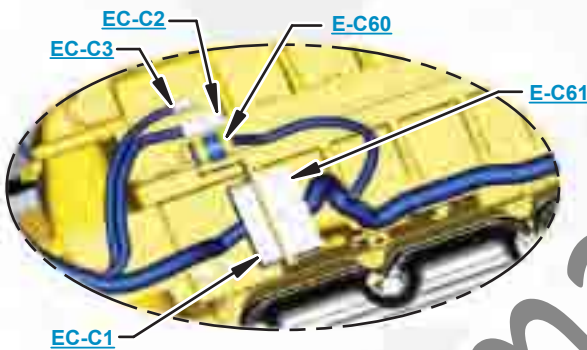


***This document is best viewed at a screen resolution of 1024 X 768.***

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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## **770G and 772G Off-Highway Truck Hydraulic System**

---

**770G:****RMD1-UP  
ECM1-UP  
ECX1-UP****772G:****RMH1-UP  
LTS1-UP  
LTX1-UP****Volume 1 of 3: Load Sense Steering and Fan System****Volume 2 of 3: Hoist and Brake System****Volume 3 of 3: Service Brakes, Parking Brakes and Traction Control System**

# COMPONENT LOCATION

## Volume 1 of 3 - LOAD SENSE STEERING AND FAN SYSTEM



Description	Part Number	Machine Location	Schematic Location
Switch As - Pressure (Secondary Steering Load Sensing)	9X-4455	<a href="#">27</a>	<a href="#">D-7</a>
Pump Gp - Electric 2 Section (Steering)	319-5405	<a href="#">8*</a>	<a href="#">D-6</a>
Tank Gp - Hydraulic	417-7942	<a href="#">28</a>	<a href="#">A-6</a>
Valve As - Vacuum Relief Breather (Steering)	358-9476	<a href="#">29</a>	<a href="#">B-6</a>
Filter Gp - Fan (System Return)	158-3491	<a href="#">38</a>	<a href="#">B-2</a>
Valve Gp - Steering Disable Check	422-8957	<a href="#">30</a>	<a href="#">D-5</a>
Pump Gp - Hand Metering Unit (Steering)	192-4286	<a href="#">31</a>	<a href="#">F-5, E-1</a>
Cylinder Gp - Steering	770G 276-5246	<a href="#">32</a>	<a href="#">F-3</a>
	772G 276-5249		<a href="#">F-5</a>
			<a href="#">F-1</a>
Sensor Gp - Pressure (Main Steering Pump)	344-7391	<a href="#">11*</a>	<a href="#">D-4</a>
Pump Gp - Piston, 2 Section (CW)	348-7627	<a href="#">33</a>	<a href="#">B-4</a>
Filter Gp - Oil (Steering Case Drain)	173-0159	<a href="#">34</a>	<a href="#">B-3</a>
Sensor As - Fluid Level Monitoring	330-9321	<a href="#">18*</a>	<a href="#">A-2</a>
Sensor - Speed (Fan Motor)	266-8577	<a href="#">35</a>	<a href="#">C-2</a>
Motor Gp - Piston (Fan)	345-9796	<a href="#">36</a>	<a href="#">C-2</a>
Valve Gp - Cooler Bypass	347-4808	<a href="#">37</a>	<a href="#">B-2</a>
Cooler Gp - Fan Return	358-0360	<a href="#">39</a>	<a href="#">B-1</a>
<b>OPTIONAL ATTACHMENTS (BRAKE SYSTEM)</b>			
Cylinder Gp - Steering (Position Sensing)	770G 341-6166	<a href="#">40</a>	<a href="#">F-2</a>
	772G 341-6167		

Always check Component part Numbers with Parts Manual for your specific machine

\* = (8) See also Volume 3

\* = (11) See also Volume 2

\* = (18) See also Volume 2

# COMPONENT LOCATION

## Volume 2 of 3 - HOIST AND BRAKE SYSTEM



Description	Part Number	Machine Location	Schematic Location
Sensor As - Fluid Level Monitoring	330-9321	<a href="#">18*</a>	<a href="#">A-6</a>
Brake Gp - Rear Brakes Including Parking Brake	770G	<a href="#">1*</a>	<a href="#">C-7</a>
	772G		<a href="#">F-7</a>
Core As - Rear Brake Oil Cooler (Oil To Water)	283-9746	<a href="#">21</a>	<a href="#">E-5</a>
Filter As - Hoist Tank Breather (Air)	8X-4575	<a href="#">12*</a>	<a href="#">B-5</a>
Pump Gp - One Section Gear Pump (CW)	318-2590	<a href="#">22</a>	<a href="#">C-4</a>
Valve Gp - Proportional Control	245-1668	<a href="#">23</a>	<a href="#">F-3</a>
Tank Gp - Hydraulic (Hoist, Brake, And Brake Cooling)	421-9670	<a href="#">7</a>	<a href="#">A-4</a>
Cylinder Gp - Hoist	4T-4168	<a href="#">24</a>	<a href="#">B-3</a>
Plate - Orifice	8X-3572	<a href="#">25</a>	<a href="#">B-3</a>
Flange (Orifice)	194-1624	<a href="#">26</a>	<a href="#">B-3</a>

Always check Component part Numbers with Parts Manual for your specific machine

\* = (1) See also Volume 3

\* = (7) See also Volume 3

\* = (12) See also Volume 3

\* = (18) See also Volume 1 and Volume 3

SchematicCatalog.com

# COMPONENT LOCATION

## Volume 3 of 3 - SERVICE BRAKES, PARKING BRAKES AND TRACTION CONTROL SYSTEM



Description	Part Number	Machine Location	Schematic Location
Pump Gp - Electric 2 Section (Brake Retract Section) (Note D)	319-5405	<a href="#">8*</a>	<a href="#">B-4</a>
Sensor - Pressure (Low Brake Supply)	344-7391	<a href="#">11*</a>	<a href="#">D-3</a>
Sensor As - Fluid Level Monitoring	330-9321	<a href="#">18*</a>	<a href="#">A-5</a>
Brake Gp - Rear Brakes Including Parking Brake	770G 323-6382	<a href="#">1*</a>	<a href="#">A-7</a>
	772G 323-6387		<a href="#">E-7</a>
Filter As - Air (Hoist Tank Breather)	8X-4575	<a href="#">12*</a>	<a href="#">A-4</a>
Pump Gp - Brake Charge (1 Section Pump)	318-2596	<a href="#">15</a>	<a href="#">B-4</a>
Tank Gp - Hydraulic (Hoist, Brake And Brake Cooling)	421-9670	<a href="#">7*</a>	<a href="#">A-3</a>
Adjuster Gp - Rear Brake Slack Adjuster	319-6290	<a href="#">2</a>	<a href="#">B-6</a>
			<a href="#">D-6</a>
Valve Gp - Secondary Brake And Accumulator Bleed Down	361-2239	<a href="#">4</a>	<a href="#">F-7</a>
Switch As - Pressure	160-2609	<a href="#">3</a>	<a href="#">F-7</a>
Valve Gp - ARC/TCS	340-6409	<a href="#">6</a>	<a href="#">C-6</a>
Adapter As - Orifice	357-4342	<a href="#">5</a>	<a href="#">B-6</a>
			<a href="#">D-6</a>
Manifold Gp - Manual Tow Valve, Check Valve, Hoist Pilot	309-1615	<a href="#">9</a>	<a href="#">C-4</a>
Accumulator Gp - A	356-3346	<a href="#">10</a>	<a href="#">D-3, D-5</a>
Filter Gp - Oil (Brake Charge Filter)	335-0980	<a href="#">14</a>	<a href="#">B-4</a>
Manifold Gp - Brake Charge Valve	341-2634	<a href="#">17</a>	<a href="#">C-3</a>
Valve Gp - Front Brake Manifold	334-8054	<a href="#">16</a>	<a href="#">E-2</a>
Pedal Gp - Brake (Service Brake Pedal Valve)	342-9078	<a href="#">19</a>	<a href="#">F-4</a>
Brake Gp - Front Brakes Dry Caliper	320-5184	<a href="#">20</a>	<a href="#">E-1</a>
			<a href="#">F-1</a>
<b>OPTIONAL ATTACHMENTS (BRAKE SYSTEM)</b>			
Accumulator Gp - Ped Certified	318-2532	<a href="#">41</a>	<a href="#">D-3, D-5</a>
Manifold Gp - Ped Certified Brake Charge Valve	320-5075	<a href="#">42</a>	<a href="#">C-3</a>

Always check Component part Numbers with Parts Manual for your specific machine

- \* = (1) See also Volume 2
- \* = (7) See also Volume 2
- \* = (8) See also Volume 1
- \* = (11) See also Volume 1
- \* = (12) See also Volume 2
- \* = (18) See also Volume 2

# TAP LOCATION

## Volume 1 of 3 - LOAD SENSE STEERING AND FAN SYSTEM



Tap Number	Description	Schematic Location
<a href="#">R</a>	HMU Inlet	<a href="#">D-4</a>
<a href="#">S</a>	Steering Load Sense	<a href="#">D-3</a>
<a href="#">I</a>	Fan Pump Output	<a href="#">C-3</a>
<a href="#">U</a>	Fan Motor Outlet	<a href="#">B-1</a>
<a href="#">V</a>	Fan Return (SOS)	<a href="#">B-2</a>

SchematicCat.com

# TAP LOCATION

## Volume 2 of 3 - HOIST AND BRAKE SYSTEM



Tap Number	Description	Schematic Location
<a href="#">H</a>	Hoist Pump Outlet	<a href="#">C-4</a>
<a href="#">I</a>	Left Brake Cooling Inlet	<a href="#">F-6</a>
<a href="#">J</a>	Left Brake Cooling Outlet	<a href="#">F-7</a>
<a href="#">K</a>	Right Brake Cooling Inlet	<a href="#">C-6</a>
<a href="#">L</a>	Right Brake Cooling Out	<a href="#">C-7</a>
<a href="#">M</a>	Brake Oil Cooler Outlet (Sos)	<a href="#">E-5</a>
<a href="#">N</a>	Hoist Cylinder Head End	<a href="#">B-3</a>
<a href="#">O</a>	Hoist Cylinder Rod End	<a href="#">C-3</a>
<a href="#">P</a>	Hoist Raise Pilot	<a href="#">D-2</a>
<a href="#">Q</a>	Hoist Lower Pilot	<a href="#">E-2</a>

# TAP LOCATION

## Volume 3 of 3 - SERVICE BRAKES, PARKING BRAKES AND TRACTION CONTROL SYSTEM



Tap Number	Description	Schematic Location
<a href="#">A</a>	Left Rear Service Brake	<a href="#">D-7</a>
<a href="#">B</a>	Right Rear Service Brake	<a href="#">B-7</a>
<a href="#">C</a>	Rear Park Brakes	<a href="#">F-7</a>
<a href="#">D</a>	Brake Charge Pump Output	<a href="#">B-3</a>
<a href="#">E</a>	Service Brake Accumulator	<a href="#">D-3</a>
<a href="#">F</a>	Park Brake Accumulator	<a href="#">D-3</a>
<a href="#">G</a>	Front Service Brakes	<a href="#">E-1</a>

