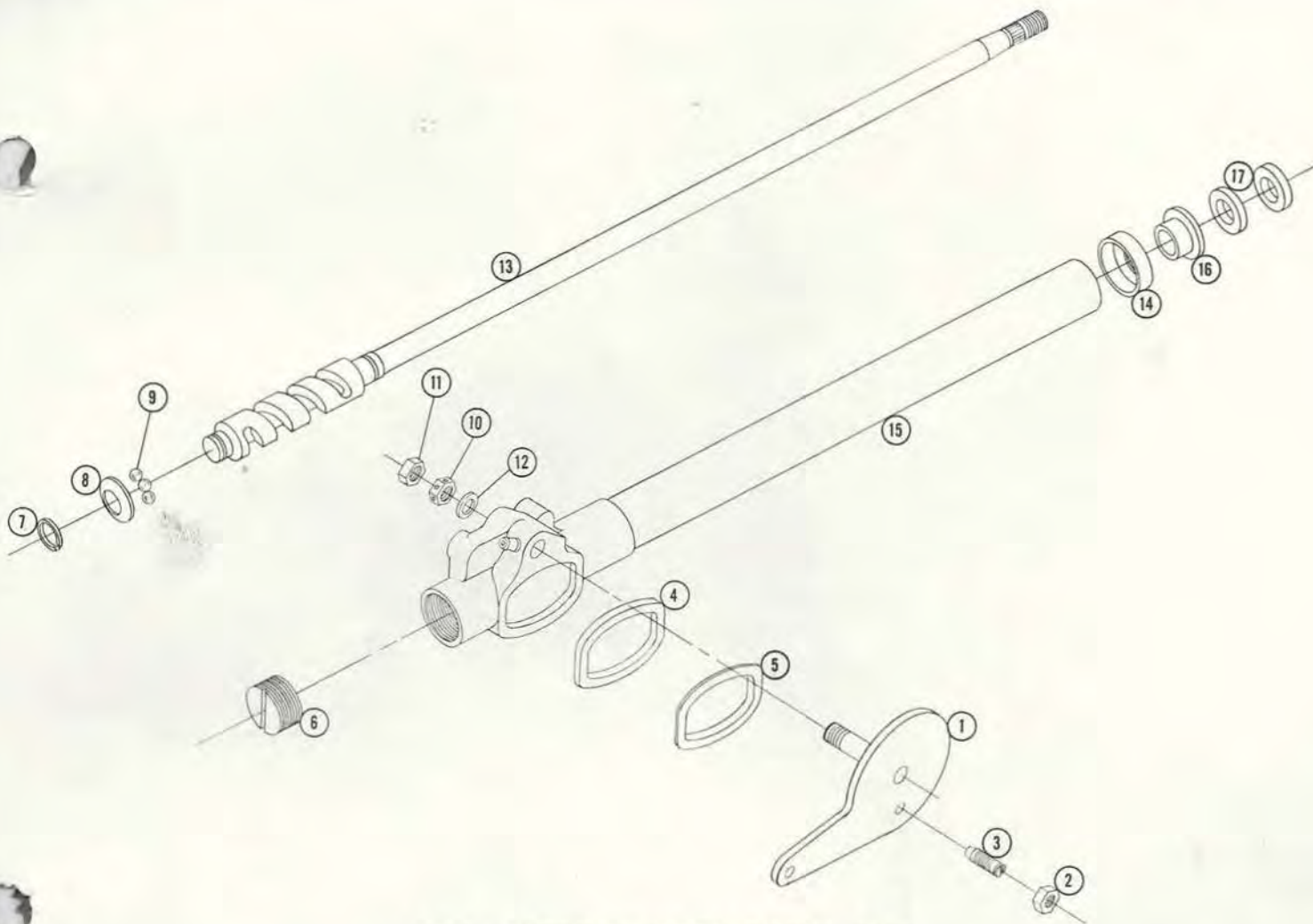
Secure the gear at all points loosened prior to making the adjustment. Also check tightness of mounting bolts and nuts. CAUTION: Steering gear mounting bolts should be torqued 25-30 ft. lbs. max. (See Fig. II for access holes.) With all supporting brackets clamped tight, turn steering wheel to see if any stiffness exists. If so, the column is probably out of alignment and needs correcting. (Refer paragraph on "Column Alignment.")

LUBRICATION

Lubricate through the fitting in the housing. Fill housing slowly until lubricant begins to seep out. Keep housing full by adding lubricant periodically according to usage. Note: The gear is designed to use a "semi-fluid" lubricant.

