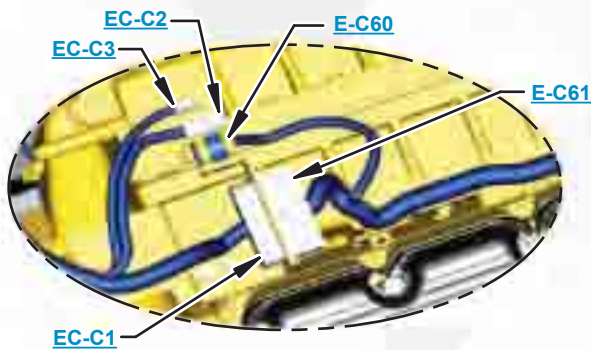


***This document is best viewed at a screen resolution of 1024 X 768.***

To set your screen resolution do the following:  
**RIGHT CLICK** on the **DESKTOP**.  
 Select **PROPERTIES**.  
**CLICK** the **SETTINGS TAB**.  
**MOVE THE SLIDER** under **SCREEN RESOLUTION** until it shows **1024 X 768**.  
**CLICK OK** to apply the resolution.

The Bookmarks panel will allow you to quickly navigate to points of interest.



Click on any text that is BLUE and underlined. These are hyperlinks that can be used to navigate the schematic and machine views.

**VIEW ALL CALLOUTS**

When only one callout is showing on a machine view this button will make all of the callouts visible. This button is located in the top right corner of every machine view page.

HOTKEYS (Keyboard Shortcuts)		
	FUNCTION	KEYS
	Zoom In	"CTRL" / "+"
	Zoom Out	"CTRL" / "-"
	Fit to Page	"CTRL" / "0" (zero)
	Hand Tool	"SPACEBAR" (hold down)
	Find	"CTRL" / "F"



# Schematic

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## **320D and 320D L Excavator Hydraulic System**

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**320D:**

JPD1-UP  
A6F1-UP  
FAL1-UP  
KLM1-UP  
PCM1-UP  
KHN1-UP  
BZP1-UP  
CXY1-UP  
JFZ1-UP  
JGZ1-UP  
KTF1-UP

**320D L:**

MDE1-UP  
A8F1-UP  
A9F1-UP  
KGF1-UP  
MGG1-UP  
TDH1-UP  
DHK1-UP  
GDP1-UP

# COMPONENT LOCATION



Description	Part Number	Machine Location	Schematic Location
Accumulator GP	164-6981	<a href="#">1</a>	<a href="#">A-4</a>
Cylinder GP - Boom	NOTE A	<a href="#">2</a>	<a href="#">E-2</a>
Cylinder GP - Bucket	NOTE A	<a href="#">3</a>	<a href="#">E-2</a>
Cylinder GP - Stick	NOTE A	<a href="#">4</a>	<a href="#">E-7</a>
Filter GP - Pilot (Hydraulic Oil)	158-8987	<a href="#">5</a>	<a href="#">A-4</a>
Filter GP - Oil (Hydraulic Return)	188-4140	<a href="#">6</a>	<a href="#">A-6</a>
Filter GP - Oil (Hydraulic, Case Drain)	126-2075	<a href="#">7</a>	<a href="#">A-6</a>
Manifold GP - Control (Pilot Oil)	215-5037	<a href="#">8</a>	<a href="#">A-5</a>
Motor GP - Swing	158-8986	<a href="#">9</a>	<a href="#">E-5</a>
Motor GP - Travel (Left)	209-5992	<a href="#">10</a>	<a href="#">E-5</a>
Motor GP - Travel (Right)	209-5992	<a href="#">11</a>	<a href="#">E-4</a>
Pump GP - Piston (Main)	272-6955	<a href="#">12</a>	<a href="#">A-2</a>
Swivel GP	234-4440	<a href="#">13</a>	<a href="#">D-4</a>
Valve GP - Check (Oil Cooler Bypass)	201-9329	<a href="#">14</a>	<a href="#">A-7</a>
Valve GP - Load Control (Boom)	255-5683	<a href="#">15</a>	<a href="#">C-2</a>
Valve GP - Load Control (Stick)	255-5680	<a href="#">16</a>	<a href="#">C-5</a>
Valve GP - Main Control	259-7464	<a href="#">17</a>	<a href="#">C-2</a>
Valve GP - Pilot (Joystick, LH)	270-5951	<a href="#">18</a>	<a href="#">C-7</a>
Valve GP - Pilot (Joystick, RH)	270-5952	<a href="#">19</a>	<a href="#">C-6</a>
Valve GP - Pilot (Travel)	270-5947	<a href="#">20</a>	<a href="#">D-7</a>
Valve GP - Pressure Reducing (Boom, Swing Priority)	232-4102	<a href="#">21</a>	<a href="#">A-4</a>
Valve GP - Shuttle 1	185-0462	<a href="#">22</a>	<a href="#">B-7</a>
Valve GP - Shuttle 2	259-7732	<a href="#">23</a>	<a href="#">B-3</a>
Valve GP - Swing Cushion	158-9085	<a href="#">24</a>	<a href="#">D-5</a>
Valve GP - Travel Counterbalance (Left)	137-3718	<a href="#">25</a>	<a href="#">D-5</a>
Valve GP - Travel Counterbalance (Right)	137-3718	<a href="#">26</a>	<a href="#">D-4</a>

Note A: Refer to Parts Manual for your specific machine.

