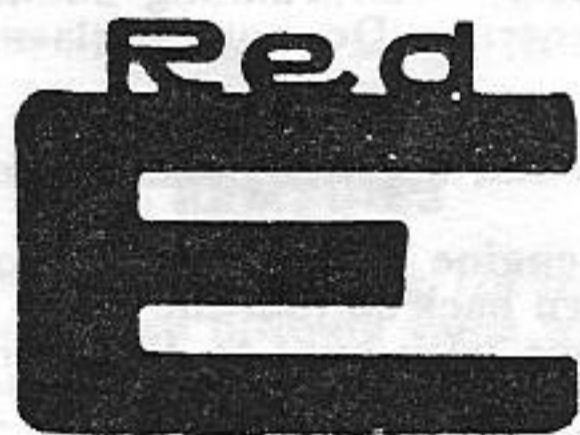


# INSTRUCTION BOOK

## Repair Parts Price List

No. 103

UNIVERSAL



TRACTOR

MANUFACTURED BY

**Pioneer Manufacturing Co.**

West Allis, (Milwaukee) Wisconsin

## SETTING-UP AND STARTING INSTRUCTIONS

### FOR THE RED-E TRACTOR

Carefully uncrate motor, making sure of having one starting rope, one oil can, one pair drawbars, one set steering handles, two pair drawbar pins, and one cultivator complete as shown by either illustration No. 1 or No. 2 in the Catalog.

Assemble handles to handle brackets. Turn clutch rod into knuckle joint and see that the notches on clutch handle fit with slots in handle plate on wooden handle. The clutch rod has two nuts which have been set and locked at the factory. Therefore all you need to do is to turn the clutch rod into the knuckle joint up to the two nuts. However, when it is necessary to adjust this clutch rod, be sure you follow the special instructions for adjusting which you will find on page 5, marked "Instructions for Adjusting Clutch." Insert the cotter pin. Place gas control cable and control wire in swivel pin on carburetor arm and tighten set screw. Turn spark plug in tightly. Go over the machine carefully and see that all nuts are securely tightened. Some may have come loose in shipping. CHECK DAILY for a week.

Put three quarts of Mobile B (Number 60), or any other good grade of heavy tractor oil into the crankcase through the breather pipe located at top of crankcase and covered with an air filter. Fill crankcase until oil runs out of petcock located on lower right hand side of crankcase. Replace air filter by pressing in place by hand, making sure that the screen disc covers the end of the pipe. For the first tank full of gasoline, add  $\frac{1}{2}$  pint of medium grade cylinder oil with gasoline to help lubricate while the engine is new and stiff. Change oil completely after running about 40 or 50 hours and flush out crankcase with kerosene. Do not be alarmed if you find small bronze flakes in the oil.

Fill the gas tank with gas and open gas shut-off valve.

To crank the engine, turn engine slightly over to compression, clockwise, until it seems to stick, then turn back so that the notch in the flywheel comes directly to the top; insert rope with knot to left of notch in flywheel and wrap rope clockwise around the flywheel, holding the handle with the right hand, and with left hand pull the flywheel back so as to take up all of the slack in the rope. Then, with the left hand, close choke in carburetor and, at the same time, pull rope with a sudden, SWIFT PULL.

After the engine is running, turn needle valve slightly one way or the other until engine fires perfectly.

To start the tractor in motion, QUICKLY push forward the clutch lever control near the right handle. It is not necessary to speed up the machine before putting the tractor in motion as the engine has plenty of power to pick up the load.

Adjust the speed control located near left handle, to give desired speed.

To stop tractor, pull, or rather give, a SNAPPY JERK to the clutch lever and, at the same time, lift up on handles slightly.

To stop engine, press cut-out button on rear of magneto, or lay gasoline cable on spark plug for shorting the ignition. Do not forget to take off after engine stops.

## **! CAUTION !**

Never crank engine until you have seen that the clutch is thrown out. Clutch handle is pulled back towards the operator when operator is facing the machine from the steering handles. Use extra heavy oil, Number 60 or Mobile B.

When installing the automatic tool steering device, be sure to mark the exact center of the tool bar and then see that the drawbars from the tractor to the bar are either parallel or placed no more than two inches farther apart at the bar than they are at the tractor and are equidistant from the center tool punch mark. See that your swivel trailer wheels are properly set on the drawbars. One should not be ahead of the other. Neither should one wheel be lower than the other. See illustration No. 49 in the catalog for setting cultivator standard on tool bar. The automatic double swivel drawbars will accurately guide the tools automatically along crooked rows by simply guiding the tractor itself, if the tools are properly lined up. If they are not, the carriage will go to one side or the other. If you want to do close work on small plants, order Hitch No. 100A in the price list for straddle row work.

