FARMALL® 30A
FARMALL® 35A
Tier 4B (final)
Compact Tractor

SERVICE MANUAL

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CASE IH AGRICULTURE

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Powered front axle - Assemble

Farmall® 30A	NA
Farmall® 35A	NA

⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply could result in death or serious injury.

W0398A

⚠ WARNING

Avoid injury!
Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.
Failure to comply could result in death or serious injury.

W0399A

Prior operation:
Powered front axle - Disassemble (25.100)

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Hydraulic control components - Troubleshooting - For the steering control unit

Farmall® 30A	NA
Farmall® 35A	NA

Problem	Possible Cause	Correction
Steering wheel excessively stiff	Control valve - External misalignment	Repair (loosen bolts and realign parts)
	Control valve - Seized by contamination in spool and sleeve	Replace or repair spool and sleeve
	Control valve - Torque of seven bolts in end cap too high	Torque end cap bolts to the prescribed torque value
	Pump - No operation	Check pump drive gear
	Pump - Worn or defective	Replace or repair pump
	Pump - Rotates in the opposite direction	Crossed pressure ports. Realign pressure ports
	Pump - Discharge pressure low	Readjust pump pressure and capacity
	Relief valve - Faulty (poor operation)	Replace relief valve
	Relief valve - Pressure setting too low	Adjust pressure setting of the relief valve
	Cylinder - Low cylinder force	Replace or repair cylinder
Oil leakage	The spool oil seal is worn	Replace
	The excessive pressure	Set to correct pressure
	Contact side of housing, space plate, rotor set and end cap O ring damaged	Replace O rings
Tractor turns opposite direction of the steering wheel	Control valve - Steering valve timing incorrect	Correct the timing
	Plumbing - Right and left high pressure ports reversed	Correct plumbing
Steering wheel does not return to the "neutral" position or moves freely.	Control valve - Contamination in spool and sleeve	Replace or repair
	Control valve - Back pressure high	Repair for adjustment
When turning the steering wheel, slow or no response in steering	Control valve - Air in system	Remove air and tighten the connection
	Pump - Low hydraulic oil flow	Replace or repair
	Cylinder - Air in system	Remove air and tighten the connection
	Cylinder - Piston seal broken	Replace
	Overload Excessive weight on the front axle.	Remove the excess weight

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Wiring harnesses - Electrical schematic sheet 08 – Engine 3 (Hydrostatic Transmission (HST) models)

Type	Component	Connector / Link	Description
Relay	**K-9004**	**X-9144**	GLOW RELAY
Relay	**K-9101**	**X-9181**	AIR PUMP RELAY [RELAY BOX #5]
Relay	**K-9102**	**X-9140**	FUEL PUMP RELAY [RELAY BOX #4]
Relay	**K-9107**	**X-9142**	BURNER GLOW RELAY [RELAY BOX #6]
Motor	**M-001**	**X-027**	FUEL PUMP
Resistor	**R-003**	**X-9086**	RESISTOR
Switch	**S-006**	**X-054**	PTO SWITCH
Connector	X-027	**X-027**	
Connector	X-054	**X-054**	
Connector	X-066	**X-066**	
Connector	X-066A	**X-066A**	
Connector	X-200	**X-200**	
Connector	X-205	**X-205**	
Connector	X-212	**X-212**	
Connector	X-9023	**X-9023**	
Connector	X-9027	**X-9027**	
Connector	X-9052	**X-9052**	
Connector	X-9086	**X-9086**	
Connector	X-9140	**X-9140**	FUEL PUMP RELAY
Connector	X-9142	**X-9142**	
Connector	X-9144	**X-9144**	
Connector	X-9181	**X-9181**	
Solenoid	**Y-001**	**X-066**	PTO VALVE
Solenoid	**Y-9001**	**X-9027**	AIR PUMP
Solenoid	**Y-9003**	**X-9023**	ENGINE GLOW PLUG
Solenoid	**Y-9010**	**X-9052**	BURNER GLOW PLUG

