FARMALL® 80N
FARMALL® 80V
FARMALL® 90N
FARMALL® 90V
FARMALL® 100N
FARMALL® 100V
FARMALL® 110N
FARMALL® 110V
Tier 4A (interim)
Tractor

SERVICE MANUAL

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CASE IH AGRICULTURE

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Wiring harnesses - Electrical schematic sheet 51 SH-051_LIGHTS_road

Farmall® 100V Without cab	
Farmall® 110V Without cab [ZGLL03058 -]	
Farmall® 80V Without cab [ZGLL03079 -]	
Farmall® 90V Without cab	

Type	Component	Connector / Link	Description
ECU	**A-005**	**X-460**	ADIC LOW LINE
Lamp	**E-006**	**X-020B**	HEADLAMPS CIH - LOW/HIGH BEAM Left side
Lamp	**E-007**	**X-019B**	HEADLAMPS CIH - LOW/HIGH BEAM Right side
Relay	**K-006**		Low beam
Relay	**K-007**		High beam
Switch	**S-027**	**X-034**	MAIN TURN/LIGHTS SW
Connector	X-019B	**X-019B**	HEADLAMPS CHI - HOOD RH
Connector	X-020B	**X-020B**	HEADLAMPS CHI - HOOD LH
Connector	X-025A	**X-025A**	Cab - front lights inline
Connector	X-025B	**X-025B**	Front lights - cab inline
Connector	X-034	**X-034**	Turn and lights sw
Connector	X-110	**X-110**	Fuse Relay Module R1-R8 - F33-F36
Connector	X-460	**X-460**	ADIC LL - CN2

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3827 - Throttle Valve Actuator (TVA) - under-voltage at power stage

Control Module: ECU

Context:
Under voltage error for H bridge.

Cause:
Wide swings in the system voltage have been detected by the engine control unit (ECU).

Possible failure modes:

1. Bad battery or battery connection
2. Alternator fault
3. Faulty engine control unit (ECU)

Solution:

1. Check for active fault codes.

   (1) Verify that the fault code is still active..
   Prior to clearing fault codes write down all fault codes, number of occurrences, and engine hours at last occurrence.

   (2) Use the electronic service tool (EST) to clear all fault codes.

   (3) To check for fault codes: Start and operate machine.

   A. Fault code 3827 is not recorded again. OK to return the vehicle to service.

   B. Fault code 3827 is recorded with other fault codes such as FC3051. Continue to test for battery or charging faults with the machine.

   C. Fault code 3827 is active and recorded again. Go to step **2**.

2. Inspect the battery cable connections.

   (1) Verify that the battery terminals and battery cables are free of corrosion, abrasion and incorrect attachment.

   (2) Verify that the battery chassis ground connection is clean and fastened securely to the frame. The chassis connection point should be free of paint, rust, dirt and debris.

   A. The cables and battery connections are secure and free of corrosion, abrasion and incorrect attachment. Go to step **3**.

   B. The battery connections or battery cables are in need of repair.Repair or replace as required.
   Return to step **1** to confirm the elimination of the fault.

3. Verify that the wiring and connectors are free of damage.

   (1) Inspect the ECU connectors **X-937** and **X-939**. All connections should be secure, tight, free of corrosion, abrasion and damage.

