

John Deere

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MODEL:

**5200 & 5400 Forage
Harvesters Volume 1 of 2**

**SERVICE
MANUAL**

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JD-S-TM1066

**5200 AND 5400
SELF-PROPELLED
FORAGE**

**HARVESTERS
TECHNICAL MANUAL
TM-1066 (May-76)**

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Section 10

GENERAL

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GROUND SPEEDS IN MPH (kmh)*
(2100 engine rpm)

2 Wheel Drive With 18.4-26 and 16.9-26 Tires		
Gear		
1st	0-1.64 (2.6)	0-1.64 (2.6)
2nd	0-3.77 (6.1)	0-3.55 (5.7)
3rd	0-6.86 (11.0)	0-6.46 (10.4)
4th	0-16.80 (27.0)	0-14.90 (24.0)

Power Rear Wheel Drive With 18.4-26 and 16.9-26 Tires		
Gear		
1st	0-1.40 (2.3)	0-1.40 (2.3)
2nd	0-2.80 (4.5)	0-2.65 (4.3)
3rd	0-4.35 (7.0)	0-4.10 (6.6)
4th	0-6.95 (11.2)	0-6.15 (9.9)

*Reverse Ranges: (Ground travel speeds are approximately one-half the forward range.)

HYDROSTATIC SYSTEM (Ground Drive):

Pump:	
Type	Variable displacement Sunstrand 23 Series
Speed	2100 rpm
Displacement	0-5.43 cu. in. (89 cm ³) per revolution

Charge Pump:	
Type	Gear
Speed	2100 rpm
Displacement	1.1 cu. in. (18.0 cm ³) per revolution
Flow rate	10 gpm (37.9 lpm) at 2100 rpm

Motor:	
Type	Fixed displacement Sunstrand 23 Series
Speed	0-2100 rpm
Displacement	5.43 cu. in. (88.98 cm ³) per revolution

Relief pressure	5000 psi (34500 kPa)
Flow rate	49 GPM (185 lpm) at 2100 rpm

HYDRAULIC SYSTEM (Machine Functions):

Type: Open-center, constant-flow system. Includes power steering, header lift, spout rotation, cutterhead reverse grinder drive, and breakaway coupler (Optional)

Pump	Gear-type
Relief pressure	2000 psi (13800 kPa)
Flow rate: Steering	
(Priority)	2.75 gpm (10.4 lpm)
Total	10.2 gpm (38.6 lpm)
Speed	2100 rpm

STEERING:

Type Full power hydraulic

TIRE OPTIONS:

Front Wheels: (8-ply rated)
5200 (-285,000) 16.9-26; 8 pr.
18.4-26; 10 pr.
5400 18.4-26; 10 pr.
Rear Wheels: (6-ply rated, 3-rib implement)
5200 (-285,000) 7.50-18; 6 pr.
11.00-16; 6 pr.
5400 11.00-16; 6 pr.
Power rear wheel drive 11.2-24 (4-ply rated,
cleat type)

BRAKES:

Type: 12-inch (30.48 cm) hydraulically actuated shoe-type. Individual brakes controlled by separate pedals.

CUTTERHEAD:

Type Helical
Diameter 24 in. (60.96 cm)
Width 22 in. (55.88 cm)
Knives Nine, J-style, tungsten carbide edge
Speed 850 rpm
Drive Three matched C-section belts

CUTTERHEAD REVERSE GRINDER:

Drive Hydraulic motor
Speed 425 rpm

BLOWER:

Type Lagged Radial Paddle
Diameter 32 in. (81.3 cm)
Number of paddles 4
Speed 1020 rpm

AUGERS:

Number 2
Drive Chain from cutterhead
Diameter 10 in. (25.4 cm)
Speed 558 rpm
Discharge Side flow to blower fan

POWER REAR WHEEL DRIVE (Optional):

Type Hydrostatic motor driven with planetary gear reduction in wheel hub, uses pressure oil from hydrostatic system
Controls Solenoid operated control valves, by electric switch on console
Planetary disconnect Hydraulic wet brake on ring gear releases when drive is disengaged

Group 10

PREDELIVERY, DELIVERY AND AFTER-SALE SERVICES

TEMPORARY UNIT STORAGE

After receiving your unit from the factory and before putting the machine into temporary storage, perform the following checks.