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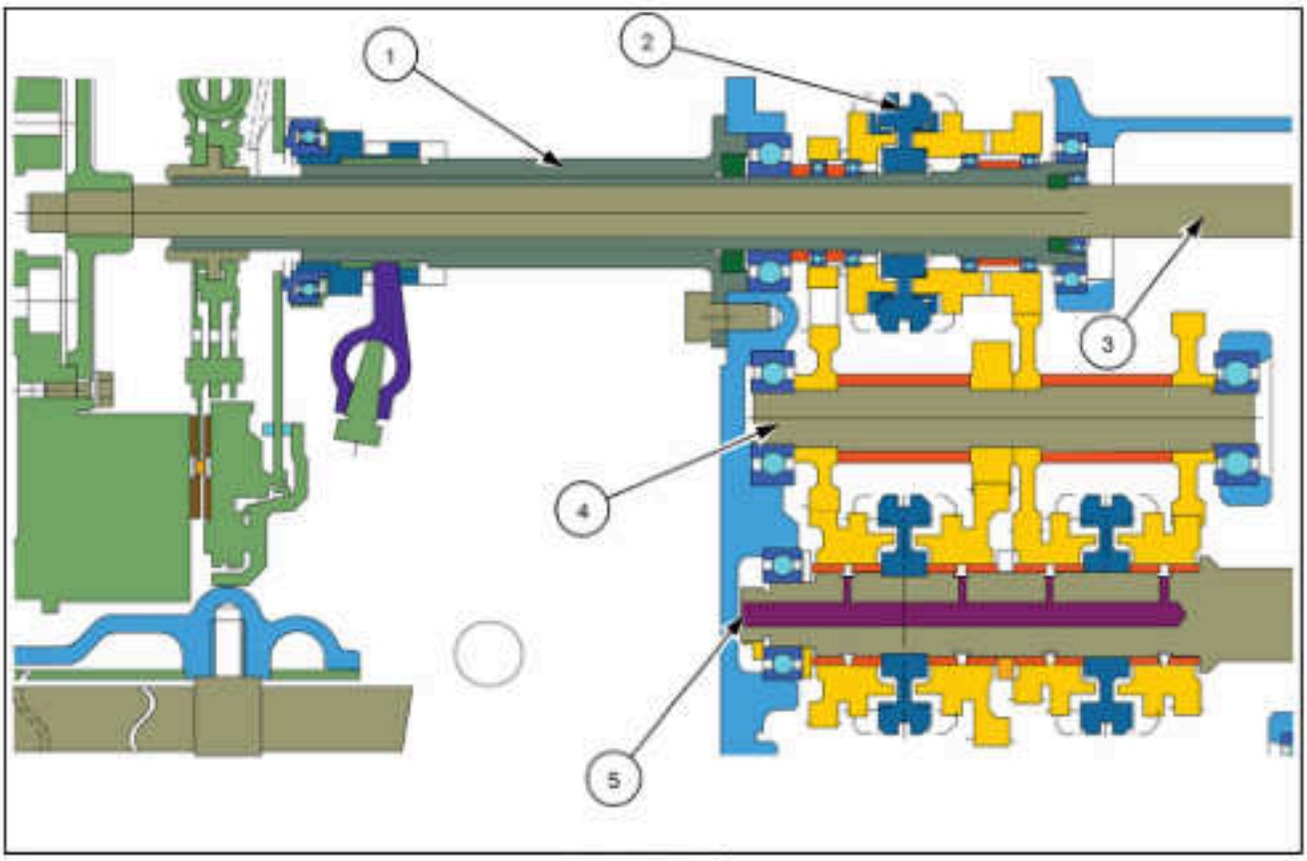
Mechanical transmission - Overhaul transmission gears assembly

Farmall® 30A	NA
Farmall® 35A	NA

⚠ WARNING

Heavy object!
ALWAYS use a hoist or get assistance to lift the component.
Failure to comply could result in death or serious injury.

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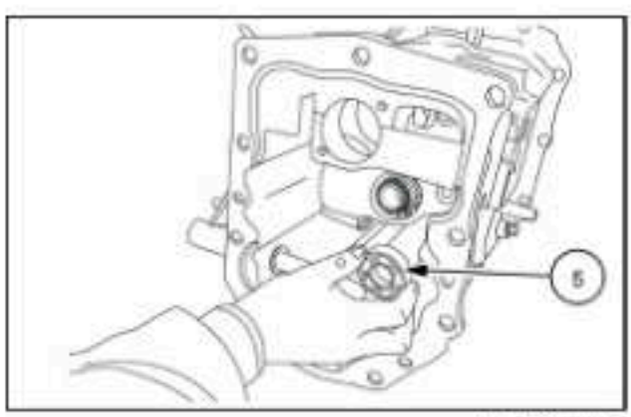
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Transmission schematic

(1) Forward - Reverse Shaft
(2) Shuttle Unit
(3) PTO Shaft
(4) Main Shaft
(5) Main Drive Shaft

