SERVICE MANUAL

CR9090

EU built combine for NA - Series [1940 -] /

CX8080 Elevation / CX8090 Elevation

Tier 4A

Combine

Part number 47695751
1st edition English
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Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1

[10.254] Intake and exhaust manifolds and muffler 10.2

[10.500] Selective Catalytic Reduction (SCR) exhaust treatment 10.3

[10.400] Engine cooling system 10.4

[10.418] Rotary screen 10.5

[10.450] Engine air compressor 10.6

Main gearbox and drive 14

[14.100] Main gearbox and drive 14.1

Transmission 21

[21.114] Mechanical transmission 21.1

[21.130] Mechanical transmission external controls 21.2

[21.145] Gearbox internal components 21.3

[21.182] Differential 21.4

Front axle system 25

[25.108] Final drive hub, steering knuckles, and shafts 25.1

[25.310] Final drives 25.2

Rear axle system 27

[27.124] Final drive hub, steering knuckles, and shafts 27.1

Hydrostatic drive 29

[29.100] Transmission and steering hydrostatic control 29.1

[29.204] Reservoir, cooler, and lines 29.2

[29.218] Pump and motor components 29.3

[29.202] Hydrostatic transmission 29.4

[29.300] Rear hydrostatic transmission 29.5

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Brakes and controls 33
[33.202] Hydraulic service brakes 33.1
[33.110] Parking brake or parking lock 33.2
Hydraulic systems 35
[35.000] Hydraulic systems 35.1
[35.300] Reservoir, cooler, and filters 35.2
[35.106] Variable displacement pump 35.3
[35.102] Pump control valves 35.4
[35.359] Main control valve 35.5
[35.322] Regulated/Low pressure system 35.6
[35.220] Auxiliary hydraulic pump and lines 35.7
[35.410] Header or attachment height system 35.8
[35.602] Header or attachment leveling system 35.9
[35.760] Header reverser drive 35.10
[35.992] Stone trapping system 35.11
[35.994] Positive Straw Discharge (PSD) 35.12
[35.796] Chaff spreader control 35.13
[35.440] Grain tank unload system 35.14
[35.450] Traction variator system 35.15
Steering 41
[41.101] Steering control 41.1
[41.200] Hydraulic control components 41.2
[41.432] Autoguidance steering 41.3
Tracks and track suspension 48
[48.130] Track frame and driving wheels 48.1
[48.134] Track tension units 48.2
[48.100] Tracks 48.3
Cab climate control 50

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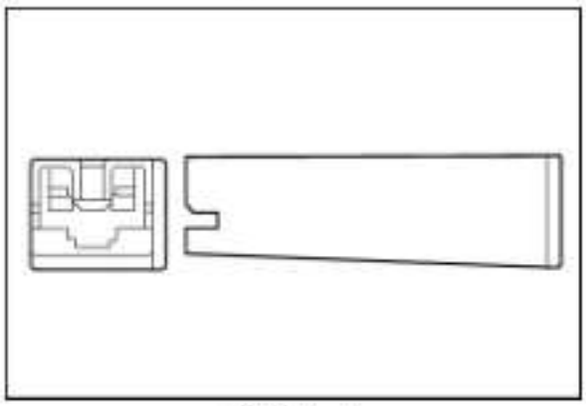
[50.100] Heating 50.1
[50.104] Ventilation 50.2
[50.200] Air conditioning 50.3
Electrical systems 55
[55.000] Electrical system 55.1
[55.100] Harnesses and connectors 55.2
[55.201] Engine starting system 55.3
[55.301] Alternator 55.4
[55.988] Selective Catalytic Reduction (SCR) electrical system 55.5
[55.640] Electronic modules 55.6
[55.029] Gearbox electric system 55.7
[55.019] Hydrostatic drive control system 55.8
[55.512] Cab controls 55.9
[55.051] Cab Heating, Ventilation, and Air-Conditioning (HVAC) controls 55.10
[55.050] Heating, Ventilation, and Air-Conditioning (HVAC) control system 55.11
[55.662] Header height control 55.12
[55.628] Threshing electrical control 55.13
[55.427] Straw walker variator 55.14
[55.426] Harvest material flow control system 55.15
[55.624] Residue handling control 55.16
[55.785] Precision farming system 55.17
[55.911] Global Positioning System (GPS) 55.18
[55.680] Autopilot/Autoguidance 55.19
[55.518] Wiper and washer system 55.20
[55.404] External lighting 55.21
[55.405] External lighting switches and relays 55.22
[55.514] Cab lighting 55.23
[55.408] Warning indicators, alarms, and instruments 55.24

