8870
Windrower Tractor

Operators Manual

9-78774

CASE IH AGRICULTURE

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SPECIFICATIONS

(Specifications and design are subject to change without notice and without liability therefore.)

MODEL ..... 8870 Windrower Tractor

DIMENSIONS AND WEIGHTS

Length, overall with header ..... 6543 mm (257.6 IN)
wheel base ..... 3556 mm (140 IN)
Height
top of cab ..... 3308 mm (130.2 IN)
clearance under walking beam ..... 953 mm (37.5 IN)
clearance under frame ..... 950 mm (37.4 IN)
Width
outside of hubs ..... 3034 mm (119.5 IN)
with standard tires ..... 3706 mm (145.9 IN)
Tread width, drive tires ..... 3202 mm (126 IN)
Tread width, tailwheels
minimum ..... 2144 mm (84.4 IN)
maximum ..... 3048 mm (120 IN)
Weight (approximate)
without header ..... 3629 kg (8000 LB)
with 14 FT auger header ..... 5420 kg (11 950 LB)
with 16 FT auger header ..... 5534 kg (12 200 LB)
with 18 FT auger header ..... 5670 kg (12 500 LB)

TIRES

Drive wheels ..... 19.5L x 24, bar or turf tread
wheel bolts ..... 5/8 IN
wheel bolt torque ..... 271 N·m (200 LB-FT)
Tailwheels ..... 14L x 16.1 6-ply implement rib
wheel bolts 9/16-18
wheel bolt torque ..... 165 N·m (120 LB-FT)
Tire pressure ..... drive wheels 20 psi
tailwheels 10 psi

ENGINE

Model ..... Case, 4T-390
Horsepower ..... 110 @ 2500 r/min (rpm)
High idle ..... 2700 r/min (rpm)
Displacement ..... 3.9 L (239 CU IN)
Cooling system capacity ..... 20.8 L (22 U.S. quarts)
Cooling fan diameter ..... 586 mm (23 IN)
Fuel ..... ASTM No. 2 Diesel
Fuel tank capacity ..... 227 L (60 U.S. gallons)

ELECTRICAL SYSTEM

System voltage ..... 12 volts
Grounding ..... negative
Batteries
quantity 2
capacity, each ..... 12V, 450 amp
minimum cranking capacity @ 0°F
type ..... SAE J537, Size 24 or 27, top post
Alternator
manufacturer ..... Robert Bosch
output ..... 95 amperes

GROUND DRIVE SYSTEM

Final drive ..... roller chain/planetary
primary reduction chain ..... No. 50
Tandem pump ..... Vickers Model 19, piston
Motors ..... Vickers Model MVE19, variable displacement
Speed, approximate
FIELD range ..... 0 to 16 km/h (0 to 10 mph)
ROAD range ..... 0 to 24 km/h (0 to 15 mph)

HEADER DRIVE SYSTEM

Pump ..... Vickers Model 19, piston
Motor ..... Eaton, fixed displacement piston

HYDRAULIC SYSTEM

Ground drive system
relief pressure ..... 37 925 kPa (5500 psi)
Header drive system
relief pressure ..... 34 475 kPa (5000 psi)
Header lift system
relief pressure ..... 17 237 kPa (2500 psi)

HEADER FLOTATION SYSTEM

Type ..... hydraulic with accumulator, adjustable from cab
Accumulator charge pressure ..... 5516 kPa (800 psi)

CAB

Cab glass ..... tinted, 6.8 m² (73 sq ft)
Steering column ..... adjustable pivot and tilt
Gages ..... fourteen function monitor
analog flotation pressure gage
digital speedometer

AIR CONDITIONING

System size ..... 22 000 BTU/hr
Refrigerant ..... HFC 134a
Capacity ..... 1.8 kg (4.0 LBS)
Compressor ..... Sanden 507H
displacement ..... 154.9 cc (9.5 CU IN)

ACCESSORIES

Lighting ..... 5 lamps front, rectangular halogen
1 lamp rear, rectangular halogen
flashers on header and tractor
2 lamps side, tail lights, turn signals
Rear view mirrors, right and left ..... deluxe
Controls ..... Shape-coded handles