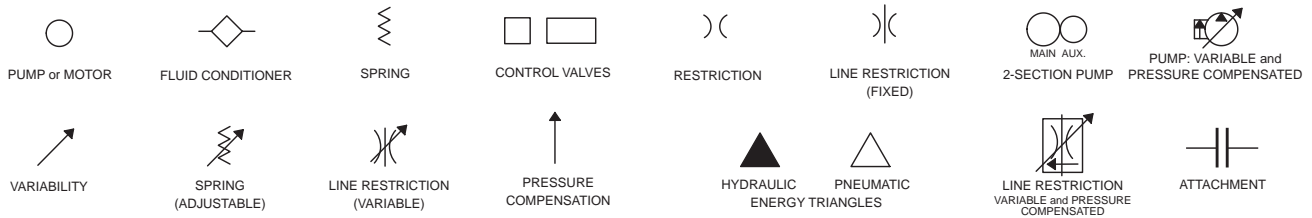
SchematicCat.com



# FLUID POWER SYMBOLS



## BASIC COMPONENT SYMBOLS



## VALVE ENVELOPES

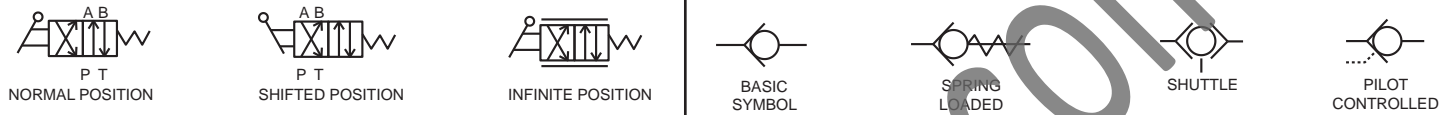
## VALVES

## 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

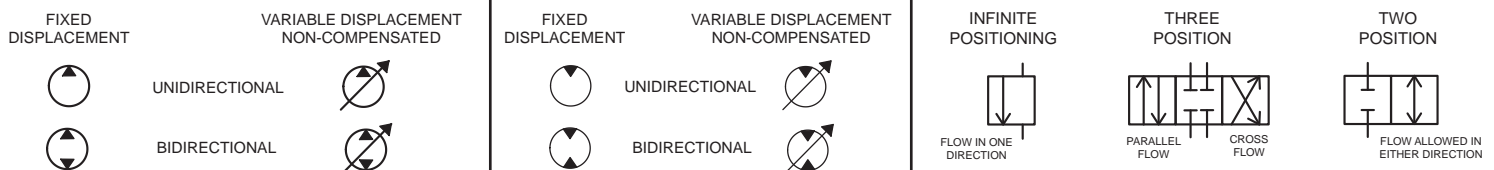
## HYDRAULIC AND PNEUMATIC CYLINDERS



## HYDRAULIC PUMPS

## HYDRAULIC MOTORS

## INTERNAL PASSAGEWAYS



# ELECTRICAL SYMBOLS



## Hydraulic Symbols (Electrical)



Transducer  
(Fluid)



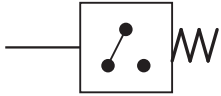
Transducer  
(Gas / Air)



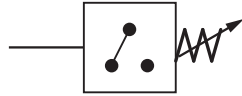
Generator



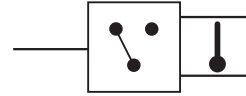
Electric Motor



Pressure Switch



Pressure Switch  
(Adjustable)

