SERVICE MANUAL

T9.435 / T9.480 / T9.530 / T9.565
T9.600 / T9.645 / T9.700
Tier 4B (final)
Tractor

PIN JEEZ00000FF405001 and above

Part number 48193205
1st edition English
October 2017

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 Tier 4B Tractor Service Manual | Publication 48193205

Order the manual at mid-west-tech.com >

Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1

[10.216] Fuel tanks 10.2

[10.202] Air cleaners and lines 10.3

[10.500] Selective Catalytic Reduction (SCR) exhaust treatment 10.4

[10.400] Engine cooling system 10.5

[10.414] Fan and drive 10.6

[10.310] Aftercooler 10.7

Power coupling 19

[19.100] Drive shaft 19.1

[19.110] Flywheel damper 19.2

Transmission 21

[21.113] Powershift transmission 21.1

[21.135] Powershift transmission external controls 21.2

[21.155] Powershift transmission internal components 21.3

[21.504] Continuously Variable Transmission (CVT) 21.4

[21.505] Continuously Variable Transmission (CVT) external controls 21.5

[21.506] Continuously Variable Transmission (CVT) hydraulic components 21.6

[21.507] Continuously Variable Transmission (CVT) internal components 21.7

Front axle system 25

[25.100] Powered front axle 25.1

[25.102] Front bevel gear set and differential 25.2

[25.310] Final drives 25.3

Rear axle system 27

[27.100] Powered rear axle 27.1

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >

[27.106] Rear bevel gear set and differential 27.2
[27.120] Planetary and final drives 27.3
Power Take-Off (PTO) 31
[31.104] Rear electro-hydraulic control 31.1
[31.110] One-speed rear Power Take-Off (PTO) 31.2
[31.220] Gearbox 31.3
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
[35.300] Reservoir, cooler, and filters 35.2
[35.106] Variable displacement pump 35.3
[35.102] Pump control valves 35.4
[35.105] Charge pump 35.5
[35.304] Combination pump units 35.6
[35.204] Remote control valves 35.7
[35.600] High flow hydraulics 35.8
Hitches, drawbars, and implement couplings 37
[37.100] Drawbars and towing hitches 37.1
Frames and ballasting 39
[39.100] Frame 39.1
Steering 41
[41.101] Steering control 41.1
[41.200] Hydraulic control components 41.2
[41.206] Pump 41.3
Wheels 44
[44.511] Front wheels 44.1

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >

[44.520] Rear wheels 44.2

Tracks and track suspension 48

[48.130] Track frame and driving wheels 48.1

[48.100] Tracks 48.2

[48.134] Track tension units 48.3

[48.138] Track rollers 48.4

Cab climate control 50

[50.104] Ventilation 50.1

[50.200] Air conditioning 50.2

[50.300] Cab pressurizing system 50.3

Electrical systems 55

[55.000] Electrical system 55.1

[55.100] Harnesses and connectors 55.2

[55.640] Electronic modules 55.3

[55.201] Engine starting system 55.4

[55.301] Alternator 55.5

[55.302] Battery 55.6

[55.010] Fuel injection system 55.7

[55.014] Engine intake and exhaust system 55.8

[55.988] Selective Catalytic Reduction (SCR) electrical system 55.9

[55.640] Electronic modules 55.10

[55.024] Transmission control system 55.11

[55.045] Front axle control system 55.12

[55.046] Rear axle control system 55.13

[55.522] Cab Power Take-Off (PTO) controls 55.14

[55.048] Rear Power Take-Off (PTO) control system 55.15

[55.035] Remote control valve electric control 55.16

[55.051] Cab Heating, Ventilation, and Air-Conditioning (HVAC) controls 55.17

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >

Gears

1. Inspect gears for pitted, nicked, burred or broken teeth. If the defect cannot be removed with a soft stone, replace the gear.
2. Inspect gear teeth for wear that may have destroyed the original tooth shape. If this condition is found, replace both the drive and driven gear.
3. Inspect thrust faces of gears for scores, scratches and burrs. If these defects cannot be removed with a soft stone, replace the gear.

Splined Parts (Gears, Shafts, Clutch Hubs and Drive Couplers)

Inspect splined parts for worn, stripped, twisted, chipped or burred splines. Remove burrs with a soft stone. Replace the part if other defects are found.