# TAP LOCATION

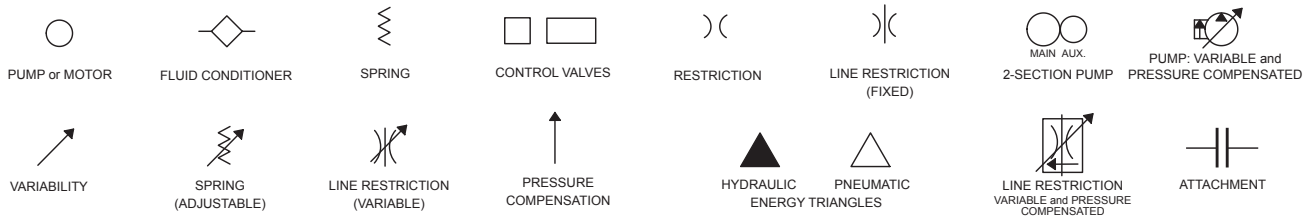


<b>Tap Number</b>	<b>Description</b>	<b>Schematic Location</b>
<a href="#"><u>AA</u></a>	Pilot Filter Pressure Test Port	<a href="#"><u>A-4</u></a>
<a href="#"><u>BB</u></a>	Idler Pump Pressure Test Port	<a href="#"><u>B-3</u></a>
<a href="#"><u>CC</u></a>	Drive Pump Pressure Test Port	<a href="#"><u>A-3</u></a>
<a href="#"><u>DD</u></a>	Power Shift Pressure Test Port	<a href="#"><u>A-2</u></a>
<a href="#"><u>SOS</u></a>	Hydraulic Oil Sampling Port	<a href="#"><u>A-3</u></a>

# FLUID POWER SYMBOLS



## BASIC COMPONENT SYMBOLS



## VALVE ENVELOPES

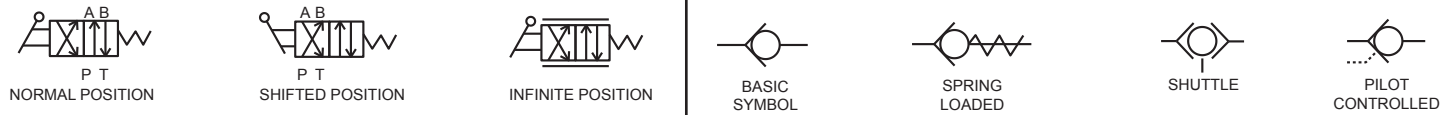
## VALVES

## VALVE PORTS



## CONTROL VALVES

## CHECK VALVES

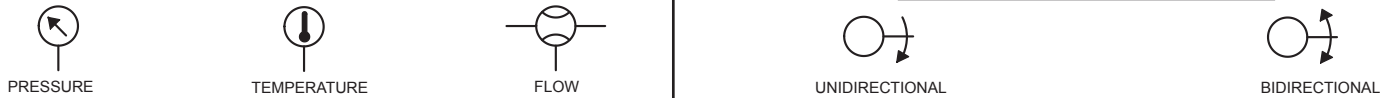


## FLUID STORAGE RESERVOIRS



## MEASUREMENT

## ROTATING SHAFTS



## COMBINATION CONTROLS



## MANUAL CONTROL SYMBOLS



## RELEASED PRESSURE

## PILOT CONTROL SYMBOLS

## REMOTE SUPPLY PRESSURE



## ACCUMULATORS

## CROSSING AND JOINING LINES

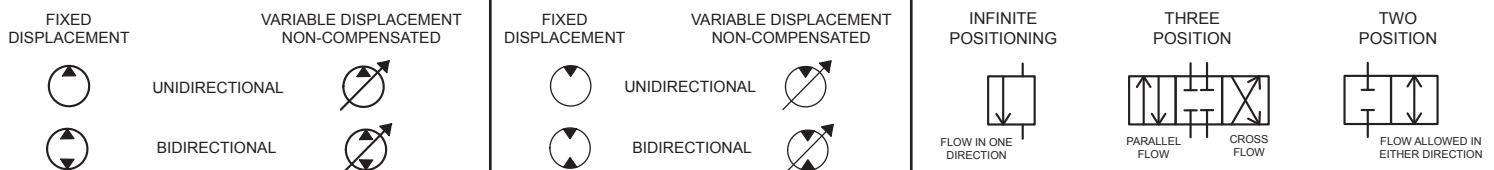
## HYDRAULIC AND PNEUMATIC CYLINDERS



## HYDRAULIC PUMPS

## HYDRAULIC MOTORS

## INTERNAL PASSAGEWAYS



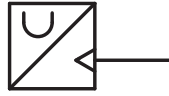
# ELECTRICAL SYMBOLS



## Hydraulic Symbols (Electrical)



Transducer  
(Fluid)



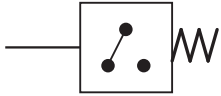
Transducer  
(Gas / Air)