## **POSSIBLE TROUBLE**

### **ENGINE FAILS TO START:**

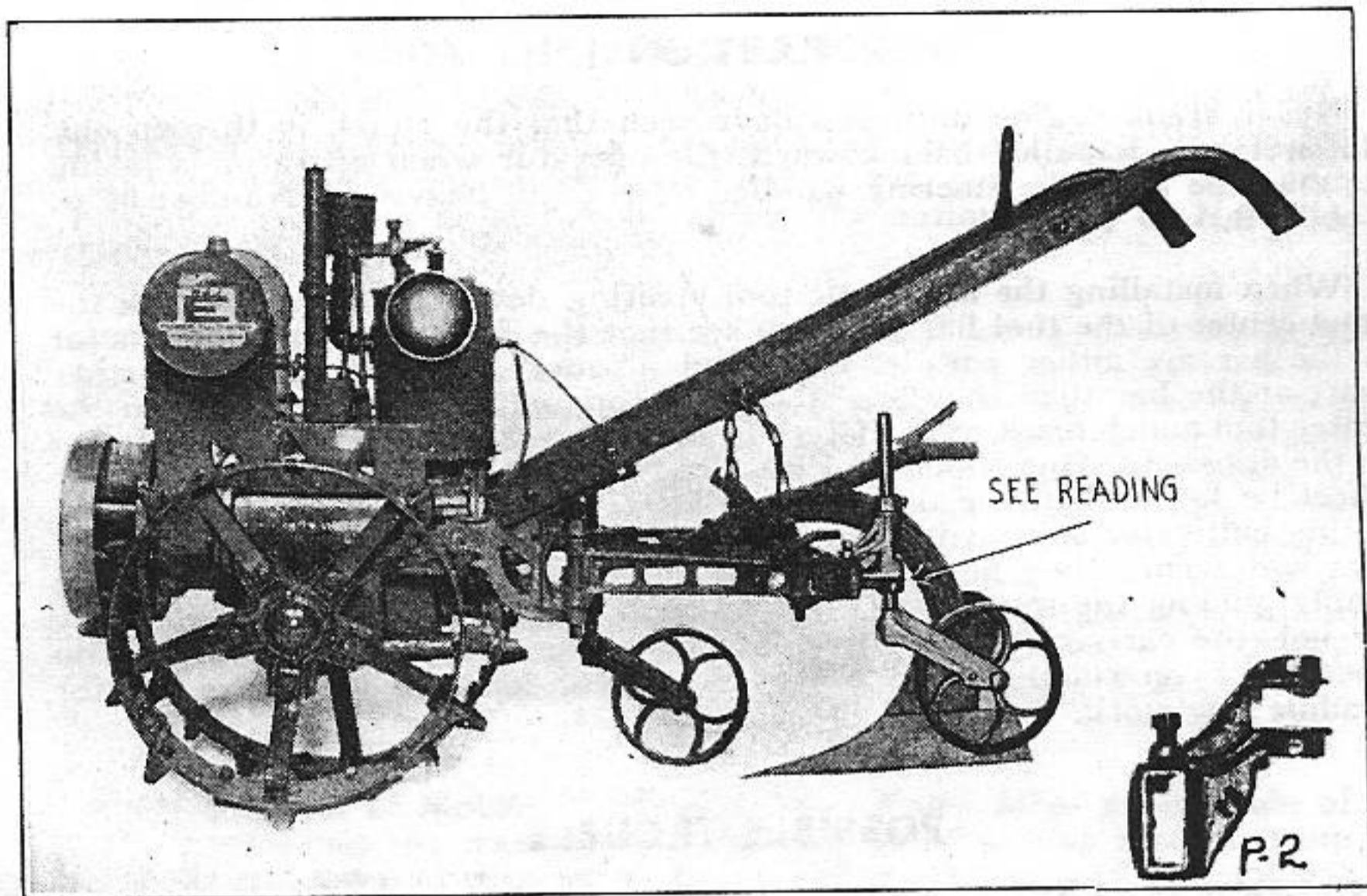
1. Valves stick.
2. Leaky valves.
3. Gas supply shut off.
4. Spark Plug short circuited or Magneto Cable loose or dirty.
5. Not the proper clearance between rocker arms and valves.
6. Push rods out of proper position.

## **REMEDIES**

1. Valve may be released by removing rocker arm over said valve and work up and down by hand, also flushing same with oil.
2. See repairman or regrind valves. Take a pair of pliers and take hold of the valve stem above the spring and turn it around a few times after putting oil and kerosene around the stem.
3. Go over gasoline system carefully; see that you have a supply in tank and that stop cock is open.
4. Remove spark plug, clean carbon deposit and see that points do not touch, set at distance of worn dime.
5. Clearance between rocker arms and valves to be  $\frac{1}{32}$ ", using screws on rocker arms for adjustment.
6. Proper position of intake push rod is first opening in tappet bushing by cylinder air hood. The exhaust push rod is the one towards the flywheel.

## **! CAUTION !**

The hood on your tractor should be taken off about once a year and the dirt removed from the top of the crankcase and around the cylinder. The flywheel acts as a fan to draw cool air over the cylinder head and cylinder and when the ground is dry, dust accumulates on top of the crankcase and may stop altogether the action of the fan in the flywheel. It will only take a few minutes to remove the hood and give your machine a good cleaning. Take care of your machine as you would your automobile. IT PAYS!



## INSTRUCTIONS FOR ADJUSTING NEW TYPE PLOW

The above photograph illustrates the Red-E Tractor No. 11 Model with Plow Wheel No. 104B on the land side and Swivel Trailer Wheels No. 98 attached to the drawbars. You will also find P-2 casting in your shipment. This casting may be put on the Plow Tool Bar on the land side and the Swivel Trailer Wheel on this side put in the P-2 Casting instead of the casting on the drawbar. This permits you to get a greater adjustment for deeper plowing. The picture above shows the drawbar clamp, Y22A, turned upside down, but this does not give as much adjustment as the P-2 Casting attached to the Plow Tool Bar.

On the ratchet for lifting the plow out of the ground there is a slot so that this ratchet can be set up or down and this should be done so as to get your plow to run perfectly level on the bottom. As you know, a plow does not work satisfactorily if it rides on the nose or if it rides on the heel.

## MAGNETO

We put on the best high tension magneto with set spark; therefore it does not need any adjustment. The magnetos are tested by the manufacturers and tested again when put on to our machines and these magnetos have run for six to eight years without giving the owner any difficulty. See General Instructions for testing spark.

## CARBURETOR

See Instructions from the Manufacturer of the Carburetor.

