FARMALL® 85C
FARMALL® 95C
FARMALL® 105C
FARMALL® 115C
With Hi-Lo Transmission
With Mechanical or Power Shuttle Transmission
Tractor

With Hi-Lo Transmission PIN ZxJV0xxxx and above
With Mechanical or Power Shuttle Transmission PIN ZxJV5xxxx and above

SERVICE MANUAL

Part number 47840678
English
March 2015
Replaces part number 47561951

CASE IH AGRICULTURE

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Air conditioning - Pressure test Example 11

Farmall® 105C with cab, with hi-lo transmission [ZxJV0xxxx]	
Farmall® 105C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	
Farmall® 115C with cab, with hi-lo transmission [ZxJV0xxxx]	
Farmall® 115C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	
Farmall® 85C with cab, with hi-lo transmission [ZxJV0xxxx]	
Farmall® 85C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	
Farmall® 95C with cab, with hi-lo transmission [ZxJV0xxxx]	
Farmall® 95C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	

1. Compressor cycles (cuts in and out) too rapidly.
2. Low side pressure readings are too high, during on and off compressor cycles and between cycles. The readings should be:
    1. **20.7 - 103.4 kPa (3 - 15 psi)** - cycle on
    2. **248.2 - 268.9 kPa (36 - 39 psi)** - cycle off
    3. **165.5 - 193.1 kPa (24 - 28 psi)** - between cycles
3. High side pressure is normal. See the pressure-temperature chart for the correct gauge readings.

DIAGNOSIS: Defective thermostatic switch.

CORRECTIVE PROCEDURES

1. Stop the engine and shut off air conditioning system.
2. Replace thermostatic switch.
3. Install the switch's temperature sensing line in the same position and depth (in the evaporator core) as previous bulb.

⚠ WARNING

Escaping refrigerant may cause frostbite!
If you get refrigerant on your skin:
-Warm the area with your hand or lukewarm water, 32 - 38 °C (90 - 100 °F).
-Cover the area loosely with a bandage to protect the area and the prevent infection.
-Seek medical assistance immediately.
Failure to comply could result in death or serious injury.

W0361A

The line is filled with refrigerant under pressure. Do not kink or bend it too sharply.

4. Performance test the system.

NOTE: *Test procedure based upon ambient temperature of **35 °C (95 °F)**. For proper high side gauge reading for other ambient temperatures, refer to the pressure-temperature chart.*

Ambient Temperature* °C (°F)	High Pressure Gauge Reading kPa (psi)
21 °C (70 °F)	786 - 924 kPa (114 - 134 psi)
24 °C (75 °F)	869 - 1007 kPa (126 - 146 psi)
26 °C (80 °F)	972 - 1110 kPa (141 - 161 psi)

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3052-Battery voltage to ECU - voltage too low

Control Module : ECU

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

Cause:
This code may be induced during cold starting.

Possible failure modes:

1. Faulty battery
2. Faulty charging system
3. Faulty connector
4. Faulty harness
5. Faulty engine controller

Solution:

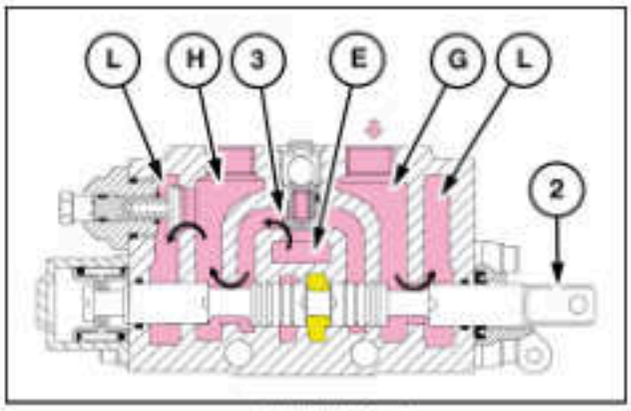
1. Before proceeding clear the error code with the approved diagnostic equipment. Run the tractor under normal conditions and retest.
   A. If the error code is not indicated, check that the system is operating correctly.
   B. If the error code is indicated, continue to step **2**
2. Check the battery condition and terminal connections.
   A. If the battery or terminals are faulty, repair or replace as required.
   B. If the battery and terminals are okay, continue to step **3**
3. Check the battery voltage on the instrument cluster.
   A. Start the engine and run at 2000 rev/min. If the voltage displayed is not between **12 - 15 V**, continue to test for a fault in the charging system.
   B. If the battery voltage is okay, continue to step **4**
4. Check the engine controller connector **X-937**.
   A. Ensure the connector is connected, not damaged, the pins are in the correct position and that the fit is tight. Repair or replace as needed.
   B. If the connector is okay, continue to step **5**
5. Check the engine controller fuses F-053, F-054 and F-059.
   A. Ensure the fuses are not blown and that the fit is tight. Repair or replace as needed.
   B. If the fuses are okay, continue to step **6**
6. Check all power supplies and grounds to the engine controller.
   A. If a fault is indicated, repair or replace the harness as required.
   B. If no faults are indicated, download the correct level of software. If the fault re–occurs, remove and replace the engine controller.

