

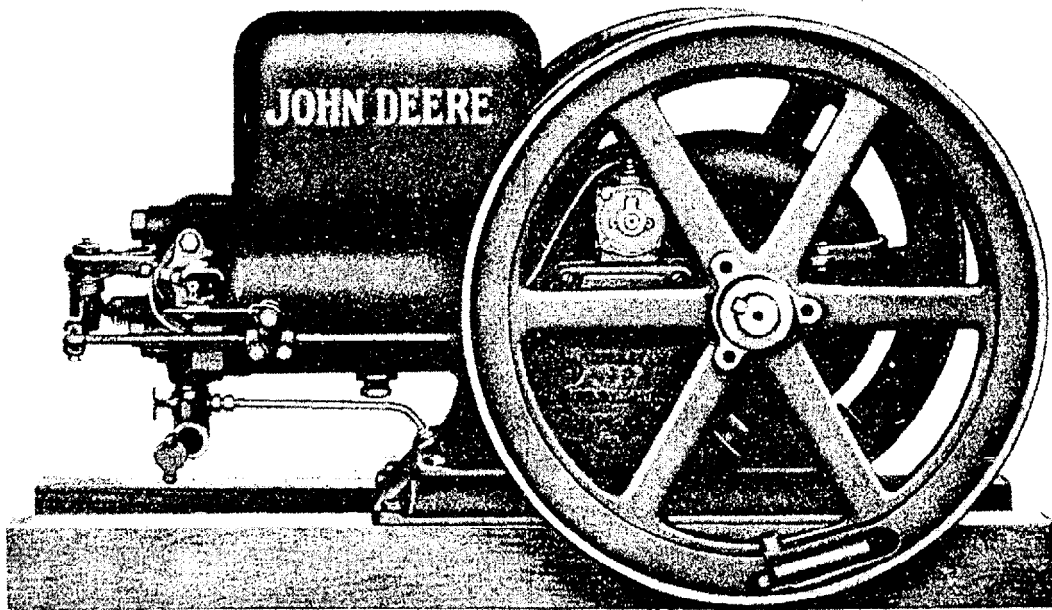
**READ**  
*Carefully*  
**SAVE!**

# Instructions

and **PARTS LIST**

**No. 107T for**

## **JOHN DEERE MODEL "E" ENGINES**



*Detail Design Subject to Change without Notice*

Manufactured by  
**MOLINE TRACTOR WORKS**  
of DEERE & COMPANY  
Moline, Illinois, U. S. A.

**TO THE PURCHASER**

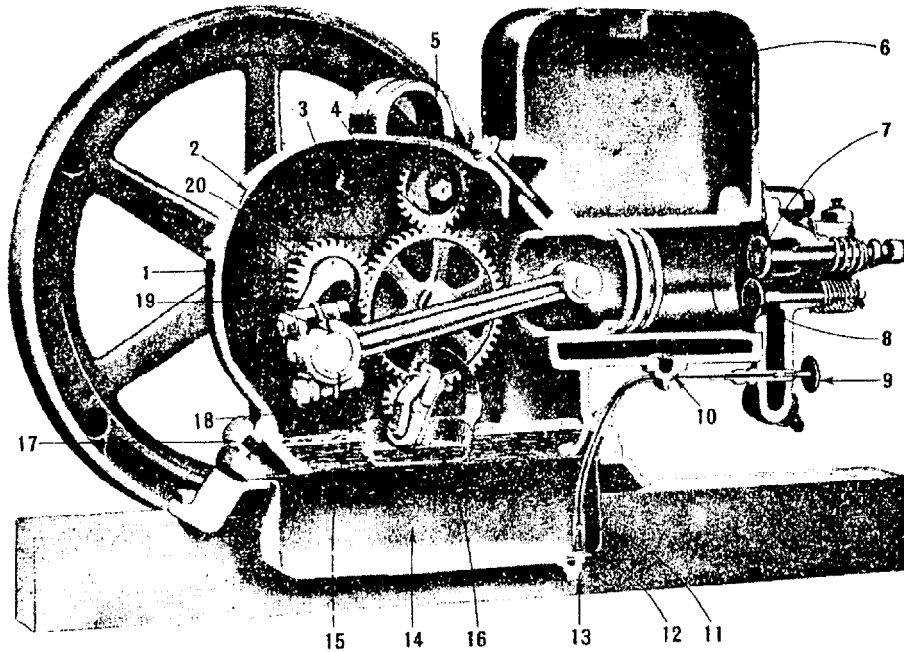
The successful operation of your engine, which is designed to give you many years of satisfactory service, depends upon the care and how it is operated.