For long term storage (over 30 days) information, consult your operator's manual.

1. Check battery electrolyte level and charge the battery, if necessary.
2. Check the level of coolant in the radiator. The coolant should be maintained at a level 2 inches (51 mm) above the baffle.
3. Fill the fuel tank.
4. Check crankcase oil level. Oil should be above bottom mark of dipstick after machine has been shut down for 10 minutes.
5. Relieve hydraulic pressure by stopping engine and operating control levers until system fails to respond.
6. Reduce shipping pressure of all tires to inflation pressure. Shown on page 10-15-3.
7. Cover unit for protection and cleanliness.

PREDELIVERY SERVICE

Because of the shipping factors involved, plus extra finishing touches that are necessary to promote customer satisfaction, proper predelivery service is of prime importance to the dealer and the customer.

NOTE: A protective cover is placed over the muffler outlet to prevent turbocharger rotation during transit. Remove protective cover before unloading harvester. Reinstall protective cover before transporting the harvester to the customer if machine is to be moved at highway speeds.

After completing the factory-recommended dealer checks and services listed on the predelivery tag, remove the tag from the harvester and file it with the shop order for the job. The tag will certify that the harvester has received the proper predelivery service when that portion of the customer's John Deere Delivery Receipt is completed.

Use the following list when preparing a unit for delivery to the customer.

1. Pre-Cleaner

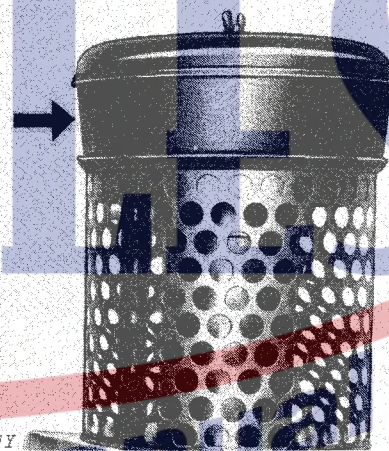


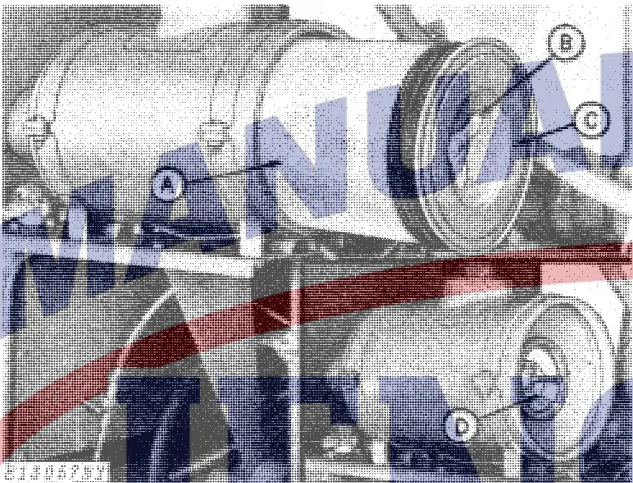
Fig. 1-Pre-cleaner

Check and clean pre-cleaner bowl.
Pre-cleaner checked and cleaned.

Yes _____

2. Air Cleaner

Check air cleaner restriction indicator lamp on instrument panel. If indicator shows red, check and clean both primary and safety filter elements. Replace elements, if necessary.

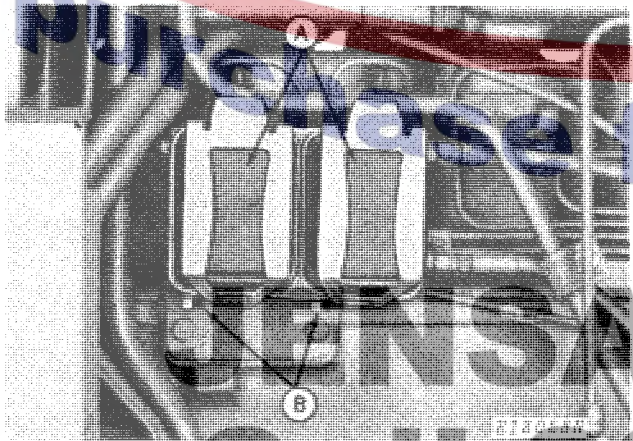


A—Primary Filter Element C—Air Cleaner Cover
B—Wing Nut D—Safety Filter Element

Fig. 2-Air Cleaner

Air Cleaner checked Yes _____
Filters Replaced Yes _____

3. Fuel Filters



A—Fuel Filters B—Drain Plugs

Fig. 3-Fuel Filters

Check fuel filters and drain any sediment that is present. (See Section 30)

