



# 4420 Combine



JOHN DEERE

## OPERATORS MANUAL

4420 Combine

OMH114177 D3 English

**John Deere Harvester Works**  
**OMH114177 D3**

LITHO IN U.S.A.  
ENGLISH



## INTRODUCTION



This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

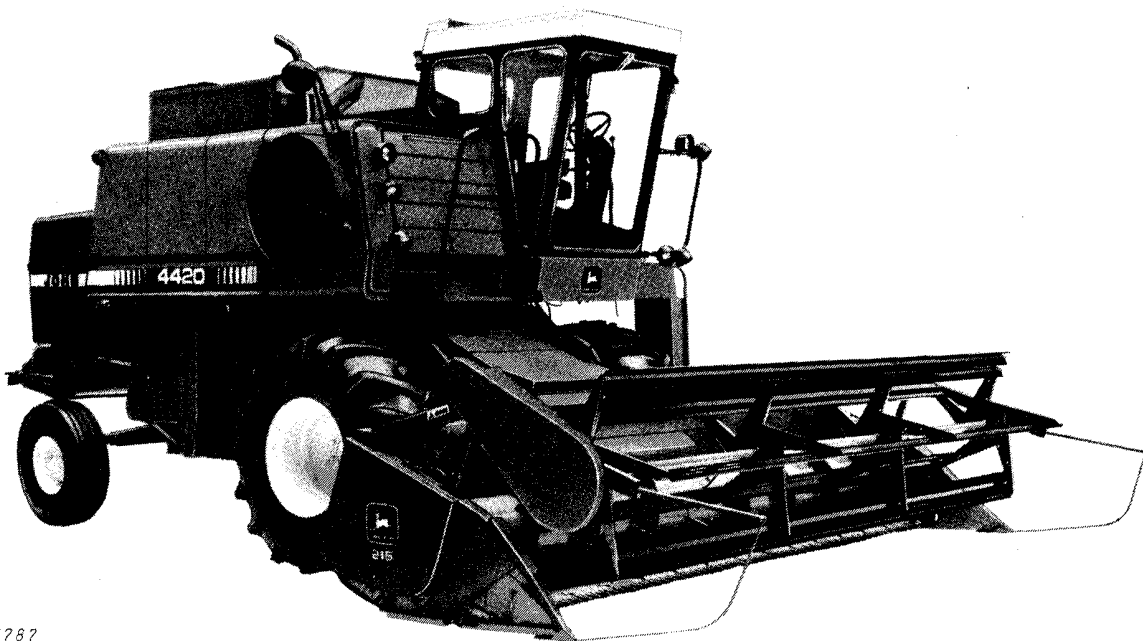
Your operator's manual contains SI metric equivalents which follow immediately after the U.S. customary units of measure.

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

Record your combine serial numbers in the space provided on page 215

The warranty on this combine appears on your copy of the purchase order which you should have received from your dealer when making your purchase. This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty.

Warranty and field improvements are a part of John Deere's product support program for customers who operate and maintain their equipment as described in this manual. Should the equipment be abused or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.





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# Safety

## SAFETY DECALS



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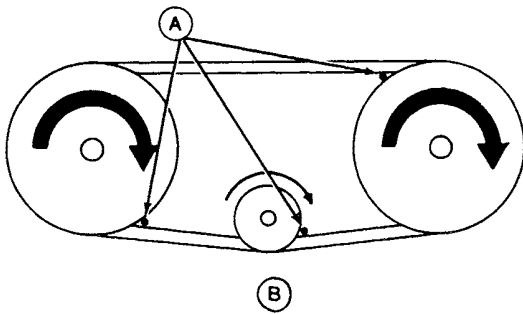
**CAUTION, WARNING or DANGER:** Decals with these headings and symbol indicate the possibility of personal injury.

**IMPORTANT:** Decals with this heading indicate the possibility of damage to the machine.

Decals are located in areas where they apply.

H28488

## AVOID CONTACT WITH MOVING PARTS



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H31200

A—Pinch Points  
B—Belt Drive

Keep guards and shields in place at all times while operating the combine. Always disengage separator and shut off engine before removing guards or shields.

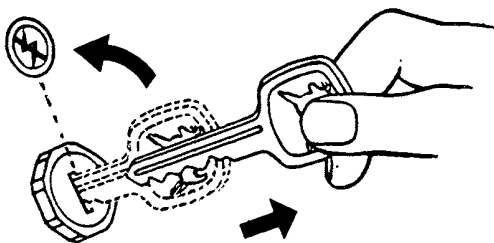
Keep hands, feet, and clothing away from power-driven parts.

Never clean, lubricate, or adjust the combine when it is running.

Sound horn. Everyone must be clear before starting engine or running combine.

Never attempt to clear obstructions off the header unless the separator is disengaged and the engine is shut off.

## LEAVING COMBINE UNATTENDED



Before leaving the combine unattended, turn off engine and remove keys, support the header with either the hydraulic cylinder safety stop, or lower it to the ground. The gearshift lever must be in neutral and the parking brake engaged.