Give your engine daily attention and make sure that all parts are kept tight and properly oiled. Good oil and proper care protect your engine from undue wear, loss of power, repair expense, and early replacements.

Always give the **SERIAL NUMBER OF YOUR ENGINE WHEN ORDERING REPAIR PARTS**. This number is located on a metal tag just below the magneto on the left-hand side of the engine.

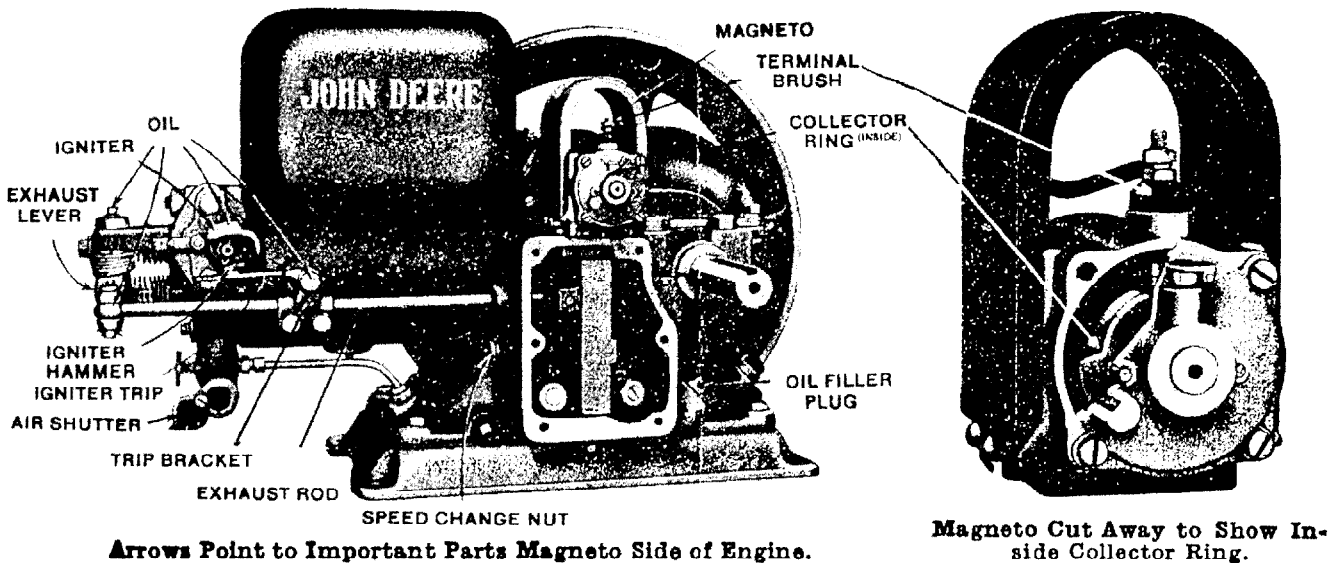
**The Serial Number**  
of your Engine is.....

