

# **7200 Pro Series**

**7210, 7220, 7230, 7240  
and 7250 Tractors**

**Operators Manual**

**CE**

**Rac 9-29022**

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# 7200 Pro Series Tractor with Mechanical Front Drive



RD97J006

CE

522L94

CASE CORPORATION  
24th and Mead Street  
Racine, WI 53403  
U.S.A.

DEALER STAMP

## TO THE OWNER

---

### TO THE OWNER

This manual contains important information about the safe operation, adjustment and maintenance of your Case Tractor. Refer to the Detail Index at the end of this manual for locating specific items about your machine.

DO NOT operate or permit anyone to operate or service this machine until you or the other persons have read this manual. Use only trained operators who have demonstrated the ability to operate and service this machine correctly and safely.

This tractor, with standard equipment and authorized attachments, is intended to be used for farming, ranching, etc.

DO NOT use this machine for any application or purpose other than those described in this manual. Consult an authorized dealer or the Case Corporation on changes, additions or modifications that can be required for this machine to comply with various country regulations and safety requirements. Unauthorized modifications will cause serious injury or death. Anyone making such unauthorized modifications is responsible for the consequences.

This Operators Manual is to be stored in the manual compartment equipped on this machine. Make sure this manual is complete and in good condition. Contact your dealer to obtain additional manuals. Contact your dealer for any further information or assistance about your machine. Your dealer has Case Corporation approved service parts. Your dealer has technicians with special training that know the best methods of repair and maintenance for your tractor.

#### DECLARATION OF CONFORMITY

This tractor complies with the provisions of directive 89/336/EEC Electromagnetic Compatibility.



**OPERATORS MANUAL  
STORAGE COMPARTMENT**

**IDENTIFICATION NUMBERS/MACHINE COMPONENTS**

---

**PRODUCT IDENTIFICATION AND  
SERIAL NUMBERS**

Write your machine Model Number, Product Identification Number (P.I.N.), and Serial Numbers of major components on the lines provided. If needed, give these numbers to your dealer when you need parts or information for your machine.

1. TRACTOR MODEL NUMBER \_\_\_\_\_

2. PRODUCT IDENTIFICATION NUMBER \* JJA \_\_\_\_\_ \*

3. ENGINE SERIAL NUMBER \_\_\_\_\_

4. TRANSMISSION SERIAL NUMBER \_\_\_\_\_

5. CAB SERIAL NUMBER \_\_\_\_\_

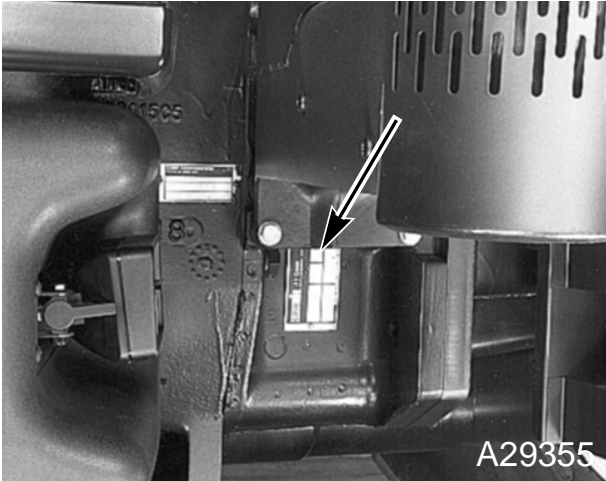
6. MFD AXLE SERIAL NUMBER \_\_\_\_\_



# IDENTIFICATION NUMBERS/MACHINE COMPONENTS

## Identification Number Locations

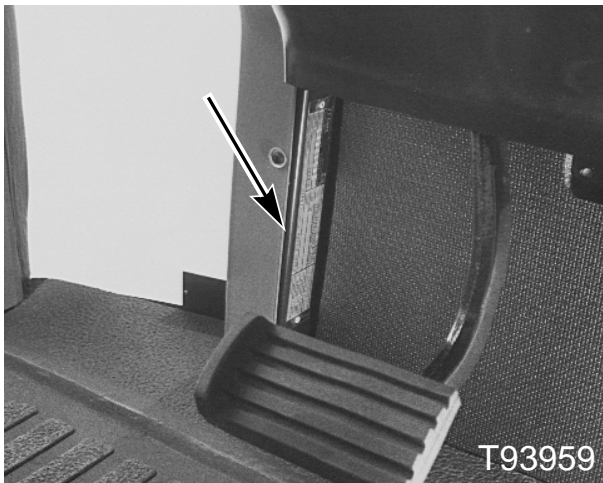
### Tractor Model and Product Identification Number



