

John Deere 15K and 25K PTO Standby Alternators



JOHN DEERE

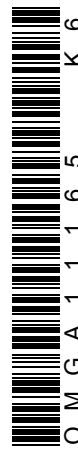
OPERATORS MANUAL

John Deere 15K and 25K PTO Standby
Alternators

OMGA11165 K6 English

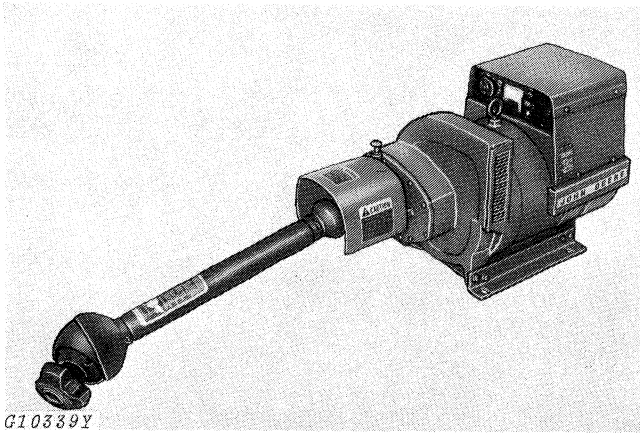
JDM Division
OMGA11165 K6

LITHO IN U.S.A.
ENGLISH





To The Operator



G10339Y



This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

Record your alternator serial number in the space provided on page 16.

Because John Deere sells its products world-wide, U.S. units of measure are shown with their respective metric equivalents throughout this operator's manual. These equivalents are the SI (International System) Units of Measure.

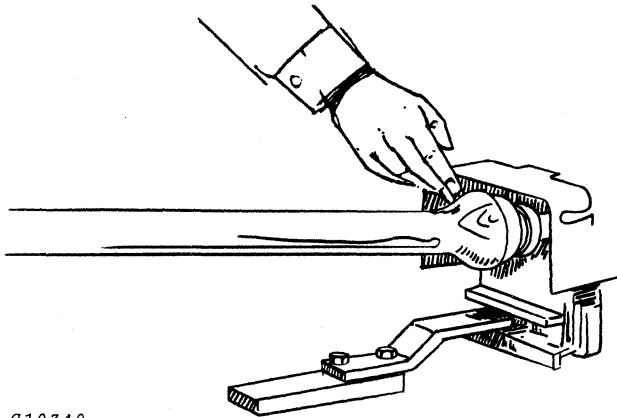


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Safety Suggestions



G10340

Stay Clear of PTO

Be sure power shields and guards are in place and secured before starting work.

Before lubricating alternator, always disengage all power, shut off tractor engine and wait until alternator stops.

After starting the alternator, place the transmission lever in the "PARK" position before dismounting from the tractor.

Operate Alternator Safely

Be sure tractor is in a well ventilated area.

Make certain only a qualified electrician performs the electrical installations.

When working around electrical equipment, move slowly. Do not lunge after falling tools.

Respect Electricity

Always use a double throw switch when connecting portable power to circuits to prevent power from feeding back through utility power lines.

Stop all power and ground all high-voltage points before touching wires.

Make certain that power cannot be accidentally restored.

Do not work on ungrounded electrical equipment.

Do not examine live equipment when mentally or physically fatigued.

Do not operate electrical equipment while standing on damp concrete, metal floors, or well grounded surfaces.

Change damp clothing or shoes immediately.

Do not take unnecessary risks.

Do not work alone.

Read the operator's manual.

Have an Extinguisher Nearby

Have a multipurpose dry chemical fire extinguisher filled and handy. Know how to use it.

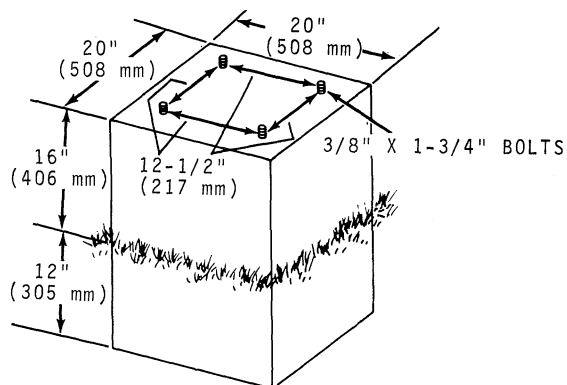


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Preparing for Use

INSTALLATION



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Location

Consider the following when selecting a permanent site:

1. Ground that is well drained and level.
2. An atmosphere that is free from excessive dust, wind blown particles, extreme high or low temperatures and corrosive fumes.
3. A location that is easy for conversion from the power line to your alternator.