LUBRICATION

Grease Fittings
lubricant ..... CASE IH 251 HEP Lithium Grease
Wheel Bearings
lubricant ..... CASE IH 251 HEP Lithium Grease
Engine Oil
quantity with filter change ..... 10.5 L (11 U.S. quarts)
type of fluid ..... Case IH No. 1 Engine Oil, SAE 15W 40, API CE, CDII/CF-4
Hydraulic System
quantity
total system ..... 87 L (23 U.S. gallons)
reservoir ..... 76 L (20 U.S. gallons)
type of fluid ..... Engine Oil, SAE 15W 40
type of fluid, alternate ..... Case IH Hy-Tran Plus
NOTE: Hy-Tran Plus can be added to factory-installed fluid, but to get the full benefit of the qualities of Hy-Tran Plus a complete oil replacement is required.
Chaincases, Final Drive
quantity, each ..... 3.8 L (8 pints)
lubricant ..... Case IH 135H EP Gear Lube 85W 140
Planetary Gearbox
quantity, each ..... 1.2 L (2.5 pints)
lubricant ..... Case IH 135H EP Gear Lube 85W 90

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Air Cleaning System

Filter Elements

The shelf life of a new filter element is five years. Do not install a filter element that is more than five years old. The date of manufacture is on the end cap of the filter element. Replace both filter elements after one year in the machine.

Do not remove the filter elements from the machine to check for restrictions; always use procedures outlined in the following paragraphs.

Air Cleaner

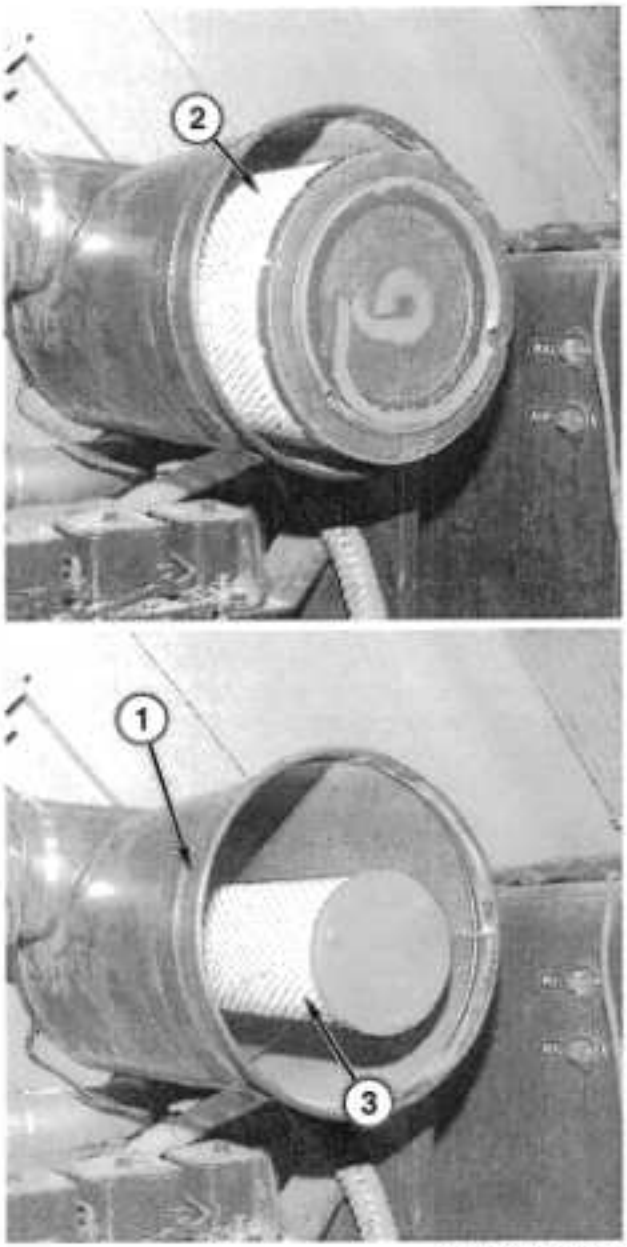
An aspirator hose is used to evacuate the dust. Service of the elements is necessary and recommended only as indicated by the amber colored service light on the monitor.

The primary element and the secondary element are sealed on the OD and retained by the end cup. Each time the air cleaner is serviced, make sure all hose connections and flanges are tight. Replace all damaged parts.

Service Interval

An amber restriction indicator light is mounted in the monitor at the operators station. During machine operation, when restriction reaches 25 IN of vacuum, the warning light will be switch on. Whenever the warning light is switched on intermittently during operation of the machine, the air filter must be cleaned or replaced at the next daily service.

If after the primary element has been cleaned, the amber warning light is still intermittently on during operation, both primary and secondary elements must be replaced.



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AIR CLEANER (COVER NOT SHOWN)

1. Housing
2. Primary Element
3. Secondary Element

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4. Throttle Control Lever

The throttle control lever is in idle position when the lever is all the way to the rear. When turning the machine and for field operation, move the throttle control lever to full throttle by moving the lever all the way to the forward position. Move the throttle control lever slowly to permit the engine to change. To increase or decrease ground speed, use the travel control lever.

