55, 95 AND 105 COMBINES

JOHN DEERE

OPERATORS MANUAL

55, 95 AND 105
COMBINES

OMH62358 K5 English

JOHN DEERE HARVESTER WORKS
OMH62358 K5

LITHO IN THE U.S.A.
ENGLISH

TO THE PURCHASER

The combine you have purchased has been carefully designed and manufactured to provide years of dependable, economical service.

To further insure trouble-free service we recommend that you follow closely all instructions concerning operation, lubrication, adjustments and service. Preventive maintenance has proved to be much more economical than corrective maintenance. Should you require information not covered in this manual, consult your John Deere dealer.

KEEP YOUR COMBINE A JOHN DEERE COMBINE.

Genuine John Deere Parts fit properly and insure satisfactory service because they are made from the original patterns and from the same materials as used in new machines. If your combine requires replacement parts, go to your John Deere dealer where you can obtain Genuine John Deere Parts—accept no substitutes.

ATTACHMENTS

In addition to the equipment furnished with your combine, there are attachments available to help you do a better job of combining in a special crop or condition. These attachments, illustrated and described in the Attachment section, are available from your John Deere dealer.

LOCATION REFERENCE

"Right-hand" and "left-hand" sides are determined by facing in the direction the combine will travel when in use.

Radiator end of the engine is referred to as the "front," flywheel end as the "rear."

SERIAL NUMBERS

Your combine, feeder house, cutting platform, axle, and engine have serial numbers.

When ordering parts, always bring with you the model and serial numbers as given on the serial number plates. By doing so, you will assist your John Deere dealer in giving you prompt, efficient service. For your convenience a space is provided below for recording these numbers.

The combine serial number is on a plate located on the support bracket at the rear end of the fuel tank.

The engine serial number is on a plate located between the distributor and generator.

The axle serial number is on the top, left-hand end of the axle tube.

The feeder house serial number is located on the right-hand side sheet.

The cutting platform serial number is located on the right-hand side sheet.

