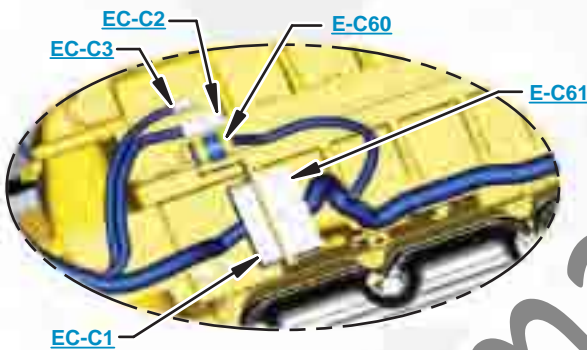


***This document is best viewed at a screen resolution of 1024 X 768.***

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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## **318D<sub>2</sub> Excavator Hydraulic System**

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JEB1-UP  
HAH1-UP  
XAH1-UP  
XGS1-UP  
TZS1-UP

SchematicCat.com

# COMPONENT LOCATION



Description	Part Number	Machine Location	Schematic Location
Accumulator Gp - Hydraulic (Charged)	164-6981	<a href="#">1</a>	<a href="#">B-4</a>
Control Gp - Joystick (LH)	297-0533	<a href="#">2</a>	<a href="#">A-8</a>
Control Gp - Joystick (RH)	297-0532	<a href="#">3</a>	<a href="#">A-7</a>
Filter & Valve Gp - Pilot (Hydraulic Oil)	158-8987	<a href="#">4</a>	<a href="#">B-3</a>
Filter Gp - Oil (Hydraulic, Case Drain)	289-8194	<a href="#">5</a>	<a href="#">A-3</a>
Filter Gp - Oil (Hydraulic, Main Return)	259-0869	<a href="#">6</a>	<a href="#">A-4</a>
Manifold Gp - Control (Pilot Oil)	215-5037	<a href="#">7</a>	<a href="#">B-5</a>
Motor Gp - Swing	369-9604	<a href="#">8</a>	<a href="#">F-6</a>
Motor Gp - Travel (Left)	185-6953	<a href="#">9</a>	<a href="#">F-8</a>
Motor Gp - Travel (Right)	185-6953	<a href="#">10</a>	<a href="#">F-7</a>
Pump Gp - Piston (Double Piston)	391-9452	<a href="#">11</a>	<a href="#">A-3</a>
Radiator & Hydraulic Oil Cooler Gp	390-8837	<a href="#">12</a>	<a href="#">C-2</a>
Screen Gp - Hydraulic (Tank)	259-0920	<a href="#">13</a>	<a href="#">A-4</a>
Switch As - Pressure (Implement)	309-5768	<a href="#">14</a>	<a href="#">E-5</a>
Swivel Gp	162-4696	<a href="#">15</a>	<a href="#">E-7</a>
Tank & Filter Gp - Hydraulic	260-8205	<a href="#">16</a>	<a href="#">A-4</a>
Valve Gp - Check (Cooler Bypass)	171-0002	<a href="#">17</a>	<a href="#">C-2</a>
Valve Gp - Main Control	420-2243	<a href="#">18</a>	<a href="#">D-4</a>
Valve Gp - Pilot	369-8503	<a href="#">19</a>	<a href="#">B-8</a>
Valve Gp - Pressure Reducing (Boom Priority)	285-1613	<a href="#">20</a>	<a href="#">C-2</a>
Valve Gp - Shuttle (B)	164-6979	<a href="#">21</a>	<a href="#">C-5</a>
Valve Gp - Travel Counterbalance (Left)	199-0504	<a href="#">22</a>	<a href="#">E-8</a>
Valve Gp - Travel Counterbalance (Right)	199-0504	<a href="#">23</a>	<a href="#">E-7</a>
Valve Gp - Swing Cushion (Crossover Relief)	369-9628	<a href="#">24</a>	<a href="#">E-6</a>

