380B

Tractor

SERVICE MANUAL

8-57691

CASE IH AGRICULTURE

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Pistons and Rods

Rings Per Piston	3
Compression Rings Per Piston	2
Oil Rings Per Piston	1
Type of Piston Pin	Full Float
Type of Bearings	Replacement Bearings Available Steel Back with Copper and Lead Liners

Main Bearings

Tractors 385 and 485	3
Tractors 585 685 and 885	5
Type of Bearings	Replacement Bearings Available Steel Back with Copper and Lead Liners

Engine Lubrication System

Type of System	Pressure Spray
Oil Pump	Gear Type
Oil Filter	Full Flow, Turn on Type, Bypass

Fuel System

Fuel Injection Pump	Robert Bosch Type CR
Fuel Transport Pump	None
Governor	Variable Speed, Part of the Fuel Injection Pump
First Stage Fuel Filter	Full Flow Element Type or Turn on Type
Second Stage Fuel Filter	Full Flow Element Type or Turn on Type
Water Trap and Drain for the Fuel Tank	Location is in the Bottom of the Fuel Filters
Fuel Gauge	Location is On the Instrument Panel
Fuel Level Gauge	Location is on the Instrument Panel
Fuel Strainer	None

Air Intake System

Type	Dry Type Air Induction System, Two Stage, with Dust Unloader

Cooling System

Type	Pressure System, Thermostat Controlled Bypass, Impeller Type Pump
Radiator	Fin and Tube Type
Thermostat	Starts to Open at Approximately 180 Degrees F (82 Degrees C) Fully Open at 203 Degrees F (94 Degrees C)
PressureCap	9 to 12 PSI (62 to 82 kPa)
Water Level Monitor	None
Water Temperature Gauge	Location is on the Instrument Panel

Tractor Brakes

Type	Wet, Hydraulic, Self-Adjusting, Single Disc

Clutch

Type	Hydraulic Operated, Self Adjusting (XL only), Single Dry Plate

		U.S Value	Metric Value
Plate Diameter	385, 485 and 585	11 in	280 mm
	685 and 885	12 in	305 mm

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Transmissions

BASIC

Type ..... 4 Speed Synchromesh with High/Low Ranges and Reverse
Number of Gears ..... 8 Forward, 4 Reverse
Controls ..... 2 Levers

OPTIONAL (Not 885/885XL)

Type ..... Forward/Reverse
Same as Synchromesh, plus a Hydraulically Operated Forward and an Increased Speed Reverse
Number of Gears ..... 8 Forward, 8 Reverse
Controls ..... 3 Levers

OPTIONAL

Type ..... 2 Speed Power Shift
Same as Synchromesh, Plus Hydraulically Operated Speed Decrease in all Gears
Number of Gears ..... 16 Forward, 8 Reverse
Controls ..... 2 Levers and an Electrical Switch

Foot Brakes

Type ..... Hydraulic, Self Adjusting, Oil Cooled Discs

	U.S Value	Metric Value
Disc Diameter	10 in	254 mm

Hydraulic System

Type ..... Independent, with Fully Live Hydraulic Pump in the Transmission
Operating Pressure ..... 175 kg/cm^2 (2500 lb/in^2)

Steering

Type ..... Hydrostatic

Turning Radius with Brake Assistance:	2WD	132 in	3352 mm
(with MFD engaged)	MFD	146 in	3708 mm
Turning Radius without Brake Assistance:	2WD	151 in	3835 mm
(with MFD engaged)	MFD	171 in	343 mm

Differential Lock

Type ..... Mechanical Actuated by the Operators Right Foot

Hitch system

Type of Sensing ..... Upper Link
Type of Control ..... Hand Lever
Type of Valve ..... Four-Position, Hold, Lift, Lower, and Float
Type of Draft Arms ..... Rigid, Swing Type, Manual Float Adjuster
Type of Hitch 385and 485 ..... Three Point, Catergory one and Two
585, 685 and 885 ..... Three Point, Category Two
Quick Hitch Coupler (Available)

