

# 6620, Sidehill 6620 7720 and 8820 Combines



JOHN DEERE

## TECHNICAL MANUAL 6620, Sidehill 6620 7720 and 8820 Combines

TM1202 (01JAN88) English

**John Deere Harvester Works**  
**TM1202 (01JAN88)**

LITHO IN U.S.A.  
ENGLISH



# 6620, SIDEHILL 6620, 7720 AND 8820 COMBINES

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*All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.*

*The specifications given in this technical manual are intended for service only. They do not include normal factory manufacturing tolerances.*

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## TECHNICAL MANUAL TABS

### INTRODUCTION

To fully utilize this technical manual, you must understand how it is organized.

Only two tab colors are used—green and yellow. Each color represents a different type of information.

Spend a minute reading this now and save many minutes of searching later.

### GREEN TAB SECTIONS

The green tab sections are repair sections that tell how to repair the components of the various systems.

Repair of a component includes:

- Removal from machine (when necessary)
- Disassembly
- Inspection
- Replacement of parts
- Assembly
- Adjustment
- Installation on machine (when necessary)

The numbers used for the repair (green tab) sections are part of an overall service publication numbering system. The numbers identify the same sections in the parts catalog, flat rate manual, service information bulletins, and service training courses.

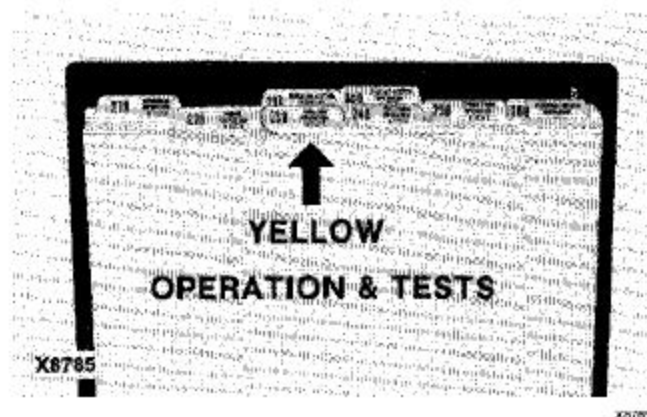
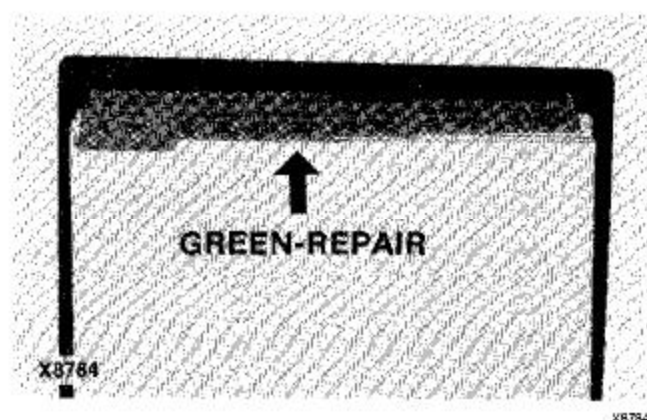
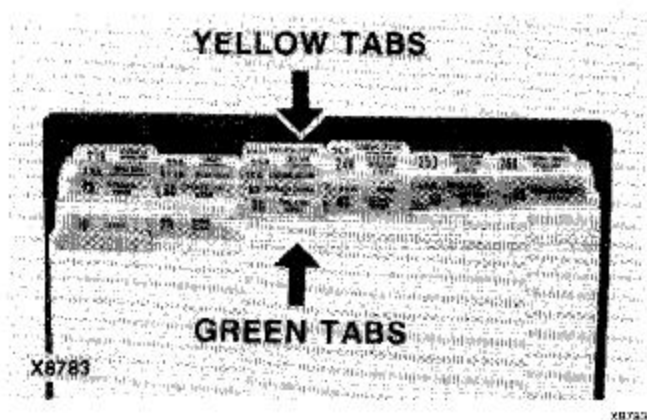
### YELLOW TAB SECTIONS

Each yellow tab section contains information on:

- System Operation
- System Tests

System operation explains how the system and its components work.

System tests tell how to test the system and diagnose the problem.



## TAB POSITIONS

Each green tab and its corresponding yellow tab have the same tab position. This is to help you quickly locate the related information.

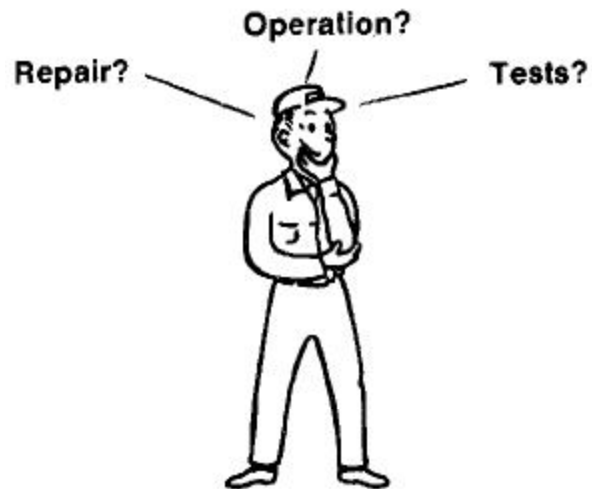
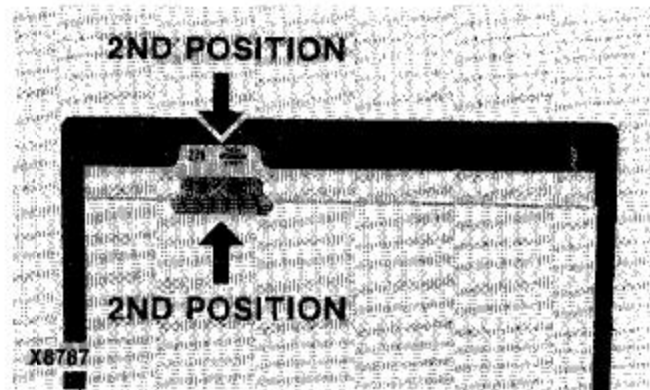
COLOR	POSITION	SEC. NO.	DESCRIPTION
Green	2nd	20	Engine Repair
Yellow	2nd	220	Engine Operation and Tests

## HOW TO USE

Use the following three-step procedure to locate the desired information.