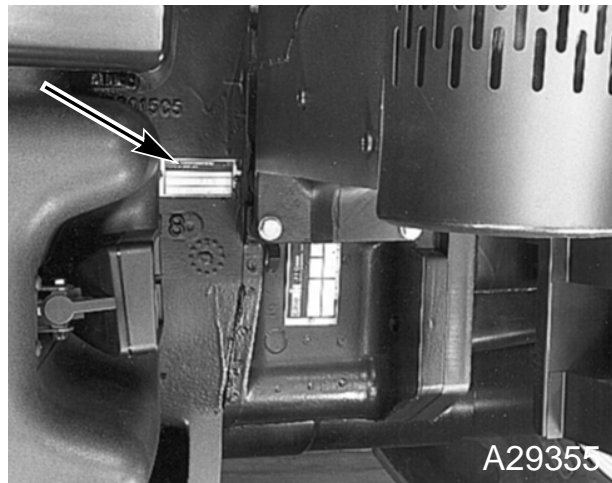
**Cab Serial Number**



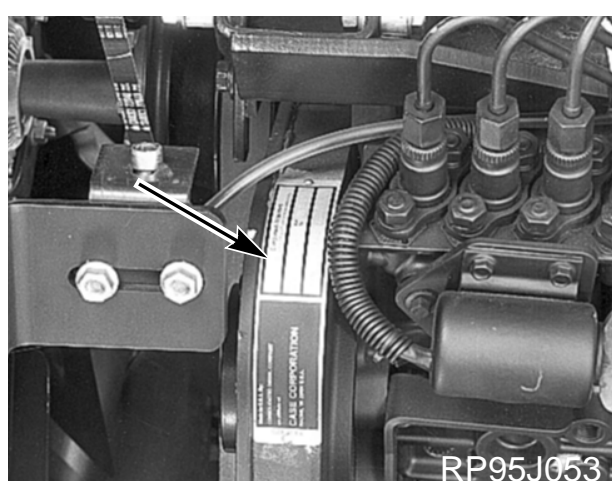
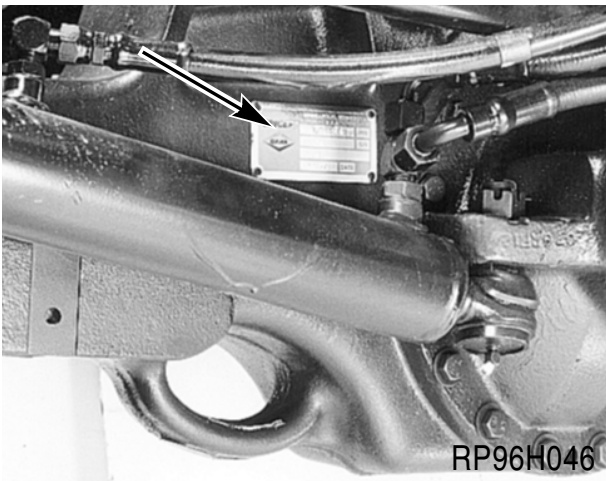
**Transmission Serial Number**



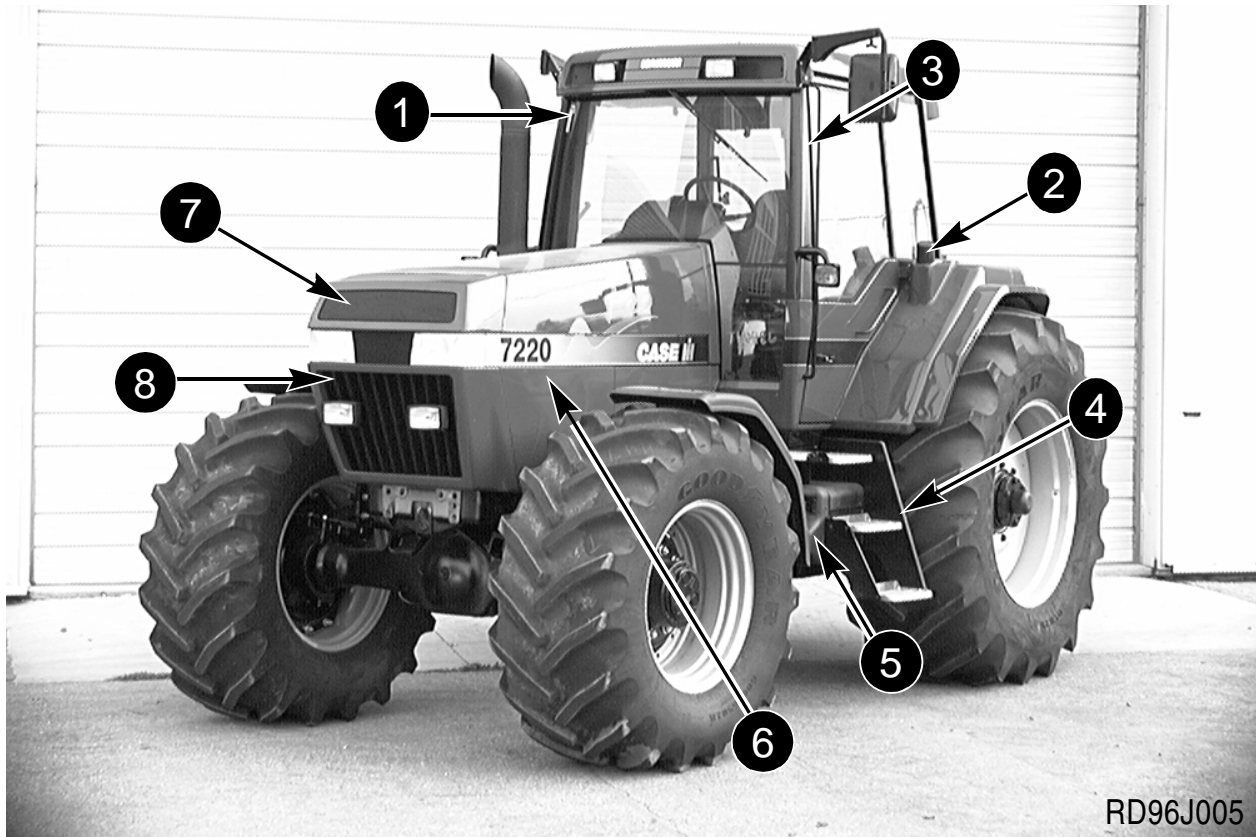
**MFD Axle Serial Number**



**Engine Serial Number**



## MACHINE COMPONENTS



- |              |                                      |
|--------------|--------------------------------------|
| 1. ROPS CAB  | 5. BATTERY COMPARTMENT               |
| 2. FUEL TANK | 6. HOOD AND SIDE PANEL               |
| 3. HAND RAIL | 7. RADIATOR                          |
| 4. STEPS     | 8. OIL COOLER, CONDENSER/FUEL COOLER |

## IDENTIFICATION NUMBERS/MACHINE COMPONENTS

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1. ROPS CAB
2. EXHAUST STACK
3. HOOD AND SIDE PANEL

4. RADIATOR, OIL COOLER, CONDENSER/  
FUEL COOLER

## IDENTIFICATION NUMBERS/MACHINE COMPONENTS



1. FENDERS
2. HITCH SYSTEM

3. POWER TAKEOFF
4. DRAWBAR

## SAFETY/DECALS

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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 this machine. **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 this machine.

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.

The Case Corporation 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.* M171B



### **Intended Use**



This tractor is designed solely for use in customary agricultural or similar operation (intended use).

Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for any damage or injury resulting from this misuse and these risks must be born solely by the user.

Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

This tractor should be operated, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention).

The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times.

Any arbitrary modifications carried out on the tractor will relieve the manufacturer of all liability for any resulting damage or injury.