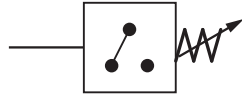
Generator



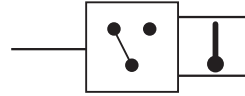
Electric Motor



Pressure Switch



Pressure Switch  
(Adjustable)

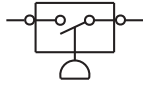


Temperature Switch

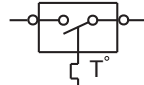


Electrical Wire

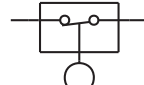
## Electrical Symbols (Electrical)



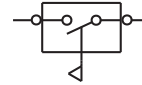
Pressure  
Symbol



Temperature  
Symbol



Level  
Symbol

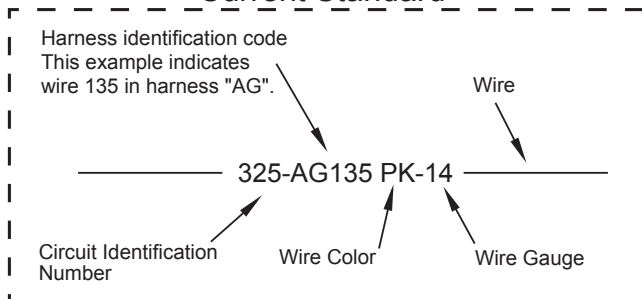


Flow  
Symbol

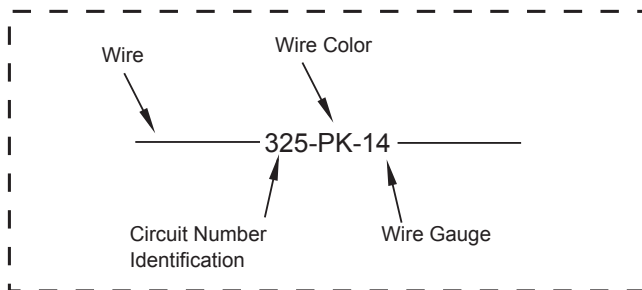