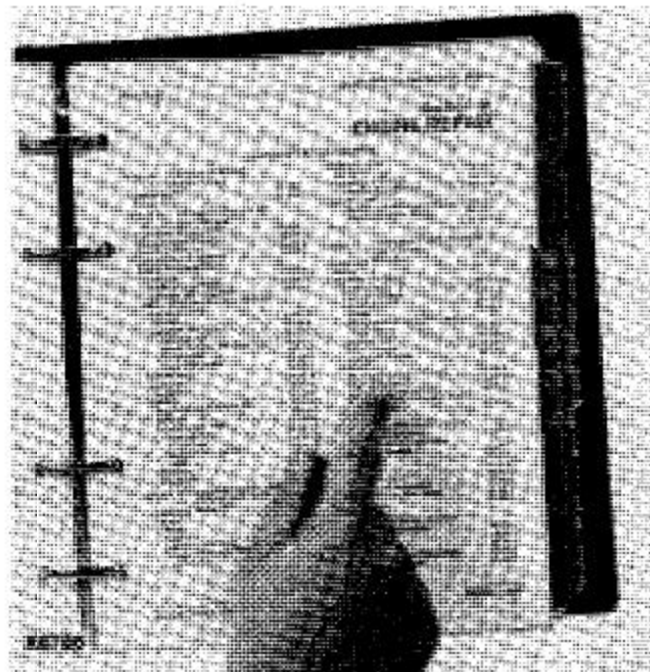
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3. Use the table of contents on the first page of the section to locate the information.



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## TYPE OF INFORMATION?





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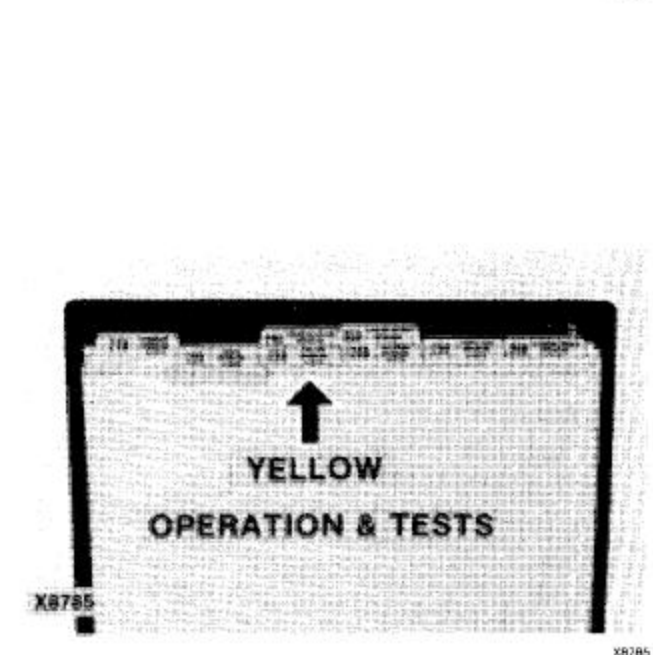
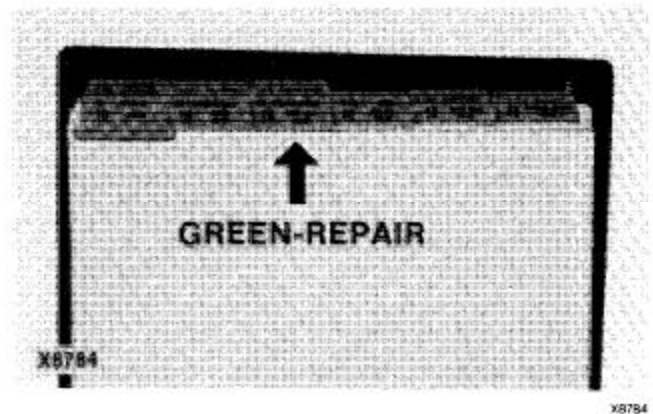
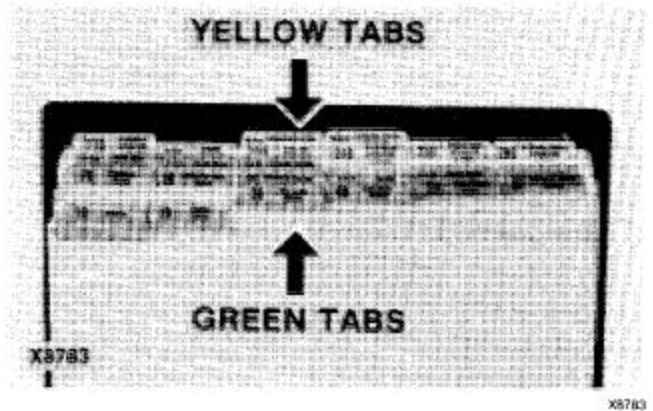
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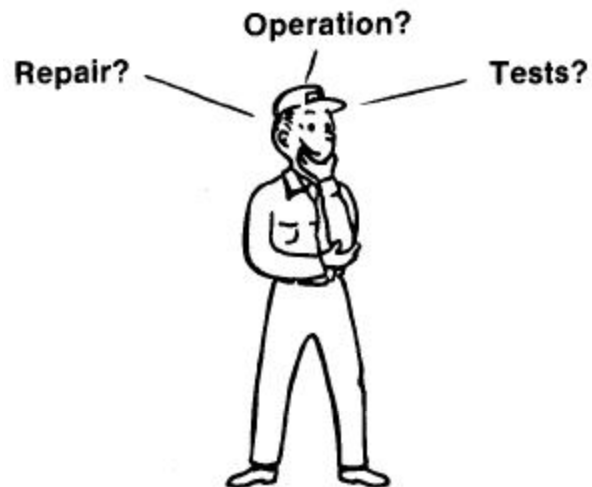
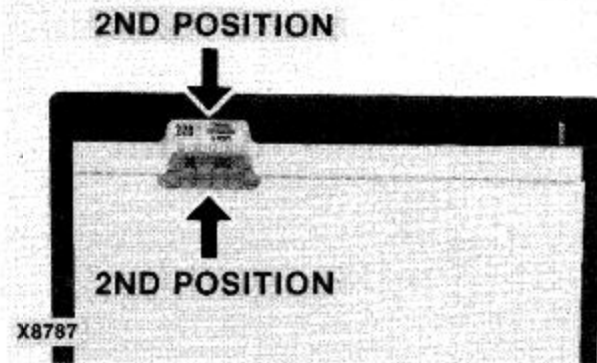
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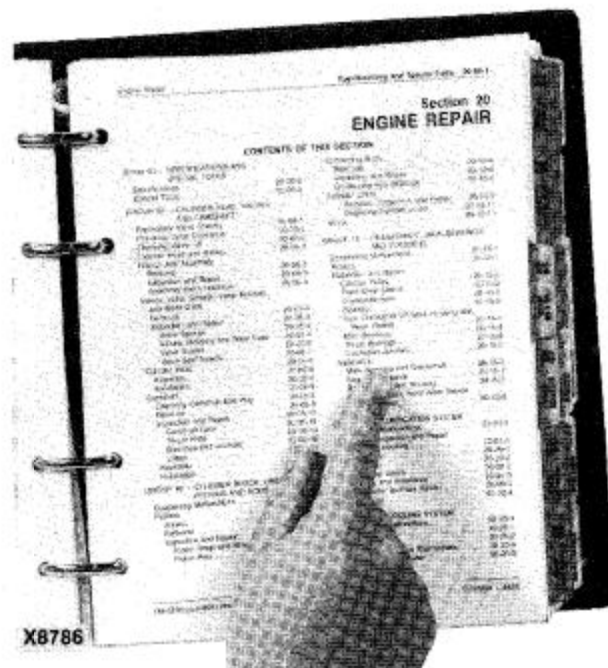
Green for Repair  
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3. Use the table of contents on the first page of the section to locate the information.



