SERVICE MANUAL

P2080 / P2085

Disk Drill

Part number 47648338
2nd edition English
June 2014
Replaces part number 47484215

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 47648338

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

Contents

INTRODUCTION

Front axle system 25

[25.400] Non-powered front axle 25.1

Rear axle system 27

[27.550] Non-powered rear axle 27.1

Hydraulic systems 35

[35.744] Seeding hydraulic circuit 35.1

[35.912] Hydraulic seeding fan system 35.2

[35.946] Frame positioning lifting 35.3

Wheels 44

[44.511] Front wheels 44.1

Electrical systems 55

[55.000] Electrical system 55.1

[55.100] Harnesses and connectors 55.2

[55.511] Light harnesses 55.3

[55.516] Seeding control system 55.4

[55.517] Cab seeding controls 55.5

[55.640] Electronic modules 55.6

[55.DTC] FAULT CODES 55.7

Metering system 61

[61.904] Product metering 61.1

Seeding 77

[77.100] Product handling and delivery drive system 77.1

[77.101] Seeding fan system 77.2

[77.105] Seeding tool 77.3

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

Contents

INTRODUCTION

Foreword 3
Safety rules 4
Safety rules 5
Hand signals 11
Safety signs – Disk drill (*) 12
Safety signs – Disk drill with mounted tank (*) 24
Safety rules - Ecology and the environment 33
Basic instructions - Important notice regarding equipment servicing 34
Torque 35
Torque - Hydraulic tubes and fittings 37
Basic instructions – Measuring voltages 38
Basic instructions - Electrical testing - Connector inspection 40
Basic instructions - Electrical testing - Measuring voltage 44
Basic instructions - Electrical testing - Measuring resistance 45
Basic instructions - Electrical testing - Measuring continuity (resistance) 46
Basic instructions - Electrical testing - Short circuit to ground 47
Basic instructions - Electrical testing - Short circuit to high – Unwanted power 48
Basic instructions - Electrical testing - Short circuit pin to pin 49
Basic instructions - Electrical testing - Testing voltage 50
Basic instructions - Electrical testing - Continuity test – Open circuit 51
Basic instructions - Shop and assembly 52
Abbreviation 54
Dimension – Disk drill (*) 56
Dimension – Disk drill with mounted tank (*) 58
Hydraulic contamination 60
Product identification – Disk drill with mounted tank (*) 61
Product identification – Disk drill 62
Product identification – Machine orientation disk drill (*) 64
Product identification – Machine orientation disk drill with mounted tank (*) 66

(*) See content for specific models

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

Contents

Front axle system - 25

Non-powered front axle - 400

TECHNICAL DATA

Axle wheel hub
- General specification 3
- Torque (*) 3
- Torque (*) 3

SERVICE

Axle wheel hub
- Disassemble front dual walking frame wheels 4
- Disassemble single front caster 5
- Service instruction Caster Hub and Spindle Maintenance 6
- Assemble front dual walking frame wheels 9
- Assemble single front caster 10

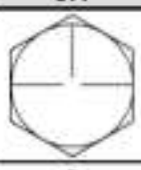
(*) See content for specific models

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

Torque

BOLT TORQUE INFORMATION

1. Fasteners should be replaced with the same or higher grade fasteners. If higher grade fasteners are used, these should only be tightened to the strength of the original.
2. Make sure the fastener's threads are clean and that thread engagement is started. This will prevent them from failing when being tightened.
3. Tighten plastic insert or crimped steel-type lock nuts to approximately **50 %** of the dry torque, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.
4. The L9 (Alloy) fasteners torque values are for a bolt, nut, and two washers. When using L9 (Alloy) fasteners, do not use the values in this table for tapped holes.