5. Turn Signal Switch

Use the turn signals when operating the windrower on a road. When making a right turn, move the turn signal switch toward the right; when making a left turn, move the turn signal switch toward the left.

NOTE: The turn signal switch must be manually moved back to center position after the turn is made. An audible indicator is engaged when the turn switch is on.

6. Lighting Switch - Headlamps

The lighting switch controls two headlamps on the front of the tractor and two red tail lamps on the rear of the tractor. Before driving the windrower on a road, illuminate the two headlamps and the red tail lamps by moving the lighting switch to the forward position.

NOTE: The lighting switch must be in the forward position when the windrower is operated on a road.

7. Lighting Switch - Field Lamps

The lighting switch controls six work lamps. In the forward position, one right corner, one center, and one left corner lamp illuminate the header work area. An additional two lamps illuminate the after cut stubble to the right rear and left rear of the machine. A single lamp illuminates directly to the rear of the machine. Lamps are off when the lighting switch is in the rear position. The left lighting switch must be in the off (rear) position when the machine is operated on a highway.

8. Header Engage Switch

The header engage switch operates the header drive system. When the header engage switch is in the center position, the header drive is disengaged. To put the header in operation, lift and move the header engage switch forward. To disengage the header, move the header engage switch to the center (neutral) position.

If the tractor is equipped with a header reverse, the header can be reversed. To operate the header in reverse, lift and move the header engage switch to the rear. When released, the header engage switch will move to the center (neutral) position and the header will disengage.

The tractor is equipped with a shutdown system that will not let the header remain engaged if the operator leaves the operators seat and opens the cab door. If the header is disengaged by the shutdown system, the header engage switch must be moved to the center (neutral) position before the header can be engaged again. See Shutdown System - Engine and Header in this section.

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Wheels and Tires

Tire Pressure

Check the tire pressure in all four tires. The tire pressure must be correct before operating the machine. See Specifications for the correct pressure.

Wheel Hardware

When installing the drive wheels, tighten wheel nuts to the correct torque. See Specifications for the correct torque. Check the torque of the wheel hardware after 3 to 5 hours of operation.

When installing the tailwheels, tighten wheel bolts in the hub to the correct torque. Then tighten the wheel nuts on the wheel bolts to the correct torque. See Specifications for the correct torque. Check the torque of the wheel hardware after 3 to 5 hours of operation.

Changing a Tire

Have a tire mechanic service the wheels that are used on this machine. The correct tire equipment, especially a tire inflation cage, is required.

Removing a Drive Wheel

1. Park the machine on a solid level surface and lower the header to the floor.

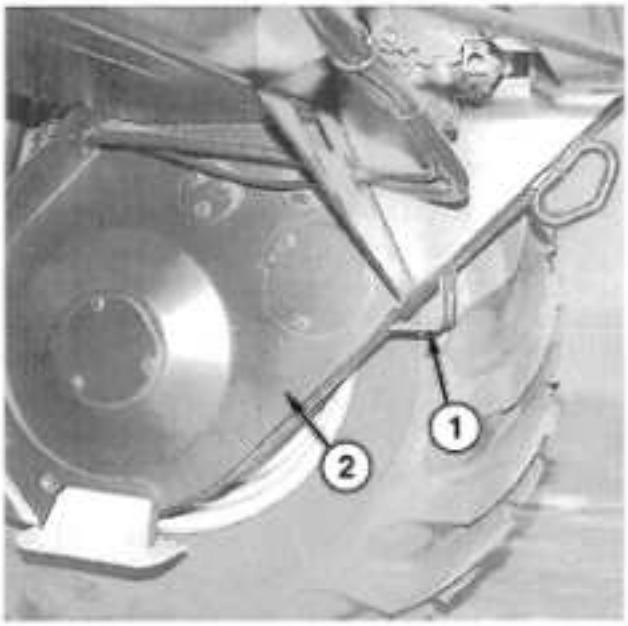
2. Stop the engine and apply the parking lock. Make sure the steering wheel is centered and locked.

3. Put blocks in front of and behind the opposite tire.

4. Put blocks in front of and behind both tailwheels.

5. Loosen the wheel bolts a small amount.

6. Use a jack that has a capacity of at least 2724 kg (3 tons) to raise the tire off the floor. Put the jack under the bracket at the rear of the chaincase.



