AXIAL-FLOW® 5140
AXIAL-FLOW® 6140
AXIAL-FLOW® 7140
Tier 4B (final)
Combine

PIN YFG014001 and above

SERVICE MANUAL

Part number 47956014
1st edition English
January 2016

CASE IH AGRICULTURE

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

Contents

INTRODUCTION

Foreword - Important notice regarding equipment servicing 3
Safety rules - Ecology and the environment (*) 4
Safety rules - Personal safety (*) 5
Safety rules (*) 6
Safety rules (*) 7
Basic instructions - Shop and assembly 8
Torque - Minimum tightening torques for normal assembly (*) 10
Torque - Standard torque data for hydraulics (*) 15
Basic instructions - Chain Wear Tables - Roller Chains (*) 17
General specification 19
Dimension 24
Capacities 27
Product overview 29
Product identification 30
Frame - Product identification - Machine orientation 31
Frame - Product identification - Machine orientation 32

(*) See content for specific models

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual |... Order the manual at mid-west-tech.com >

Contents

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

[10.254] Intake and exhaust manifolds and muffler 10.6

[10.304] Engine lubrication system 10.7

[10.310] Aftercooler 10.8

[10.400] Engine cooling system 10.9

[10.408] Oil cooler and lines 10.10

[10.414] Fan and drive 10.11

[10.419] Stationary air screen 10.12

[10.450] Engine air compressor 10.13

[10.500] Selective Catalytic Reduction (SCR) exhaust treatment 10.14

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual |... Order the manual at mid-west-tech.com >

Contents

Engine - 10

Engine and crankcase - 001

SERVICE

Engine

Remove engine oil drain line and drain valve 3
Install engine oil drain line and drain valve 6
Change fluid – Maintenance Chart – Recommended operating temperature range (*) 9
Remove engine serpentine belt (*) 10
Install engine serpentine belt (*) 12
Remove engine serpentine belt (*) 13
Install engine serpentine belt (*) 15
Remove 5140 Engine (*) 17
Install 5140 Engine (*) 23
Remove 6140, 7140 Engine (*) 28
Install 6140, 7140 Engine (*) 34
Drain fluid 39

(*) See content for specific models

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual |... Order the manual at mid-west-tech.com >

Wiring harnesses - Electrical schematic sheet 55 – Heating, Ventilation, and Air conditioning (HVAC) system

Type	Component	Connector / Link	Description
ECU	**A-013**	**X-013A X-013B**	BLOWER SPEED CONTROL MODULE
ECU	**A-014**	**X-014**	ATC CONTROL MODULE
Fuse	**F-017**	**X-901A**	HVAC BLOWER MOTOR
Fuse	**F-034**	**X-902A**	HVAC COMPRESSOR
Ground	**GND-564**	GND-564	COMPONENT CASE GROUND
Relay	**K-015**	**X-901D**	HVAC COMPRESSOR
Motor	**M-602**	**X-602P X-602N**	BLOWER MOTOR
Motor	**M-603**	**X-603**	HEATER VALVE
Connector	X-013A	**X-013A**	BLOWER SPEED CONTROL MODULE
Connector	X-013B	**X-013B**	BLOWER SPEED CONTROL MODULE
Connector	X-014	**X-014**	ATC CONTROL MODULE
Connector	X-1003	**X-1003**	TO CAB MAIN HARNESS
Connector	X-1004	**X-1004**	TO UPPER ROOF HARNESS
Connector	X-1040	**X-1040**	TO LH MAIN HARNESS
Connector	X-1045A	**X-1045A**	TO LH MAIN HARNESS
Connector	X-417C	**X-417C**	A/C COMPRESSOR CLUTCH
Connector	X-417N	**X-417N**	A/C COMPRESSOR CLUTCH
Connector	X-552R	**X-552R**	SWITCHED B+ POST
Connector	X-602N	**X-602N**	BLOWER MOTOR (-)
Connector	X-602P	**X-602P**	BLOWER MOTOR (+)
Connector	X-603	**X-603**	HEATER VALVE
Connector	X-901A	**X-901A**	CAB ROOF FUSE MODULE
Connector	X-901D	**X-901D**	CAB MAIN RELAY MODULE
Connector	X-902A	**X-902A**	CAB MAIN FUSE MODULE
Solenoid	**Y-417C**	**X-417C**	A/C COMPRESSOR CLUTCH (CURSOR ENGINE)
Solenoid	**Y-417N**	**X-417N**	A/C COMPRESSOR CLUTCH (NEF ENGINE)

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual | Publication 47956014

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

E0151-11-Fan Decrease Relay - Unidentified failure code

Control Module : UCM1

Context:
The Universal Control Module 1 (UCM1) monitors the operation of the fan decrease relay K-025.