COLUMN ALIGNMENT

Alignment of the column is of paramount importance. The STEERING COLUMN MUST NOT BE SPRUNG IN ANY DIRECTION FROM ITS FREE POSITION. To determine whether misalignment exists, release upper column bracket and note whether the column moves to a different position, its free position. If it does, it has been out of line and should be re-clamped in the new position. Caution: If the column has been permanently bent because of severe misalignment, the above test may not be reliable, and replacement of the tubes will be necessary.



953 STEERING GEAR PARTS LIST

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

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	3780	Lever Arm (with cross bolt)	1	10	915117-6	Self - Locking Nut $\frac{5}{8}$ -11 Hex.	1
2	915087-4	Lock Nut (taper stud) $\frac{1}{2}$ -20 Hex.	1	11	915240-4	Jam Nut $\frac{5}{8}$ -11 Hex.	1
3	3781	Taper Stud	1	12	3789	Plain Washer	1
4	3782	Seal	1	13	3791	Cam & Tube Ass'y.	1
5	3783	Seal Retainer	1	→ 14	3793	Spacer	1
6	3784	Adjusting Plug	1	← 15	3788	Housing & Jacket Ass'y.	1
7	3785	Retaining Ring	2	→ 16	3794	Bushing	1
8	3786	Ball Cup	2	→ 17	3795	Felt Washers	2
→ 9	3787	Bearing Balls	20				

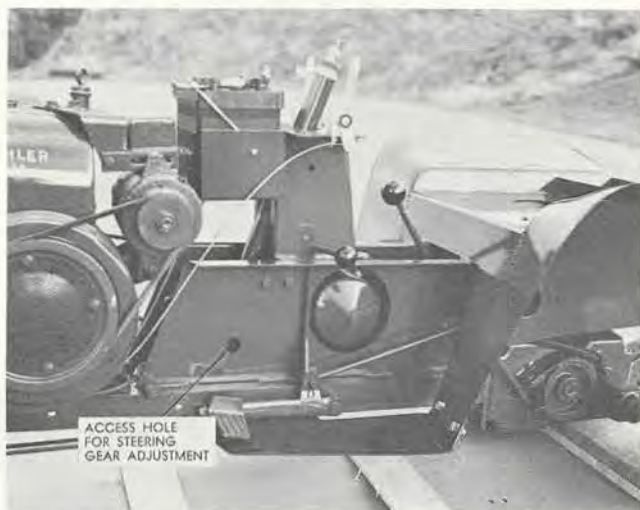
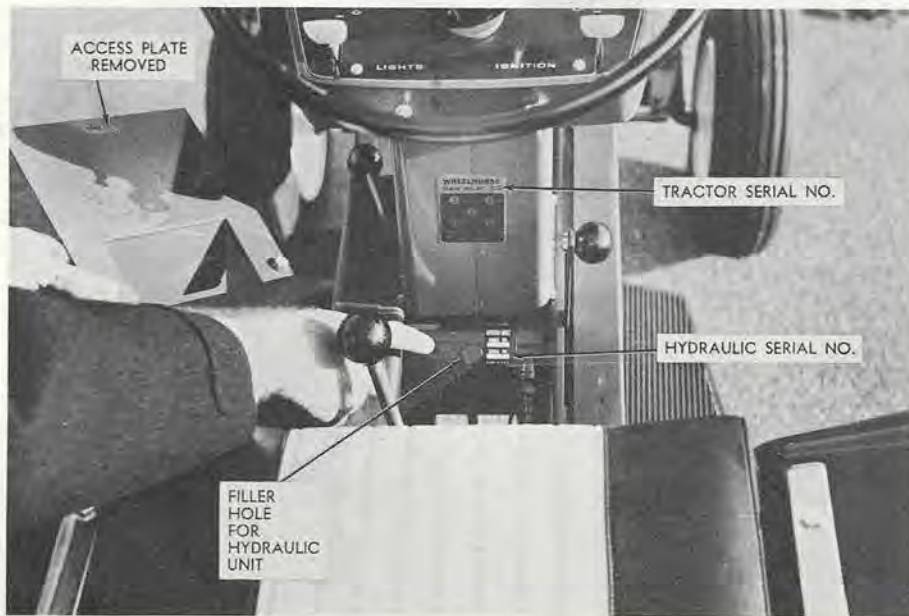


FIGURE I



FIGURE II



HYDRAULIC UNIT

DESCRIPTION

The Hydraulic Unit system built into your tractor is designed to give you hydraulic power for your attachments with fingertip control. 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 with the cylinder. The unit has a built-in safety valve to eliminate overloading of the hydraulic system and tractor attachments.