Combine Serial No. _____

Engine Serial No. _____

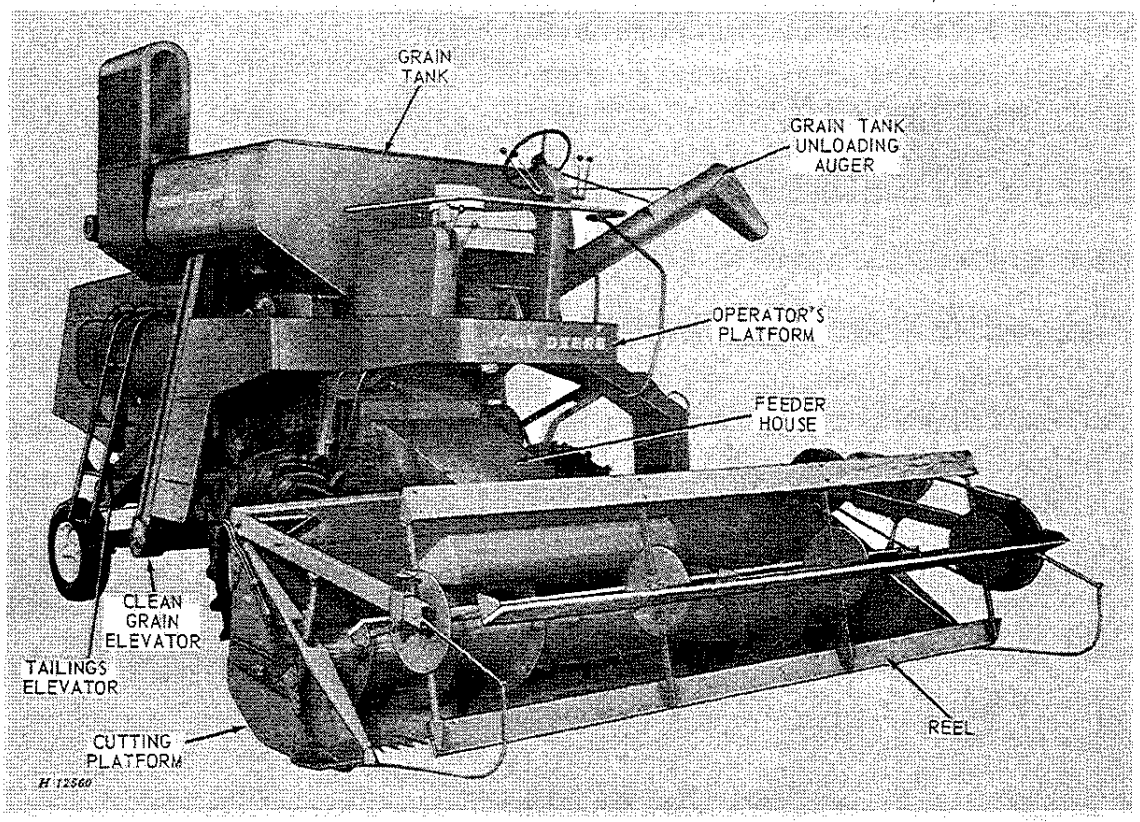
Axle Serial No. _____

Cutting Platform Serial No. _____

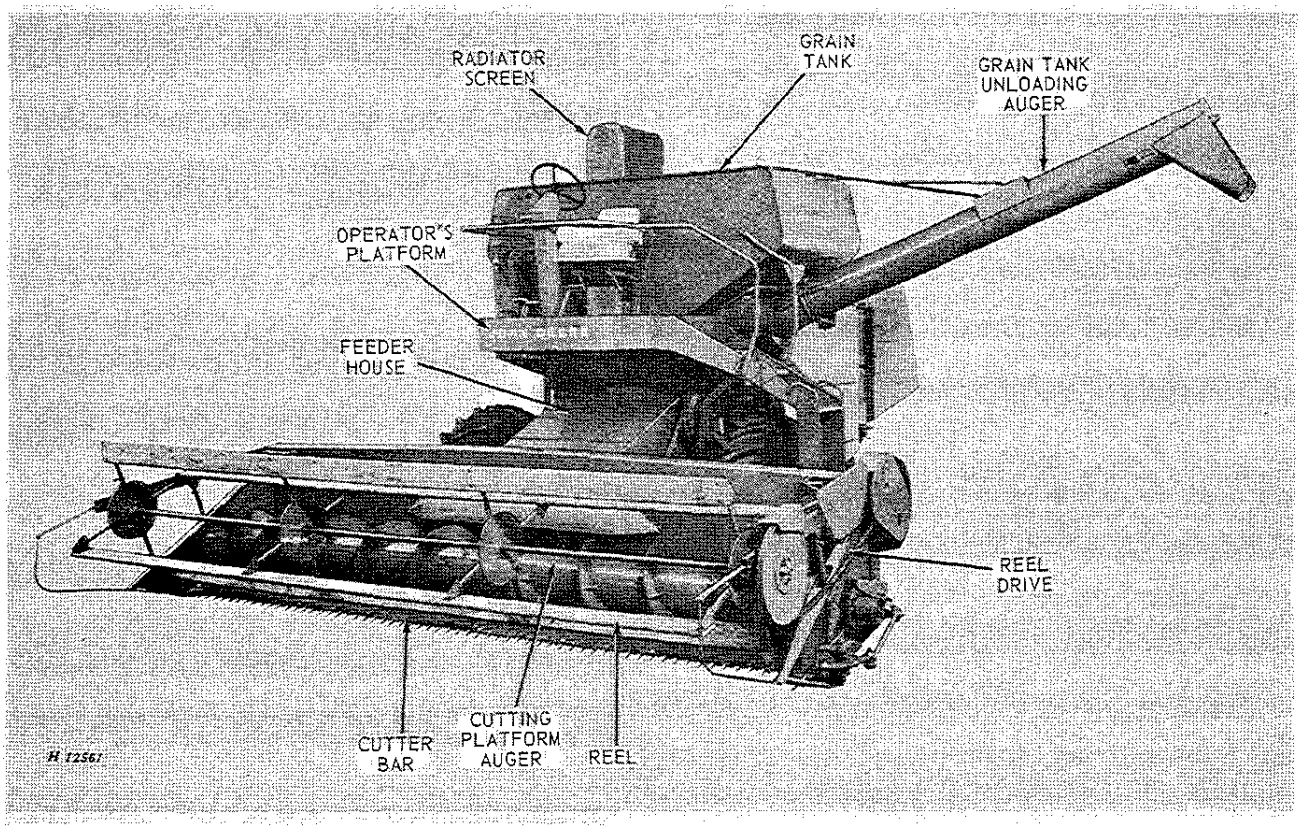
Feeder House Serial No. _____

Date Purchased _____

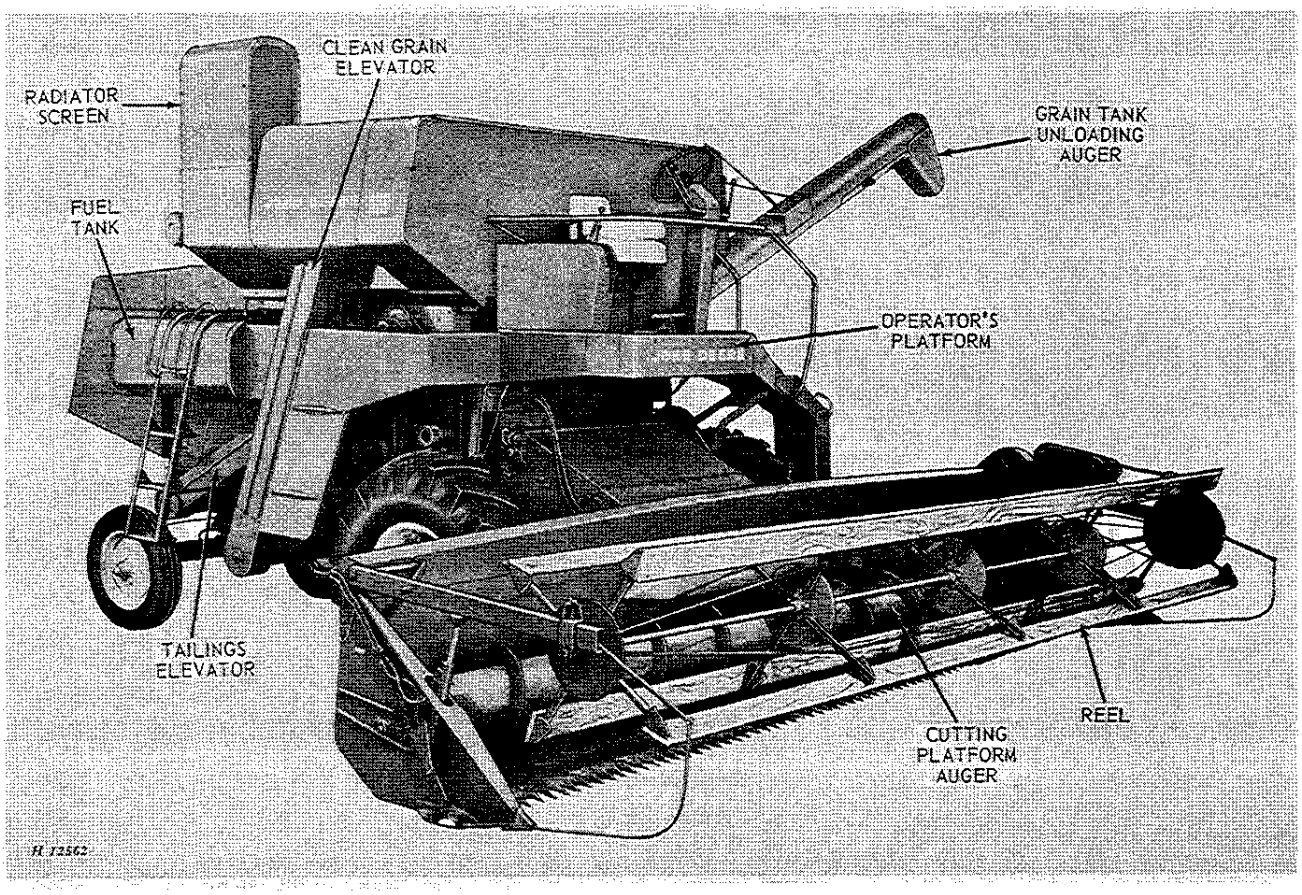
CONTENTS



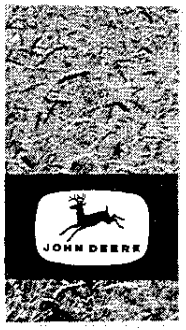
John Deere 55 Combine



John Deere 95 Combine



John Deere 105 Combine



SPECIFICATIONS

Description	55 Combine	95 Combine	105 Combine
CUTTER BAR			
Width of cut	12 ft., 13 ft. or 14 ft. (rice)	12 ft., 13 ft., 14 ft., 16 ft. (rice)	12 ft., 13 ft., 14 ft. or 16 ft. (rice)
	12 ft., 13 ft. or 14 ft. (grain)	12 ft., 13 ft., 14 ft., 16 ft., 19 ft., or 20 ft. (grain)	12 ft., 13 ft., 14 ft., 16 ft., 19 ft., 20 ft., 22 ft. (grain)
Length of cutter bar	6 inches less than width of cut	6 inches less than width of cut	6 inches less than width of cut
Type of knife sections	Heavy-duty over-serrated	Heavy-duty over-serrated	Heavy-duty over-serrated
REEL			
Drive	V-belt	V-belt	V-belt
Number of slats	4 regular; 3, 6 or 8 special	4 regular; 3, 6 or 8 special	4 regular; 3, 6 or 8 special
Diameter of reel	32 in. or 40 in.	32 in. or 40 in.	32 in. or 40 in.
Speed range	15.3 rpm to 56.9 rpm	15.8 rpm to 58.5 rpm	15.8 rpm to 58.5 rpm
Height control	Manual	Manual	Manual
CUTTING PLATFORM			
Type of feed	Auger	Auger	Auger
Cutting height range	2.9 inches below wheel level to 34.3 inches above	2.9 inches below wheel level to 34.3 inches above	2.9 inches below wheel level to 34.3 inches above
Height control	Hydraulic (2 cylinders)	Hydraulic (2 cylinders)	Hydraulic (2 cylinders)
CUTTING PLATFORM AUGER			
Diameter	20 in.	20 in.	20 in.
Type of auger fingers	Round retracting	Round retracting	Round retracting
BELT PICKUP PLATFORM			
Width	12 ft.	12 ft.	12 ft.
CYLINDER			
Type	Rasp bar or spike tooth	Rasp bar or spike tooth	Rasp bar or spike tooth
Width	30 in.	40 in.	49-1/2 in.
Diameter	22 in.	22 in.	22 in.
Number of bars	8-rasp bar or 10 spike tooth	8-rasp bar or 10 spike tooth	8-rasp bar or 10 spike tooth
Drive	Roller chain	Roller chain	Roller chain
Speed range	196 rpm to 1190 rpm	196 rpm to 1190 rpm	227 rpm to 1190 rpm
CONCAVE			
Type	12 bar open type or spike tooth type	12 bar open type or spike tooth type	12 bar open type or spike tooth type
Width	30 in.	40 in.	49-1/2 in.
BEATER			
Type	Wing (regular)		
	Drum (optional)	Drum	Drum
Width	30 in.	40 in.	50 in.
Diameter	12 in.	12 in.	12 in.
Speed	680 rpm	680 rpm	680 rpm