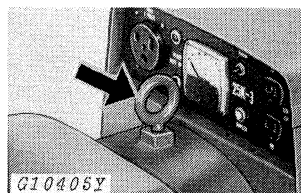
NOTE: Allow a minimum of three feet for service accessibility.

Foundation

Lift alternator using lift anchor and secure to concrete base.



CAUTION: Stand clear when alternator is being raised with lift anchor.



Lift Anchor

Adapter Plug

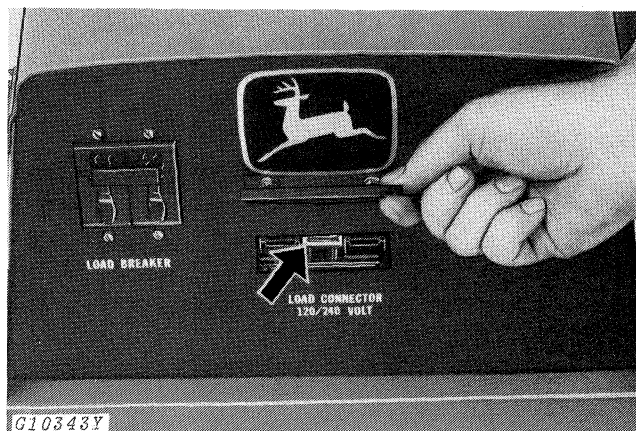


CAUTION: All electrical installations must be done only by a qualified electrician.

Insert plug into load connector receptacle.



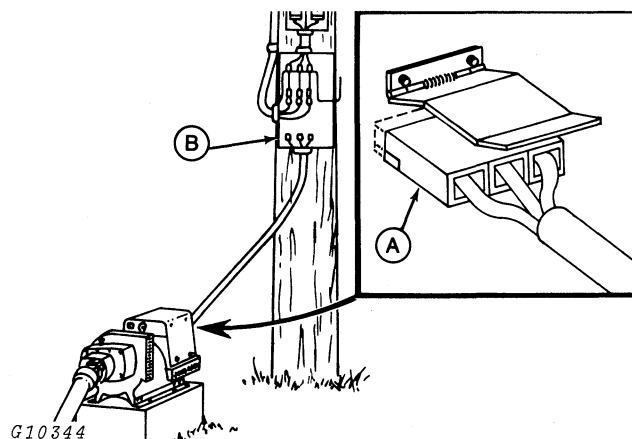
CAUTION: Always use a load transfer switch when connecting portable power to circuits to prevent power from feeding back through utility power lines.



G10343Y

Connector Receptacle

A—Plug
B—Load Transfer Switch



Attaching to Tractor

Remove PTO cover from tractor.

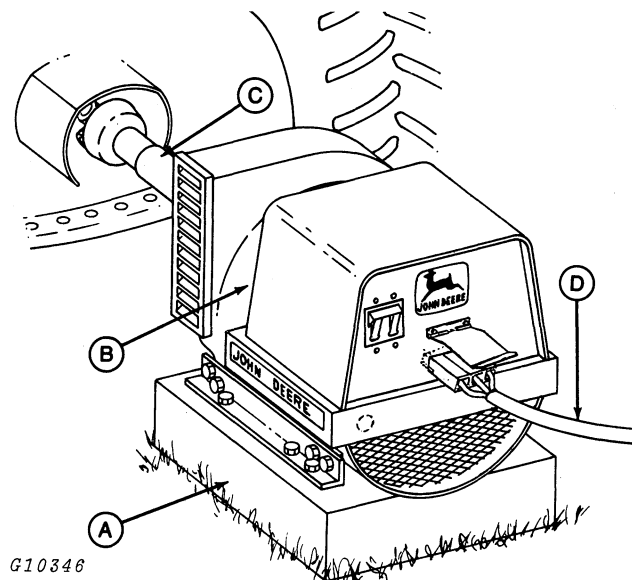
Align tractor PTO with alternator PTO so shaft will be as straight as possible.