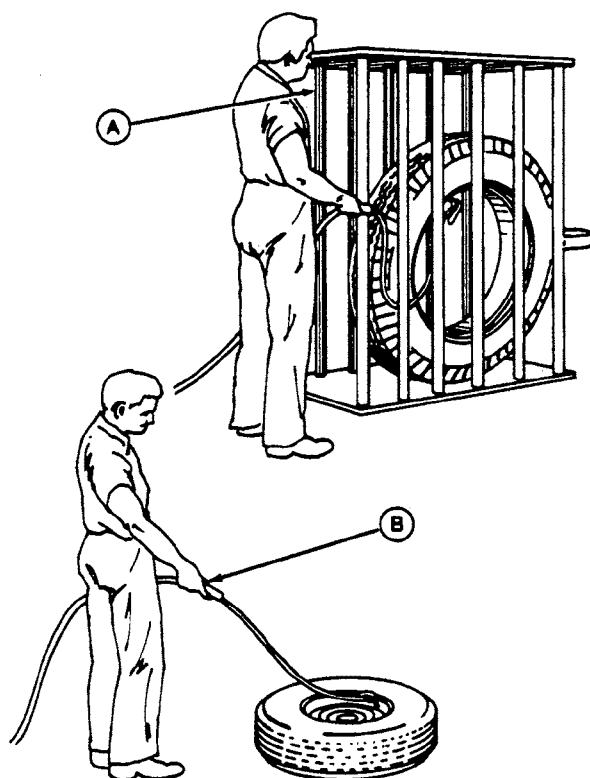
## SERVICE TIRES

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service.

When sealing tire beads on rims, never exceed 35 psi (2.40 kPa) (2.4 bar) or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, re-lubricate bead, and reinflate.

Detailed tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55, Tires and Tracks, available through your John Deere dealer. Such information is also available from the Rubber Manufacturers Association and from tire manufacturers.

- A—Use a safety cage if available.
- B—Do not stand over tire. Use a clip-on chuck and extension hose.



## WASHING FRONT CAB WINDOW

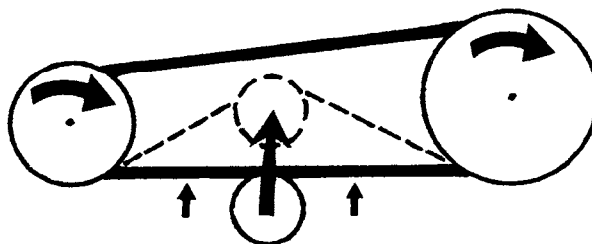
T5-0123

To wash front window of cab, stand on ground and use a long handled squeegee or mop to reach top of window. Do not stand on feeder house or header top beam, as this could result in a fall.

## SERVICING DRIVES AND DRIVE RELATED AREAS

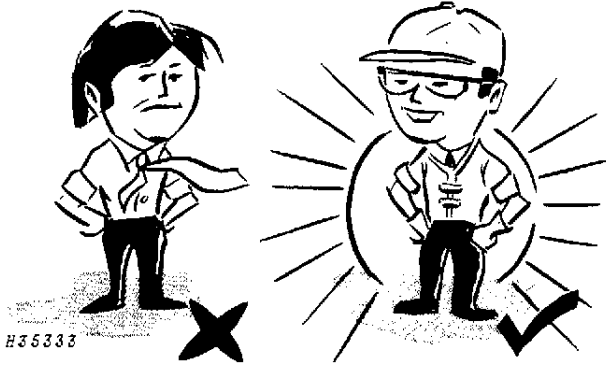
Shut off engine and remove key before servicing combine in either a belt driven area or any area receiving power from a belt drive. Some drives, due to their clutching and declutching characteristics, can be engaged when the engine is running by the applying or removing of outside forces.

Replace any shields that were removed.



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## OPERATE SAFELY



Clothing be worn by operator must be fairly tight and belted. Loose jackets, shirts, or sleeves must never be worn.

The gearshift lever must be in neutral and the separator disengaged before starting engine.

Be careful when operating on hillsides so the combine will not tip.

Always keep the combine in gear when going down hills.

Use right-hand cab door to get to engine compartment or feeder house areas. Never climb to these areas from the ground.

Do not ride or attempt to climb rear ladder while combine is moving.

When operating combine in extremely muddy conditions, swing ladder up to prevent it from being bent when backing up.

The radio antenna must be bent forward and secured with clip any time the combine may come into contact with a high voltage wire or when combine is transported by truck or rail.

## BATTERIES



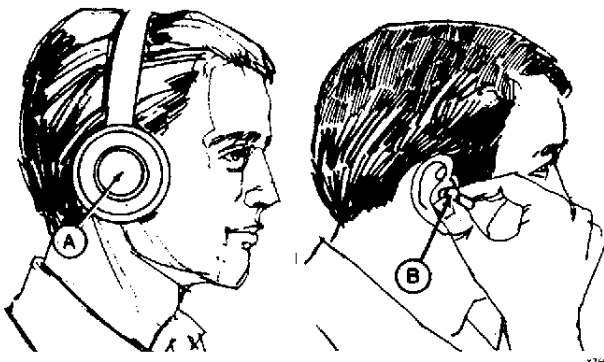
Batteries generate explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Always shield eyes when working near batteries. Always wear safety glasses.

Do not connect or disconnect live circuits.

Turn off charger before attaching or removing a lead from the battery.

Ventilate the area when charging.

## NOISE



Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs (A) or earplugs (B) to protect against objectionable or uncomfortable loud noises.

A—Earmuffs  
B—Earplugs

## AVOID HIGH PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pin holes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.

Cracking hydraulic line fittings to lower the feeder house will result in an instantaneous dropping of feeder house or feeder house and header.



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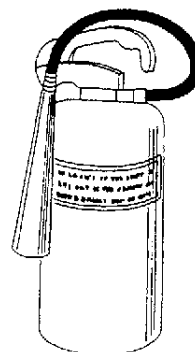
## FIRE EXTINGUISHER

Have a multipurpose dry chemical fire extinguisher filled and handy. Know how to use it.

DO NOT refuel with the engine running.

DO NOT smoke or use a lantern when refueling.

The part number of the extinguisher is AT62018. See page 12 for installation instructions.



