9110-9130 Tractor

Operators Manual

9-15290

Reprinted

CASE

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GENERAL TABLE OF CONTENTS

Safety/Decals 6

Specifications 17

Instruments/Controls 23

Operating Instructions 53

Field Operation 87

Tires/Wheels/Spacing/Ballast 121

Lubrication/Maintenance Charts 141

Lubrication/Filters/Fluids 145

Maintenance/Adjustments 177

Electrical System 190

Storage 203

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SAFETY

Understand that your safety and the safety of other persons is measured by how you service and operate this machine. Know the positions and operations of all controls before you try to operate. MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.

READ THIS MANUAL COMPLETELY and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering, stability and load characteristics of this machine before you start to operate.

The safety information given in this manual does not replace safety codes, insurance needs, federal, state and local laws. Make sure your machine has the correct equipment needed by the local laws and regulations.

Case IH is continuing to work for your safety: by making tractors with better protection and by giving these rules for safe operation.



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH. M171A

Safety Rules

Before starting the engine, be sure all operating controls are in neutral or park lock position. This will eliminate accidental movement of the machine or start up of power driven equipment. R106D

Operate controls only when seated in the Operators seat. R137

Securely fasten your seat belt. Your tractor is equipped with a ROPS cab or frame for your protection. The seat belt can help insure your safety if it is used and maintained. Never wear a seat belt loosely or with slack in the belt system. Never wear the belt in a twisted condition or pinched between the seat structural members. R271

A frequent cause of personal injury or death is persons falling off and being run over. Do not permit others to ride. Only one person - the operator - should be on the machine when it is in operation. R115A

Before leaving the tractor, stop the engine, put all controls in neutral, engage the park brake and remove the key from the key switch. R301

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Center Hinge Locking Bar

A center hinge locking bar is furnished with the tractor. The locking bar is installed between the front and rear tractor frames to hold the tractor articulation joint in rigid position.

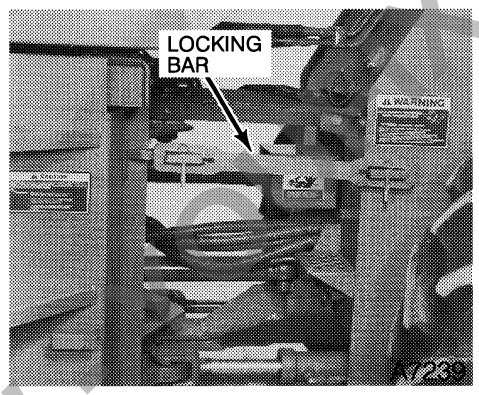
The locking bar MUST be installed for safety when doing the following operations:

1. Before doing service work near the center of the tractor.

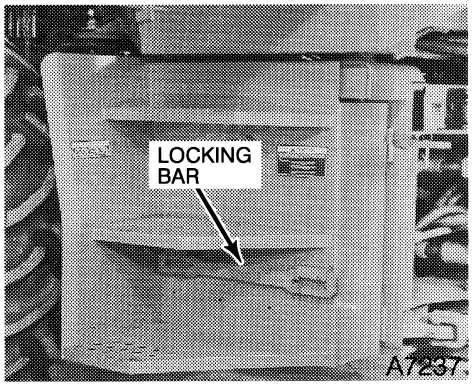
2. Before lifting or transporting the tractor on another vehicle.

3. Before operating stationary PTO equipment.

Make sure the locking bar is removed and installed in the storage postion before attempting to steer the tractor.



LOCKING BAR INSTALLED BETWEEN FRONT AND REAR FRAME



LOCKING BAR IN STORAGE POSITION

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TRAVEL SPEEDS

MPH at Rated Engine Speed

The following travel speeds are approximate at rated engine speed. No allowance is made for wheel slip.