SERVICING PUMP

CAUTION: The hydraulic unit is **NOT FILLED** and you must **ADD OIL** before starting engine to avoid damage to pump. Remove filler plug and fill to top of hole with fluid. **NOTE:** Filler plug is mounted off the vertical center line of the unit. This is to prevent over filling. An air space must be left in the top of tank, so no attempt should be made to completely fill reservoir. **USE ONLY WHEEL HORSE OIL** (Number 4822). Replace plug and tighten.

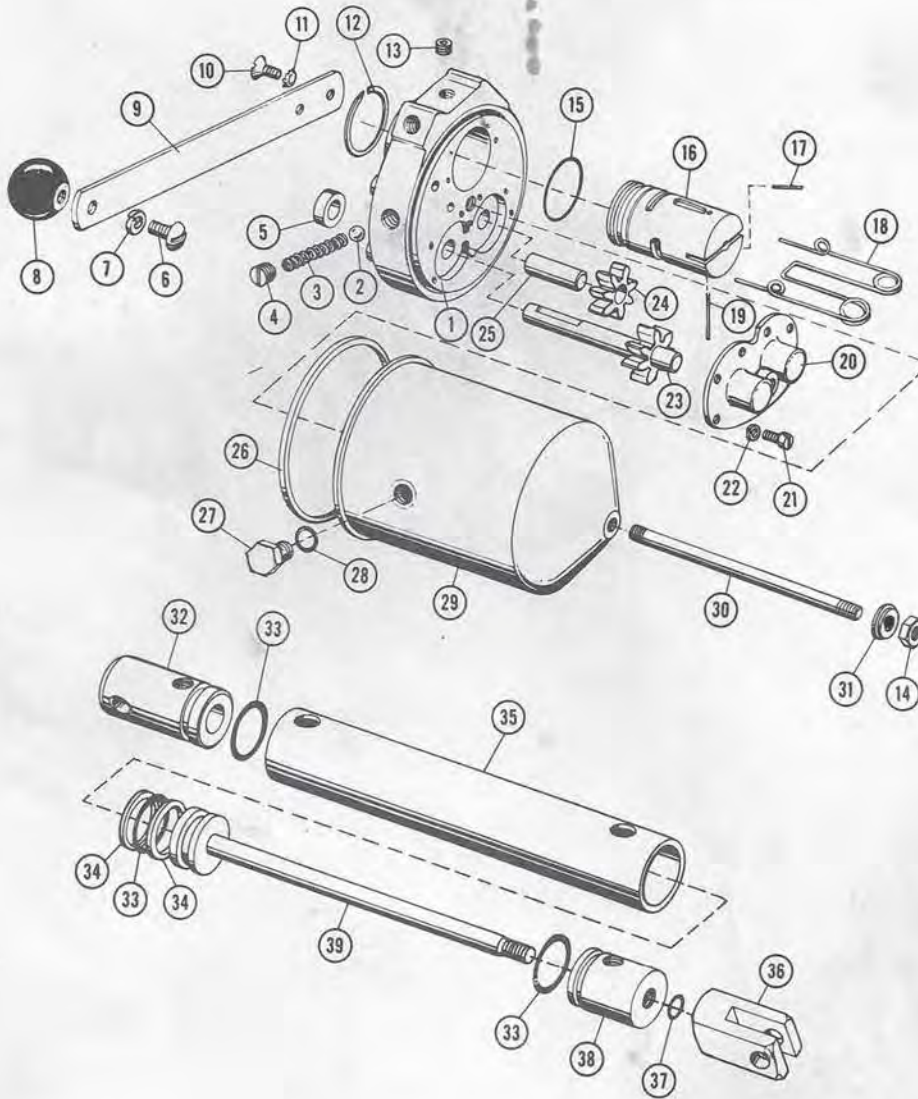
OPERATION

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. After running unit a short time, check all fittings for fluid leaks.

IMPORTANT — Never run unit without fluid or warranty will be voided. If unit is taken apart for service make sure all parts are clean before assembling unit. After service it is advisable to install new fluid. 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 harm to unit over a period of time.