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Lower

To operate the lowering stage, you need to pull the control lever forward and trigger the following actions:

- The control cable moves and shifts the spool **(2)** of the control valve.
- The movement of the spool allows:
  - The oil in the cylinder to flow to the drain **(L)** through line **(G)**
  - The entire flow of oil from the pump to run to the drain **(L)** through check valve **(3)** and line **(H)**.



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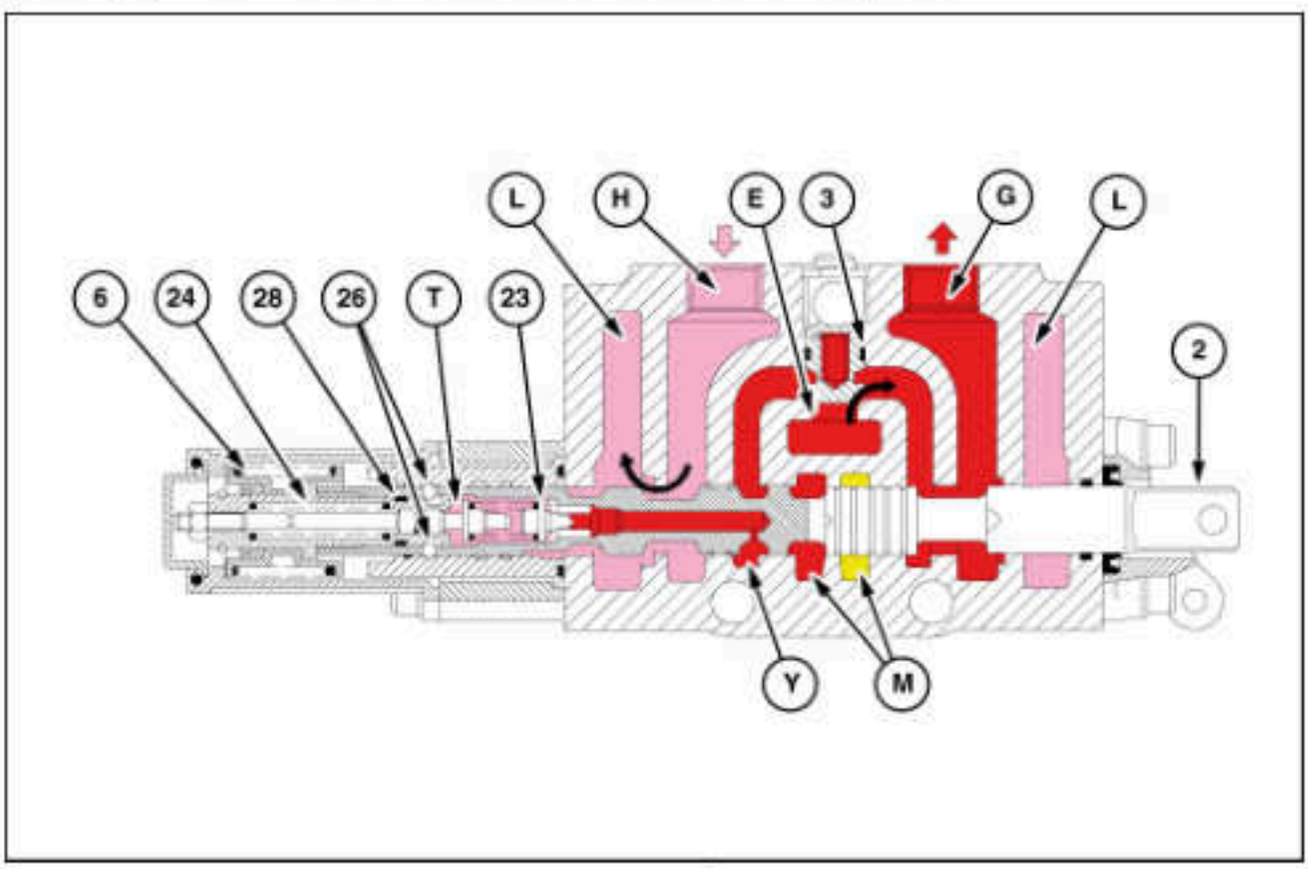
Pressure oil