Clutch Plates

1. Inspect the clutch friction plates for cracked or glazed surfaces, or for cracked, worn or broken teeth. Replace damaged or worn plates.
2. Inspect the clutch steel plates for discoloration and warpage. Replace damaged steel plates.
3. New friction plates must be soaked in clean operating fluid for 20 minutes before installation.

Snap Rings

Replace damaged or distorted snap rings.

IMPORTANT REBUILD INFORMATION

If there has been a massive system failure, and the transmission must be removed for inspection and rebuilt, the oil cooler and all system hoses must also be cleaned and flushed.

On initial start-up of a rebuilt transmission system, change the filter element(s) after the first 30 minutes of operation, and then again after the first 8 hours of operation. This should be followed by a third filter element change after 50 hours of operation to ensure a clean system. From then on, change the filter element at the interval specified in the operators manual.

NOTICE: *The transmission oil cooler must be flushed after a major failure.*

Springs

Inspect springs for broken or distorted coils. Replace the spring if either of these defects are found. Refer to the specifications below.

PISTON RETURN SPRINGS SPECIFICATIONS

Spring Location	Wire Diameter	Outside Diameter	Free-Length	Qty/Clutch
1M, 1R, 2F and 2R Clutches	2.6 mm	14.0 mm	36.5 mm	16
1F Clutch	2.3 mm	11.6 mm	35.7 mm	20
4R Clutch	2.6 mm	14.0 mm	36.5 mm	16
5R Clutch	2.6 mm	14.0 mm	45.0 mm	16

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >

Wiring harnesses - Electrical schematic sheet 49 - Lighting - rear roof work lamps

Type	Component	Connector / Link	Description
Lamp	**E-910**	C910M	REAR LEFT INNER WORK LAMP
Lamp	**E-911**	C911M	REAR RIGHT INNER WORK LAMP
Lamp	**E-912**	C912M	REAR RIGHT OUTER WORK LAMP
Lamp	**E-913**	C913M	REAR LEFT OUTER WORK LAMP
Relay	**K-010**		REAR INNER ROOF LAMPS RELAY
Relay	**K-011**	C038	REAR OUTER ROOF LAMPS RELAY

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 Tier 4B Tractor Service Manual | Publication 48193205

Order the manual at mid-west-tech.com >

18015 - Rear hitch position control potentiometer - voltage too high

NOTE: *When the cause of the error code has been rectified, clear the error code and test the system for normal operation.*