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## TYPE OF INFORMATION?



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## Group 00 GENERAL SPECIFICATIONS

### SERIAL NUMBERS

Serial Number Unit	Location	Serial Number Unit	Location
Separator... ( -1982)	Rear left hand upright	Cutting Platform and Pickup Platform .....	Left-hand side of main frame
(1983- )	Near right hand side of tool box		
Engine .....	Front side of engine block on water jacket directly above starter	Corn Head .....	Lower right-hand side on bulk-head frame
Sundstrand Hydrostatic Unit ...	Under pump section	Row-Crop Head .....	Left-hand side end sheet of main frame
Eaton Hydrostatic Unit .....	Side of motor section		
Cam Lobe 4-Wheel Drive Motor .....	Top of motor		
Planetary 4-Wheel Drive Motor .....	None		



**GROUND SPEED IN MPH (km/h) 6620 COMBINE (Posi-Torq Drive)  
10 TO 82 AND 11 TO 90 RATIO FINAL DRIVES**

Size	Tire		Ply	1st Gear	2nd Gear	3rd Gear	4th Gear	Reverse Gear
	Type							
23.1-26	Cleat	8, 10		.7 to 1.7	1.6 to 3.9	2.9 to 7.2	6.6 to 16.5	1.3 to 3.2
				(1.1 to 2.7)	(2.6 to 6.3)	(4.7 to 11.6)	(10.6 to 26.6)	(2.1 to 5.2)
23.1-26	Low Profile	8		.7 to 1.7	1.5 to 3.8	2.8 to 6.9	6.4 to 16.0	1.2 to 3.1
				(1.1 to 2.7)	(2.4 to 6.1)	(4.5 to 11.1)	(10.3 to 25.7)	(2.1 to 5.0)
23.1-26	Cane & Rice	8,10		.7 to 1.8	1.7 to 4.2	3.0 to 7.6	7.0 to 17.4	1.4 to 3.4
				(1.1 to 2.9)	(2.7 to 6.8)	(4.8 to 12.2)	(11.3 to 28.0)	(2.3 to 5.5)
28.1-26	Cleat	10		.7 to 1.8	1.6 to 4.0	2.9 to 7.3	6.7 to 16.9	1.3 to 3.3
				(1.1 to 2.9)	(2.6 to 6.4)	(4.8 to 11.8)	(10.8 to 27.2)	(2.1 to 5.3)
28.1-26	Cane & Rice	10		.7 to 1.8	1.7 to 4.2	3.0 to 7.6	7.0 to 17.4	1.4 to 3.4
				(1.1 to 2.9)	(2.7 to 6.8)	(4.8 to 12.2)	(11.3 to 28.0)	(2.3 to 5.5)