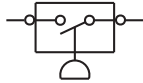


Temperature Switch

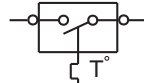


Electrical Wire

## Electrical Symbols (Electrical)



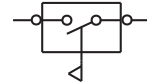
Pressure  
Symbol



Temperature  
Symbol



Level  
Symbol

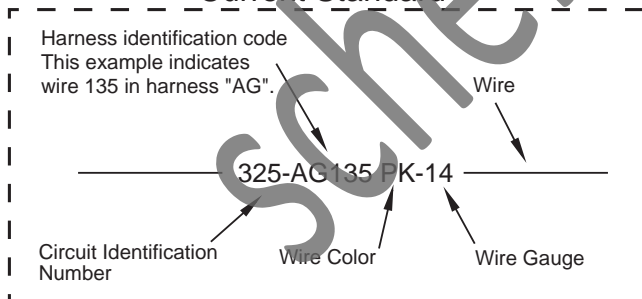


Flow  
Symbol

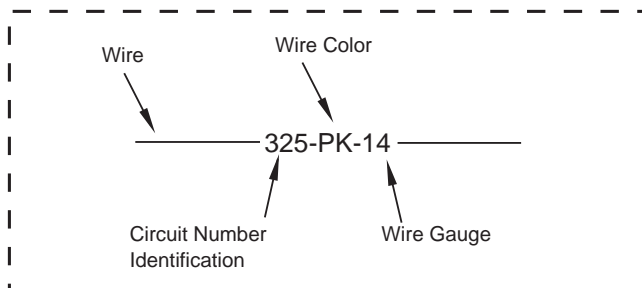
## Wire Number Identification Codes

### Electrical Schematic Example

#### Current Standard

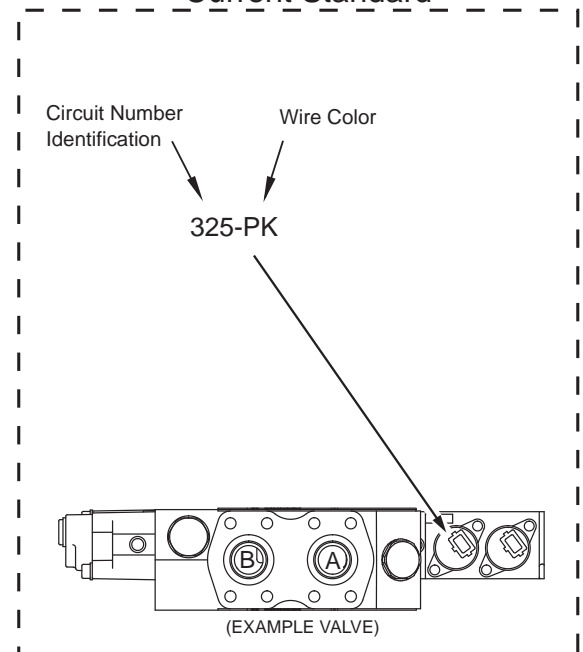


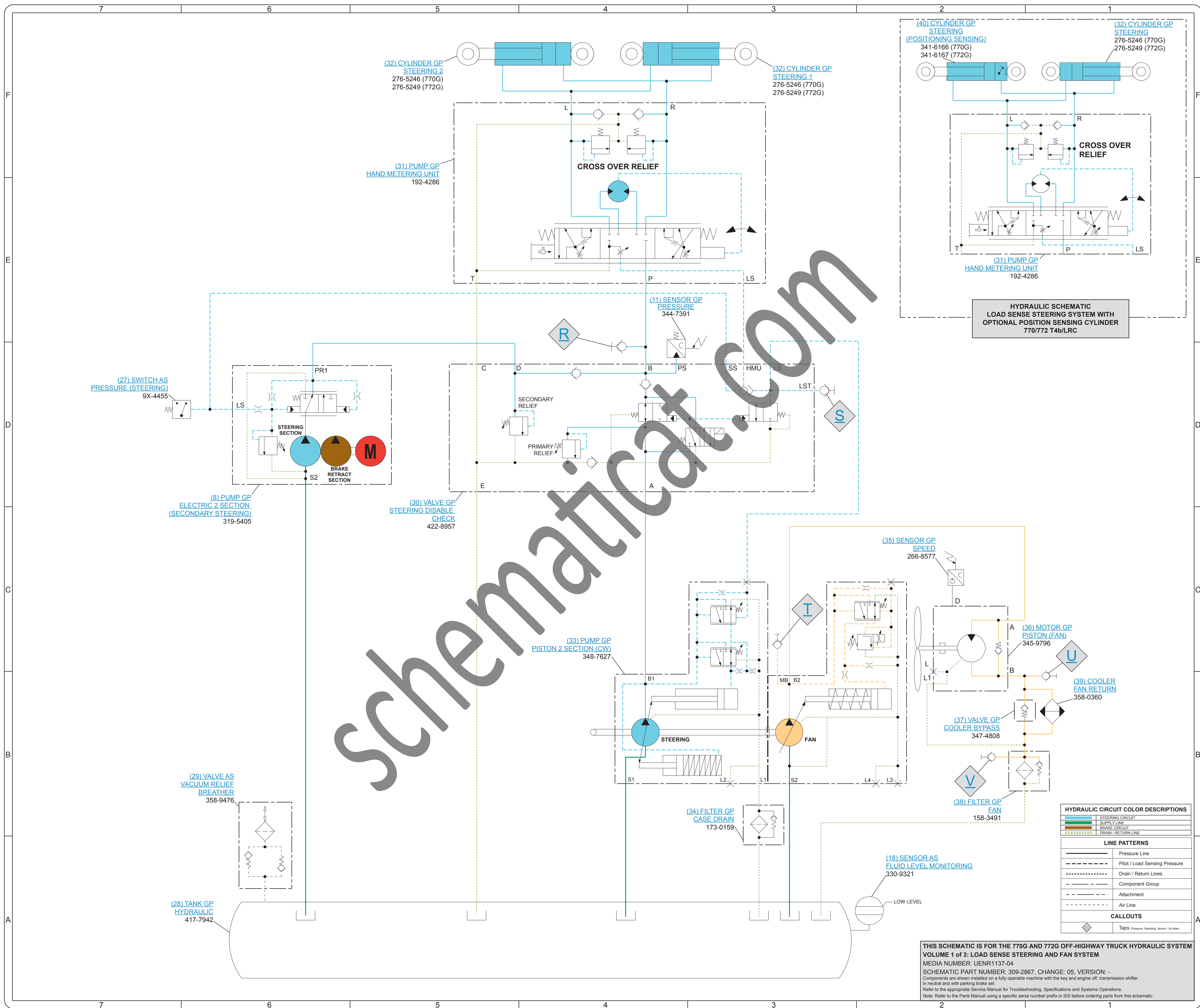
#### Previous Standard



### Hydraulic Schematic Example

#### Current Standard

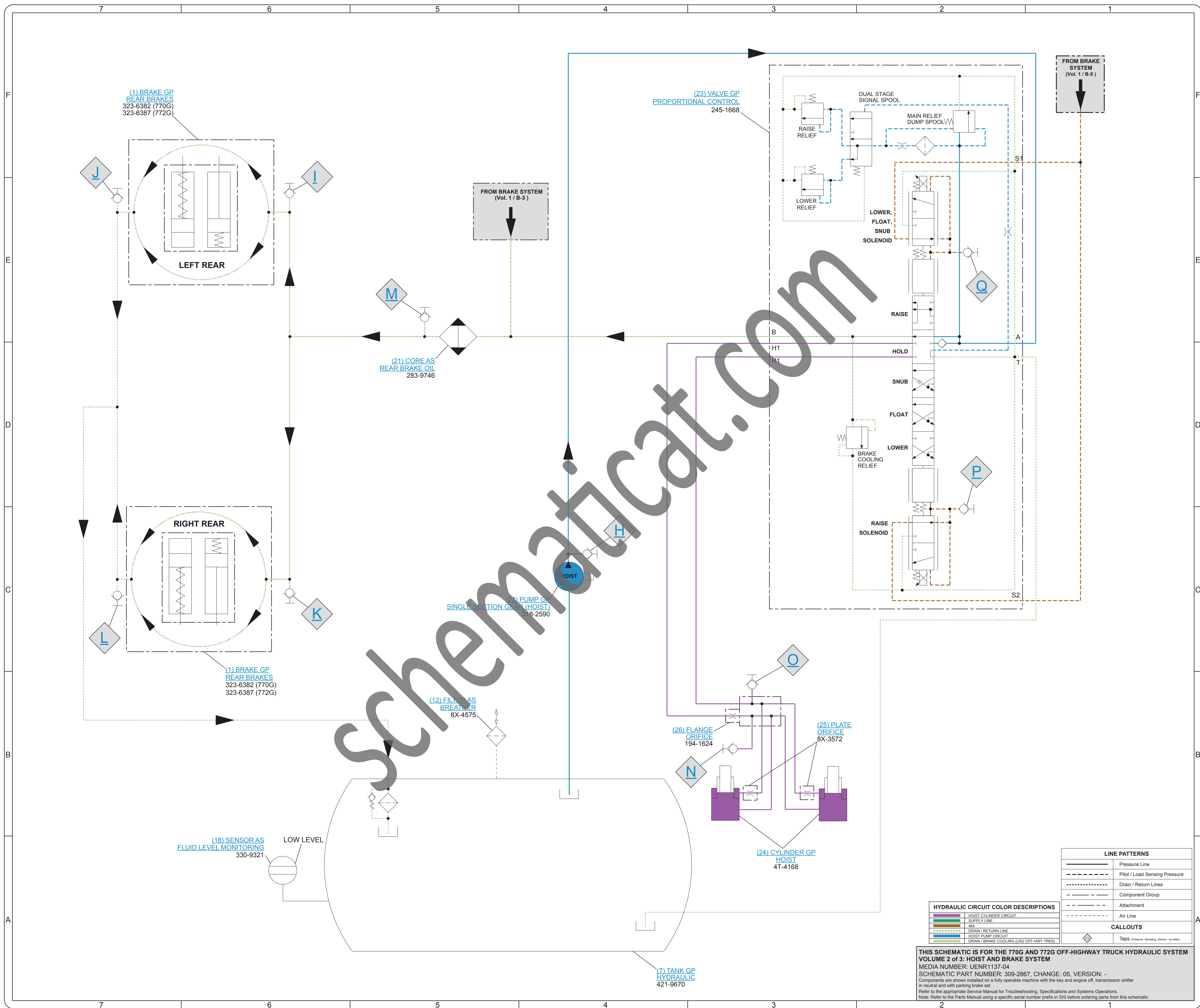




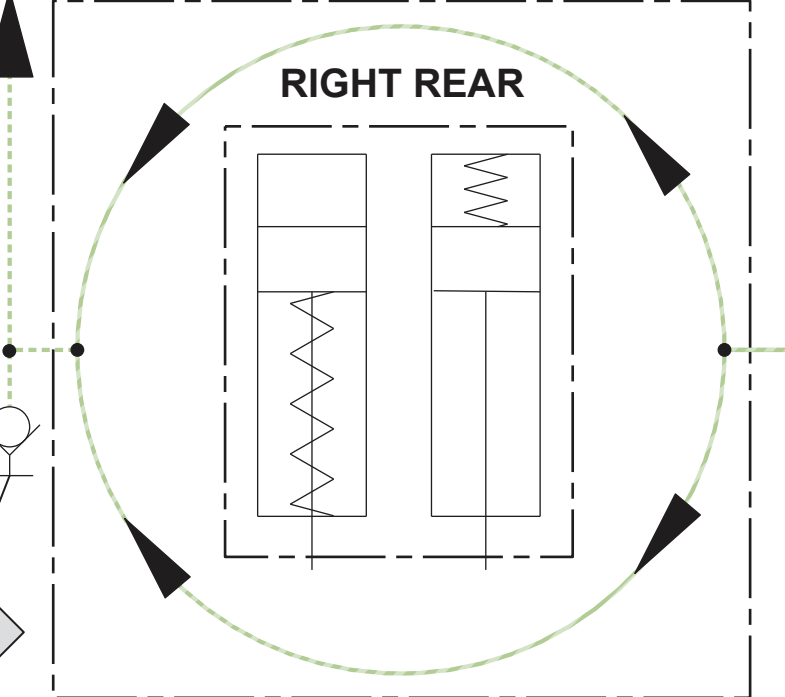
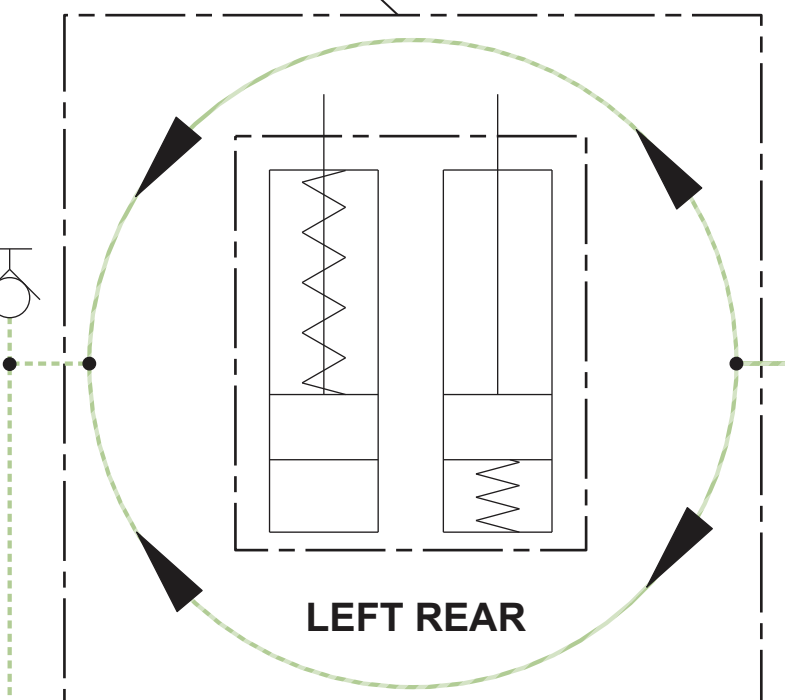
HYDRAULIC SCHEMATIC  
LOAD SENSE STEERING SYSTEM WITH  
OPTIONAL POSITION SENSING CYLINDER  
770/772 T4b/LRC

HYDRAULIC CIRCUIT COLOR DESCRIPTIONS	
<span style="color: blue;">—</span>	STEERING CIRCUIT
<span style="color: green;">—</span>	SUPPLY LINE
<span style="color: red;">—</span>	BRAKE CIRCUIT
<span style="color: black;">—</span>	DRAIN / RETURN LINE
LINE PATTERNS	
<span style="border-bottom: 1px solid black;">  </span>	Pressure Line
<span style="border-bottom: 1px dashed black;">  </span>	Pilot / Load Sensing Pressure
<span style="border-bottom: 1px dotted black;">  </span>	Drain / Return Lines
<span style="border-bottom: 1px long-dashed black;">  </span>	Component Group
<span style="border-bottom: 1px dash-dot black;">  </span>	Attachment
<span style="border-bottom: 1px long-dash-dot black;">  </span>	Air Line
CALLOUTS	
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">  </span>	Taps (Pressure, Sampling, Sensor, by letter)

THIS SCHEMATIC IS FOR THE 770G AND 772G OFF-HIGHWAY TRUCK HYDRAULIC SYSTEM  
VOLUME 1 of 3: LOAD SENSE STEERING AND FAN SYSTEM  
MEDIA NUMBER: UENR1137-04  
SCHEMATIC PART NUMBER: 309-2867, CHANGE: 05, VERSION: -  
Components are shown installed on a fully operable machine with the key and engine off, transmission shifter in neutral and with parking brake set.  
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.  
Note: Refer to the Parts Manual using a specific serial number prefix in SIS before ordering parts from this schematic.



(1) BRAKE GP  
REAR BRAKES  
323-6382 (770G)  
323-6387 (772G)



(1) BRAKE GP  
REAR BRAKES  
323-6382 (770G)  
323-6387 (772G)

(18) SENSOR AS  
FLUID LEVEL MONITORING  
330-9321

LOW LEVEL

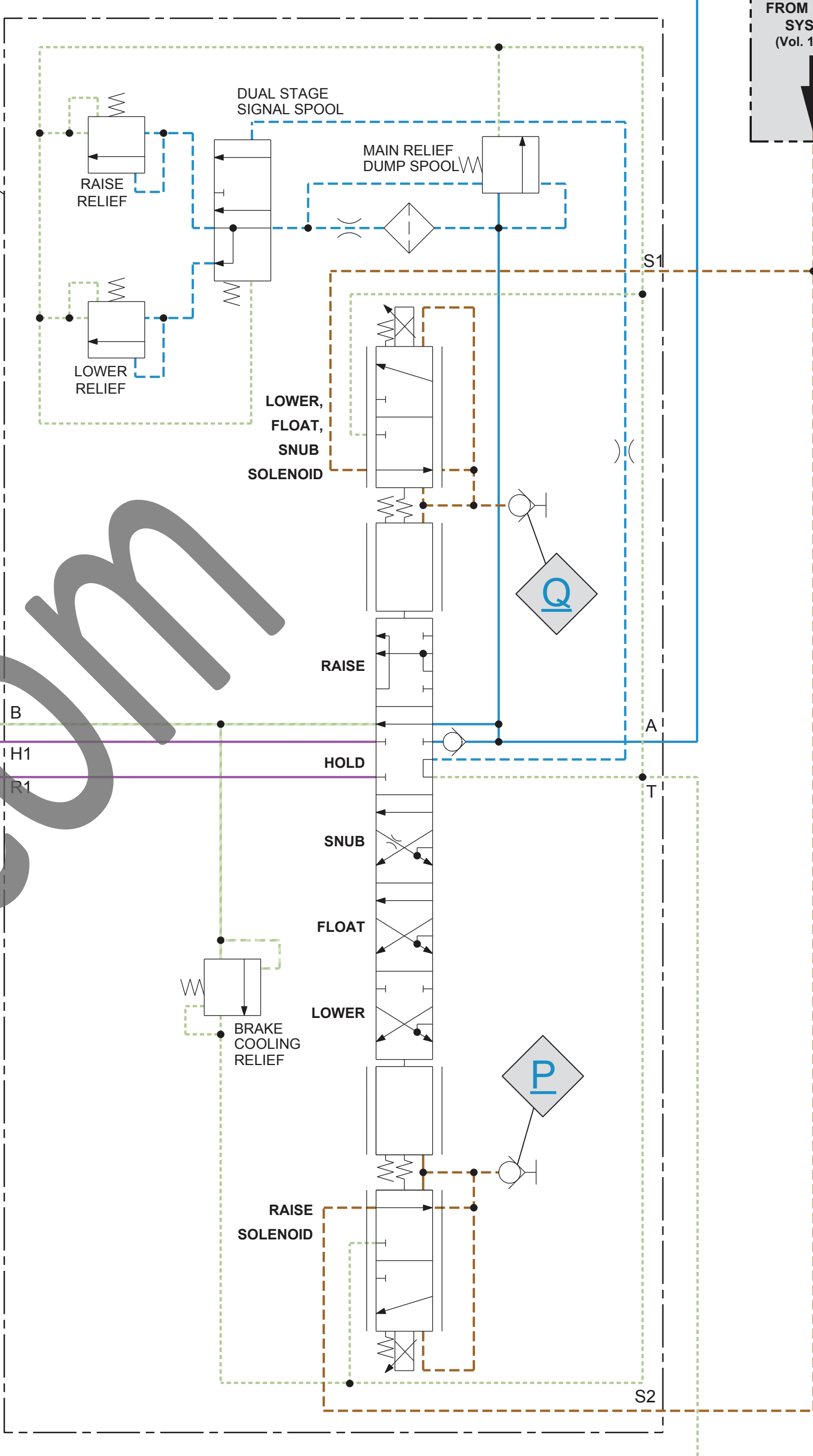
FROM BRAKE SYSTEM  
(Vol. 1 / B-3)