	GRADE						
	1 or 2	5	5.1	5.2	8	8.2	L9 (Alloy)
SAE Markings for Bolts and Cap Screws							
	2	5			8		L9 (Alloy)
SAE Markings for Hex Nuts							

	GRADE 2*		GRADE 5, 5.1 or 5.2		GRADE 8 or 8.2		GRADE L9 (Alloy)	
SIZE	Dry **	Lubricated **	Dry**	Lubricated **	Dry**	Lubricated **	Head	Nut
1/4 UNF	7.5 Nm	5.7 Nm	10.8 Nm	8.5 Nm	16.3 Nm	12.2 Nm	13.6 Nm	14.9 Nm
	5.5 lb ft	4.2 lb ft	8 lb ft	6.3 lb ft	12 lb ft	9 lb ft	10 lb ft	11 lb ft
1/4 UNC	8.5 Nm	6.4 Nm	13.6 Nm	9.8 Nm	19 Nm	13.6 Nm	16.3 Nm	17.6 Nm
	6.3 lb ft	4.7 lb ft	10 lb ft	7.2 lb ft	14 lb ft	10 lb ft	12 lb ft	13 lb ft
5/16 UNF	15 Nm	11 Nm	23 Nm	18 Nm	33 Nm	24 Nm	26 Nm	28 28 Nm
	11 lb ft	8 lb ft	17 lb ft	13 lb ft	24 lb ft	18 lb ft	19 lb ft	21 lb ft
5/16 UNC	16 Nm	12 Nm	26 Nm	19 Nm	37 Nm	27 Nm	27 Nm	31 Nm
	12 lb ft	9 lb ft	19 lb ft	14 lb ft	27 lb ft	20 lb ft	20 lb ft	23 lb ft
3/8 UNF	27 Nm	20 Nm	41 Nm	31 Nm	61 Nm	47 Nm	41 Nm	45 Nm
	20 lb ft	15 lb ft	30 lb ft	23 lb ft	45 lb ft	35 lb ft	30 lb ft	33 lb ft
3/8 UNC	31 Nm	23 Nm	47 Nm	34 Nm	68 Nm	47 Nm	47 Nm	52 Nm
	23 lb ft	17 lb ft	35 lb ft	25 lb ft	50 lb ft	35 lb ft	35 lb ft	38 lb ft
7/16 UNF	43 Nm	33 Nm	68 Nm	47 Nm	95 Nm	68 Nm	75 Nm	81 Nm
	32 lb ft	24 lb ft	50 lb ft	35 lb ft	70 lb ft	50 lb ft	55 lb ft	60 lb ft
7/16 UNC	49 Nm	37 Nm	75 Nm	54 Nm	108 Nm	81 Nm	81 Nm	88 Nm
	36 lb ft	27 lb ft	55 lb ft	40 lb ft	80 lb ft	60 lb ft	60 lb ft	65 lb ft
1/2 UNF	68 Nm	47 Nm	102 Nm	75 Nm	149 Nm	108 Nm	115 Nm	129 Nm
	50 lb ft	35 lb ft	75 lb ft	55 lb ft	110 lb ft	80 lb ft	85 lb ft	95 lb ft
1/2 UNC	75 Nm	54 Nm	115 Nm	88 Nm	163 Nm	122 Nm	129 Nm	142 Nm
	55 lb ft	40 lb ft	85 lb ft	65 lb ft	120 lb ft	90 lb ft	95 lb ft	105 lb ft
9/16 UNF	95 Nm	75 Nm	149 Nm	108 Nm	203 Nm	149 Nm	163 Nm	190 Nm
	70 lb ft	55 lb ft	110 lb ft	80 lb ft	150 lb ft	110 lb ft	120 lb ft	140 lb ft
9/16 UNC	108 Nm	81 Nm	163 Nm	122 Nm	231 Nm	176 Nm	183 Nm	203 Nm
	80 lb ft	60 lb ft	120 lb ft	90 lb ft	170 lb ft	130 lb ft	135 lb ft	150 lb ft
5/8 UNF	136 Nm	102 Nm	203 Nm	149 Nm	285 Nm	217 Nm	231 Nm	251 Nm
	100 lb ft	75 lb ft	150 lb ft	110 lb ft	210 lb ft	160 lb ft	170 lb ft	185 lb ft
5/8 UNC	149 Nm	115 Nm	231 Nm	176 Nm	325 Nm	244 Nm	258 Nm	278 Nm
	110 lb ft	85 lb ft	170 lb ft	130 lb ft	240 lb ft	180 lb ft	190 lb ft	205 lb ft