Oil in suction, delivery or return

Trapped oil

NOTE: *To operate the single-acting cylinder, loosen the switching valve* ***(1)****; see Fig.* ***3****.*

Operating stages of an auxiliary control valve for operation of a single-acting cylinder/double-acting cylinder with automatic detent release and float position



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Pressure oil

Oil in suction, delivery or return

Trapped oil

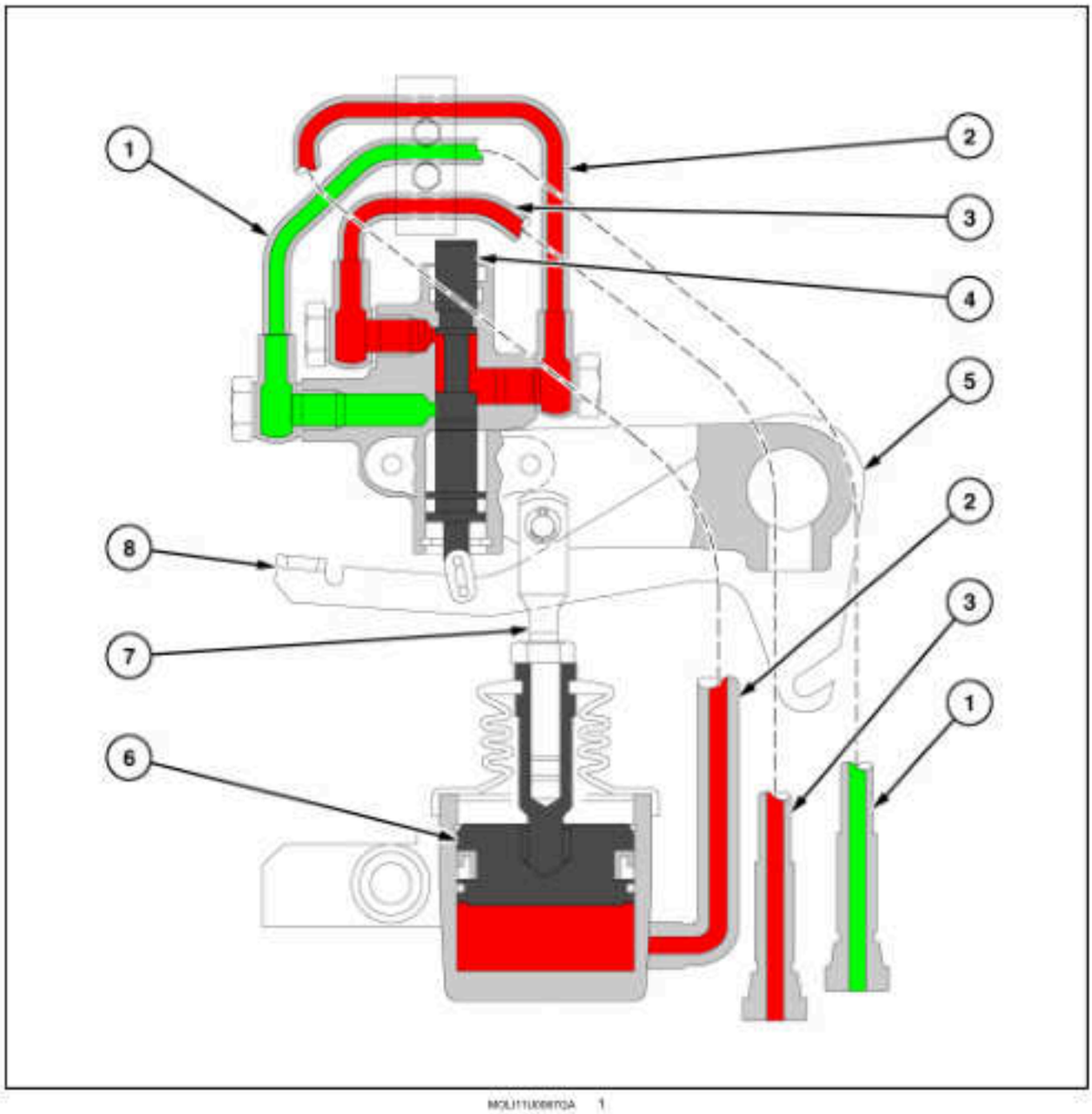
Raising

To operate the lifting stage, you need to pull the control lever back and trigger the following actions:

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Engage and release control tie rod - Dynamic description

Farmall® 115C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	Transmission - Mechanical
Farmall® 85C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	Transmission - Mechanical
Farmall® 95C with cab, with mechanical or power shuttle transmission [ZxJV5xxxx]	Transmission - Mechanical



MGJ11UX001GA 1

Pressurised oil Discharge oil

Description and operation

Engaging the PTO control clutch

The PTO clutch control system consists of a control lever (in the cab) and a cable connecting the lever to the servo control unit.

The servo control unit consists of a hydraulic control valve and piston.

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Wiring harnesses - Electrical schema CCU (Central Control Unit)

Farmall® 105C less cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 105C with cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 115C less cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 115C with cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 85C less cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 85C with cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 95C less cab, with hi-lo transmission [ZxJV0xxxx]
Farmall® 95C with cab, with hi-lo transmission [ZxJV0xxxx]

COMPO-NENT NAME	SIZE OF THE FUSE	DESCRIPTION
A-011		EDC mouse
A-012		EDC LED panel