TROUBLE SHOOTING CHART

Trouble	Probable Cause	Remedy
Slow action with tractor engine at 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
	Slow engine RPM	Speed engine
Attachment not holding in raised position	Oil leak in system	Check all connections
	Improper type of oil	Use Wheel Horse (4822)
	Oil leak at seals	Replace
Excessive noise or chattering	Insufficient oil	Fill with proper oil
	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)
Excessive Heating	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



953 HYDRAULIC UNIT PARTS LIST

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

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	4152	Body	1	21	1451	Cover Screw #10-32 x 7/16	6
2	4831	3/16 Relief Ball	1	22	920120-4	Lockwasher #10 Ext. Tooth	6
3	4832	Spring	1	23	4841	Drive Shaft Assembly	1
4	4833	Plug	1	24	4839	Idler Gear	1
5	1447	Shaft Seal	1	25	4840	Idler Shaft	1
6	909084-4	Screw 3/8-16 x 3/4	1	26	4842	Gasket	1
7	920083-4	Lockwasher 3/8	1	27	908203-4	1/2-20 x 1/2 Hex. Bolt	1
8	1001	Knob	1	28	4188	Washer	1
9	4153	Handle	1	29	4157	Reservoir	1
10	908817-4	Screw 1/4-20 x 3/8	2	30	4187	Stud	1
11	920081-4	Lockwasher 1/4 Dia.	2	31	1453	Washer	1
12	1449	Spirolox Snap Ring	1	32	4155	Head	1
13	943459-4	Allen Hd. Pipe Plug	1	33	1450	"O" Ring	3
14	915236-4	Hex. Jam Nut 3/8-16	1	34	1457	Back-Up Washer	2
15	1455	"O" Ring	1	35	4846	Tube	1
16	4154	Spool Valve	1	36	4156	Clevis	1
17	933169	Roll Pin 5/32 x 1 1/8	1	37	1456	"O" Ring	1
18	4837	Return Spring	1	38	4848	Guide	1
19	933158	Roll Pin 1/8 x 1 1/4	1	39	4849	Piston Rod Assembly	1
20	4838	Cover	1				



953 TRANSMISSION PARTS LIST

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

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	4160	Case - Transmission R.H.	1	40	2827	Shaft - Differential	1
2	1533	Bearing - Ball	2	41	908044-4	Cap Screw - Hex. $\frac{3}{8}$ -16 x 4	4
3	3915	Pin - Locating	2	42	1022	Nut - Hex. Hug - Lock $\frac{3}{8}$ -16	4
4	1532	Bearing - Needle	1	43	2824	Axle - Rear R.H.	1
5	1529	Bearing - Needle	2	44	2825	Axle - Rear L.H.	1
6	1508	Bearing - Needle	2	45	3912	Gasket	1
7	1526	Bearing - Needle	1	46	2826	Block - Differential	2
8	1213	Seal - Oil $1\frac{1}{8}$ I.D.	2	47	4161	Case - Transmission L.H.	1