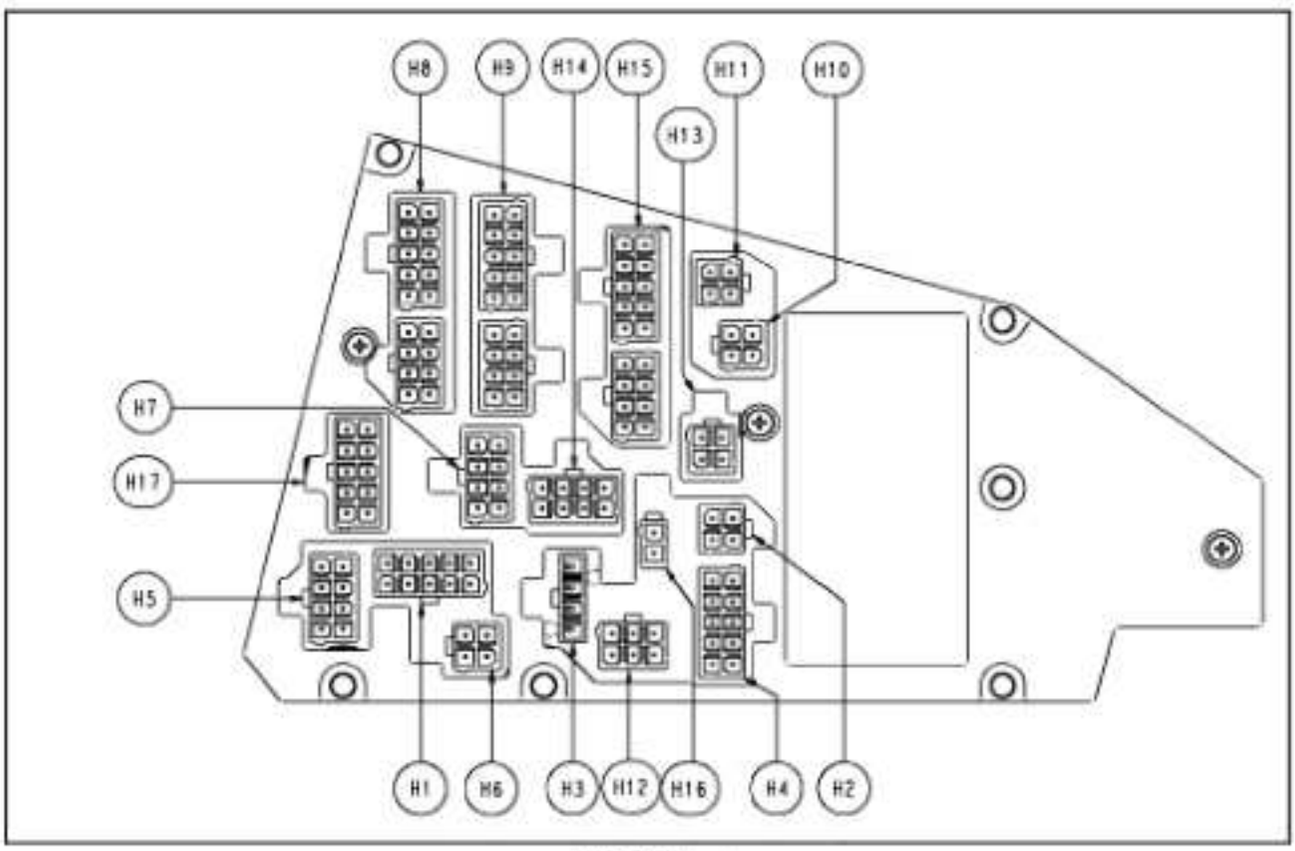
Cause:
Voltage from sensor too high (above **4.8 V**) as measured at armrest controller.

Possible failure modes:

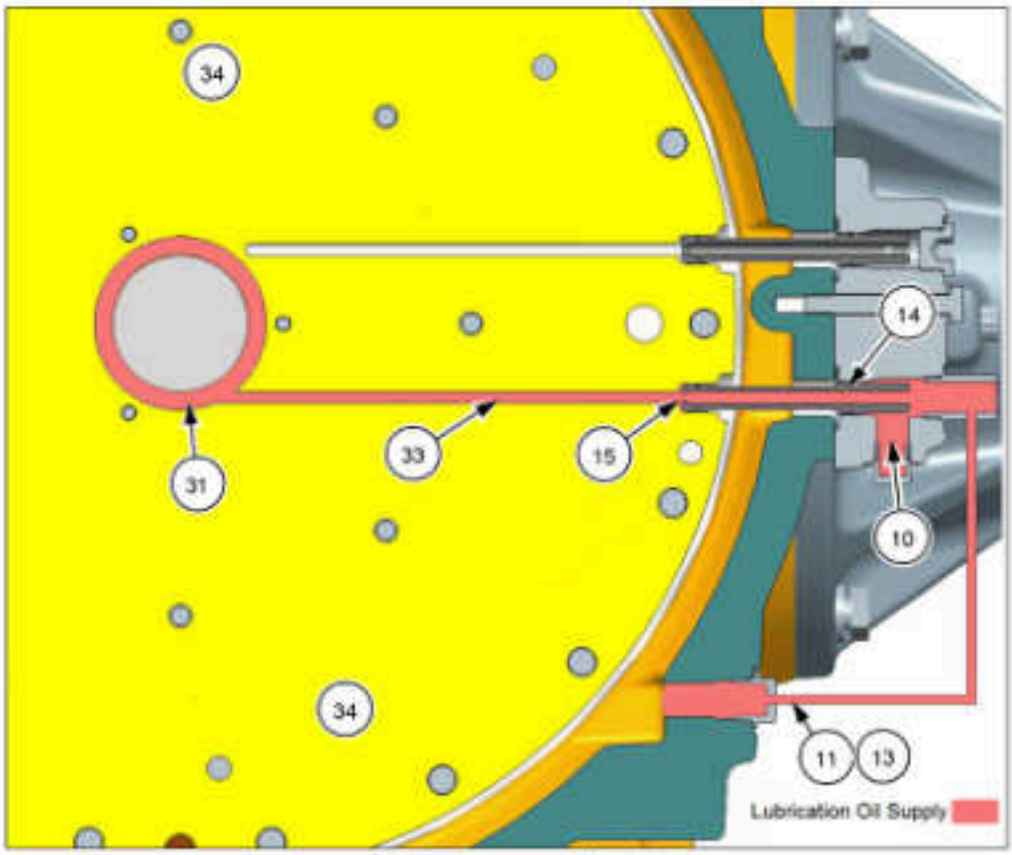
1. Faulty connector
2. Faulty hitch position control potentiometer
3. Faulty harness
4. Faulty controller