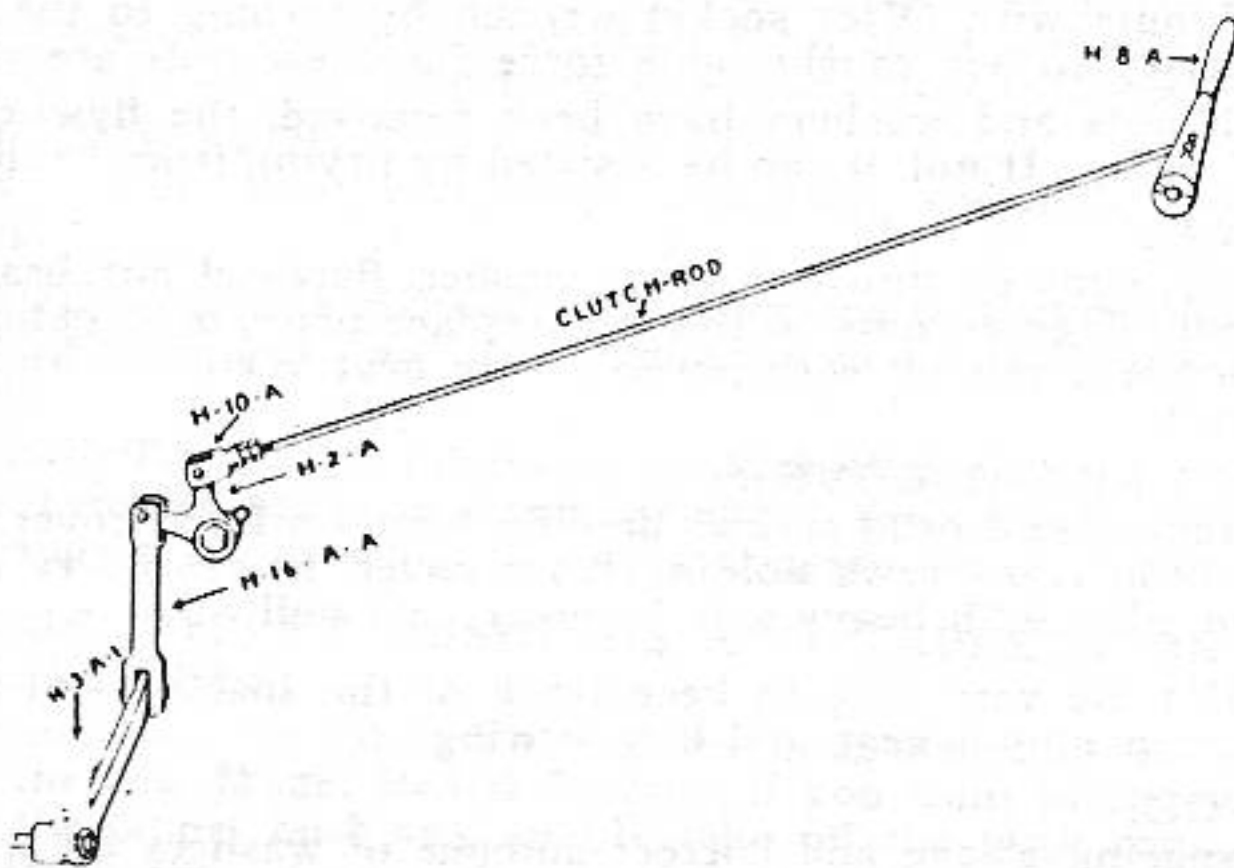
## AIR CLEANER

See Instructions right on the Air Cleaner itself. It is important that you take proper care of your Air Cleaner. The Air Filter on the breather pipe should be taken care of in the same way.

## INSTRUCTIONS FOR ADJUSTING CLUTCH

After you have assembled the wood handles, screw clutch rod into H-10-A and push this forward as far as possible which brings the clutch on the inside of the machine in gear. Now be sure you hold this casting forward while you shorten or lengthen the CLUTCH rod, so the other end may be put into the hole on the clutch handle H-8-A. When the clutch rod is put into the hole on the handle H-8-A, the handle should be in the forward groove of the side plate on the wooden handle. Then try to pull the handle back into the rear groove, as shown by the picture, and find out if the clutch is out. If it is not out, take the clutch rod out of the clutch handle H-8-A, and turn it a little farther into H-10-A casting, which, of course, shortens the clutch rod. When you have this adjusted properly, move the clutch handle H-8-A gently forward while the engine is running until you feel the clutch clicking on the inside of the engine. The drawing below shows the clutch assembly when the clutch is out of gear.

**Caution**—Do not run your tractor with the clutch just catching on these dogs, because you will chip them off if you do. Take the time to adjust this properly and you will have no trouble with the clutch.



## **GENERAL INSTRUCTIONS FOR TAKING DOWN AND ASSEMBLING RED-E TRACTOR**

To completely disassemble the tractor follow in order. To assemble, reverse the order. (See Cross-section cut of Engine on page 8.)

### **TO REMOVE CYLINDER HEAD:**

Remove spark plug and air cleaner, disconnect control wire and gas line from carburetor, loosen four nuts on top of head and pull off rocker arms and head.

### **TO REPLACE:**

Make sure the gasket sits properly in groove in head and rocker arms strike on center of valve stem.

### **TO REMOVE AIR HOOD:**

Loosen round head screw around bottom of hood, three hexagon cap screws on bottom of cylinder, remove breather cap and pull off hood.

### **TO REMOVE WHEELS:**

(CAUTION! 1930 and succeeding Models do not have taper end axle, but a square end. No keys or nuts are used.)

Take off hub caps by removing four round head screws on each cap. Remove both axle nuts by turning to left, loosen wheel dogs (with clutch disengaged) by turning both wheels in opposite directions at the same time until they bump; then reverse the directions until it again bumps. It may be necessary to reverse the wheels several times before the dogs can be pried off. In prying, use two screw drivers and work dog from opposite sides near key-way. Remove keys by driving a soft iron tool, similar to a chisel, straight in under the edge of key. The wheels should then slide off. Keep track of wheel spacing washers.

### **TO REPLACE:**

Replace spacing washers, wheels, wheel keys with ground end towards crankcase, wheel dog, lock washer, and nut. Make sure that nuts are tightened well. Replace the caps.

### **TO REMOVE FLYWHEEL:**

Remove pulley or plate (whichever it may be) by four screws. To hold flywheel, insert a bar similar to a crowbar into blades of flywheel. Remove both flywheel nuts with offset socket wrench by turning to the right. It may be necessary to use considerable force for these nuts are very tight.

After both nuts and washers have been removed, the flywheel should then slide off easily. If not, it can be assisted by prying from behind.

### **TO REPLACE:**

Replace key, slide on flywheel, brass washer, flywheel nut, brass washer and second nut. Tighten nuts to the left, replace plate, or if pulley is used, make sure that it is put on with pin in pulley near vertical with engine on top dead center.

### **TO REMOVE FRONT COVER:**

Take off four round head screws holding hood on front cover. Unscrew six hexagon head cap screws holding front cover, loosen cover by driving under bottom edge with heavy soft hammer, and pull off.