(21) CORE AS  
REAR BRAKE OIL  
283-9746

(22) PUMP GP  
SINGLE SECTION GEAR (HOIST)  
318-2590

(12) FILTER AS  
BREATHER  
8X-4575

(23) VALVE GP  
PROPORTIONAL CONTROL  
245-1668



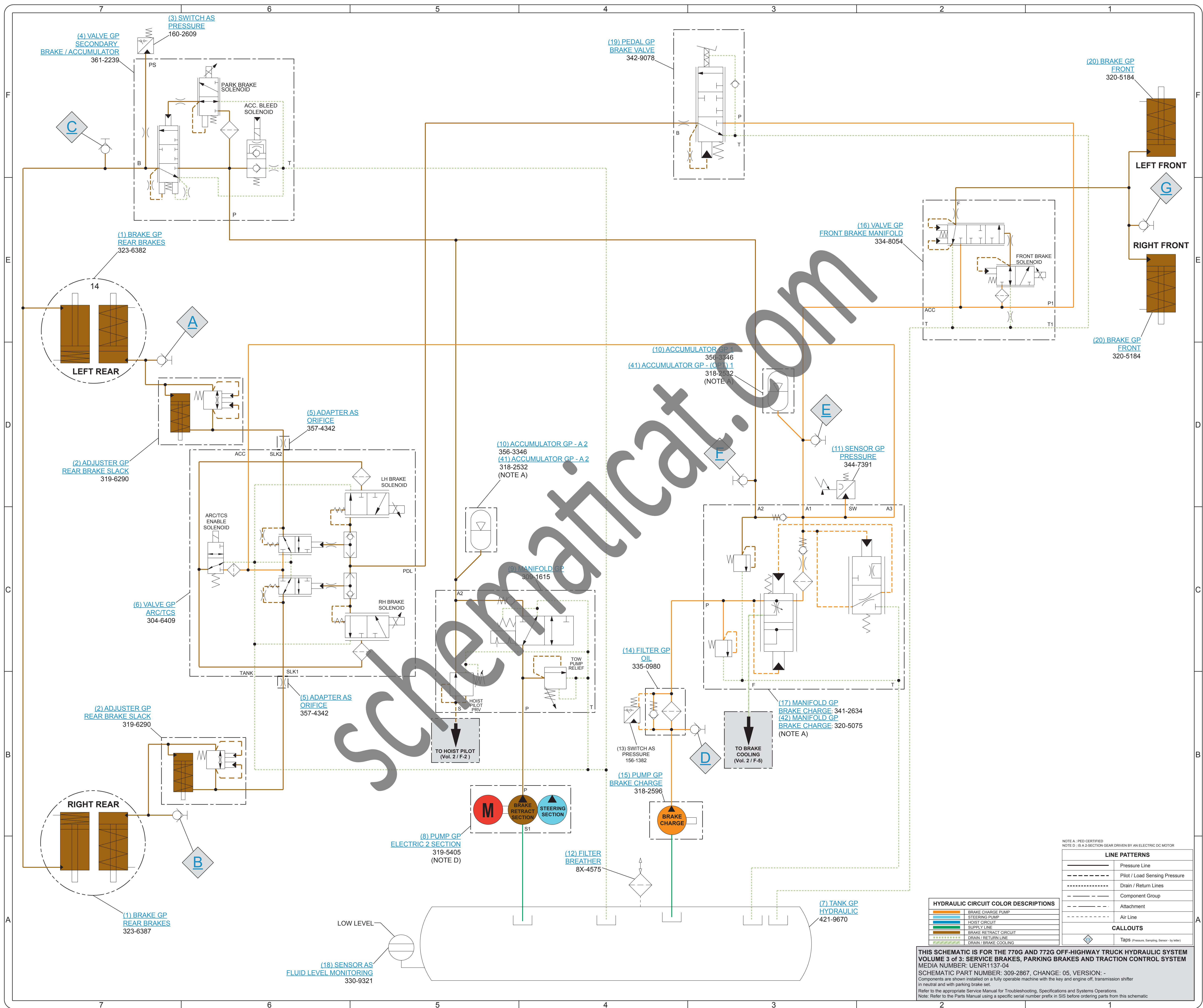
FROM BRAKE SYSTEM  
(Vol. 1 / B-5)

(26) FLANGE ORIFICE  
194-1624

(25) PLATE ORIFICE  
8X-3572

(24) CYLINDER GP  
HOIST  
4T-4168

(7) TANK GP  
HYDRAULIC  
421-9670



SchematicCat.com

NOTE A: PED CERTIFIED  
NOTE D: IS A 2-SECTION GEAR DRIVEN BY AN ELECTRIC DC MOTOR

LINE PATTERNS	
	Pressure Line
	Pilot / Load Sensing Pressure
	Drain / Return Lines
	Component Group
	Attachment
	Air Line

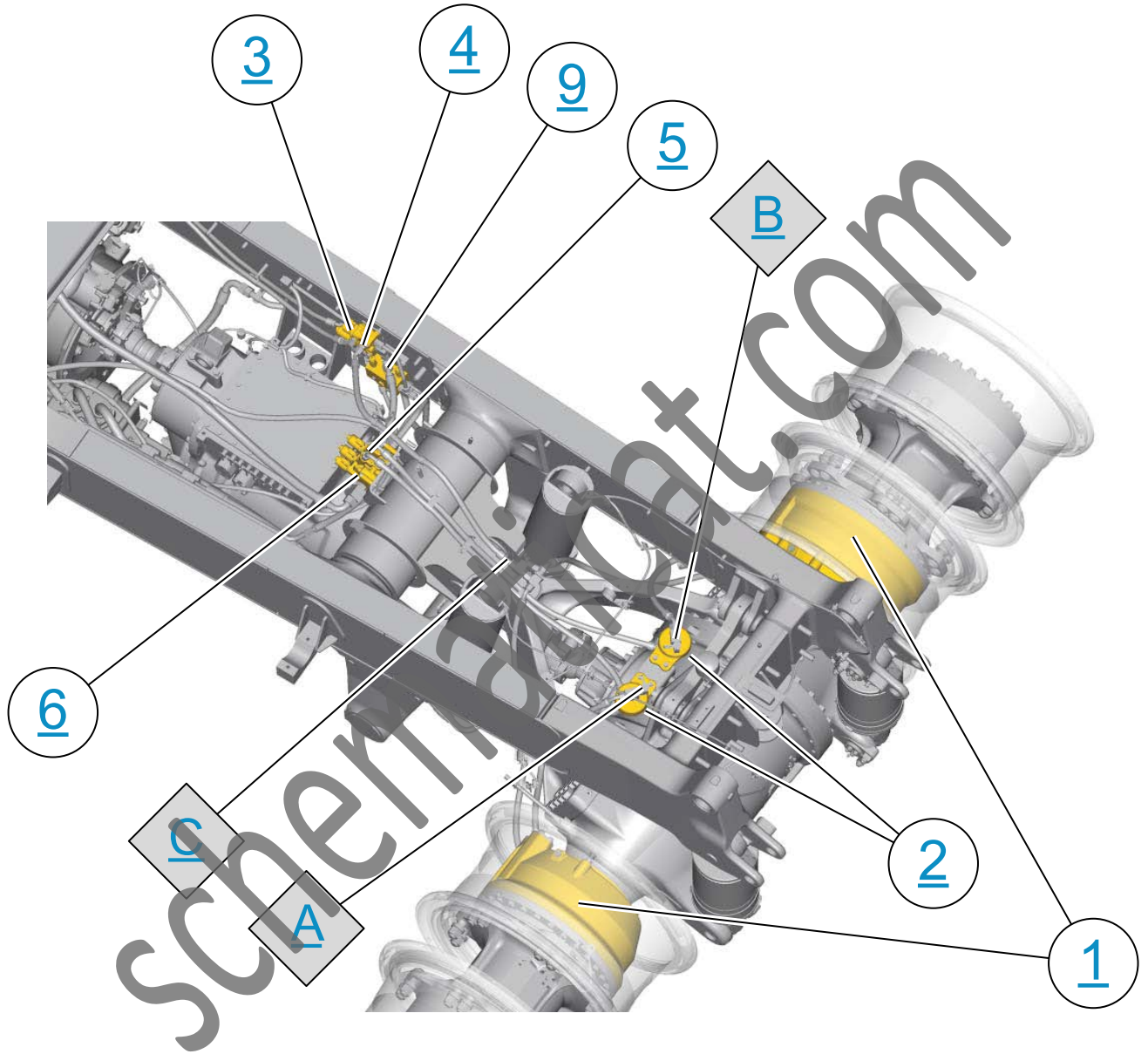
  

CALLOUTS	
	Taps (Pressure, Sensing, Sensor, by letter)