**KEEP THESE INSTRUCTIONS  
FOR FUTURE REFERENCE**



## Description of Parts Arrowed in Cut Above

1. **Crankcase** contains all important operating parts. Wear taken on easily replaced inexpensive bushings.
2. **Crankcase Cover** prevents dirt or foreign matter getting into operating parts. Removable without disturbing magneto or operating parts.
3. **Cam Gear** drives camshaft which governs ignition and valve-timing. It also drives magneto and governor.
4. **Magneto Gear** drives magneto at the same speed and same direction as crankshaft.
5. **Magneto** furnishes hot fat spark for easy-starting and continuous running.
6. **Water Hopper** has excess capacity. No danger of overheating.
7. **Exhaust Valve**—non-warping.
8. **Intake Valve**—non-warping.
9. **Mixer Needle Valve** for adjusting amount of fuel.
10. **Drain Plug** for removing water.
11. **Check** in fuel line keeps gasoline at mixer.
12. **Strainer Screen** prevents foreign matter from entering check, fuel line, or needle valve.
13. **Drain Plug** for flushing water and sediment from fuel tank.
14. **Gasoline Tank.** Seamless, heavy pressed steel construction, no solder joints. Fully protected from damage. No fire hazard.
15. **Oil Reservoir.** Capacity for 20 hours' continuous running. Note maximum oil level shown.
16. **Oil Pan.** Revolving governor (18) splashes oil to all parts of crankcase, thoroughly lubricating the operating parts. Oil pan regulates oil supply.
17. **Large Gasoline Filler Hole.** Convenient oil filler on opposite side of engine.
18. **Governor** runs in oil. Insures uniform speed.
19. **Connecting Rod Bearings** die-cast, removable and replaceable. Metal shims for adjustment.
20. **Main Bearings** fitted to crankcase. No strain on studs, replaceable die-cast bearings with metal shims for adjustment.



## BEFORE STARTING

### Examine for Damage in Shipping

**Lubrication.** Remove oil-filler plug. Pour in good grade engine oil until it runs out oil-filler hole. This is **correct** level. Add oil every fifteen to twenty hours' operation. Use **high-grade** oil; S. A. E. 30 when air temperature is above 32° F.; S. A. E. 20 when air temperature is below 32° F. Drain and wash crankcase every 100 hours of operation. Oil **exhaust lever bearing** and **exhaust rod journal** daily.

**Oil Igniter, igniter trip, and magneto** daily. Use one drop of light engine oil in magneto.

**Fuel.** Fill tank at gasoline filler hole with clean gasoline.

**Water.** Fill hopper three-fourths full of clean water—preferably soft.

**Starting.** Open **mixer needle** one turn, close **air shutter** and crank engine. When engine starts, open air shutter and adjust needle until engine takes one explosion at a time, running without load. To stop engine, hold down the **igniter trip**.

## OPERATING

**Speed.** May be adjusted from one-half to full rated speed by turning **speed change nut**.

**Mixer.** Needle needs no change except in cold weather. Then it should be opened further until engine is warm.

Drain **hopper** in freezing weather.

## Maintenance

**Fuel.** If engine does not get gasoline, remove **fuel line** by disconnecting at mixer, loosen top nut and remove lower nut where it enters cylinder. Clean **strainer** at fuel pipe end and be sure **check** holds gasoline. Replace fuel line and keep connections tight. **Slot in end of needle valve seat must be horizontal.** Gasoline should appear in mixer elbow after closing air shutter and turning flywheels.

**Timing Exhaust.** Turn flywheel in direction of rotation about one-half turn after igniter trips until mark "EXHAUST OPEN" on flywheel is level with exhaust rod. Turn **exhaust lever adjusting screw** until it just touches end of **exhaust valve**, then tighten **lock nut**.

**Magneto.** Test spark by cleaning a bright spot on **igniter main spring** and scratch igniter end of wire across it while flywheels are rotating. If no spark shows, the **magneto terminal brush holder**, to which wire is attached, should be removed and cleaned and copper collector ring inside magneto wiped clean, through terminal brush

holder tapped hole. Magneto rarely needs attention, and should always give spark if igniter is timed correctly. Never remove magneto until marks on magneto and cam gears are lined up. Replace in same position and engine will start.

**Note:** In case the gear marking becomes obliterated, the magneto can be timed by pressing in the timing rivet marked "L" (in the magneto end bearing) while the flywheel is turned slowly in the direction it runs. This rivet should drop into the notch and start out just as the igniter trips.