A-014		Gear lever
A-015		EDC potentiometers panel
B-003		EDC left-hand draft sensor
B-004		EDC right-hand draft sensor
B-005		Rear PTO speed sensor
B-008		Transmission temperature sensor
B-009		Wheel speed sensor
B-010		Clutch pedal position
F-002	**5 A**	Rear PTO circuit power supply [+ **12 V** 15/54 key]
F-004	**5 A**	CCU memory power supply [+ **12 V** F-061 - **10 A**]
F-009	**5 A**	Speed sensors power supply [+ **12 V** 15/54 key]
F-011	**5 A**	EDC control instruments power supply [+ **12 V** 15/54 key]
F-012	**5 A**	Transmission controls power supply (clutch C & D) [+ **12 V** 15/54 key]
F-035	**7.5 A**	Differential lock and 4WD circuit power supply [+ **12 V** 15/54 key]
F-043	**7.5 A**	Power shuttle lever power supply [+ **12 V** 15/54 key]
F-059	**60 A**	Main engine power supply [+ **12 V** G-001]
J-009		Main diagnostic socket
K-029		Starting relay
M-001		Starter motor
S-003		EDC left-hand fender switch
S-004		EDC right-hand fender switch
S-005		PTO left-hand fender switch
S-006		PTO right-hand fender switch
S-007		Rear PTO switch
S-008		Front PTO switch
S-009		Ground PTO engaged switch
S-010		4WD input switch
S-011		Differential lock switch
S-021		Brake pedal switch left hand
S-022		Brake pedal switch right hand
S-029		Safety pressure switch A
S-030		Safety pressure switch B

COMPO-NENT NAME	SIZE OF THE FUSE	DESCRIPTION
S-031		Gear 1-2 switch
S-032		Low range switch
S-033		Medium range switch
S-034		Shuttle lever
S-035		Clutch pedal switch
S-036		Power shuttle reactivity switch
S-067		Park Lock engaged switch (mechanical parking block)
S-088		Gear 3–4 switch
S-089		High range switch
S-090		Creeper switch
Y-001		EDC raise solenoid valve
Y-002		EDC work solenoid valve
Y-003		Rear PTO solenoid valve
Y-004		Front PTO solenoid valve
Y-005		Rear differential lock solenoid valve
Y-006		4WD solenoid valve
Y-009		Clutch solenoid "A"
Y-010		Clutch solenoid "B"
Y-011		Clutch solenoid "C"
Y-025		Rear PTO brake solenoid valve

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