# TAP LOCATION



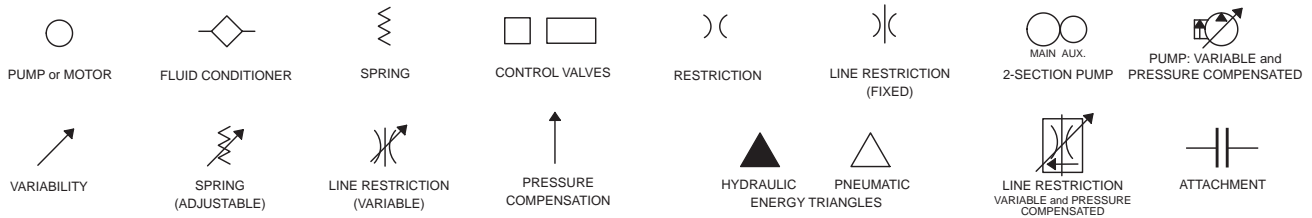
Tap Number	Description	Schematic Location
<a href="#">AA</a>	Idler Pump Delivery Pressure	<a href="#">B-3</a>
<a href="#">BB</a>	Drive Pump Delivery Pressure	<a href="#">A-3</a>
<a href="#">CC</a>	Power Shift Pressure	<a href="#">A-2</a>
<a href="#">DD</a>	Pump Case Pressure	<a href="#">A-2</a>
<a href="#">PG</a>	Pilot Pump Delivery Pressure	<a href="#">B-3</a>
<a href="#">SOS</a>	Oil Sampling Port	<a href="#">B-3</a>