**CAUTION!** Be very sure to keep track of the spacing and number of washers between pinion gear and ball bearing.

### **TO REPLACE:**

Replace spacing sleeve and correct amount of washers on worm shaft. Replace spacing sleeve and gasket, front cover, six hexagon cap screws, and four round head screws.

#### TO REMOVE REAR COVER:

Remove collar on clutch shifter from clutch shaft. Remove clutch rod from clutch handle. Remove five screws holding cover and with clutch rod drawn way back, remove cover.

#### TO REPLACE:

In replacing, make sure crank pin is in the notch on magneto drive arm.

#### TO REMOVE MAGNETO:

Remove rear cover. Hold drive arm and remove nut and washer on end of magneto shaft. Remove screws underneath magneto and, if necessary, gently tap end of shaft, being careful not to injure the threads.

#### TO REMOVE CRANKSHAFT:

Remove connecting rod, piston, timing gears, and then remove shaft from back.

#### TO REPLACE:

In replacing timing gears, see that punch mark on pinion gear is between the two punch marks on cam gear. Be sure that cam shaft tappets are both down or on dead center.

#### TO REMOVE AXLE:

Loosen set screw in worm set collar with a good fitting screw driver. NOTE: Do not attempt to drive screw driver in slot.

Remove axle thrust plate by four cap screws, remove split washers, pry out axle thrust collar and remove key. Drive out axle from left to right of repairman.

#### TO REPLACE:

Replace with clutch, worm gear, and set collar in place. Replace Woodruff key, thrust collar, split washers, thrust plate, left axle bushing, felt packing, and packing washers. Tighten set screw in set collar with collar against worm gear and center punch lightly to prevent set screw from working out, should it come loose. Replace front cover, wheels and flywheel.

#### TO REMOVE CLUTCH SHAFT:

Remove the worm gear and two pipe plugs on opposite sides of crankcase. Drive out drift pin from the inside and pull out shaft.

#### TO CHANGE AXLE:

Block up bottom of crankcase so that wheels will clear the ground. Remove both wheels, flywheel, flywheel key, front cover and axle. (See instructions.) See that clutch slides easily on new axle before replacing. Reassemble.

#### TO REMOVE PISTON:

Remove cylinder head, rear cover, connecting rod nuts, and pull piston through top.

#### TO CHANGE TAPPET BUSHINGS (Previous to 1929 Model):

Remove cylinder head, air hood, ball caps, and screw out bushings with pipe wrench.