Assembly

1. Install the bearing **(5)**.



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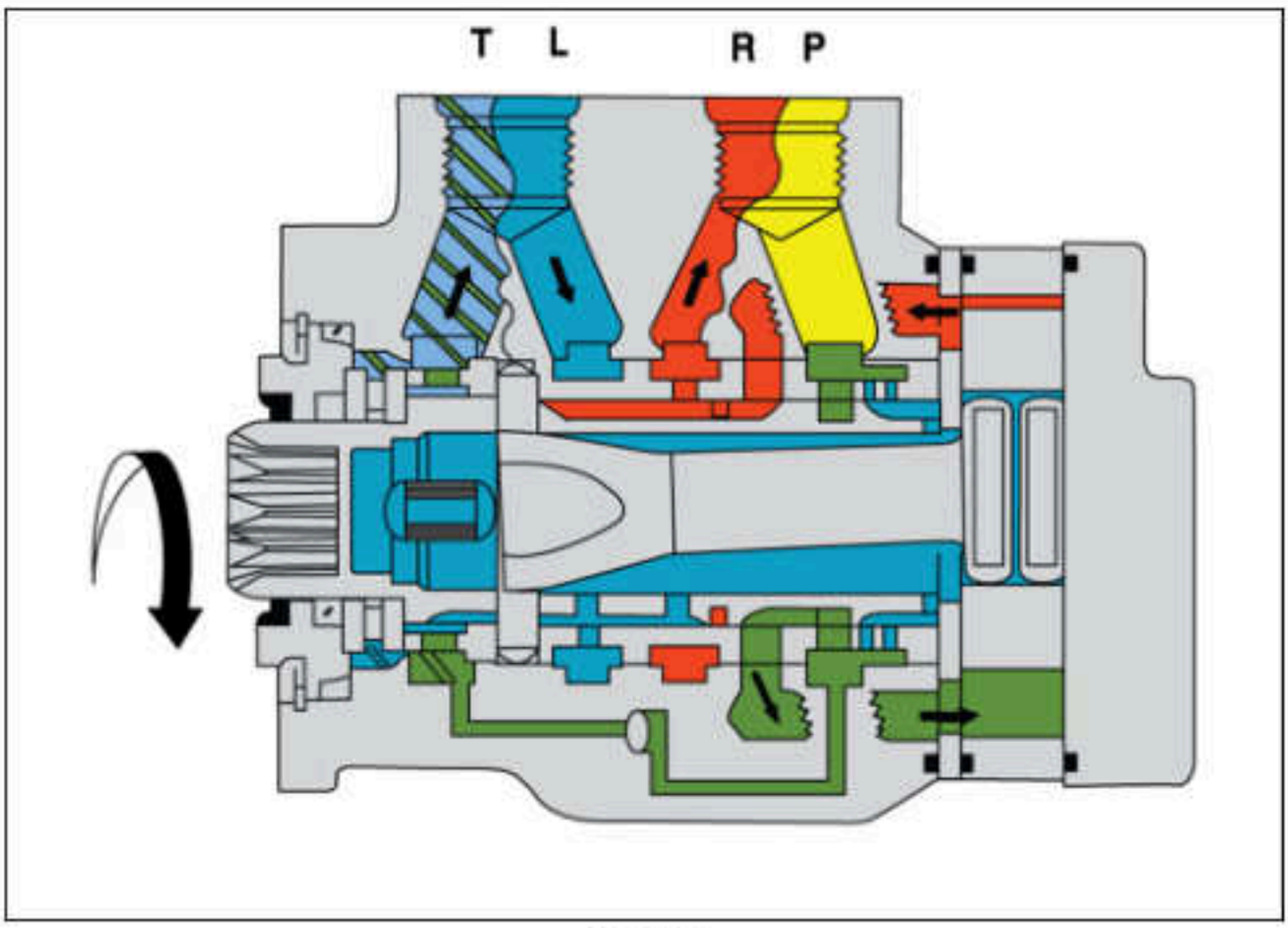
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Emergency operation

⚠ WARNING

Loss of control hazard!
Because of the slow responsiveness of the steering in this condition, you should not travel at high speeds or on downhill roads.
Failure to comply could result in death or serious injury.