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CONNECTOR X-156 - HIGH SPEED

CONNECTOR X-156 HIGH SPEED			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	ACB 946 (RD)	High speed signal	**Wire harnesses - Electrical schematic sheet 61 (55.100)**

NOTE: *For the wiring color code refer to,* ***Electrical system - Electrical standard (55.000).***



AMP_172076 11

X-156
HIGH SPEED

NOTE: *For connector service tools refer to,* ***Electrical system - Special tools 2 (55.000).***

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B. If the multimeter reads outside the range given above, then the fault is in the MFH. Replace the MFH. Continue troubleshooting at step **3**.

3. Visually inspect the harness and connectors for damage, bent or dislocated pins, broken or pinched wires.

A. Repair any damage found during visual inspection.

B. If no damage is found, erase the fault code and continue operation.

Wire harnesses - Electrical schematic sheet 10 (55.100.DP-C.20.E.10)

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Fan drive system - General specification

CR Series Tier IV	NA
CX8000 Elevation series	NA

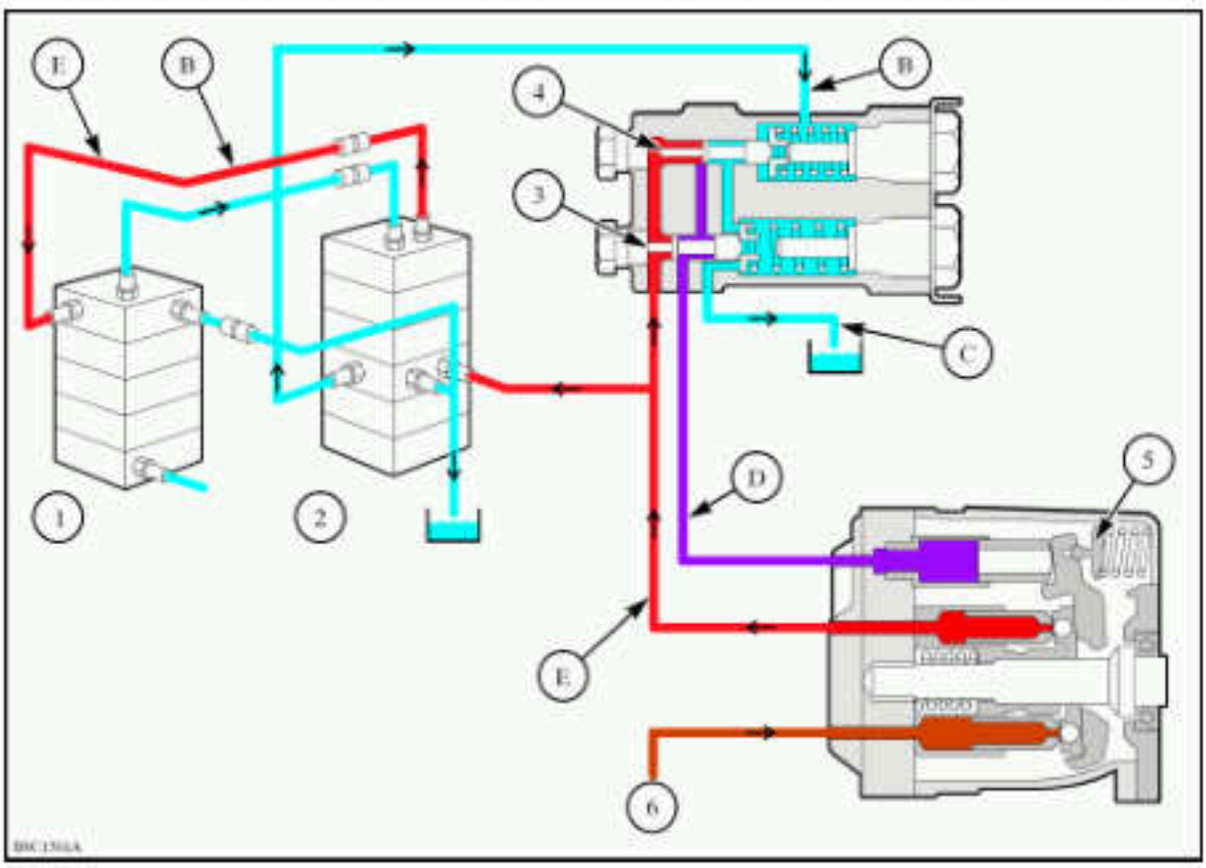
Cleaning Fan Speed (high idle - no load)	
Narrow frame	**500 - 940 rpm**
Wide frame	**475 - 900 rpm**
Cleaning Fan Drive Belt Depth	
Maximum Speed (at driven sheave)	**54 mm (2.12 in)**
Minimum Speed (at drive sheave))	**40 mm (1.60 in**
Minimum Sheave Clearance (w/belt at correct depth)	
Drive	**1 mm (0.039 in)**
Driven	**1 mm (0.039 in)**
Sheave Bushing Retaining Compound	Loctite 638, Omnifit 230H or Permabond 201