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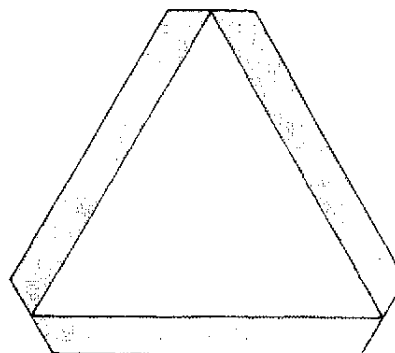
## TRANSPORT SAFELY

Never ride or allow anyone on the operator's platform.

Be extra careful when transporting the combine in hilly country. Never transport with grain in tank and always lock brake pedals together.

When transporting the combine on a road or highway, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local governmental regulations. Always check width laws.

The radio antenna must be bent forward and secured with clip when transporting the combine. This prevents the antenna coming into contact with a high voltage wire.



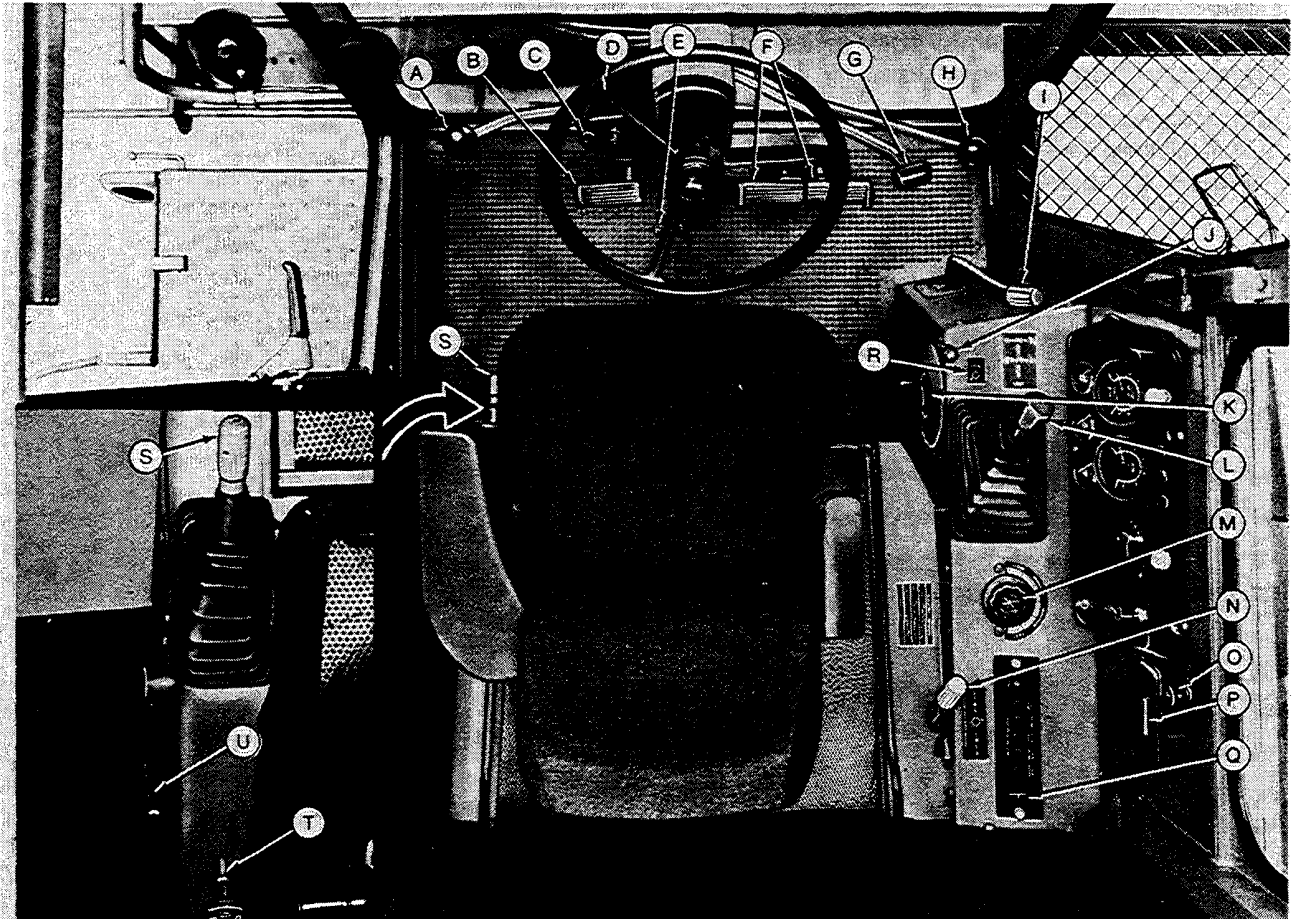
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# Operator's Station

## INSTRUMENTS AND CONTROLS IDENTIFICATION

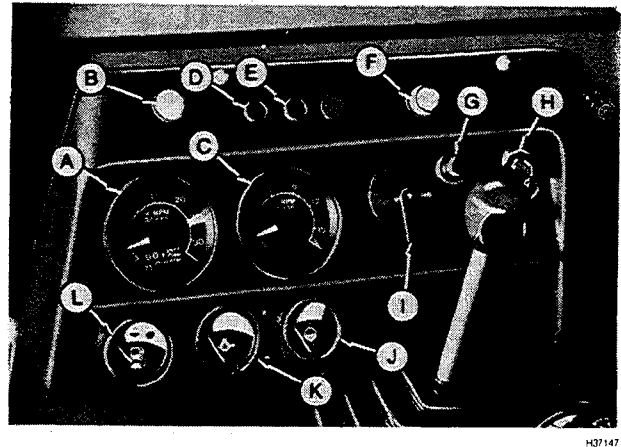


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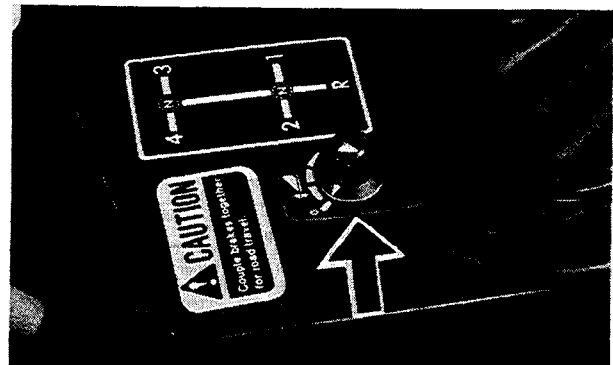
H37143  
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### Instrument Panel Controls and Instruments