9	1303	Seal - Oil $\frac{1}{4}$ I.D.	1	48	1530	Bearing - Needle	1
10	3503	Fork - Shift	2	49	1531	Bearing - Needle	1
11	3515	Rail - Front Shift	1	50	943460-4	Plug - $\frac{1}{4}$ Pipe	1
12	3516	Rail - Rear Shift	1	51	2828	Washer - Thrust	2
13	933156	Pin - Roll $\frac{1}{8}$ x 1	2	52	943420-4	Plug $\frac{3}{8}$ Pipe Sq. Hd.	1
14	3517	Ball - Stop	2	53	908038-4	Screw - Hex. Cap $\frac{3}{8}$ -16 x 2	5
15	3518	Spring - Stop	1	54	908043-4	Screw - Hex. Cap $\frac{3}{8}$ -16 x $3\frac{1}{2}$	1
16	3573	Shift Pin - Stop	1	55	915113-6	Nut - Nylock $\frac{3}{8}$ -16	9
17	3522	Gear - Input Drive	1	56	2726	Stick - Shift	1
18	1518	Bearing - Needle	1	57	3514	Collar - Shift	1
19	3907	Shaft - Spline	1	58	933168	Pin - Roll $\frac{5}{32}$ x $1\frac{1}{16}$	1
20	S-50-75	Snapping Truarc $\frac{3}{4}$ Shaft	1	59	909854-4	Screw - Soc. Hd. Set $\frac{1}{4}$ -20 x $\frac{3}{4}$	1
21	3523	Gear (Hi & inter)	1	60	915111-6	Nut - Hex. Lock $\frac{1}{4}$ -20 Nylock	1
22	3524	Gear (Low & Reverse)	1	61	3577	Boot - Shift Lever	1
23	3526	Gear - Spline Shaft	1	62	2709	Knob - Shift	1
24	3910	Cluster - Shaft	1	63	3902	Drum - Brake	1
25	937014	Key #9 Woodruff	3	64	937022	Key #15 Woodruff	1
26	3525	Gear - Cluster	1	65	S-50-100	Snap Ring 1" Shaft	1
27	1504	Bushing - Bronze	2	66	4437	Band - Brake	1
28	3528	Pinion - Cluster Shaft Reduction	1	67	908002-4	Screw - Hex. Cap C.P. $\frac{1}{4}$ -20 x $\frac{5}{8}$	2
29	3527	Gear - Cluster Shaft Reduction	1	68	920081-4	Washer - C.P. $\frac{1}{4}$	2
30	4204	Gear - Reverse Idler	1	69	2707	Pulley	1
31	1516	Bushing - Bronze	1	70	909862-4	Set Screw $\frac{5}{16}$ -18 x $\frac{5}{16}$	2
32	3909	Pin - Reverse Idler	1	71	908035-4	Bolt - Hex. $\frac{3}{8}$ -16 x $1\frac{1}{4}$	4
33	4166	Gear - Brake Shaft	1	72	920083-4	Lockwasher $\frac{3}{8}$ Dia.	4
34	2821	Gear - Ring	1	73	1488	Hub - Rear Wheel	2
35	2822	Case - Differential R.H.	1	74	909554-4	Set Screw - Sq. Hd. $\frac{3}{8}$ -16 x 1	2
36	2823	Case - Differential L.H.	1	75	1349	Key - Straight $\frac{1}{4}$ x $\frac{1}{4}$ x $1\frac{1}{2}$	2
37	2820	Gear - Axle	2	76	3935	Rod - Brake	1
38	933217	Pin - Roll $\frac{1}{4}$ x $1\frac{1}{2}$	2	77	1487	Lug Bolt - Wheel Hub	8
39	2819	Gear - Differential Pinion	2	78	S-52-3	Hair Pin	1

