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786, 886, 986, 1086, 1486, 1586 & Hydro-186 Tractors

Operators Manual

1096207R4

Reprinted

CASE IH

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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

If Safety Decals on this machine use the words **Danger, Warning or Caution,** which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation which if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates an potentially hazardous situation which if not avoided, will result in serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

If Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as  and  if used, are RED.

WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

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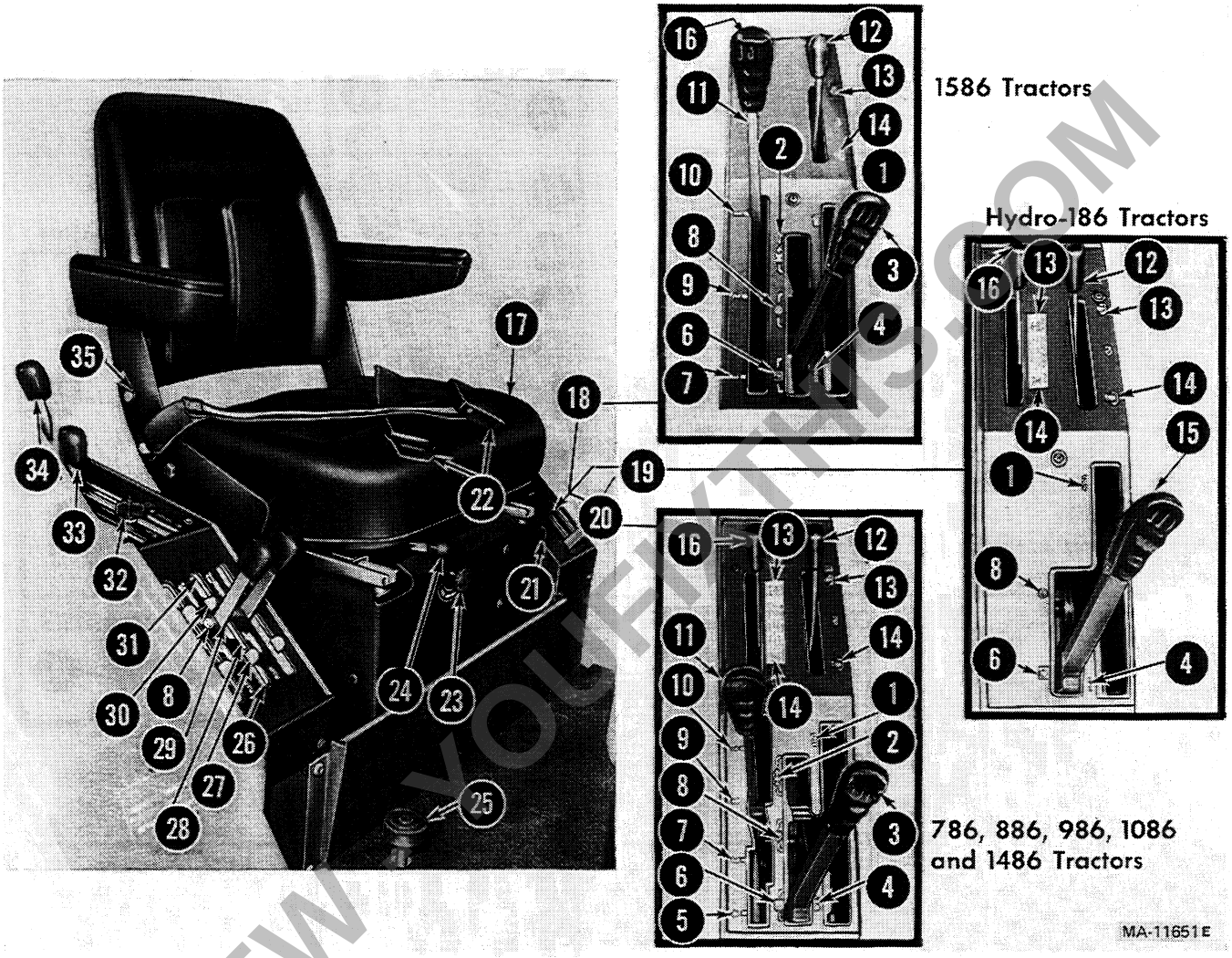
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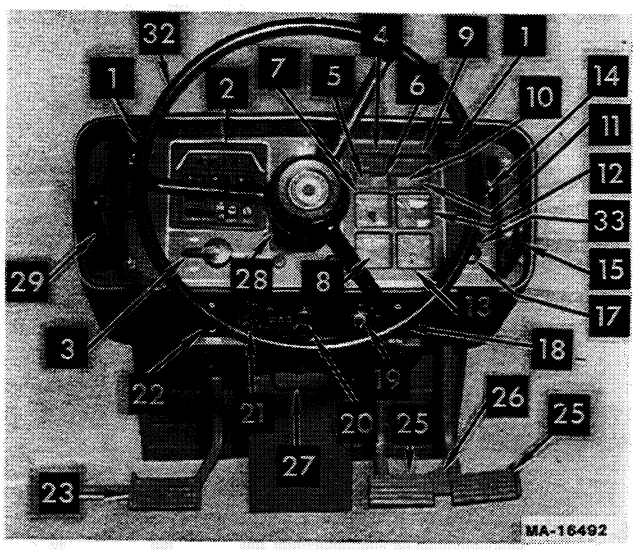
LEFT AND RIGHT CONSOLE, AND HYDRAULIC SEAT CONTROLS -OPEN CENTER HYDRAULIC SYSTEM-