SchematicCat.com

# FLUID POWER SYMBOLS



## BASIC COMPONENT SYMBOLS



## VALVE ENVELOPES

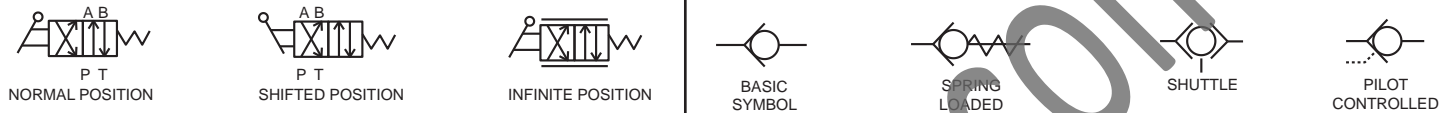
## VALVES

## VALVE PORTS



## CONTROL VALVES

## CHECK VALVES



## FLUID STORAGE RESERVOIRS



## MEASUREMENT

## ROTATING SHAFTS



## COMBINATION CONTROLS



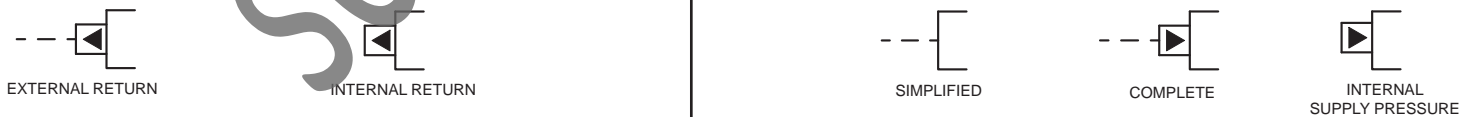
## MANUAL CONTROL SYMBOLS



## RELEASED PRESSURE

## PILOT CONTROL SYMBOLS

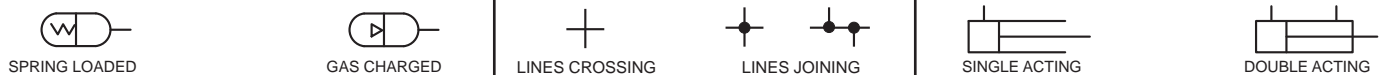
## REMOTE SUPPLY PRESSURE



## ACCUMULATORS

## CROSSING AND JOINING LINES

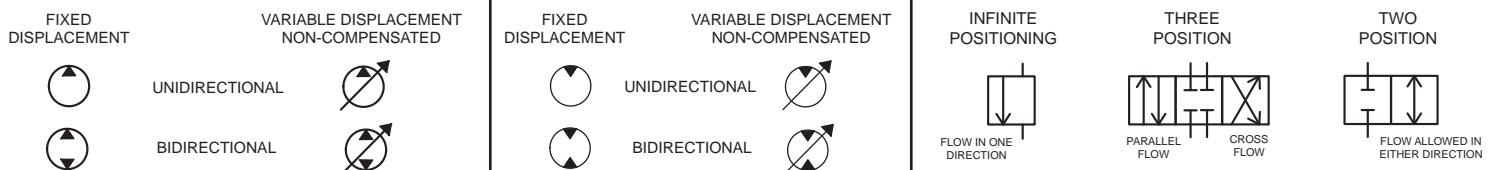
## HYDRAULIC AND PNEUMATIC CYLINDERS



## HYDRAULIC PUMPS

## HYDRAULIC MOTORS

## INTERNAL PASSAGEWAYS



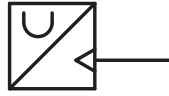
# ELECTRICAL SYMBOLS



## Hydraulic Symbols (Electrical)



Transducer  
(Fluid)



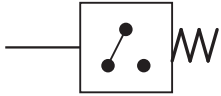
Transducer  
(Gas / Air)



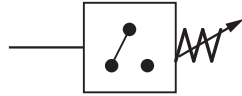
Generator



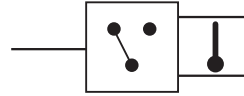
Electric Motor



Pressure Switch



Pressure Switch  
(Adjustable)

