NO. 55 AND 55-R SELF-PROPELLED COMBINES (12-FOOT CUT)

JOHN DEERE

OPERATORS MANUAL

NO. 55 AND 55-R SELF-PROPELLED COMBINES (12-FOOT CUT)

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ENGLISH

TO THE PURCHASER

Your combine, which is shiny and new today, comes to you from the most up-to-date combine factory in the world. Material and workmanship are the best. It will serve you in direct proportion to the care you give it. Depreciation, in a machine of this kind, is an item of expense that must be considered. How long it will last and continue its good work is a matter entirely in your hands.

The way you operate your combine and the care you give it have much to do with the service and satisfaction you will get from it. This manual has been carefully prepared and illustrated to show you what to do and when to do it. The John Deere dealer is obligated to explain thoroughly the adjustments that are built into the machine and give instructions on when and how to make these adjustments. He should also explain to the operator the value of the Parts List and the Operator's Manual you are now reading. The information given in these Manuals will afford a clear understanding of the fundamentals of combine harvesting. **The best use of these fundamentals to suit the condition in which the machine is operating is a responsibility that is completely up to the operator.**

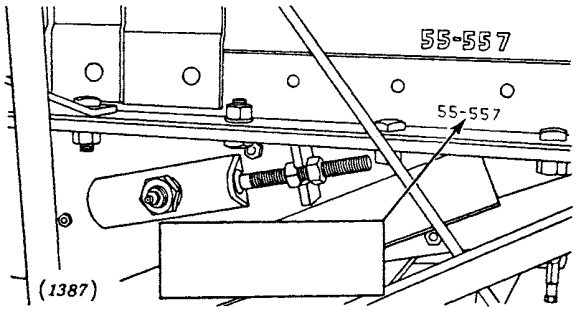
If you find you need information not covered in this manual, or if your combine requires special servicing, which it will periodically, take advantage of the facilities offered by your John Deere dealer. He has trained mechanics, who are kept informed on the best methods of John Deere combine servicing and can give you prompt, "know-how" service in the field or in his shop.

Location References. "Right" and "Left", "Front" and "Rear" refer to the Operator's "Right" or "Left" and "Front" or "Rear" when facing the same direction machine is headed or traveling.

Engine Reference Only. Timing gear end of motor is referred to as the "front"; flywheel end as the "rear".

"Clockwise" refers to a shaft, screw, or similar part turning to the operator's "Right", or like the hands of a clock. "Counterclockwise" refers to the operator's "Left".

SERIAL NUMBER



You will find the serial number stamped on the left-hand main sill angle and stencilled on the side sheet of the separator just below left-hand cylinder bearing. Write the serial number of your combine in the space provided at the left.

Date Purchased....., **19**....

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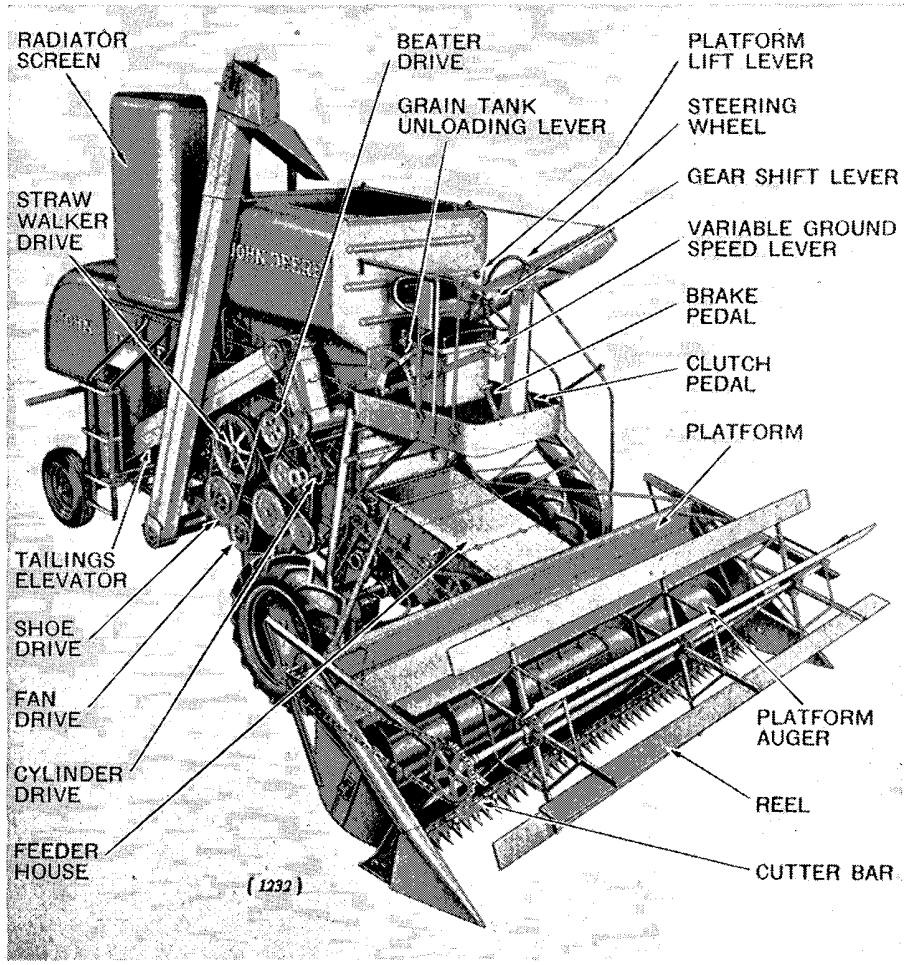