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

CONNECTOR X-351 - MODULE_A

12_16_12

CONNECTOR X-351 - MODULE_A			
PIN NUMBER	WIRE NUMBER	CIRCUIT REFERENCE	ELECTRICAL SCHEMATIC FRAME
1	70 (YE)	ROW_W1	Wire harnesses - Electrical schematic sheet 06 (55.100)
2	71 (YE)	ROW_W2	Wire harnesses - Electrical schematic sheet 06 (55.100)
3	72 (YE)	ROW_W3	Wire harnesses - Electrical schematic sheet 06 (55.100)
4	73 (YE)	ROW_W4	Wire harnesses - Electrical schematic sheet 06 (55.100)
5	74 (YE)	ROW_W5	Wire harnesses - Electrical schematic sheet 06 (55.100)
6	75 (YE)	ROW_W6	Wire harnesses - Electrical schematic sheet 06 (55.100)
7	76 (YE)	ROW_W7	Wire harnesses - Electrical schematic sheet 07 (55.100)
8	77 (YE)	ROW_W8	Wire harnesses - Electrical schematic sheet 07 (55.100)
9	78 (YE))	ROW_W9	Wire harnesses - Electrical schematic sheet 07 (55.100)
10	79 (YE)	ROW_W11	Wire harnesses - Electrical schematic sheet 07 (55.100)
11	80 (YE))	ROW_W11	Wire harnesses - Electrical schematic sheet 07 (55.100)
12	81 (YE)	ROW_W12	Wire harnesses - Electrical schematic sheet 07 (55.100)

18_28_18

CONNECTOR X-351 - MODULE_A			
PIN NUMBER	WIRE NUMBER	CIRCUIT REFERENCE	ELECTRICAL SCHEMATIC FRAME
1	70 (YE)	ROW_W1	Wire harnesses - Electrical schematic sheet 10 (55.100)
2	71 (YE)	ROW_W2	Wire harnesses - Electrical schematic sheet 10 (55.100)
3	72 (YE)	ROW_W3	Wire harnesses - Electrical schematic sheet 10 (55.100)
4	73 (YE)	ROW_W4	Wire harnesses - Electrical schematic sheet 10 (55.100)
5	74 (YE)	ROW_W5	Wire harnesses - Electrical schematic sheet 10 (55.100)
6	75 (YE)	ROW_W6	Wire harnesses - Electrical schematic sheet 10 (55.100)
7	76 (YE)	ROW_W7	Wire harnesses - Electrical schematic sheet 11 (55.100)
8	77 (YE)	ROW_W8	Wire harnesses - Electrical schematic sheet 11 (55.100)
9	78 (YE))	ROW_W9	Wire harnesses - Electrical schematic sheet 11 (55.100)
10	79 (YE)	ROW_W11	Wire harnesses - Electrical schematic sheet 11 (55.100)
11	80 (YE))	ROW_W11	Wire harnesses - Electrical schematic sheet 11 (55.100)

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

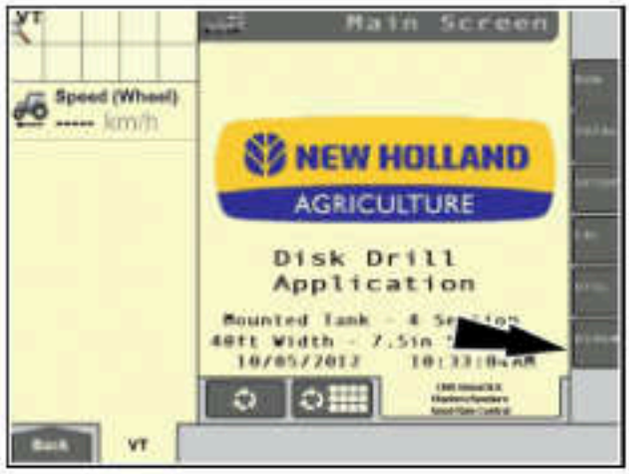
Seeding fan system - Troubleshooting - mounted tank models only