**Timing Igniter.** The igniter must trip when mark "Spark" on flywheel is level with or slightly above exhaust rod, and exhaust rod is clear back toward flywheel just starting ahead. If igniter trips

before this point, loosen clamp bolts of trip bracket and adjust back toward flywheel. If it trips later than this, adjust bracket ahead. Face of igniter trip must set flat against igniter hammer when bolts are tightened.

**Battery Connections.** Never attach a battery and coil to engine without first disconnecting magneto wire.

John Deere Model "E" Engines are extremely simple in design. They have the fewest possible number of parts to wear or get out of adjustment. They start easily and run without attention. Keep all nuts tight; use good oil as instructed; keep engine clean, and it will prove a safe, reliable and durable power plant.

Part No.	H.P. Size	Name and Description	Part No.	H.P. Size	Name and Description
<b>Cylinder</b>					
629R	1½ 3	Washer, crankcase cover screw.	AE73RT	3	<b>Cylinder Head</b> Head, cylinder, E78RT, with valves and springs.
1450R	1½ 3	Pipe plug, in lower hook-up lever shaft hole.	AE89RT	1½	
A2093R	1½ 3	Pipe plug, cylinder drain.	AE278RT	1½	Valve, intake and exhaust (Set of 2 E1973RT).
AE29RT	1½	Cover, crankcase, E60RT, with oil guard (prior to Serial No. 326471).	AE279RT	3	Valve, intake and exhaust (Set of 2 E1974RT).
AE85RT	1½	Cylinder, E103RT, with studs, main bearing caps and bushings.	E78RT	3	Head, only, cylinder.
AE86RT	3	Cylinder, E77RT, with studs, main bearing caps and bushings.	E93RT	1½	Head, only, cylinder.
AE218RT	1½	Bearing, main.	E2221RT	1½	Gasket, cylinder head.
AE220RT	3	Bearing, main.	E2251RT	3	Gasket, cylinder head.
AE229RT	1½	Cover, crankcase, E127RT, with oil guard.	K2006RT	1½ 3	Spring, intake valve.
E53RT	1½	Cap, main bearing.	K2007RT	1½ 3	Spring, exhaust valve.
E54RT	1½	Sub-base.	K2025RT	3	Spring, cushion, intake valve.
E79RT	3	Cover, crankcase.	<b>Crankshaft</b>		
E86RT	3	Cap, main bearing.	AE18RT	1½	Crankshaft with gear.
E92RT	3	Sub-base.	AE60RT	3	Crankshaft with gear.
E128RT	1½	Spacer, ventilator.	E2168RT	1½	Gear, crankshaft.
E1946RT	1½	Cover, ventilator.	E2207R	1½ 3	Woodruff key, crankshaft gear.
E1947RT	1½	Valve, breather.	E2228RT	3	Gear, crankshaft.
E2135RT	1½	Gasket, crankcase bottom.	<b>Piston and Connecting Rod</b>		
E2136RT	3	Gasket, crankcase bottom.	AE40RT	1½	Connecting rod, E49R, with bearings.
E2183RT	1½	Gasket, crankcase cover.	AE75RT	3	Connecting rod, E50R, with bearings.
E2187RT	1½	Guard, oil.	AE217RT	1½	Bearing, connecting rod.
E2196RT	1	Shim, main bearing, thick.	AE219RT	3	Bearing, connecting rod.
E2198RT	1½	Shim, main bearing, medium.	AE241RT	1½	Piston with rings.
E2220RT	1½ 3	Washer, packing, 7/8" x 3/8", cover cap screw.	AE242RT	1½	Piston with rings, .0625 oversize.
E2229R	3	Stud, cylinder head, 5/8" x 4-5/8".	AE243RT	3	Piston with rings.
E2230RT	3	Shim, main bearing, thick.	AE244RT	3	Piston with rings, .0625 oversize.
E2245RT	3	Shim, main bearing, medium.	AE253RT	1½	Ring, piston (Set of 3).
E2247RT	3	Gasket, crankcase cover.	AE254RT	1½	Ring, piston (Set of 3).
E2258RT	1½	Shim, main bearing, thin.	AE255RT	3	Ring, piston (Set of 3).
E2270RT	3	Shim, main bearing, thin.	AE256RT	3	Ring, piston (Set of 3).
K2002RT	1½	Stud, cylinder head, 1/2" x 3-1/4".	AE260RT	1½	Bushing, piston pin (Substitute for 1 E2075RT).
K2003RT	1½	Stud, cylinder head, 1/2" x 2-1/2".			

