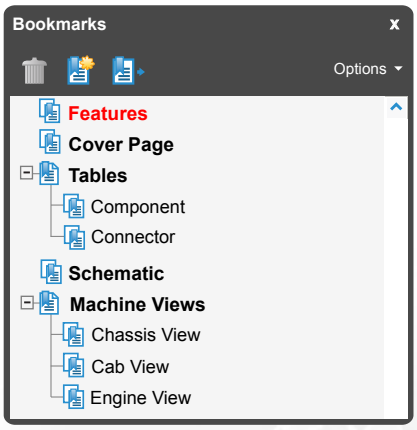
INTERACTIVE SCHEMATIC

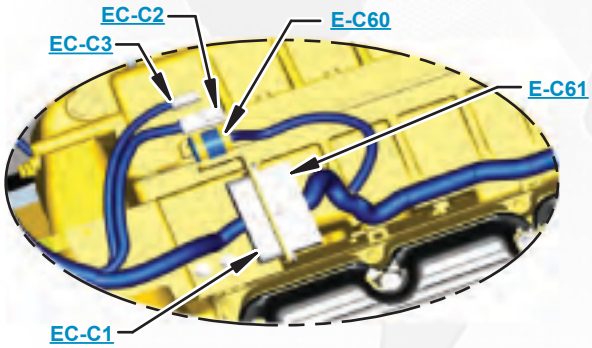


The Bookmarks panel will allow you to quickly navigate to points of interest.

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.

**Due to different monitor sizes and PDF reader preferences there may be some variance in linked schematic locations*



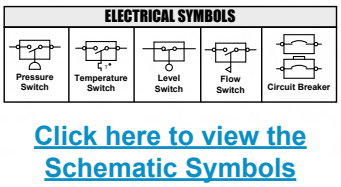
Click on any text that is BLUE and underlined. These are hyperlinks that can be used to navigate the schematic and machine views.

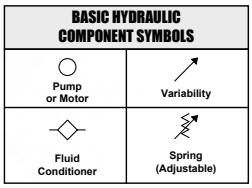
Click here to save a copy of this interactive schematic to your desktop

VIEW ALL CALLOUTS

When only one callout is showing on a machine view, clicking on 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"





Click here to view the Schematic Symbols and Definitions page

SCHEMATIC SYMBOLS AND DEFINITIONS

VALVES

ENVELOPES

One Position | Two Position | Three Position

PORTS

Two-way | Three-Way | Four-Way

CONTROL

Normal Position (A B / P T) | Shifted Position (A B / P T) | Infinite Position

CHECK

Basic Symbol | Spring Loaded | Shuttle | Pilot Controlled

INTERNAL PASSAGEWAYS

FLOW IN ONE DIRECTION	FLOW ALLOWED IN EITHER DIRECTION	PARALLEL FLOW / CROSS FLOW
Infinite Positioning	Two Position	Three Position

CYLINDERS

Single Acting | Double Acting

ACCUMULATORS

Spring Loaded | Gas Charged

PUMPS

FIXED DISPLACEMENT

Unidirectional | Bidirectional

VARIABLE DISPLACEMENT NON- COMPENSATED

Unidirectional | Bidirectional

MOTORS

FIXED DISPLACEMENT

Unidirectional | Bidirectional

VARIABLE DISPLACEMENT NON- COMPENSATED

Unidirectional | Bidirectional

ROTATING SHAFTS

Unidirectional | Bidirectional

BASIC HYDRAULIC COMPONENT SYMBOLS

Pump or Motor	Variability
Fluid Conditioner	Spring (Adjustable)
Spring	Pressure Compensation
Control Valves	Line Restriction (Variable)
Restriction	Line Restriction (Fixed)
Line Restriction Variable and Pressure Compensated	MAIN AUX. 2-Section Pump
Attachment	Pump: Variable and Pressure Compensated

Hydraulic Energy Triangles | Pneumatic

PILOT CONTROL

RELEASED PRESSURE

External Return | Internal Return

REMOTE SUPPLY PRESSURE

Simplified | Complete | Internal Supply Pressure

COMBINATION CONTROLS

Solenoid | Solenoid or Manual | Solenoid and Pilot | Solenoid and Pilot or Manual | Servo | Thermal | Detent