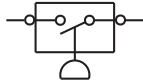


Temperature Switch

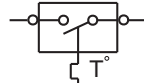


Electrical Wire

## Electrical Symbols (Electrical)



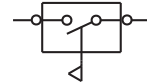
Pressure  
Symbol



Temperature  
Symbol



Level  
Symbol

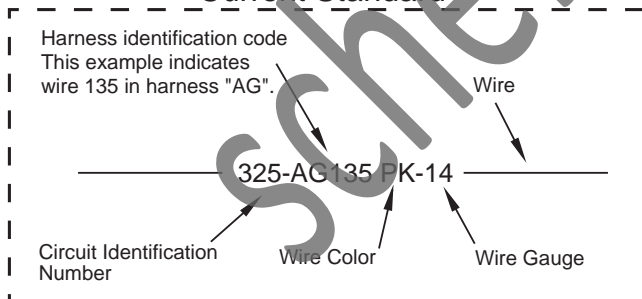


Flow  
Symbol

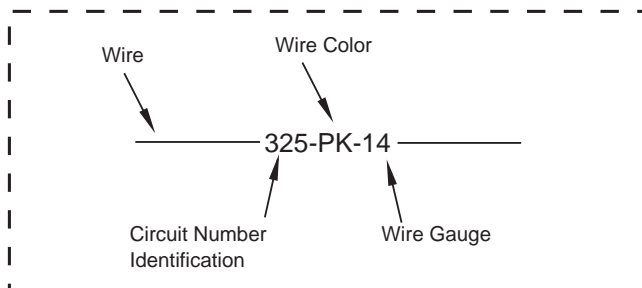
## Wire Number Identification Codes

### Electrical Schematic Example

#### Current Standard

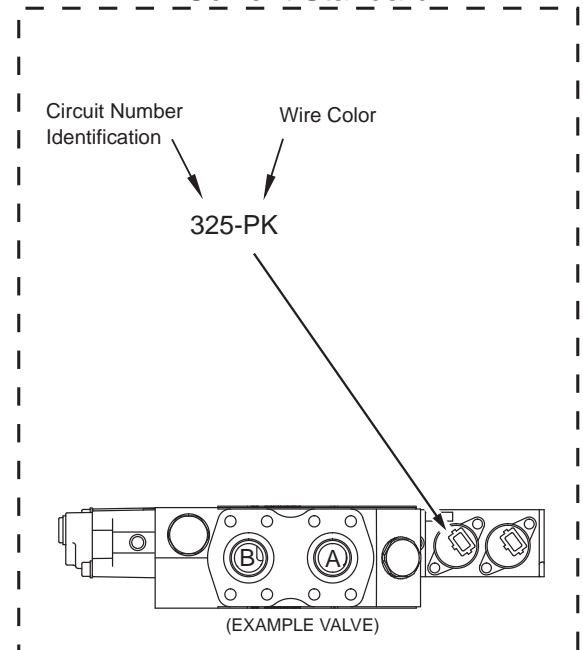


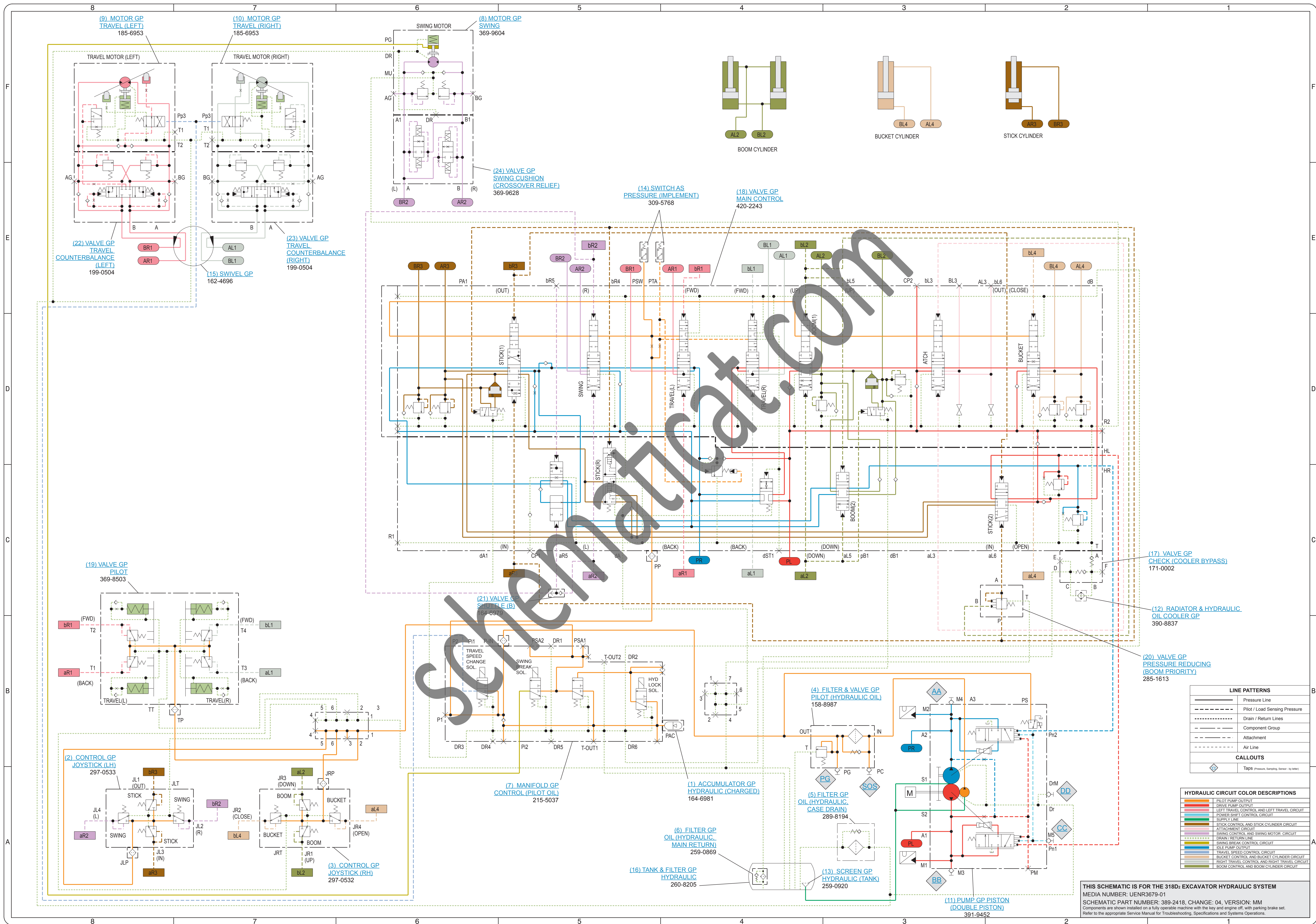
