SERVICE MANUAL

Guardian™ SP.260R
Guardian™ SP.300R
Tier 4B (final)
Sprayer

PIN YFYM00925 and above

Part number 47828487
1st edition English
September 2015

NEW HOLLAND AGRICULTURE

MidWestTech | New Holland Guardian SP.260R, SP.300R Tier 4B Sprayer Service Manual | Publication 47828487

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Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1

[10.202] Air cleaners and lines 10.2

[10.206] Fuel filters 10.3

[10.210] Lift pump and lines 10.4

[10.216] Fuel tanks 10.5

[10.400] Engine cooling system 10.6

[10.414] Fan and drive 10.7

[10.500] Selective Catalytic Reduction (SCR) exhaust treatment 10.8

Transmission 21

[21.112] Power shuttle transmission 21.1

[21.145] Gearbox internal components 21.2

[21.200] Dropbox 21.3

Front axle system 25

[25.100] Powered front axle 25.1

[25.400] Non-powered front axle 25.2

Rear axle system 27

[27.100] Powered rear axle 27.1

[27.106] Rear bevel gear set and differential 27.2

Brakes and controls 33

[33.202] Hydraulic service brakes 33.1

[33.110] Parking brake or parking lock 33.2

Hydraulic systems 35

[35.000] Hydraulic systems 35.1

[35.106] Variable displacement pump 35.2

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[35.300] Reservoir, cooler, and filters 35.3
[35.359] Main control valve 35.4
Pneumatic system 36
[36.100] Pneumatic system 36.1
[36.200] Pneumatic operated components 36.2
Frames and ballasting 39
[39.100] Frame 39.1
Steering 41
[41.200] Hydraulic control components 41.1
[41.206] Pump 41.2
[41.216] Cylinders 41.3
Wheels 44
[44.511] Front wheels 44.1
[44.520] Rear wheels 44.2
Cab climate control 50
[50.100] Heating 50.1
[50.104] Ventilation 50.2
[50.200] Air conditioning 50.3
Electrical systems 55
[55.015] Engine control system 55.1
[55.100] Harnesses and connectors 55.2
[55.050] Heating, Ventilation, and Air-Conditioning (HVAC) control system 55.3
[55.201] Engine starting system 55.4
[55.301] Alternator 55.5
[55.302] Battery 55.6
[55.521] Cab sprayer controls 55.7
[55.518] Wiper and washer system 55.8
[55.000] Electrical system 55.9

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[55.640] Electronic modules 55.10

Spraying 78

[78.110] Chemical spraying 78.1

[78.120] Foam marking system 78.2

Accessories 88

[88.100] Accessories 88.1

Platform, cab, bodywork, and decals 90

[90.105] Machine shields and guards 90.1

[90.118] Protections and footboards 90.2

[90.124] Pneumatically-adjusted operator seat 90.3

[90.150] Cab 90.4

[90.151] Cab interior 90.5

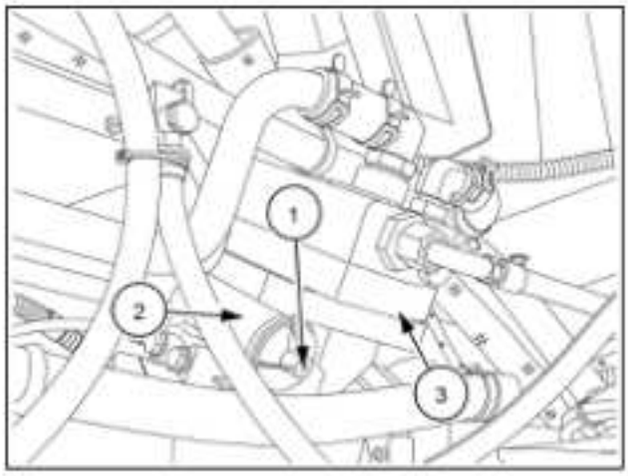
[90.160] Cab interior trim and panels 90.6

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Pneumatic operator controls - Adjust - Air governor

SP.260R Angle drive adjustable axle 1000 Gallon product tank [YFYM00925 -]	
SP.260R Angle drive fixed axle 1000 Gallon product tank [YFYM00925 -]	
SP.260R Drop box 1000 Gallon product tank [YFYM00925 -]	
SP.260R Drop box 1200 Gallon product tank [YFYM00925 -]	
SP.300C Axle Tech 2WD [YFYM00950 -]	NA
SP.300C Axle Tech 4WD [YFYM00950 -]	NA
SP.300R 2WD RR Drive 1000 Gallon product tank [YFYM00925 -]	
SP.300R 2WD RR Drive 1200 Gallon product tank [YFYM00925 -]	
SP.300R 4WD 1000 Gallon product tank [YFYM00925 -]	
SP.300R 4WD 1200 Gallon product tank [YFYM00925 -]	