## **General Safety and Accident Prevention Regulations**



1. In addition to the instructions contained in this operator's manual, also observe the general safety and accident prevention regulations.
2. Always comply with local traffic regulations when driving on public roads.
3. Before starting work, familiarize yourself with all the controls and instruments and their functions. During work is too late.
4. Start the engine only from the operator's seat. Never attempt to start engine by shorting across the starting motor terminals as the machine may immediately start to move.
5. Before moving away, always check the immediate vicinity of the machine (e.g. for children). Ensure adequate visibility.
6. Never run the engine in a closed building.
7. Clothing worn by the operator must be close-fitting. Avoid wearing loose jackets, shirts or ties.
8. Handle fuel with care as it is highly flammable. Never refuel the machine in the vicinity of naked flames or sparks. Do not smoke during refuelling.
9. Always stop the engine and remove the main switch key before refuelling. Fill fuel tank outdoors. Clean up any spilled fuel immediately.
10. Prevent fires by keeping the machine clean.
11. Take care when handling brake fluid and battery acid (toxic and corrosive).



## **Transporting Passengers**



12. Passengers may only be carried if a proper passenger seat is fitted.
13. The carrying of passengers is otherwise not permitted.

## SAFETY/DECALS

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### Operation



14. Always adapt your ground speed to the ground conditions. Avoid making sharp turns when driving up or down slopes or when driving across the slope. Do not attempt to turn the machine with the differential lock engaged. When driving down slopes, never depress the clutch and change gear.
15. Attach trailers and/or implements correctly. The operating, steering and braking behavior will be affected by attaching implements, trailers and ballast weights. Therefore ensure adequate steering and braking power.
16. Observe maximum permissible axle loads and total weights.
17. When making turns with towed or mounted implements, always take into consideration the width and inertia of the implement.



### Leaving the Tractor



18. Lower implement or equipment to the ground before leaving the tractor (machine).
19. When leaving the tractor (machine), ensure that it will not roll away (apply park lock, wheel wedges) stop the engine.
20. Remove the main switch key and lock the operator's cab (when equipped).
21. Never leave the tractor (machine) unattended as long as the engine is still running.
22. Never leave the operator's platform/cab when tractor is in motion.



### Implements



23. Attach implements and trailers to the tractor (machine) only using the prescribed drawbars or hitches.
24. Take particular care when attaching trailers or implements.
25. Prevent trailer and implement from rolling away.
26. Operate tractor (machine) only when all guards are fitted and in their correct position.



## **PTO Operation**



27. Always shut off engine before connecting or disconnecting drive shaft.
28. When operating the PTO, no-one must be allowed to remain in the vicinity of the rotating PTO stub shaft or drive shaft.
29. Guards for drive shaft and PTO stub shaft must be fitted.
30. High-inertia implements do not become stationary immediately when PTO is disengaged. Allow sufficient time for implement to “coast down” to a halt before cleaning or adjusting.
31. As soon as drive shaft has been removed, install guard over PTO stub shaft.



## **Service**



32. DO NOT service the tractor with the engine running. Follow the instructions in this manual or see your dealer.
33. Escaping fluid (fuel or hydraulic oil) under high pressure can penetrate the skin and cause serious injury. If any fluid is injected into the skin, consult a doctor immediately as otherwise serious infections may result.
34. Dispose of oil, fuel and filters correctly, in accordance with local regulations. Do not drain oil or fuel onto the ground or into a drain. Be responsible for the environment.
35. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job safely.
36. Retighten wheel nuts after the specified hours in this manual.
37. Always disconnect battery ground strap(s) before carrying out any electrical repairs on the machine.
38. Use original manufacturers parts. Spare parts/service parts must comply with the manufacturers technical specifications.



## **Basic Rule**



Always check the operating and road safety of the tractor (machine) before starting.

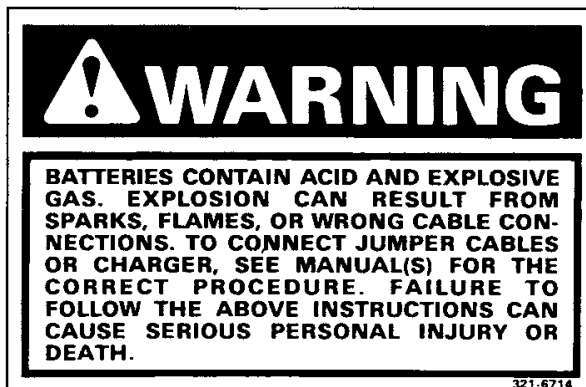
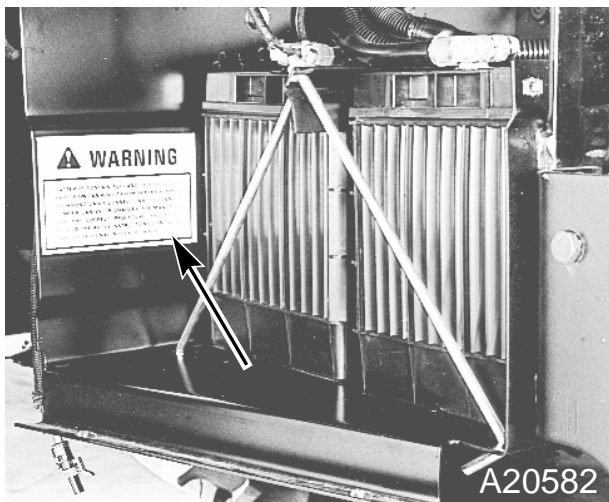


## SAFETY/DECALS

### DECALS

**IMPORTANT:** Install new decals if the old decals are destroyed, lost, painted over or can not be read. When parts are replaced that have decals, make sure you install a new decal with each new part.

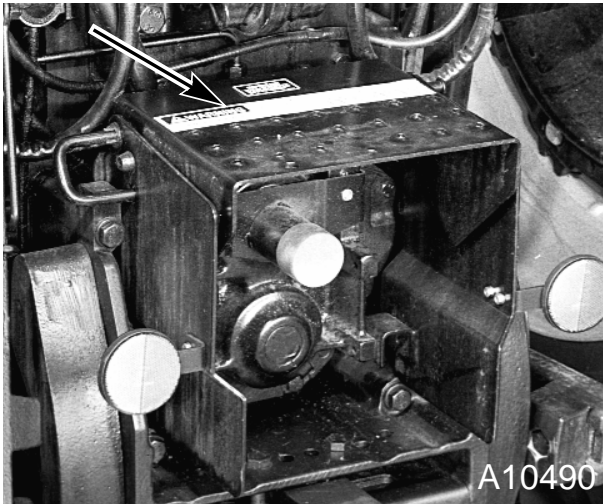
**NOTE:** New decals are available from your dealer.