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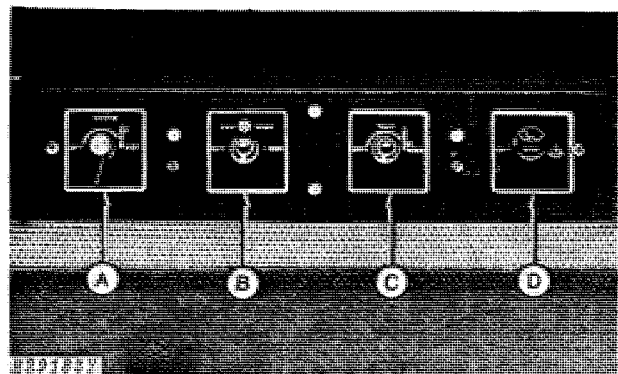


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### Operator's Cab Controls

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The operator's cab controls are located in the cab headliner. The radio is located in the rear right-hand corner of the cab.



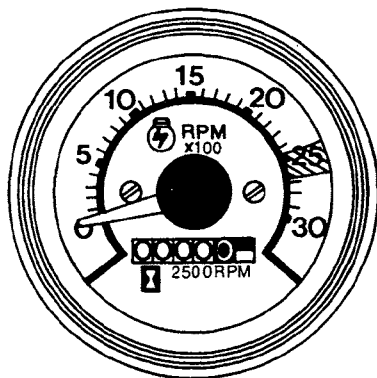
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## INSTRUMENTS

### Engine Tach-Hour Meter

The tachometer reads engine rpm by hundreds.

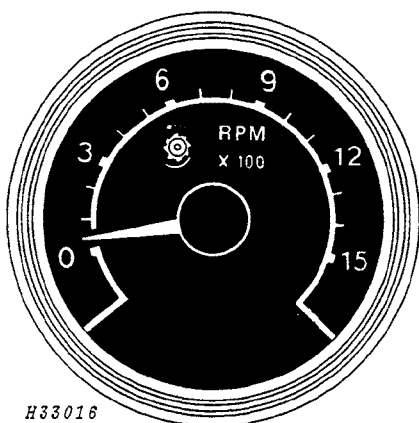
The hour meter shows the accumulated engine service in hours and tenths of hours.



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### Cylinder Speed Tachometer

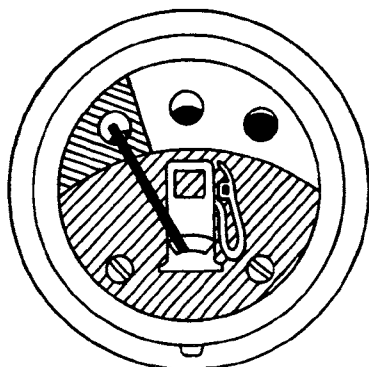
The tachometer reads cylinder rpm by hundreds.



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### Fuel Gauge

Stop to refuel before fuel gauge reaches empty mark. Never allow a diesel engine to run out of fuel.

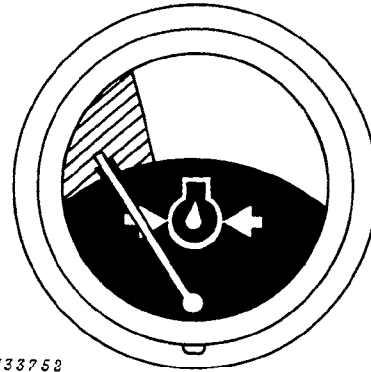


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### Engine Oil Pressure Gauge

This gauge indicates pressure in psi.

The normal operating range is 40-60 psi (2.76-4.14 bar)  
Gauge needle must be pointing to unlined zone.

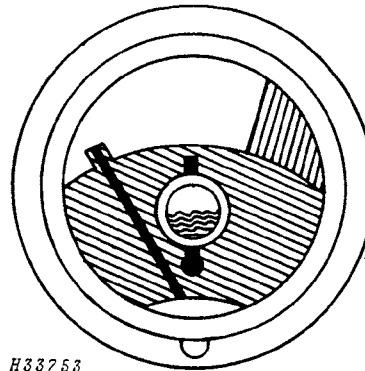


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### Coolant Temperature Gauge

This gauge indicates the coolant temperature in the cooling system. The white zone on the dial indicates normal operating temperature; the red-orange zone indicates above normal operating temperature.