Description	55 Combine	95 Combine	105 Combine
SEPARATOR			
Type	Grain conveyor, straw walker	Grain conveyor, straw walker	Grain conveyor, straw walker
Width	30 in.	40 in.	50 in.
Length of separating surface	140 in. (straw walker pans extended)	140 in. (straw walker pans extended)	140 in. (straw walker pans extended)
Total separating area	4,200 sq. in.	5,600 sq. in.	6,930 sq. in.
GRAIN CONVEYOR			
Type	Slat	Slat	Channel Slat
Drive	Chain (CA 550 roller)	Chain (CA 550 roller)	Chain (CA 550 roller)
CLEANING FAN			
Type	5-bladed undershot	5-bladed undershot	5-bladed undershot
Drive	V-belt	V-belt	V-belt
Speed Range	602 rpm to 858 rpm	602 rpm to 858 rpm	550 rpm to 1050 rpm
CHAFFER			
Type	Adjustable	Adjustable	Adjustable
Width	28-1/2 in.	38-1/2 in.	48 in.
Length with extension	60-3/4 in.	60-3/4 in.	60-3/4 in.
Area	1,733 sq. in.	2,337 sq. in.	2,915 sq. in.
SIEVE			
Type	Adjustable	Adjustable	Adjustable
Width	28-1/2 in.	38-1/2 in.	48 in.
Length	45-1/4 in.	45 in.	45 in.
Area	1,291 sq. in.	1,734 sq. in.	2,163 sq. in.
CHAFFER EXTENSION			
Type	Adjustable	Adjustable	Adjustable
Width	28-1/2 in.	38-1/2 in.	48 in.
Length	12 in.	12 in.	12-5/16 in.
Area	342 sq. in.	462 sq. in.	591 sq. in.
TOTAL CLEANING AREA OF CHAFFER, SIEVE, AND CHAFFER EXTENSION	3,024 sq. in.	4,071 sq. in.	5,078 sq. in.
STRAW WALKERS			
Number	Three	Four	Five
Width	9-1/2 in.	9-1/2 in.	9-1/2 in.
Length with pans extended	123 in.	123 in.	123 in.
Area	3,690 sq. in.	4,920 sq. in.	6,089 sq. in.
Number of steps	Five	Five	Five
Drive	V-belt	V-belt	V-belt
Bearings	Oil-soaked maple	Oil-soaked maple	Oil-soaked maple
Extension pans	One on each walker	One on each walker	One on each walker
GRAIN TANK			
Capacity	65 bushel, approx.	80 bushel, approx.	100 bushel, approx.
Type of unloading	Hinged auger	Hinged auger	Hinged auger

Description	55 Combine	95 Combine	105 Combine
BRAKES Type	Individual, mechanical disk type	Individual, mechanical disk type	Individual, mechanical disk type
TRANSMISSION	Automotive - 4 speeds forward, 1 reverse	Automotive - 4 speeds forward, 1 reverse	Automotive - 4 speeds forward, 1 reverse
SHIPPING LENGTH	19 ft. 2 in.	19 ft. 2 in.	19 ft. 2 in.
SHIPPING WIDTH	9 ft. 2 in. (16.9-26 tires)	9 ft. 3 in. (18.4-26 tires)	9 ft. 11 in. (18.4-26 tires)
WEIGHT	9,800 lbs. with 14-ft. cutting platform	10,700 lbs. with 14-ft. cutting platform	12,100 lbs. with 16-ft. cutting platform
DIMENSIONS	See page 10	See page 10	See page 10

GROUND SPEED RANGE

55 COMBINE

14.9-26 Tires – Grain

	(Min.)		(Max.)
1st GEAR	.7	to	1.5 mph
2nd GEAR	1.3	to	2.9 mph
3rd GEAR	2.6	to	5.9 mph
4th GEAR	5.3	to	11.8 mph
REVERSE	1.5	to	3.3 mph

16.9-26 Tires – Grain

	(Min.)		(Max.)
1st GEAR	.7	to	1.5 mph
2nd GEAR	1.3	to	3.0 mph
3rd GEAR	2.7	to	6.0 mph
4th GEAR	5.4	to	12.1 mph
REVERSE	1.5	to	3.4 mph

18.4-26 Tires – Grain

	(Min.)		(Max.)
1st GEAR	.7	to	1.6 mph
2nd GEAR	1.4	to	3.2 mph
3rd GEAR	2.9	to	6.4 mph
4th GEAR	5.8	to	12.9 mph
REVERSE	1.6	to	3.6 mph

18.4-26 Tires – Rice

	(Min.)		(Max.)
1st GEAR	.6	to	1.4 mph
2nd GEAR	1.2	to	2.8 mph
3rd GEAR	2.5	to	5.5 mph
4th GEAR	4.5	to	11.1 mph
REVERSE	1.4	to	3.1 mph

23.1-26 Tires – Rice

	(Min.)		(Max.)
1st GEAR	.7	to	1.6 mph
2nd GEAR	1.4	to	3.2 mph
3rd GEAR	2.8	to	6.3 mph
4th GEAR	5.6	to	12.6 mph
REVERSE	1.6	to	3.6 mph

Tracks – Rice

	(Min.)		(Max.)
1st GEAR	.4	to	.8 mph
2nd GEAR	.7	to	1.6 mph
3rd GEAR	1.4	to	3.2 mph
4th GEAR	2.8	to	6.3 mph
REVERSE	.8	to	1.8 mph

GROUND SPEED RANGE

95 COMBINE

16.9-26 Tires – Grain	(Min.)		(Max.)
1st GEAR	.7	to	1.7 mph
2nd GEAR	1.5	to	3.3 mph
3rd GEAR	3.0	to	6.7 mph
4th GEAR	6.0	to	13.4 mph
REVERSE	1.7	to	3.3 mph

18.4-26 Tires – Grain	(Min.)		(Max.)
1st GEAR	.8	to	1.8 mph
2nd GEAR	1.6	to	3.7 mph
3rd GEAR	3.3	to	7.3 mph
4th GEAR	6.5	to	14.7 mph
REVERSE	1.8	to	3.6 mph

23.1-26 Tires – Grain	(Min.)		(Max.)
1st GEAR	.8	to	1.9 mph
2nd GEAR	1.7	to	3.8 mph
3rd GEAR	3.4	to	7.6 mph
4th GEAR	6.8	to	15.2 mph
REVERSE	1.9	to	3.8 mph

18.4-26 Tires – Rice	(Min.)		(Max.)
1st GEAR	.7	to	1.6 mph
2nd GEAR	1.4	to	3.1 mph
3rd GEAR	2.8	to	6.3 mph
4th GEAR	5.6	to	12.7 mph
REVERSE	1.6	to	3.5 mph

23.1-26 Tires – Rice	(Min.)		(Max.)
1st GEAR	.7	to	1.8 mph
2nd GEAR	1.6	to	3.6 mph
3rd GEAR	3.2	to	7.2 mph
4th GEAR	6.4	to	14.4 mph
REVERSE	1.8	to	4.0 mph

Tracks – Rice	(Min.)		(Max.)
1st GEAR	.4	to	.9 mph
2nd GEAR	.8	to	1.8 mph
3rd GEAR	1.6	to	3.6 mph
4th GEAR	3.2	to	7.2 mph
REVERSE	.9	to	2.0 mph