321-6714



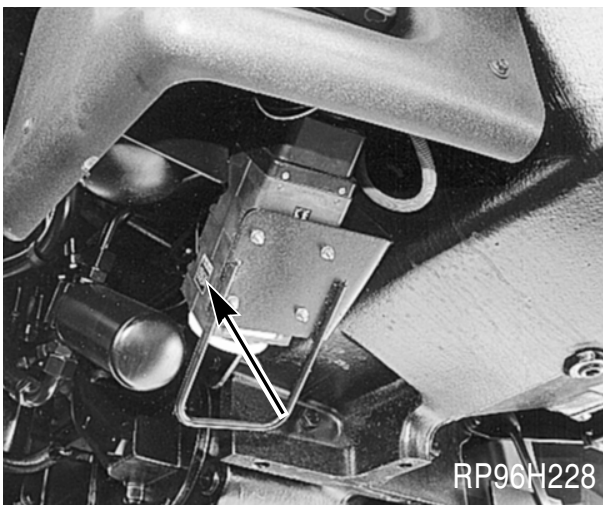
109318R1



A10490

 <p><b>WARNING</b></p>	<p>Always keep PTO driveline shields in place to avoid entanglement.</p> <p>Be sure implements are matched to tractor PTO speeds.</p> <p>Center and lock drawbar when using PTO.</p>	<p>To prevent bottoming or separation of implement driveline, position drawbar according to implement manufacturer's recommendation or as follows:</p>								
		<p><b>PTO Shaft</b></p> <table border="1"> <tr> <td>540 RPM</td> <td>6 spline</td> </tr> <tr> <td>1000 RPM</td> <td>21 spline</td> </tr> <tr> <td>1000 RPM</td> <td>20 spline</td> </tr> </table>	540 RPM	6 spline	1000 RPM	21 spline	1000 RPM	20 spline	<p><b>PTO Shaft end to drawbar pin hole</b></p> <table border="1"> <tr> <td>1 3/8 DIAMETER - 14 INCH - (356mm)</td> </tr> <tr> <td>1 3/8 DIAMETER - 16 INCH - (407mm)</td> </tr> <tr> <td>1 3/4 DIAMETER - 20 INCH - (508mm)</td> </tr> </table>	1 3/8 DIAMETER - 14 INCH - (356mm)
540 RPM	6 spline									
1000 RPM	21 spline									
1000 RPM	20 spline									
1 3/8 DIAMETER - 14 INCH - (356mm)										
1 3/8 DIAMETER - 16 INCH - (407mm)										
1 3/4 DIAMETER - 20 INCH - (508mm)										
<p><b>AVOID INJURY OR DEATH</b></p>		<p><small>196744C2</small></p>								

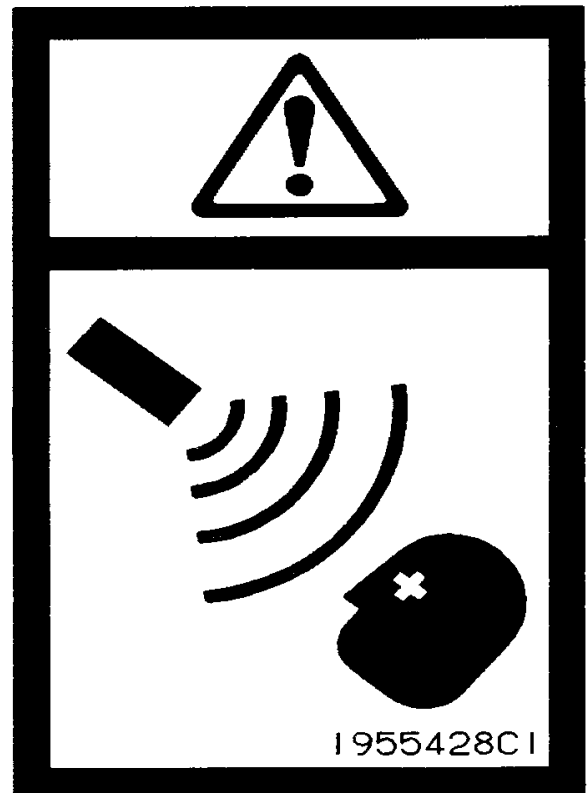
196744C2



RP96H228

 <p><b>WARNING</b></p>
<p>To avoid possible eye damage from microwave signals emitted by this radar sensor, do not look directly into sensor face.</p>

A187743



1955428C

**DO NOT LOOK DIRECTLY INTO THE SENSOR EYE**



# **WARNING**

## **AVOID INJURY OR DEATH**

### **BEFORE STARTING ENGINE:**

- Read operators manual for safety information and operating instructions.
- Read all tractor safety signs.
- Be sure other people are clear of tractor and equipment.
- Be sure gear shift is in neutral or park and PTO control is off.
- Start engine only from seat.
- Shields are for your protection. Keep them in place.

### **OPERATION:**

- When starting tractor in cold weather, the tractor may move when transmission is engaged and clutch pedal is depressed. Use brakes to prevent tractor movement.
- No riders on tractor or equipment.
- Keep hands, feet, and clothing away from power driven parts.
- For road travel, couple brake pedals, use flashing warning lamps unless prohibited by law and SMV emblem (when required) to be kept clean and visible.
- Release of clutch pedal, after down shifting several gears with clutch disengaged, may result in abrupt deceleration of tractor.

### **TRACTORS CAN BE UPSET:**

- Reduce speed on turns and rough ground.
- Avoid steep slopes.
- Avoid rear upset. Pull only from drawbar, never higher.

### **WHEN TRACTOR HAS STOPPED:**

- Engage park lock or brake.
- Lower implement to ground.
- Disengage PTO, stop engine, and wait for all movement to stop before servicing or clearing equipment.

1955178C1

## **ROLL OVER PROTECTIVE STRUCTURE (ROPS)**

Your tractor is equipped with a ROPS cab. Carefully follow all instructions to get all the safety advantages of the equipment provided.



**ROPS CAB**

## SAFETY/DECALS

### Tractor Roll Over

ROPS is a special safety unit. After an accident, the ROPS must be replaced so that you will get the same protection as a new ROPS.

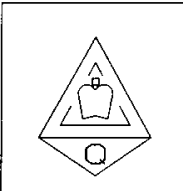
ROPS, the operator's seat and all the mounting, accessories and wiring inside the operators protective system must be carefully checked after a tractor accident and all parts with damage, replaced immediately. DO NOT TRY TO MAKE REPAIRS OR WELD THE ROPS.