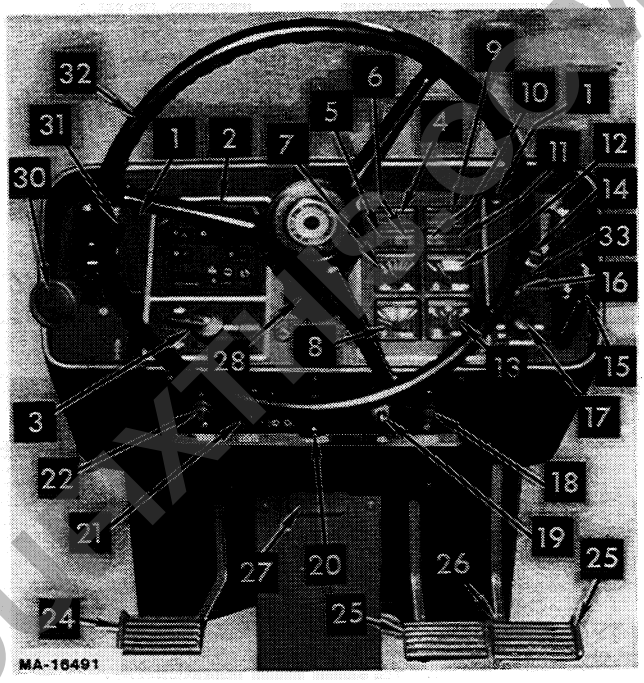
1 - Low range
2 - Reverse position
3 - Transmission range lever
4 - High range
5 - Fourth speed
6 - Park position
7 - Third speed
8 - Neutral position
9 - Second speed
10 - First speed
11 - Transmission speed lever
12 - Power take-off lever
13 - Disengaged position
14 - Engaged position
15 - Range shift lever
16 - All-wheel drive lever
17 - Tilt control
18 - 1586 Gear drive tractors
19 - Hydro 186 hydrostatic drive tractors
20 - 786, 886, 986, 1086, and 1486 Gear drive tractors
21 - Height control
22 - Seat belt
23 - Ride control
24 - Position control
25 - Differential lock
26 - Float position
27 - Float lockout lever
28 - Lower position
29 - Auxiliary valve lever
30 - Neutral lock lever
31 - Raise position
32 - Adjustable position knob
33 - Draft lever
34 - Rockshaft arm control
35 - Back cushion adjustment

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INSTRUMENT PANEL AND CONTROLS TRACTORS EQUIPPED WITH DATA CENTER



886, 986, 1086, 1486 and 1586 tractors.



Hydro 186 tractors.