#### TO CHANGE TAPPETS (Previous to 1929 Model):

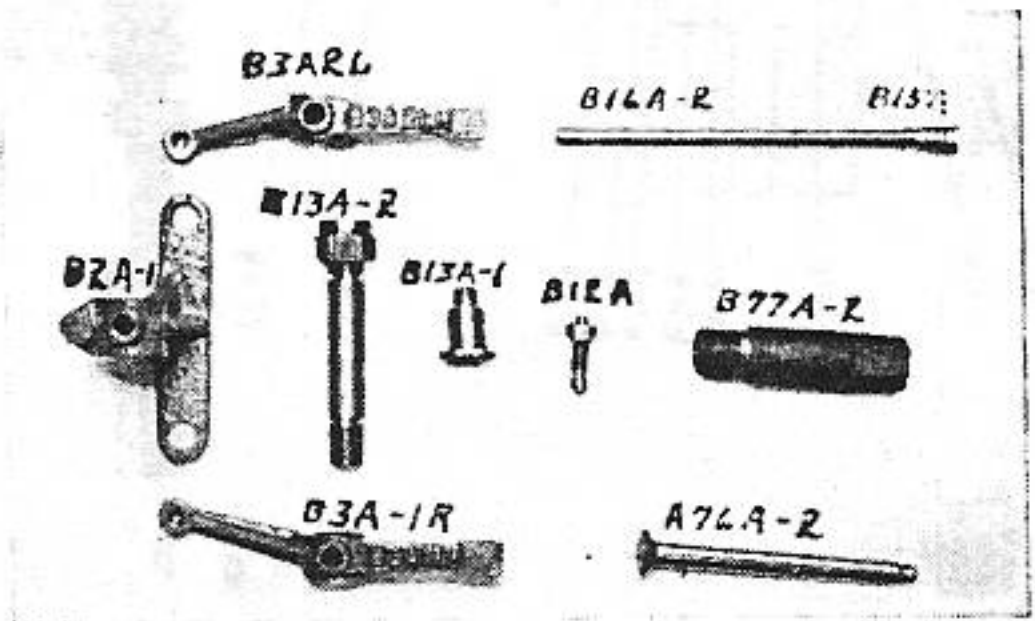
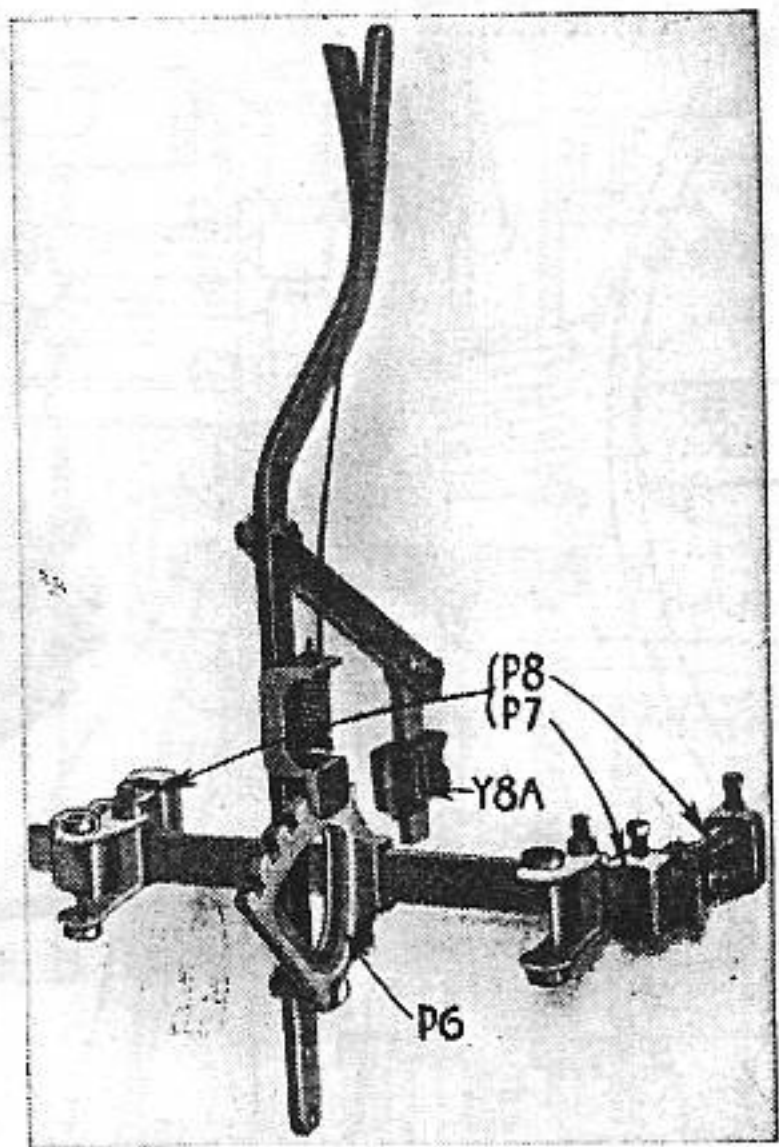
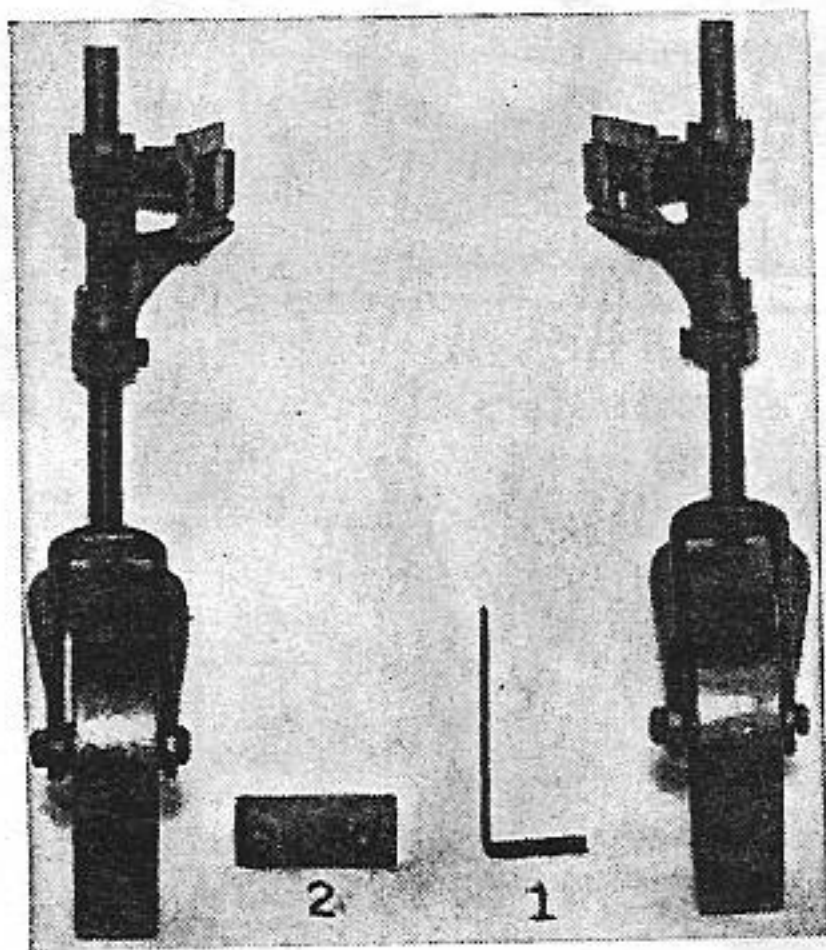
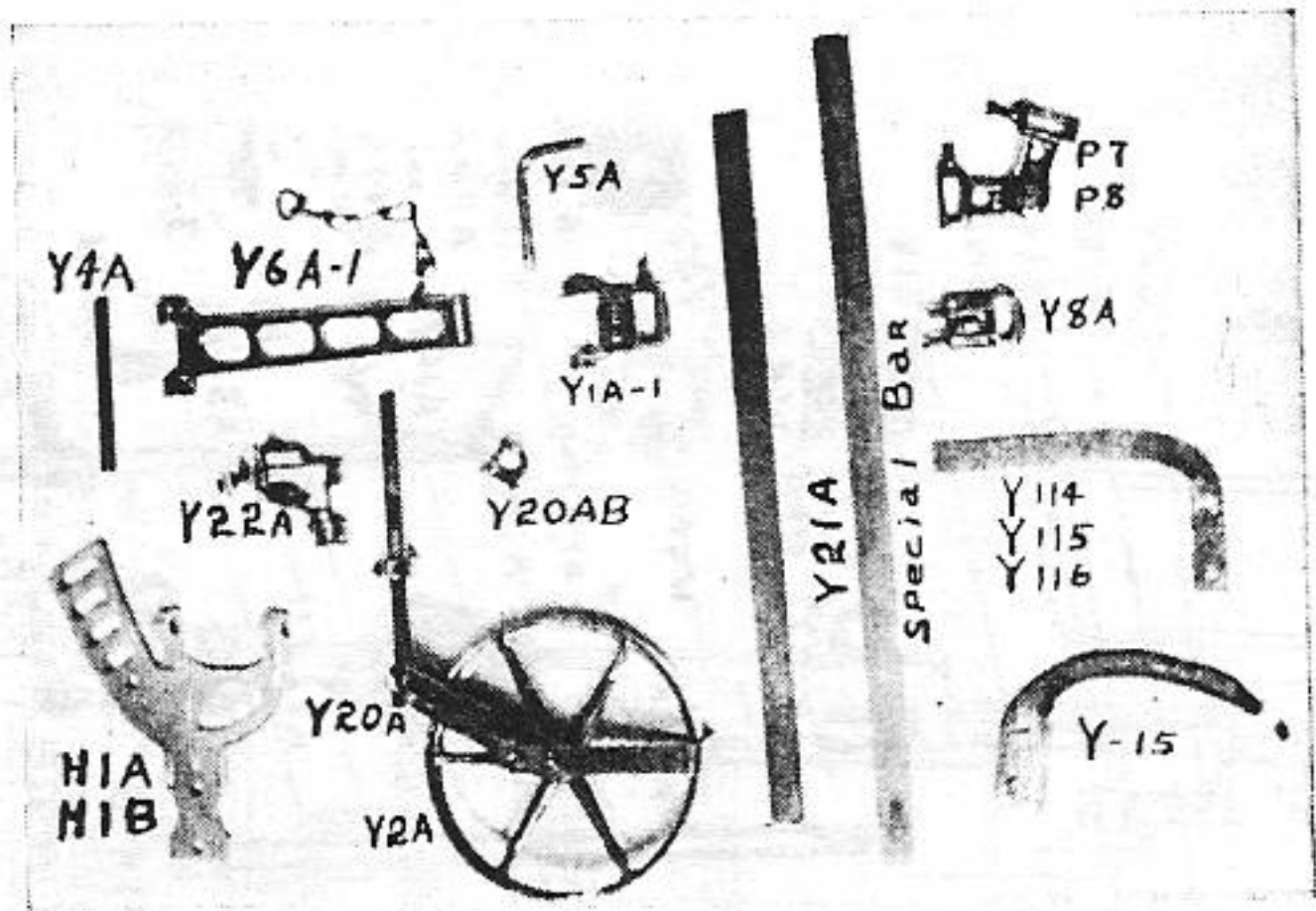
Remove cylinder head, air hood, flywheel, front cover, cam gear, cam shaft, and tappets. In replacing, be sure that gears are at their proper setting.

