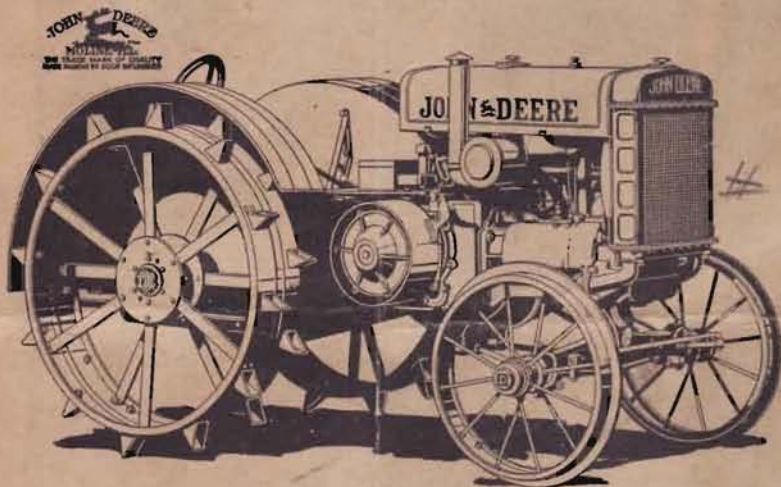


**READ AND FOLLOW THESE DIRECTIONS CAREFULLY AND
PRESERVE THEM FOR FUTURE REFERENCE**

INSTRUCTIONS

AND

PARTS LIST No. 24



John Deere Tractor

Model D

**READ THIS BOOK CAREFULLY BEFORE STARTING TRACTOR.
KEEP IT FOR REFERENCE.**

This tractor is designed and built for farm work. Simplicity and the accessibility of all parts make it possible for the operator to make his own adjustments without the aid of an expert. Read and study these instructions carefully, and preserve for future reference. Give the machine daily attention, and make sure that all parts are kept tight and properly oiled. This attention and care will result in continuous and satisfactory service, and reduce wear and breakage to a minimum. Good oil and proper care mean reduction of your maintenance expense.

WATERLOO GASOLINE ENGINE COMPANY

WATERLOO, IOWA

U. S. A.

BEFORE STARTING TRACTOR**Examine for Any Damage Caused by Shipping or Unloading.**

Seat. Assemble seat on tractor. Short leaf must be outside.

Extension Drawbar. Bolt cross member to under side of "U" drawbar, straddle swinging link on "U" drawbar and bolt to cross member.

Fenders and Platform. Bolt platform assembly to case. Bolt fender brackets to case, and fenders to brackets and platform. Bolt dust shields in place. Use lock washers furnished for all bolts, and pull nuts down tight.

Lugs. Bolt on rear wheel lugs. See cut on cover.

Front wheel grousers should be put on with the vertical flange nearest the center of wheel.

Use lock washers on all bolts. Tighten bolts thoroughly after first half-day's use.

Spark Plugs and Priming Cups. Spark plugs and priming cups are packed in tool box.

Check spark plug points to .020 inch before screwing in cylinder. Use gauge attached to instruction book.

Screw priming cups in cylinder.

Oil. Put two gallons good tractor engine

oil in crank case through filler pipe at tool box, medium in winter and heavy in summer.

Put six gallons of medium-weight transmission oil (not grease) in transmission case through filler hole in rear cover.

Fill front fan bearing oiler with engine oil.

Fill five grease cups and front wheel hub caps with CLEAN, high-grade cup grease, and turn down until grease appears at end of bearings.

The use of CLEAN, high-quality oil and grease will make your engine run better, last longer and will prevent delays.

Air Cleaner. Soak air cleaner filter in oil for five minutes to be sure filter material is thoroughly saturated.

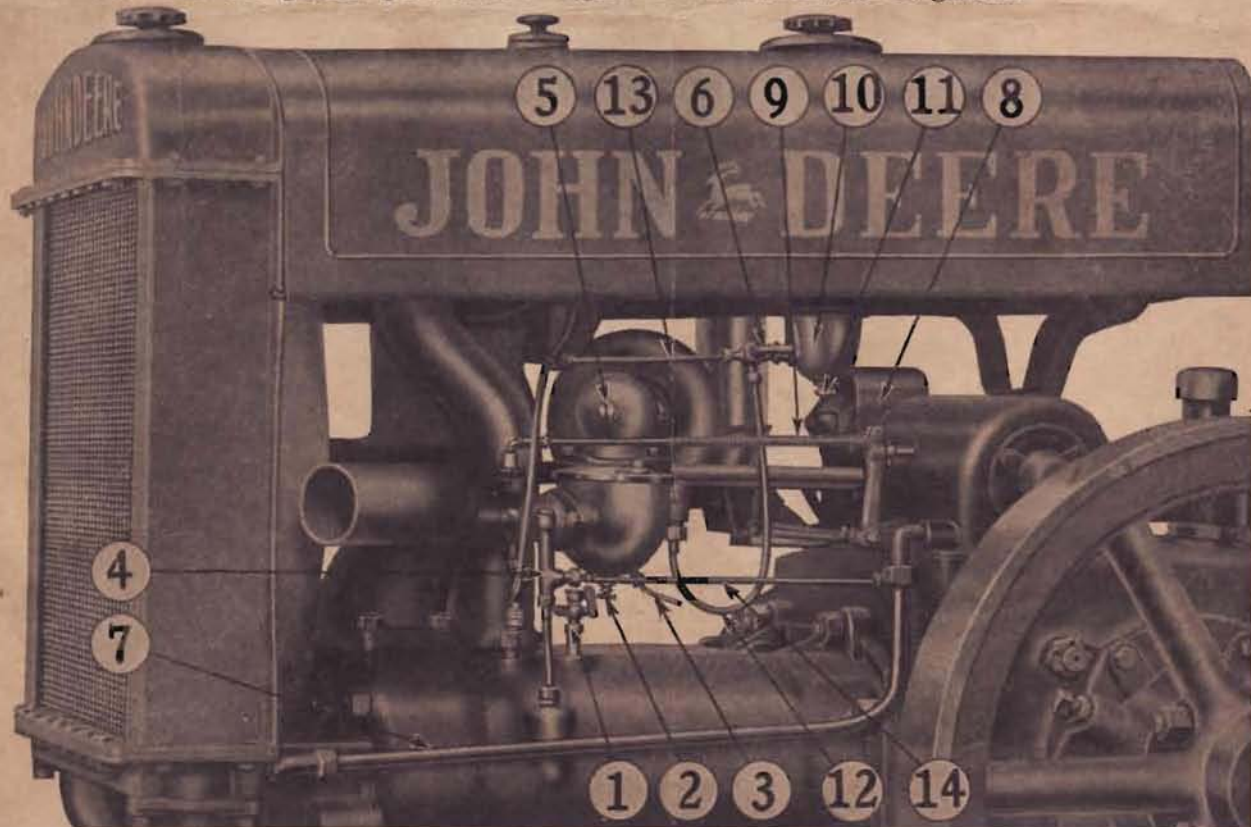
Fuel. Before filling fuel tanks, shut off carburetor by turning the 3-way cock ⑥ lever forward.