CAUTION: Be sure tractor shift lever is in the "PARK" position before dismounting from tractor or operating alternator.

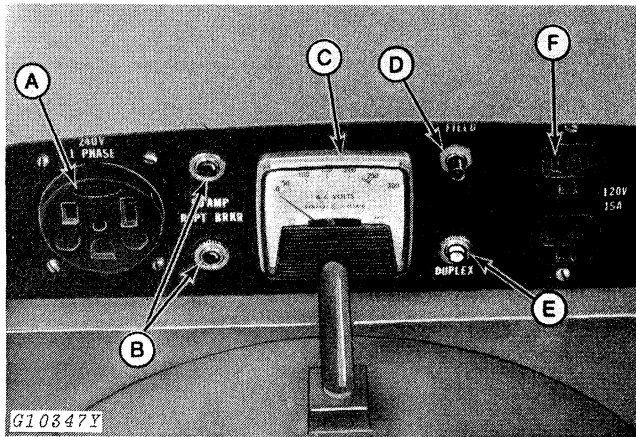
Depress the spring loaded pin on the PTO yoke at the tractor end of the drive shaft. Slide the yoke onto the alternator PTO shaft and make certain the spring loaded pin falls into the groove on the alternator splined PTO shaft. Attach other end of shaft to tractor PTO.

A—Permanent Base
B—Alternator
C—PTO Shaft
D—Load





Controls and Instruments



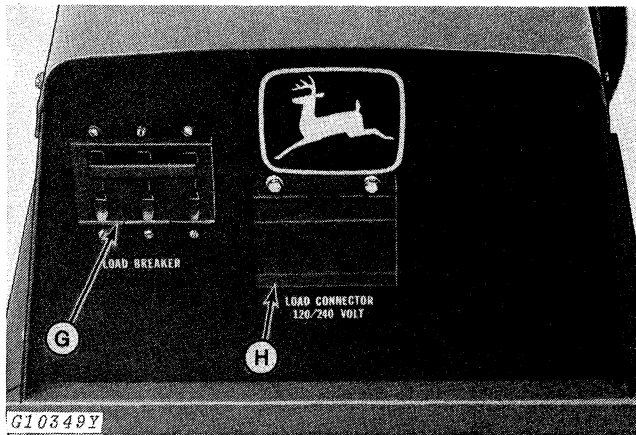
Instrument Panel

Push to reset circuit breakers.

Allow breakers to cool before resetting.

NOTE: If field winding breaker is continually breaking circuit, internal damage is possible.

- A—240-Volt Receptacle
- B—50-Amp Breakers
- C—Voltmeter
- D—Field Winding Breaker
- E—Duplex Breaker
- F—120-Volt Duplex Receptacles



Rear Panel (25K)

To reset load circuit breakers, push all the way "OFF." Then, push to "ON."