#### Previous Standard



### Hydraulic Schematic Example

#### Current Standard





8 7 6 5 4 3 2 1

F  
E  
D  
C  
B  
A

F  
E  
D  
C  
B  
A

8 7 6 5 4 3 2 1

(9) MOTOR GP TRAVEL (LEFT) 185-6953

(10) MOTOR GP TRAVEL (RIGHT) 185-6953

(8) MOTOR GP SWING 369-9604

(24) VALVE GP SWING CUSHION (CROSSOVER RELIEF) 369-9626

(14) SWITCH AS PRESSURE (IMPLEMENT) 309-5768

(18) VALVE GP MAIN CONTROL 420-2243

(22) VALVE GP TRAVEL COUNTERBALANCE (LEFT) 199-0504

(23) VALVE GP TRAVEL COUNTERBALANCE (RIGHT) 199-0504

(15) SWIVEL GP 162-4696

(19) VALVE GP PILOT 369-8503

(21) VALVE GP SHUTTLE (B) 164-6979

(17) VALVE GP CHECK (COOLER BYPASS) 171-0002

(12) RADIATOR & HYDRAULIC OIL COOLER GP 390-8837

(20) VALVE GP PRESSURE REDUCING (BOOM PRIORITY) 285-1613

(2) CONTROL GP JOYSTICK (LH) 297-0533

(7) MANIFOLD GP CONTROL (PILOT OIL) 215-5037

(6) FILTER GP OIL (HYDRAULIC MAIN RETURN) 259-0869

(16) TANK & FILTER GP HYDRAULIC 260-8205

(4) FILTER & VALVE GP PILOT (HYDRAULIC OIL) 158-8987

(5) FILTER GP OIL (HYDRAULIC CASE DRAIN) 289-8194

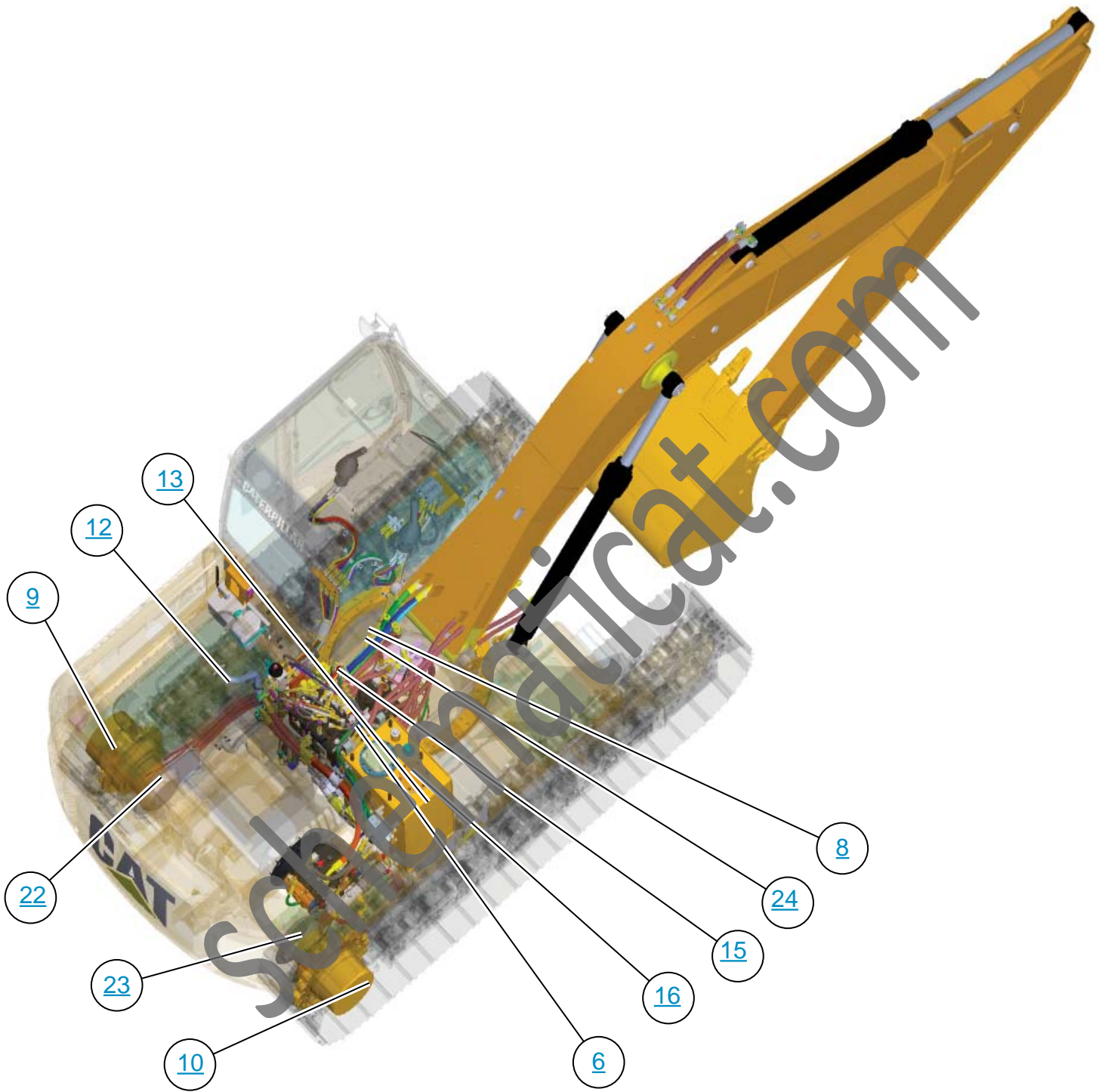
(13) SCREEN GP HYDRAULIC (TANK) 259-0920