1 - Instrument lights
2 - Data center
3 - Combination flash and turn signal switch
4 - Left turn signal indicator
5 - Transmission oil pressure tellite
6 - Brake wear tellite (Not on 1586 Tractors)
7 - Engine oil pressure gauge
8 - Voltmeter
9 - Right turn signal indicator
10 - Air cleaner service indicator
11 - Low coolant level tellite
12 - Coolant temperature gauge
13 - Fuel gauge
14 - Governor adjustable stop
15 - Governor control
16 - Transmission oil temperature tellite
17 - Instrument lights dimmer switch
18 - Horn button switch
19 - Key start switch
20 - Cigarette lighter
21 - Lighting switch
22 - Ether start push button
23 - Clutch pedal
24 - Foot-n-inch pedal
25 - Brake pedals
26 - Brake pedal latch
27 - Access cover
28 - Steering wheel locking collar
29 - Torque amplifier lever
30 - Speed ration control
31 - Speed ratio control adjustable stop
32 - Steering wheel
33 - Exhaust gas temperature alert light

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Air Recirculation Control
(On tractors so equipped)



The air recirculation control regulates the amount of fresh and recirculated air entering the cab.



For maximum fresh air, loosen the control knob and push it to the forward end of the slot, and tighten.



For maximum recirculation, loosen the control knob and push it to the rear end of the slot and tighten. Intermediate positioning of the control knob in the slot is available to the operator for delivery of fresh and recirculated air.

Air Recirculation
(Tractors without recirculation control)

A mixed amount of fresh and recirculated air flows through the cab when the blower is operating. Air recirculation is controlled by the cab recirculation grille and filter. For maximum efficiency, clean the recirculation air filter at the recommended intervals. Refer to "Cab Equipment Preventive Maintenance."

Air Flow Control Louvers

The majority of the conditioned cab air is discharged through three air control louvers found in the front headliner. These are adjustable up or down, to the left or right, and closeable to allow the operator to control air flow direction as desired.

Defroster

Six non-adjustable, continuous defrost air discharge ports are found along the forward edge of the front headliner. The amount of defrost air flow over the windshield may be varied by the adjustment of the air flow control louvers.

Refrigerant Pressure Indicator Light

The air conditioner incorporates a safety system to protect the compressor from excessively high or low refrigerant pressures. High and low pressure switches can activate a relay which opens the compressor clutch circuit upon signal from either pressure switch. A red light located on the headliner control panel glows when this system has been activated.

Activation of the red light does not necessarily indicate a component failure in the cab cooling system; it may simply be responding to one or a combination of unusual conditions (for example, cool outdoor conditions and/or low refrigerant charge).

Restart the air conditioner by either: (1) turning the air conditioner control to the "OFF" position, (2) turning the blower control to the "OFF" position, or (3) turning the key switch to the "OFF" position. Returning any of these controls to the original position will restart the air conditioner.

If the indicator light continually glows after restart, the cause of the excessive pressure situation should be investigated. Refer to "CAB EQUIPMENT PREVENTIVE MAINTENANCE" section for possible causes.

Windshield Wiper Control



The windshield wiper is controlled by a two speed switch. Turn the control knob clockwise to increase wiper speed. The wiper has an automatic park position for the blade at the left side of the windshield when the switch is turned to the off position. The wiper motor is protected from over load by a 6 amp circuit breaker, which is part of the switch.

Dome Light

The dome light is located at the center of the rear headliner and is connected directly to the battery and controlled only by the toggle switch located adjacent to the light.

NOTE: Turn the light off when leaving the tractor to conserve the battery.

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All tellites should come on when the key switch is turned to start position. If the tellites fail to function, corrective action must be taken. Check for burned out bulbs.

All tellites should turn off when engine is started.

The tellites are located in the instrument panel.

NOTE: IF THE RED TELLITE GOES ON, IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN.

Transmission Oil Pressure Tellite (Red) (Gear Drive Tractors)



Indicates low transmission oil pressure.