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Low Pressure Standby

With Reference to image **2**

Low pressure standby is the system pressure **21 - 24 bar** (**305 - 348 psi**) maintained by the hydraulic pump when high pressure hydraulic circuits are not being operated.
During engine start up, standby pressure has not been generated and both the flow and pressure compensating valves are held to the left by spring pressure.
While the spools are held to the left oil pressure generated by the pump cannot be applied to the swash plate servo piston. The swash plate consequently remains in the maximum flow position until the pump has developed sufficient flow to produce pressure at low pressure standby.
As pump output pressure increases to **21 - 24 bar** (**305 - 348 psi**), this pressure is sensed in gallery **(E)**, and applied to the flow compensating spool. The spool gradually moves against the spring allowing oil flow from gallery **(E)**, to gallery **(D)**.
The controlled pressure rise in gallery **(D)**, operates the swash plate servo piston, changing the angle of the swash plate in relation to the pumping head. The change in angle reduces the operating stroke of the pistons and output of the pump.
As pump output decreases and the pressure in gallery **(D)**, reduces to less than **24 bar** (**348 psi**), the flow compensating valve gradually moves under spring pressure to the left bleeding gallery **(D)**, to sump through gallery **(C)**. This reduces the control pressure applied to the servo piston, allowing the servo piston to retract at a controlled rate under pressure from the swash plate return spring and re-adjust the angle of the swash plate to increase pump output.
This control process continues maintaining pump output pressure at **21 - 24 bar** (**305 - 348 psi**) (low pressure standby) until a high pressure circuit is operated and pump system pressure needs to be increased to operate the service.