- G—Load Circuit Breakers (2 used 15K, 3 used 25K)
- H—Output Receptacle



Field Operation and Adjustments

OPERATION



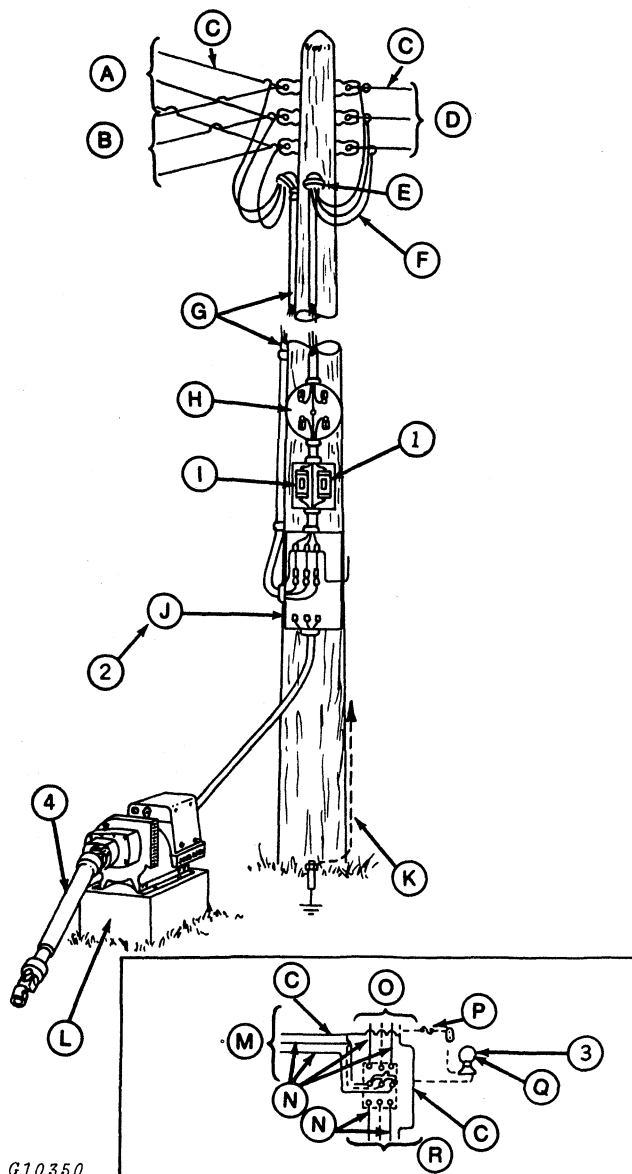
CAUTION: All electrical installations must be done only by a qualified electrician. Always use a load transfer switch when connecting portable power to circuits to prevent power from feeding back through utility power lines.

1. Move the power line circuit breaker to the "OFF" position.
2. Throw the load transfer switch (installed by a qualified electrician) to connect load to alternator.
3. Turn power return signal to the "ON" position (if one has been installed by a qualified electrician).
4. Start tractor engine, engage the power take-off and bring PTO shaft speed to 540 rpm.

IMPORTANT: The voltmeter on the alternator control box must read 240 volts.

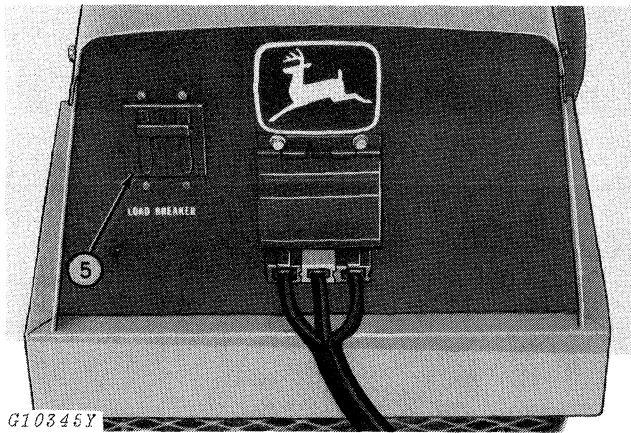
A—Wires to House
B—Wires to Barn
C—Neutral
D—Wires from Power Line
E—Service Head
F—Drip Loops
G—Load Lines
H—Meter
I—Switch or Safety Breaker
J—Load Transfer Switch

K—Lightning Ground Wire to Neutral from Power Line at Top of Pole
L—Concrete Base
M—To Electrical Load
N—Hot
O—To Main Switch or Breaker at Meter
P—Fuse
Q—Power Return Signal
R—To Alternator



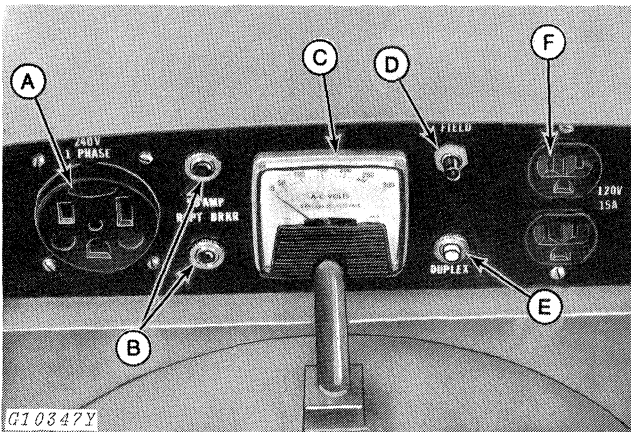
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8 Field Operation and Adjustments



15K Single Phase Illustrated

5. Turn load breakers to the "ON" position.



- A—240-Volt Receptacle
B—50-Amp Breakers
C—Voltmeter
D—Field Winding Breaker
E—Duplex Breaker
F—120-Volt Duplex Receptacles

IMPORTANT: When powering motors, connect only one motor at a time. Allow each motor to reach running speed before connecting a second motor. (Motors require four to five times more current for starting than for running at normal speed.) (See tables in specifications on page 14.)