After the engine is running, the tellite should go out in a few seconds. on tractors with the torque amplifier, the engine clutch must be in the engaged position before the tellite will go out. If the tellite stays on or comes on during engine operation, stop the engine and check the oil level in the transmission. Add oil if necessary to bring it to the proper level. Refer to "Lubrication". Start the engine. If the tellite still comes on see your International Harvester dealer.

Transmission Oil Pressure Tellite (Red) (Hydro 186 Tractor)



Indicates excessive transmission oil pressure.

With the engine running and by pressing down all the way on the foot-n-inch pedal, the tellite should come on. This is normal.

After the engine is running and the foot-n-inch pedal is completely released, the tellite should go out. If the light stays on or comes on during operation, stop the engine immediately and investigate the problem.

Transmission Oil Temperature Tellite (Red) (Hydrostatic Drive)



Indicates excessive transmission oil temperature.

Coolant Level Tellite (Red)



Indicates a loss of coolant during operation.

NOTE: The coolant level tellite is not to be a substitute for daily visual check of the coolant level in the radiator.

Air Cleaner Service Tellite (Amber)



Indicates air cleaner service is required.

Brake Wear Tellite (Amber) 786, 886, 986, 1086, 1486 and Hydro-186 Tractors.



This tellite will come on when the brake linings are worn enough to require an inspection of the brakes. At that time, it should be determined whether the brake linings should be replaced.

STEERING THE TRACTOR

The steering system receives a power assist when the engine is running. The steering system will still function with the engine off, but greater steering effort will be required.

To make a sharp or pivot turn, push down on the right or left brake pedal, depending on the direction in which the turn is to be made. The brake pedals must be unlatched so they can be operated individually.



CAUTION! Do not make sharp turns at high speeds.

The steering wheel has a height adjustment. To change the steering wheel height, loosen the locking collar by turning it counterclockwise. Raise or lower the steering wheel, and tighten the locking collar by turning it clockwise.

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STORING THE TRACTOR

STORAGE

When your tractor is not to be used for some time, it should be stored in a dry and protected place. Leaving your tractor outdoors, exposed to the elements, materially shortens its life.

Follow the procedure outlined below when your tractor is placed in storage for periods up to approximately six months.

See your International Harvester dealer for the procedure on longer storage periods.

Store the tractor so the tires are protected from light. Before storing the tractor, clean the tires thoroughly. Jack up the tractor so the load is off the tires, when it is to be out of service for a long period. If not jacked up, inflate the tires at regular intervals.

Run the engine long enough to thoroughly warm the oil in the crankcase, then drain the oil. Change the oil filter as instructed in "Lubrication". Refill the crankcase with fresh oil as specified in the "Lubrication Table" and run the engine for five minutes.

Fill the fuel tank with a premium grade diesel engine fuel. If this grade has not been used regularly, drain the fuel tank and refill. Run the engine for about five minutes to circulate the fuel through the injection system.

Drain, flush and fill the cooling system with an antifreeze mixture ratio to protect the coolant to the lowest anticipated temperature and add I.H. cooling system conditioner. Refer to "Cooling System".

I.H. International maintenance free batteries need not be removed from the tractor. Batteries should be fully charged to prevent freezing of electrolyte. Disconnect both negative ground cables at the batteries to prevent accidental discharge.

REMOVING FROM STORAGE

Be sure that the grade of oil in the engine crankcase is as specified in the "Lubrication Table".

Remove the plugs from the exhaust pipe and the valve cover breather pipe.

Open the fuel tank water drain valve and be sure that all water and sediment has drained from the tank before closing.

Check the level of the coolant in the radiator.

See that the batteries are fuly charged and that the terminal connections are clamped tightly.

Before starting the engine, prime the lubrication system by setting the engine speed control lever in the shut-off position, turning the key switch to the start position, and cranking the engine until the engine oil pressure builds up or up to a maximum of 30 seconds.

On hydrostatic drive tractors follow the same procedure for starting as "After transporting on a truck or flatcar" refer to "Operating The Tractor".

Start the engine and let it run slowly.

CAUTION! Keep the doors wide open and move the machine outside the storage room immediately to avoid danger from exhaust fumes. Do not accelerate the engine rapidly, or operate it at high speed immediately after starting.