105 COMBINE

18.4-26 Tires – Grain	(Min.)		(Max.)
1st GEAR	.6	to	1.4 mph
2nd GEAR	1.2	to	2.8 mph
3rd GEAR	2.5	to	5.6 mph
4th GEAR	5.0	to	11.1 mph
REVERSE	1.4	to	3.1 mph

23.1-26 Tires – Grain	(Min.)		(Max.)
1st GEAR	.7	to	1.5 mph
2nd GEAR	1.3	to	2.9 mph
3rd GEAR	2.6	to	5.9 mph
4th GEAR	5.2	to	11.8 mph
REVERSE	1.4	to	3.3 mph

23.1-26 Tires – Rice	(Min.)		(Max.)
1st GEAR	.7	to	1.6 mph
2nd GEAR	1.4	to	3.2 mph
3rd GEAR	2.8	to	6.3 mph
4th GEAR	5.6	to	12.7 mph
REVERSE	1.5	to	3.6 mph

Tracks – Rice	(Min.)		(Max.)
1st GEAR	.4	to	.8 mph
2nd GEAR	.7	to	1.6 mph
3rd GEAR	1.4	to	3.2 mph
4th GEAR	2.8	to	6.4 mph
REVERSE	.8	to	1.8 mph

TIRE SIZES AND WHEEL TREAD DIMENSIONS

Drive Wheels

55 COMBINE

Combine	Tire Sizes	Center-to-Center Wheel Thread	
		Dished In	Dished Out
GRAIN	14.9-26 (8 ply) Cleat	78 in.	88 in.
	14.9-26 (6 ply) Low profile	78 in.	88 in.
	16.9-26 (8 ply) Cleat	80 in.	86 in.
	18.4-26 (6 ply) Cleat or low profile	80 in.	86 in.
	18.4-26 (6 ply) Cleat or low profile (16" wheel)	81 in.	. . . .
	23.1-26 (8 ply) Cleat (use with wide tread 7.50-18 tire)	90 in.	. . . .
RICE	18.4-26 (6 ply) Rice (16" rims)	81 in.	90 in.
	23.1-26 (8 ply) Rice (16" rims)	90 in.	. . . .
	23.1-26 (8 ply) Rice (20" rims)	94 in.	. . . .

95 COMBINE

GRAIN	16.9-26 (8 ply) Cleat (with H10135 Hub—optional)	84 in.	. . . .
	18.4-26 (10 ply) Cleat or low profile (use with 334 and 434 Corn Attachments) (with H10135 Hub)	85 in.	. . . .
	18.4-26 (6 ply) Cleat or low profile (with H10024 Hub—optional)	90 in.	. . . .
	23.1-26 (8 ply) Cleat or low profile	89 in.	. . . .
RICE	23.1-26 (8 ply) Rice	98 in.	. . . .

105 COMBINE

GRAIN	18.4-26 (10 ply) Cleat or low profile	97 in.	. . . .
	23.1-26 (8 ply) Cleat or low profile	101 in.	. . . .
RICE	23.1-26 (8 ply) Rice	108 in.	. . . .

Guide Wheels

55, 95 AND 105 COMBINES

Combine	Tire Sizes	Center-to-Center Wheel Tread	
		Narrow	Wide
GRAIN	6.00-16 (4 ply) Rib implement (55 and 95 only)	49 in.	66 in.
	6.50-16 (4 ply) Rib implement (55 and 95 only)	51 in.	68-1/2 in.
	7.50-16 (4 ply) Rib implement	51 in.	68-1/2 in.
	7.50-20 (4 ply) Rib implement (105 only)	48-1/2 in.	66 in.
	9.00-16 (4 ply) Low profile	53 in.	70 in.
RICE	7.50-18 (6 ply) Skid ring (55 and 95 only)	50 in.	67-1/2 in.
	7.50-20 (4 ply) Rib implement	48-1/2 in.	66 in.
	7.50-20 (6 ply) Skid ring (95 and 105 only)	48-1/2 in.	66 in.

See attachment section for information on drive wheel axle spacers.

CAPACITIES (APPROX.)

Description	55 Combine	95 Combine	105 Combine
Fuel Tank	40 U.S. gallons	40 U.S. gallons	60 U.S. gallons—gasoline 40 U.S. gallons—diesel
Cooling System	6 U.S. gallons	6 U.S. gallons	8 U.S. gallons
Engine Crankcase	7 U.S. quarts	7 U.S. quarts	9 U.S. quarts
Transmission	14 U.S. pints	14 U.S. pints	4 U.S. pints
Final Drives (2)	4-1/2 U.S. pints each	4-1/2 U.S. pints each	4-1/2 U.S. pints each
Hydraulic Unit (Including Lines and Cylinders)	12 U.S. quarts	12 U.S. quarts	12-1/2 U.S. quarts

GASOLINE ENGINES

Description	55 Combine	95 Combine	105 Combine
Make and Model of Eng.	John Deere HE217G	John Deere HG217G	John Deere 341G 1H
Bore	3-5/8 in.	3-5/8 in.	4-1/4 in.
Stroke	3-1/2 in.	3-1/2 in.	4 in.
Brake Horse Power	71*	87*	100†
Number of Cylinders	6	6	6
Piston Displacement	217 cu. in.	217 cu. in.	341 cu. in.
Maximum Load Speed	2200 rpm	2500 rpm	2200 rpm
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4
Crankcase	Cast integral with block	Cast integral with block	Cast integral with block
Type of Lubrication	Force feed by gear pump	Force feed by gear pump	Force feed by gear pump
Valve Arrangement	Valve in head	Valve in head	Valve in head
Valve Clearance:			
Intake	0.012 in. when cold	0.012 in. when cold	0.015 in. when cold
Exhaust	0.018 in. when cold	0.018 in. when cold	0.028 in. when cold
Make of Governor	Pierce	Pierce	Pierce
Make of Carburetor	Marvel-Schebler	Zenith (dual down draft)	Marvel-Schebler
Air Cleaner	Dry type	Dry type	Dry type
Spark Plug	Size 14 mm-gap 0.025 in.	Size 14 mm-gap 0.025 in.	Size 18 mm-gap 0.025 in.
Electrical System	12 volt	12 volt	12 volt
Cooling System	Water pressure	Water pressure	Water pressure
Type of Fuel	Gasoline (regular)	Gasoline (regular)	Gasoline (regular)
Oil Filter	Full flow	Full flow	Full flow

**Calculated at 60°F. and 29.92 inches Hg. at sea level.*

†Factory observed at 85°F. and 29.3 inches Hg. at 500 ft. above sea level.