Filters checked Yes _____
Sediment present in filters Yes _____

4. Batteries

Check battery electrolyte level. If distilled water is not available, use clean soft water. Avoid use of hard water. Remove foreign material from top of battery and coat terminals with petroleum jelly. Clean vent holes in battery caps.

IMPORTANT: Never add water to battery in freezing weather unless engine is to be run long enough (2 or 3 hours) to assure mixing of water and electrolyte.

Check battery connection.
Punch date code on battery.

Battery Connections checked Yes _____
Water added Yes _____

5 Fuel Tank



Fig. 4-Fuel Tank Filler Cap

Check the fuel gauge. If fuel gauge indicates a low supply of fuel, fill the tank. Fuel tank capacity is 72 U.S. gals (273 l).

Fuel tank level Full 1/2 Full Empty

6. Fuel Tank Sump



Fig. 5-Fuel Tank Sump

IMPORTANT: Sediment will settle over extended periods of transport or storage.

Open the sump drain cock. Allow fuel to drain out for approximately three seconds to allow moisture and sediment to drain out.

NOTE: Fuel tank sump drain is located on the bottom of the fuel tank.

Fuel sump drained

Yes _____

7. Radiator

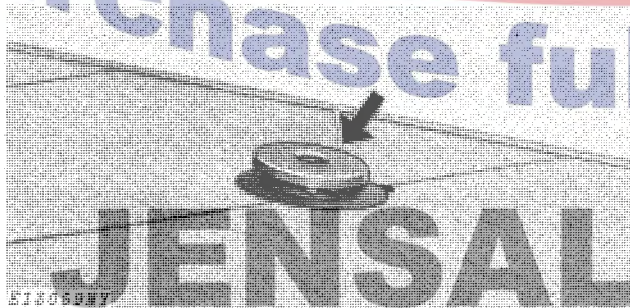


Fig. 6-Radiator Filler Cap

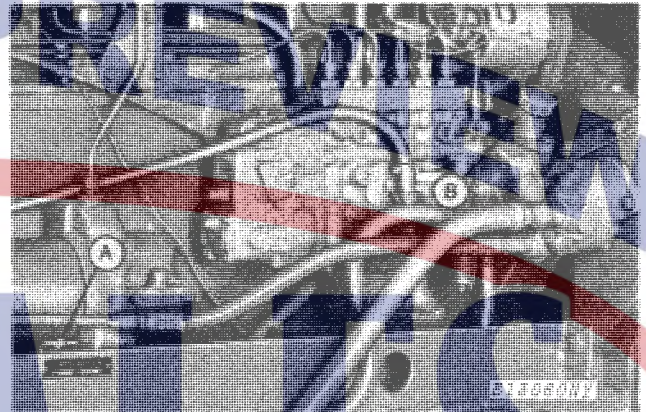
CAUTION: Remove the radiator filler cap only when the coolant temperature is below the boiling point. Then loosen the cap slightly to the stop to relieve pressure before removing the cap completely.

Check the level of coolant in the radiator. Coolant should be maintained at a level 2 inches (51 mm) above the baffle. Add permanent type antifreeze if cold weather is anticipated.

Radiator coolant level checked
Coolant or antifreeze added

Yes _____
Yes _____

8. Crankcase Oil Level



A—Dipstick

B—Oil Filler Cap

Fig. 7-Crankcase Oil Level

Check crankcase oil level with machine on level ground and engine off. If oil level is at or below bottom mark on dipstick, add sufficient oil of the proper viscosity and type specified on page 10-30-2 to bring oil level to between marks on dipstick. Do not operate engine with oil level below the bottom mark.

Crankcase oil level checked
Oil added, if any

Yes _____
qts (l)