Figure 1—R. H. Complete View of John Deere No. 55 Self-Propelled Combine.

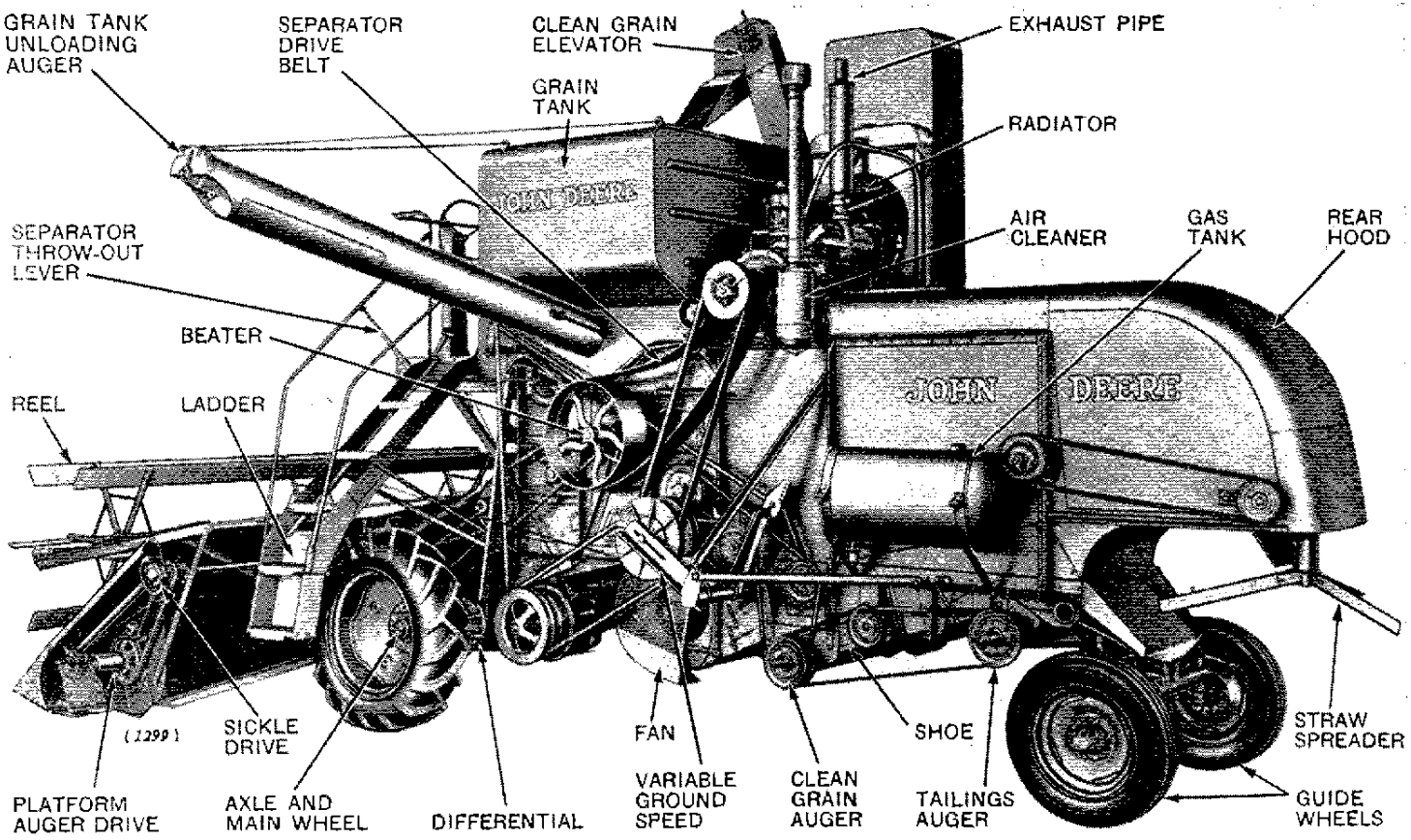


Figure 2—L. H. Complete View of John Deere No. 55 Self-Propelled Combine.