DIESEL ENGINES

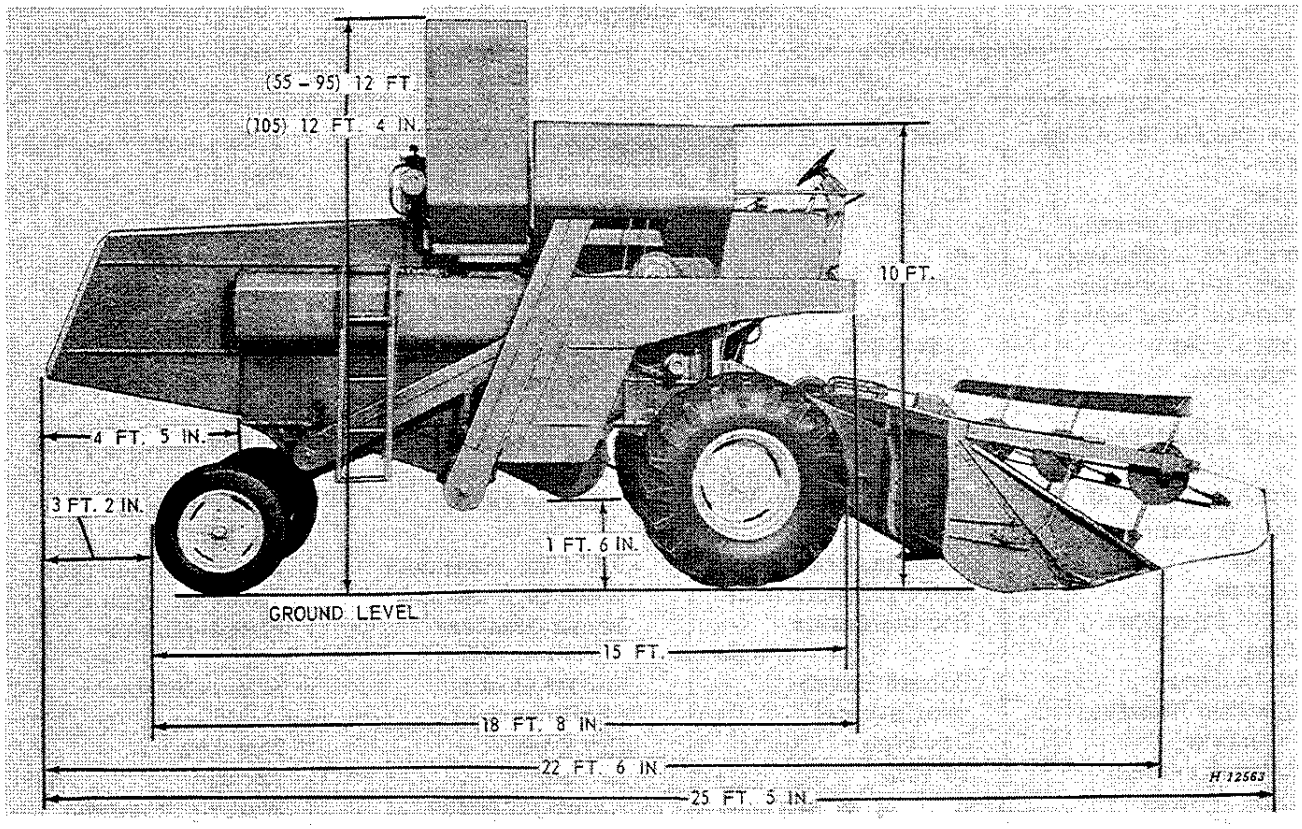
Description	55 Combine	95 Combine	105 Combine
Make and Model of Eng.	John Deere HA248D	John Deere HB248D	John Deere 404D-2H
Bore	3-7/8 in.	3-7/8 in.	4-1/4 in.
Stroke	3-1/2 in.	3-1/2 in.	4-3/4 in.
Brake Horse Power	71*	80*	100+
Number of Cylinders	6	6	6
Piston Displacement	248 cu. in.	248 cu. in.	404 cu. in.
Maximum Load Speed	2200 rpm	2500 rpm	2200 rpm
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4
Crankcase	Cast integral with block	Cast integral with block	Cast integral with block
Type of Lubrication	Force feed by gear pump	Force feed by gear pump	Force feed by gear pump
Valve Arrangement	Valve in head	Valve in head	Valve in head
Valve Clearance:			
Intake	0.012 in. when cold	0.012 in. when cold	0.018 in. when cold
Exhaust	0.018 in. when cold	0.018 in. when cold	0.018 in. when cold
Make of injection Pump	Roosa-Master	Roosa-Master	Roosa-Master
Make of Fuel Injection Nozzles	Robert Bosch (pintle-type)	Robert Bosch (pintle-type)	Roosa-Master
Air Cleaner	Dry type	Dry type	Dry type
Electrical System	12 volt	12 volt	12 volt
Cooling System	Water pressure	Water pressure	Water pressure
Type of Fuel	No. 1-D or No. 2-D Diesel fuel	No. 1-D or No. 2-D Diesel fuel	No. 1-D or No. 2-D Diesel fuel
Oil Filter	Full flow	Full flow	Full flow

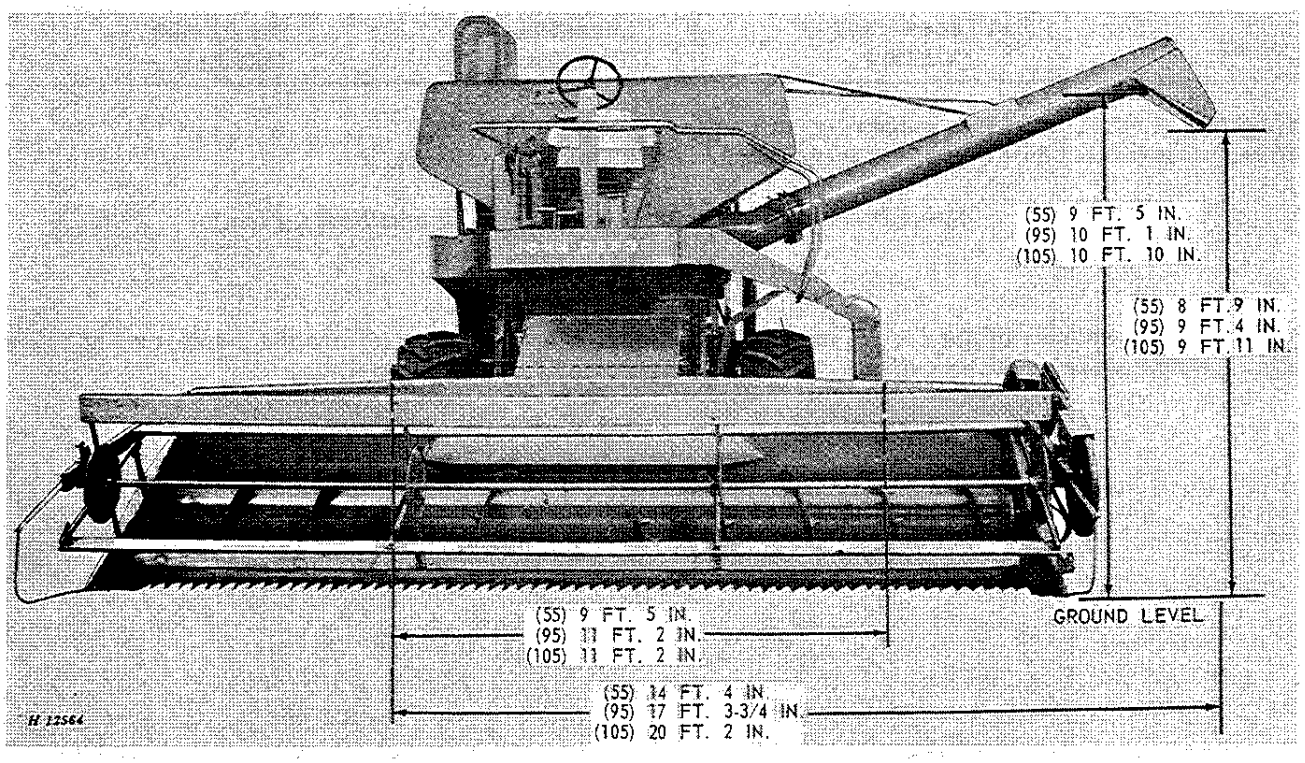
**Calculated at 60°F. and 29.92 inches Hg. at sea level.*
+ Factory observed at 85°F. and 29.3 inches Hg. at 500 ft. above sea level.