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Standby Pressure @ **21 - 24 bar** (**305 - 348 psi**)

Control Pressure

Return to Reservoir

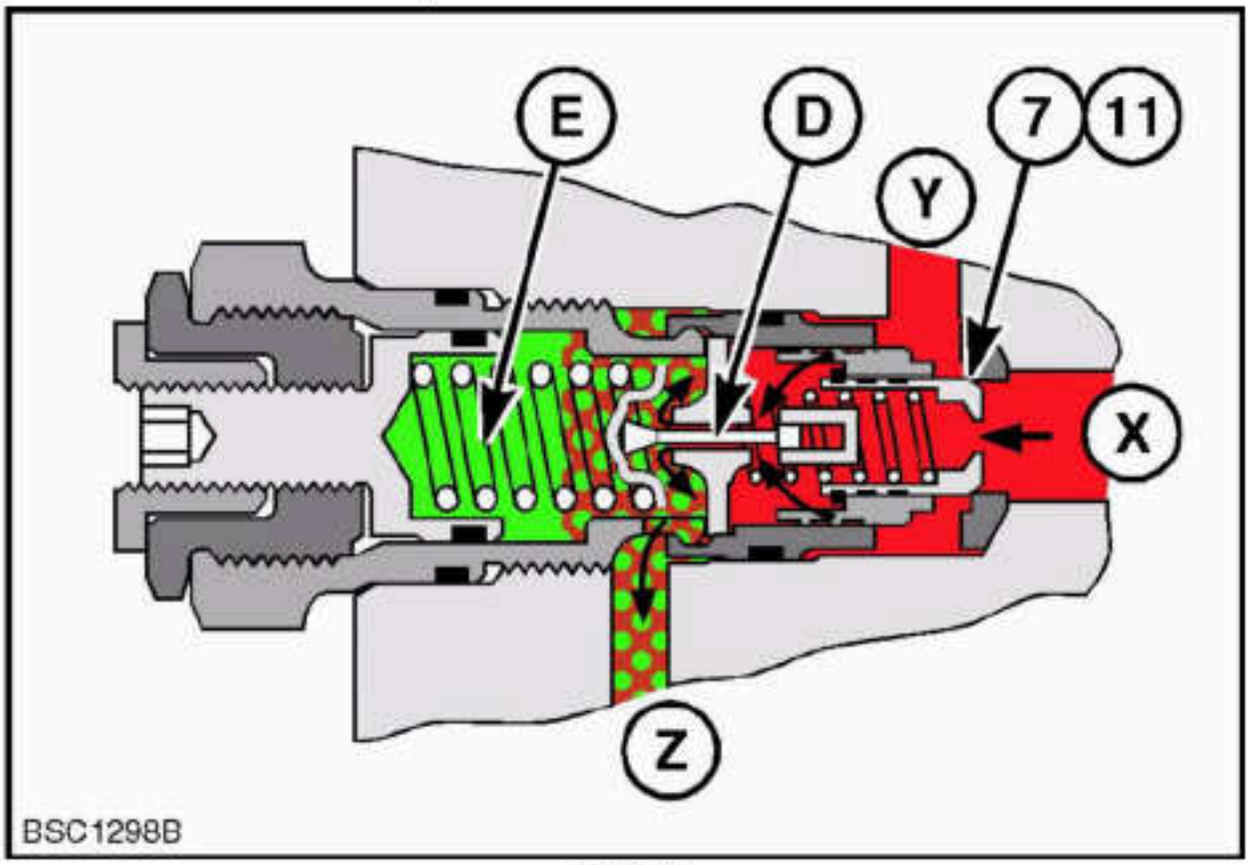
Charge Pressure

1 Straw elevator stack valve (In Neutral)
2 Main frame stack valve (in neutral)
3 Pressure Compensating Valve
4 Flow Compensating Valve
5 Swash Plate
6 Return from Hydrostatic motors