Fill kerosene at rear cap—18 gallons; gasoline at small cap—2-3/4 gallons.

Water and dirt in fuel are sure to cause trouble. Always strain fuel.

Be sure that vent hole in gasoline tank cap is open.

Water. Fill radiator with CLEAN water, soft water is best—14 gallons.



TRACTOR OPERATION

To Start Engine. (1) Close water valve, set gear shift lever in neutral, and pull clutch lever back.

(2) Set speed control and spark levers vertical.

(3) Close 3-way cock. ⑥ Lever forward.

(4) Drain kerosene ② from carburetor.

(5) Set 3-way cock ⑥ on gasoline. Lever down.

(6) Open carburetor needle ③ $1\frac{1}{4}$ turns from closed position.

(7) Set impulse starter pawl ⑧ (at inner end of magneto) to engage notch.

(8) Open priming cocks ①, prime with high-test gasoline.

(9) Turn flywheel over to front (anti-clockwise).

Running Engine. (1) When engine starts, oil indicator **Red Head** must rise and impulse starter pawl throw out of engagement. Close priming cocks.

(2) Set spark lever (right hand) clear back to retarded position when idling or to warm up engine. Set clear ahead to advanced position when pulling load.

(3) When top of radiator feels hot, turn 3-way cock ⑥ lever toward rear on kerosene. Radiator should always be warm. Cover radiator if necessary in cool weather.

(4) Adjust carburetor needle ③ to develop maximum power, from $\frac{3}{4}$ to $1\frac{1}{4}$ turns open. Too much fuel is indicated by black, smoky exhaust; too little fuel by popping back through carburetor. Air valve adjusting screw ⑤ should be set to show $\frac{1}{2}$ to $\frac{5}{8}$ inch space between lock nut and knurled head. Keep lock nut tight.

(5) Engine speed is regulated by speed control lever (left hand). To increase speed, push lever forward. The engine develops its rated horse power at 800 R. P. M.

(6) **Never overload the tractor. Run at part load first twenty hours.**

Starting Tractor. (1) With engine running, stop pulley by pulling clutch lever back. This insures clutch being disengaged and applies pulley brake. Do not shift gears until pulley stops.

(2) The gear shift lever operates as follows:

Neutral—Lever center. *Reverse*—Lever forward and to left—slot marked "Rev."

High Speed Forward—Lever back and to left—slot marked "High."

Low Speed Forward—Lever forward and to right—slot marked "Low."

(3) If gears do not shift freely, move clutch lever forward until pulley turns slowly. This allows gear teeth to line up for shifting. Shift gears carefully. Clashing them causes unnecessary wear and breakage.

(4) When gears are shifted, push clutch lever forward slowly until tractor starts; then shove clear ahead until it locks in place. The clutch is self-locking. See "Adjustment of Clutch" for further information.

(5) After backing into belt, set emergency brake, throw clutch out, turn pulley backward by pulling on belt to relieve bind in gearshift, shift gears to neutral.

Stopping Tractor. Disengage clutch by pulling clutch lever clear back. Always place gear shift lever in neutral after disengaging clutch.

Stopping the Engine. (1) In stopping engine after running on kerosene, turn lever of 3-way cock forward, shutting off kerosene. Engine will stop when fuel is used from carburetor. Pull spark and speed control levers back to run slowly. Pull speed control lever clear back to stop.

(2) If engine has been stopped on kerosene, it can be started while still hot by priming with gasoline. If engine is cold, kerosene must be drained from carburetor and gasoline turned on before starting. Prime with high-test gasoline.

CARE OF TRACTOR

Keep your engine and tractor clean, well lubricated and adjusted properly.

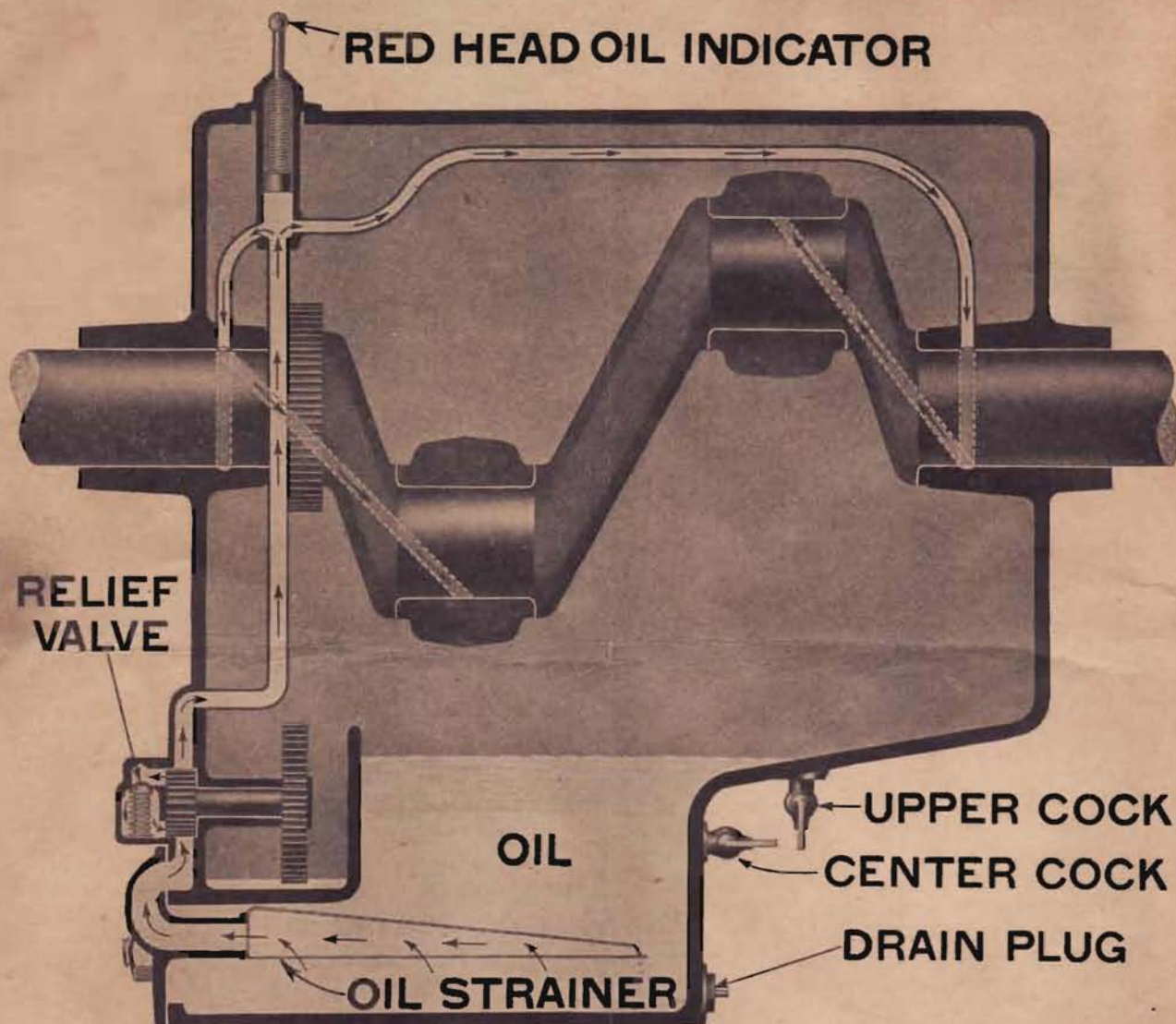
Before changing magneto or timing gears, be sure to read and understand instructions on timing. Mark parts so they can be put back in original position if necessary.