### Safety Rules

1. Do not make modifications to the ROPS. Example, welding an accessory to the ROPS or drilling a hole in the ROPS.
2. Special fasteners are used to install the operator protective parts. Replacement parts must be the same as given in the parts catalog for your tractor.

### ROPS Label

1. Each ROPS is equipped with a ROPS label.
2. The label contains the ROPS serial number and applicable standards.

Made in U.S.A. For: J. I. Case Europe Limited Wheatley Hall Road Doncaster, South Yorkshire DN2 4PG		FOR APPLICATION ON CASE IH 7210 MFD, 7220 MFD, 7230 MFD, 7240 MFD, & 7250 MFD MAGNUM TRACTORS		195521C2
ROPS SERIAL No.		APPROVAL NUMBER CSS096/1/NM0038, CSS096/3/NM0040 CSS096/5/NM0042, CSS096/7/NM0044		
ROPS TYPE	CX-96			

630L95

## AUTOMATIC SHUTDOWN SYSTEM

Your tractor is equipped with an Automatic Engine Shutdown System. The digital instrument cluster monitors Engine Oil Pressure, Transmission Temperature, Transmission System Oil Pressure, Transmission Lubrication Oil Pressure and Coolant Temperature. If any of these systems are not operating in the normal range, the digital instrument cluster will turn off power to the fuel shutoff solenoid on the injection pump. The fuel shutoff solenoid will stop the flow of fuel to the engine and the engine will shutdown. The automatic shutdown system also includes an override switch which can be used to prevent or override an automatic shutdown.

The Automatic Engine Shutdown System is activated at the same time as the Stop Engine Indicator. Thirty (30) seconds after the Stop Engine Indicator is activated, the engine will shutdown. The Stop Engine Indicator is activated by any of the following conditions:

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| A. Low Engine Oil Pressure           | D. High Engine Coolant Temperature |
| B. High Transmission Oil Temperature | E. High PFC Pressure               |
| C. Low Transmission System Pressure  | F. Low Transmission Oil Pressure   |

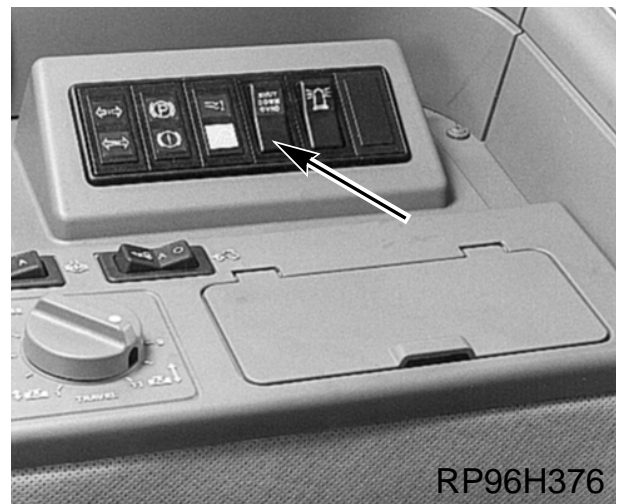
**NOTE:** See *Service Indicator Lamps (LED' s) and Bar Graph Displays (LCD' s)*, Pages 20 through 27 for details on the above system monitors.

### Automatic Shutdown Override Switch

The override switch is located on the RH side of the steering console. The override switch has a red indicator which will be illuminated when the switch is in the override position.

In an EMERGENCY, the override switch can be used to prevent automatic shutdown or to override the shutdown system after automatic shutdown has occurred.

If automatic shutdown occurs due to a malfunction in any of the systems being monitored, correct the cause before starting the engine again. Use the override switch in an emergency to move the tractor to a safe location.



**IMPORTANT:** *DO NOT* override the Automatic Shutdown System except in an emergency, as damage to the tractor can result.

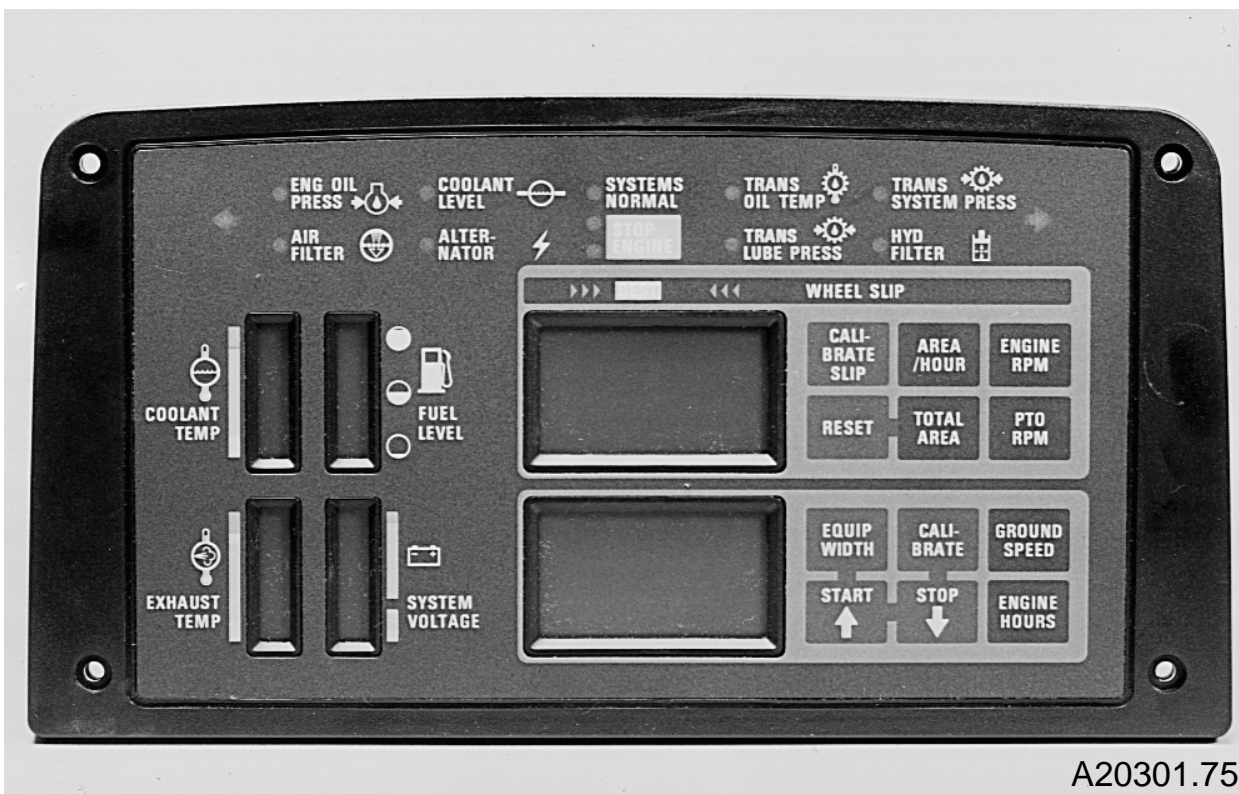
**IMPORTANT:** *The override switch must manually be returned to the normal operating position to reactivate the Automatic Shutdown System.*