CAUTION! Exhaust fumes can kill. Never run engine inside buildings.

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—After Every 100 Tachometer Hours of Operation

1. Crankcase oil drain plug.

Remove the crankcase drain plug and drain all the oil from the crankcase while the engine is warm; then reinstall the plug and refill with new oil to the "Full" mark on the oil level gauge. Refer to the "Lubrication Table".

NOTE: The engine crankcase drain period may be extended to every 200 hours if I.H. NO.1 10w or 30w engine oil is used.

2. Hydraulic fluid filter.

NOTE: After the first 100 hours only: Remove and clean the by-pass valve screen and replace filter. Refer to "Hydraulic Fluid Filter". Change the filter at 200 hours and every 200 hours of operation thereafter.

3. Front wheel pivot bearings (American-Coleman all wheel drive).

4. Compensating ring busings (8). (American-Coleman all wheel drive). See "Note A".

5. Ball joints (Elwood all wheel drive).

Use IH 251H EP grease or equivalent No. 2 multi-purpose lithium grease and apply two or three strokes of lubricator, or sufficient grease to flush out the old grease and dirt.

NOTE A: The lubrication fittings for the compensating ring bushings can be reached by removing the four dust plugs on each wheel cover. Replace the plugs when lubrication is completed.

6. Drive housing hydraulic fluid filter

NOTE: After the first 100 hours only: Remove element shell and element. Replace the element with a new one. Reinstall element and element shell. Change the element at 200 hours, and every 200 hours of operation thereafter. Refer to Hydrostatic Drive Housing Hydraulic Fluid Filter."

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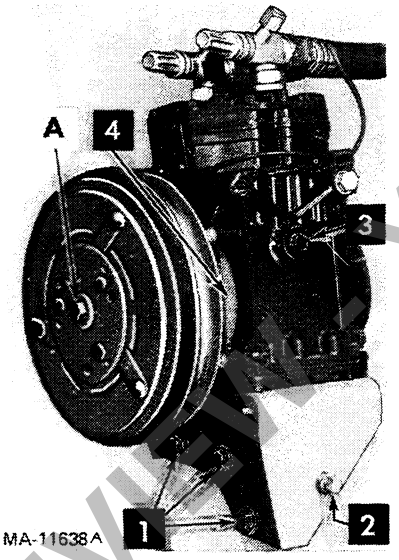
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ADJUSTING THE COMPRESSOR BELT TENSION — 886 with D-360 Engine and 986, 1086, 1486, 1586 and Hydro 186 Tractors —

The compressor drive belt is adjusted for tension by moving the compressor on its mounting bracket.

Loosen the three mounting bracket bolts and the adjusting bolt lock nut. To tighten the belt, turn the adjusting bolt "in"; to loosen the belt turn the adjusting bolt "out". The belt tension is correct when the belt can be deflected 15/32 (11.9 mm) with a 25 pound (111 N) load midway between the fan and compressor pulley. When using a belt tension dial gauge, the tension is 100 pounds (445 N) for a new belt or 80-90 pounds (356-400 N) for a belt used 36 hours or more.

After adjustment is made, tighten the adjustment bolt lock nut and the mounting bracket bolts.



886 with D-360 Engine and 986, 1086, 1486, 1586 and Hydro 186 Tractors

1 - Compressor mounting bracket bolts
2 - Adjusting bolt and lock nut
3 - Compressor oil filler plug
4 - Foam dust seal

Left Side of engine

COMPRESSOR PULLEY AND CLUTCH

The compressor clutch should be periodically cleaned thoroughly.

With the engine off, energize the clutch. Remove bolt "A".

Thread a 5/8-inch — 11 NC bolt in clutch at "A", and slowly tighten to remove pulley and clutch from the shaft. Remove bolt from clutch.

Thoroughly clean inside recessed area of pulley and clutch with compressed air.

Clean the face, outside dimension and inside dimension of the coil.

Reassemble belt pulley and clutch and secure with bolt at "A".

Energize the clutch. Tighten bolt "A".