Solution:

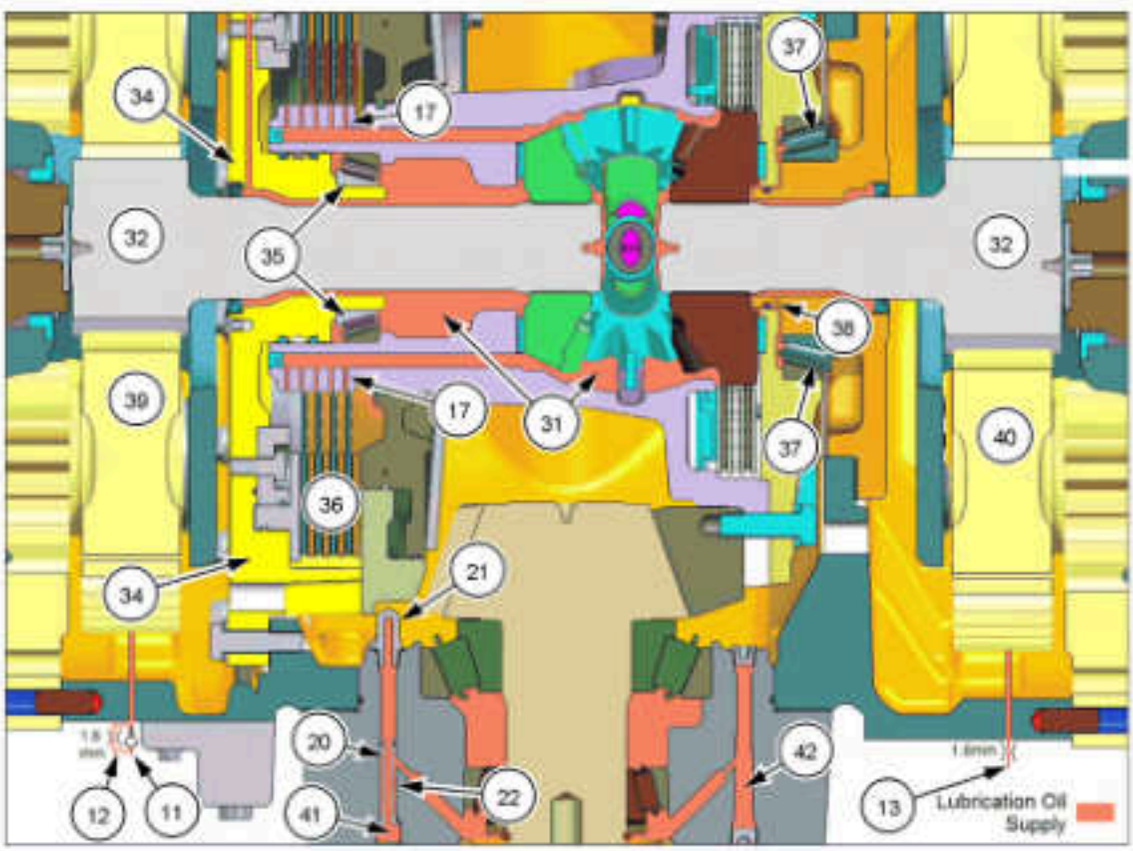
1. Before proceeding clear the error code with the approved diagnostic equipment. Run the machine under normal conditions and retest.
   A. If the error code is not indicated, check that the system is operating correctly.
   B. If the error code is indicated, continue to step **2**
2. Use the electronic service tool (EST) monitor screen function to check the hitch position control potentiometer. Refer to the electronic service tool (EST) user guide.
   A. If hitch position control potentiometer check is not okay, continue to step **3**
   B. If hitch position control potentiometer check is okay and the fault does not reoccur continue operation.
3. Check the hitch position control potentiometer.



MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >

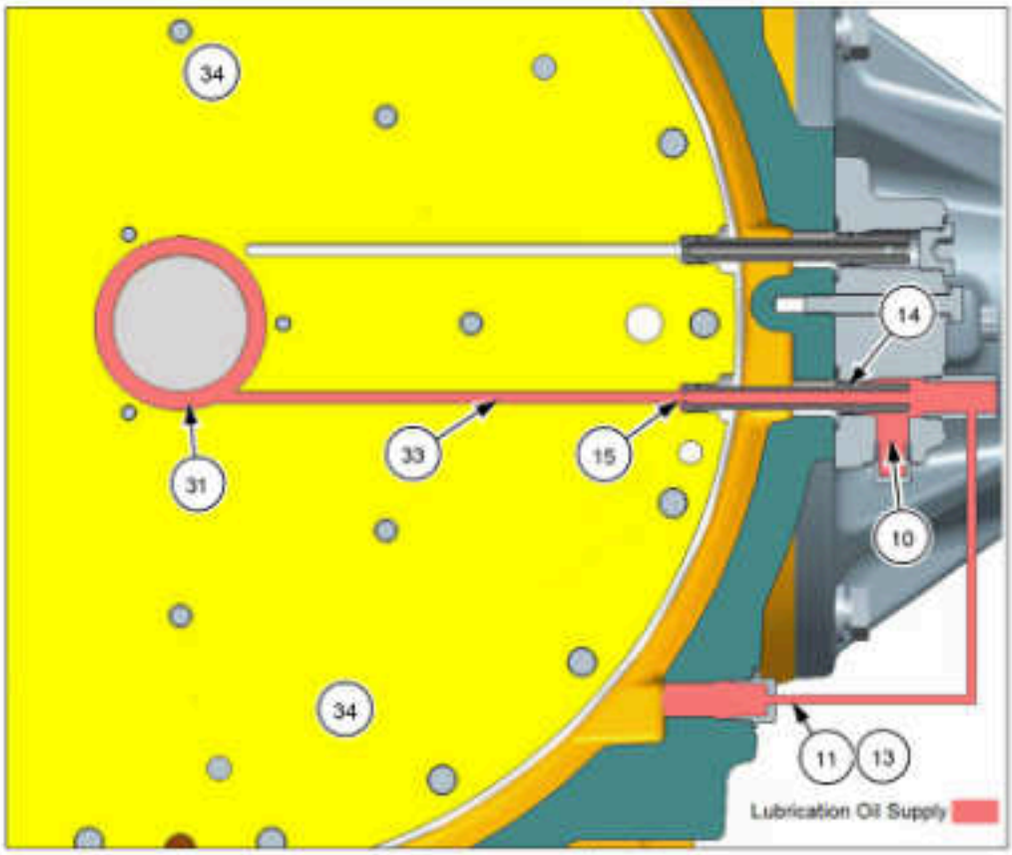


RAIL HTR00567FA 12

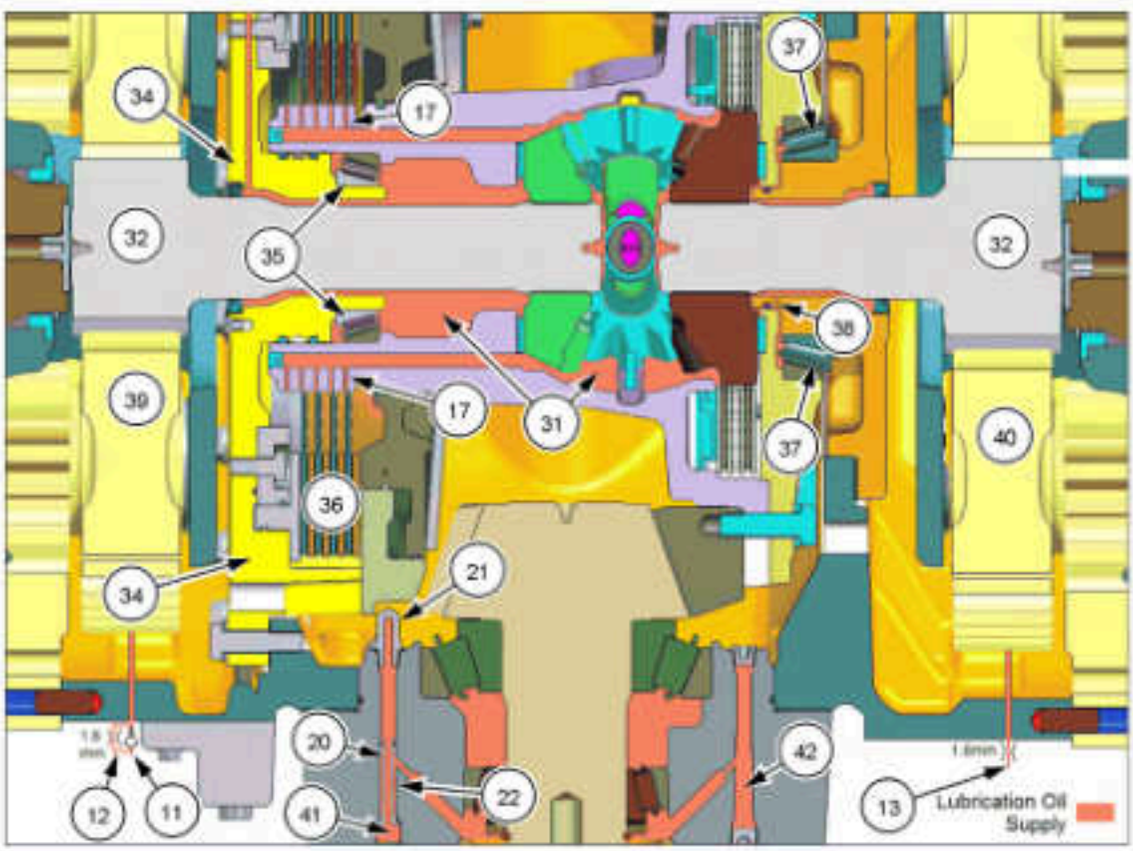


RAIL HTR00568FA 13

MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >

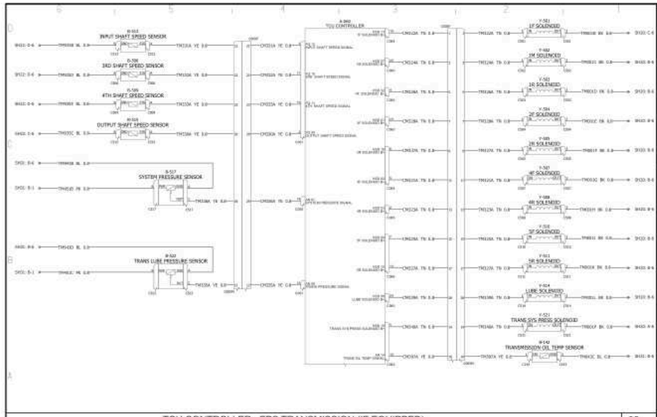


RAIL H1TR0056FA 12