Cause:
The UCM1 has sensed a driver error in the fan decrease relay signal circuit.

Possible failure modes:

1. Faulty relay.
2. Faulty driver / module.

Solution:

1. Verify that the fault is present and active.

   Use the display monitor diagnostic capability to view parameter status.

   For additional information about the monitor diagnostic capability, see **Electrical system - Dynamic description Theory of operation – Display monitor diagnostic screens (55.000)**.

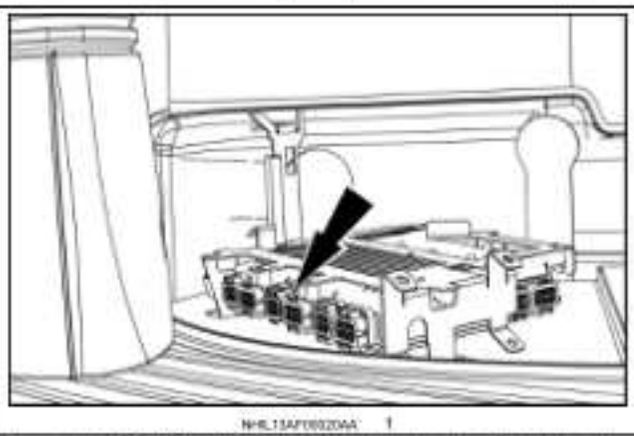
   A. If the fault is still present and active, continue to Step **2**.

   B. If the fault is not present and active, the fault may intermittent and not currently active. Continue to Step **3**.

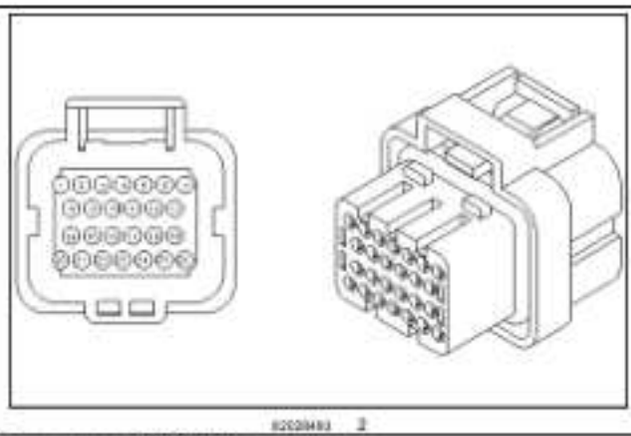
2. Perform the following circuit wiring test.

   Place the key switch in the OFF position.

   Disconnect the Cab Main (CM) harness from the UCM at connector X-001C2A.



Connector **X-001C2A** is located under the right hand console.



Connector **X-001C2A**.

   Use a multimeter to check for continuity:

From	To	Result
Cab Main (CM) harness side of connector X-001C2A pin 23	Right Main Frame (RH) harness side of connector X-902B pin R2_86	Should be continuity

   A. If there is continuity, the UCM has failed internally. Load the appropriate module software. If the fault re-occurs, replace the module.

   B. If there is no continuity, there is a faulty wire between connector X-001C2A pin 23 and connector X-902B pin R2_86, wire 072 gray.Locate the faulty wiring. Repair the faulty wiring.

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual |... Order the manual at mid-west-tech.com >

Clearance between rotor front bearing housing and rotor impeller blades	**0.76 - 3.81 mm (0.03 - 0.15 in)**
Clearance between rotor speed sensor and speed sprocket	**0.356 - 2.286 mm (0.014 - 0.090 in)**

Rotor - Torque

AXIAL-FLOW® 5140	NA
AXIAL-FLOW® 6140	NA
AXIAL-FLOW® 7140	NA

Rotor speed sensor sprocket retaining nut	**190 - 217 N·m (140 - 160 lb ft)**
Rotor speed sensor lock nut	**48 - 57 N·m (35 - 42 lb ft)**
M12 Front rotor bearing support to bearing housing bolts	**121 - 134 N·m (89 - 99 lb ft)**
M16 Front rotor bearing support to bearing housing bolts	**301 - 407 N·m (222 - 300 lb ft)**