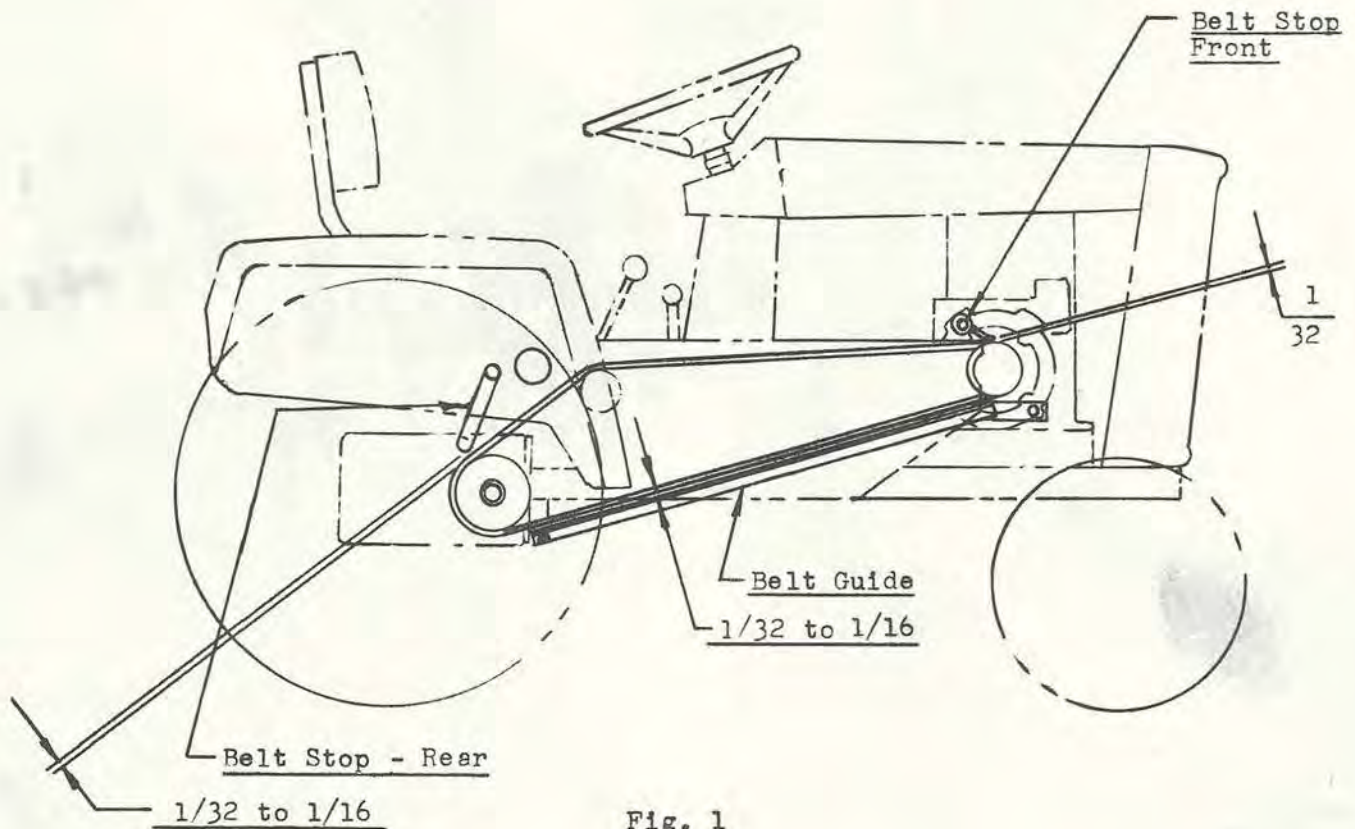


Fig. 1

SUPPLEMENT SHEET #1 953 Tractor Manual Revisions

- I. **FIG. 1** — A Belt Guide, Part No. 4195 added. It attaches to the Frame and to the side of Engine and runs along bottom side of Drive Belt. It attaches to the Frame with a Bolt ($\frac{3}{8}$ -16 x 1) Part No. 908034-4 and Nut ($\frac{3}{8}$ -16) Nylock, Part No. 915113-6 and to the Engine with a Bolt ($\frac{1}{16}$ -14 x 1) Part No. 908046-4 and Lock Washer $\frac{1}{16}$ Dia., Part No. 920084-4. The Guide is to be tightened to Tractor only when it is placed along bottom of Belt with $\frac{1}{32}$ " to $\frac{1}{16}$ " clearance.
- II. **FIG. 1** — A Belt Stop (Rear), Part No. 4486 fits inside the Right Rear Fender with a Bolt ($\frac{3}{8}$ -16 x $\frac{3}{4}$) Part No. 908032-4 and Lock Washer $\frac{3}{8}$ Dia., Part No. 920156-4 and extends down to top of Drive Belt on Transmission Pulley. The Belt Stop is to be tightened only when it is $\frac{1}{32}$ " to $\frac{1}{16}$ " away from top of Belt.
- III. **FIG. 1** — A Belt Stop (Front), Part No. 4796 fits on Engine with a bolt 908046-4 ($\frac{1}{16}$ -14 x 1) and Plain Washer 920010-4 and Lock Washer 920084-4. It extends down to Belt on Engine Pulley. It is to be tightened only when it is $\frac{1}{32}$ " away from top of Belt.