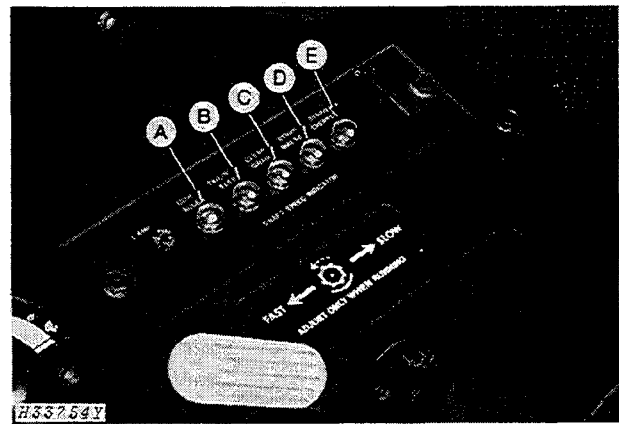


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### Warning Lights

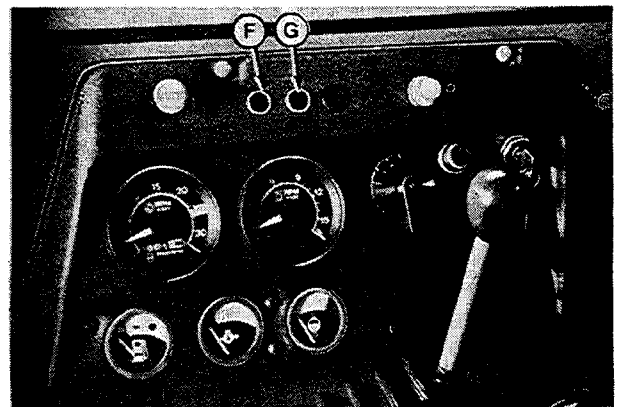
- A—Conveyor Augers (Optional)
- B—Tailings Auger (Optional)
- C—Clean Grain Elevator (Optional)
- D—Straw Walker (Optional)
- E—Straw Chopper (Optional)



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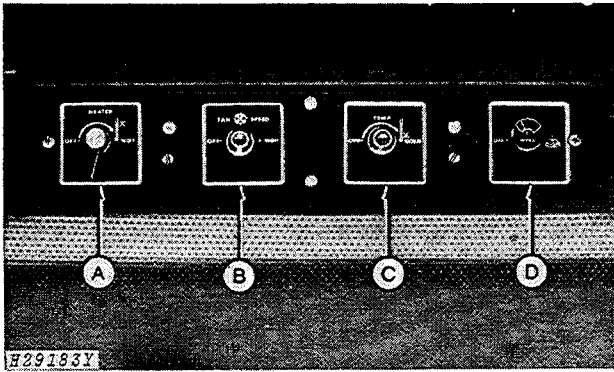
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- F—Parking Brake Indicator Light
- G—Alternator Indicator Light



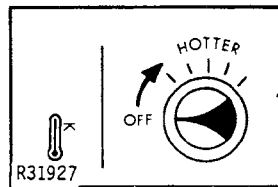
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## CONTROLS



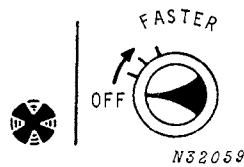
*NOTE: Only "comfort" controls are covered here. Driving and harvesting function controls are covered in the applicable sections of this manual.*

- A—Heater Temperature Control Switch
- B—Pressurizer Fans Switch
- C—Air Conditioner Temperature Control Switch
- D—Windshield Wiper Switch



### Heater

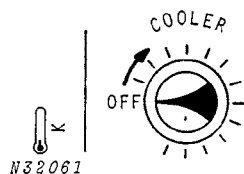
Control temperature with heater control and pressurizer switch.



### Pressurizer Fan

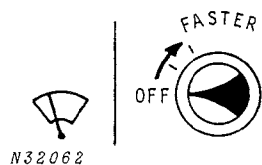
This switch controls the fan which pressurizes the cab. This is a three-speed switch with the highest speed obtained by turning the switch clockwise as far as it will go.

**IMPORTANT: Pressurizer fan must be operating whenever the heater or air conditioner is in use.**



### Air Conditioning

Pressurizer fan switch must be turned on before the air conditioning system will operate. Regulate temperature with air conditioning control and pressurizer fan speed.



### Wiper

The windshield wiper has a two speed switch.

### Louvered Air Outlets

Adjust louvers to direct air where needed, such as for defogging windows.

## OPERATOR'S SEAT

### Personal-Posture Seat

Seat fabric may be vacuumed or brushed with a soft bristle brush to remove loose dirt and dust. Use fabric cleaners to clean normal soilage on fabric. To clean grease and oil stains use solvent-type spot removers.

Use only warm water and mild soap to clean arm rest. Never use solvents.

### Adjusting Seat Forward or Rearward

Sit in the seat, push lever (A) forward as far as possible and by using your weight, adjust seat to the desired position. Release lever (A).

### Adjusting Seat Up or Down

Remove the four spring locking pins (B). Raise or lower the seat to the desired height. Replace spring locking pins (B).

### Raising Seat to Access Position

Loosen wing nuts (C) and move locks (D) to raise seat to access position.

Lift lid with seat and hold open with rod.



**CAUTION:** Keep hands or fingers from under seat or lid when lowering.

### Adjusting Armrest Height

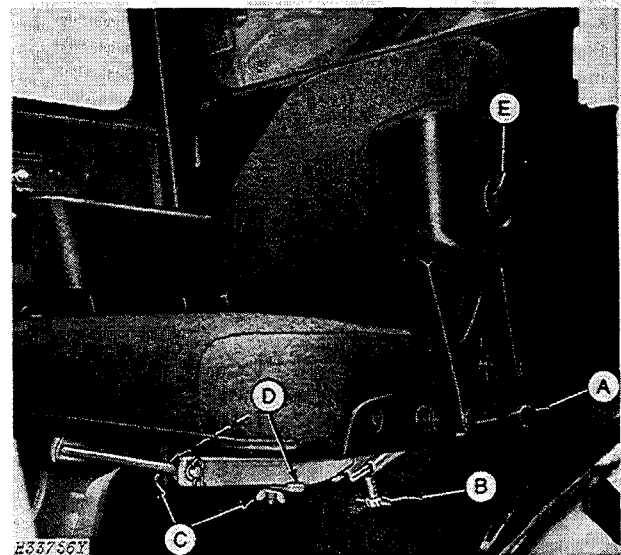
Press armrest button (A), move armrest up or down to the desired position, and release button. Do not sit on armrest.