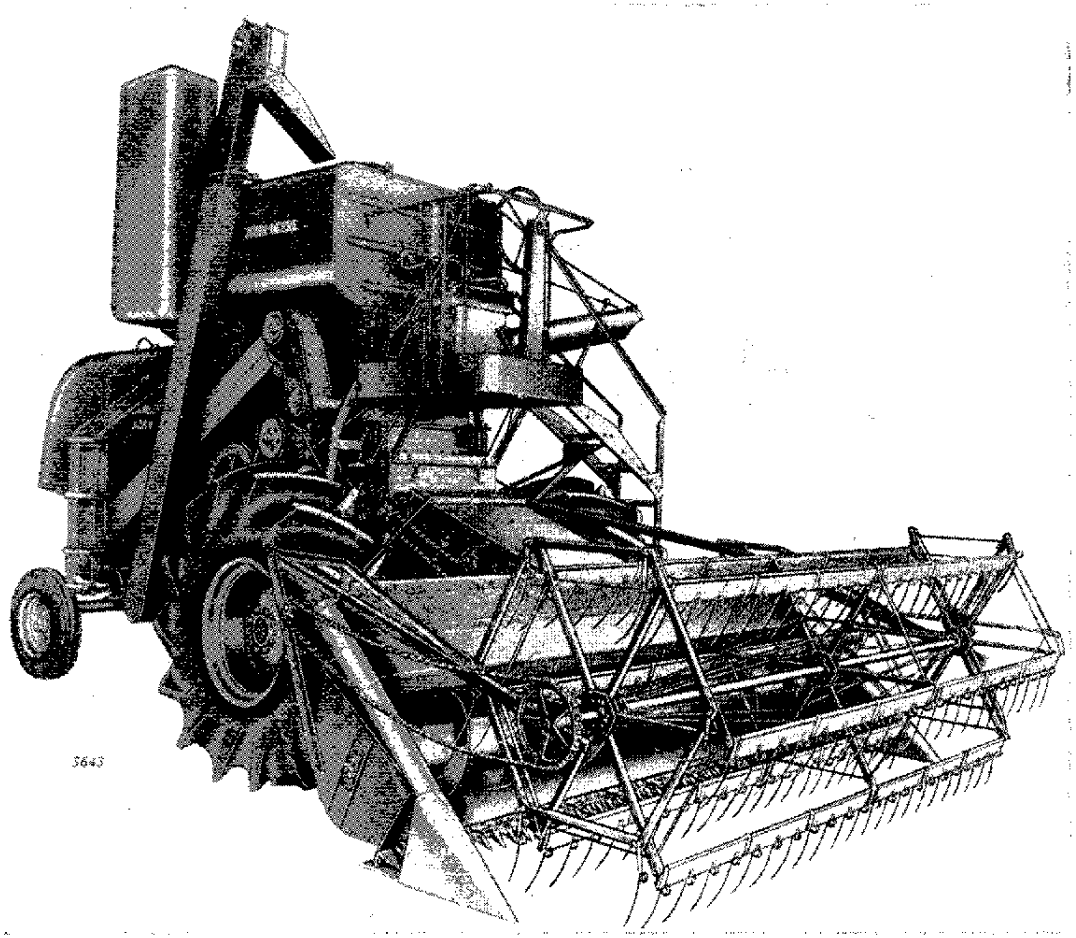
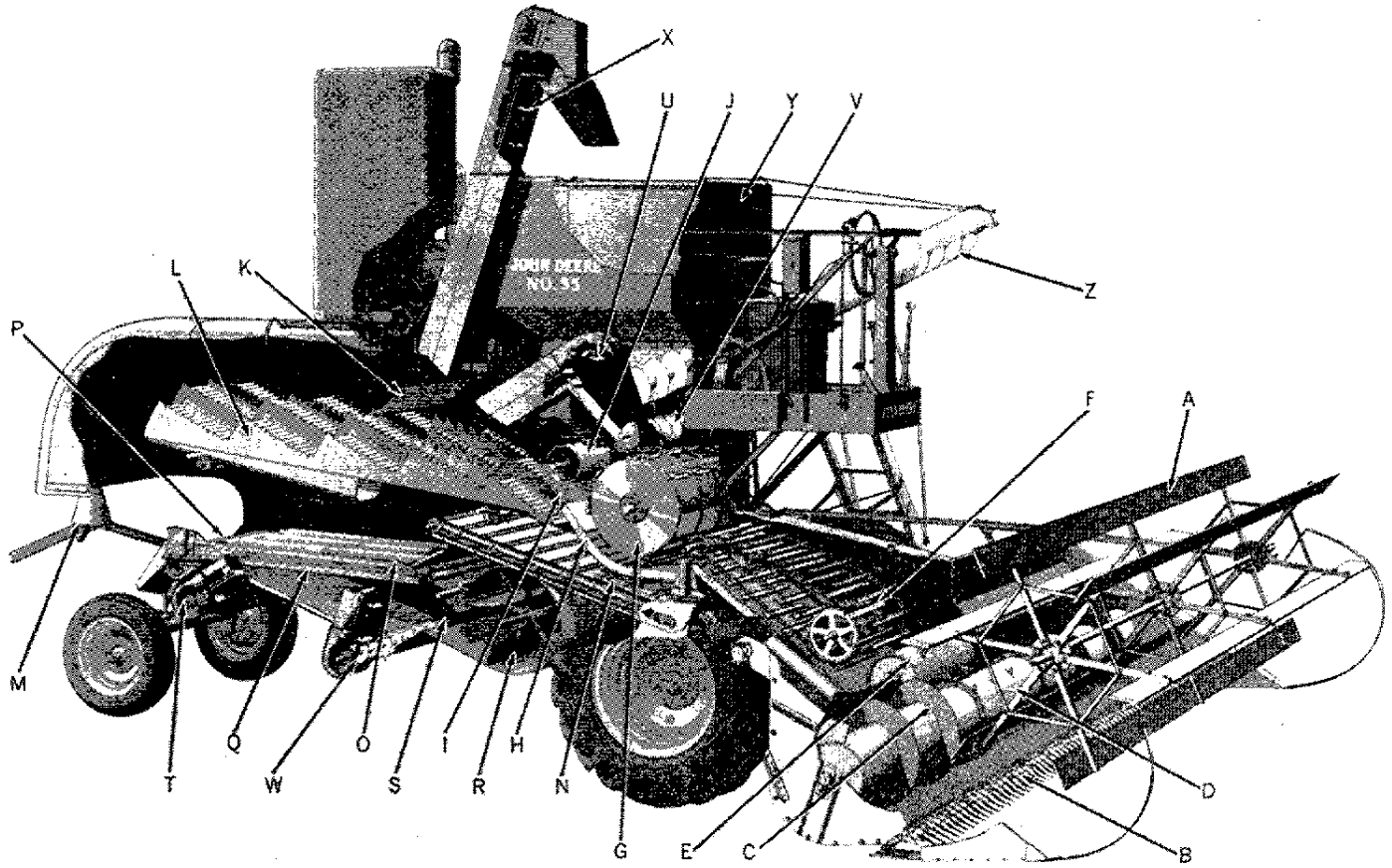


Figure 3—Complete View of John Deere No. 55-R Self-Propelled Rice Combine.



Cross-Sectional View of the No. 55 Combine

A. Reel

B. Cutter Bar

C. Platform Auger

D. Auger Beater

E. Feeder Beater

F. Feeder Conveyor

G. Cylinder

H. Concave-Grate

I. Finger-Grate

J. Beater Behind Cylinder

K. Grain Curtain

L. Straw Walkers

M. Straw Spreader

N. Grain Conveyor Under Cylinder

O. Adjustable Chaffer

P. Finger Bar Chaffer Extension

Q. Adjustable Lower Sieve

R. Fan

S. Adjustable Wind Deflectors

T. Tailings Auger

U. Tailings Elevator

V. Tailings Cross Auger

W. Clean Grain Auger

X. Clean Grain Elevator

Y. Grain Tank

Z. Grain Tank Unloading Auger

SPECIFICATIONS AND DATA

Differences Between No. 55 and No. 55-R Combines.