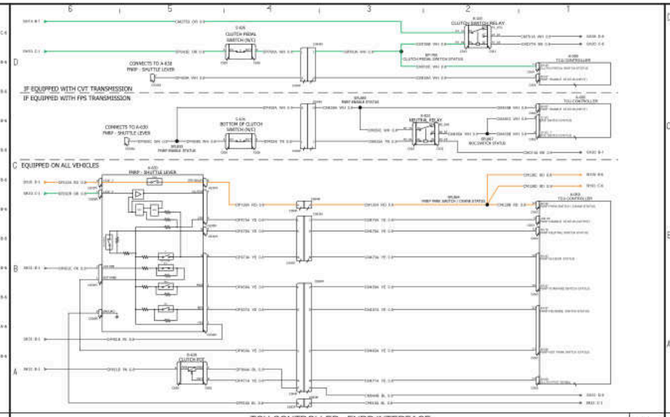


RAIL H1TR0056EA 13

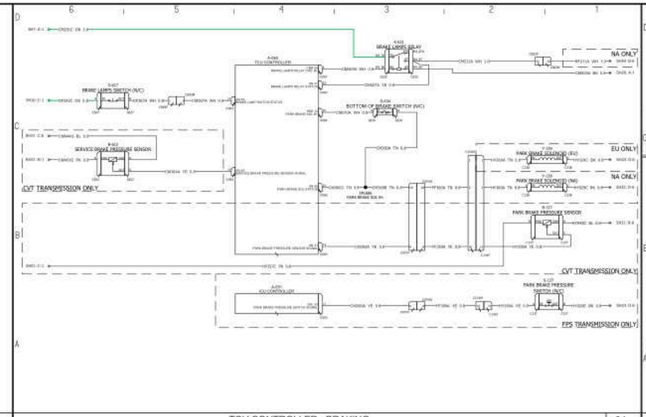
MidWestTech | New Holland T9.435, T9.480, T9.530, T9.565, T9.600, T9.645, T9.700 T... Order the manual at mid-west-tech.com >



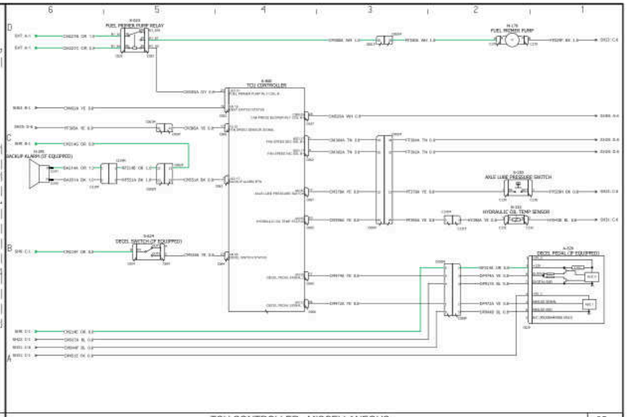
TCU CONTROLLER - FPS TRANSMISSION (IF EQUIPPED) | 32