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12

Emergency mode steering manually

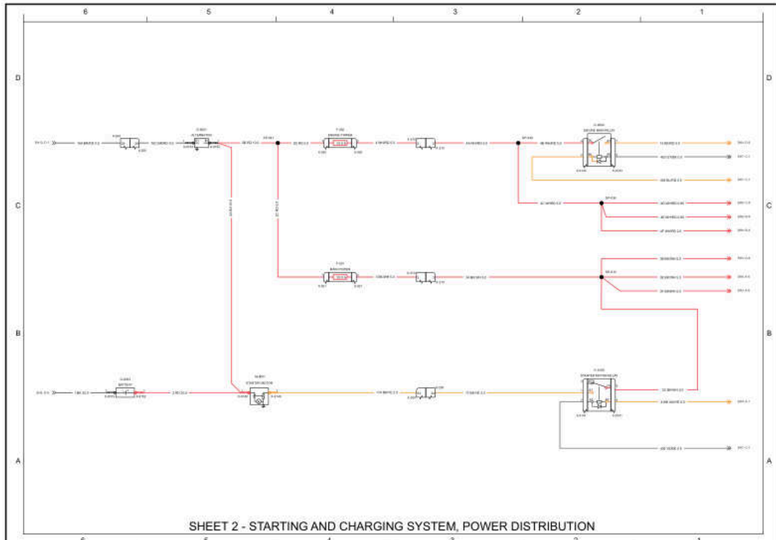
(T) - Tank
(L) - Left steer port
(R) - Right steer port
(P) - Pump discharge

- Pressurized oil from pump
- Oil from rotor
- Discharge
- Suction
- Suction or discharge
- Neutral

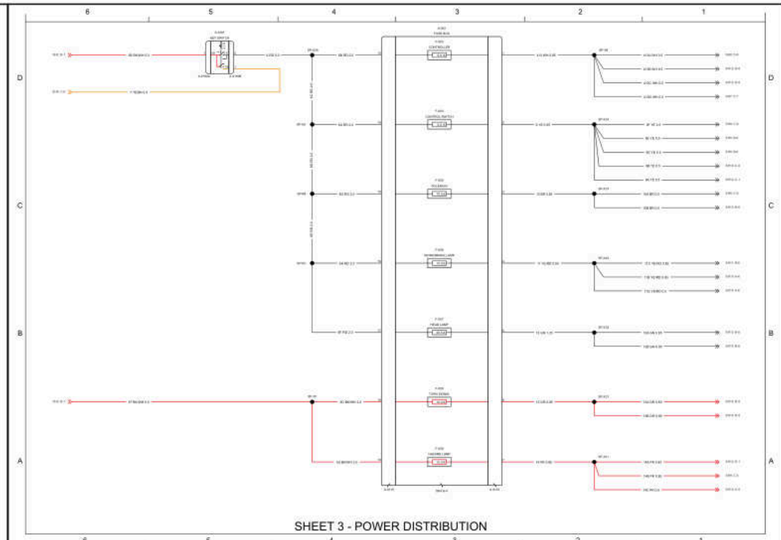
NOTICE: *In the EMERGENCY manual steering mode, if steering becomes difficult to do, STOP and transport the tractor by trailer.*

If hydraulic pressure is not generated by the hydraulic pump, the "Rocker" inside the valve serves as a hand pump, and allows the steering cylinder to operate.
The oil returning to the port **(T)** is sent to the rotor **(1)** through the check valve and the rotor sends oil to the cylinder. At this time, the oil in the opposite side returns to the port **(T)** again and repeats the procedure previously described.