Gear	MPH	(KPH)
1	2.0	(3.3)
2	2.5	(3.9)
3	3.0	(4.9)
4	3.7	(5.9)
5	4.4	(7.1)
6	5.5	(8.8)
7	6.5	(10.5)
8	7.8	(12.5)
9	9.6	(15.4)
10	11.7	(18.9)
11	14.1	(22.7)
12	17.3	(27.9)
R1	2.7	(4.3)
R2	4.8	(7.8)

To determine speed for other tire sizes use the following chart multipliers:

Average Static Loaded R.R.	Tire Size	Factor
30.7	20.8 x 34 R1	0.96
33.5	20.8 x 38 R2	1.05
33.7	18.4 x 42 R1	1.05
34.6	20.8 x 42 R1	1.09
33.0	30.5L x 32 R2	1.03
32.5	30.5L x 32 LS2	1.02

Example of Use:

If chart speed was 14.6 MPH and tractor was equipped with 20.8 x 34 R1 tires,

Then: MPH = (Chart) x (Factor)
MPH = 14.6 x 0.96 = 14.0 MPH

Speeds shown on the chart represent following tire sizes at rated RPM

18.4 x 38 R	24.5 x 32 LS2
23.1 x 34 R1	20.8 x 38 R1
24.5 x 32 R1	30.5L x 32 R1

MPH at Other Engine Speeds

To determine travel speed for other than rated engine speed use the following formula:

$$MPH = \frac{(Chart) \times Engine\ RPM}{Rated\ RPM}$$

Example:

If chart speed was 14.6 MPH and tractor has engine with rated speed of 2100 RPM and MPH wanted at 1800 RPM,

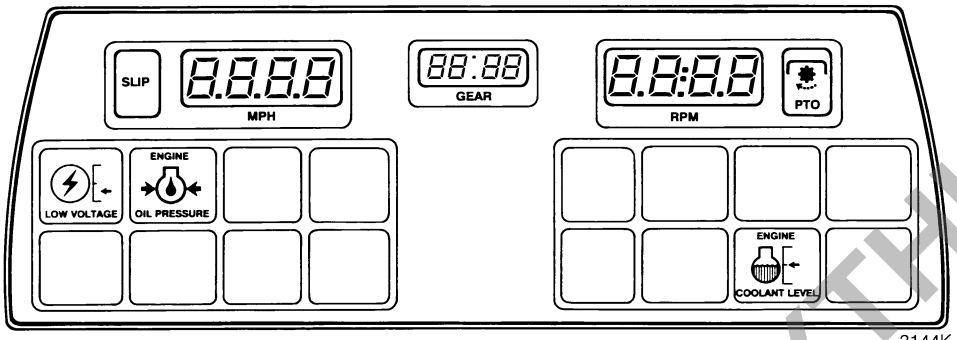
Then: $MPH = \frac{14.6 \times 1800}{2100} = 12.5\ MPH$

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Instrument Cluster Self Check

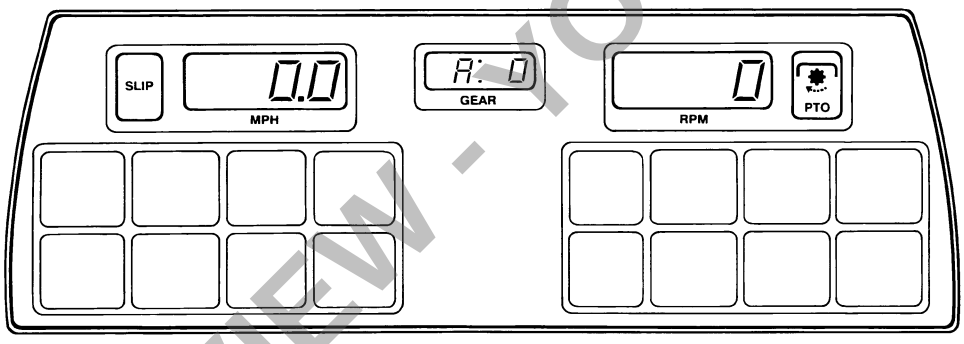
When the key switch is turned to the ON position the instrument cluster will do a self check of the MPH, Gear and RPM LCD's. The indicator lamps for Low Voltage, Engine Oil Pressure and Engine Coolant Level will also be illuminated.



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The indicator lamps will be illuminated for approximately 2 seconds and will then go OFF.

The LCD readouts shown above will be displayed for approximately 2 seconds and will then change to start-up mode readout. MPH will read 0.0, Gear will read A: O and RPM will read 0 as shown below.



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When the engine is started the LCD's will change to actual MPH, gear selection and engine RPM.

If the LCD readouts are not correct, see your dealer for service.