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CHAINCASE JACK POINT

1. Jack Bracket
2. Chaincase

7. Put a support under the chaincase.

8. Remove the wheel bolts and the spacers.

9. Remove the wheel.

Installing a Drive Wheel

1. Install the wheel on the pilot.

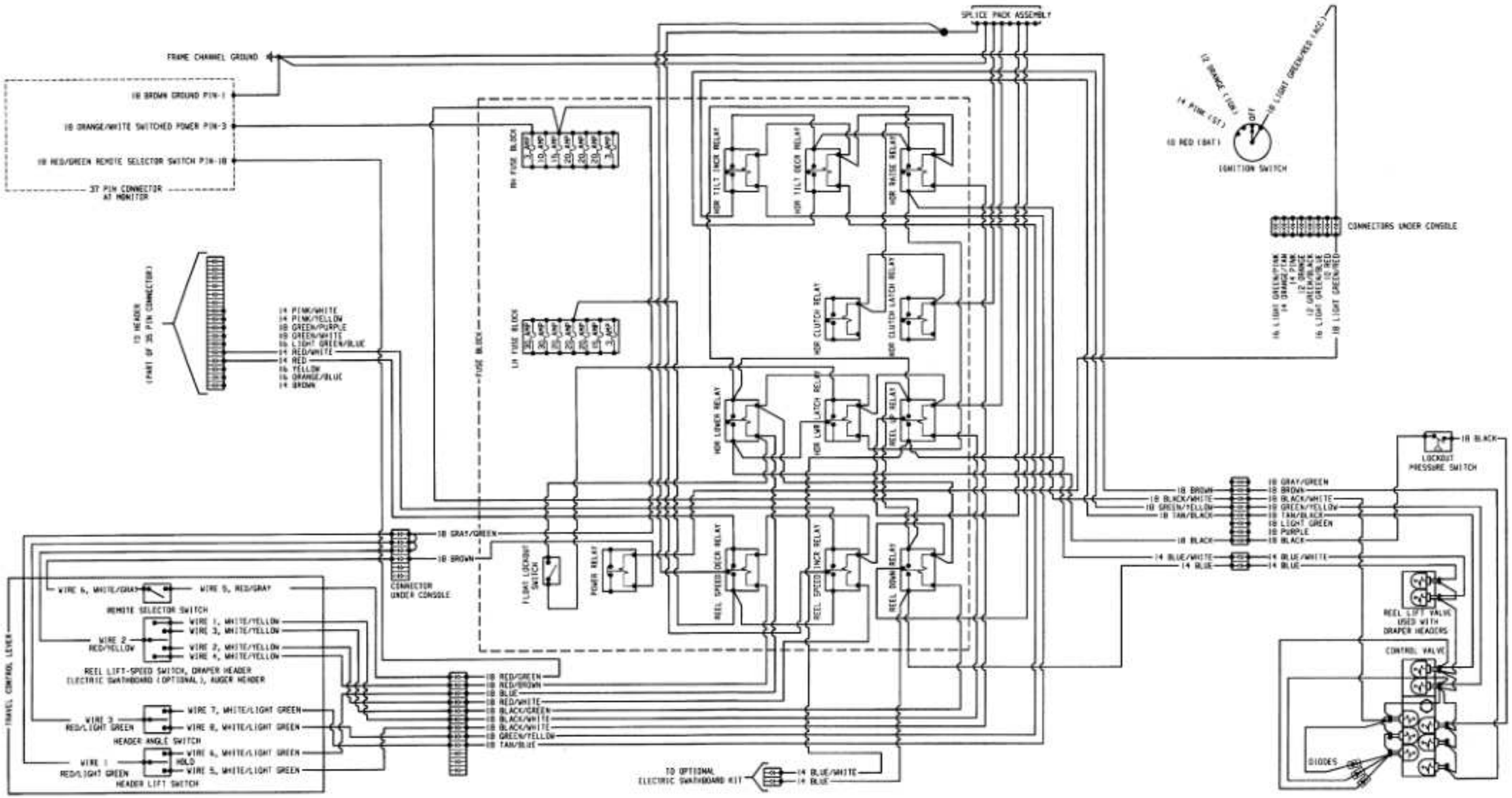
2. Start the wheel bolts and spacers into the hub.

3. Use a hand wrench to tighten the wheel bolts alternately and evenly until the wheel is tight against the hub. Do not use an impact wrench to install the wheel bolts.

4. Use the jack to lower the tire to the floor.

5. Tighten the wheel bolts alternately and evenly to the correct torque. See Specifications for the correct torque. Check the torque of the wheel bolts after 3 to 5 hours of operation.

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TRAVEL CONTROL LEVER AND MONITOR SELECTION CIRCUITS

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