Keep all bolts and nuts tight.

Examine spark plugs occasionally, and keep them clean, with gap properly adjusted. In removing spark plugs, be careful not to break insulation.

Keep the magneto breaker points and distributor clean.

Always use **clean** oil, grease and water.



Oiling System. When engine starts, oil indicator **Red Head** must rise to insure lubrication. If it does not, check supply of oil in crank case and see that oil indicator works freely. Clean oil strainer screen. Examine pressure control valve in pump cover; see that it is clean and works freely. See that oil pipe joints are not leaking. Indicator **must be up** when engine is running.

If engine uses over two gallons of oil in ten hours' operation, examine the connecting rods

and adjust if necessary. If it continues to use more than two gallons of oil, remove one or two washers from under oil-pressure spring in pump cover. To use more oil, add one or two washers. Pressure is set to use $1/2$ to $1-1/2$ gallons of oil in ten hours, depending upon load.

If gasket between pump and pump cover is renewed, new gasket must not be thicker than old one (.015 inch) or pump will not maintain pressure.

Keep oil in transmission case five inches deep

at large sprockets. Do not neglect to thin with engine oil in cold weather so that oil will cling to chain in operation.

Use good oil always.

Fuel System. If fuel does not flow readily, drain sediment trap at bottom of fuel tank and clean fuel strainer screens at tank connections.

Fuel level in carburetor should be $3/16$ to $1/4$ inch below top of nozzle. If carburetor overflows or drips constantly, examine for soggy float, or dirt in float valve seat.

To stop pre-ignition, feed water from the cooling system into the fuel mixture by turning the water feed lever (at rear of transmission case) to the left. Keep water feed strainer screen clean where water pipe enters cylinder. Turn water off when engine is stopped.

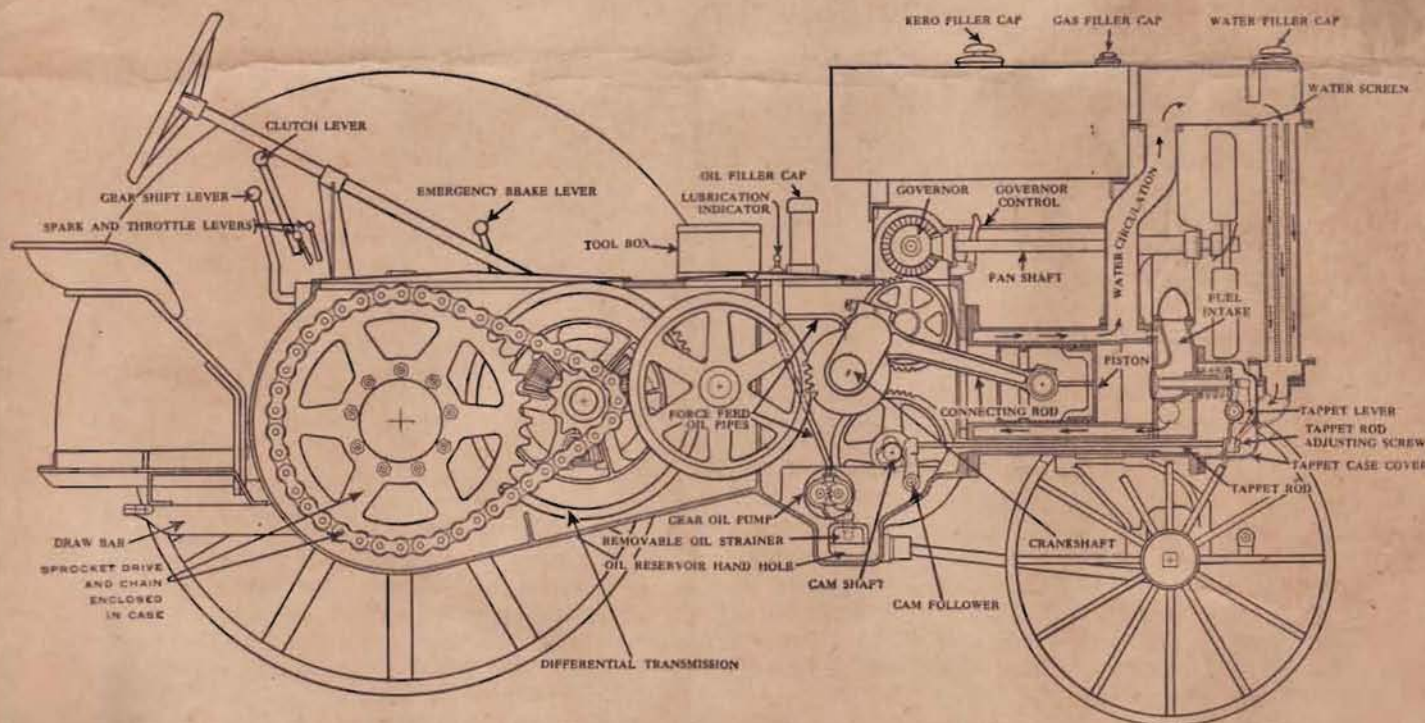
Air Cleaner. Before each day's work, re-

move filter and rinse with gasoline or kerosene to remove dirt; then dip in used crank case oil and replace.

Cooling System. Screen on top of radiator tubes prevents foreign matter from clogging tubes. Keep this screen clean. Always use clean water and keep level above radiator tubes. Do not pour water into empty cooling system when engine is hot.

If engine overheats, examine air passages in radiator core; remove all chaff, dirt, etc., and straighten bent fins. Adjust tappets for proper clearance; adjust carburetor to secure lean mixture. Check magneto and valve timing, renew oil in crank case, and test compression for leaky valves.

Keep radiator partly covered in cold weather to keep water hot, and save fuel. In freezing weather, drain all water from cooling system.



Cross-Sectional View of John Deere Tractor—Arrows point to important working parts. Note simple, compact construction.

Ignition and Magneto. Magneto is properly aligned and timed when tractor leaves the factory. If it has been removed or timing changed, it may be re-timed as follows:

(1) Secure magneto to engine, aligned with driving shaft member.

(2) Loosen clamps on magneto driving flange. This allows magneto to turn independent of engine.

(3) Turn engine in direction it runs, to end of compression stroke on left-hand cylinder with mark on flywheel—"L.H. Ret. Spk."—in line with arrow on spline shaft cover.

(4) Remove breaker and distributor cover.

(5) Set spark lever clear back, spark fully retarded.

(6) Turn magneto same direction as flywheel runs until brass segment on distributor is in upper right-hand corner and breaker points just beginning to open.