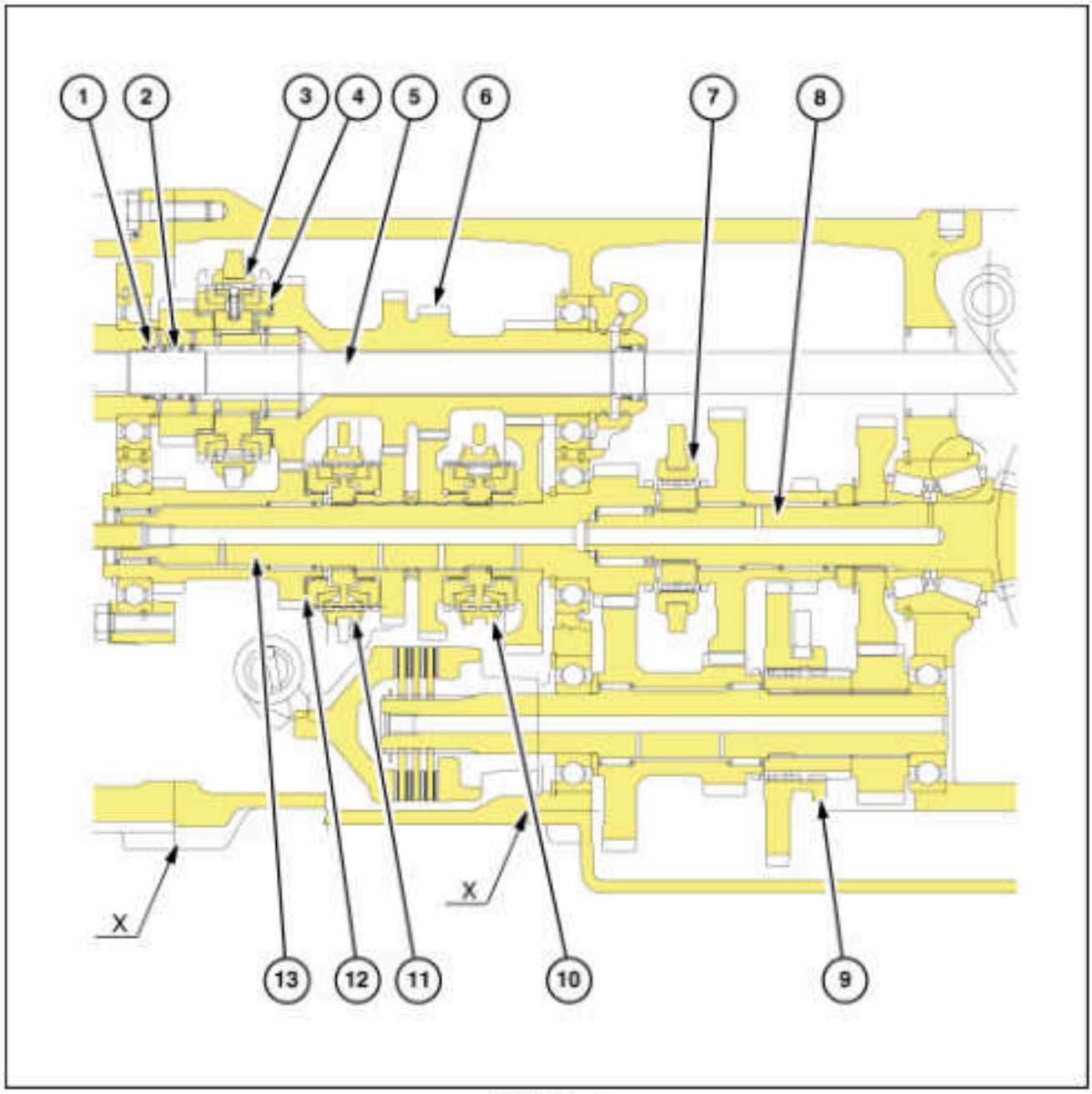
   (2) Inspect the wiring from the battery to the ECU **X-937** connector. Check that the wiring is free of damage, corrosion, abrasion and incorrect attachment.

   A. If the connectors are secure and the wiring is free of damage.Temporarily replace the engine control unit (ECU) and repeat the test.
   Return to step **1** to confirm the elimination of the fault.

   B. If the connectors or the wiring has damage.Repair or replace the wiring or the connectors as required.
   Return to step **1** to confirm the elimination of the fault.

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Transmission internal parts - Sectional view