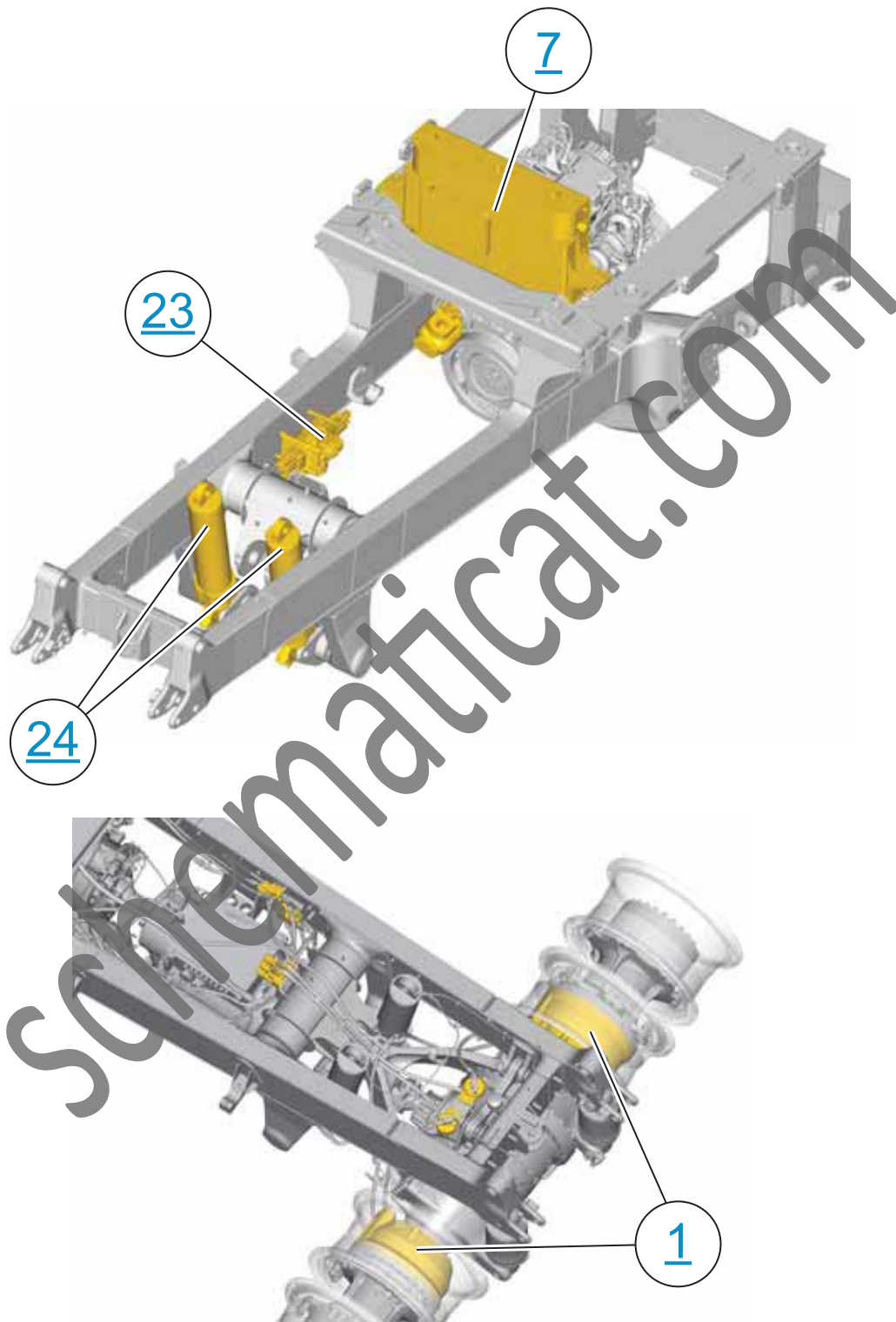
HYDRAULIC CIRCUIT COLOR DESCRIPTIONS	
	BRAKE CHARGE PUMP
	STEERING PUMP
	HOIST CIRCUIT
	SUPPLY LINE
	BRAKE RETRACT CIRCUIT
	DRAIN / RETURN LINE
	DRAIN / BRAKE COOLING

**THIS SCHEMATIC IS FOR THE 770G AND 772G OFF-HIGHWAY TRUCK HYDRAULIC SYSTEM**  
**VOLUME 3 of 3: SERVICE BRAKES, PARKING BRAKES AND TRACTION CONTROL SYSTEM**  
 MEDIA NUMBER: UENR1137-04  
 SCHEMATIC PART NUMBER: 309-2867, CHANGE: 05, VERSION: -  
 Components are shown installed on a fully operable machine with the key and engine off, transmission shifter in neutral and with parking brake set.  
 Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.  
 Note: Refer to the Parts Manual using a specific serial number prefix in SIS before ordering parts from this schematic.