(7) Tighten cap screws on magneto drive flange.

(8) Wire from forward terminal to left spark plug and wire from rear terminal to right spark plug.

Keep breaker points clean and adjusted to .020 inch. Use gauge attached to instruction book. Keep the distributor segment clean. Oil starter couple occasionally through hole in rim by removing plug in rear of housing. Do not allow dirt to accumulate or oil to become gummy around coupling. If it becomes sluggish, wash with kerosene.

Clutch. Clutch is properly adjusted when nuts are drawn up to exactly the same tension, and clutch operates with a snap requiring some pressure to lock.

To tighten clutch, set lever in running position, tighten each nut one slot to right; replace cotters. Repeat if necessary.

To replace clutch facing discs, remove nuts on adjusting bolts and cap screw on end of crank shaft. Clutch adjusting disc and driving disc can then be removed. In replacing outer disc, be sure facing is in place. Adjust all three nuts to uniform tension—**this is important.**

Pulley Brake. To adjust pulley brake, turn set-screw until brake holds pulley from turning when clutch lever is held clear back.

Emergency Brake. To apply the emergency brake, shove lever forward. Adjust brake by tightening nut at rear of tool box. Brake should begin to tighten when lever stands ver-

tical. When brake is not in use, lever should point to rear and rest on stop.

Valves. Loss of power is frequently due to poor compression caused by leaky valves. Turn engine over against compression to test for valve leaks. To grind valves, remove radiator by removing cap screws at upper end of water pipe and at radiator end of lower elbows. Remove tappet lever case and cylinder head. Remove valves and grind to an even seat. After grinding, test valves for leaks by filling ports with gasoline. A tight valve will hold gasoline even when rotated.

In replacing cylinder heads, use lead washers or oiled string under nuts and tighten evenly.

To Replace Tappet Rods. Remove adjusting screws from tappet levers. Rods can then be removed or replaced through end of lever. Be sure inside end of rod rests in cam follower socket when adjusting screws are replaced.

Timing Valves. (1) Remove tappet lever case cover and turn flywheel until all levers are free just before left-hand exhaust valve opens. Adjust tappets by tightening adjusting screws until there is no shake in levers. Back off adjusting screws 1/2 turn on exhaust or end levers; 1/4 turn on intake or center levers. Be sure clamp screws are tight.

(2) Turn flywheel in direction engine runs until exhaust or left-hand valve on left-hand cylinder just starts to open.

(3) Mark on flywheel—"L.H. Exh. Open"—should be in line with or within one inch of arrow on spline shaft cover. If not within one inch, loosen bearings on both ends of cam shaft and remove left bearing.

(4) Mesh cam shaft gear with crank shaft gear so left-hand exhaust valve just starts to open when flywheel mark is in line with arrow. *Note*—Left-hand side of tractor means left hand when operator is on seat looking forward.

Bearings. To adjust connecting rod bearings, remove cap and brass laminated shims. Pull one .003-inch layer off each laminated shim. Tighten bolts and try rod. It should fit snugly, but not tight enough to bind. Repeat if necessary. Bearing caps are marked and must be put back in their proper place. Laminated shims must be between steel shims. Nuts must be tight and cotters replaced.

To adjust main bearings, remove flywheel (by loosening bolts and wedging open) and end cover on left main bearing. Remove clutch

fork bearing and belt pulley. Loosen both main bearing caps, slip out the brass laminated shim and proceed as for connecting rod bearings.

Fan. Examine fan friction facing once each season.

Fan spring should not be compressed to less than one inch in length.

Rear Axle. To tighten drive chains, jack up rear end of tractor, placing jack under case or

drawbar. Loosen nuts around rear axle quill, turn top of quill forward in direction of arrow on case. Remove rear transmission cover to observe tightening of chain. With all slack at top, chain should be tight enough so it can be raised and lowered not to exceed one inch at center. After chain is adjusted and bolts tightened, turn each wheel over several times to make sure chain is not too tight; otherwise, there will be excessive wear on chain and bearings.

LUBRICATING CHART

The use of **high-quality** oil and grease will make your engine run better, last longer, and will prevent delays.

Every 10 Hours

Drain crank case oil at center cock		
Crank case	and fill to upper cock	High-grade tractor engine oil
Front fan bearing	Fill oiler	High-grade tractor engine oil
Steering knuckles (2)	Two turns	Cup grease
Steering worm (2)	Two turns	Cup grease
Front axle pivot pin (1)	Two turns	Cup grease

Every 60 Hours

Drain crank case and cam gear sump. Remove and clean oil strainer. Wash crank case with kerosene. Fill to upper cock with high-grade tractor engine oil.		
Front wheels	Fill front hub cap forcing grease into hub until it appears at the other end	Cup grease
Left spline shaft bearing	On continuous belt work remove cap	Pack with cup grease

Every 600 Hours

Transmission	Five inches oil in bottom of case	Medium-weight transmission oil
--------------	-----------------------------------	--------------------------------

MAGNETO

Every 20 Hours

Oiler on distributor end	4 Drops	Cream-separator oil
Oiler on starter end	2 Drops	Cream-separator oil
Oil hole in impulse coupling	4 Drops	Cream-separator oil

Every 200 Hours

Breaker arm	1 Drop	Cream-separator oil
-------------	--------	---------------------

Important. Continuous tractor service with few repairs results from proper lubrication.

Use good grade of engine oil, and use it regularly. Oil is cheaper than repairs. Don't use heavy oil on magneto.

INSTRUCTIONS FOR ORDERING PARTS

1. Always give serial number of tractor or engine.
2. Give number and name of part ordered. If in doubt, send sketch or return broken parts.
3. Order parts from regular John Deere dealer.
4. State how parts are to be shipped—freight, express or parcel post.