(Specifications and design subject to change without notice.)

OVER-ALL DIMENSIONS

NOTE: The dimensions of the 55, 95, and 105 Combines (shown on page 10) are the same except where indicated for combines equipped with 18.4-26 drive wheels and 6.50-16 guide wheels.

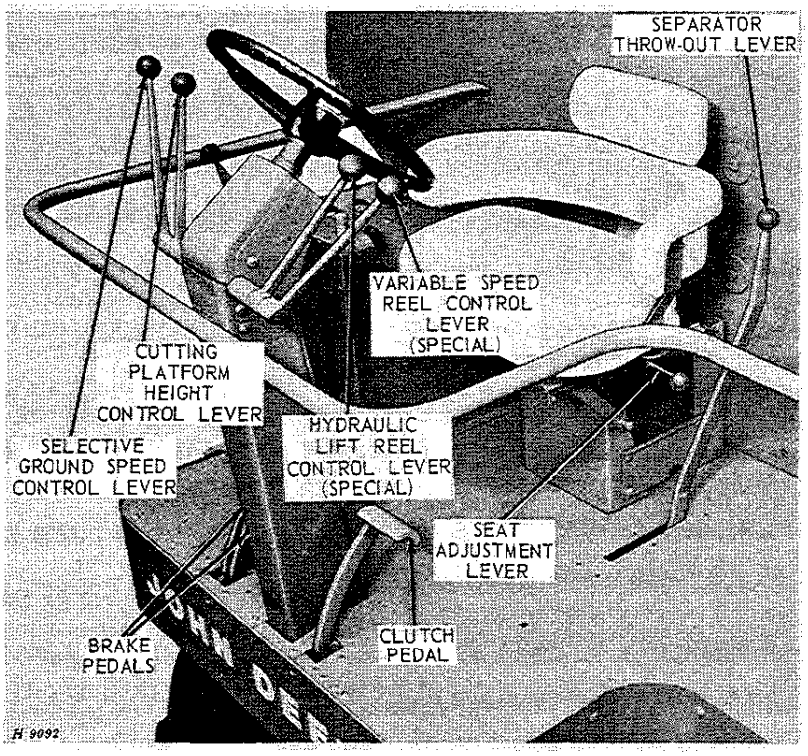




On combines equipped with operator's cab add approximately 24 inches to storage height. On combines equipped with ScourKleen or Elevator Extension add approximately 20 inches to storage height.

CONTROLS AND INSTRUMENTS

Before attempting to operate your new combine, become familiar with the location and purpose of its controls and instruments. Study these pages carefully, regardless of your previous combine experience.



The combine controls are located on the operator's platform within easy reach of the operator. Those controls, whose purpose and function are obvious, will not be explained.

CUTTING PLATFORM HEIGHT CONTROL LEVER

This lever controls the height of the platform through a hydraulic mechanism. Move lever forward to lower platform; move lever rearward to raise platform. When released, lever automatically returns to neutral position. As a safety measure, cutting platform height cannot be changed unless engine is running.

SELECTIVE GROUND SPEED CONTROL LEVER

To increase ground travel speed within a selected transmission range, move lever forward. It will automatically return to neutral position when released and speed will remain as selected.

SEPARATOR THROW-OUT LEVER

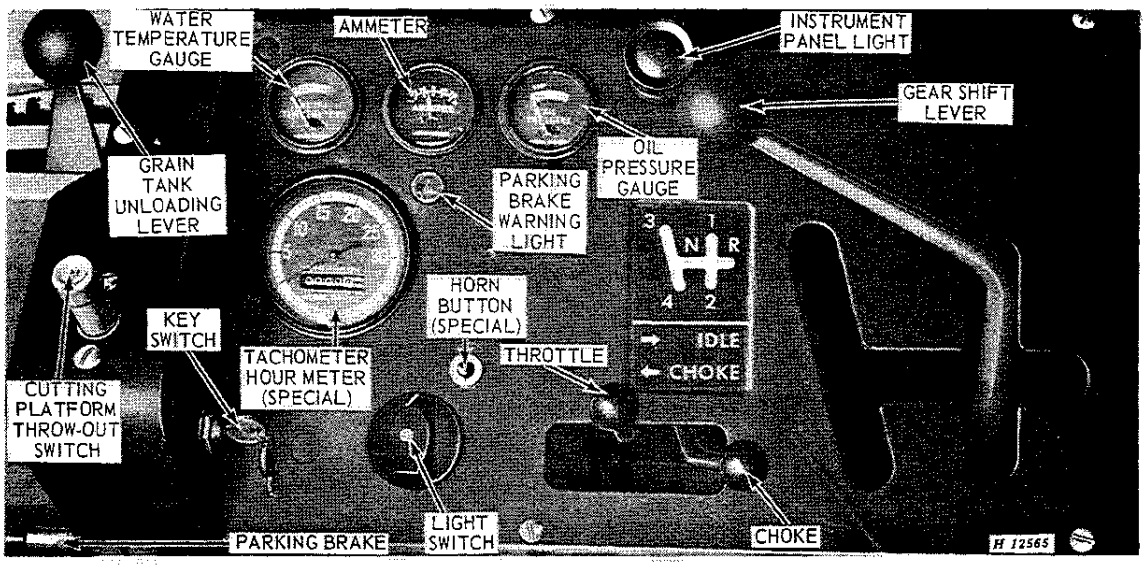
Separator is engaged when lever is in forward position. To disengage, pull lever rearward.

CONCAVE FRONT ADJUSTMENT LEVER

This lever controls the opening and closing of the front of the concave from the operator's platform. Move lever forward to open concave; move lever rearward to close concave.

GRAIN TANK UNLOADING LEVER

This lever engages auger when pulled up. To disengage, move lever down. Grain tank unloading drive and separator drive are independent. If engine is running, separator can be stopped without affecting unloading of grain tank.



PARKING BRAKE LEVER

The parking brake lever is used to lock the wheel brakes so the combine cannot move if left unattended. To engage, pull lever rearward. To disengage, push button in and move lever forward.

Never attempt to move combine with parking brake lever engaged.

TRANSMISSION GEARSHIFT LEVER

There are four speed ranges forward and one reverse range available. Positions of gearshift lever for different transmission speed ranges are shown by diagram.

Clutch pedal must be fully depressed before gearshift lever can be shifted from one forward position to another.

CAUTION: Make certain the gearshift lever is in neutral position and clutch pedal is fully depressed before starting engine.

CUTTING PLATFORM THROW-OUT SWITCH (Special - 55 and 95 Combines; regular 105 Combines)

This switch operates the electromagnetic throw-out clutch which permits instant stopping of the cutting platform and feeder while the separator continues to run.

Push switch down to disengage drive, then when trouble has been taken care of, push switch down again to engage drive.

THROTTLE

Move throttle one quarter forward when starting engine. Move throttle all the way forward for normal operation (fast idle); move throttle all the way rearward for slow idle.

CHOKE - GASOLINE ONLY

Move choke control all the way forward when starting engine. After engine is started, and for normal operation, move choke control all the way rearward.

WATER TEMPERATURE GAUGE

This gauge indicates the water temperature in the cooling system—not the quantity. Normal operating temperature is 160° to 219° F. (indicated by green band on dial). If 219° F. or above (indicated by red band on dial), stop engine and determine cause.

AMMETER

This gauge indicates the rate of charge or discharge of the batteries. If ammeter shows discharge for an extended period during normal operation, check for a ground, short circuit or faulty regulator. If ammeter shows high charge continually, inspect for low batteries, faulty connections, low battery water, or bad regulator.