NOTE: To maintain the required 540 rpm it may be necessary to change the engine throttle setting when large changes in the electrical load are made.

When disconnecting large portions of the load:

1. Disconnect the part of the load which will be left on.
2. Remove remaining load.
3. Wait until alternator speed has stabilized.
4. Reconnect that part of the load which will be left on.

STORAGE

Cover the alternator to protect it from moisture.

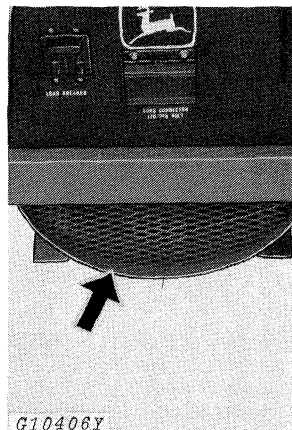


Lubrication and Periodic Service

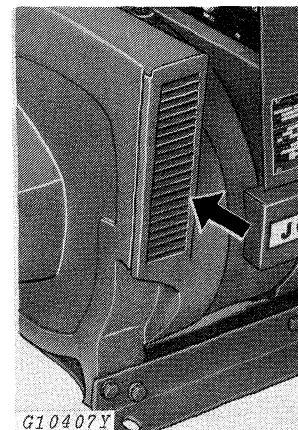
AIR INLET AND OUTLET

CAUTION: Disengage PTO and shut off tractor before servicing or lubricating alternator.

Check and clean air inlet and outlet as required to prevent overheating.



Air Inlet



Air Outlet

SYMBOLS

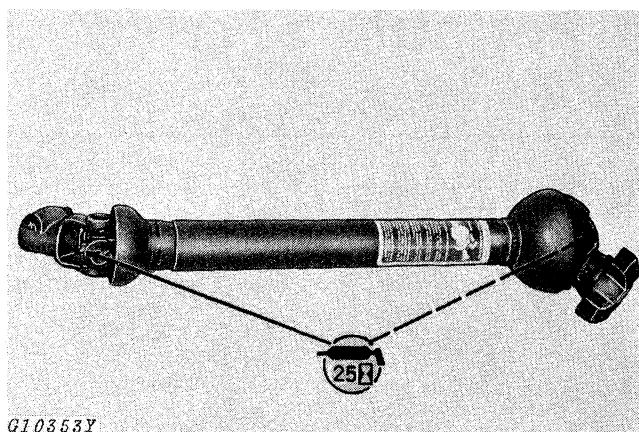


Lubricate with John Deere Multi-Purpose Lubricant or an equivalent SAE multipurpose-type grease at hourly intervals indicated on the symbols.



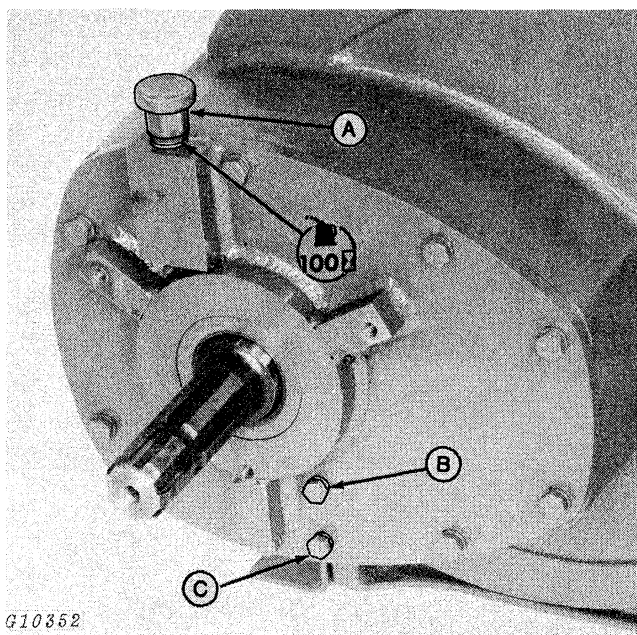
Lubricate with John Deere SAE 90 SCL gear lubricant or equivalent at hourly intervals indicated on the symbols.