## Wire Number Identification Codes

### Electrical Schematic Example

#### Current Standard

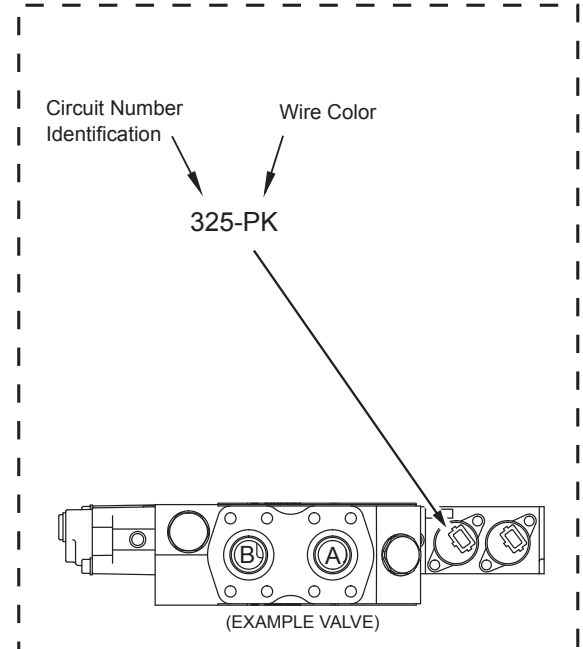


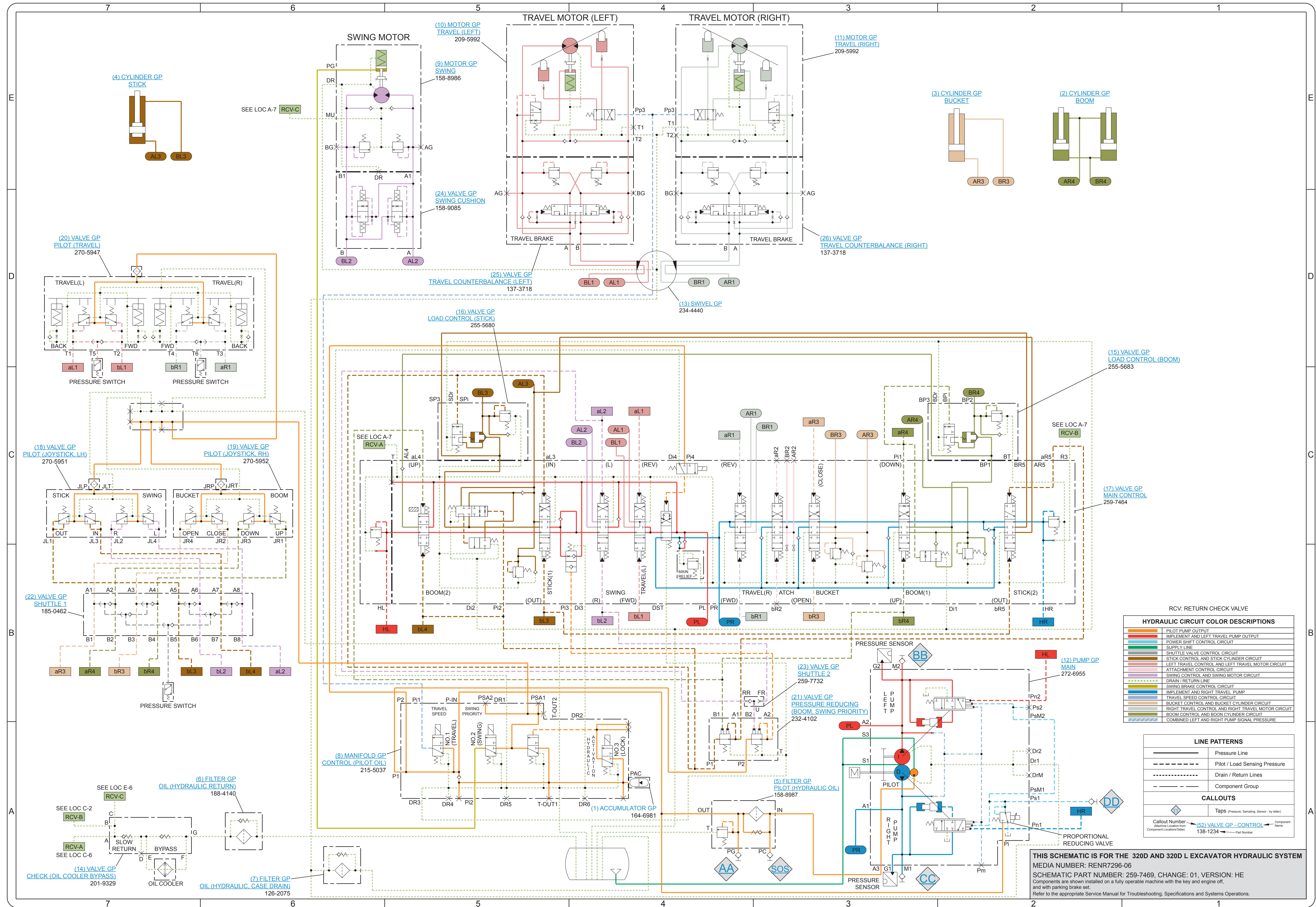
#### Previous Standard



### Hydraulic Schematic Example

#### Current Standard

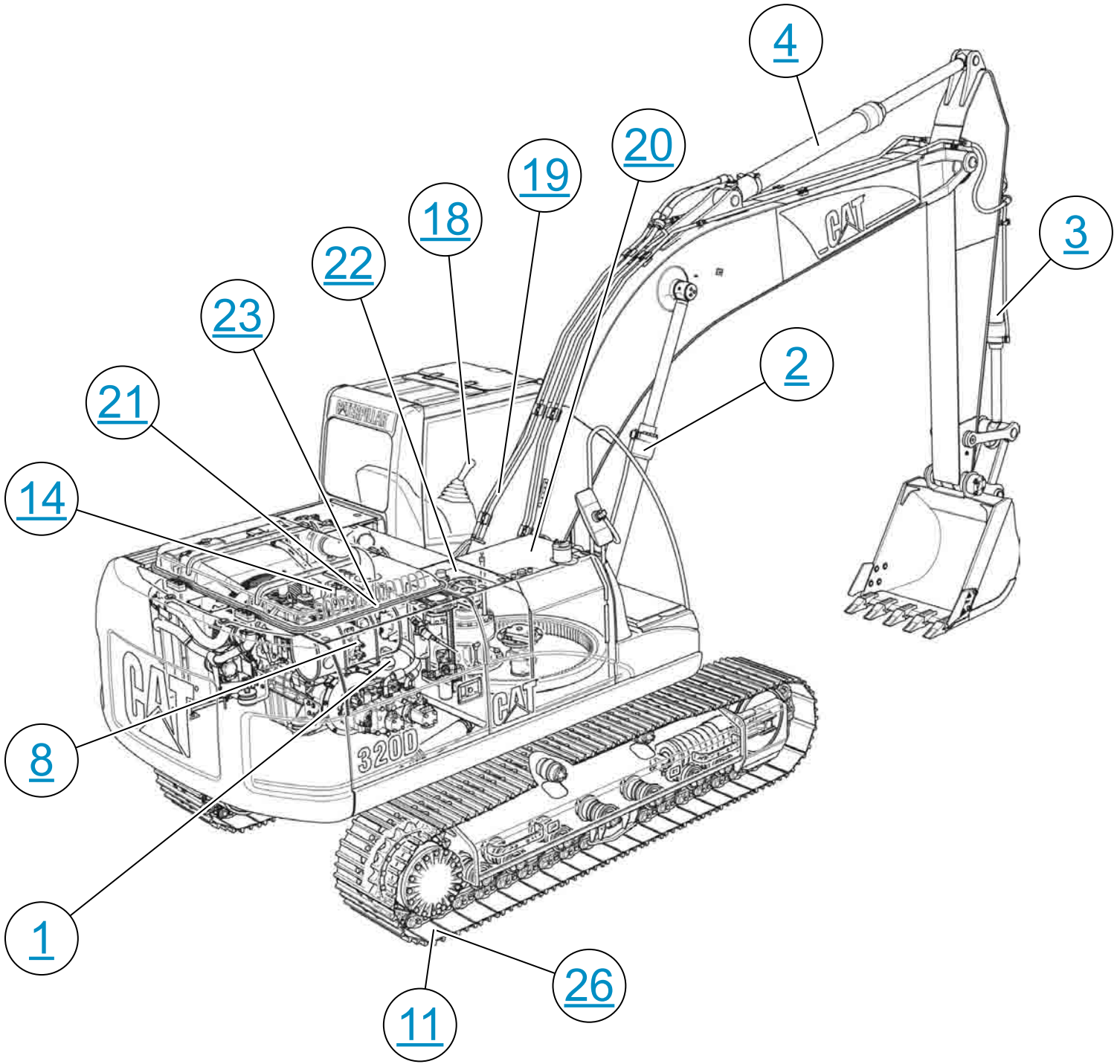




**THIS SCHEMATIC IS FOR THE 320D AND 320D L EXCAVATOR HYDRAULIC SYSTEM**  
 MEDIA NUMBER: REN7296-06  
 SCHEMATIC PART NUMBER: 259-7469, CHANGE: 01, VERSION: HE  
 Components are shown installed on a fully operable machine with the key and engine off, and with parking brake set.  
 Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.