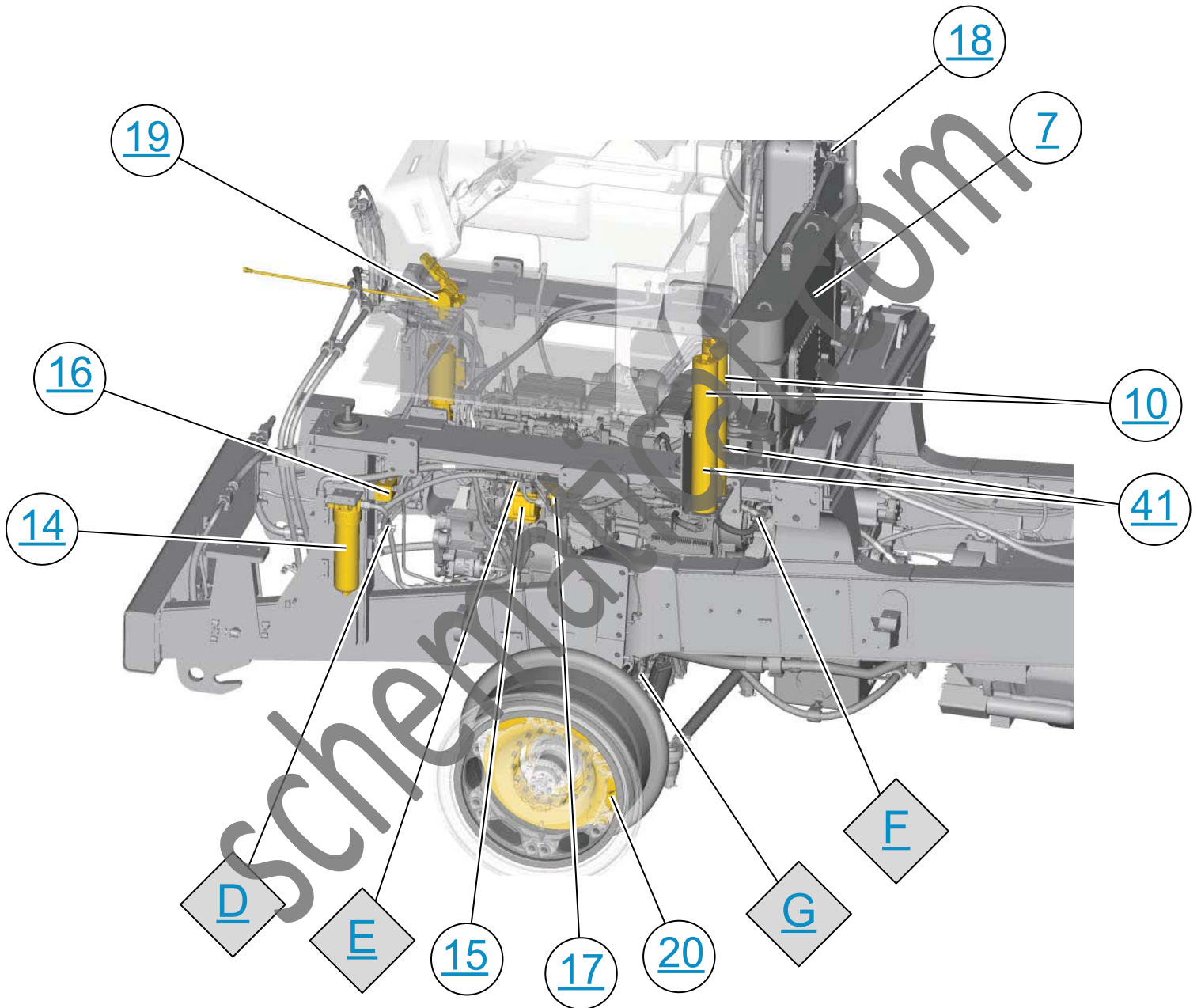
# CHASSIS REAR - TOP DOWN VIEW



# CHASSIS VIEW TOP DOWN

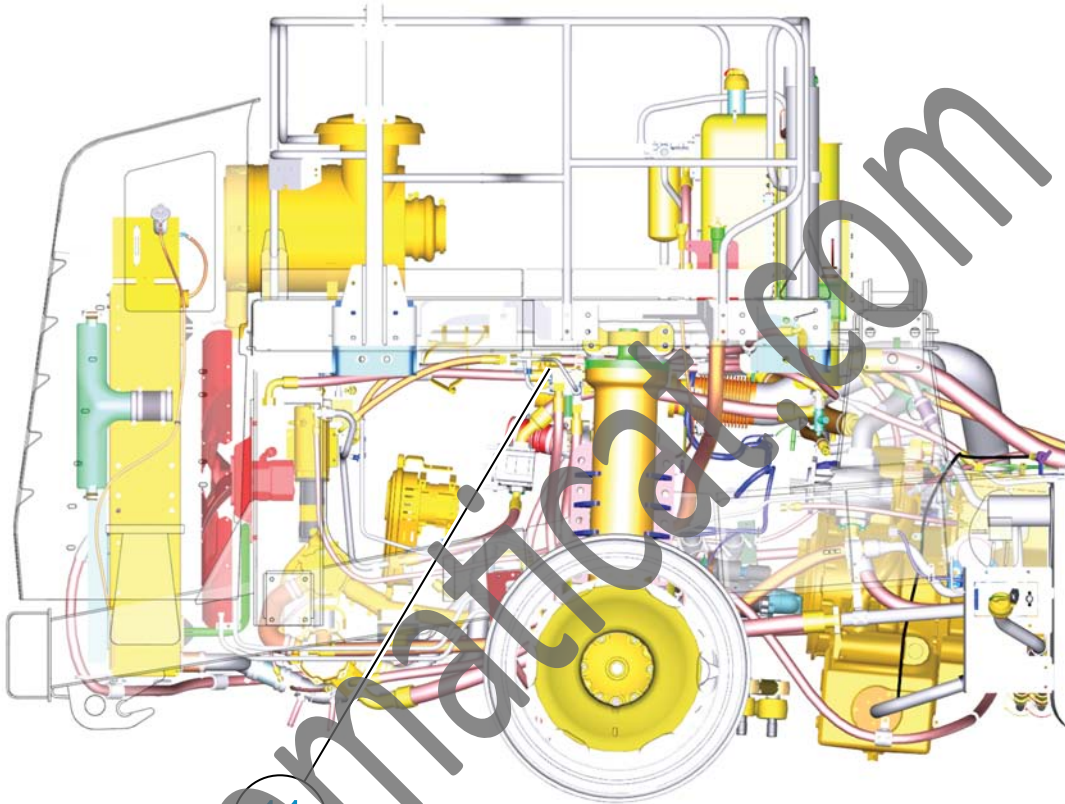


# LEFT SIDE - TOP DOWN VIEW



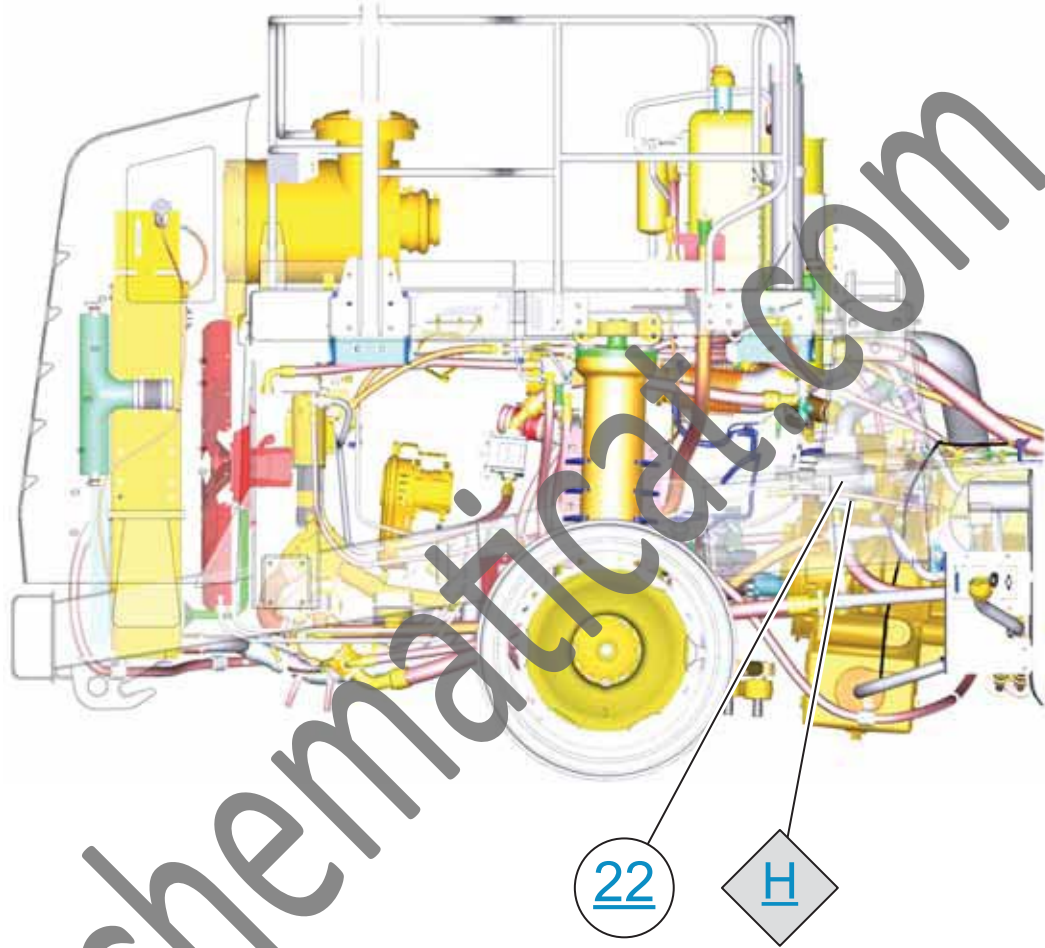


# LEFT SIDE VIEW

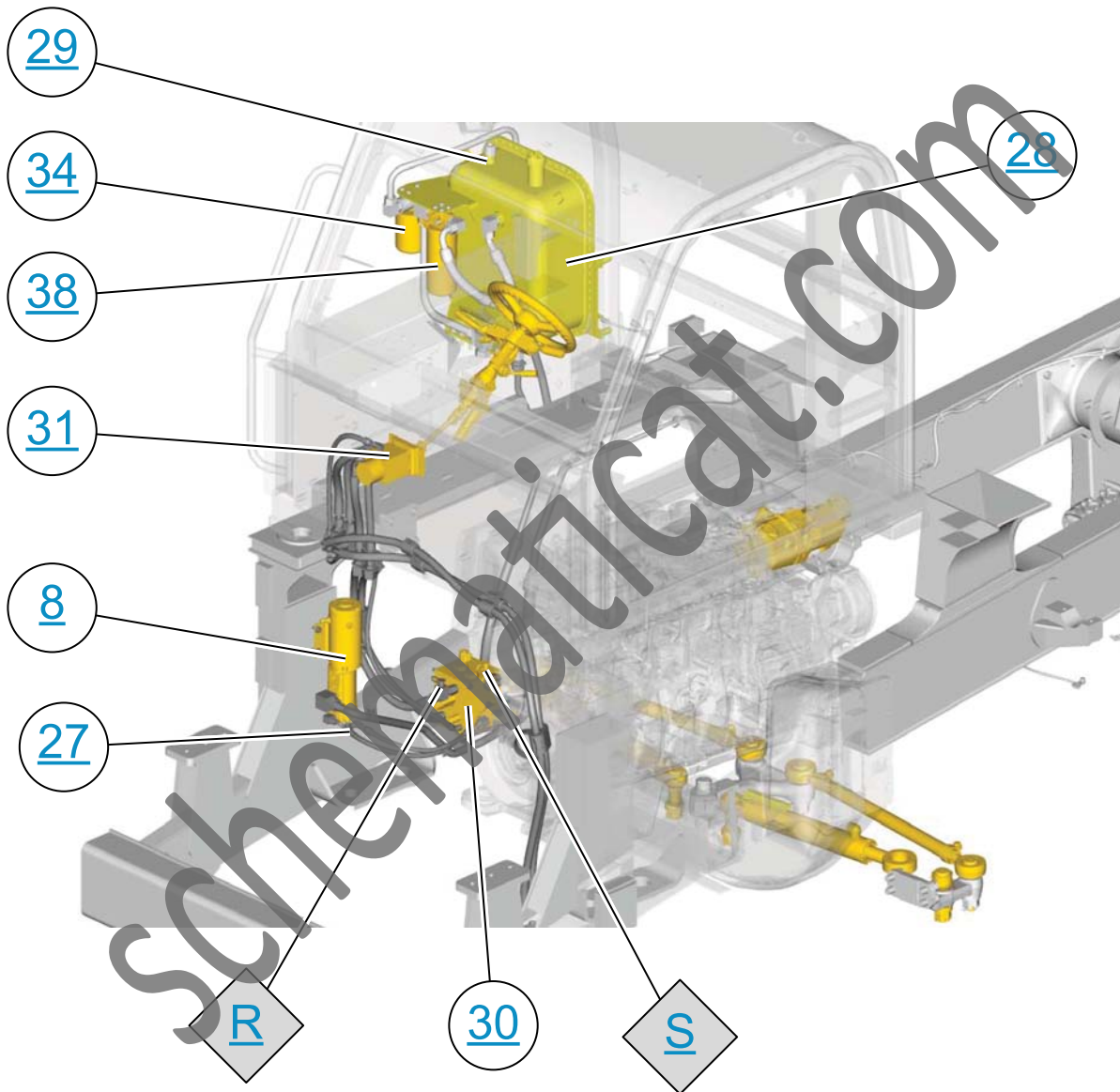


14