#### TO CHANGE TAPPET BUSHINGS AND TAPPETS ON 1929 AND LATER MODELS:

It is not necessary to take off the air hood, as stated above, for changing tappets on the new Model Red-E Tractor; if you want to change either the tappets or the tappet bushings, simply take off the push rods and, with a wrench, unscrew the tappet bushing which comes up above the hood on the tractor. When this is taken out, you can lift the tappet right out of the crankcase, as the hole in the crankcase for putting in the tappet bushing is now large enough for the tappet head to come through.







## REPAIR PARTS PRICE LIST

Mention Engine Number When Ordering Repair Parts

### PARTS FOR MOTOR AND TRANSMISSION

Part No.	Part Name	Price Ea.
A1A	Cylinder .....	\$ 7.00
	Rebore Old Cylinder.....	2.50
A3A	Crankcase .....	20.00
A11A	Crank Disc .....	5.00
	Crank Disc and Crank Pin A38A assembled.....	6.75
A44A	Roller Bearing Spacing Collar.....	.32
A12A-1	Clutch .....	6.25
A13A-1	Worm Hub .....	6.90
A14A	Clutch Yoke .....	.82
A15A	Clutch Shifter Lever.....	.40
A19A	Oiler Wheel .....	.25
A20A	Oiler Counterweight .....	.40
A24A	Cam Gear .....	2.50
A22A-1	Worm Shaft .....	18.00
A25A	Cam Shaft .....	6.00
A34A	Cylinder Stud (long).....	.35
A34B	Cylinder Stud (short).....	.35
A73A	Connecting Rod .....	1.60
A71A	Wrist Pin .....	.30
A72A	Wrist Pin Bushing .....	.20
A72B	Wrist Pin Bolt .....	.10
A70A	Piston Ring .....	.20
A70	Piston assembled with Pin and Bushing.....	1.95
A76A	Cam Shaft Tappets (O. S.).....	.20
A76A-1	Cam Shaft Tappet, long (N. S.).....	.40
A61A	Locating Pin for Cam Gear.....	.05
A108A	Washers for Tappets (Felt).....	.02
A77A	Tappet Bushings (Bronze, O. S.).....	.25
A77A-2	Tappet Bushing, long (for N. S. Tappet).....	.50
A23A	Cam Pinion .....	1.50
A38A	Crank Pin .....	1.60
A110A	Oil Level Cocks.....	.22
A28A-3	Axle, 1 $\frac{1}{4}$ " dia., Taper or Square End.....	10.00
A32A	Thrust Collar for Axle.....	.60
A27A	Set Collar for Worm.....	.50
A21A	Worm Gear .....	12.00
A111A	Bushing for Worm Hub.....	.60
A41B	Bushing for Axle, R. H.....	1.10
A36A	Shaft for Clutch Yoke.....	.46
A48A	Packing Gland for Yoke Shaft.....	.24
A112A	Packing for same.....	.06
A60A	Locating Pin for Outer Race.....	.09
A109A	Roller Bearing (complete).....	11.00
	Rollers only .....	6.00
	Inner Race only .....	2.00
	Outer Race only .....	3.00
A47A	Oil Wheelscrew .....	.40
A116A	Screw for Counterweight.....	.40
A107A	Wire for Connecting Rod.....	.03
A46A	Pins for Clutch Yoke.....	.25
S10	Cylinder Gasket .....	.10
S12	Lock Washer—Crank Disc Nut.....	.10

## Mention Engine Number When Ordering Repair Parts

### PARTS FOR MOTOR AND TRANSMISSION—(Continued)

Part No.	Part Name	Price Ea.
S5R	Hex. Head Cap Screw for Worm Hubs.....	\$ 0.05
S354	Hex. Nut for Cam Shaft.....	.15
S359	Hex. Nut for Crank Disc.....	.25
S306	Hex. Nut for Counterweight Screw.....	.15
S436A	Lock Washer for Cam Shaft Nut.....	.03
S720	Woodruff Key for Cam Pinion.....	.10
S731	Woodruff Key for Crank Disc.....	.10
S732	Woodruff Key for Axle.....	.10
S616H	Headless Set Screw for Worm Set Collar.....	.05
S617H	Headless Set Screw for Outer Race.....	.05
S902	Pipe Plugs for Crankcase.....	.10
S705T	Taper Pin for Clutch Yoke or Shifter Lever.....	.25
S705T	Taper Pin for Clutch Shifter Shaft.....	.25
S1A-1	Breather Pipe .....	.75
S2	Air Cleaner for Breather Pipe.....	1.25
S3	Breather Cap .....	.12
S4	Breather Cap Gasket.....	.08
S5	Cap Screw and Lock Nuts for Breather Cap.....	.15
S1 O.S.	Breather Pipe (old model).....	.75