# MACHINE COMPONENT LOCATIONS





# FILTER GP



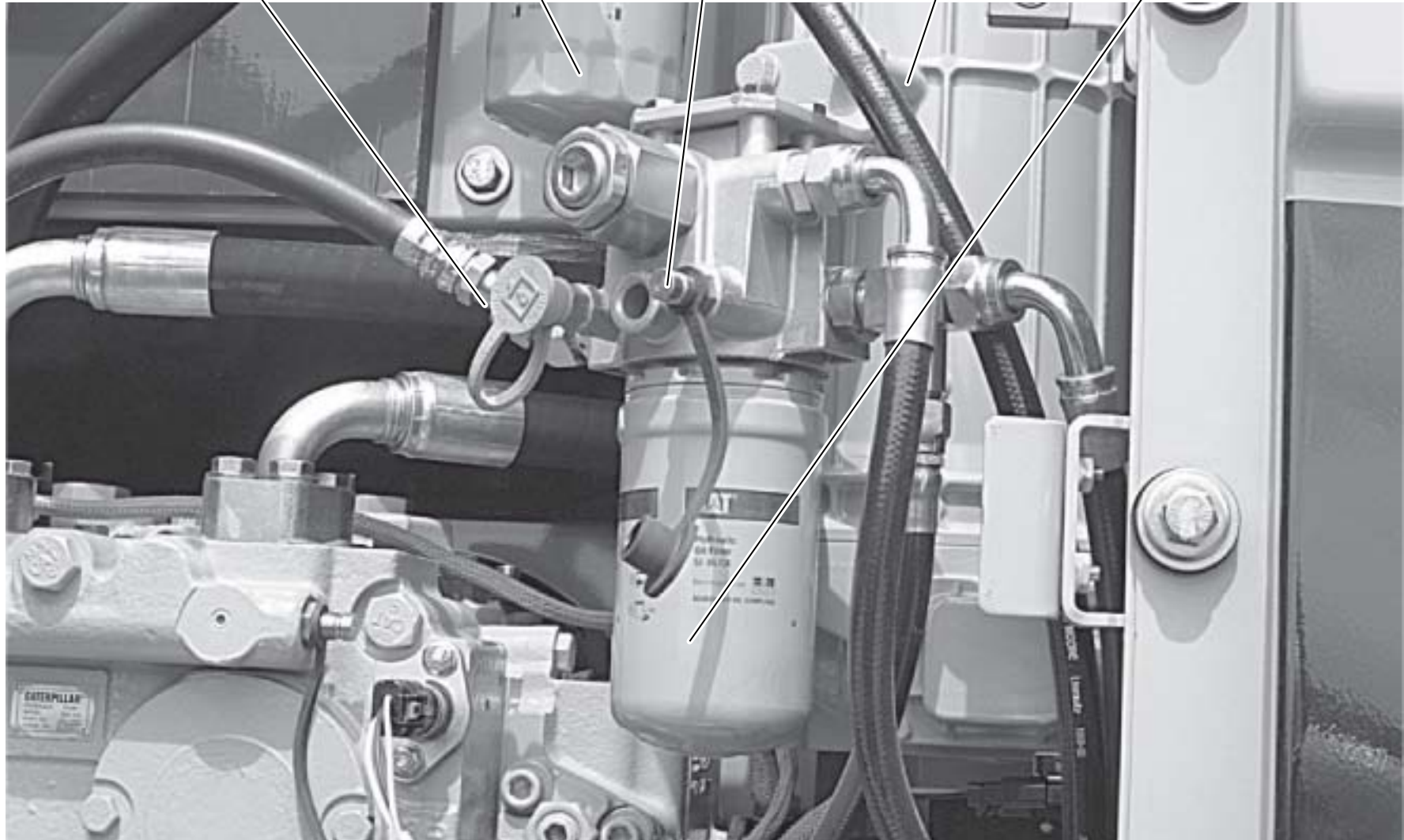
SOS

7