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual |... Order the manual at mid-west-tech.com >

ELECTRICAL SYSTEMS - 55

[55.000] Electrical system - 55.1

AXIAL-FLOW® 5140
AXIAL-FLOW® 6140
AXIAL-FLOW® 7140
Tier 4B (final)
Combine

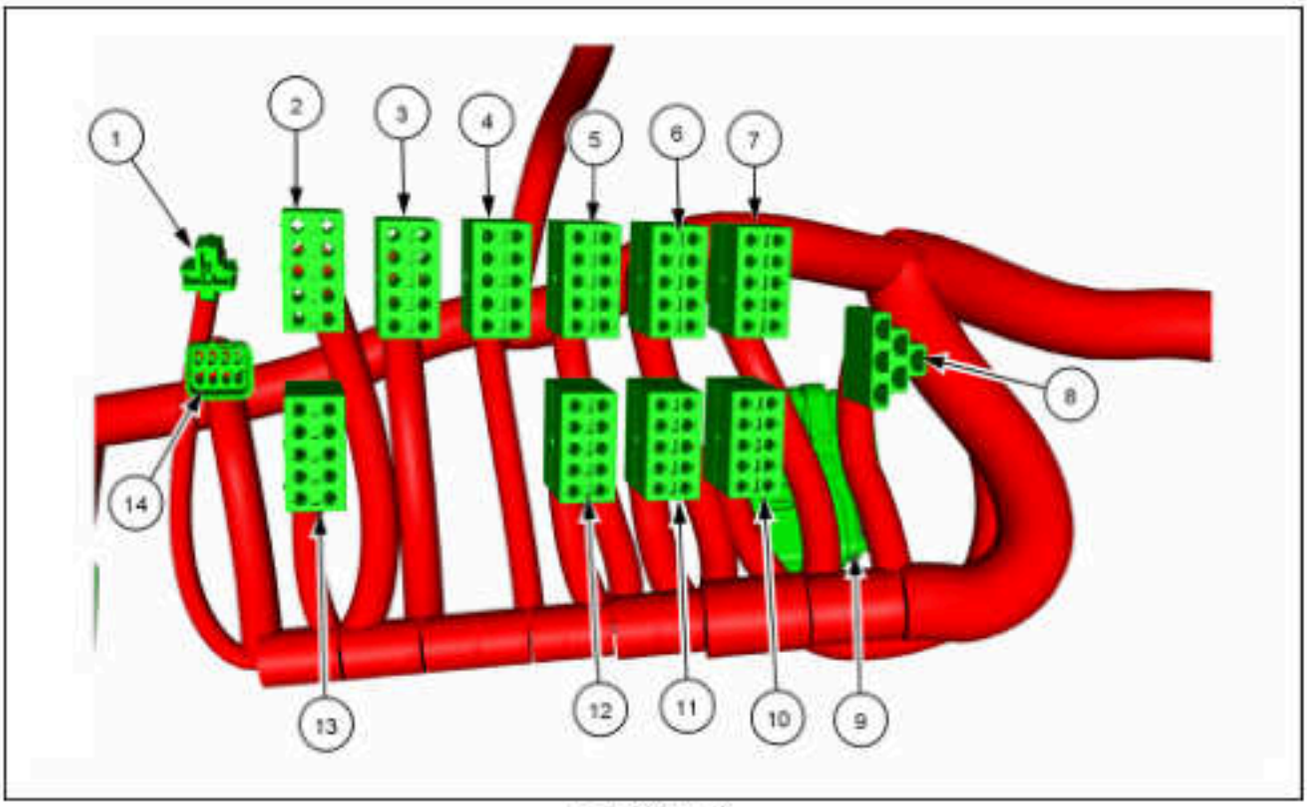
PIN YFG014001 and above

SERVICE MANUAL

Part number 47969405
1st edition English
January 2016

CASE IH AGRICULTURE

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual | Publi... Order the manual at mid-west-tech.com >