The John Deere No. 55-R Self-Propelled Rice Combine is built especially for combining rice. Basically the No. 55-R is the same as the standard No. 55, except that the No. 55-R has special tires, feed rolls, and other equipment necessary to meet the unusual field conditions and to do a better job of saving, threshing, separating and cleaning the rank and heavy crop.

COMBINE

Width of Cut	12′
Width of Cylinder	30″
Width of Combine, Rear	30″
Cylinder Speed (Small Grain)	1050 R.P.M.
Type of Cylinder	Rasp Bar
Height for Lowest and Highest Stubble	2-1/2″– 32″
Canvas Conveyor or Spiral	Spiral
Hart ScourKleen	Optional
Length of Separator Surface (Straight line from center of Cylinder to Point of Straw Discharge)	130″
Type of Separation	Straw Walkers
Length of Chaffer Sieve	48″
Length of Cleaning Sieve	45″
Drive to Cylinder	Double Steel Roller Chain
Front Wheel Tires (Regular)	2—13 x 26
Front Wheel Tires (Rice)	2—18 x 26
Rear Wheel Tires (Regular)	2—5.50 x 16
Rear Wheel Tires (Rice)	2—7.50 x 16
Cylinder Bearings	Double Row Ball Bearings
Beater Behind the Cylinder Bearings	Double Row Ball Bearings
Fan Bearings	Hyatt
Front and Rear Wheel Bearings	Timken
Width Over-All	12′ 9″
Extreme Height over Elevator Regular Machine	12′ 4″
Extreme Height over Elevator—Rice Machine	12′ 10-7/8″
Capacity Grain Bin, Bushels	45
Weight with Bin and Straw Spreader	Approximately 8000 Lbs.

(Detail Design Subject to Change Without Notice)

SPECIFICATIONS AND DATA—(Continued)

VARIABLE TRAVEL SPEED RANGE

	Minimum		*Maximum*
1st Gear	.951	to	2.15 M.P.H.
2nd Gear	2.14	to	4.88 M.P.H.
3rd Gear	4.35	to	9.65 M.P.H.
Reverse	.71	to	1.60 M.P.H.

ENGINE

Make of Engine	Hercules "QXD-3"
Bore and Stroke	3-7/16" x 4-1/8"
N.A.C.C. Rating	28.35 H.P.
Brake Horsepower	45
Number of Cylinders	6
Piston Displacement, Cu. In.	230
Speed at Full Load	1800 R.P.M.
Firing Order	1-5-3-6-2-4
Crankcase	Cast Integral with Block
Crankcase Capacity	6 Qts.
Force Feed Lubrication	By Gear Pump to All Connecting Rods and Main Bearings. Oil Strainer in Bottom of Pump.
Valve Arrangement	L-Head
Cast-Iron Pistons	
All Piston Rings above Pin	
Crankshaft—No. of Bearings	7
Built-in "Handy" Governor	
Zenith Carburetor	Model 62AX9
Gas Strainer	
Air Cleaner—Pre-cleaner—Donaldson	5-1/4" Dia.
Donaldson Oil Bath Cleaner at Bottom	7" Dia.
Delco-Remy Ignition System	
Timing Marks on Flywheel on Side of Bell Housing	
Bayonet Type Oil Gauge in Crankcase	
Cooling System with Water Pump	
Fan Drive	7/8" V-Belt
Tubular Radiator	Capacity, 6 Gal.
Dirt Screen for Radiator	
Oil Pressure Gauge	
Electric Starting	
Gasoline Tank (Capacity)	25 Gal.

COMBINE CONTROLS

All the controls necessary for the operation of this combine are on the operator's platform as shown in Figure 5. Those controls whose purpose and function is obvious, will not be explained in detail, but any controls peculiar to the combine will be explained on the next few pages.