**10 TO 95 AND 11 TO 104 RATIO FINAL DRIVES**

Size	Tire or Tracks		Ply	1st Gear	2nd Gear	3rd Gear	4th Gear	Reverse Gear
	Type							
24.5-32	Cleat	10		.7 to 1.7	1.6 to 3.9	2.8 to 7.1	6.5 to 16.3	1.2 to 3.2
				(1.1 to 2.7)	(2.4 to 6.3)	(4.5 to 11.4)	(10.5 to 26.2)	(2.1 to 5.2)
24.5-32	Cane & Rice	10		.7 to 1.7	1.6 to 4.0	2.9 to 7.3	6.7 to 16.8	1.3 to 3.3
				(1.1 to 2.7)	(2.6 to 6.4)	(4.7 to 11.8)	(10.8 to 26.2)	(2.1 to 5.3)
Tracks				.3 to .8	.7 to 1.8	1.3 to 3.3	3.0 to 7.6	.6 to 1.5
				(.5 to 1.3)	(1.1 to 2.9)	(2.1 to 5.3)	(4.8 to 12.2)	(1.0 to 2.4)

**GROUND SPEED IN MPH (km/h) 6620 COMBINE (Hydrostatic Drive)  
10 TO 82 AND 11 TO 90 RATIO FINAL DRIVES**

Tire			1st Gear	2nd Gear	3rd Gear	4th Gear
Size	Type	Ply				
23.1-26	R1 Cleat	8, 10	0 to 1.7 (0 to 2.7)	0 to 3.8 (0 to 6.2)	0 to 6.9 (0 to 11.3)	0 to 16.0 (0 to 26.2)
23.1-26	R3 Low Profile	8	0 to 1.6 (0 to 2.6)	0 to 3.7 (0 to 6.0)	0 to 6.7 (0 to 10.9)	0 to 15.4 (0 to 25.1)
23.1-26	R2 Cane & Rice	8, 10	0 to 1.7 (0 to 2.8)	0 to 4.0 (0 to 6.6)	0 to 7.3 (0 to 11.9)	0 to 16.8 (0 to 28.0)
28.1-26	R1 Cleat	10	0 to 1.7 (0 to 2.8)	0 to 3.9 (0 to 6.3)	0 to 7.1 (0 to 11.6)	0 to 16.3 (0 to 26.7)
28.1-26	R2 Cane & Rice	10	0 to 1.7 (0 to 2.8)	0 to 4.0 (0 to 6.6)	0 to 7.3 (0 to 11.9)	0 to 16.8 (0 to 27.4)

**10 TO 95 AND 11 TO 104 RATIO FINAL DRIVES**

Tire or Tracks			1st Gear	2nd Gear	3rd Gear	4th Gear
Size	Type	Ply				
24.5-32	R1 Cleat	10	0 to 1.7 (0 to 2.7)	0 to 3.9 (0 to 6.3)	0 to 7.1 (0 to 11.4)	0 to 16.3 (0 to 26.2)
24.5-32	R2 Cane & Rice	10	0 to 1.7 (0 to 2.7)	0 to 4.0 (0 to 6.4)	0 to 7.3 (0 to 11.8)	0 to 16.8 (0 to 27.0)
Tracks			0 to .8 (0 to 1.3)	0 to 1.8 (0 to 2.9)	0 to 3.3 (0 to 5.3)	0 to 7.6 (0 to 12.2)

**GROUND SPEED CONTROL RANGE IN MPH (km/h)  
SIDEHILL 6620 COMBINE**

Tire			1st Gear	2nd Gear	3rd Gear	4th Gear
Size	Type	Ply Rating				
23.1-26	R1 Cleat	10	0 to 1.7 (0 to 2.7)	0 to 4.0 (0 to 6.4)	0 to 7.3 (0 to 11.8)	0 to 16.7 (0 to 26.9)
23.1-26	R2 Cane & Rice	10	0 to 1.8 (0 to 2.9)	0 to 4.2 (0 to 6.8)	0 to 7.6 (0 to 12.2)	0 to 17.6 (0 to 28.3)

**GROUND SPEED CONTROL RANGE IN MPH (km/h)  
WITH 4-WHEEL DRIVE ENGAGED**

**SIDEHILL 6620, 6620 AND 7720 COMBINES**

(HYDROSTATIC DRIVE)

Tire or Tracks Size	Type	Ply	1st Gear	2nd Gear	3rd Gear	4th Gear
23.1-26	R1 Cleat	8	0 to 1.5 (0 to 2.4)	0 to 3.1 (0 to 5.0)	0 to 4.8 (0 to 7.7)	0 to 7.9 (0 to 12.7)
23.1-26	R2 Cane & Rice	10	0 to 1.6 (0 to 2.6)	0 to 3.2 (0 to 5.1)	0 to 5.1 (0 to 8.2)	0 to 8.3 (0 to 13.4)
24.5-32	R1 Cleat	10	0 to 1.5 (0 to 2.4)	0 to 3.1 (0 to 5.0)	0 to 4.9 (0 to 7.9)	0 to 8.1 (0 to 13.0)
24.5-32	R2 Cane & Rice	10	0 to 1.5 (0 to 2.4)	0 to 3.2 (0 to 5.1)	0 to 5.0 (0 to 8.0)	0 to 8.4 (0 to 13.5)
28.1-26	R1 Cleat	10,12	0 to 1.5 (0 to 2.4)	0 to 3.2 (0 to 5.1)	0 to 5.0 (0 to 8.0)	0 to 8.3 (0 to 13.4)
28.1-26	R2 Cane & Rice	10,12	0 to 1.6 (0 to 2.6)	0 to 3.2 (0 to 5.1)	0 to 5.1 (0 to 8.2)	0 to 8.5 (0 to 13.6)
30.5-32	R1 Cleat	10	0 to 1.5 (0 to 2.4)	0 to 3.1 (0 to 5.0)	0 to 5.0 (0 to 8.0)	0 to 8.4 (0 to 13.5)
30.5-32	R2 Cane and Rice	10	0 to 1.5 (0 to 2.4)	0 to 3.2 (0 to 5.1)	0 to 5.0 (0 to 8.0)	0 to 8.4 (0 to 13.5)
Tracks			0 to .7 (0 to 1.1)	0 to 1.5 (0 to 2.4)	0 to 2.5 (0 to 4.0)	0 to 4.4 (0 to 7.1)