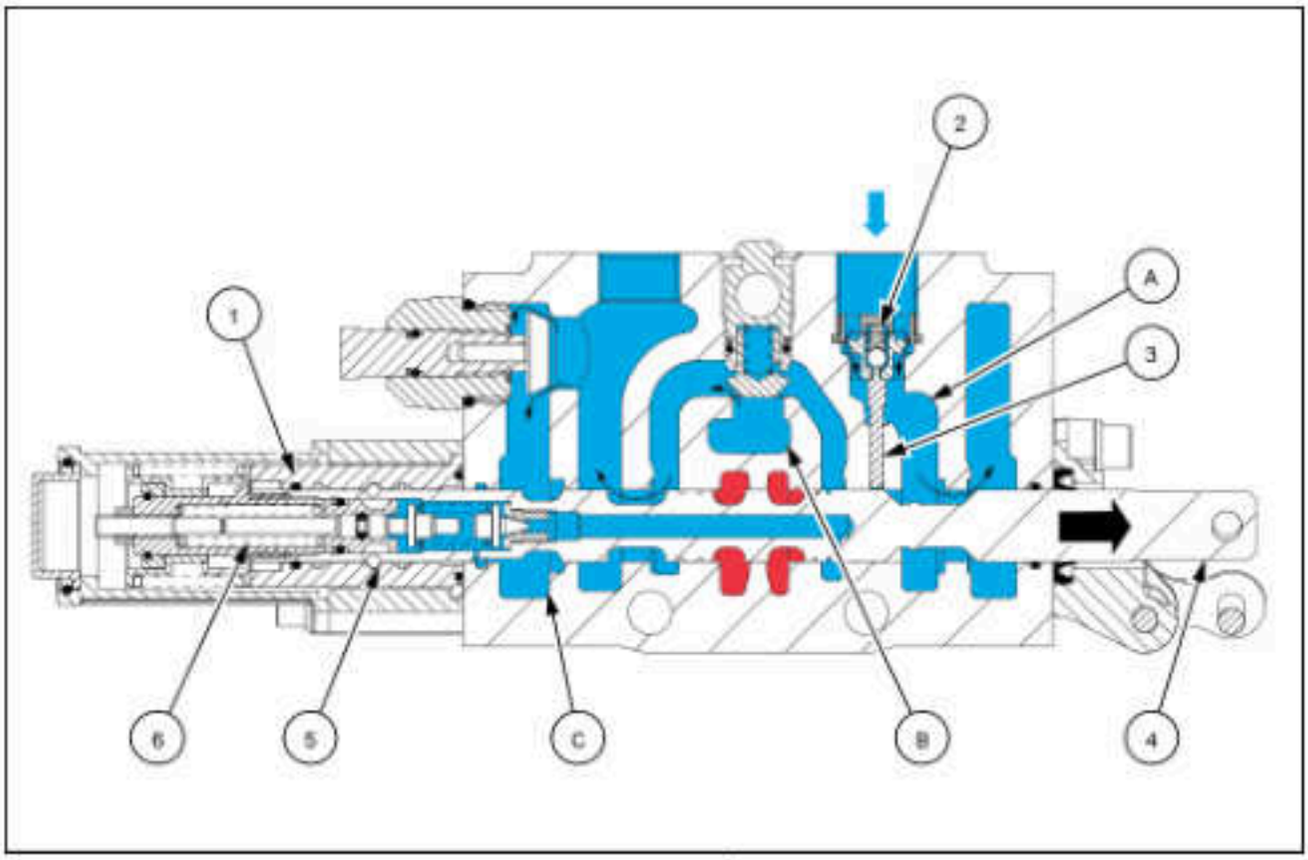
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Longitudinal cross-sectional view of gearbox and gear range

1. Seal
2. Power take-off shaft support roller bearings
3. Reverser control synchroniser
4. Gearbox driving gear clearance adjusting thickness
5. Power take-off shaft
6. Gearbox driving gear
7. Selector sleeve for high or medium-low speeds
8. Bevel pinion shaft
9. Selector sleeve for low or medium-high speeds
10. Synchroniser for 1st and 2nd speed
11. Synchroniser for 3rd and 4th speed
12. Gearbox driven shaft gear clearance adjusting thickness
13. Gearbox driven shaft

NOTE: *On assembly apply a bead of sealing compound to the surfaces X as indicated on* ***Transmission drive housing - Reseal (21.114)****.*

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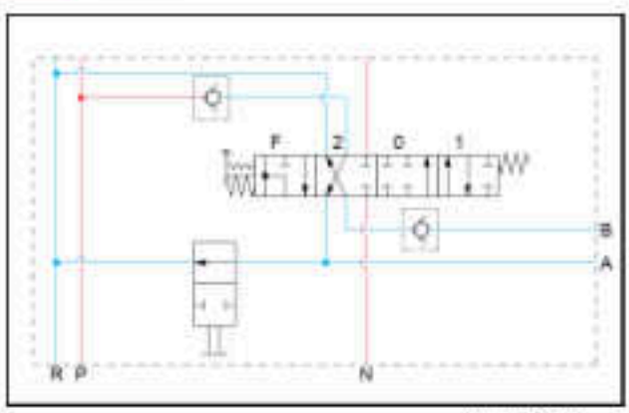
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Control valve phase - Lever in position "2"

Pressurized oil (**190 bar** (**2755 psi**)

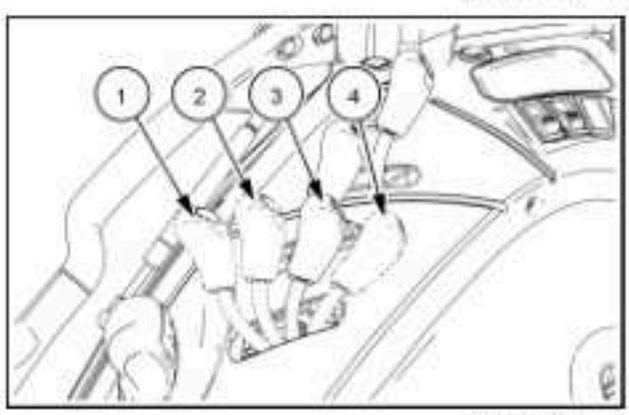
Exhaust oil

Pushing the control lever in the cab the control valve spool **(4)** moves in the direction of the arrow: the locking balls **(5)** enter in the stop point in the support **(1)**, remaining locked by the thrust of the spring **(6)**, and hold the spool. The spool displacement connects the oil supply line **(B)** directly to the exhaust in transmission through the line **(C)**. The pin **(3)**, pressed by the spool **(4)**, keeps the non-return valve **(2)** open, allowing the oil to be exhausted in the transmission through the "+" port and the line **(A)**.
At the end of the operation manually return the spool **(4)** in the neutral position operating on the control lever in the cab.