### PARTS FOR CYLINDER HEAD AND VALVE ASSEMBLY

B1A	Cylinder Head .....	\$ 9.00
	Steel Inserts put in your old Cylinder Head.....	2.50
B1A-1	Cylinder Head (1927 Model).....	9.00
	Cylinder Head assembled with Valves and Springs.....	10.50
B2A-1	Rocker Arm Bracket (N. S. 1935).....	1.00
B3A-1R	Rocker Arm (Offset Right).....	.60
B3A-2L	Rocker Arm (Offset Left).....	.60
B4A	Muffler Body .....	1.00
B5A	Muffler Cover .....	.75
B6A	Spark Plug (Special).....	.75
B7A	Cylinder Head Gasket (Copper).....	.25
B8A	Valve—Intake .....	.40
B8A-1	Valve—Exhaust .....	.50
B9A	Valve Pins .....	.02
B10A	Valve Spring Caps.....	.05
B11A	Valve Springs .....	.15
B12A	Ball End Screw and Nut for Rocker Arm.....	.25
B13A	Shoulder Screw for Rocker Arm (O. S.).....	.35
B13A-2	Rocker Arm Adjustable Shaft with Nuts (N. S.).....	.70
B14A	Oil Cups for Rocker Arms.....	.25
B14A-1	Grease Cup for Rocker Arm Shaft.....	.25
B15A	Ball Sockets for Push Rods.....	.15
B16A-1	Push Rod, 6 <sup>7</sup> / <sub>8</sub> " long (O. S.).....	.18
B16A-2	Push Rod, 7 <sup>1</sup> / <sub>8</sub> " long (N. S. 1935).....	.18
B17A	Ball Caps for Tappets.....	.15

### PARTS FOR REAR COVER

R1A	Rear Cover .....	\$ 4.30
R3A	Magneto Drive Arm.....	.90
R4A	Rear Cover Gasket.....	.10
R7A	High Tension Magneto.....	18.00
R8A	Line-up Jacks .....	.15
R9A	Rear Cover Bearing for Drive Arm.....	.45

## Mention Engine Number When Ordering Repair Parts

### PARTS FOR FLYWHEEL AND FRONT COVER

Part No.	Part Name	Price Ea.
F1A	Flywheel .....	\$12.50
F2A	Pulley, 3" Face, 3" diameter .....	4.00
F14A	Pulley, 4" Face, 6" diameter .....	5.75
F3A	Front Crankcase Cover .....	7.50
F4A	Thrust Plate for Ball Bearing .....	.67
F5A	Retaining Washer for F8A Felt and Screws .....	.25
F6A	Spec. Lock Washers for Flywheel Nut .....	.08
F7A	Front Cover Gasket .....	.08
F8A	Felt Washer for Ball Bearing .....	.05
F9A	Bushing for Ball Bearing .....	.25
F10A	Ball Bearing .....	5.20
F11A	Spacing Sleeve for Ball Bearing .....	.13
F12A	Flywheel Pulley Plate (take off when putting on Belt Pulley) .....	1.25
F13B	Packing Washer for F8A Felt .....	.20
F15A	Starting Rope with Handle .....	.25
F19	Fil. Head Cap Screws for Pulley .....	.05
S46LH	Hex. Jam Nuts for Flywheel .....	.25
S73	Woodruff Key for Flywheel .....	.10
S60	Sq. Head Set Screw for Cam Shaft .....	.30
S33	Hex. Jam Nut for same .....	.05
	Special Flywheel Wrench with Offset Head .....	3.00

### PARTS FOR GASOLINE TANK

G1A	Gas Tank and Tool Box, less Hood .....	\$ 2.50
G2A	Outlet Fitting .....	.75
G4A	Strainer Plug .....	.03
G5A	Strainer .....	.03
G6A	Gas Line .....	.30
G7A	Gas Line Fittings .....	.25
G9A	Shut Off Cock .....	1.16
G10	Gas Tank Cap .....	.15

### PARTS FOR GAS CONTROL

J1A	Throttle Lever .....	\$ 0.45
J2A	Bracket for Lever and Cable .....	.45
I3A	Spring Washer .....	.12
J4A	Bushing for Lever .....	.20
J5A	Control Wire .....	.20
I6A	Clips .....	.05
I7A	Clip for Cable Attachment to Carb. Elbow .....	.25
J8A	Cable .....	.50
S31G	Sq. Head Nut for Lever .....	.03
S41G	Washer for same .....	.03
S10G	Carriage Bolt for same .....	.05
S23G	Rd. Hd. Machine Screw for Wire Post .....	.03
S75G	Cotter Pin for Wire Post .....	.01
S76G	Wire Post .....	.30

### PARTS FOR AIR CLEANER AND CARBURETOR ASSEMBLY

C1A	Air Cleaner .....	\$ 3.60
C2A	Air Cleaner Intake Pipe (O. S.) .....	.40
C3A-1	Carburetor Cylinder Elbow (O. S.) .....	1.60
C3A-3	Carburetor Cylinder Elbow (N. S.) .....	1.45
C4A	Bracket for Air Cleaner (O. S.) .....	.40
C5A	Pipe for Air Cleaner (O. S.) .....	.65
C7A	Carburetor complete (Zenith) .....	8.50
C8A	Carburetor Gasket .....	.03
C9A	Carburetor Lever .....	.40