**GROUND SPEED IN MPH (km/h) 7720 COMBINE (Posi-Torq Drive)  
10 TO 82 AND 11 TO 90 RATIO FINAL DRIVES**

Size	Tire		Ply	1st Gear	2nd Gear	3rd Gear	4th Gear	Reverse Gear
	Type							
23.1-26	Cleat		10	.7 to 1.7 (1.1 to 2.7)	1.6 to 3.9 (2.6 to 6.2)	2.9 to 7.2 (4.7 to 11.7)	6.6 to 16.5 (10.7 to 26.7)	1.3 to 3.2 (2.1 to 5.2)
23.1-26	Low Profile		8	.7 to 1.7 (1.1 to 2.7)	1.5 to 3.8 (2.4 to 6.1)	2.8 to 6.9 (4.5 to 11.1)	6.4 to 16.0 (10.3 to 25.7)	1.2 to 3.1 (2.0 to 5.0)
23.1-26	Cane & Rice		10	.7 to 1.8 (1.1 to 2.9)	1.7 to 4.2 (2.7 to 6.8)	3.0 to 7.6 (4.9 to 12.2)	7.0 to 17.4 (11.3 to 28.1)	1.4 to 3.4 (2.3 to 5.5)
28.1-26	Cleat		12	.7 to 1.8 (1.1 to 2.9)	1.6 to 4.0 (2.6 to 6.4)	2.9 to 7.3 (4.7 to 11.8)	6.7 to 16.9 (10.8 to 27.2)	1.3 to 3.3 (2.1 to 5.3)
28.1-26	Cane & Rice		12	.7 to 1.8 (1.1 to 2.9)	1.7 to 4.2 (2.7 to 6.8)	3.0 to 7.6 (4.8 to 12.2)	7.0 to 17.4 (11.3 to 28.0)	1.4 to 3.4 (2.3 to 5.5)

**10 TO 95 AND 11 TO 104 RATIO FINAL DRIVES**

Size	Tire or Tracks		Ply	1st Gear	2nd Gear	3rd Gear	4th Gear	Reverse Gear
	Type							
24.5-32	Cleat		10	.7 to 1.7 (1.1 to 2.7)	1.6 to 3.9 (2.6 to 6.3)	2.8 to 7.1 (4.5 to 11.4)	6.5 to 16.3 (10.5 to 26.2)	1.3 to 3.2 (2.1 to 5.2)
24.5-32	Cane & Rice		10	.7 to 1.7 (1.1 to 2.7)	1.6 to 4.0 (2.6 to 6.4)	2.9 to 7.3 (4.7 to 11.8)	6.7 to 16.8 (10.8 to 27.0)	1.3 to 3.3 (2.1 to 5.3)
30.5-32	Cleat		10	.7 to 1.7 (1.1 to 2.7)	1.6 to 3.9 (2.6 to 6.3)	2.9 to 7.2 (4.7 to 11.6)	6.6 to 16.4 (10.6 to 26.4)	1.3 to 3.2 (2.1 to 5.2)
30.5-32	Cane & Rice		10	.7 to 1.8 (1.1 to 2.9)	1.6 to 4.1 (2.6 to 6.7)	3.0 to 7.4 (4.9 to 11.9)	6.8 to 17.1 (11.0 to 27.8)	1.3 to 3.3 (1.8 to 5.3)
Tracks				.3 to .8 (.5 to 1.3)	.7 to 1.8 (1.1 to 2.9)	1.3 to 3.3 (2.1 to 5.3)	3.0 to 7.6 (4.8 to 12.2)	.6 to 1.5 (1.0 to 2.4)

**GROUND SPEED IN MPH (km/h) 7720 COMBINE (Hydrostatic Drive)  
10 TO 82 AND 11 TO 90 RATIO FINAL DRIVES**

Tire			1st Gear	2nd Gear	3rd Gear	4th Gear
Size	Type	Ply				
23.1-26	R1 Cleat	10	0 to 1.7 (0 to 2.7)	0 to 3.8 (0 to 6.2)	0 to 6.9 (0 to 11.4)	0 to 16.0 (0 to 26.2)
23.1-26	R3 Low Profile	8	0 to 1.6 (0 to 2.6)	0 to 3.7 (0 to 6.0)	0 to 6.7 (0 to 10.9)	0 to 15.4 (0 to 25.1)
23.1-26	R2 Cane & Rice	10	0 to 1.7 (0 to 2.8)	0 to 4.0 (0 to 6.6)	0 to 7.3 (0 to 11.9)	0 to 16.8 (0 to 28.0)
28.1-26	R1 Cleat	12	0 to 1.7 (0 to 2.8)	0 to 3.9 (0 to 6.3)	0 to 7.1 (0 to 11.6)	0 to 16.3 (0 to 26.7)
28.1-26	R2 Cane & Rice	12	0 to 1.7 (0 to 2.8)	0 to 4.0 (0 to 6.6)	0 to 7.3 (0 to 11.9)	0 to 16.8 (0 to 27.4)