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385 SPECIFICATIONS

General

Diesel Engine Model	D 155
Number of Cylinders	3
Firing Order	1-3-2
Engine Speeds	
Rated	2200 r/min
Low Idle	700 ± 50 r/min
Static Timing (BTDC)	10 Degrees

	U.S Value	Metric Value
Bore	3.87 in	98.4 mm
Stroke	4.37 in	111.1 mm
Displacement	155 in^3	2536 cm^3
Valve Clearances (hot)		
Inlet	0.012 in	0.30 mm
Exhaust	0.012 in	0.30 mm

Fuel System

Injection Nozzle type	DLLA 150S 836
Nozzle Holder type	KBEL 84S 4/13

Lubrication System

Crankcase Capacity (including filter)	13.2 UK pints	2 U.S. gal	7.5 litre
Oil Pressure	40 to 60 PSI		275 to 414 kPa

Cooling System

Cooling System Capacity (including heater)	2.5 UK gal	3 U.S. gal	11.4 litre

Drawbar Heights

Swinging Drawbar Top	13.9 in / 353 mm
Automatic Hitch Drawbar	15.6 in / 396 mm
Automatic Hitch Hook	13.2 in / 335 mm

Hydraulic System

Pump Output at Rated Engine Speed of 2200 r/min	
with 27 Tooth Drive Gear	10 UK or 12 U.S. gal min / 46 litre min
with 23 Tooth Drive Gear	12 UK or 14 4 U.S. gal min / 54 litre min
with 21 Tooth Drive Gear	13 UK or 15.6 U.S. gal min / 59 litre min
Maximum Lift Capacities	
Lower Links horizontal	3700 lb / 1680 kg
Through range of 780 mm (31 in)	3100 lb / 1400 kg
Lower Link Length	28.95 in / 735 mm

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Hitch Check

Test the hitch raise rate

IS THE HITCH RAISE RATE WITHIN SPECIFICATIONS? Refer to Section 1280

YES

NO

Put the remote valve on demand

IS THE HITCH RAISE RATE NOW WITHIN SPECIFICATIONS?

NO

YES

The unloading poppet is not seating the unloading piston is stuck or the orifice is blocked

Remove the inspection cover and check if the control spool is moving outwards

IS THE CONTROL SPOOL MOVING OUTWARDS?

NO

Adjust or repair the linkage Refer to Section 8005

YES

Hitch cylinder or cushion relief is bypassing

NO

DOES THE HITCH OPERATE CORRECTLY?

YES

Refer to: REMOTE VALVE CHECK on Page 14

DOES THE SYSTEM REMAIN ON HIGH PRESSURE AFTER THE HITCH IS RAISED?

NO

YES

DOES THE PROBLEM EXIST ONLY WHEN THE HITCH IS AT THE TOP?

YES

Adjust the lift linkage Refer to Section 8005

NO

The unloading piston is not opening the unloading poppet

Check the unloading piston o-ring and the unloading poppet and spring

Test the hitch lower rate

DOES THE HITCH LOWER SLOW OR NOT AT ALL?

NO

YES

Remove the inspection cover and check if the control spool is moving inwards

IS THE CONTROL SPOOL MOVING INWARDS?

YES

NO

Adjust or repair the linkage or Remove the spool and check for binding or a weak return spring

Adjust the drop poppet Refer to Section 8005

DOES THE PROBLEM STILL EXIST?

Check for binding of the drop flow poppet

Check for stuck or bypassing drop check valve

DOES THE HITCH LOWER TOO FAST?

NO

YES

Check the drop flow control poppet for sticking or check for a weak spring

DOES THE HITCH REPEATEDLY CORRECT POSITION?

YES

NO

Refer to: REMOTE VALVE CHECK on Page 14

Adjust the drop poppet Refer to Section 8005

IS THE PROBLEM STILL PRESENT?

NO

YES

Check for leaking hitch cylinder cushion relief Refer to Section 8005

IS THE CUSHION RELIEF LEAKING?

NO

YES

Repair or replace the cushion relief Refer to Section 8005

Check for damaged drop check ball or damaged drop check valve and seat

Check the hitch cylinder piston, seals and bore for bypassing

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