Number	Description	Number	Description
TRANSMISSION CASE			
AD-209	Case—transmission—main	D-281-R	Case—tappet
AD-298	Gasket—complete front cover	D-285	Gasket—tappet case
AD-299	Gasket—complete rear cover	D-309	Gasket—tappet case cover
D-5	Cover—rear	D-348	Spacer—tappet lever
D-409	Stud—cylinder flange— $3/4'' \times 3-3/8''$	D-376	Spring—tappet spacer
D-426	Pipe—cap—crank case filler cap	D-463	Welsh plug—end of shaft
D-625	Pipe plug—rear cover	D-683	Rivet—tappet lever
D-625	Pipe plug—transmission oil drain		
D-836	Strap—front cover	CYLINDER	
D-837	Cover—front	AD-64	Cylinder—complete with studs
D-843	Stud—radius rod pivot	D-290	Gasket—cylinder to case
1452-R	Pipe plug—cam sump, drain	D-364	Stud—for water pipe
K-2603	Pipe—crank case filler	D-409	Stud—front end support
		D-489	Priming cup
		E-97-R	Plug—water drain
		2205-R	Stud—for cylinder head
ENGINE		CYLINDER HEAD AND MANIFOLD	
AD-32	Main bearing housing with cap—R. H.	AD-34	Cylinder head with valve guides
AD-33	Main bearing housing with cap—L. H.	AN-2154	Valve
AD-305	Flywheel with bolts and dowel pin	D-42-R	Manifold—intake and exhaust
D-23-R	Collar—flywheel spacing	D-282	Gasket—head to cylinder
D-26-R	Cover—L. H. main bearing	D-306	Gasket—manifold to head
D-128	Shim—main bearing—steel	86-R	Guide—valve
D-174	Adjusting screw—R. H. main bearing	264-R	Lead washer—cylinder head stud
D-175	Adjusting screw—L. H. main bearing	294-R	Stud—manifold— $1/2'' \times 1-5/8''$
D-186	Dowel pin—flywheel collar— $1/4'' \times 1/2''$	485-R	Spring—valve
D-200	Key—flywheel— $5/8'' \times 2-3/8''$	2209-R	Cap—valve spring
D-259	Shim—main bearing—laminated	2210-R	Lock washer—valve stem—half
D-299	Gasket—L. H. main bearing		
D-300	Gasket—L. H. main bearing cover	GOVERNOR	
D-551	Bushing—main bearing—half	AD-7	Thrust bearing—complete
D-626	Felt—right main bearing	AD-300	Case—governor
E-97-R	Oil drain plug—crank case	D-34-R	Fork—governor
1452-R	Oil drain plug—cam shaft gear sump.	D-59-R	Sleeve—governor shaft
		D-60-R	Weight—governor
PISTONS—CONNECTING ROD—CRANK SHAFT		D-170	Plunger—throttle
AD-22	Crank shaft with gear	D-189	Pin—governor fork
AD-35	Connecting rod and cap with piston pin bushing	D-279	Key—fan bevel gear
AD-101	Connecting rod—complete	D-279	Key—governor drive gear
AD-102	Bolt with nut and cotter—connecting rod	D-297	Gasket—governor bearings to case—thick
D-44-R	Piston	D-298	Gasket—governor case to transmission case
D-129	Shim—steel—connecting rod	D-318	Ball bearing—governor shaft—No. 303
D-186	Dowel pin—crank shaft— $1/4'' \times 1/2''$	D-509	Gasket—governor bearings to case—thin
D-228	Pin—piston	D-824-R	Bearing housing—governor shaft—R. H.
D-260	Shim—laminated brass	D-825	Felt washer—governor—R. H. bearing
D-334	Set-screw—piston pin— $1/2'' \times 2-1/4''$	D-826	Felt retainer—governor—R. H. bearing
D-550	Bushing—connecting rod—half	D-827	Washer—governor—R. H. bearing
D-553	Bushing—piston pin	D-828-R	Gear—fan drive bevel
2166-R	Rings—piston	D-829	Shaft—governor
		D-830-R	Bearing housing—governor shaft—L. H.
CAM SHAFT		D-831-R	Cover—bearing housing—governor shaft—L. H.
AD-98	Gear—cam shaft—with bolts	D-832	Oil trough—governor case
D-6-R	Bearing—cam shaft	D-842-R	Gear—governor drive
D-102-R	Cam shaft	293-R	Washer—governor bearing
D-291	Gasket—shaft bearing		
D-467	Washer—cam shaft spacer	GOVERNOR IDLER GEAR	
56-R	Woodruff key—cam gear	AD-99	Gear—governor idler with bushing
		AD-174	Spindle—idler gear
CAM FOLLOWER		D-186	Dowel pin—spindle— $1/4'' \times 1/2''$
D-67-R	Cam follower	D-490	Washer—idler gear thrust
D-190	Shaft—cam follower	D-554	Bushing—governor idler gear
D-349	Spacer—cam follower		
D-469	Welsh plug—end of shaft	LUBRICATING SYSTEM OIL PUMP	
D-795	Spring—cam follower spacer	AD-29	Oil pump drive shaft with gear
		AD-30	Oil pump idler shaft with gear
TAPPETS		AD-46	Strainer—complete
AD-179	Tappet lever with rivet	D-14-R	Body—oil pump
D-24-R	Cover—tappet case	D-29-R	Cover—oil pump gear
D-169	Socket—tappet lever	D-38-R	Gear—oil pump helical drive
D-193	Shaft—tappet lever	D-182	Relief valve—oil pump cover
D-214	Tappet rod		