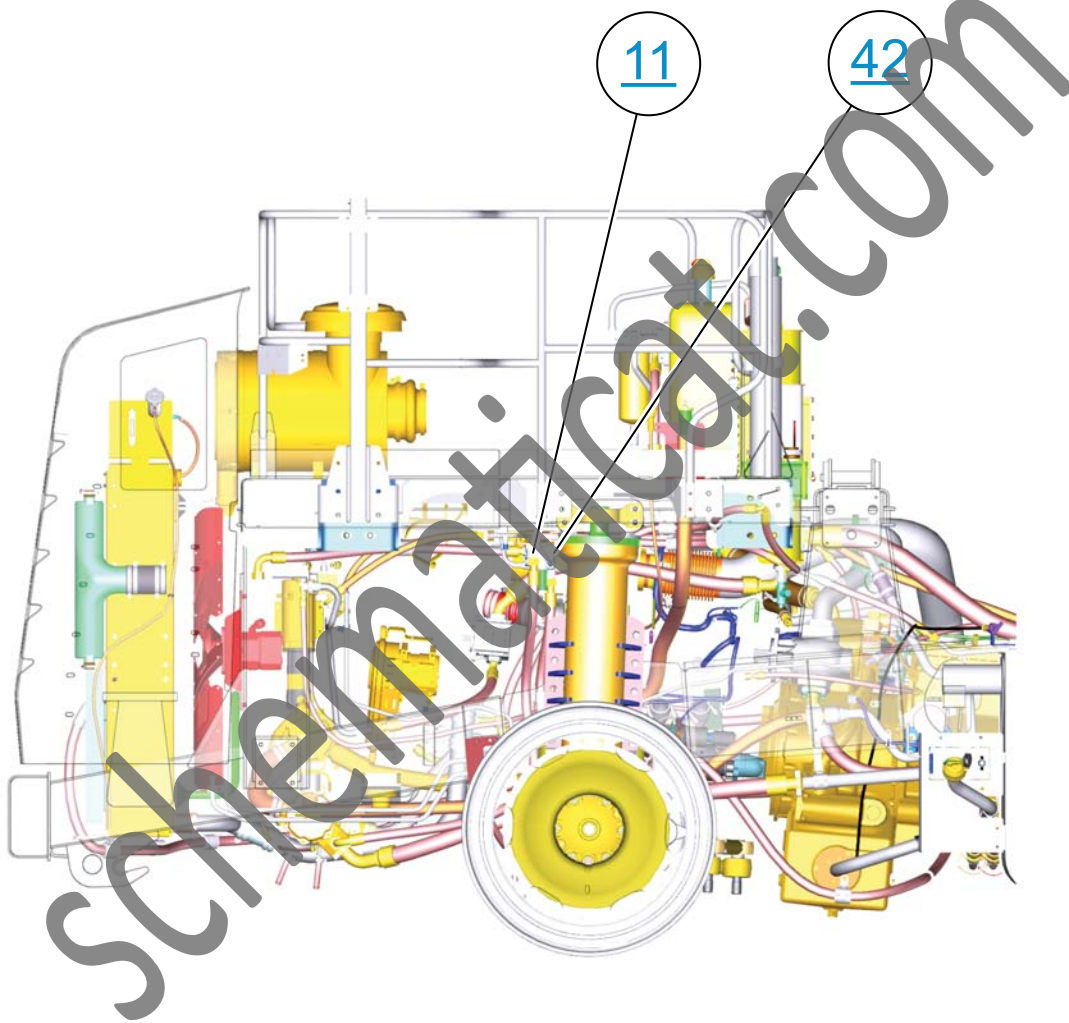
# LEFT SIDE CHASSIS VIEW



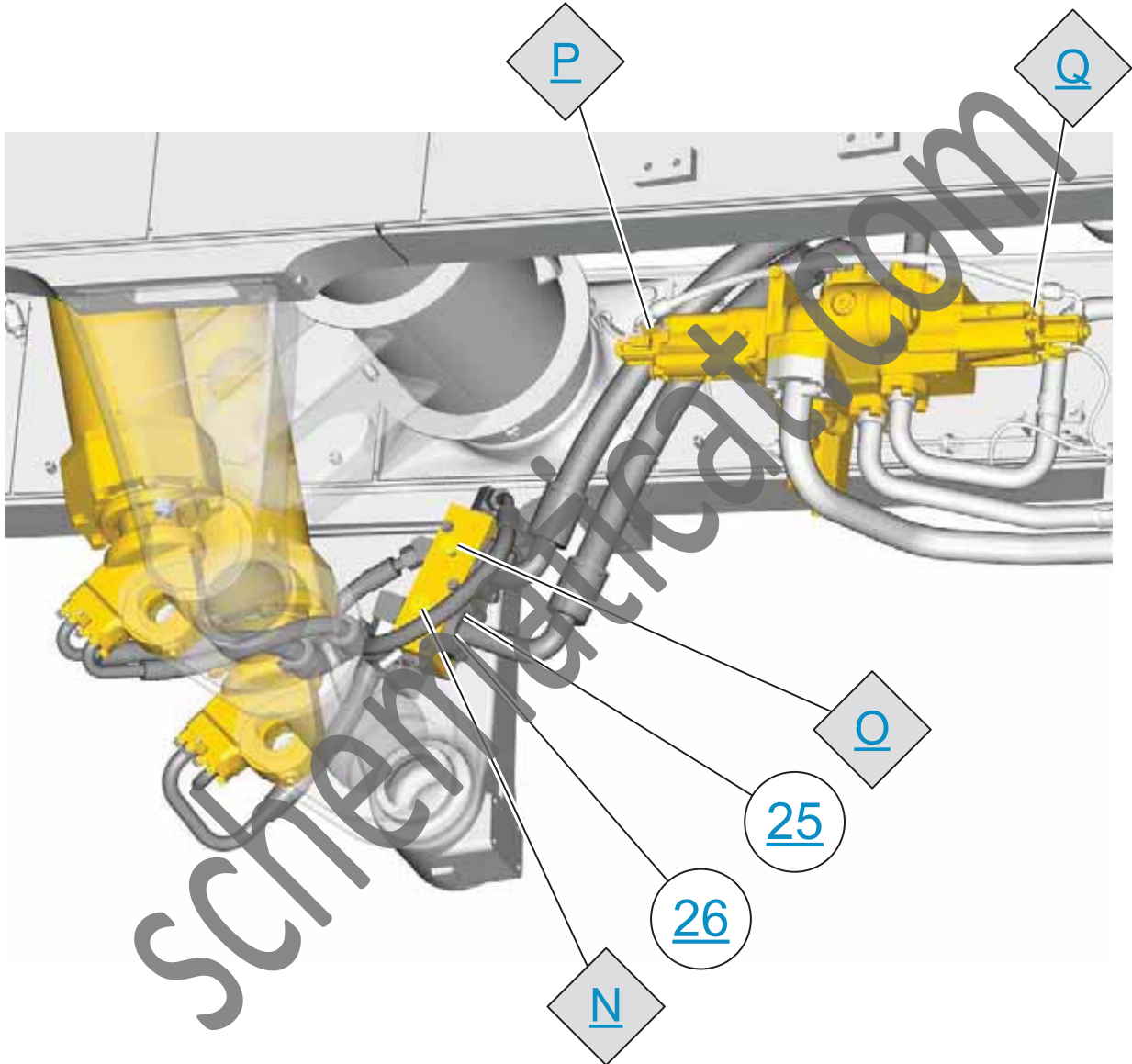
# LEFT SIDE FRONT VIEW



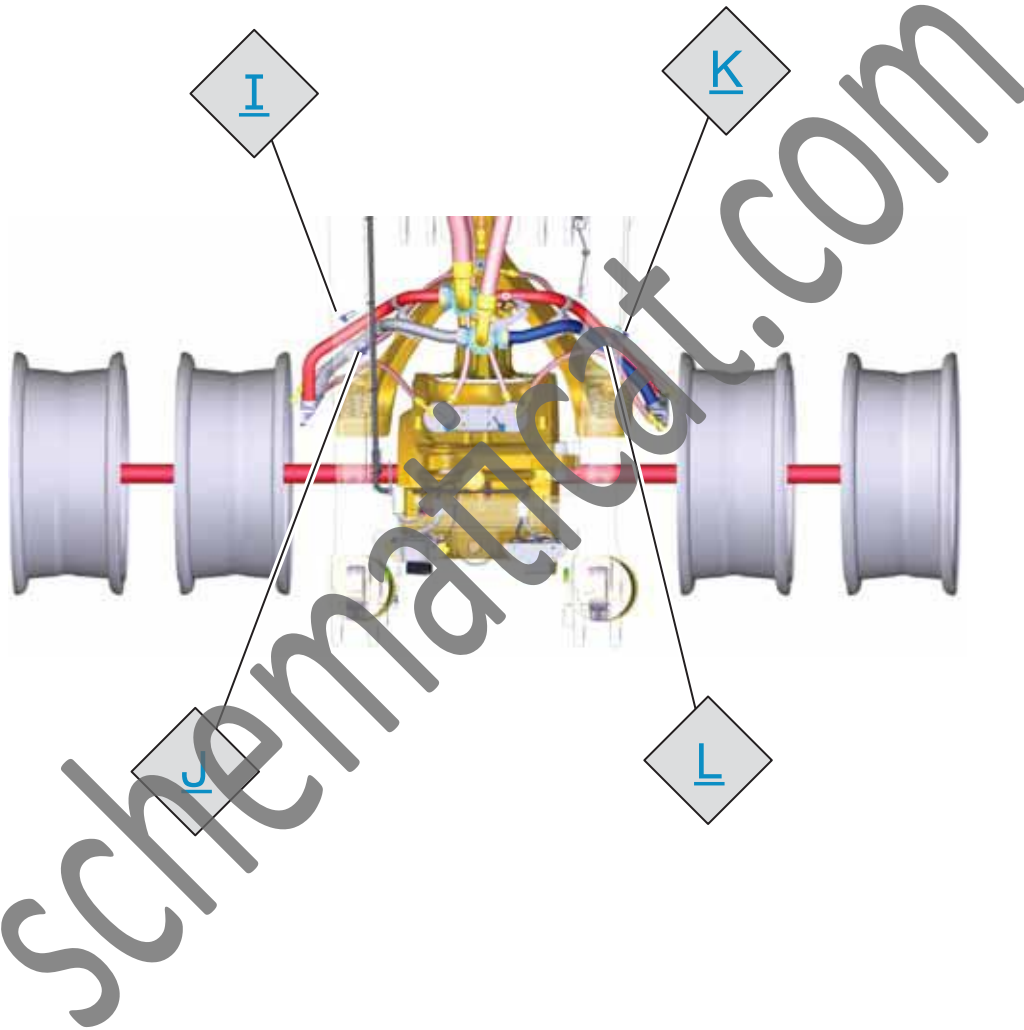
# LEFT SIDE VIEW - FRONT



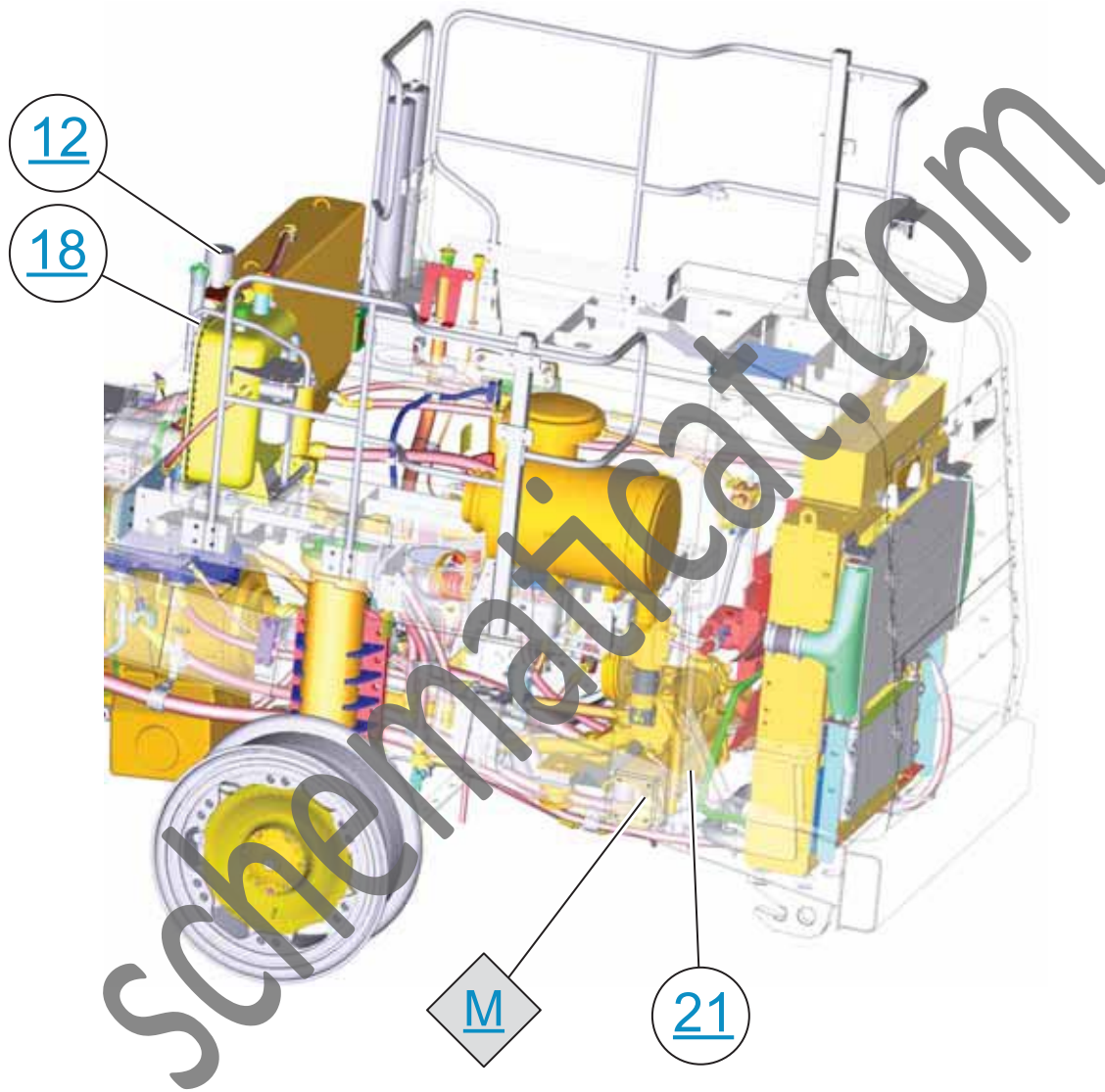
# LEFT SIDE LOWER CHASSIS VIEW



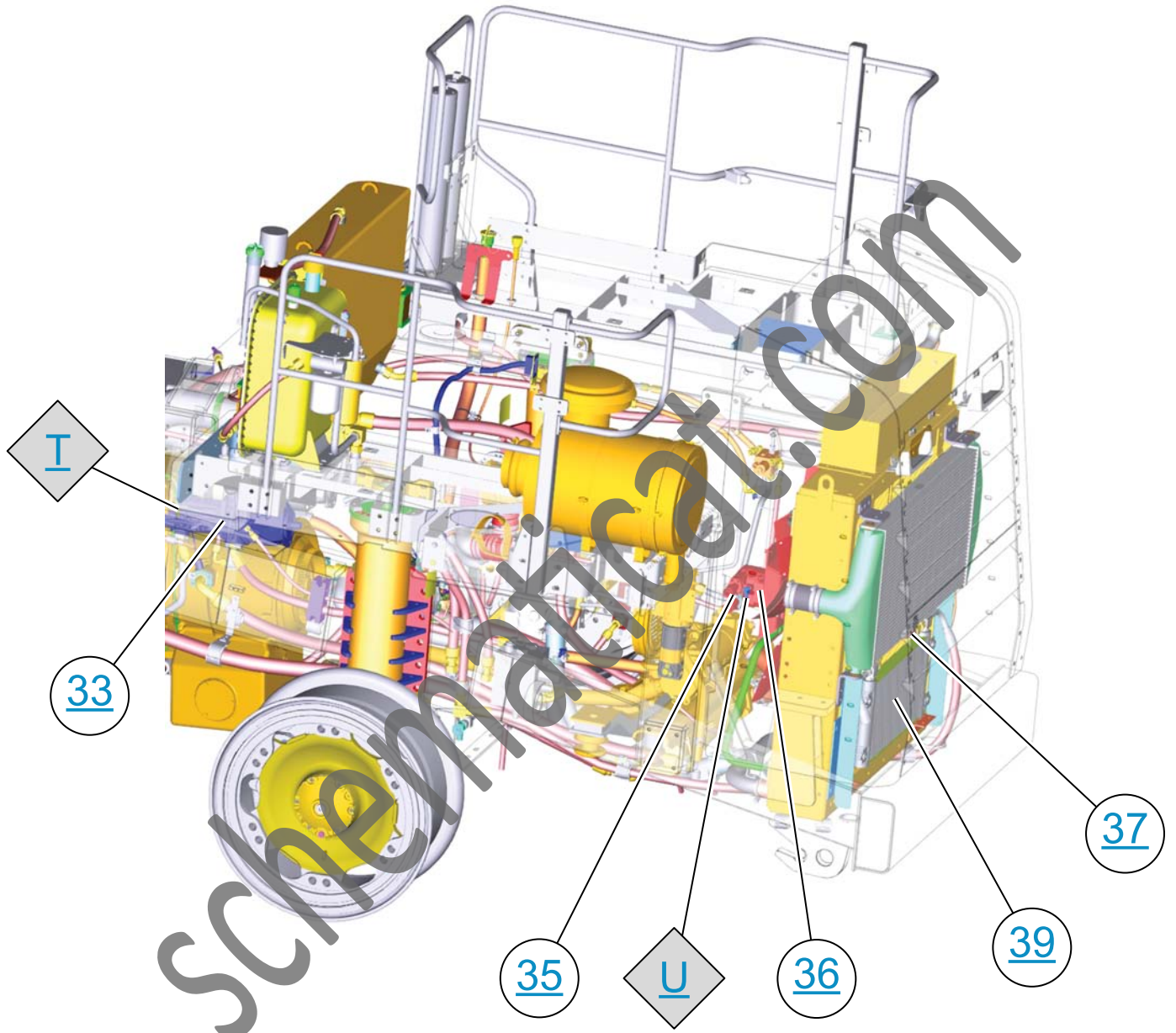