Problem	Possible Cause	Correction
No oil flow to or from the fan motor.	Hydraulic couplers dirty or damaged.	Check hydraulic couplers and clean or replace if required.
	Control valve closed.	Operate control lever.
	Extremely low oil level.	Maintain proper hydraulic fluid levels.
	Hydraulic hose coupler not inserted.	Reconnect the coupler.
	Tractor control valve line not open.	Pressurize return line briefly to open coupler.
	Hydraulic hose is pinched, collapsed or burst.	Inspect and repair as required.
	Faulty fan motor.	Service or replace the fan motor.
	Failed coupling to fan impeller shaft.	Return for service.
	Fan impeller is jammed.	Clear obstruction. Adjust to remove drag.
	Fan bearing is seized.	Replace bearings.
	Return line is being pressurized.	Change in oil flow direction.
Fan impeller is turning too heavy.	Fan bearings are seizing.	Replace fan bearings.
	Impeller is dragging on the fan housing.	Inspect fan and repair or replace as required.
Fan out of balance.	Dirt or ice buildup in impeller.	Clean the fan.
	Balance weights removed.	Rebalance the fan.
	Worn fan bearings.	Replace the fan assembly.
	Fan speed too high.	Operate fan below **5500 RPM**.
	Fan belts too tight.	Loosen fan belts and adjust to specifications.
Fan is turning too slowly.	Flow control valve set too low at tractor.	Increase flow control setting.
	Tractor hydraulic pressure is too low.	Increase tractor engine speed.
	Hydraulic hose is pinched.	Inspect and repair.
	Quick coupler is not fully seated.	Reconnect and replace if required.
	Return line is being pressurized.	Change oil flow direction.
	Leaking supply line.	Repair as required.
	Hydraulic fluid level in tractor is very low.	Maintain adequate oil level.
	Hydraulic oil is too cold.	Allow oil to circulate before operation.
	Faulty fan motor.	Repair or replace as required.
	Hydraulic oil is too hot.	Service the cooling system, add oil.
	Oil bypassing fan motor (variable drive only)	Faulty pressure flow compensator (or installed backwards)
Fan speed is uneven.	Operating with open center hydraulic system.	Closed center or load sensing hydraulic system is recommended.
	Tractor oil filters are plugging.	Service tractor hydraulic filters.
	Low hydraulic fluid level in tractor.	Maintain adequate oil levels.
	Faulty flow control valve.	Service tractor hydraulic system.
Oil is leaking at the fan motor.	Hydraulic hose fittings are not tight.	Apply thread sealant and tighten.
	Motor bolts are not tight.	Tighten motor bolts.
	Faulty fan motor shaft seal.	Some wetness is expected. Return for service if excessive.
	Faulty fan motor.	Return for service.
	Case drain line not connected.	Connect the drain line and replace the motor seal.
	Case drain line is obstructed.	Check that the case drain line is clear of obstructions.
	Case drain line couplers not fully seated.	Check that couplers and tips are fully seated.

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

Electronic control - Check what's connected

1. Select DIAGN for 'diagnostics' from the Main Screen.



2. Select CONN for "connected".



3. Each item will have an icon indicating it's status:



✔ indicates the item is present and expected.