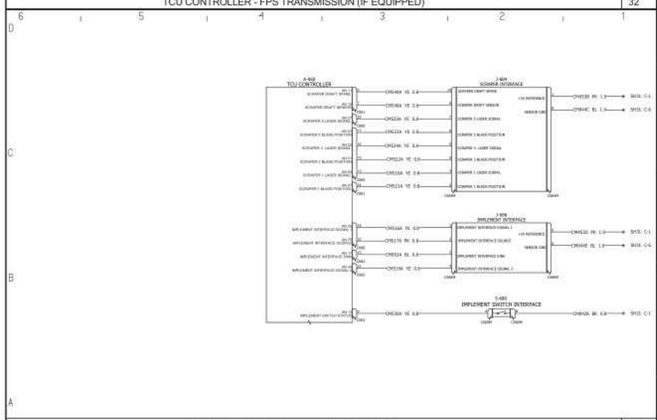
TCU CONTROLLER - FNRP INTERFACE | 33



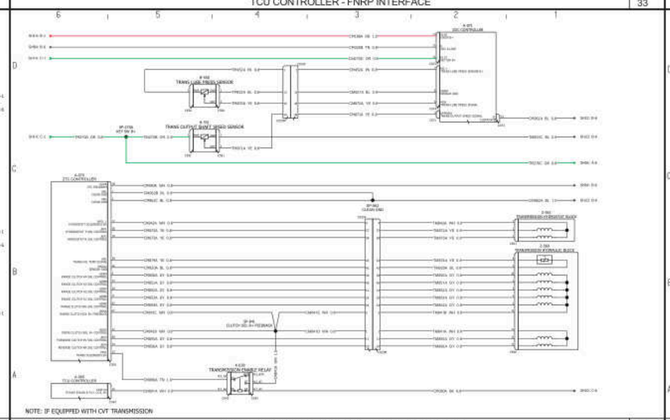
TCU CONTROLLER - BRAKING | 34



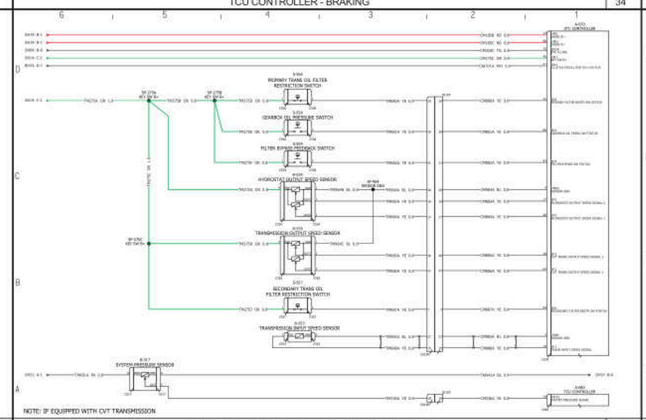
TCU CONTROLLER - MISCELLANEOUS | 35



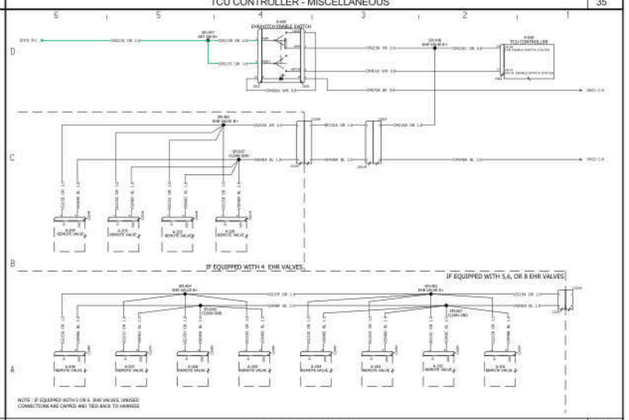
TCU CONTROLLER - IMPLEMENT CONTROLS | 36



CVT TRANSMISSION CONTROLLERS (IF EQUIPPED) | 37



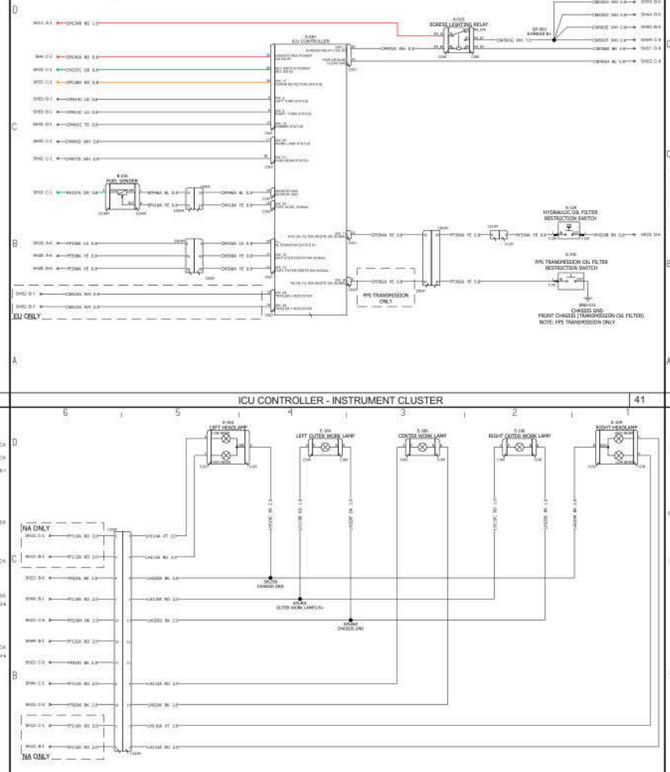
CVT TRANSMISSION CONTROLLERS (IF EQUIPPED) | 38



HYDRAULIC - EHR VALVES | 39

BLANK

HYDRAULIC - SECONDARY STEERING (IF EQUIPPED) | 40


ECU CONTROLLER
ECU CONTROLLER
SCRAPER LIGHTING RELAY
ECU CONTROLLER
SCRAPER LIGHTING RELAY
ECU CONTROLLER
SCRAPER LIGHTING RELAY