Number	Description	Number	Description
LUBRICATING SYSTEM OIL PUMP—Continued		D-297	Gasket—rear fan housing
D-180	Nut—relief valve	D-318	Ball bearing—fan shaft No. 303
D-271	Screen—strainer	D-378	Spring—fan friction
D-301	Gasket—cork—oil pump body	D-396-R	Disc—fan drive
D-302	Gasket—oil pump cover—1/64-thick.	D-398	Snap ring—rear bearing
D-308	Gasket—cork—strainer flange	D-399	Facing—fan friction
D-317	Stud—strainer flange	D-400	Key—drive disc
D-379	Spring—relief valve	D-403	Key—bevel pinion
D-403	Key—drive gear to shaft	D-501	Bevel pinion—on fan shaft
D-453	Washer—relief valve pressure	D-653-R	Cover—front bearing
D-456	Elbow—discharge pipe—3/8"	D-654-R	Housing—rear bearing
D-465	Gasket—relief valve nut	D-655	Felt retainer—fan shaft
D-793	Body—oil level test cock	D-684	Felt washer—front and rear bearings
D-794	Plug—oil level test cock	D-828-R	Gear—fan drive bevel
OIL INDICATOR AND PIPING		K-3090	Oil cup—front fan bearing
AD-41	Oil pipe to R. H. main bearing	27-R	Washer—fan shaft—front
AD-42	Oil pipe to L. H. main bearing	1707-R	Washer—spring thrust
AD-290	Piston with rod—oil indicator	PULLEY AND CLUTCH	
D-274	Discharge pipe—pump to indicator	AD-1	Hyatt bearing—complete—pulley
D-310	Gasket—indicator body	AD-25	Brake with lining—pulley
D-380	Spring—oil indicator	AD-292	Pulley with cone, bushing and gear
D-392	Body—solder bushing—5/16"	D-12-R	Bearing—clutch fork
D-417	Elbow—solder bushing—5/16"	D-64-R	Cone—clutch
D-458	Packing nut—discharge pipe—3/8"	D-79-R	Dog—clutch
D-815-R	Body—oil indicator	D-83-R	Fork—clutch
D-818	Bushing—discharge pipe to indicator body	D-100-R	Collar—clutch
TAPPET OILER		D-141	Washer—drive disc to crank shaft
AD-84	Oil pipe	D-158	Pin—clutch cone drive—1/2" x 2"
D-31-R	Elbow—tappet case end	D-178	Cap screw pivot—clutch fork
D-179	Packing nut—feed pipe	D-194	Shaft—clutch fork (bent)
D-346	Feed pipe—governor to tappet case	D-208	Bolt—clutch operating
D-401-R	Elbow—governor case end	D-237	Link—clutch dog
FUEL SYSTEM		D-289	Gasket—pulley and spline gear cover
AD-15	Fuel tank—complete	D-293	Gasket—clutch fork shaft bearing
AD-44	Gasoline pipe—complete	D-311	Snap ring—gear retainer
AD-45	Fuel pipe—complete	D-355	Pin—clutch dog—1/2" x 2-1/2"
AD-51	Fuel strainer—complete	D-356	Pin—clutch dog link—outer—1/2" x 1-1/16"
AD-78	Filler cap—complete—kerosene	D-357	Pin—clutch dog link—outer—1/2" x 1-3/4"
AD-278	Body—gasoline drain	D-359	Snap ring—bearing retainer
D-19-R	Cap—gas filler	D-377	Spring—clutch release
D-252	Bracket—fuel tank—rear	D-384	Facing—clutch friction
D-253	Bracket—fuel tank—front	D-385	Lining—pulley brake
D-288	Gasket—cork—fuel filler cap	D-463	Walah—plug—clutch fork bearing
D-387	3-way cock	D-487	Key—clutch fork to shaft—5/16" x 1/4" x 5"
D-792	Plug—gasoline drain	D-552	Bushing—pulley
294-R	Stud—front tank bracket	D-650-R	Dust shield—clutch
1450-R	Drain plug—fuel tank	D-651	Washer—bearing retainer
HOOD		D-652	Felt washer—pulley bearing
AD-13	Hood—complete	D-659	Key—belt pulley gear
D-236	Clamp—hood	D-661	Gear—pulley
COOLING SYSTEM		D-676-R	Cover—pulley and spline gear
AD-8	Core—radiator	D-834-R	Disc—clutch driving
AD-77	Radiator—complete	D-835-R	Disc—clutch adjusting
AD-86	Filler cap—complete	IR-212	Inner race—Hyatt bearing
AD-112	Bottom tank—radiator	OR-212	Outer race—Hyatt bearing
D-32-R	Elbow—radiator to cylinder	RA-212	Roller assembly—Hyatt bearing
D-53-R	Top tank—radiator	SPLINE SHAFT	
D-56-R	Radiator side	D-111-R	Pinion—low-speed sliding
D-228	Strap—radiator top side	D-112-R	Pinion—high-speed sliding
D-229	Strap—radiator top rear	D-358	Snap ring—bearing retainer
D-230	Strap—radiator bottom rear	D-365-R	Gear—spline shaft
D-231	Strap—radiator bottom and top front	D-382	Key—gear to shaft
D-272	Screen—over radiator tubes	D-420	Snap ring—left end of shaft
D-294	Gasket—elbow to cylinder head	D-672	Ball bearing—complete—No. 1309
D-295	Gasket—top and bottom of pipe D-681-R	D-673-R	Quill—spline shaft—R. H.
D-303	Gasket—radiator top tank	D-674-R	Cover—spline shaft—left
D-304	Gasket—radiator bottom tank	D-675-R	Nut—spline shaft
D-305	Gasket—elbow to radiator	D-677	Gasket—left-hand spline cover
D-473	Gasket—radiator cap	D-799	Shaft—spline
D-488	Stud—radiator bottom tank	GEAR SHIFT	
D-681-R	Water pipe—cylinder to radiator	AD-92	Fork—shift—low and reverse—complete
27-R	Washer—elbow to cylinder head	AD-93	Fork—shift—high—complete
1706-R	Washer—top of water pipe	D-208-R	Gate—gear shift
FAN		D-245	Yoke—shift fork
AD-49	Spider and blades—complete	D-342	Woodruff key—arm to lever
D-168	Shaft—fan	D-619	Lever—gear shift
D-246	Spacer—front bearing	D-620-R	Arm—on gear shift lever
D-279	Key—fan bevel gear—3/16" x 1-1/4"	D-671	Shaft—shifting fork
		D-678	Adjusting screw—shift shaft
		D-789	Nipple—stop pin
		79-R	Spring—gear shift lever
		1146-R	Spring—stop pin
		2323-R	Pin—stop

Number	Description	Number	Description
REVERSE SHAFT		FRONT AXLE AND STEERING	
AD-48	Reverse gear with bushings	D-410	Packing nut—needle valve
D-22-R	Collar—reverse shaft	D-447	Check—water valve
D-555	Bushing—reverse gear	D-448-R	Body—water valve
D-621	Shaft—reverse	D-449	Packing nut—pipe to cylinder
D-679	Wash plug—reverse shaft	D-451	Needle valve—water feed
DIFFERENTIAL		D-452	Cap—valve body
		E-2149	Nut—pipe to body
AD-2	Hyatt bearing—complete—differential shaft	FRONT AXLE AND STEERING	
AD-14	Differential spider and shaft	AD-4	Timken bearing—front wheel—outside
D-49-R	Quill—differential shaft	AD-21	Front wheel with cap
D-121-R	Gear—high speed	AD-201	Timken bearing—front wheel—inside
D-133-R	Gear—low speed	AD-253	Front axle with bushing
D-140	Washer—differential shaft outer thrust	AD-274	Knuckle—steering—R. H.—with nut and cotter
D-143	Washer—bevel gear thrust	AD-275	Knuckle—steering—L. H.—with nut and cotter
D-147	Washer—differential pinion thrust	AD-282	Support—front end
D-186	Dowel pin—1/4" x 1/2"	D-58-R	Segment—steering
D-195	Shaft—differential pinion	D-61-R	Wheel—steering
D-296	Gasket—differential quill	D-76-R	Worm—steering
D-359	Snap ring—differential quill	D-96-R	Nut—front wheel bearing
D-525-R	Differential bevel gear and sprocket	D-105	Adjusting pin—tie rod
D-528	Differential bevel pinion	D-136	Washer—knuckle bolt
684-R	Washer—differential shaft end thrust	D-156	Taper bolt—steering wheel
IR-310	Inner race—Hyatt bearing	D-156	Taper bolt—steering knuckle pivot pin
OR-310	Outer race—Hyatt bearing	D-191	Shaft—steering worm
RA-310	Roller assembly—Hyatt bearing	D-196	Pin—front axle pivot
FINAL DRIVE AND REAR WHEELS		D-219	Tie rod
		D-248	Guide band—front wheel—2 used per wheel
AD-31	Drive chain—44 links	D-265-R	Block—universal joint
AD-38	Drive wheel—complete	D-327-R	Hub cap—front wheel
AD-246	Timken bearing—complete—rear axle	D-409	Stud—front end support—3/4" x 3"
AD-269	Quill—rear axle—with snap rings	D-485-R	Cover—steering worm
D-41-R	Hub—drive wheel	D-486	Bushing—steering worm shaft
D-72-R	Nut—drive wheel	D-486	Bushing—radius rod pivot
D-74-R	Sprocket—rear axle	D-524-R	Side bar—universal joint
D-89-R	Nut—rear axle	D-627	Key—steering worm
D-90-R	Lock nut—rear axle	D-632	Rod—radius
D-113	Shaft—rear axle	D-634-R	Pivot—radius rod
D-130	Lock washer—drive wheel nut	D-635	Felt retainer—front wheel
D-144	Lock washer—axle nut	D-636	Felt washer—front wheel
D-233	Spade lug	D-663-R	Bearing—rear steering shaft
D-241	Spoke—drive wheel	D-664-R	Bearing—front steering shaft
D-331	Bolt—rear axle sprocket	D-665	Shaft—steering—front
D-373	Felt washer—rear axle	D-666	Shaft—steering—rear
D-402	Snap ring—axle bearing retainer	D-768-R	Cover—steering sector
D-411	Bolt—spade lug	D-777	Pivot pin—steering knuckle
D-629-R	Clamp—quill to case	D-843	Stud—radius rod pivot
D-766	Felt retainer—rear axle	D-844	Washer—radius rod pivot
572	Cup—Timken bearing	871-R	Grease cup—front axle
575	Cone—includes rollers—Timken bearing	2720	Cup—Timken outside bearing
EMERGENCY BRAKE		2785	Cone—with rollers—Timken outside bearing
AD-24	Brake band—complete with lining and end	3320	Cup—Timken inside bearing
D-421	Brake lever	3383	Cone—with rollers—Timken inside bearing
D-423	End—brake band	DRAWBAR AND SEAT	
D-424	Lining—brake band	AD-211	Swinging link for awing draw bar
CONTROLS		D-242	Seat spring
D-35-R	Fork—governor speed control	D-391	Stud—seat spring
D-87-R	Lever—spark and speed control	D-408	Seat spring leaf
D-167	End—carburetor control rod	D-496	Cross member for awing drawbar
D-209	Rod—spark control	D-647	Draw bar
D-215	Crank—speed control	D-867	Seat
D-216	Rod—clutch operating	FENDERS AND PLATFORM	
D-221	Lever—clutch operating	AD-122	Fender—complete—R. H.
D-224	Clip—clutch rod	AD-123	Fender—complete—L. H.
D-247	Tube—control rod	D-78-R	Bracket—fender to case
D-266-R	Quadrant—control	D-251	Cross angle—58" long
D-330	Bolt—clutch operating lever	D-370	Plank—platform
D-393-R	Yoke—clutch rod	D-462	Reinforcing strap—fender
D-407	Pin—clutch rod yoke	D-516	Dust shield—front right hand
D-412	Rod—speed control	D-517	Dust shield—front left hand
D-617	Rod—carburetor control	D-518	Dust shield—rear right hand
D-618	Spring—carburetor control rod	D-519	Dust shield—rear left hand
D-796	Washer—carburetor control	D-648	Platform support—angle—R. H.
K-2172	Spring—control lever friction	D-649	Platform support—angle—L. H.
WATER FEED		MAGNETO	
AD-50	Strainer—water valve—complete	AD-26	Wire—R. H. spark plug
AD-53	Pipe—with gland—water feed	AD-27	Wire—L. H. spark plug
D-177	Drilled plug—feed lever in transmission case	AD-295	Magneto—complete with arm
D-207	Lever—water feed	D-225	Arm—magneto control
		D-369	Wood clamp—spark plug wires