PTO SHAFT



NOTE: Grease universal joints every 4 to 8 hours during adverse conditions.

GEARBOX



Drain after the first 100 hours of operation and refill with John Deere SAE 90 Multi-Purpose gear lubricant. Repeat this procedure every six months or every 100 hours.

1. Remove filler plug (A) and oil level plug (B).
2. Fill gearbox until oil begins to flow from oil level plug hole.
3. Replace both plugs (A and B).

A—Filler Plug
B—Oil Level Plug
C—Drain Plug



Trouble Shooting

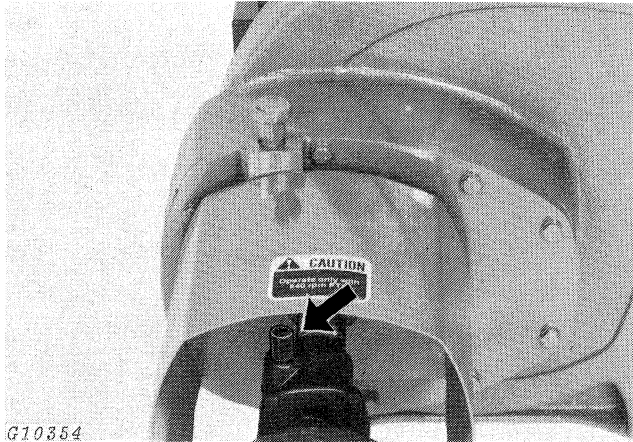
Use the following chart to find the possible cause of trouble and the remedy. If the trouble cannot be corrected, consult your John Deere dealer.

Trouble	Possible Cause	Possible Remedy	Page
No output voltage.	Load circuit breaker in tripped position.	Remove part of load and reset breaker.	6
	Incorrect PTO speed.	Adjust PTO speed to 540 rpm.	7
Low output voltage.	Incorrect PTO speed.	Adjust PTO speed to 540 rpm.	7
No output voltage from 120-volt duplex receptacle.	Blown circuit breaker.	Reset circuit breaker	6
Alternator overheats.	Overloaded.	Remove part of load.	8
	Poor ventilation.	Clear alternator air intake and outlet of restrictions.	9



Assembly

PTO SHAFT



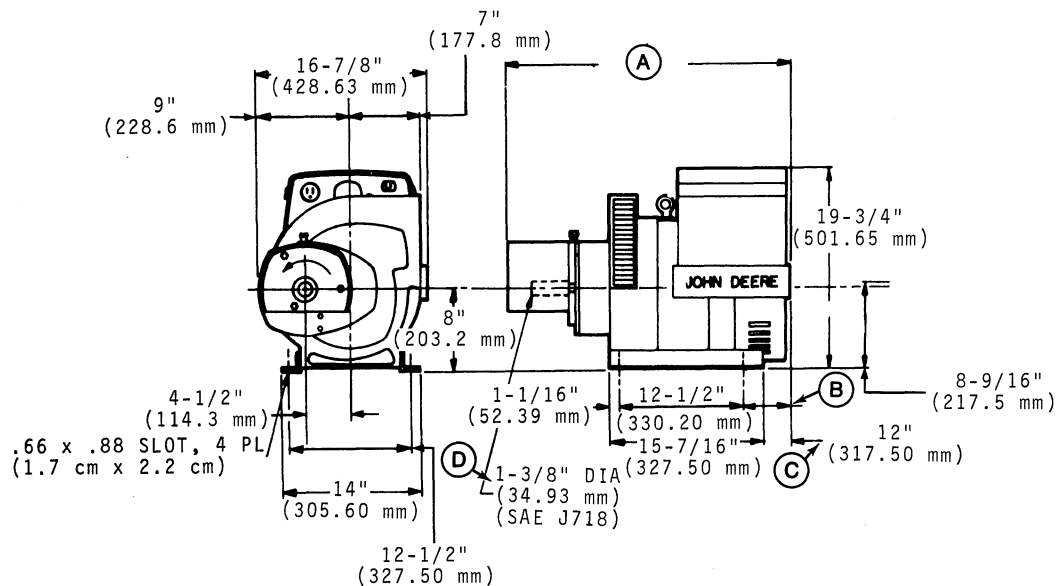
Depress the spring-loaded pin on the PTO yoke at the alternator end of the drive shaft. Slide the yoke onto the alternator PTO shaft and make certain the spring loaded pin falls into the groove on the alternator splined PTO shaft.