1. Remove cover **(1)** from air governor **(2)** that is mounted near air compressor **(3)**.

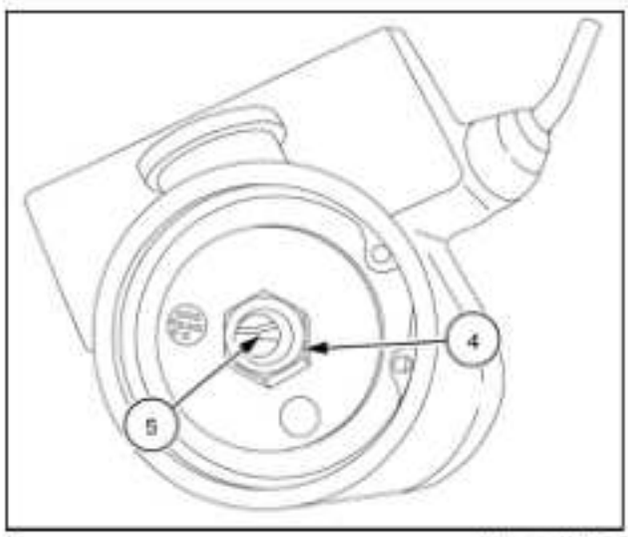


RAIL128P9032BAA 1

2. Loosen the adjusting screw locknut **(4)**.
3. Turn adjusting screw **(5)** clockwise to RAISE pressure setting. Turn screw counter clockwise to LOWER pressure setting.

NOTE: *Air governor psi adjustment is normally set to* ***793 kPa*** *(****115 psi****) (unless equipped to auxiliary air line). Each 1/4 turn of the adjustment screw raises/lowers the psi by approximately* ***28 kPa*** *(****4 psi****). Be careful when making adjustments not to turn adjustment screw too far. Failure to comply may result in damage to equipment.*

4. When proper adjustment is obtained, tighten adjusting screw locknut **(4)**.



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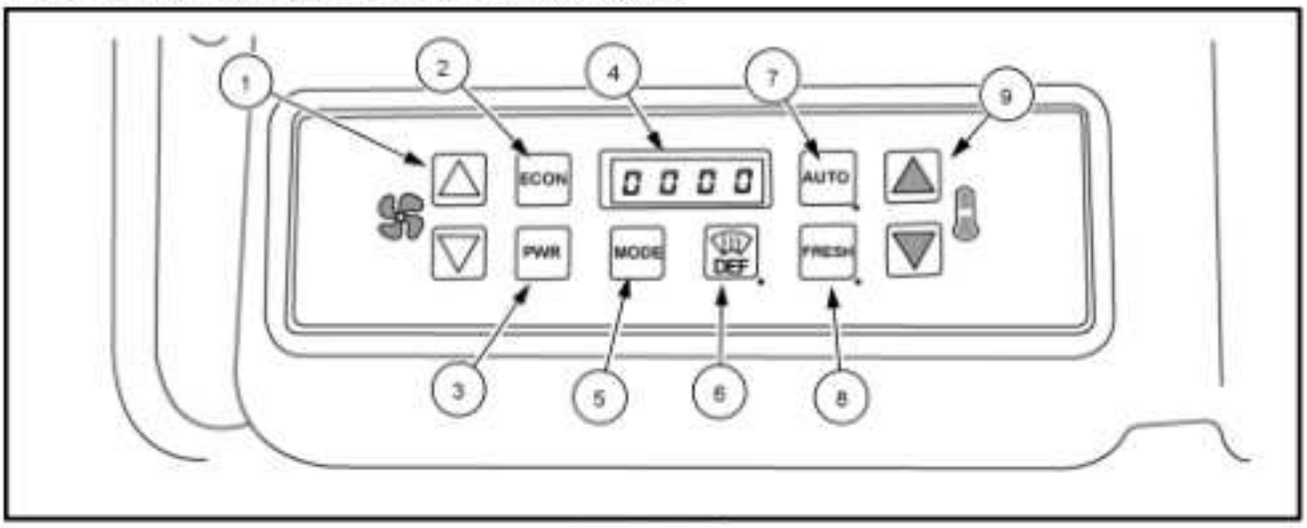
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Air conditioning - Overview - Troubleshooting using ATC