Number	Description	Number	Description
FENDERS AND PLATFORM—Continued			
D-403	Key—magneto drive flange—3/16" x 7/8"	BW	Bowl casting
D-797	Collar—magneto drive	EW	Needle valve with packing nut
D-798-R	Bracket—magneto and air cleaner	FW	Cork float
D-823-R	Flange—magneto drive	HW	Float valve
132-R	Clamp—timing plate	JW	Float lever
508-R	Spark plug	KW	Throttle disc
2152-R	Plate—magneto timing	MW	Air valve adjusting screw
MAGNETO PARTS			
227	Screws with lock washers—distributor block	NW	Lid cork gasket
2710	Thumb-nut for distributor block	UW	Bowl cap
8024	Nut—breaker box cover or ground stud	XW	Needle valve connection
8058	Contact screw with platinum	4-W	Float washer and screw
8285	Thrust button with spring—center of distributor block	5-W	Throttle cap screw
9161	Breaker bar—complete with platinum	6-W	Air valve cap screw
9366	Distributor disc—complete	5-W	Lid cap screw
9432	Cam—left hand	6-W	Float valve retainer nut
9435	Collector brush with spring	8-W	Float lever bearing
14725	Distributor block—complete	10-W	Throttle clamp screw
14757	Breaker box cover—complete	11-W	Throttle stop adjusting screw
14762	Side plate—left hand	12-W	Throttle stop
18404	Nut—magneto armature shaft—castellated	15-W	Throttle shaft collar
27394	Back plate and impulse starter housing	16-W	Throttle lever lock nut
IMPULSE STARTER—ROTATING UNIT			
AD-302	Rotating unit complete	17-W	Throttle shaft collar screw
3782	Lock washer—magneto shaft	17-W	Throttle stop lock screw
18404	Nut—shaft—castellated	20-W	Air valve spring washer
A-18637	Magneto member—fits armature shaft	21-W	Bowl cap cork gasket
18640	Washer—magneto member	18-O	Throttle stop spring
18641	Compression spring—long	18-P	Air valve spring
19327	Cotter key—magneto shaft	321-R	Gasket—carburetor to manifold
28025	Cushion spring—short	AIR CLEANER	
J-28056	Cam member—slotted for drive collar	AD-110	Air cleaner—complete
IMPULSE STARTER—STATIONARY UNIT			
AD-303	Stationary unit complete	AD-115	Filter collar
1212	Cover screw—with lock washer	AD-202	Outlet pipe
2139	Screw—pawl stop	D-492-R	Elbow—air stack
3033	Lock washer—for 2139, 1212	D-798-R	Bracket—magneto and air cleaner
3040	Spring—oil cover	1977-R	Felt washer—outlet pipe flange
18604	Cover—housing	AIR STACK	
18609	Head screw—cover plate—with lock washer	AD-119	Air stack—complete—12" long
F-18610	Pawl	TOOL BOX AND TOOLS	
18612	Clip—magnet cover	AD-18	Tool box—complete
18615	Plunger	D-510	Flywheel wedge
H-18616	Pawl pivot	D-586	Gauge—magneto breaker contact points
V-18617	Spring—plunger	411-R	Socket wrench handle
18618	Washer—plunger spring	488-R	Valve grinding tool
W-18619	Bearing—plunger	1820-R	Socket wrench
18620	Plug—opposite plunger bearing	EXTRA EQUIPMENT—WHEELS	
G-18633	Pawl lever—complete	AD-248	Road band—with supports—2 used per wheel
18644	Spacer—pawl lever	D-233	Spade lug—4" high
X-18656	Pawl stop	D-248	Guide band—front wheel—1-1/2" high—2 used per wheel
19104	Oil cover	D-411	Bolt—spade lug
19124	Pin—oil cover	D-529	Guide band—front wheel—2-1/2" high—2 used per wheel
27394	Housing and back plate	D-530	Grouser—R. H.—2-1/4" x 2-1/4" x 5/16" x 22"
CARBURETOR			
AD-107	Carburetor—complete	D-531	Grouser—L. H.—2-1/4" x 2-1/4" x 5/16" x 22"
P-348	Butterfly (choker) disc	D-532	Extension rim—6" wide—rear wheel
S-82	Union nipple	D-573	Spade lug—6" high
S-83	Union nut	D-574	Grouser—R. H.—2-1/4" x 2-1/4" x 5/16" x 16"
S-87	Lock nut for adjusting screw	D-575	Grouser—L. H.—2-1/4" x 2-1/4" x 5/16" x 16"
S-439	Float lever pin	D-576	Grouser—R. H.—4" x 3" x 3/8" x 16"
S-1121	Drain cock	D-577	Grouser—L. H.—4" x 3" x 3/8" x 16"
S-1276	Throttle shaft	D-578	Grouser—R. H.—4" x 3" x 3/8" x 22"
S-1392	Throttle shaft bushing	D-579	Grouser—L. H.—4" x 3" x 3/8" x 22"
SJ-25	Throttle disc screw	D-580-R	Road lug—R. H.
S2911	Spray nozzle	D-581-R	Road lug—L. H.
WD-322	Lid casting	D-582	Extension rim—5" wide—front wheel
WD-323	Throttle casting	D-583	Rim clamp—front wheel extension rim
WD-329	Air valve casting	D-584-R	Washer—rim clamp—front wheel extension rim
WD-330	Throttle lever	D-600	Grouser—R. H.—4" x 3" x 3/8" x 30"
X-106-A	Choker lever assembly	D-601	Grouser—L. H.—4" x 3" x 3/8" x 30"
X-1814	Throttle—complete	D-713	Extension rim clip—rear wheel
X-1815	Butterfly throttle shaft assembly	D-726-R	Road lug—herringbone
X-1882	Air valve—complete	D-730	Support for road band
X-1940	Air valve leather disc assembly	EXTRA EQUIPMENT—WHEEL SCRAPERS	
		D-769	Bar—drive wheel scraper
		D-770	Support—scraper bar
		D-771-R	Clamp—scraper blade
		D-772	Blade—drive wheel scraper
		D-773	Bar—extension rim scraper
		D-774	Blade—R. H.—extension rim scraper
		D-775	Blade—L. H.—extension rim scraper