JOHN DEERE MODEL "E" GASOLINE ENGINES

Part No.	H.P. Size	Name and Description	Part No.	H.P. Size	Name and Description
<b>Piston and Connecting Rod</b>			E2260RT	1 1/2 3	Follower, cam.
—Continued			E2262RT	1 1/2 3	Shaft, cam follower.
AE261RT	3	Bushing, piston pin (Substitute for 1 E2076RT).	E2266RT	1 1/2 3	Nut, speed change.
AE380RT	1 1/2	Piston with rings (.030" oversize).	E2272RT	3	Spring, cam follower spacer.
AE381RT	3	Piston with rings (.030" oversize).	E2296RT	1 1/2 3	Spring, governor plunger.
AE384RT	1 1/2	Rings, piston (Set of 3) (.030" oversize)	E2296RT	1 1/2 3	Spring, speed change.
AE385RT	3	Rings, piston (Set of 3) (.030" oversize)	K2342RT	1 1/2 3	Plate, hook-up lever.
E2169RT	1 1/2	Pin, piston.	<b>Mixer</b>		
E2197RT	1 1/2	Shim, connecting rod, thick.	AE35RT	1 1/2 3	Valve, needle.
E2199RT	1 1/2	Shim, connecting rod, thin.	E89RT	3	Body, mixer.
E2231RT	3	Shim, connecting rod, medium.	E2160RT	1 1/2 3	Seat, needle valve.
E2246RT	3	Shim, connecting rod, medium.	E2250RT	3	Gasket, mixer.
E2259RT	1 1/2	Shim, connecting rod, thin.	E2269RT	1 1/2 3	Air shutter.
E2271RT	3	Shim, connecting rod, thin.	K2396RT	1 1/2 3	Spring, air shutter.
K2024RT	3	Pin, piston pin bushing.	K2480RT	1 1/2 3	Spring, needle valve.
K2117RT	3	Pin, piston.	<b>Fuel System</b>		
<b>Exhaust Rod</b>			1417RT	1 1/2 3	Pipe, oil drain.
E81RT	3	Lever, exhaust.	AE16RT	1 1/2	Top, fuel tank, with oil pan (Prior to Serial No. 326571).
E106RT	1 1/2	Lever, exhaust.	AE17RT	1 1/2	Tank, fuel, with drain.
E2165RT	1 1/2	Rod, exhaust.	AE58RT	3	Top, fuel tank, with oil pan.
E2205RT	1 1/2 3	Pin, exhaust lever to rod.	AE59RT	3	Tank, fuel, with drain.
E2224RT	3	Rod, exhaust.	AE102RT	3	Fuel line, complete.
E2292RT	1 1/2 3	Spring, exhaust lever.	AE105RT	1 1/2	Fuel line, complete.
E2293RT	1 1/2 3	Screw, cap, 5/8", exhaust lever pivot.	AE120RT	1 1/2 3	Check valve and strainer assembly.
E2302RT	1 1/2 3	Cover, oil hole.	AE230RT	1 1/2	Top, fuel tank, with oil pan.
K2010RT	1 1/2 3	Screw, exhaust lever adjusting.	D345RT	1 1/2 3	Pipe cap, on oil drain pipe.
<b>Governor</b>			E97RT	1 1/2 3	Plug, filler, oil and fuel.
1215R	1 1/2 3	Nut, hex., jam, camshaft, 3/4", U.S.S.	E1976RT	1 1/2 3	Plug, fuel drain.
1450R	1 1/2 3	Pipe plug, in lower hook-up lever shaft hole.	E2056RT	1 1/2 3	Flange, fuel drain.