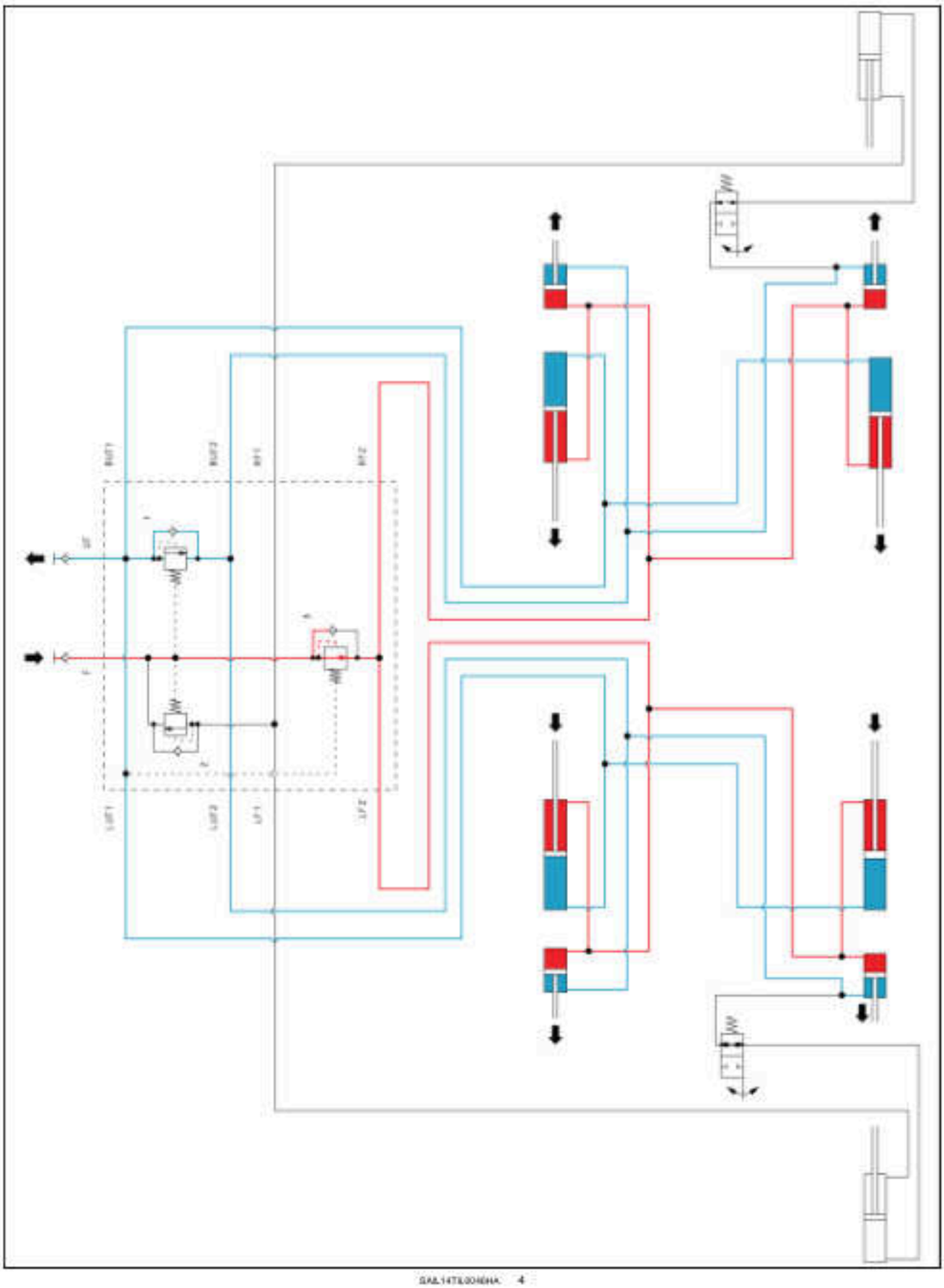
✘ indicates the item is not present, but expected.

? indicates the item is present, but not expected.