### DIGITAL INSTRUMENT CLUSTER

The digital instrument cluster will automatically monitor various operating systems and functions on your tractor. The condition of the monitored systems is indicated by service indicator lamps and bar graph displays.

The digital instrument cluster will also monitor and display information on functions such as gear readout, ground speed, engine RPM, PTO RPM, engine hours, service hour intervals, area per hour, etc. This information can be displayed on the upper or lower digital display screens.

### General Arrangement and Features



A20301.75

The service indicator lamps (Light Emitting Diodes) are located across the top of the instrument cluster. The bar graph displays (Liquid Crystal Displays) are located on the left hand side of the cluster. The symbols used to identify the various indicators and bar graphs conform to ISO standards.

The digital instrument cluster has two digital display screens located in the center of the instrument cluster. The upper display screen can be used to display wheel slip, engine RPM, PTO RPM, area/hour, total area or service interval. The push buttons (touch switches) located on the right side of the upper display screen are used to display or program information.

The lower display screen can be used to display ground speed, ground speed calibration number, equipment width, total engine hours or service indicator and gear readout. The push buttons (touch switches) located on the right side of the lower display screen are used to display or program information.

## Audible Alarm

The audible alarm is automatically activated in conjunction with various system monitors. The audible alarm will sound for three (3) seconds continuously or will sound ON and OFF as described under the service indicator lamps and bar graph displays for the various monitored systems. The audible alarm will also confirm push button actuation by sounding a 1/8 second signal when a push button is pushed.

## English or Metric Units

The instrument cluster can be programmed to display the following operations in either English or Metric units of measurement.

<u>Operation</u>	<u>English Unit</u>	<u>Metric Unit</u>
Total Area	Acre	Hectare
Area/Hour	Acres per Hour	Hectares per Hour
Ground Speed	Miles per Hour (MPH)	Kilometres per Hour (KMPH)
Attachment Width	Feet	Metres (m)

See Instrument Cluster Programming, Page 138, for more information.

## Accessory Mode

When the key switch is in the accessory position, all indicator lamps (LED' s) are OFF except the alternator indicator. The bar graph indicators are ON but without the audible signal. The upper display screen will read ACC. The lower display screen will read ENG HRS.

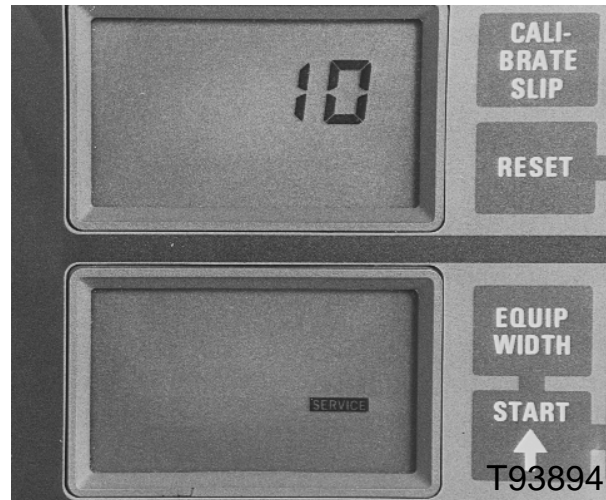




## INSTRUMENTS/CONTROLS

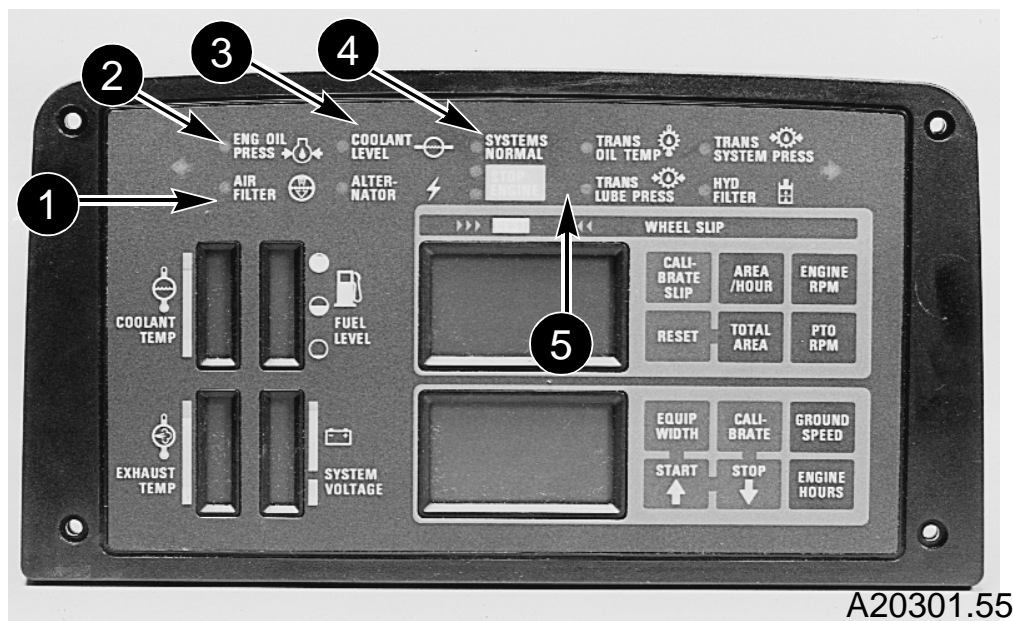
### Service Hour Indicator

The service hour indicator can be used to indicate when tractor service is required. Any desired service hour interval can be programmed into the digital instrument cluster. The service hour interval will be displayed on the upper display screen. The service indicator will be displayed on the lower display screen.