Number	Description	Number	Description
EXTRA EQUIPMENT—CALIFORNIA DRAWBAR			
AD-373	Swinging drawbar—California drawbar	D-733-R	Support—steering and power shaft
D-147	Washer—California drawbar	D-748-R	Cover—rear support
D-802	Swinging link—California drawbar	D-751-R	Housing—upper bearing
D-803	Guide bar—California drawbar	D-752-R	Clamp ring—upper bearing housing
D-804	Bracket—R. H.—California drawbar	D-753-R	Lever—throw-out
D-805	Bracket—L. H.—California drawbar	D-755-R	Housing
EXTRA EQUIPMENT—MISCELLANEOUS			
AD-103	Muffler—complete	D-759-R	Cover—housing
AD-173	Umbrella holder	D-826	Felt retainer—rear bearing
AD-232	Citrous grove fender—complete—R. H.	D-845	Key—spiral driven gear
AD-233	Citrous grove fender—complete—L. H.	D-846	Collar—ball-bearing
AD-241	Exhaust elbow—complete	D-847	Gear—spiral driven
AD-243	Radiator guard	D-848	Washer—guard reinforcing
D-213	Clamp—Muffler and exhaust elbow	D-850	Felt washer—rear bearing
D-557	Bolt—special—steering wheel handle	D-853	Snap ring—upper bearing
D-564	Bracket—R. H.—radiator curtain	D-854	Ball-bearing—rear support
D-566	Engine cover—canvas	D-855	Ball-bearing—upper housing
D-567-R	Quadrant—plow shift	D-865	Gasket—upper housing
D-570	Connecting link—plow shift	D-866	Gasket—housing cover
D-572	Bracket—L. H.—radiator curtain	871-R	Grease cup—1/8"—rear support
D-598	Lever—plow shift	1077-R	Felt washer—upper housing
D-599	Spring—plow shift lever	E-37-R	Filler plug—housing
D-703	Tie rod—citrous grove fender	JOHN DEERE TYPE "W" STATIONARY ENGINE	
D-710	Brace—citrous grove fender	AD-238	Needle valve—water feed
D-778	Air stack extension	AD-240	Crank case with studs
764-R	Handle—steering wheel	AD-262	Cylinder—complete with studs
2387-R	Roller—curtain—wood	AD-294	Belt pulley with bushing
2389-R	Curtain—cloth	AD-306	Flywheel with bolts and dowel pin
POWER SHAFT			
AD-308	Gear with hub—spiral drive	D-716	Cover—crank case
AD-309	Guard—power shaft	D-717-R	Cover—clutch fork
AD-312	Shaft—power	D-718	Rod—clutch operating
D-130	Washer—spiral drive gear	D-719	Rod—speed control
D-297	Gasket—rear support cover	D-720	Rod—spark control
D-372	Felt washer—rear support cover	D-721-R	Quadrant—control
D-382	Key—spiral drive gear	D-723	Gasket—clutch fork cover
D-677	Gasket—housing to case	D-732	Gasket—crank case cover
		D-780	Support—front end
		D-783	Bracket—rear tank
		D-788	Support—rear crank case
		K-2394	Filler pipe—crank case—1-1/2" x 2-1/2"
		D-784	Skid
		D-785	Cross member—skid

The Manufacturer's Interest in Your Tractor

The value of your tractor investment depends upon, first, the amount of continuous service it gives you; second, the cost of operation and upkeep. The best-built tractor may prove to be a poor investment if proper care and precautions are not used in operating it. In the John Deere, we use the best quality of materials made up in accordance with the best-known engineering design. We employ highly-skilled mechanics, so that the finished tractor will be a machine capable of doing the hard, steady work for which it is built. We furnish carefully-written detailed instructions on how to care for and operate the tractor, and then must depend upon its owner to follow them carefully if he is to get the full value from his investment.

IMPORTANCE OF KNOWING YOUR TRACTOR

Study the manual of instructions sent with your tractor—this is vitally important. Go over your tractor as you read your instruction book—become familiar with every part, its operation, care and adjustment. A little attention daily in keeping the working parts in good condition will prevent small troubles from becoming serious and costly.

Do not hesitate to employ the same type of skilled

help for tractor repair work that you would employ for your automobile. Proper care will pay big dividends in better and longer service and low repair bills.

IMPORTANCE OF GOOD LUBRICATION

There are many oil manufacturers in the country who make hundreds of brands of oil. No one brand is always obtainable by all tractor owners. It is, therefore, impractical to recommend brands of oil for each locality. The selection of oil must be left largely to the judgment of the owner. A number of oil companies employ experienced lubricating engineers, who determine, by actual test, the most effective oil to use in every make of tractor. Recommendations made from the results of these tests are widely advertised. Reliable companies making such recommendations assume responsibility for the performance of their oil in your tractor. There are some irresponsible concerns who make a practice of meeting responsible competition with "just as good" an oil at a much lower price. The use of such oils is hazardous and may result in serious damage to the tractor before the quality can be determined. Oils should be bought on a basis of quality and on the reputation of the manufacturer.

Good High-Grade Oil Doubles the Life of Your Tractor