SP.260R Angle drive adjustable axle 1000 Gallon product tank [YFYM00925 -]	
SP.260R Angle drive fixed axle 1000 Gallon product tank [YFYM00925 -]	
SP.260R Drop box 1000 Gallon product tank [YFYM00925 -]	
SP.260R Drop box 1200 Gallon product tank [YFYM00925 -]	
SP.300C Axle Tech 2WD [YFYM00950 -]	NA
SP.300C Axle Tech 4WD [YFYM00950 -]	NA
SP.300R 2WD RR Drive 1000 Gallon product tank [YFYM00925 -]	
SP.300R 2WD RR Drive 1200 Gallon product tank [YFYM00925 -]	
SP.300R 4WD 1000 Gallon product tank [YFYM00925 -]	
SP.300R 4WD 1200 Gallon product tank [YFYM00925 -]	

Troubleshooting of the air conditioning system may be performed using the automatic temperature control (ATC) display. The following procedure details the steps necessary for display of error codes associated with the system.

Use the ATC control to access the error code in order to troubleshoot the HVAC system. The control is mounted in the headliner at the upper right hand side of the cab interior.



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ATC key descriptions

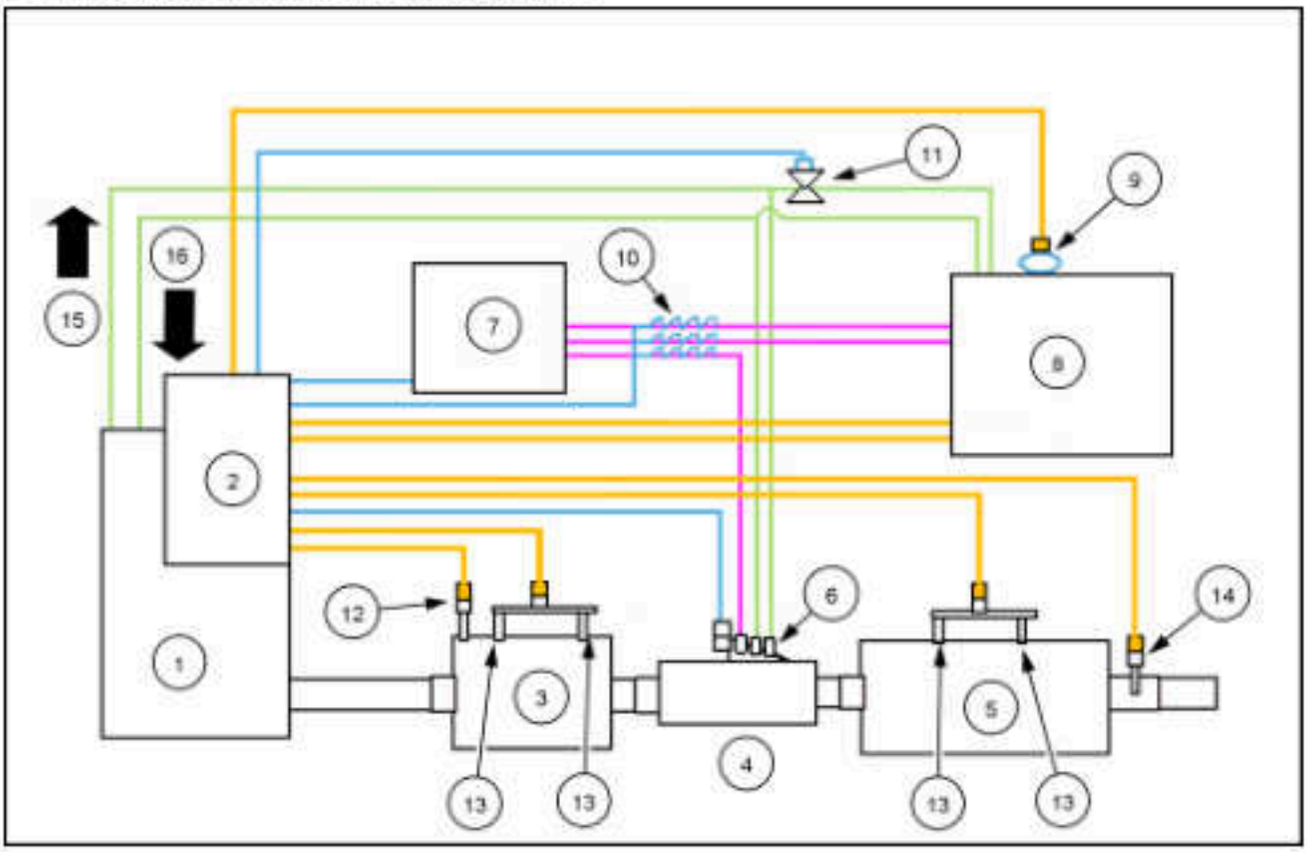
Item	Description
1	Fan speed (increase/decrease)
2	Economy Mode
3	Power Key
4	Display
5	Mode Key
6	Defrost Key
7	Automatic Mode Key
8	Fresh Key (not used)
9	Temperature Key (increase/decrease)