### Indicator Lamps (LED' s)

The operating characteristics of the indicator lamps are as follows:



1. AIR FILTER INDICATOR - Service is indicated by a constant yellow indicator and a three second audible alarm. When the filter needs service during operation, the following will occur
  - A. Yellow indicator will illuminate and stay ON.
  - B. Alarm will sound for three seconds.
  - C. Green systems normal indicator will stay ON.

If the air filter service monitor illuminates during the work day, you can service the air filter element after the days work is complete. Failure to service the air filter element within the next 24 hours can cause the tractor to gradually lose power or possibly cause damage to engine components.

2. ENGINE OIL PRESSURE INDICATOR - Service is indicated by a constant red indicator and a repeating audible alarm. If at any time during engine operation, the oil pressure is below normal operating range at either idle speed or rated speed, the following will occur:
- A. Red indicator will illuminate and stay ON.
  - B. Alarm will sound ON and OFF.
  - C. Green systems normal indicator will go OFF.
  - D. Stop engine indicator will illuminate ON and OFF.
  - E. Automatic Engine Shutdown timer is activated.

Stop the engine immediately and check the engine oil level or other cause. Find and correct the problem

**NOTE:** *Your tractor is equipped with Automatic Engine Shutdown. The engine will shutdown 30 seconds after the red indicator and stop engine indicator goes ON.*

3. COOLANT LEVEL INDICATOR - Service is indicated by a constant red indicator and a three second audible alarm. If the coolant level is below the safe operating level, the following will occur:
- A. Red indicator will illuminate and stay ON.
  - B. Alarm will sound for three seconds.
  - C. Green Systems normal indicator will go OFF.

Stop the engine immediately and check coolant level or other causes. Find and correct the problem.

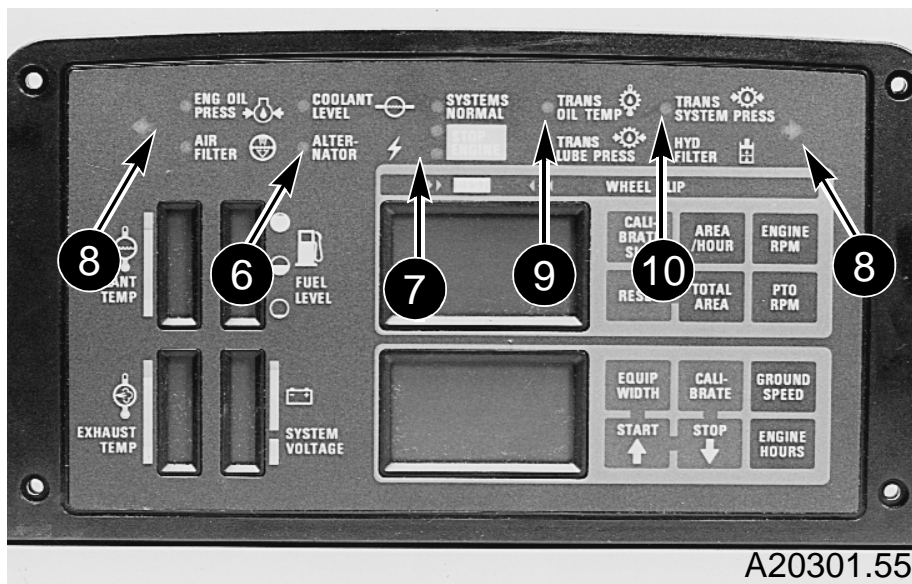
4. GREEN SYSTEMS NORMAL INDICATOR - The green systems normal indicator will stay on when the tractor is running and all monitored systems are in the normal operating range. If the green indicator goes OFF, stop the tractor and check the system with the service indicator illuminated.

**NOTE:** *The Systems Normal indicator will not go OFF when the air filter service monitor is illuminated, because immediate service is not required.*

5. TRANSMISSION LUBE OIL PRESSURE INDICATOR - Service is indicated by the red indicator illuminating ON and OFF and a three second audible alarm. If at anytime during tractor operation the transmission lube oil pressure is too low, the following will occur:
- A. Red indicator will illuminate ON and OFF.
  - B. Alarm will sound for three (3) seconds.
  - C. Green systems normal indicator will go OFF.

Stop the engine immediately. Find and correct the problem.

## INSTRUMENTS/CONTROLS



6. ALTERNATOR INDICATOR - Service is indicated by a constant red indicator (there is no audible alarm). At any time during engine operation, the alternator does not supply enough power for the electrical system, the following will occur:
- A. Red indicator will illuminate and stay ON.
  - B. Green systems normal indicator will go OFF

You can continue to operate the tractor until the voltage level alarm sounds.

**IMPORTANT:** Before stopping the tractor, make sure it will not block a road and that it will be safe for the operator to leave. The batteries may be too low to start the engine if the tractor has to be moved.

7. STOP ENGINE INDICATOR - Service is indicated by dual red indicators illuminating ON and OFF and a repeating audible alarm. The stop engine indicator is initiated in conjunction with any of the following service indicators:
- A. Low Engine Oil Pressure
  - B. High Transmission Oil Temperature
  - C. Low Transmission System Pressure
  - D. High Engine Coolant Temperature
  - E. High PFC Case Pressure.
  - F. Low Transmission Oil Pressure

When the stop engine indicator is initiated, the following will occur:

- A. The Automatic Engine Shutdown System is activated and the engine will shutdown in thirty (30) seconds.
- B. Dual red indicators will illuminate ON and OFF.
- C. Alarm will sound ON and OFF.

If the shutdown system is disconnected or is overridden by the operator, the following will occur:

- A. The red indicators will continue to illuminate ON and OFF and the audible alarm will continue to sound ON and OFF.
  - B. Engine will not shutdown until the key switch is turned OFF.
8. DIRECTION TURN SIGNAL INDICATORS - The indicator on the left hand side will operate when the direction turn signal switch is down. The indicator on the right hand side will operate when the direction turn signal switch is up.
9. TRANSMISSION OIL TEMPERATURE INDICATOR - Service is Indicated by a constant red indicator and a repeating audible alarm. If at any time during tractor operation, the transmission oil becomes too hot the following will occur:
- A. Red indicator will illuminate and stay ON.
  - B. Alarm will sound ON and OFF.
  - C. Green systems normal indicator will go OFF.
  - D. Stop engine indicator will illuminate ON and OFF.
  - E. Automatic engine shutdown timer is activated.