**10 TO 95 AND 11 TO 104 RATIO FINAL DRIVES**

Tire			1st Gear	2nd Gear	3rd Gear	4th Gear
Size	Type	Ply				
24.5-32	R1 Cleat	10	0 to 1.6 (0 to 2.6)	0 to 3.8 (0 to 6.2)	0 to 6.8 (0 to 11.1)	0 to 15.7 (0 to 25.6)
24.5-32	R2 Cane & Rice	10	0 to 1.7 (0 to 2.7)	0 to 3.9 (0 to 6.3)	0 to 7.1 (0 to 11.8)	0 to 16.2 (0 to 27.0)
30.5-32	R1 Cleat	10	0 to 1.7 (0 to 2.7)	0 to 3.8 (0 to 6.3)	0 to 6.9 (0 to 11.6)	0 to 15.9 (0 to 26.4)
30.5-32	R2 Cane & Rice	10	0 to 1.7 (0 to 2.7)	0 to 3.9 (0 to 6.3)	0 to 7.2 (0 to 11.6)	0 to 16.5 (0 to 26.5)
Tracks			0 to .8 (0 to 1.3)	0 to 1.7 (0 to 2.8)	0 to 3.2 (0 to 5.2)	0 to 7.3 (0 to 11.8)



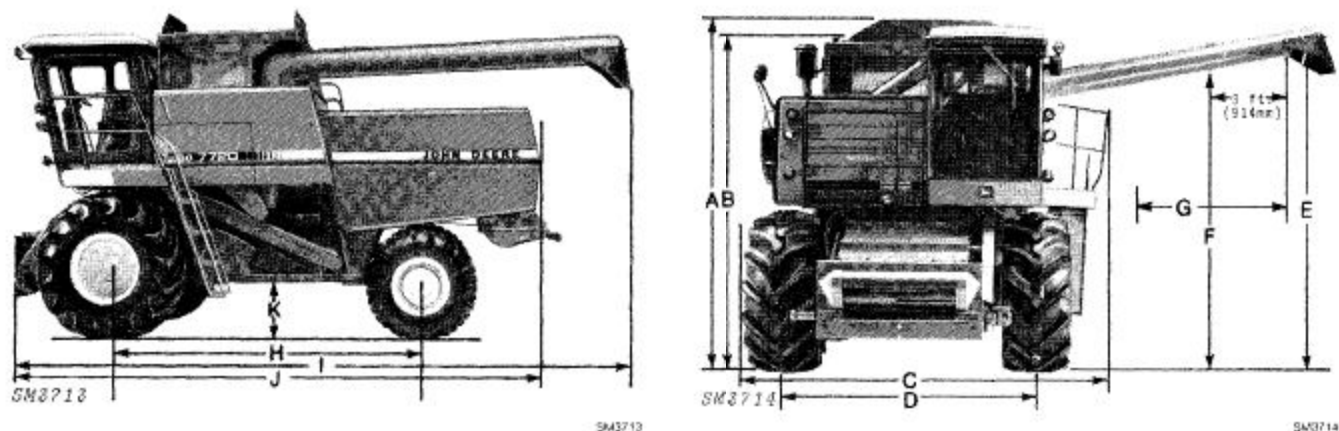
**GROUND SPEED CONTROL RANGE IN MPH (km/h)  
7720 RICE AND 8820 COMBINES**

	<b>Tire Size and Type</b>	<b>Ply</b>	<b>1st Gear</b>	<b>2nd Gear</b>	<b>3rd Gear</b>	<b>4th Gear</b>
24.5-32	R1 Cleat	10	0 to 1.6 (0 to 2.6)	0 to 3.6 (0 to 5.8)	0 to 6.5 (0 to 10.5)	0 to 15.0 (0 to 24.1)
24.5-32	R2 Cane and Rice	10	0 to 1.6 (0 to 2.6)	0 to 3.7 (0 to 6.0)	0 to 6.7 (0 to 10.8)	0 to 15.4 (0 to 24.8)
24.5-32	R3 Low Profile	10	0 to 1.5 (0 to 2.4)	0 to 3.4 (0 to 5.5)	0 to 6.3 (0 to 10.1)	0 to 14.4 (0 to 23.2)
18.4-38 Duals and 30.5-32	R1 Cleat	8, 10	0 to 1.6 (0 to 2.0)	0 to 3.6 (0 to 5.8)	0 to 6.5 (0 to 10.5)	0 to 15.1 (0 to 24.3)
18.4-38 Duals and 30.5-32	R2 Cane and Rice	8, 10	0 to 1.6 (0 to 2.6)	0 to 3.7 (0 to 6.0)	0 to 6.8 (0 to 10.9)	0 to 15.6 (0 to 25.1)
30.5-32	R3 Low Profile	10	0 to 1.5 (0 to 2.4)	0 to 3.4 (0 to 5.5)	0 to 6.3 (0 to 10.1)	0 to 14.4 (0 to 23.2)
73x44.00-32	R1.5 High Flotation	12	0 to 1.6 (0 to 2.6)	0 to 3.7 (0 to 6.0)	0 to 6.8 (0 to 10.9)	0 to 15.5 (0 to 25.0)
Tracks			0 to 1.1 (0 to 1.8)	0 to 2.4 (0 to 3.9)	0 to 4.4 (0 to 7.1)	0 to 10.1 (0 to 16.3)