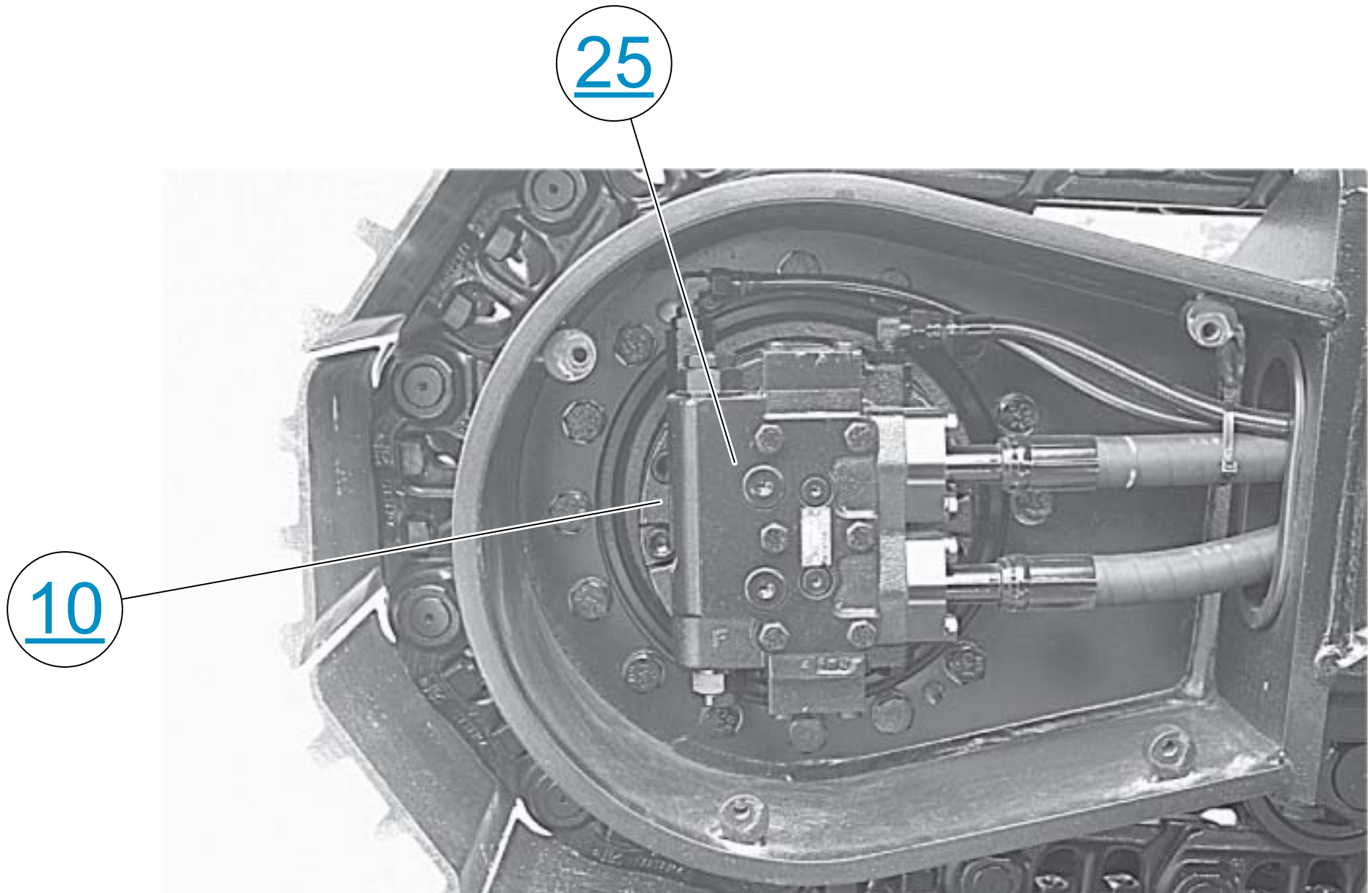
AA

6

5



# MOTOR GP - PISTON (TRAVEL)





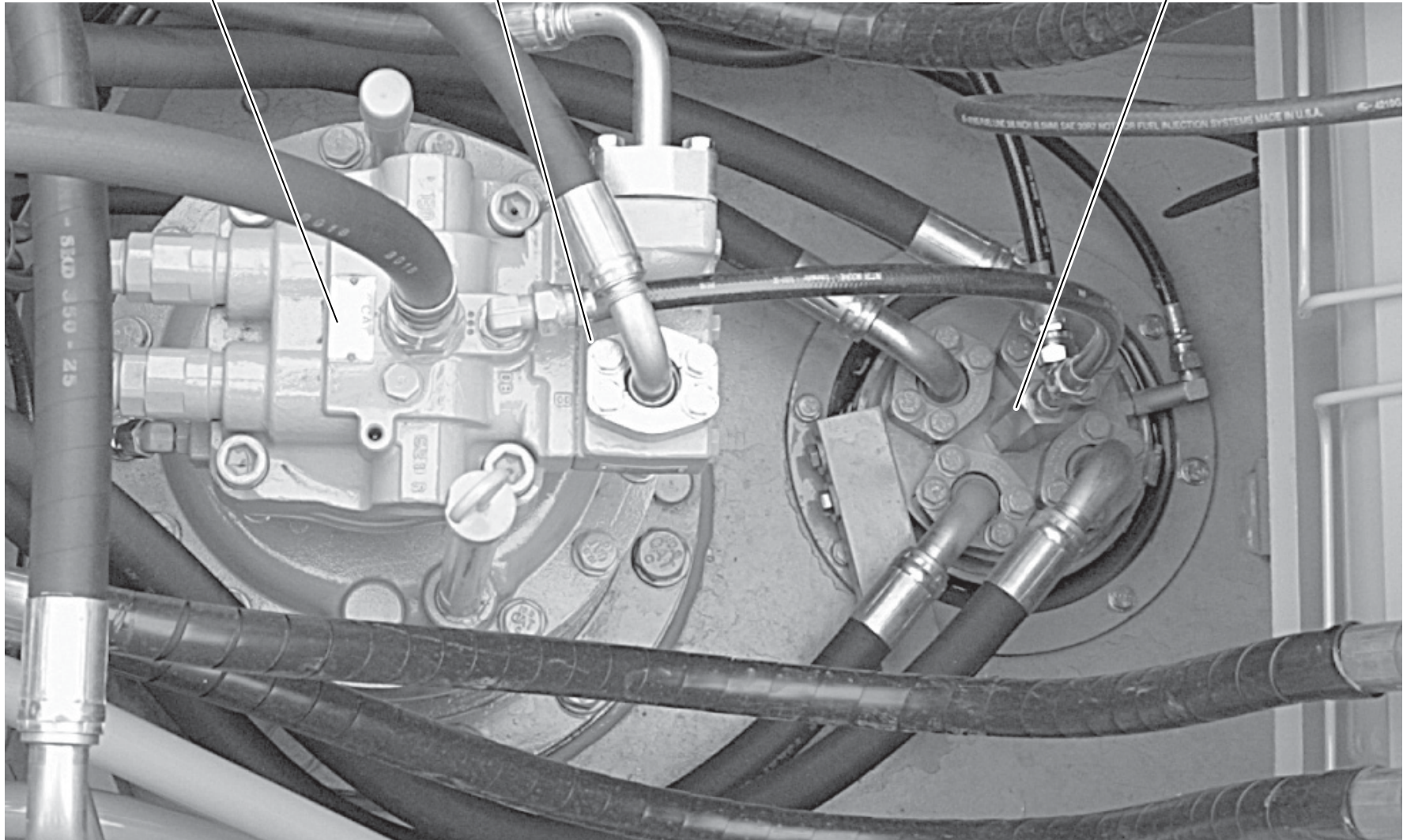