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SPN #	FMI #	FAULT CODE	LAMP COLOR	REASON	EFFECT	ACTION
3031	11	4737	AMBER	An unknown error has been detected with the aftertreatment diesel exhaust fluid tank temperature sensor	Engine power derate	Check engine wiring harness
3031	13	4731	AMBER	The received datalink message was not valid	Possible reduced engine performance	Check engine wiring harness
3216	2	3228	AMBER	An incorrect NOx sensor reading has been detected by the aftertreatment intake NOx sensor	Possible reduced engine performance	Check for exhaust system leakage
3216	4	1885	AMBER	An internal circuit error has been detected by the aftertreatment intake NOx sensor	Possible reduced engine performance	Check engine wiring harness
3216	9	3232	AMBER	No communi-cations or an invalid data transfer rate detected on the J1939 data link between the ECM and the aftertreat-ment intake NOx sensor	Possible reduced engine performance	Check engine wiring harness
3216	10	3725	AMBER	The aftertreatment NOx sensor reading is not valid	None on performance	Check engine wiring harness
3216	13	3718	AMBER	A nominal system voltage mismatch has been detected by the aftertreatment intake NOx sensor	None on performance	Check engine wiring harness
3216	20	3748	AMBER	An offset in the intake NOx sensor reading has been detected	None on performance	Call Cummins Service

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During engine operation, the exhaust gasses from the engine enter the DOC where the exhaust gas hydrocarbons are oxidized to carbon dioxide. The exhaust gasses then travel through the DRT where Diesel Exhaust Fluid is sprayed into the chamber. The exhaust gasses and DEF mixture pass through a mixer plate and the mixture turns into an ammonia and iso-cyanic acid. This mixture then passes into the SCR chamber and through the SCR catalyst. The exhaust gasses then exit the exhaust pipe as nitrogen and water vapor.
The following figure shows the system components.