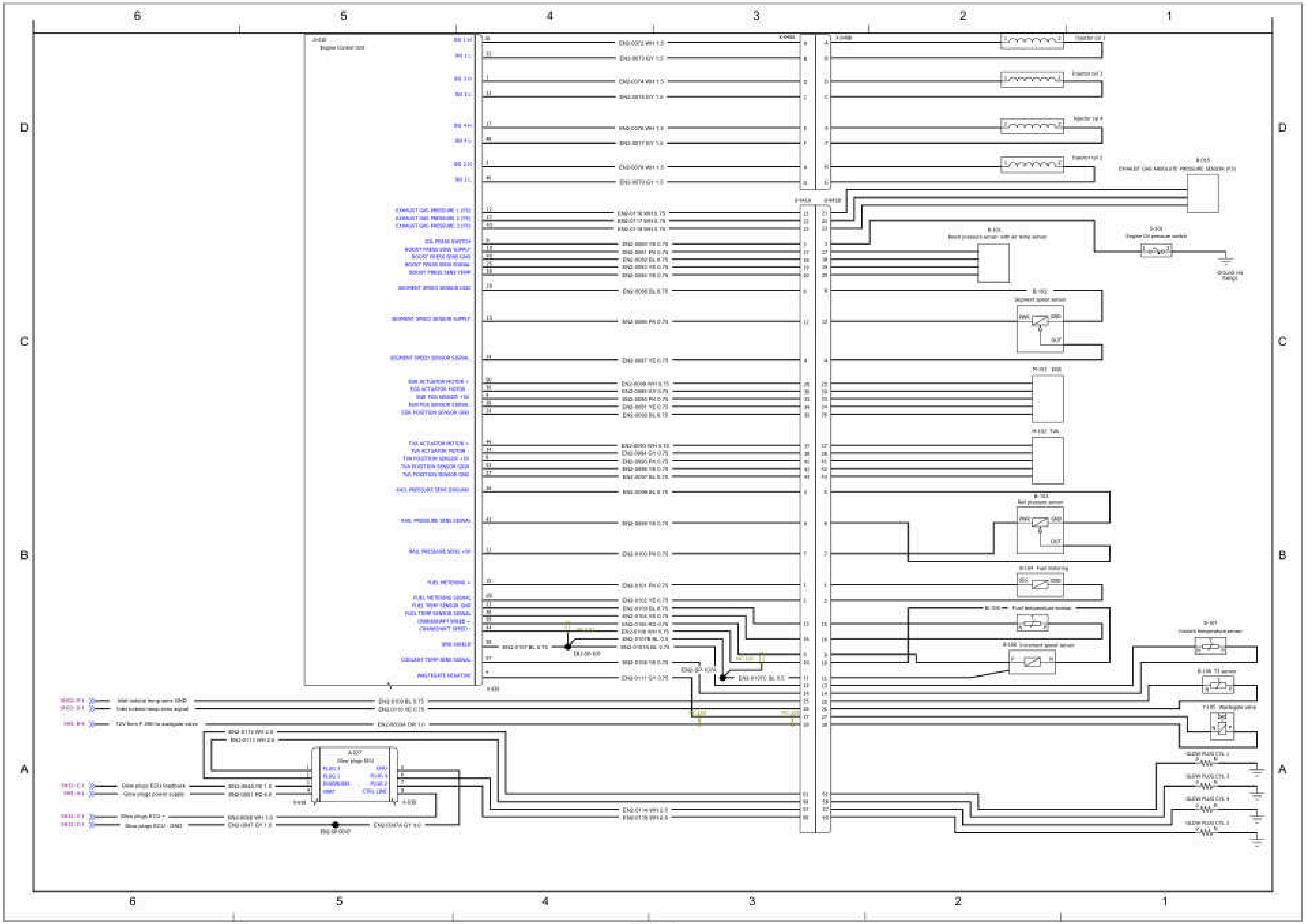
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- Floating position **(1)** (not available with single-acting control valve)
- Lowering or retraction position **(2)**
- Neutral position **(3)**
- Lifting or extension position **(4)**



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