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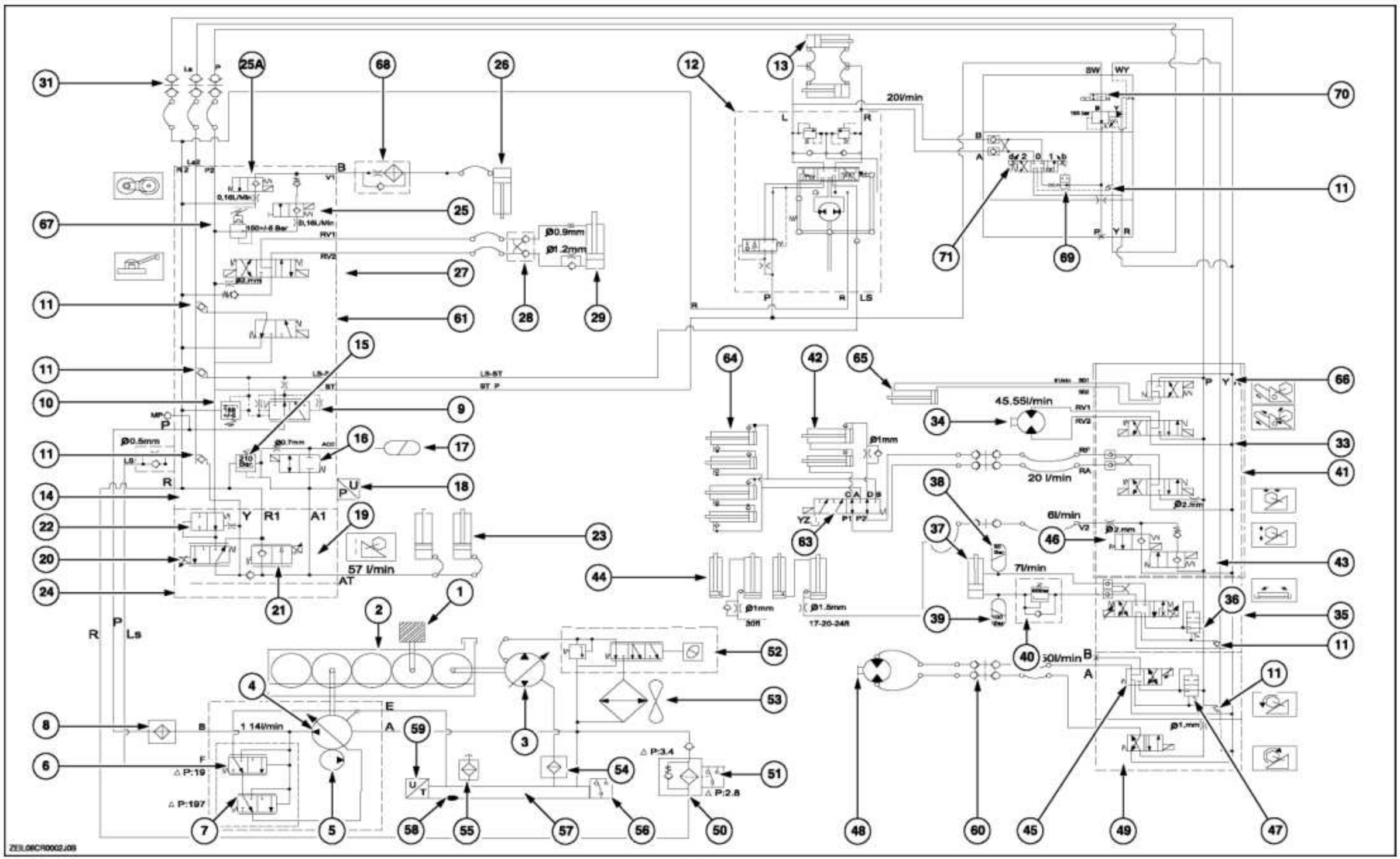
Pressure limiter 8b - 9b

When high pressure exceeds **420 bar** (**6090 psi**), poppet **(D)**, will move to the left, compressing spring **(E)**, due to the pressure behind the poppet pressurized oil will flow from port **(X)**, into port **(Z)**, to the main servo cylinder. The main servo cylinder will then move the swash plate of the hydrostatic pump towards neutral when the transmission is in drive mode and towards maximum displacement when the transmission is in brake mode.



BSC1298B 4

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