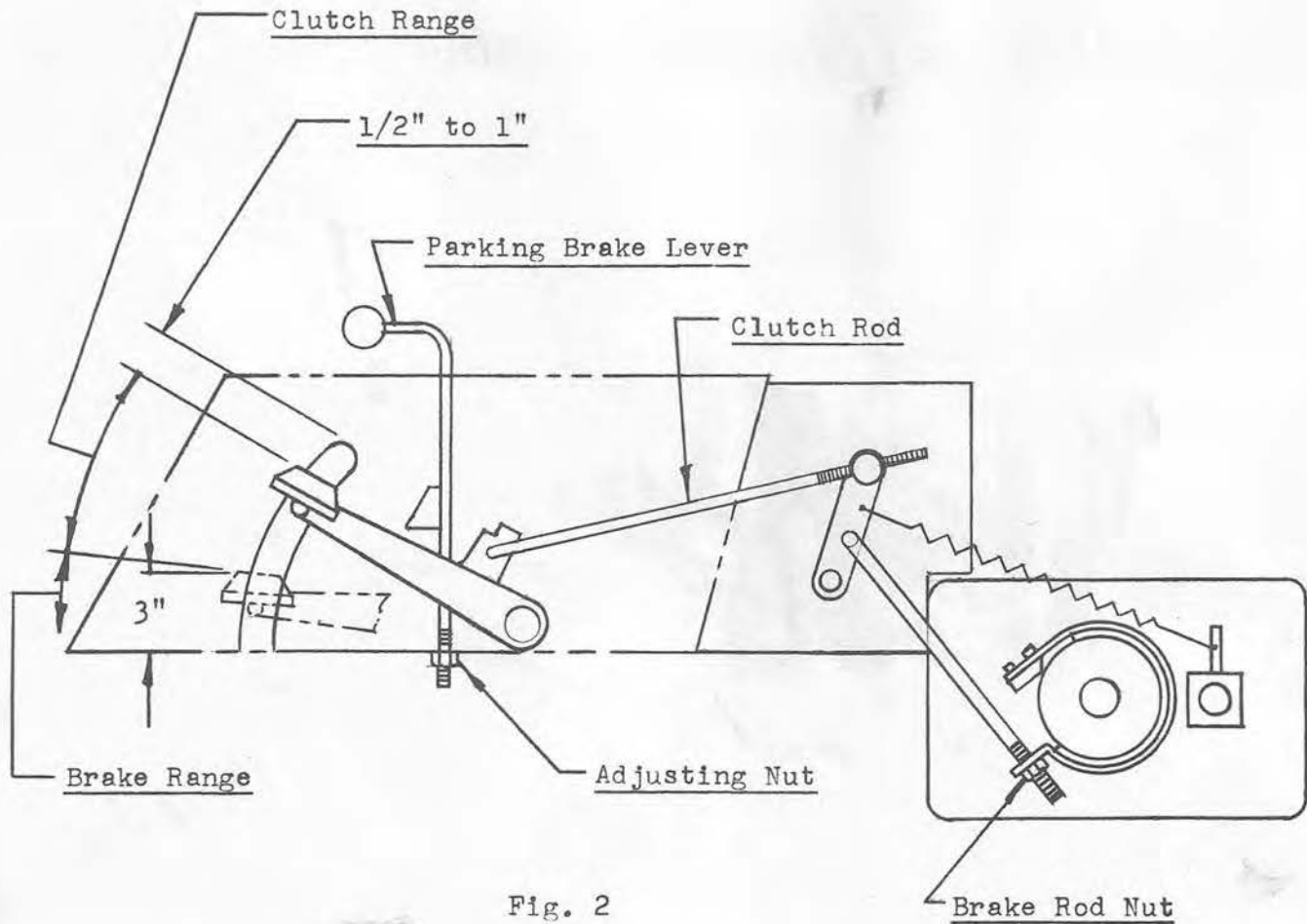


Fig. 2

IV. IMPORTANT: ADJUSTMENT OF CLUTCH BRAKE PEDAL. ADJUST AS FOLLOWS:

1. Adjust Pedal to $\frac{1}{2}$ " to 1" position by adjusting Clutch Rod.
2. Depress Pedal to approximately the 3" dimension and swing Parking Brake Lever until it holds Pedal at the 3" position.
3. Tighten Brake Rod Nut until Brakes lock.
4. This procedure must be followed after 10-15 hours of operation on initial run-in of Tractor. This adjustment should be repeated if the Clutch Pedal approaches the top of the slot in the Belt Shield. Failure to adjust may result in failure of the main Drive Belt.