### Adjusting Backrest Angle

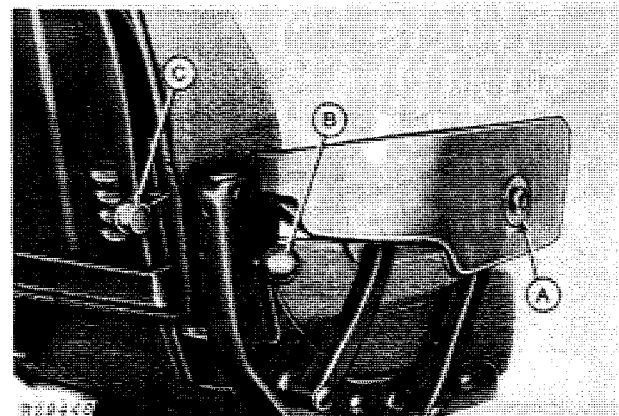
To change backrest angle, raise or lower the backrest angle control knob (B).

### Adjusting Lumbar Support

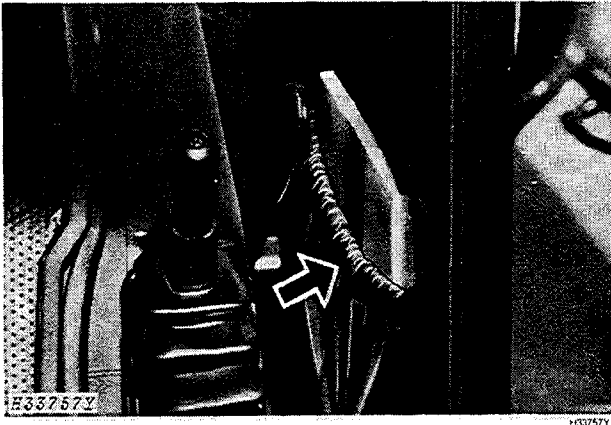
Move knob (C) up or down to adjust lumbar support to the desired pressure against your lower back.



A—Lever  
B—Spring Locking Pins  
C—Wing Nuts  
D—Locks  
E—Armrest Release Button



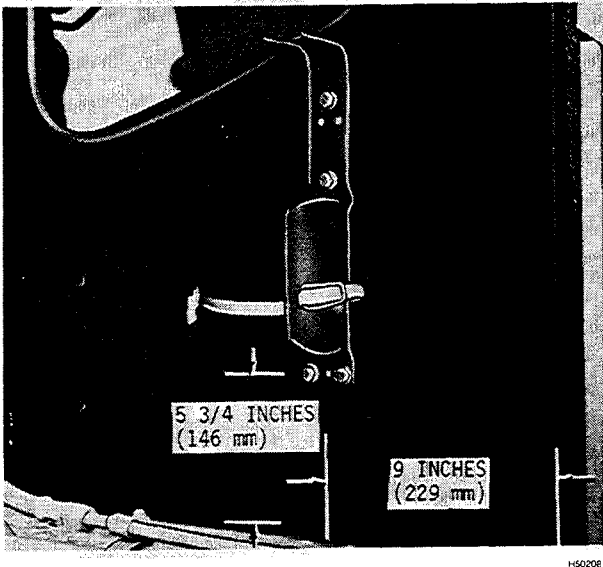
A—Armrest Release Button  
B—Backrest Angle Knob  
C—Lumbar Support Knob



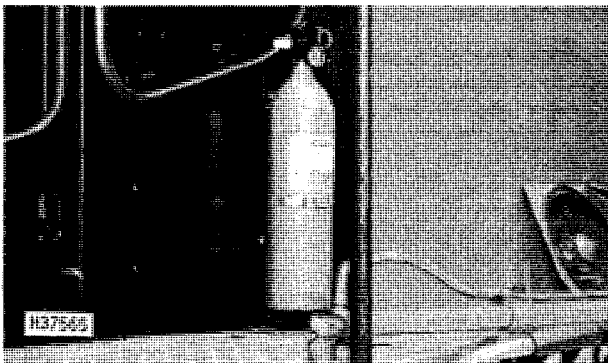
### Operator's Manual Storage

A pocket on the left-hand side of the cab is provided to store operator's manual.

## FIRE EXTINGUISHER

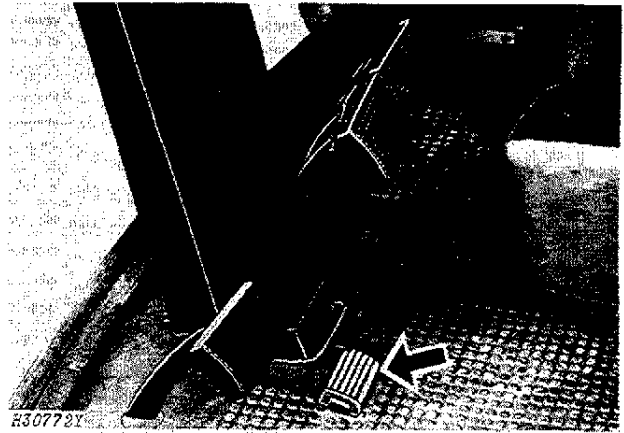


1. Center mounting bracket on cab side panel (in back of door) using dimensions shown.
2. Use bracket as template to mark four holes.
3. Drill four holes with #10 drill bit.
4. Secure bracket with four screws.
5. Install extinguisher and secure with clamp.



## STEERING COLUMN

Step on pedal and move steering column to desired position. Release pedal to lock steering column.