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LUBRICATION/MAINTENANCE CHART

PAGE NO.	SERVICE POINTS	NO. OF POINTS	FREQUENCY IN HOURS				
			CLEAN	CHANGE	CHECK	GREASE	DRAIN
175	Air Filter Cab (See Note 2)	1		1000			
161	Air Filter Primary (See Note 3)	1		1000			
161	Air Filter Secondary	1		1000			
160	Air Tubing Engine	1	1000				
172	Differential Oil Front and Rear	2		1000			
172	Differential Vent Front and Rear	2	1000				
167	Hydraulic Oil	1		1000			
168	Hydraulic Oil Filter	1		1000			
168	Hydraulic Oil Vent	1		1000			
165	Transmission Oil	1		1000			
165	Transmission Oil Filter	1		1000			
165	Transmission Vent	1	1000				
170	PTO Drop Box Oil			1000			
171	PTO Drop Box Vent		1000				
183	Door Lock and Hinges	3				2000	
155	Coolant (See Note 4)	1		2000			
185	Tappet Adjustment	12			2000		

NOTE 1: Check the tractor for oil leaks, rubbing hoses, loose bolts and trash build up. Repair all oil leaks, hoses and loose bolts before field operation.

NOTE 2: In dusty conditions the cab filter may require more frequent cleaning.

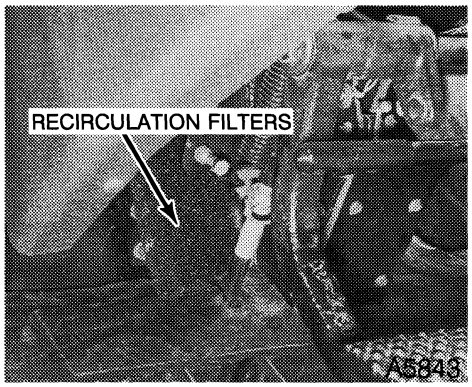
NOTE 3: Clean the filter element whenever the service monitor illuminates.

NOTE 4: Check the coolant level whenever the service monitor illuminates.

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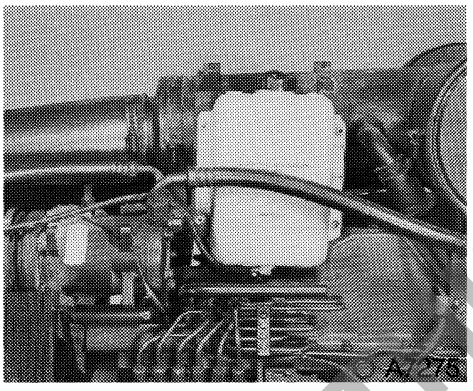
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D. Recirculation Air Filters



Keep the recirculation filters clean to provide maximum filtering of recirculated air inside the cab. See Recirculation Air Filters on Page 176 for complete instructions.

E. Compressor Belt



Check the compressor belt for correct tension. See Compressor Belt Check and Adjustment in this section for complete instructions.

F. Door Hinges

Use graphite to lubricate the cab door hinges. Do not use oil.

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LUBRICATION/MAINTENANCE CHART

PAGE NO.	SERVICE POINTS	NO. OF POINTS	FREQUENCY IN HOURS				
			CLEAN	CHANGE	CHECK	GREASE	DRAIN
149	Engine Oil	1			10		
167	Hydraulic Oil	1			10		
165	Transmission Oil	1			10		
147	Center Hinge Top Articulation	1				10	
147	Center Hinge Lower Articulation	1				10	
147	Center Hinge Rear Oscillation	1				10	
147	Articulation Cylinder - Front - LH and RH	2				10	
147	Articulation Cylinder - Rear - LH and RH	2				10	
54	General Tractor Inspection (See Note 1)				10		
153	Water Trap - Fuel Tank and Fuel Filter	1					50
147	Drawbar Pivot	1				50	
147	Driveshaft Carrier Bearing	1				50	
147	Three Point Upper Cylinder Pin - LH and RH	2				50	
147	Three Point Lower Cylinder Pin - LH and RH	2				50	
147	Three Point Rockshaft - LH and RH	2				50	
147	Three Point Linkage	10				50	
176	Cab Recirculation Filters	2	50				
147	Grease Bank Steerable Axle	7				50	
172	Differential Oil Front and Rear	2			250		
180	Compressor Belt	1			250		
179	Fan and Alternator Belt	1			250		
194	Battery Level	2			250		
149	Engine Oil	1		250			
150	Engine Oil Filter	1		250			
157	Engine Coolant Filter	1		250			
174	Master Cylinder Brake	1			250		
147	PTO Carrier Bearing	1				250	
170	PTO Drop Box Oil	1			250		
147	PTO Slip Joint Transmission Output	1				250	
178	Radiator and Coolers	3	250				
147	Slip Joint Transmission Output Front	1				250	
147	Slip Joint Transmission Output Rear	1				250	
123	Tire Pressure				250		
154	Engine Fuel Filters	2		500			