**GROUND SPEED CONTROL RANGE IN MPH (km/h)  
WITH 4-WHEEL DRIVE ENGAGED  
7720 RICE AND 8820 COMBINES**

	<b>Tire Size and Type</b>	<b>Ply</b>	<b>1st Gear</b>	<b>2nd Gear</b>	<b>3rd Gear</b>	<b>4th Gear</b>
24.5-32	R1 Cleat	10	0 to 1.4 (0 to 2.3)	0 to 2.9 (0 to 4.7)	0 to 4.6 (0 to 7.4)	0 to 7.8 (0 to 12.6)
24.5-32	R2 Cane and Rice	10	0 to 1.5 (0 to 2.4)	0 to 3.0 (0 to 4.8)	0 to 4.8 (0 to 7.7)	0 to 7.9 (0 to 12.7)
18.4-38 Duals and 30.5-32	R1 Cleat	8, 10	0 to 1.4 (0 to 2.3)	0 to 2.9 (0 to 4.7)	0 to 4.7 (0 to 7.6)	0 to 7.9 (0 to 12.7)
18.4-38 Duals and 30.5-32	R2 Cane and Rice	8, 10	0 to 1.5 (0 to 2.4)	0 to 3.0 (0 to 4.8)	0 to 4.8 (0 to 7.7)	0 to 8.0 (0 to 12.9)
73x44.00-32	R.1 High Flotation	12	0 to 1.5 (0 to 2.4)	0 to 3.0 (0 to 4.8)	0 to 4.7 (0 to 7.6)	0 to 7.7 (0 to 12.4)
Tracks			0 to 1.0 (0 to 1.6)	0 to 2.0 (0 to 3.2)	0 to 3.2 (0 to 5.1)	0 to 5.5 (0 to 8.9)

**DIMENSIONS**



Dimensions are with combine equipped with standard equipment tires and radio antenna clipped to roof.

	6620	SideHill 6620	7720	8820
Standard Equipment Tires . . . . .	23.1-26-in.	23.1-26-in.	24.5-32-in.	30.5-32-in.
	Cleat (R-1)	Cleat (R-1)	Cleat (R-1)	Cleat (R-1)
A. Height (Grain Tank Flip-Up In Up Position) . . . . .	13 ft.	13 ft. 3 in.	13 ft. 4 in.	13 ft. 4 in.
	(3.96 m)	(4.04 m)	(3.96 m)	(4.06 m)
B. Height (Grain Tank Flip-Up In Down Position And Exhaust Pipe At Highest Point) . . . . .	12 ft. 8 in.	12 ft. 11 in.	13 ft.	13 ft.
	(3.86 m)	(3.94 m)	(3.86 m)	(3.96 m)
C. Width . . . . .	12 ft. 4 in.	13 ft.	13 ft. 3 in.	14 ft. 5 in.
	(3.76 m)	(3.96 m)	(4.04 m)	(4.39 m)
D. Wheel Tread - For tread widths refer to wheel spacers page in the operator's manual.				
E. Unloading Auger Discharge Height . . . . .	12 ft. 2 in.	12 ft. 5 in.	12 ft. 2 in.	12 ft. 6 in.
	(3.71 m)	(3.78 m)	(3.71 m)	(3.81 m)
F. Unloading Auger Clearance Height . . . . .	11 ft. 8 in.	11 ft. 11 in.	11 ft. 8 in.	12 ft.
	(3.56 m)	(3.63 m)	(3.56 m)	(3.66 m)
G. Unloading Auger Reach* . . . . .	5 ft. 7 in.	5 ft. 7 in.	4 ft. 1 in.	4 ft. 6 in.
	(1.70 m)	(1.70 m)	(1.24 m)	(1.37 m)
Header Size Used . . . . .	20 ft.	20 ft.	24 ft.	24 ft.
	(6.1 m)	(6.1 m)	(7.32 m)	(7.32 m)
H. Wheelbase (All but heavy-duty) . . . . .	12 ft. 1 in.	12 ft. 10 in.	12 ft. 1 in.	N/A
	(3.68 m)	(3.91 m)	(3.68 m)	
Heavy-Duty Rear Axle . . . . .	12 ft. 8 in.	12 ft. 8 in.	12 ft. 8 in.	12 ft. 8 in.
	(3.86 m)	(3.86 m)	(3.86 m)	(3.86 m)
**Turning Radius . . . . .	N/A	N/A	20 ft. 8 in.	26 ft. 4 in.
			(6.33 m)	(8.03 m)
***Clearance Radius . . . . .	N/A	N/A	28 ft. 9 in.	30 ft.
			(8.89 m)	(9.14 m)

\*Add 3-ft. (0.9 m) for extra long unloading auger.

\*\*Measured to center of outer wheel track.

\*\*\*Measured to extreme scribed circle (end of unloading auger in transport position).

## DIMENSIONS

	6620	SideHill 6620	7720	8820
<b>I. Length<sup>+</sup></b>				
With Auger In The Rear Position:				
Separator Only .....	26 ft. 1 in. (7.95 m)	26 ft. 1 in. (7.95 m)	26 ft. 1 in. (7.95 m)	26 ft. 1 in. (7.95 m)
Separator With Corn Head .....	34 ft. 3 in. (10.44 m)	34 ft. 3 in. (10.44 m)	34 ft. 3 in. (10.44 m)	34 ft. 3 in. (10.44 m)
Separator With Row-Crop Head .....	35 ft. 8 in. (10.87 m)	35 ft. 8 in. (10.87 m)	35 ft. 8 in. (10.87 m)	35 ft. 8 in. (10.87 m)
Separator With Flexible Platform .....	36 ft. 4 in. (11.07 m)	36 ft. 4 in. (11.07 m)	36 ft. 4 in. (11.07 m)	36 ft. 4 in. (11.07 m)
Separator With Rigid Platform .....	33 ft. 8 in. (10.26 m)	33 ft. 8 in. (10.26 m)	33 ft. 8 in. (10.26 m)	33 ft. 8 in. (10.26 m)
Separator With Pickup Platform (pickup in) .....	33 ft. (10.06 m)	33 ft. (10.06 m)	33 ft. (10.06 m)	33 ft. (10.06 m)
<b>J. Length<sup>**</sup></b>				
With Auger In The Out Position:				
Separator Only .....	22 ft. 9 in. (6.93 m)	22 ft. 9 in. (6.93 m)	22 ft. 9 in. (6.93 m)	22 ft. 9 in. (6.93 m)
Separator With Corn Head .....	30 ft. 11 in. (9.42 m)	30 ft. 11 in. (9.42 m)	30 ft. 11 in. (9.42 m)	30 ft. 11 in. (9.42 m)
Separator With-Row Crop Head .....	32 ft. 4 in. (9.86 m)	32 ft. 4 in. (9.86 m)	32 ft. 4 in. (9.86 m)	32 ft. 4 in. (9.86 m)
Separator With Flexible Platform .....	33 ft. (10.06 m)	33 ft. (10.06 m)	33 ft. (10.06 m)	33 ft. (10.06 m)
Separator With Rigid Platform .....	30 ft. 4 in. (9.25 m)	30 ft. 4 in. (9.25 m)	30 ft. 4 in. (9.25 m)	30 ft. 4 in. (9.25 m)
Separator With Pickup Platform (pickup in) .....	29 ft. 8 in. (9.04 m)	29 ft. 8 in. (9.04 m)	29 ft. 8 in. (9.04 m)	29 ft. 8 in. (9.04 m)
<b>K. Ground Clearance .....</b>	<b>1 ft. 9 in. (.53 m)</b>	<b>2 ft. (.61 m)</b>	<b>1 ft. 9 in. (.53 m)</b>	<b>2 ft. 1 in. (.64 m)</b>