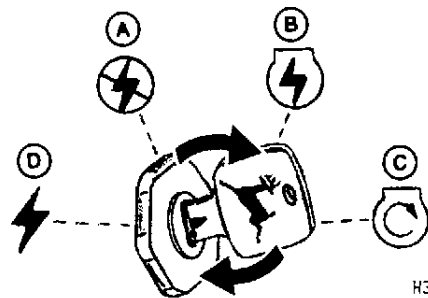


## IGNITION SWITCH

Turn the key clockwise from off (A) to the run position (B). Turn the key further clockwise to start position (C).

When released it will return to run position (B).

Turn key counterclockwise from off position (A) to operate accessories (D).



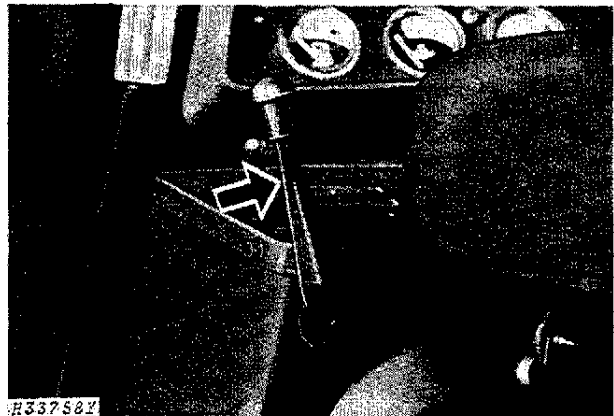
- A—Off Position
- B—Run Position
- C—Start Position
- D—Accessories

H37566

## THROTTLE

Move throttle all the way forward for normal operation.

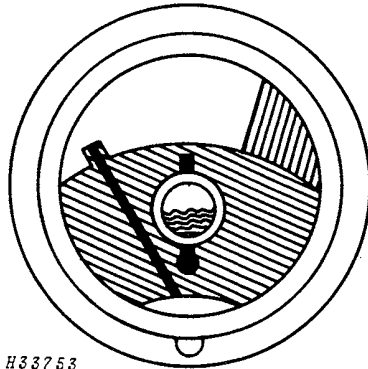
Move throttle all the way rearward for slow idle or when starting the engine.



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# Engine Break-in



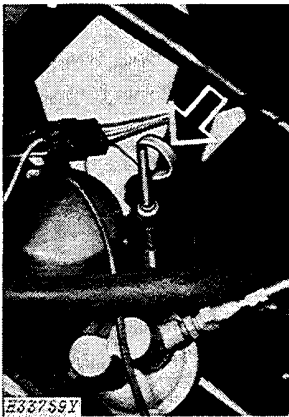
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## Engine Break-in

The engine is ready for normal operation. However, be extra cautious during the first 100 hours.

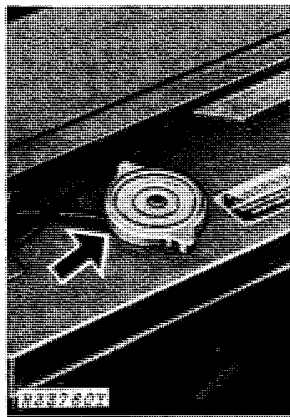
1. Avoid unnecessary engine idling. If combine will be idle longer than five minutes, stop the engine.
2. Watch coolant temperature gauge closely. If temperature rises to the warning zone, shift to a lower gear or reduce load. Unless temperature quickly drops, stop the engine and determine the cause.



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Engine Oil Dipstick



H33760Y

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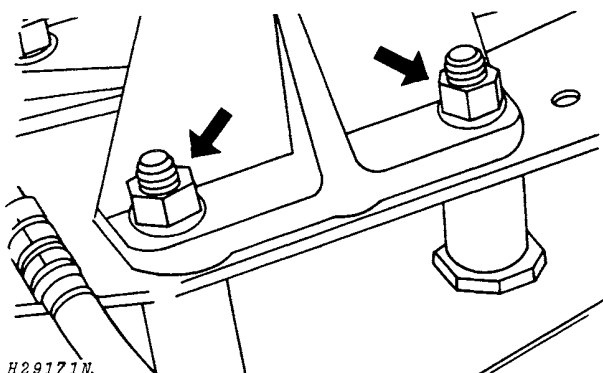
Radiator Cap (With Air Conditioning)

3. Check engine oil and coolant levels more frequently. Watch for any signs of leaks.
4. Until you become thoroughly familiar with the sound and feel of your new combine, stay extra attentive and alert.

## After 1 Hour of Operation Check Torque on All Wheel Bolts:

Drive Wheels 400 ft-lbs (542 N·m)

Steering Wheels 130 ft-lbs (176 N·m)



H29171N

1000254

## After 5 Hours of Operation

Check all V-belts for initial stretch. Tighten as necessary. Continue to check V-belts every few hours for the first 50 hours.

Tighten eight 3/4-inch machine bolts, attaching separator uprights to drive wheel axle, to 300 ft-lbs (407 N·m).

## After 100 Hours of Operation

Drain crankcase oil, change filter, and refill with Torq-GARD SUPREME® Oil. See lubrication Section. Thereafter, repeat this procedure every 200 hours or once a season, whichever occurs first.

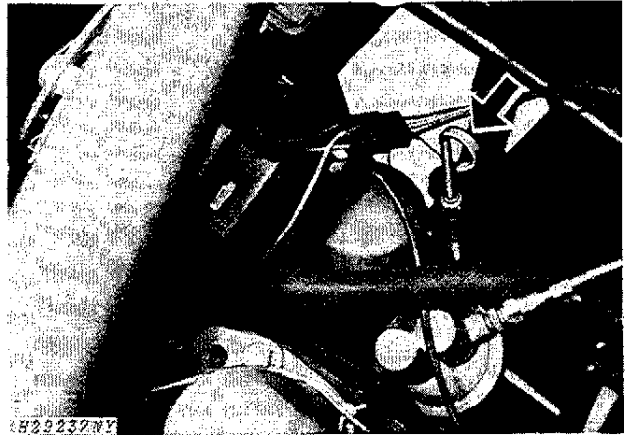
**IMPORTANT:** If diesel fuel sulfur content exceeds 0.7 percent, change oil every 100 hours.