**Mention Engine Number When Ordering Repair Parts**  
**PARTS FOR FLYWHEEL AND FRONT COVER**

Part No.	Part Name	Price Ea.
W1A or B	Bull Wheel Stub Sprocket—Right or Left.....	\$ 5.50
W2A	Hub Caps .....	.22
W3A	Differential Wheel Dog—Taper or Square.....	1.75
W4A	Axle Thrust Plate .....	.98
W4B	Gasket for Axle Thrust Plate.....	.10
W5A	Axle Bushing for Left Hand Side.....	2.00
W6A	Packing Washer .....	.20
W7A	Felt Washer for Axle.....	.10
W8A	Stud for Axle Bushing .....	.10
W9A	Half Washers for Axle, each .....	.05
W10A	Cotter Pin for Axle.....	.10
W10B	Packing for Left Hand Bushing.....	.05
W11A	Bushing for Stub Sprocket.....	.85
W12A	1/2" Bolt with Nut and Washer for Stub Sprocket.....	.10
W13A	3"x20" Drive Wheels with Spokes, pair.....	8.00
W14A	6"x20" Drive Wheels with Spokes, pair.....	9.00
W15A	4"x24" Drive Wheels with Spokes, pair.....	14.00
W16A	3"x28" Drive Wheels with Spokes, pair.....	16.00
W17A	Spokes for above Wheel, each.....	.50
W20	Dirt Guards for Stub Sprocket, Right Hand.....	.10
W21	Dirt Guards for Stub Sprocket, Left Hand.....	.10
S72W	Woodruff Key for Tapered Wheel Dog.....	.10
S73W	Differential Drive Pin in Stub Sprocket (9/16" and 1/2" in diameter) .....	.35
	Spacing Washers between Engine and Stub Sprocket, 1/32" and 1/16" in thickness.....	.05

**PARTS FOR HANDLE AND CLUTCH CONTROL**

H1A	Handle Bracket, R. H. {As you stand in the}.....	\$ 2.50
H1B	Handle Bracket, L. H. {operating position}.....	2.50
H1	Adjustable Drawbar Casting for No. 12 Model.....	1.00
H2A	Bell Crank .....	.90
H3A	Clutch Shifter, O. S.....	1.50
H3A-1	Clutch Shifter Lever, N. S.....	1.50
H4A	Clutch Handle Plate.....	.15
H4AS	Wood Screw for same.....	.01
H5A	Guide Chains with 2 Cold Shuts.....	.30
H8A	Handle for Clutch.....	.35
H10A	Bell Crank Yoke.....	.50
H13A	Bell Crank Yoke Pin.....	.05
H16A	Bell Crank Con. Lever.....	1.25
H6A	Spacing Collar for Handle.....	.30
H7A	Set Collar .....	.22
H9A	Steering Handle, R. H.....	.84
H9B	Steering Handle, L. H.....	.84
H11A	Clutch Rod .....	.60
H12A	Shou'lder Screw for Bell Crank.....	.50
H12AS	3/4" Nuts for same, each.....	.25
H7B	Clutch Collar .....	.22
H14A	Handle Spacing Stud .....	.15
H15A	Clutch Handle Spring .....	.10
S75H	Cotter Pin for Control Lever.....	.01
S60H	Set Screw for Spring Collar.....	.05
S60HK	Set Screw for Clutch Shaft Collar.....	.05
S12H	Carriage Bolts for Gas Control Lever, each.....	.05

## Mention Engine Number When Ordering Repair Parts

### PARTS FOR AIR HOOD ASSEMBLY

Part No.	Part Name	Price Ea.
T1A-2	Air Hood over Cylinder and Crankcase.....	\$ 3.50
T2	Oil Can Holder.....	.20
S5R	Hexagon Head Cap Screws for Air Hood, each.....	.05
S432B	Lock Washers for same, each.....	.02
	Bronze Tappet Bushings in Hood, O. S.....	1.95

### CARRIAGE PARTS

Y1A-1	Draw and Tool Bar Casting for 1/2" Bar.....	\$ 0.75
Y1A-2	Draw and Tool Bar Casting for 5/8" Bar.....	.75
Y2A	12" Trailer Wheel—Straight Bushing, O. S.....	.75
Y2A-1	12" Trailer Wheel—Cone Bushing, N. S.....	1.00
Y7A	Bushing and Axle for Trailer Wheel, Y2A, Straight.....	.35
Y7A-1	Bushing and Axle for Trailer Wheel, Y2A-1, Cone.....	.40
Y4A	Swivel Pin for Drawbar 3/4"x7 1/4" with Cotter Pin.....	.40
Y5A	Handle Pin for Draw and Tool Bar Casting.....	.25
Y6A-1	Drawbar, Standard Model.....	1.50
Y8A	Tool Clamp and Set Screws for 1/2" Bar.....	.50
3935-1	Tool Clamp and Set Screws for 5/8" Bar.....	.50
Y15	Adjustable Cultivating Shank.....	.85
Y20A	Swivel Trailer Wheel Fork and Standard.....	2.00
Y20B	Bottom Collar for Swivel Wheel Standard.....	.25
Y20T	Top Collar for Swivel Wheel Standard.....	.25
Y21A	Tool Bar—1/2"x1 1/2"x28" long—Standard Equipment.....	1.00
Y22A	Drawbar Clamp for Y20A with Bolts.....	1.15
E223	Adjustable Clamp with Bracket for 7" Disc.....	.75
WS2	New Type Spade Lug with Bolt—1 3/4" High.....	.18
WS3	New Type Spade Lug with Bolt—3" High.....	.25
WS4	Trailer Wheel Scraper, per pair.....	.50
WS6	Side Slippage and Sand Traction Lugs.....	.40

### PLOW AND CULTIVATOR LIFT PARTS

P-1	Plow Lift U Bracket.....	\$ 2.75
P-2	Swivel Trailer Wheel Tool Bar Clamp for Plow.....	.50
P-3	Plow Lift Ratchet.....	.75
P-4	Plunger Guide.....	.75
P-5	Plunger.....	.25
P-6	Ratchet Lift Casting for Cultivator.....	1.50
P-8	Hinge Casting for Cultivator.....	.60
P-8A	Spacer for P-8 with Bolt.....	.30
P-9	Wire for Plow Lift Plunger.....	.25
PC-9	Wire for Cultivator Lift Plunger.....	.25
P-10	Handle for Plow Lift.....	.75
PC-10	Handle for Cultivator Lift.....	1.25
P-11	Handle Grip to release Plunger.....	.15
P-12	Spacers for Plow Beam Pivot with Bolt.....	.30
P-13	Plunger Spring Cap.....	.05
P-14	Adjustable Bar—Cultivator—Long with 4 holes.....	.60
P-15	Adjustable Bar—Cultivator—Short with 1 hole.....	.40
P-16	Adjustable Bar—Expanding Cultivator.....	.85
P-17	Plunger Spring.....	.30
	RED-E Wrench.....	.25