OIL PRESSURE GAUGE

This gauge indicates the pressure of the engine lubricating oil—not the amount of oil in the crankcase. Oil pressure will vary slightly with wear, but with recommended oil, it should read NORMAL at full governed speed (indicated by green band on dial). If oil pressure drops (indicated by red band on dial), stop immediately and determine cause.

OPERATION

FUNDAMENTALS OF COMBINE HARVESTING

The most important factor in harvesting, is for the operator to have a thorough understanding of the fundamentals of combine operation.

These fundamentals in brief are:

Be sure crop is in condition to thresh—moisture content not too high—straw not too green, etc.

In making the first round of the field, keep the combine forward speed as slow as possible to reduce the volume of material entering the combine. Always run the engine at full throttle to keep the combine mechanism up to full speed, thus guarding against slugging and clogging. Use the selective ground speed drive to obtain slower speed or shift to a lower gear if necessary—but do not throttle down the engine.

Select a ground speed that will not overload the combine.

Engine should be in good condition—governor should be properly set and responsive enough to accelerate quickly if an overload occurs.

Keep the cylinder speed as low as possible and concave clearance as high as possible to remove the maximum amount of grain from head without breaking up the straw excessively. Maintain correct beater speed to guard against wrapping of straw on beater.

Cut the crop as high as possible without excessive loss of low grain heads. If the straw is down and tangled, it may be desirable to use lifting guards. Slow travel speed is imperative.

Adjust the reel position and speed for even feeding.

Regulate adjustable chaffer openings to pass the grain or seed to the lower sieve before it has passed over two-thirds the length of chaffer without admitting too much coarse material.

Close adjustable sieve as far as possible without carrying clean grain into the tailings auger.

If material loads up on front of chaffer, adjust upper windboard to throw air blast to front of shoe.

Use as much air as possible without blowing over clean seed. If the grain or seed is unusually light, it may be necessary to reduce the volume of air. In heavy seeds, increase the volume of air.

Keep amount of tailings as low as possible.

OPERATING SUGGESTIONS

Don't start combining until the crop is ripe.

Unless crop drying equipment is available, a crop should not be combined until it is dead ripe. If the threshed grain feels damp or is easily dented with the fingernail, the moisture content is usually too high for safe storage.

Grain crops containing 14 per cent moisture or less are usually considered dry enough for safe storage. A John Deere Moisture Meter for checking moisture content of grain and a portable Grain Dryer can be purchased from your John Deere dealer, or arrangements can usually be made at the local grain elevator for necessary moisture tests and drying if necessary.

OPERATION IN WEEDY CONDITIONS

Combining in fields where weeds are numerous is particularly troublesome as they tend to gum up the sieves. Also, the moisture in the seeds is imparted to the grain.

The following suggestions will help while operating in weedy conditions.

Cut the crop as high as possible to avoid weeds and undergrowth.

Check to see that the cylinder is operating at proper speed.

Use as much air blast on the shoe as possible without blowing over grain.

Lower rear end of chaffer.

HEIGHT AND WIDTH OF CUT

The cutting platform has a cutting height range from 2.9 inches below wheel level to 34.3 inches above wheel level on grain combines, and from 9.5 inches below wheel level to 33.5 inches above wheel level on rice combines. Cut just low enough to get all grain heads. Watch the height and condition of crop and continually raise and lower the cutting platform to meet conditions. If the crop is extremely heavy and badly down, it may be necessary to cut less than a full swath or reduce travel speed.

HOLD DOWN THE GROUND SPEED

Excessive travel speed is one of the greatest causes of trouble in combining. Traveling at too high a ground speed causes overloading, resulting in a loss of grain.

Also, traveling at an excessively high speed over rough ground also causes extra wear and damage to parts, not incurred when the combine is operated at a more reasonable speed.

KEEP STEADY, SMOOTH ENGINE SPEED

Any fluctuation in engine speed is reflected in the speed of the separator. Uneven speed results in loss of grain, inferior threshing and, in extreme cases, complete plugging of the combine. Take every precaution to maintain the correct uniform speed.

By rounding the corners in the field, you can maintain more uniform speed when turning.

When stopping, wait until material in the combine is cleaned out before disengaging separator throw-out lever.

BEFORE-OPERATION CHECKS AND ADJUSTMENTS

Careful inspection and service of the combine before starting work each day will prevent needless delays and breakdown in the field. Make the following checks and adjustments:

Fill fuel tank with proper grade of fuel. See fuels and lubricants section.

Add water or antifreeze slowly until the level is approximately 1-inch below the bottom of the filler neck.

Lubricate the combine completely. Service air cleaner, and check oil level of hydraulic units, transmission, and final drives. See Lubrication section.

Open the doors at bottom of elevators and leave them open until combine is started.

Inspect belts and chains for proper tension and alignment. See that there are no loose bolts or missing cotter pins.

COMBINE AND ENGINE BREAK-IN

Check all V-belt drives carefully for proper alignment and tension. Keep belts tight enough to prevent slippage. Belts can be ruined very quickly if allowed to slip in the grooves of a sheave for any length of time. Excessive heating of a sheave is a sign of belt slippage. New belts will stretch slightly after the first run-off. Check tension frequently.

Open the clean-out doors in the bottom of the clean grain and tailings elevators and check tension of elevator chains. Check the chain tension every day of operation.

Be certain all shafts turn freely.

After 50 hours of operation, drain the oil from the transmission and final drives. Fill with oil as specified in the Lubrication section of this manual.

Follow the lubrication instructions and charts closely.

Check water level in radiator. Fill with rain water, if available. Do not use water containing alkali. *If combine is being operated at temperatures below 32°F., refer to "Cold weather operation.*

Your new engine was shipped from the factory with SAE 10W-30 oil Service DS for gasoline engines or Service DM for diesel engines in the crankcase. Check crankcase oil level.

To promote good ring seating and to prevent cylinder wall glazing, put the engine to work as soon as possible. Do not overload. Second gear will give the best load during early operation. If prolonged transport periods are required, use third gear. This will keep torque level up and induce ring seating.

After the first 20 hours of operation, drain the oil from the crankcase. Replace the engine oil filter and clean the hydraulic reservoir oil filter. Fill with the proper viscosity of oil as specified in the Lubrication section of this manual.

STARTING THE ENGINE

Make certain the separator, cutting platform, and grain tank unloading auger throw-out levers are desengaged, the gearshift lever is in neutral, and clutch pedal fully depressed before starting engine.

GASOLINE ENGINE

If engine has not been operated for a period of time, or the fuel tank has run dry, prime fuel pump lever up or down to force gasoline into carburetor.

NOTE: After priming fuel pump, be sure the priming lever is in the down position. If the priming lever is left in the up position, the fuel pump is inoperative.

Move throttle lever one-quarter open. Move choke lever all the way open, depress clutch pedal, and turn key as far clockwise as possible. After engine starts, release key and push choke control rearward. Check oil pressure gauge to

make certain it is registering pressure; if not, stop engine and determine cause.

Release clutch, warm engine and transmission for five minutes at fast idle—no load. Do not operate combine during warm up.

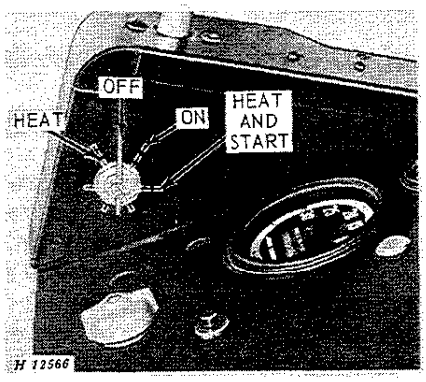
DIESEL ENGINE

If the engine has not been operated for a long period of time, or if the fuel tank has run dry, it is necessary to bleed the entire fuel system to remove air bubbles. See page 87 for bleeding procedure.