(11) PUMP GP PISTON (DOUBLE PISTON) 391-9452

(3) CONTROL GP JOYSTICK (RH) 297-0532

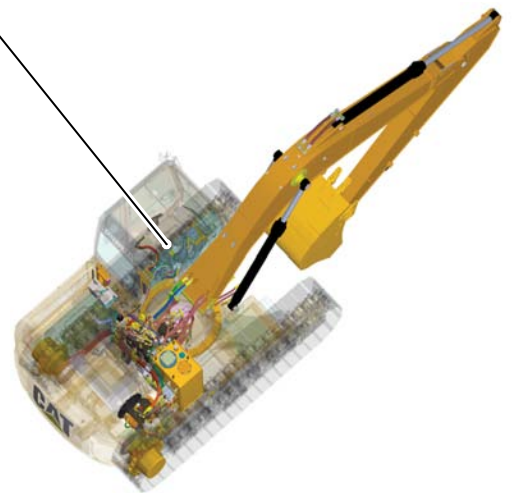
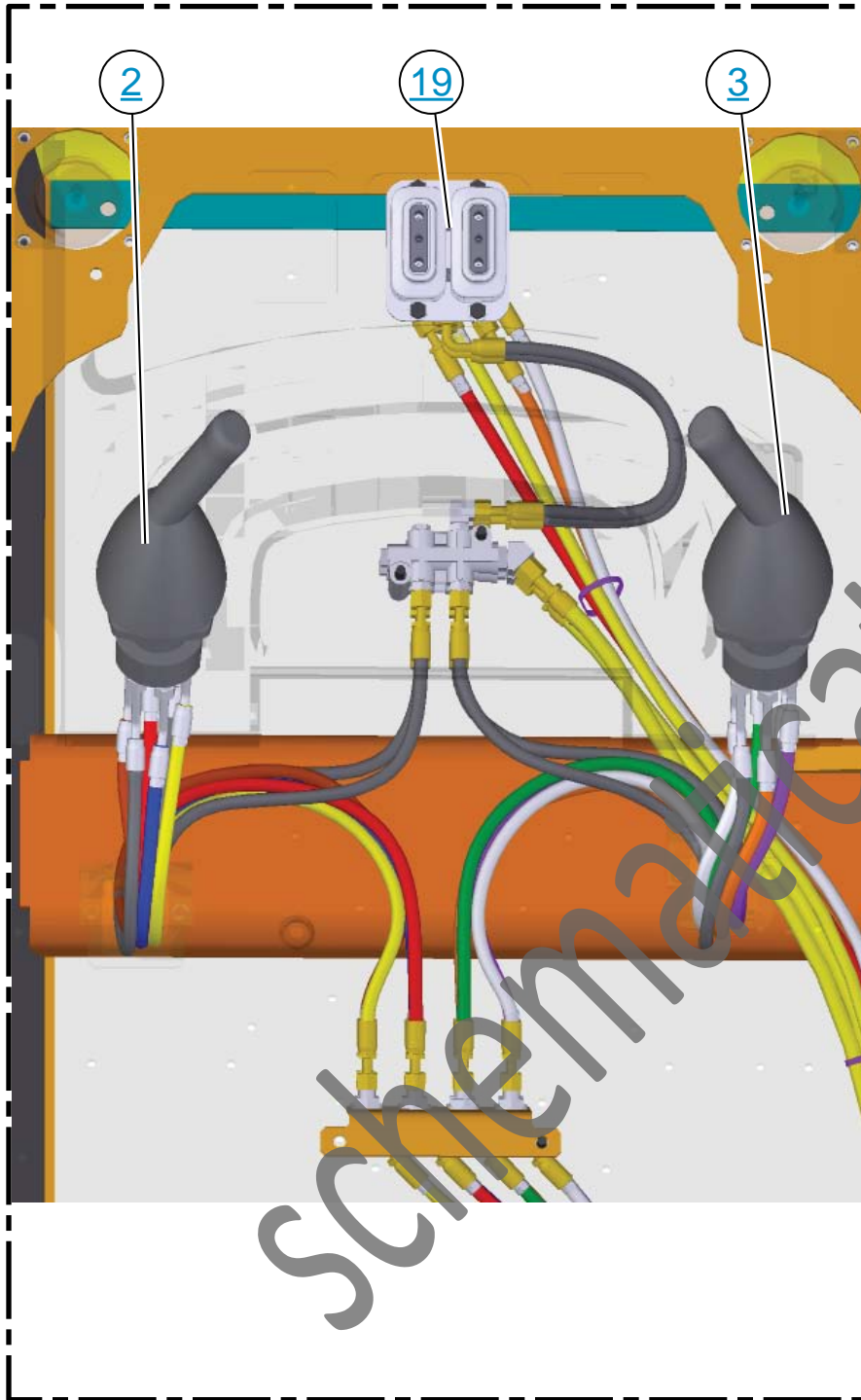
(1) ACCUMULATOR GP HYDRAULIC (CHARGED) 164-6981