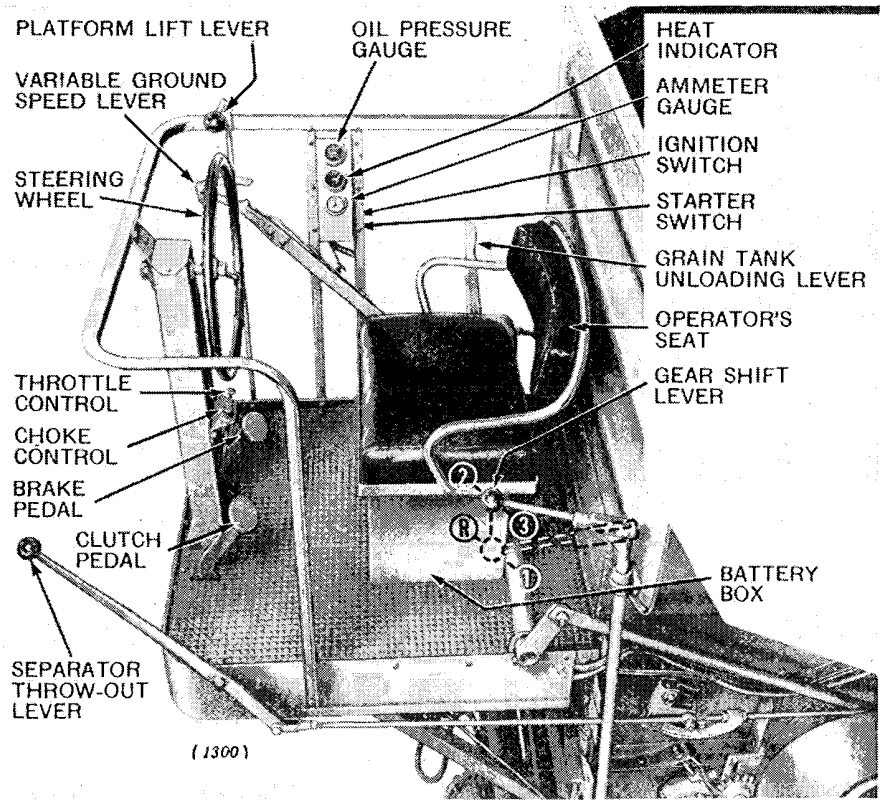


Figure 5—Combine Controls

Oil Pressure Gauge. (Figure 5) Top gauge on instrument panel indicates pressure of engine lubricating oil. Pressure reading may vary according to operating conditions, but the normal reading should be 26 pounds at full throttle. If pressure drops to less than 12 pounds when operating at full throttle, or to zero at any time engine is running, stop engine immediately and determine cause. **This gauge does not indicate amount of oil in crankcase.**

Heat Indicator. (Figure 5) Gauge located on instrument panel indicates temperature of water in cooling system—**not quantity of water in system.** Normal operating temperature is 180° to 190° F. If temperature rises above 200° F., stop engine and determine cause.

Ammeter Gauge. (Figure 5) Ammeter, on instrument panel, indicates rate of electric current flow being applied to battery by generator, or rate of discharge from battery. If ammeter shows discharge for an extended period during normal operation, check for a ground, short circuit, or faulty regulator. A continuous high-charging rate indicates discharged battery or defective regulator.

Gear Shift Lever. The transmission has three speeds forward and one in reverse. The positions of the gear shift lever for the various transmission speeds are shown in Figure 5.

Platform Lift Lever. This lever, located at the right of the Operator's Platform (Figure 5), controls the height of the combine platform through the hydraulic lift cylinders. The platform can be set at any height above the ground between 2-1/2 inches to 32 inches. Moving the lever forward lowers the platform; rearward raises it.

By varying the platform height, all the grain heads can be cut with a minimum of straw going through the combine.

Variable Ground Speed Lever. Variable travel speed is controlled by a lever on the right-hand side of the operator's platform, see Figure 5. The variable speed control permits the selection of any speed between gear shift speeds. Speed can be quickly and easily set to conform to field conditions.

Release the latch and move lever forward to increase speed, or backward to decrease speed. Release latch to lock lever at desired speed.

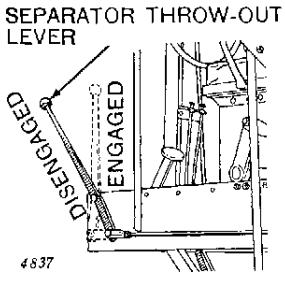


Figure 6

Separator Throw-Out Lever. This lever engages and disengages the separating mechanism of the combine. When the throw-out lever is moved forward the separator is disengaged. Pull the lever back to the vertical position to engage the separator (See Figure 6).