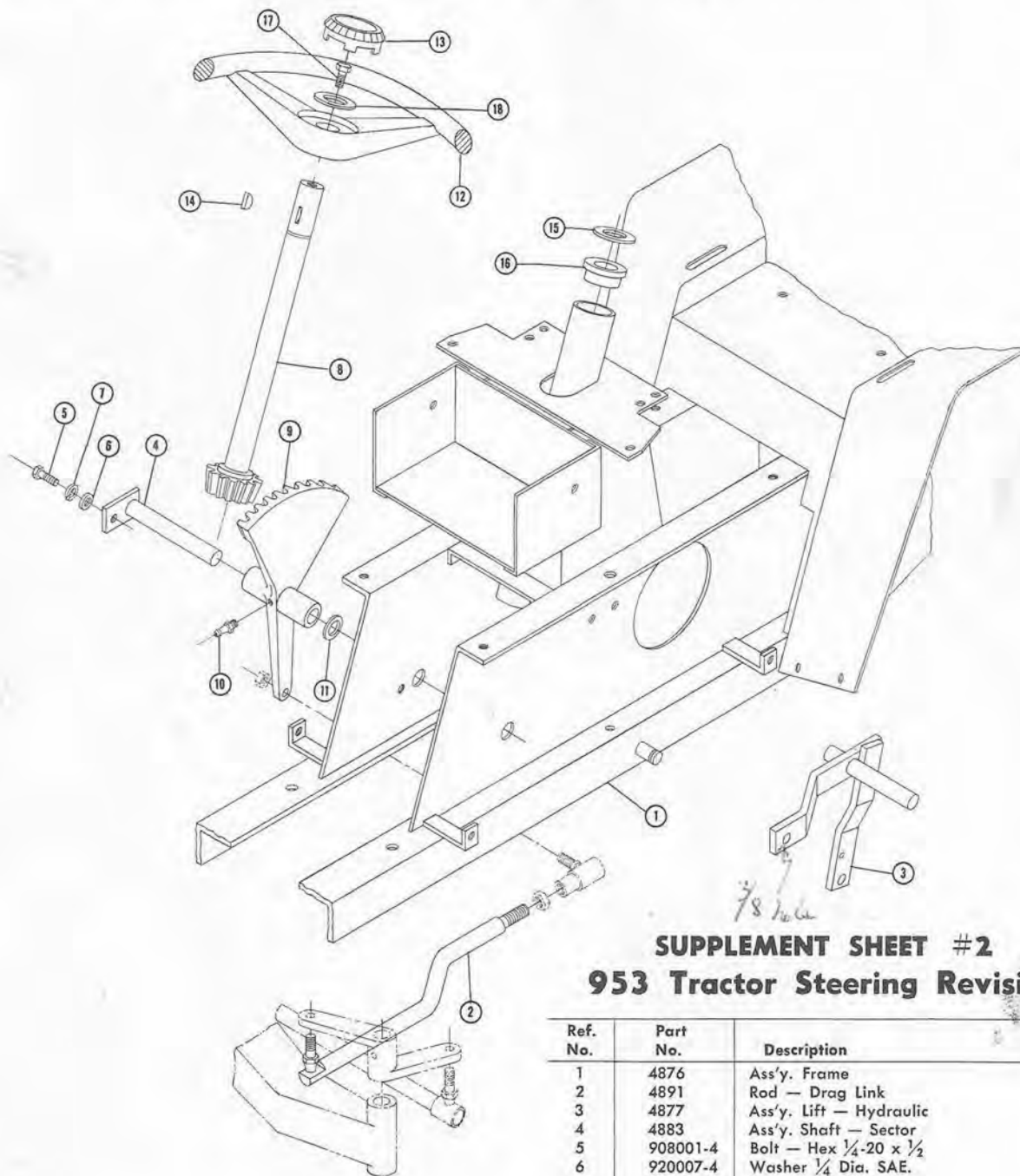
PARTS LIST CHANGES

PAGE NO.	ILLUSTRATION	REF. NO.	OLD NO.	NEW NO.
6	Steering and Wheel Assembly	21	3979	4199
6	Steering and Wheel Assembly	22	933158	933190 ($\frac{3}{16}$ x $1\frac{1}{4}$)
6	Main Frame Assembly	144	2795	2782
PAGE NO.	ILLUSTRATION	REF. NO.	LOOSE PARTS ADDED	
6	Body and Seat Assembly	86	2884 (Nut Hex. 1"-27 Thin)	
6	Body and Seat Assembly	86	2885 (Lock Washer 1" Dia. Thin)	
6	Body and Seat Assembly	86	2883 (Lamp Bulb)	
12	Transmission Parts List	69	909543 (Set Screw $\frac{5}{16}$ -18 x $\frac{7}{8}$)	
12	Transmission Parts List	69	915235-4 ($\frac{5}{16}$ -18 Jam Nut)	

Wheel Horse® PRODUCTS, INC.



Due to the great demand for 953 tractors, the steering unit previously obtained from a supplier is being manufactured by Wheel Horse. To meet the increased production rate, the new parts shown below have been substituted for similar parts shown on page 6 in the 953 tractor manual.



SUPPLEMENT SHEET #2 953 Tractor Steering Revision

Ref. No.	Part No.	Description	No. Req'd.
1	4876	Ass'y. Frame	1
2	4891	Rod — Drag Link	1
3	4877	Ass'y. Lift — Hydraulic	1
4	4883	Ass'y. Shaft — Sector	1
5	908001-4	Bolt — Hex 1/4-20 x 1/2	1
6	920007-4	Washer 1/4 Dia. SAE.	1
7	920081-4	Lockwasher 1/4 Dia.	1
8	4885	Ass'y. Shaft and Pinion	1
9	4880	Sector Steering	1
10	1030	Fitting — Grease	1
11	S-57-62	Washer — Shim	2
12	4875	Wheel — Steering	1
13	2897	Insert	1
14	937014	Key #9 Woodruff	1
15	5209	Washer-Shim	1
16	4890	Bushing — Steering Column	2
17	908031-6	Bolt Hex — Nylock 3/8-16 x 5/8	1
18	2844	Washer	1