# MACHINE COMPONENT LOCATION

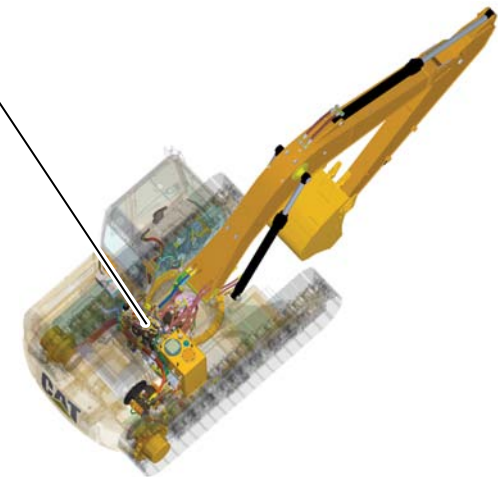
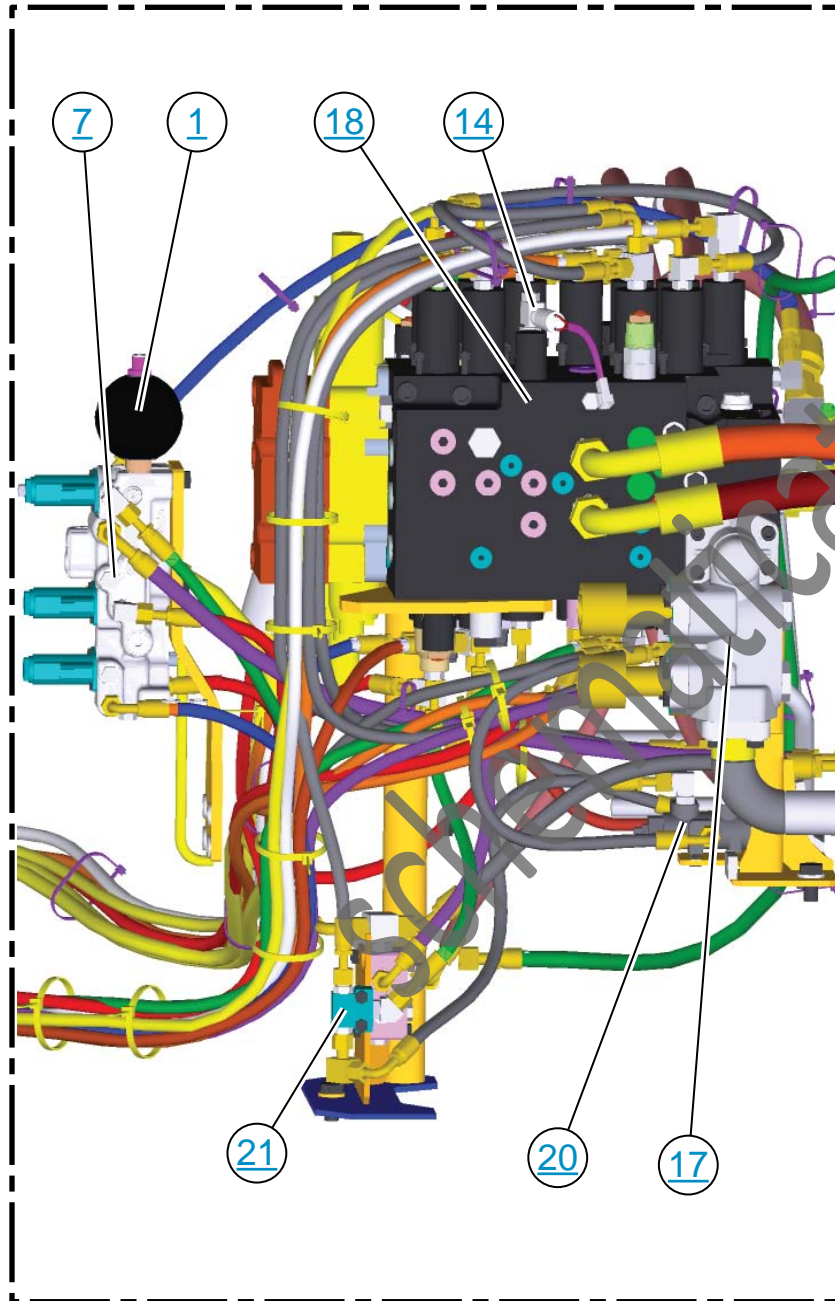




# CAP VIEW - TOP



# MAIN CONTROL VALVE



# MAIN PUMP