1520R	1 1/2 3	Nut, hex., jam, hook-up screw, 1/2", U.S.S.	E2157R	1 1/2 3	Nut, 1/4", solder bushing.
1530R	1 1/2 3	Nut, hex., jam, governor, 3/4", U.S.S., L. H.	E2158R	1 1/2 3	Gland, 1/4", solder bushing.
AE24RT	1 1/2	Lever, hook-up, E66RT, with plate.	E2252RT	1 1/2 3	Bushing, fuel line to cylinder.
AE66RT	3	Lever, hook-up, E85RT, with plate.	E2257RT	1 1/2 3	Flange, fuel drain (1-1/2 H. P. Prior to Serial No. 250423; 3 H. P. Prior to Serial No. 25844).
AE232RT	1 1/2	Plunger, governor.	E2304RT	1 1/2 3	Check valve.
E56RT	1 1/2 3	Shaft, governor.	K2457RT	1 1/2 3	Nut, compression, fuel line cylinder bushing.
E61RT	1 1/2	Cover, governor.	<b>Engine Parts</b>		
E62RT	1 1/2	Gear, camshaft.	2532R	3	Washer, on water hopper cover latch.
E80RT	3	Gear, camshaft.	AE30RT	1 1/2	Flywheel, E47RT, with crank.
E84RT	3	Cover, governor.	AE69RT	3	Flywheel, E110RT, with crank.
E102RT	1 1/2 3	Shaft, cam.	AE70RT	1 1/2 3	Muffler.
E109RT	3	Weight, governor.	AE80RT	1 1/2 3	Crankshaft extension.
E133RT	1 1/2	Weight, governor.	E46RT	1 1/2	Flywheel, pulley side.
E2128RT	1 1/2 3	Gasket, hook-up lever shaft pole (Prior to Serial No. 265812).	E65RT	1 1/2	Spacer, flywheel.
E2171RT	1 1/2	Pin, hook-up lever, 7/16" x 6-9/16".	E83RT	3	Spacer, flywheel.
E2175RT	1 1/2 3	Screw, hook-up lever, adjusting.	E111RT	3	Flywheel, pulley side.
E2176RT	1 1/2 3	Screw, speed change.	E191RT	3	Cover, water hopper.
E2184RT	1 1/2	Gasket, governor cover.	E192RT	3	Latch, water hopper cover.
E2189R	1 1/2 3	Washer, governor thrust, 1-7/16" x 25/32".	E1988RT	3	Spring, water hopper cover latch.
E2203RT	1 1/2 3	Bushing, governor and camshaft bearing.	E2071RT	1 1/2 3	Screw, starting crank.
E2206RT	3	Plunger, governor.	E2125RT	1 1/2 3	Funnel.
E2207R	1 1/2 3	Key, camshaft gear.	E2127RT	1 1/2 3	Key, flywheel, 3/8" x 5/16" x 2-3/8".
E2220RT	1 1/2 3	Washer, packing, speed change nut.	E2144RT	1 1/2	Skid.
E2223RT	3	Pin, hook-up lever, 7/16" x 7-5/8".	E2145RT	3	Skid.
E2225RT	3	Shaft, cam follower.	E2153RT	1 1/2 3	Washer, belt pulley reinforcement.
E2248RT	3	Gasket, governor cover.	E2299RT	1 1/2 3	Crank, starting.
			E2301RT	1 1/2 3	Setscrew, headless, crank to flywheel, 5/16" x 1-3/4" (1-1/2 H. P. Prior to Serial No. 238846).