Stop the engine immediately. Find and correct the problem.

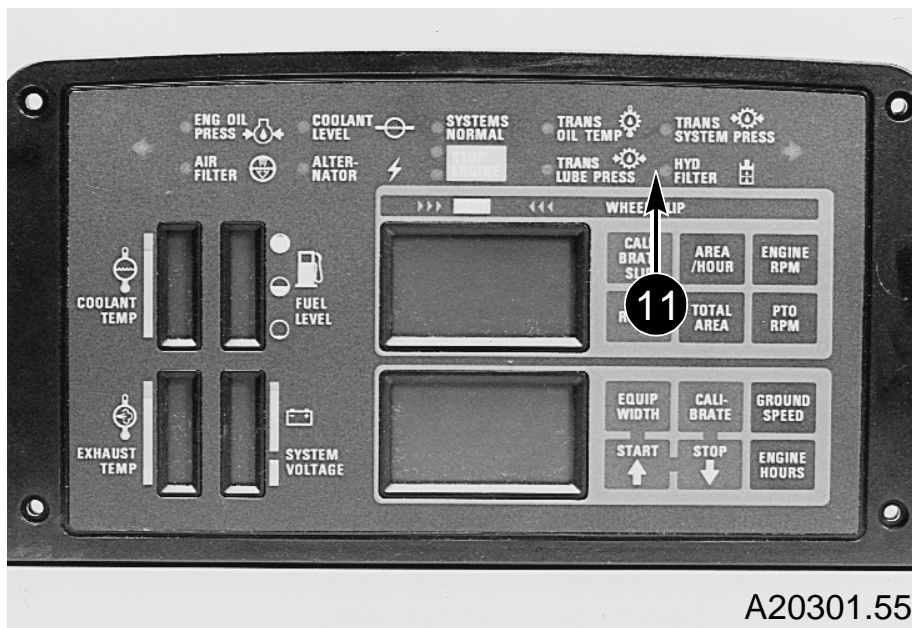
**NOTE:** *Your tractor is equipped with Automatic Engine Shutdown. The engine will shutdown 30 seconds after the red indicator and stop engine indicator goes ON.*

10. TRANSMISSION SYSTEM PRESSURE INDICATOR - Service is indicated by a constant red indicator and a repeating audible alarm. If at any time during tractor operation, the transmission system pressure is not within normal operating range, the following will occur:
- A. Red indicator will illuminate and stay ON.
  - B. Alarm will sound ON and OFF.
  - C. Green systems normal indicator will go OFF.
  - D. Stop engine indicator will illuminate ON and OFF.
  - E. Automatic Engine Shutdown timer is activated.

Stop the engine immediately, check the transmission oil level or other cause. Find and correct the problem.

**NOTE:** *Your tractor is equipped with Automatic Engine Shutdown. The engine will shutdown 30 seconds after the red indicator and stop engine indicator goes ON.*

## INSTRUMENTS/CONTROLS



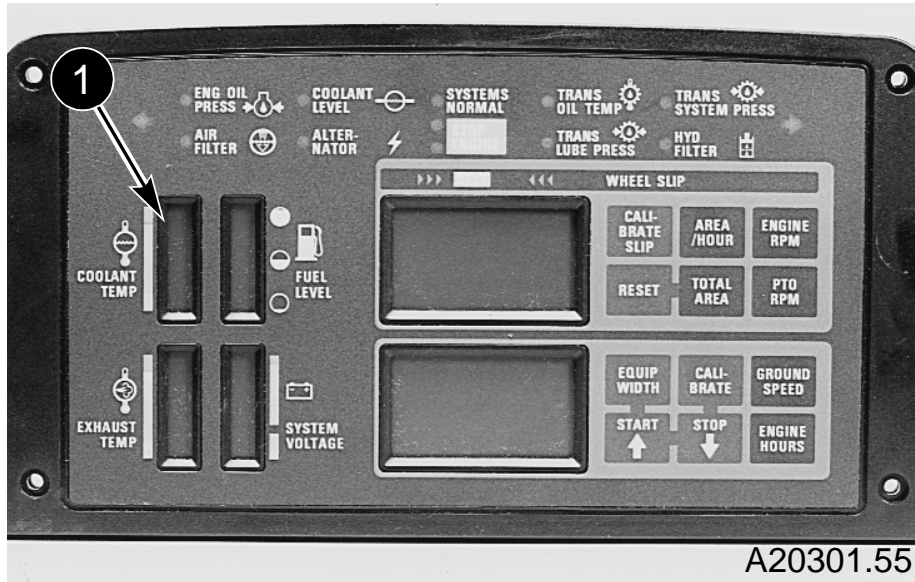
11. HYDRAULIC FILTER INDICATOR - Service is indicated by a yellow indicator and a three second audible alarm. When the hydraulic filters need service, the following will occur:
- A. Yellow indicator will illuminate
  - B. Alarm will sound for three seconds.

If the hydraulic filter indicator is illuminating ON and OFF, change the transmission filter (4 inch diameter, angled) as soon as possible. If the hydraulic filter indicator illuminates and stays ON, change the hydraulic filter (5 inch diameter, vertical) as soon as possible.

**IMPORTANT:** Failure to service the hydraulic filters as recommended can cause unfiltered oil to bypass the filters which can cause excessive wear to transmission and hydraulic components.

## Bar Graph Display - LCD' s

The operating characteristics of the Bar Graph Displays are as follows:



1. COOLANT TEMPERATURE BAR INDICATOR - Service is indicated by flashing bar graph and either a three second or a repeating audible alarm. When the bar graph is in the green area, the tractor is operating in the correct coolant temperature range.

The tractor can continue to operate when the bar graph reaches the upper green area, however, at the next convenient time the following should be checked:

- A. Grille screens, radiator, oil cooler, or air conditioning condenser plugging.
- B. Coolant leaks.
- C. Loose or worn fan drive belt.
- D. Improperly functioning viscous fan drive.
- E. Improperly fitted, worn, or missing radiator to hood seals.
- F. Excessive hydraulic load.
- G. Ethylene glycol concentration over 60%.
- H. Gelling of the radiator core tubes due to the use of coolant other than that which is specified in this manual.
- I. Improperly functioning thermostats.
- J. Any other condition that could affect engine cooling.

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