Adjust belt tension if required.

See "Adjusting the Compressor Belt Tension".

COMPRESSOR SHAFT SEAL

A minor loss of refrigerant oil and refrigerant is tolerable at the compressor shaft seal.

The compressor shaft dust seal (foam donut) should be periodically cleaned with compressed air.

During an extended non-opeating period such as seasonal storage, start the engine and operate the compressor for a few minutes each month. This will keep seals from drying out, causing possible damage to the compressor and/or system due to loss of refrigerant.

COMPRESSOR OIL LEVEL

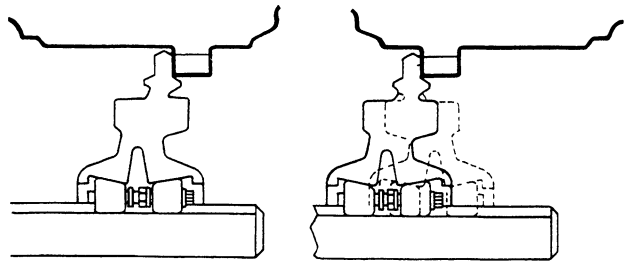
Compressor lubrication is a sealed system and does not normally require serivice. See your International Harvester dealer.

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WHEELS WITH ATTACHED CLAMP RIMS (1586 Tractors)

NOTE: When the attached-clamp rims are reversed to change the tread width, change the tire and rim assembly, assembling the right tire and rim on the left side and vice versa, in order to keep the tread of the tire pointing in the correct direction of rotation as shown by the arrow on the tire. Rim bolt to be tightened to 255 foot-pounds (346 N·m) torque.



MA-10148

Rear wheel tread and rim mounting diagram (right rear wheel shown).

Fixed clamps rim w/wheel concave	Rim position and tread widths Inches (Millimetres)	
	A	B
	Rim centerline in	Rim centerline out
In	66-98* (1.68-2.49m) 72-104** (1.83-2.64m)	83-115* (2.11-2.92m) 85-127** (2.16-3.23m)
Out	70-102* (1.78-2.59m) 72-94** (1.83-2.39m)	88-120* (2.24-3.05m) 94-126** (2.39-3.20m)

* — With 24.5-32 tires.
** — With 30.5-32 tires.

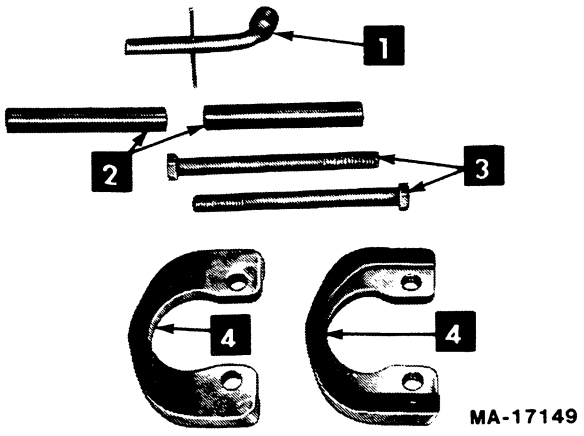
NOTE: Heavy drawbar loads are not recommended with treads wider than 96-inches (2.44m). Refer to rear ballast instructions under "Weights".

TRACTORS WITH WEDGE WHEELS (All tractors except 1586)

How the Wedge Locks Work

The wedge bolt is used to pull the wedges into place and lock the axle and wheel together. Once the wedges are seated and the wheels do not move on the axle, the bolt does not need to be tight to keep the wedges in place. The belleville washers under the head of the bolt act as a spring on the wedges to help them "work" into their seat.

One of the wedges is loosened by backing out the wedge bolt. After the first wedge is loose the wedge removing tool is needed to loosen the second wedge. The loose wedge is "backed up" by one plate of the wedge removing tool. The opposite late is against the wheel hub. Backing out the wedge bolt (with the loose wedge held by its plate) forces the tight wedge out.



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1 - Wheel wrench
2 - Sleeves
3 - 3/4-inch cap screws
4 - Plate

Wedge removing tools.

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