# REAR BREAKS PRESSURE TAPS



# RIGHT SIDE CHASSIS VIEW

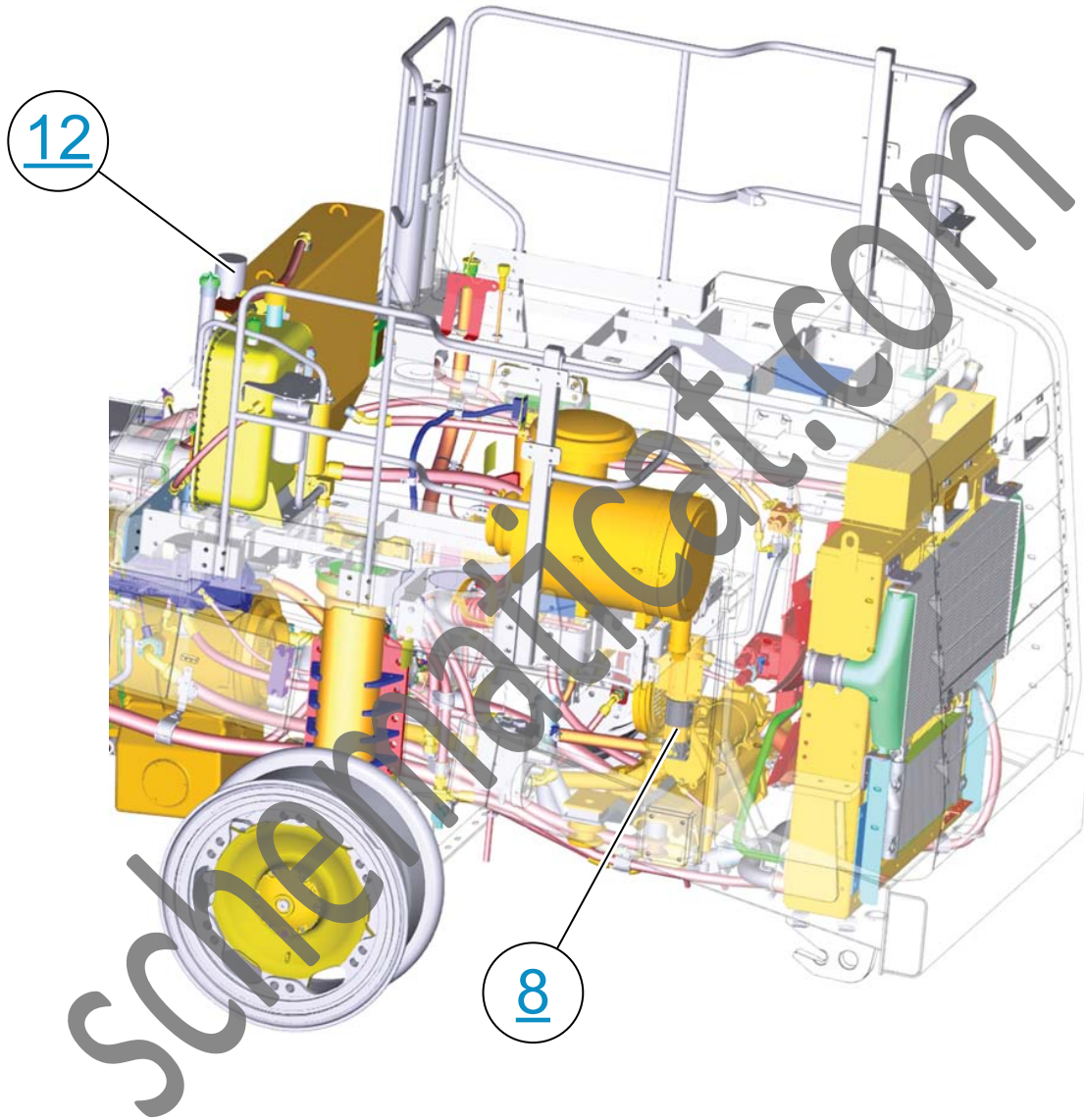


# RIGHT SIDE VIEW

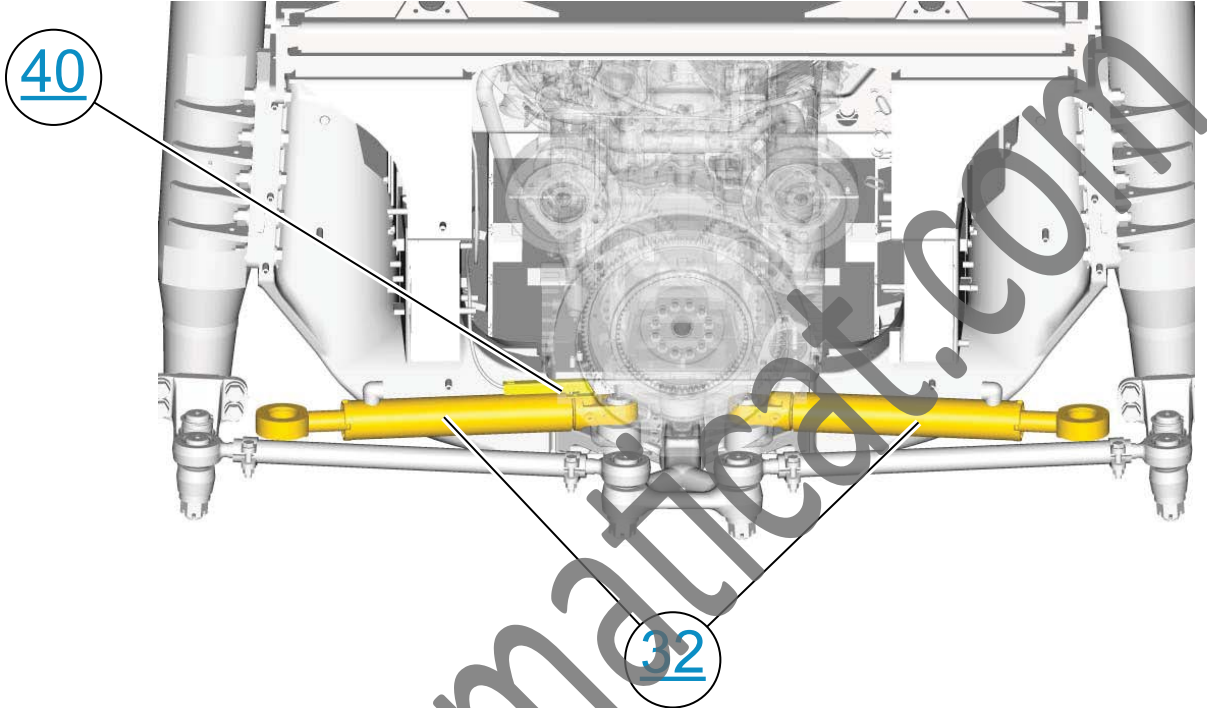




# RIGHT SIDE FRONT VIEW



# STEERING CYLINDERS FRONT VIEW



# STEERING SYSTEM TANK