<sup>+</sup>Add 14-in. (356 mm) for long-length feeder house.

<sup>\*\*</sup>Add 12-in. (304 mm) for a straw chopper; and 2 ft. 11 in. (889 mm) for a straw spreader.

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## Group 05

# DIAGNOSING AND TESTING PROCEDURES

To prevent unnecessary loss of time and money, use the following seven steps for a quick and accurate method of locating troubles:

### 1. Know The Unit

In other words, "Do your Homework". Study the Operator's Manual and this manual to know how the individual components work and what their function is in the overall system.

Keep up with the latest service information. Read and then file in a handy place. Record the Service Information Bulletin numbers on the pages provided in the front of this manual. Information received today may have the cause and remedy of a problem being encountered.

### 2. Consult The Operator

Ask the operator how the combine was performing when it started to fail. Find out what was unusual about it.

Also find out if any "do-it-yourself" service was performed. (You may find the trouble somewhere else, but you should know if any corrective measures have already been taken.)

Ask how the combine is used and how often it is serviced. Many problems are caused by poor maintenance or abuse.

### 3. Operate The Combine

If the combine is operable, operate it yourself. Don't rely completely on the operator's story - check it yourself.

Are gauges reading normal? If not, maybe the component being monitored is not functioning correctly or the gauge is faulty.

How's the performance? Is the action perhaps too fast or too slow, erratic, or none at all?

Do the controls feel solid or "spongy"? Do they seem to be "sticking"?

Do you smell or see any signs of smoke?

Do you hear any unusual sounds? Where?

### 4. Inspect The Combine

Get off the combine and make a visual check. Use your eyes, ears, and nose to spot any signs of trouble.

Look closely at the components. Inspect for cracked welds, loose hardware, damaged linkages, worn or broken lines, etc.

During the inspection, make notes of all the trouble signs.

### 5. List The Possible Causes

With the information obtained during steps 1 through 4, make a list of the possible causes.

What were the signs you found while inspecting the combine? What is the most likely cause?

### 6. Reach Some Conclusions

Look over the list of possible causes and decide which are most likely and which are easiest to verify.

Review the "Diagnosing Malfunctions" section as a helpful guide.

Reach your decision on the probable causes and plan to check them first.

### 7. Test Your Conclusions

Before repairing components in the system, test your conclusions to see which are correct.

Some of the possible causes may be verified without further testing. Check these possibilities first.

Test will narrow the remaining list of possible causes and soon the actual cause(s) of trouble will be pin pointed.

With the cause(s) accurately located, it is now a simple matter to remove and repair the component(s) at fault.





# Group 10

## TUNE-UP AND ADJUSTMENT

### GENERAL INFORMATION

Before tuning up a combine engine, determine whether a tune-up will restore operating efficiency. When there is doubt, the following preliminary tests will help determine if the engine can be tuned up. If the

condition is satisfactory, proceed with the tune-up. Choose from the following procedures only those necessary to restore the combine.

### PRELIMINARY ENGINE TESTING

Compression Test (minimum readings at 200-250 rpm cranking speed)

Engine	Compression Pressure
6466DH-01 .....	26-28 Kg/cm <sup>2</sup> (26-27 bar) (370-400 psi)
6466TH-01, TH-05 .....	23-25 Kg/cm <sup>2</sup> (23-26 bar) (330-370 psi)
ENGINE ( -252662)	
6466TH-01, TH-05 .....	27-32 Kg/cm <sup>2</sup> (27-31 bar) (390-450 psi)
ENGINE (252663- )	
6466AH-01, AH-02 .....	23-25 Kg/cm <sup>2</sup> (23-26 bar) (330-370 psi)
ENGINE ( -227649)	
6466AH-01, AH-02, AH-03 .....	25-30 Kg/cm <sup>2</sup> (25-29 bar) (355-415 psi)
ENGINE (227650- )	

It is very important that all cylinder pressures be approximately alike. There should be less than 25 psi (1.72 bar) (1.75 kg/cm<sup>2</sup>) difference between cylinder pressures.

### ENGINE TUNE-UP

#### **Air Intake System**

Check system for leaks

#### **Exhaust System**

Check system for leaks. Check for restricted muffler or exhaust pipe

#### **Crankcase Vent**

Check for restrictions

#### **Cooling System**

Clean rotary screen, radiator core, hydrostatic oil cooler core, and air conditioning condenser  
 Clean and flush system and check thermostats  
 Check radiator cap  
 Inspect all hoses