Grain Tank Unloading Lever. The grain tank unloading lever is the short lever on the right side of the platform (Figure 5). Move lever to rear to engage clutch for grain tank unloading auger. Move lever forward to disengage clutch and stop the unloading auger. The grain tank can be unloaded while the combine is in motion.

LUBRICATION

The economical and efficient operation of any machine depends on regular and proper lubrication of all moving parts with a quality lubricant. This is especially true of farm equipment which must operate in hot, dusty conditions over rough ground. Neglected lubrication quickly leads to reduced efficiency, heavy draft, wear, breakdown, and costly replacement of parts.

STORAGE OF LUBRICANTS

Your new combine is equipped with various safeguards such as an air cleaner, pre-cleaner, oil filter and crankcase ventilator—safeguards designed to keep dust, dirt and other abrasives from reaching operating parts. You can increase the efficiency of these safeguards by using clean containers for storing and handling all lubricants. See that only clean lubricants go into the working parts of your combine.

ENGINE LUBRICATION

Quality of Oil.

The engine on your combine with its force-feed pressure lubricating system has one of the finest oiling systems it is possible to produce. So do not handicap it by trying to save money with inferior oil. High-grade oils withstand heat and wear for a longer time. Inferior oils soon become thin and lose their lubricating qualities.

It is impossible to determine the quality of oil by its appearance. As a result, inferior oil often is sold as a quality product at a lower price. It pays to buy only nationally-known, high-quality brands of oil. Don't take chances.

Weight of Oil.

Your John Deere combine engine was made with the same precision as a fine automobile, with clearances between bearing surfaces as fine as a ten-thousandth part of an inch. If oil is expected to lubricate these surfaces, it first must get there. Therefore, weight or viscosity of the oil is very important.

As soon as oil of the correct weight and quality reaches bearing surfaces, it immediately begins functioning to relieve friction, carry off heat, to create an oil seal between rings and cylinders, thus preventing blow-by and loss of power and, last, to carry away elements such as carbon, dirt, and other abrasive materials that are harmful if left between metal working surfaces.

Oil of the wrong weight can result in loss of power, excessive fuel consumption, undue wear on moving parts, and eventual replacement of costly parts.

The temperature in the crankcase correspondingly varies with the outside temperature. Therefore, it is important to use oil in the new engine according to the recommended temperature and weight chart at the top of Page 13.

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Temperature	Engine Crankcase	Air Cleaner
Above 90° F.	S.A.E. 40	S.A.E. 40
32° F. to 90° F.	S.A.E. 30	S.A.E. 30
Below 32° F.	S.A.E. 20	S.A.E. 20

Crankcase oil capacity: 6 U. S. quarts, 5 Imperial quarts.

Break-In Period.

At the completion of the 40-hour breaking-in period, be sure to drain the crankcase oil and refill with new oil as specified in the chart above. This is important.

TRANSMISSION, BEVEL GEAR HOUSING, DIFFERENTIAL, AND FINAL DRIVE

The proper weight of oil in these units is important. Be sure to use the grade specified in the chart below when operating in different temperature ranges:

Air Temperature	Transmission	Bevel Gear Housing	Differential	Final Drive Housing
Above 32° F.	S.A.E. 90	S.A.E. 90	S.A.E. 140	S.A.E. 140
Below 32° F.	S.A.E. 90	S.A.E. 90	S.A.E. 90	S.A.E. 90

CHAINS

Lubricate chains at frequent intervals except when working in dry, sandy conditions. See Page 79. **CAUTION: Be careful not to over-lubricate chains so oil will not be thrown on belts.**

LINKAGES

When lubricating the combine, make a practice of putting a few drops of oil on all linkages, clevises, and other moving parts. This will make them work easier and prolong their life.

Replace all missing Zerk fittings immediately.

LUBRICATION CHART

All lubrication points are illustrated on succeeding pages. The illustrations have been grouped by the intervals at which the various points should be lubricated. References made to (Sealed Bearings) are for the operator's information only. When lubricating the combine, do not attempt to oil or grease a Sealed Bearing. The way the illustrations have been grouped organizes your lubrication work for you. For example, say it is time for the twice-a-day lubrication of the combine. Turn to Page 14 where the twice-daily lubrication starts. Start lubricating these points and continue until you finish the points grouped under the heading "twice-daily".

Pressure gun grease should be used on all fittings unless otherwise specified in the charts. Wipe dirt off all fittings before greasing. Do not over-lubricate. Excessive grease will gather dust and dirt.