Specifications

ALTERNATOR POWER SPECIFICATIONS

MODEL NUMBER	STARTING WATTS	RUNNING WATTS	VOLTS	PHASE	AMPS	WIRES	CYCLES (HERTZ)	PTO RPM	TRACTOR HORSEPOWER	POWER FACTOR	FUSE
15K	37,500	15,000	120/240	1	62.5	3	60	540	30	1.0	15 AMP
25K Single-Phase	62,500	25,000	120/240	1	104	3	60	540	45	1.0	15 AMP
25K Three-Phase	70,000	25,000	120/240	3	75	4	60	540	45	0.8	15 AMP



UNIT RATING	DIM "A"	DIM "B"
15 YD-3S/184	27-9/16" (700.09 mm)	3-7/8" (98.43 mm)
25 YD-3S/185	30-1/4" (768.35 mm)	6-9/16" (166.69 mm)
25 YD-5DS/185	30-1/4" (768.35 mm)	6-9/16" (166.69 mm)

A—Dimension "A"

B—Dimension "B"

C—Minimum Clearance for Air Inlet

D—6 Spline 540 rpm PTO

(Specifications and design subject to change without notice.)

G10355

MISCELLANEOUS POWER REQUIREMENTS (WATTAGE)

Item	Approximate Wattage
Air Conditioner	600-2000
Attic Fan	370
Broiler	1325
Brooders	500-1000
Clothes Dryer	4600
Dairy Utensil Sterilizer (25 cows)	1000-1600
Diswasher (Conventional)	290
Dishwasher (Heat Unit)	1155
Disposer	320
Drills (1/4-inch to 1/2-inch)	125-700
Egg Cooler	200-300
Fan	75-300
Food Freezer	300-800
Furnace Fan	225
Grinders	700-1000
Heater, Portable	1000-2000
House, Heating	10000-15000
Milk House, Heating	660-2500
Oil Burner	245
Pasteurizer	1500
Radio	90
Range	3000-12000
Refrigerator (Conventional)	200-300
Refrigerator (Combination)	250-600
Sanders	40-1000
Saws	400-1500
Stock Tank Heater	200-1500
Sump Pump	250-500
Television	280
Washer (Automatic)	1000
Washer (Conventional)	250-640
Water Heater	5000
Water Pump (Shallow Well)	250-1000
Water Pump (Deep Well)	250-1000

MOTOR STARTING AND CONTINUOUS REQUIREMENTS (WATTAGES)

Single-Phase Motors-115/230 Volts

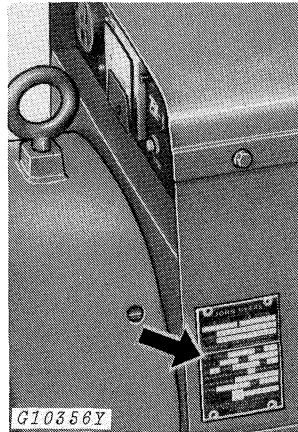
Horsepower	Approximate Wattage	
	Starting	Running
1/4	2500	400
1/3	2900	500
1/2	4360	600
3/4	6700	850
1	11500	1000
1-1/2	15000	1800
2	21000	2100
3	27700	3000
5	41000	4800
7-1/2	55000	7000
10	73000	8700

Three-Phase Motors - 220 or 230 Volts

Horsepower	Approx. Wattage	
	Starting	Running
1	11500	1000
1-1/2	15000	1500
2	21000	2000
3	27700	2800
5	41000	4800
7-1/2	55000	7100
10	73000	8700
15	97000	13200



Serial Number



The serial number plate is located in the lower front right-hand side of control box.

When ordering parts, always bring with you the model and serial number given on the serial number plate.

JOHN DEERE 15K AND 25K STANDBY ALTERNATORS

Model _____

Serial No. _____

Date Purchased _____

(To be filled in by purchaser)