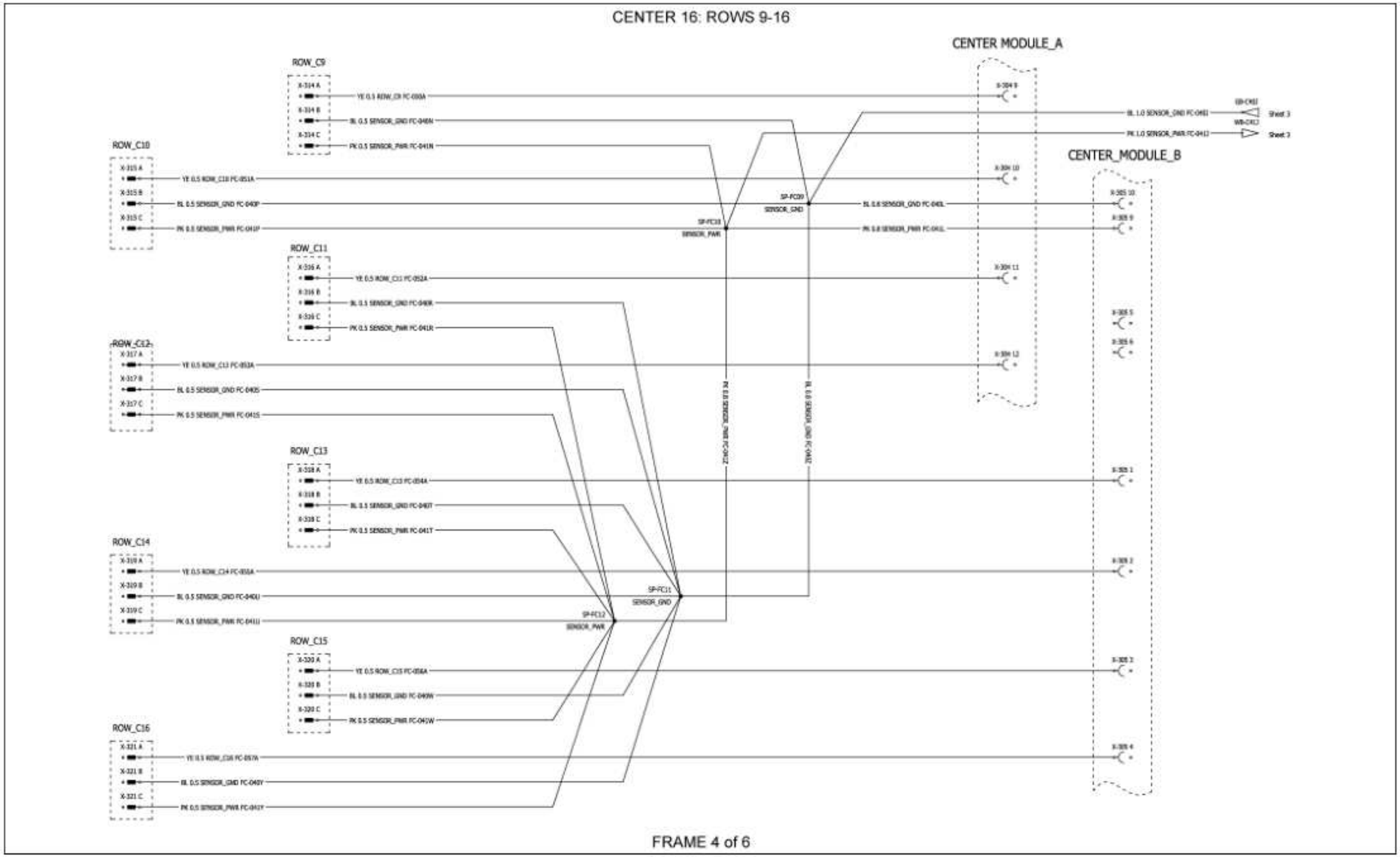
▭ indicates the item is not present, and not expected.

MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >

Fold stage 2



MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 476... Order the manual at mid-west-tech.com >



MidWestTech | New Holland P2080, P2085 Disk Drill Service Manual | Publication 47648338
Order the manual at mid-west-tech.com >