# MOTOR GP - SWING AND SWIVEL



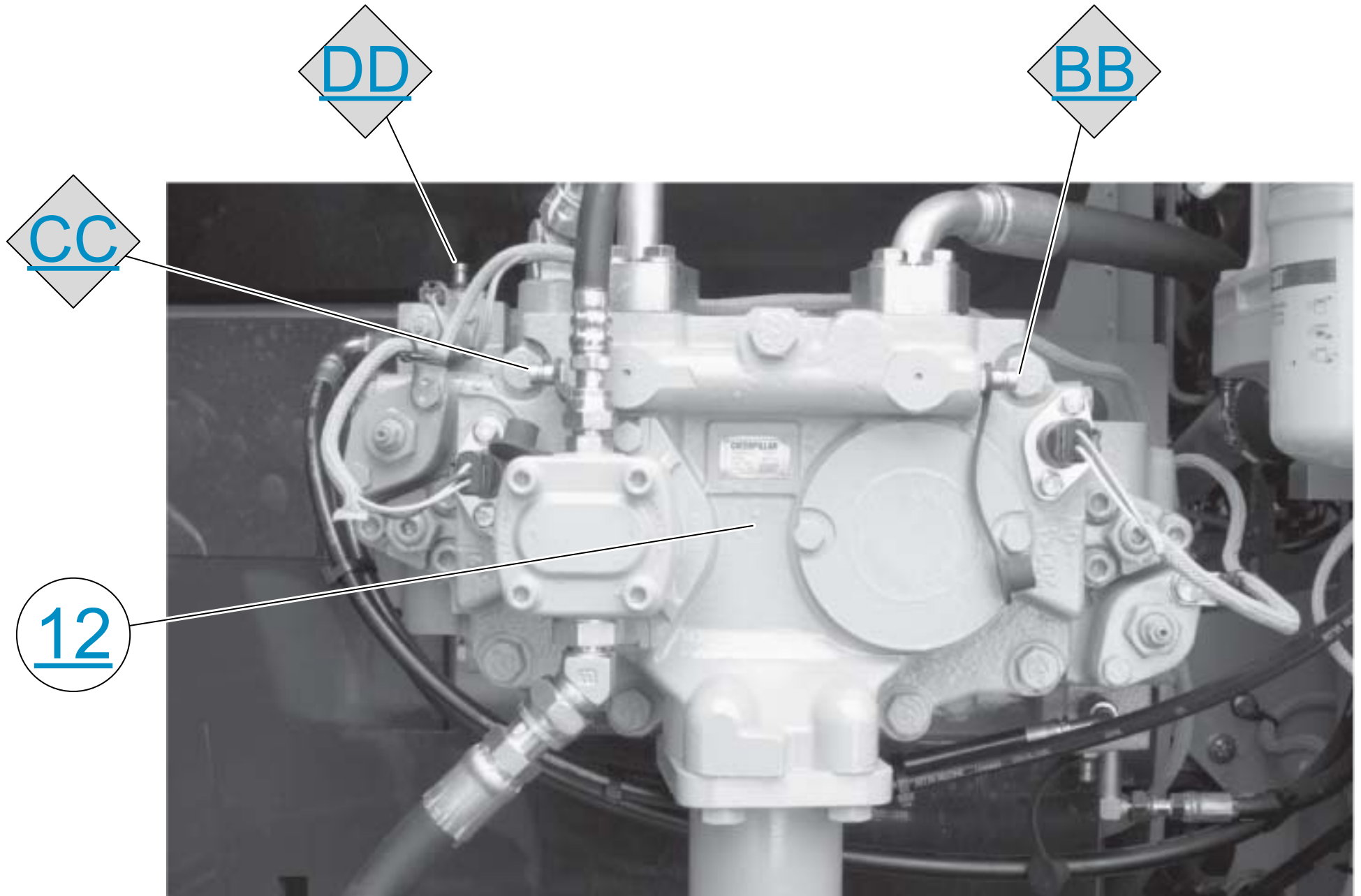
9

24

13