## JOHN DEERE MODEL "E" GASOLINE ENGINES

Part No.	H. P. Size	Name and Description	Part No.	H. P. Size	Name and Description
<b>Plain Pulley</b>					
AE4RT	1½ 3	Pulley, E100RT, 6" x 5", with bolts.	HLS	1½ 3	Nut, 10-32, binding post.
AE5RT	1½ 3	Pulley, E98RT, 8" x 5", with bolts.	HLW	1½ 3	Bearing, frame end.
AE6RT	1½ 3	Pulley, E48RT, 10" x 5", with bolts.	HMT	1½ 3	Strap, magnet.
AE7RT	1½ 3	Pulley, E2134RT, 4-3/4" x 4", with bolts.	HSF	1½ 3	Armature, complete.
AE106RT	1½ 3	Pulley, E36RT, 12" x 5", with bolts.	HSW	1½ 3	Shaft, armature drive.
AE107RT	1½ 3	Pulley, E37RT, 14" x 5", with bolts.	HSX-HTA	1½ 3	Shaft, armature with collector ring (short).
AE108RT	1½ 3	Pulley, E38RT, 16" x 5", with bolts.	KHM	1½ 3	Washer, armature thrust.
E2153RT	1½	Washer, belt pulley reinforcement.	NYH	1½ 3	Magnet.
<b>Hand Portable Truck</b>					
AE82RT	1½ 3	Front axle, complete with E45RT turntable.	PGD	1½ 3	Screw, 10-32 x 1/2", frame end.
AE83RT	1½ 3	Front axle, complete with E43RT rear bolster.	PGG	1½ 3	Screw, 8-32 x 1/4", magneto strap.
E42RT	1½ 3	Bolster, front.	PGP	1½ 3	Collector brush with spring.
E43RT	1½ 3	Bolster, rear.	PGR	1½ 3	Ground brush with spring.
E44RT	1½ 3	Wheel.	PGW	1½ 3	Binding post and brush holder with HLS.
E45RT	1½ 3	Turntable.	<b>Igniter</b>		
E2131RT	1½ 3	Tongue.	AE25RT	1½ 3	Igniter, complete, with E108RT body.
E2313RT	1½ 3	Brace, rear axle.	AE38RT	1½ 3	Electrode, movable, with point.
<b>Magneto</b>					
AE36RT	1½ 3	Magneto.	AE38RT	1½ 3	Electrode, stationary, with point and nuts.
C1197RT	1½	Felt—Magneto oil seal.	AE134RT	1½ 3	Body, igniter.
E76RT	1½	Gear, magneto drive.	E99RT	1½ 3	Bracket, igniter trip.
E88RT	3	Gear, magneto drive.	E2057R	1½ 3	Washer, igniter, stationary electrode.
E2185RT	1½ 3	Gasket, magneto cover.	E2072RT	1½ 3	Pin, igniter torsion spring.
E2213RT	1½	Cable, magneto.	E2163RT	1½ 3	Hammer, igniter.
E2218RT	1½ 3	Plate, magneto.	E2227RT	1½ 3	Gasket, igniter.
E2253RT	3	Cable, magneto.	E2234RT	1½ 3	Point, igniter spark.
<b>AE36RT Magneto Parts</b>					
D2706R	1½ 3	Screw, frame end, 1/32" x 1/2".	E2263RT	1½ 3	Igniter trip.
E2302RT	1½ 3	Oil cup.	E2268RT	1½ 3	Spring, igniter trip.
HCT	1½ 3	Frame.	E2274RT	1½ 3	Anvil, igniter.
HKZ	1½ 3	Key, drive shaft.	E2275RT	1½ 3	Pin, igniter anvil.
			E2276RT	1½ 3	Spring, igniter, main.
			E2282RT	1½ 3	Pin, igniter trip.
			E2294RT	1½ 3	Spring, igniter torsion.
			K2316RT	1½ 3	Mica washers (set).
			K2318RT	1½ 3	Spring binding post, magneto cable.

## *Genuine John Deere Parts* **Protect Your Investment**

**W**HEN a new part is required for your equipment, order by number as shown on the old part, or as listed in this direction book. And be sure to **INSIST** on **GENUINE JOHN DEERE PARTS**. **THEY** can be procured from any John Deere dealer.

Genuine John Deere parts are made from the same patterns, by the same skilled

workmen, of the same high quality materials as the original parts. They fit properly. They wear better, last longer, and maintain the quality of your equipment throughout all of its long life.

Protect your farm equipment investment through the use of Genuine John Deere parts — least expensive because they're best.