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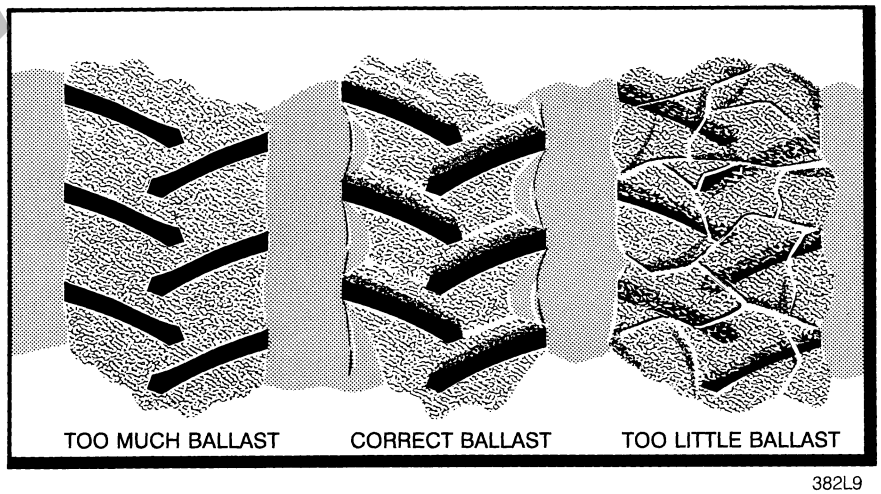
Measuring Wheel Slip

For tractors equipped with true ground speed sensor see Wheel Slip Indicator, Page 31 for instructions. If your tractor is not equipped with a true ground speed sensor, measure the amount of wheel slip as follows:

1. Put a reference mark on the side of the tractor rear tire.
2. Operate the tractor with the implement in the ground.
3. While the tractor is moving put a marker on the ground, outside the implement width, where the reference mark on the tire comes down to the ground.
4. Continue to move along with the tractor and count ten wheel revolutions. Put a second marker on the ground outside the implement width, where the reference mark on the tire comes down to the ground for the tenth time.
5. Lift the implement out of the ground. Put the tractor in position and put a new reference mark on the rear tire aligned with the first ground marker.
6. Operate the tractor, with the implement raised, from the first ground marker to the second ground marker. Count the number of wheel revolutions between the two ground markers.
7. Find the percent of slip as follows:

Revolutions of wheel	Slip (%)
9-1/2	5
9	10
8-1/2	15
8	20
7-1/2	25
7	30

NOTE: *When you have too much ballast installed on the tractor, you will see the clear shape of the tire tread in the ground which is an indication of no slippage. With too little ballast, the tire tread marks will not show because of the tire slippage.*



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SECTION INDEX

Tire and Rim Equipment 122
Check Air Pressure 123
Tire Inflation Procedure 123
Tire Inflation Specifications 122

Tire and Rim Service 126
Tire and Rim Repair 126
Tire Installation 126

Tire Pressure and Load Capacity Chart 124

Tractor Ballast 134
Ballast Information 135
Front Ballast 136
Measuring Wheel Slip 138
Rear Ballast 136
Static Weight Distribution 135
Loads Matched to Tractor 134
Tire Liquid Weight 139

Tread Positions 127
Articulation and Oscillation Stop Settings 130
Tread Settings - Hub Mounted Duals 128
Wheel Disc Positions 127

Wheel Adjustment 132
Split Bushing Hub 132
Wheel Offset Direction Change 133

Wheel Bolt Torques 125

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