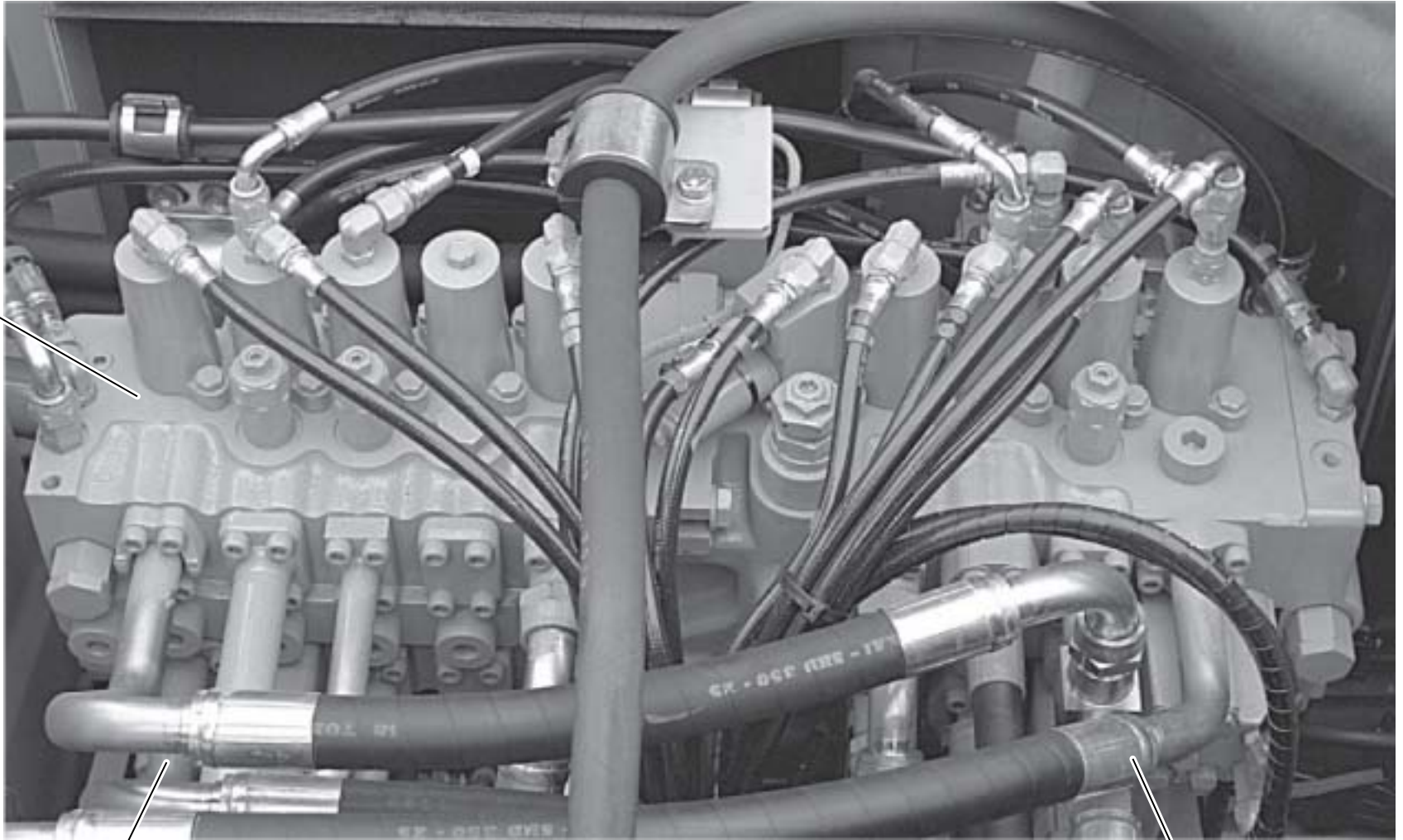
# PUMP GP - PISTON (MAIN)



# VALVE GP - MAIN CONTROL



17



15

16