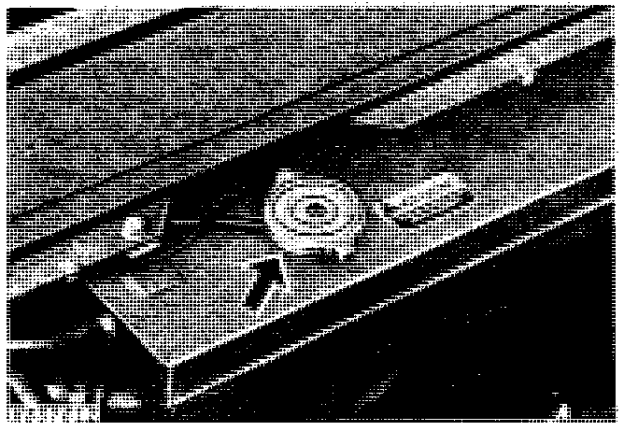
## Prestarting Checks

Before starting the engine for the first time each day:

1. Check engine oil level. Do not operate engine when oil level is below the low mark on the dip stick.



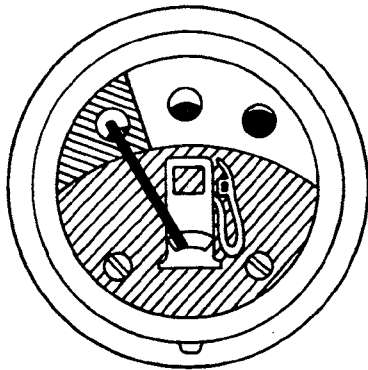
2. Check radiator coolant level. Add coolant until radiator is full and install cap. Fill surge tank to 1-in. (25 mm) from top of neck.



3. Check hydraulic oil level. With header on the ground, oil must be to "FULL" mark on dipstick attached to oil reservoir cap. Do not overfill above "FULL" mark.

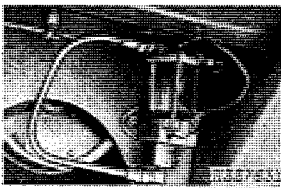


16 *Prestarting Checks*



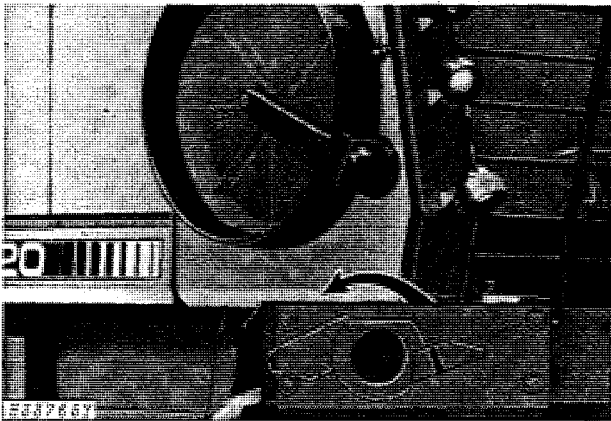
H33751

4. Check fuel gauge.



5. Drain any accumulated water out of fuel tank and engine fuel filter.
6. If engine has not been operated for a long time, bleed entire fuel system to remove air bubbles.
7. Be certain combine is properly lubricated.
8. Be certain rotary screen drive is engaged.

**IMPORTANT:** To prevent breaking drive belt, rotary screen must turn easily and be free of snow and ice, before starting engine.





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# Operating the Engine

## STARTING THE ENGINE

**CAUTION:** Before starting engine, be sure there is plenty of ventilation.

*NOTE: The following controls must be in the position described before starting the engine.*

1. Unloading auger lever disengaged.
2. Parking brake engaged.
3. Separator lever disengaged.
4. Electromagnetic header clutch disengaged.
5. Throttle lever in slow idle position.
6. Gearshift lever in neutral.
7. Clutch pedal, depressed.

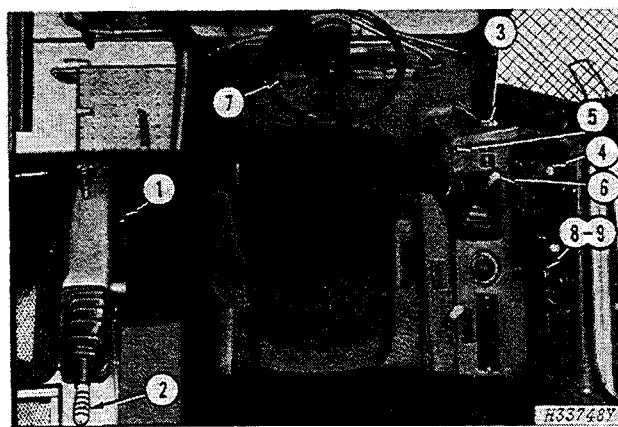
*NOTE: If temperature is below 40°F (5°C), it may be necessary to use a cold weather starting aid.*

8. Turn key to first position.

*NOTE: The indicator light will flash when the key is turned on because the parking brake is engaged.*

9. Turn key switch farther clockwise to engage starter. Release key when engine starts. If key is released before engine starts, wait until starter and engine stop turning before trying again.

**IMPORTANT:** Do not operate starter more than 30 seconds at a time. If engine does not start, wait at least two minutes before trying again. If engine does not start in four attempts, refer to "Trouble Shooting," page 197.



*Continued on next page.*

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