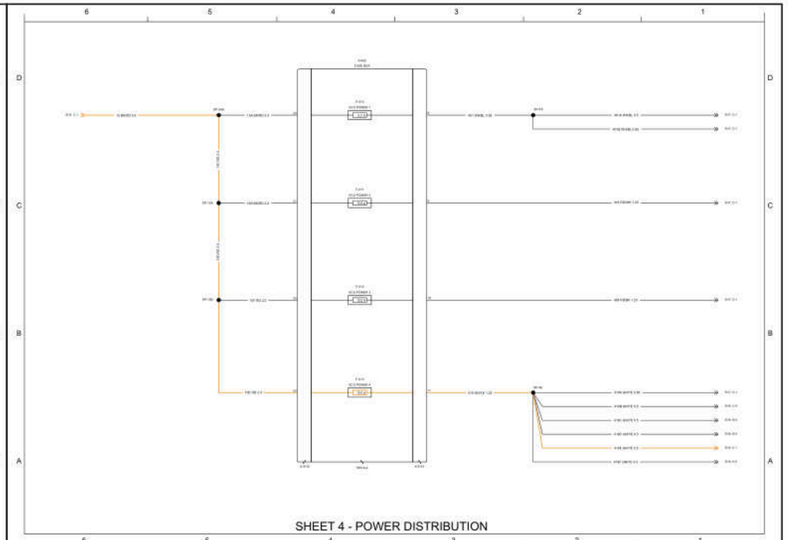
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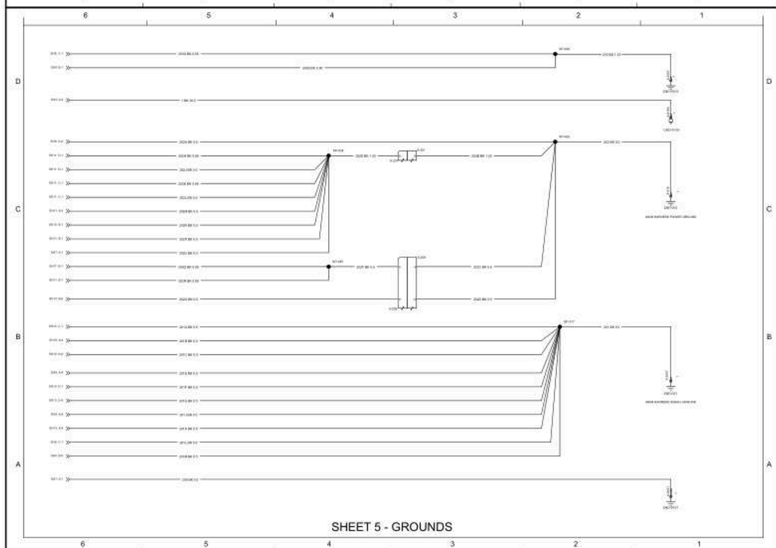
SHEET 2 - STARTING AND CHARGING SYSTEM, POWER DISTRIBUTION