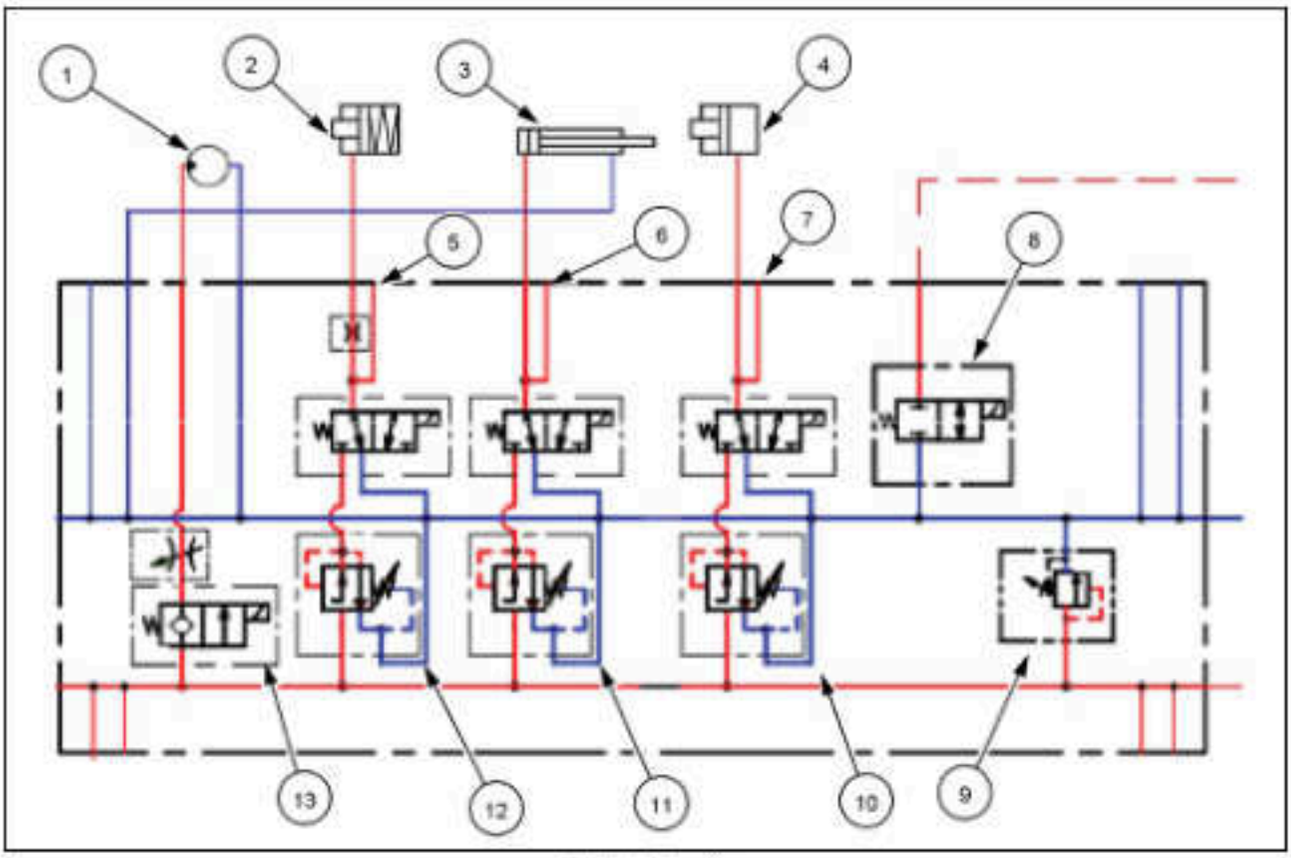
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Item	Description
1	Engine
2	Engine control module
3	Diesel Oxidation Catalyst (DOC)
4	Decomposition Reactor Tube (DRT)
5	Selective Catalyst Reduction (SCR)
6	Diesel Exhaust Fluid (DEF) Dosing Module
7	DEF Supply Module
8	DEF Tank
9	DEF quality sensor
10	DEF line heaters
11	Coolant flow control valve
12	NOx Sensor — Engine exhaust gasses out
13	Temperature sensor
14	NOx Sensor — System exhaust gasses out
15	Engine coolant supply line
16	Engine coolant return line
	Analog signal/Wiring harness
	Diesel Exhaust Fluid (DEF) lines
	Analog signal/Wiring harness
	Engine coolant lines

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Item	Description
1	Product ON/OFF Flow Control
2	Product ON/OFF
3	Relief Valve
4	Park Brake Release Test Port
5	Park Brake Release
6	Park Brake Release Pressure Reducing Valve
7	Ladder Test Port
8	Ladder Raise Valve
9	Ladder Pressure Reducing Valve
10	Differential Lock Test Port
11	Differential Lock Valve
12	Differential Lock Pressure Reducing Valve
13	Pressure Compensator Dump Valve

The following illustration is the auxiliary main valve schematic showing the flow paths to the individual components of the hydraulic system. Input oil flow is represented with red flow lines, and return flow is represented with blue lines.



RAIL140PE02EPA 14

Item	Description
1	Product Pump
2	Park Brake
3	Ladder
4	Differential
5	Park Brake Test Port
6	Ladder Test Port
7	Differential Lock Test Port
8	Pressure Compensator Dump Valve
9	Main Relief Valve
10	Differential Lock Pressure Reducing Valve
11	Ladder Pressure Reducing Valve
12	Park Brake Pressure Reducing Valve

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SEE ARMREST PAGE 2

SEE CAB HARNESSES PAGE 3

SEE FWA 44.25520 PAGE 4

PLUGS INTO HARNESS SUPER NODE COMBO #44.26208
SEE UPPER RIGHT HAND OF PAGE 4
NOTE: SHOWN PLUG INTO DRY BOX HARNESS #44.26207

HARNESS, COMBO LIQUID SYSTEM #44.26206
USE HARNESS #44.26207 WITH DRY BOX
SEE RIGHT HAND OF PAGE 4

SEE BOOM HARNESSES ON PAGE 2

SP.300R Transmission Harness
See page 2 for
SP.260R Transmission Harness

GUARDIAN REAR BOOM SPRAYER
GUARDIAN COMBO
SP.260R, PIN BREAK YFYM00925
SP.300R, PIN BREAK YFYM00925
SP.300C, PIN BREAK YFYM00950
ELECTRICAL SCHEMATIC
RAC 47932587
PAGE 1

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