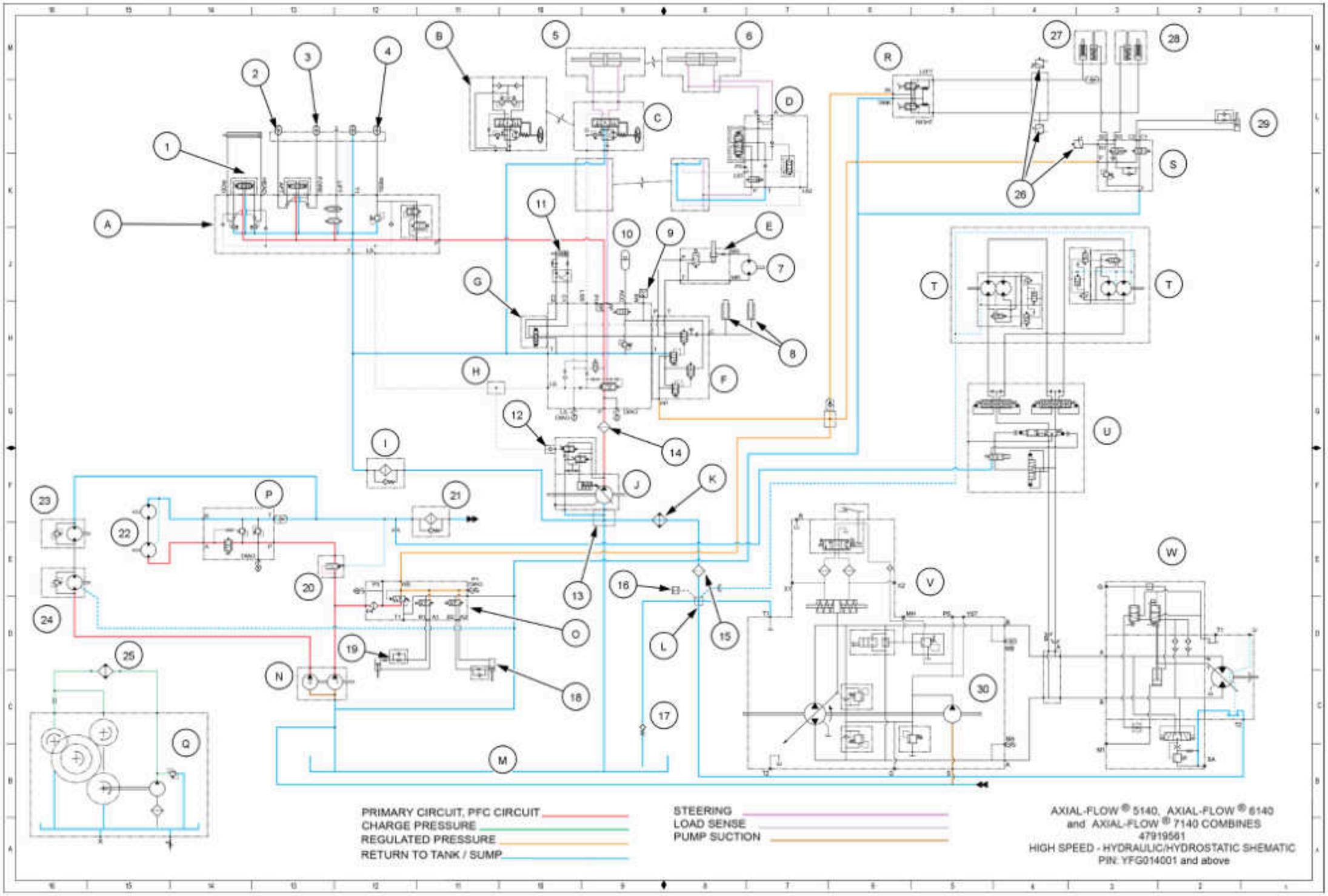


NHL15AF0176HA 3

Lower Roof (CR) wire harness

Item	Connector	Description
(1)	X-522	Headliner accessory outlet J-522
(2)	X-847	Folding unload tube S-847
(3)	X-846	Grain tank covers S-846
(4)	X-849	Autoguidance control S-849
(5)	X-825	Road mode S-825
(6)	X-807	Hazards lights S-807
(7)	X-844	Left-hand front speaker H-754
(8)	X-845	Lights master S-845
(9)	X-014	ATC Control Module A-014
(10)	X-813	Distance spot lights S-813
(11)	X-802	Windshield wiper S-802
(12)	X-803	Windshield washer S-803
(13)	X-805	Mirror heat S-803
(14)	X-804	Mirror adjust S-804

MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual |... Order the manual at mid-west-tech.com >



MidWestTech | Case Axial Flow 5140, 6140, 7140 Tier 4B Combine Service Manual | Publication 47956014
Order the manual at mid-west-tech.com >