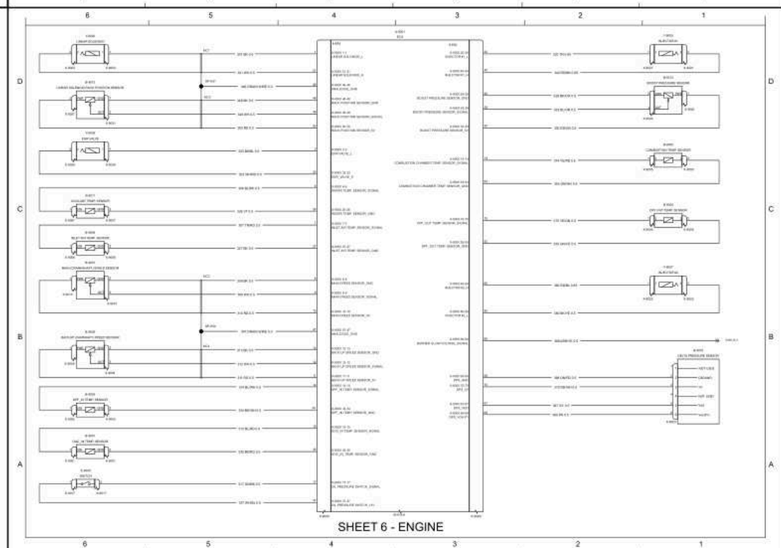
SHEET 3 - POWER DISTRIBUTION



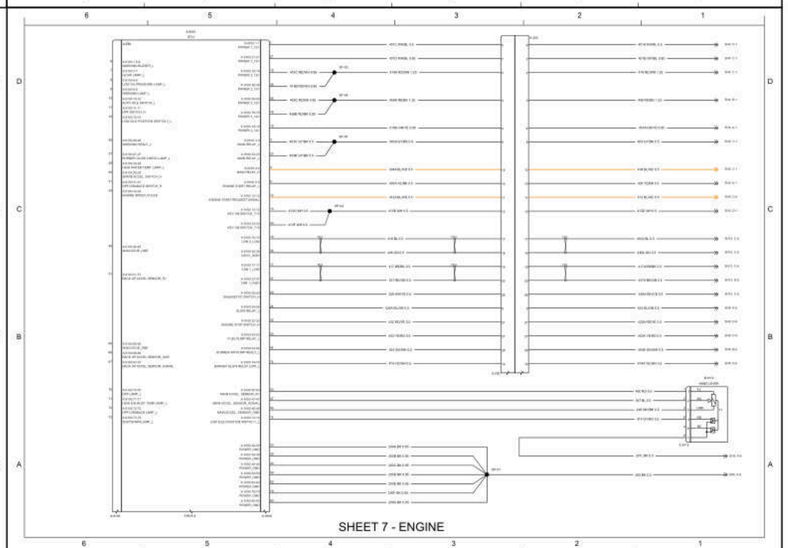
SHEET 4 - POWER DISTRIBUTION



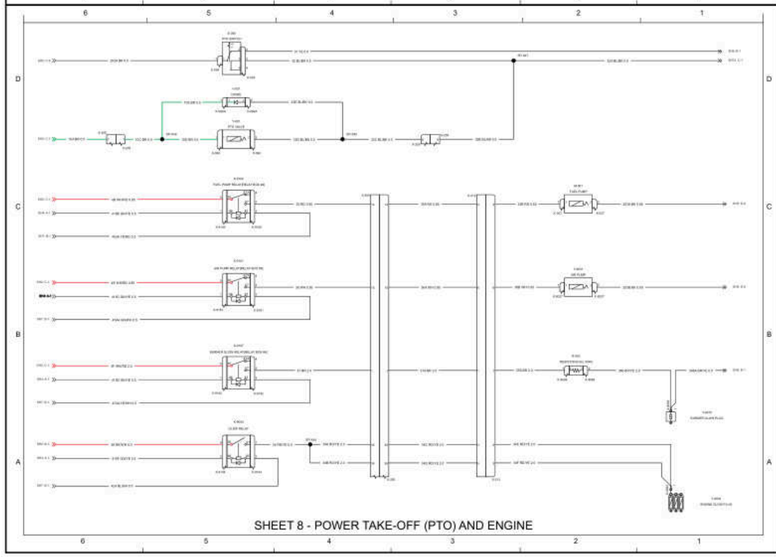
SHEET 5 - GROUNDS



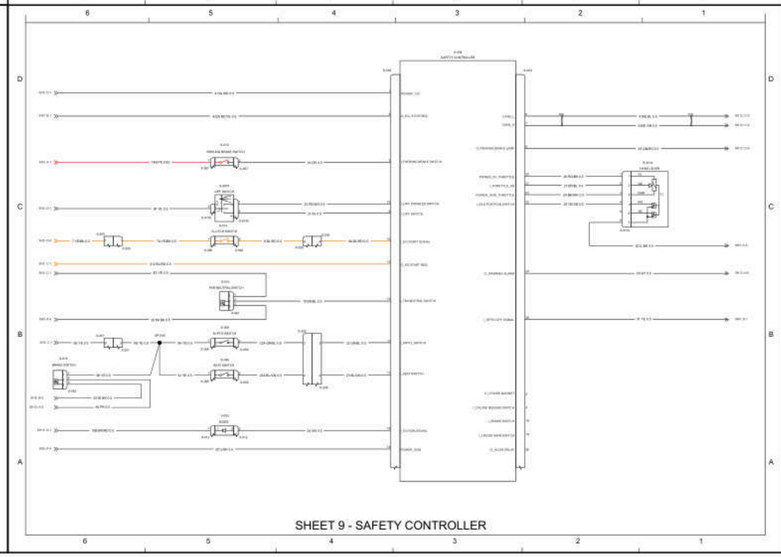
SHEET 6 - ENGINE



SHEET 7 - ENGINE



SHEET 8 - POWER TAKE-OFF (PTO) AND ENGINE



SHEET 9 - SAFETY CONTROLLER

FARMALL® 30A, FARMALL® 35A COMPACT TRACTOR

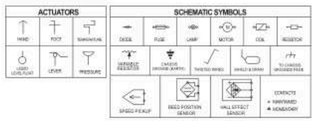
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ELECTRICAL SCHEMATIC
HYDROSTATIC TRANSMISSION
1ST EDITION

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ANALOG DIGITAL INSTRUMENT CLUSTER (ADIC)	12
DIAGNOSTIC CONNECTOR AND AUDIBLE DEVICES	13

SYMBOL LEGEND



COMPONENT LEGEND

Label Prefix	Component Type	Label Prefix	Component Type
A	Electronics	K	Relays
B	Sensors	M	Motors
D	Diodes	Q	Circuit Breakers
E	Lights	R	Resistive
F	Fuses	S	Switches
G	Generators	W	Splice Blocks
H	Audio	Y	Solenoids
J	Outlets		

CIRCUIT COLOR INDEX

12V UNSWITCHED POWER
IGNITION KEY ON
IGNITION KEY ON - AFTER CAB POWER RELAY
CRANKING

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