CAUTION: If possible never let the fuel tank run dry.

Move throttle to one-quarter open, depress clutch pedal and turn key as far clockwise as possible.

55 and 95 Combines



The 55 and 95 Combine diesel engines are equipped with electrical combustion chamber pre-heaters called glow plugs, located above the fuel injectors. They are used when starting a cold engine, but need not be used when starting a hot engine. Heat glow plugs (no more than 30 seconds at a time) by turning key switch clockwise as far as possible and cranking engine at the same time.

Diesel engines do not require a choking system.

If combine is equipped with primer pump, prime engine when necessary. Turn key counterclockwise, and heat glow plugs as specified in the chart, in the next column.

Primer Pump Chart

Temperature	Prime	Preheat Time
Warm engine	None	30 seconds
Above 32° F.	2 strokes	30 seconds
32° F. to 0° F.	3 strokes	30 seconds
Below 0° F.	4 strokes	30 seconds

NOTE: Do not prime more than specified in chart.

IMPORTANT: Lock plunger in place after using pump

105 Combine

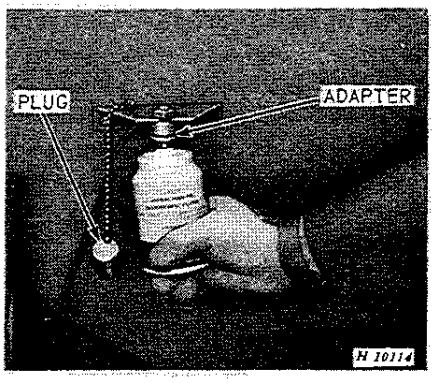
Turn key clockwise as far as possible.

After engine starts, release key and check oil pressure gauge to make certain it is registering pressure; if not, stop and determine cause.

Release clutch, warm engine and transmission for five minutes at fast idle—no load. Do not operate combine during warm up.

COLD WEATHER STARTING AID

The 105 Diesel Engine Combine is equipped with an ether starting fluid adapter which is used to inject atomized fluid into the engine air intake system. Normally either is used for starting at temperatures below 32° F. Pressurized cans of starting fluid are available from your John Deere dealer.



To use the starting fluid, remove the safety cap and plastic spray button from the can. Remove the cap from the adapter and position the can under the adapter.

To inject starting fluid, push up on the can.

CAUTION: To avoid damage, turn engine with starter one or two revolutions before injecting starting fluid. Inject starting fluid only while the engine is turning.

Relax pressure on the can between "shots" of starting fluid. Stop injecting fluid after the engine starts. If the engine begins to die during the first few minutes of operation, inject another" shot" of fluid. When the engine is operating satisfactorily, remove the can from the adapter and replace the safety cap on the can.

Be certain to install the cap on the adapter when it is not in use. This will prevent dust from being drawn into the engine.

CAUTION: Ether starting fluid is highly flammable.

Store starting fluid cans where they will not be subject to extreme cold or warm temperatures. For best results, store fluid at room temperature.

IMPORTANT: The ether starting aid SHOULD NOT be used on 55 and 95 Diesel Engines—only 105 Diesel Engines.

STOPPING THE ENGINE

GASOLINE ENGINE

Set engine at slow idle speed and allow engine to run at this speed for a few minutes before stopping.

DIESEL ENGINE

Set engine at slow idle speed and allow engine to run at this speed until temperature gauge drops well into white range on dial. Move throttle to rear and turn off key.

CAUTION: Do not attempt to stop engine by turning off fuel supply at tank. Doing so will cause injection pump to run dry and damage internal parts.

STARTING THE COMBINE

CAUTION: Make certain no one is standing near enough to the combine to touch any moving parts. Warn everyone to stand clear.

When engine is properly warmed up, move separator throw-out lever forward to engage the separator. Push throttle lever all the way forward.

Check the speed of beater behind the cylinder with a speed indicator. Beater should operate at 680 to 685 rpm with separator empty and not under load. If beater speed is not correct, adjust governor setting.

Test operation of hydraulic control for adjusting cutting platform height.

Test operation of grain tank unloading auger.

Test operation of hydraulic selective ground speed control.

Check brakes to see if they are in proper working order.

Inspect entire combine again, making certain all units are working properly.

Disengage separator, then close doors at bottom of elevators.

SELECTING PROPER GROUND SPEED

The ground speed of the combine can be very closely controlled by using the selective ground speed drive in conjunction with different transmission speeds. The chart on pages 5 and 6 shows the range of speeds that can be obtained in each transmission range by means of selective ground speed control. Select the best transmission speed range; then, with the selective ground speed control lever, adjust the ground speed to meet field conditions exactly.

TRANSPORTING

When transporting, drive combine under its own power or load it on a truck. Combine may be towed with caution. If combine is to be towed, remove the drive shafts between final drives and differential.

This combine is designed for easy and safe transporting. The width of the combine can be reduced by folding the unloading auger back along the separator and removing the cutting platform. The width can be further reduced by folding up hinged-type operator's platform ladder. The radiator screen can be hinged down to reduce the height.

Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

Over-all dimensions are given on page 10.

If the cutting platform and feeder house are removed, the hydraulic cylinders must be wired or supported by support chains (special attachment) no closer to separator support channel than 14 inches. Damage may result to hoses if carried too close.

Reduce the spread of noxious weed seeds by cleaning out combine thoroughly before leaving one field and going to the next.

When through cutting in a field, sweep trash and straw from outside of combine, open doors at bottom of elevators and run combine until all straw, trash, and grain are removed from inside of combine before moving to the next field.

CAUTION: When driving the combine on a road or highway at night or during the day, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard check local governmental regulations. Various safety lights and devices are available from your John Deere dealer.

SPEEDS OF VARIOUS UNITS (Full Throttle—No Load)

Description	55 Combine	95 Combine	105 Combine
Auger, Platform	194 rpm	201 rpm	201 rpm
Beater Behind Cylinder	680 to 685 rpm	680 to 685 rpm	680 to 685 rpm
Beater, Front of	218 rpm	227 rpm	227 rpm
Feeder House			
Cylinder:			
Regular	1057 rpm	1057 rpm	1057 rpm
Rice (Rasp-Bar)	952 rpm	952 rpm	952 rpm
Rice (Spike-Tooth)	793 rpm	793 rpm	793 rpm
Soybean	604 rpm	604 rpm	604 rpm
Cylinder (Extreme Low)	196 rpm	196 rpm	277 rpm
Cylinder (Extreme High)	1190 rpm	1190 rpm	1190 rpm
Elevators	313 rpm	313 rpm	313 rpm
Fan (Normal Operating Speed)	750 rpm	750 rpm	750 rpm
Fan (Extreme Low)	602 rpm	602 rpm	550 rpm
Fan (Extreme High)	858 rpm	858 rpm	1050 rpm
Feeder House Conveyor Drive Shaft	255 rpm	265 rpm	265 rpm
Grain Conveyor Under			
Cylinder:			
(With Regular 15-Tooth Sprocket)	170 rpm	170 rpm	170 rpm
(With Special 10-Tooth Sprocket)	255 rpm	255 rpm	255 rpm
Ground Travel Speeds	See page 5	See page 6	See page 6
Reel	15.3 to 56.9 rpm	15.8 to 58.5 rpm	15.8 to 58.5 rpm
Shoe Crank	286 rpm	286 rpm	286 rpm
Straw	213 rpm	213 rpm	213 rpm

NOTE: For best results use a mechanical revolution counter when checking basic speeds.