LINES

Crossing | Joining

MEASUREMENT

Pressure | Temperature | Flow

MANUAL CONTROL

Push-pull Lever | Manual Shutoff | General Manual | Push Button | Pedal | Spring

FLUID STORAGE RESERVOIRS

Vented | Pressurized | Return Above Fluid Level | Return Below Fluid Level

HYDRAULIC SYMBOLS - ELECTRICAL

Transducer (Fluid) | Transducer (Gas / Air) | Generator | Electric Motor | Pressure Switch | Pressure Switch (Adjustable) | Temperature Switch | Electrical Wire

ELECTRICAL SYMBOLS

Pressure Switch | Temperature Switch | Level Switch | Flow Switch | Circuit Breaker

BASIC ELECTRICAL COMPONENT SYMBOLS

Fuse: A component in an electrical circuit that will open the circuit if too much current flows through it.

Switch (Normally Open): A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from it.

Switch (Normally Closed): A switch that will open at a specified point (temp, press, etc.). No circle indicates that the wire cannot be disconnected from the component.

Ground (Wired): This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.

Ground (Case): This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.

Reed Switch: A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.

Sender: A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.

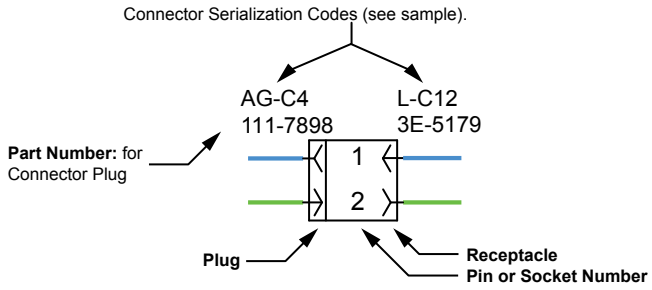
Relay (Magnetic Switch): A relay is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.

Solenoid: A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.

Magnetic Latch Solenoid: An electrical component that is activated by electricity and held latched by a permanent magnet. It has two coils (latch and unlatch) that make electromagnet when current flows through them. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

HARNESS AND WIRE SYMBOLS

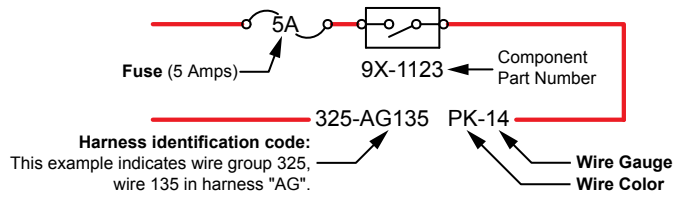
Wire, Cable, or Harness Assembly Identification: Includes Harness Identification Letters and Harness Connector Serialization Codes (see sample).

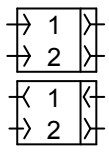


Harness Identification Letter(s): (A, B, C, AA, AB, AC, ...)

Harness Connector Serialization Code: The "C" stands for "Connector" and the number indicates which connector in the harness (C1, C2, C3, ...)

L-C12
3E-5179





Deutsch connector: Typical representation of a Deutsch connector. The plug contains all sockets and the receptacle contains all pins.

Sure-Seal connector: Typical representation of a Sure-Seal connector. The plug and receptacle contain both pins and sockets.

UENR2633-02
August 2014

Schematic

CP54B, CS54B and CS64B Vibratory Soil Compactor Hydraulic System

CP54B:
5461-UP
P5F1-UP
PFM1-UP

CS54B:
5441-UP
M5B1-UP
MFC1-UP

CS64B:
DH61-UP

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5441-UP
M5B1-UP
MFC1-UP

CS64B:
DH61-UP

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COMPONENT TABLE

Component Locations			
Description	**Part Number**	**Machine Location**	**Schematic Location**
Cooler GP - Radiator	381-7228	1	D-8
Cylinder GP - Steering	356-2015	2	F-2
Filter GP - Oil (Charge)	346-5575	3	D-2
Manifold GP - Propel Test and Loop Balance	398-8500	4	F-3
Motor GP - Axle Propel	353-5927	5	F-6
Motor GP - Drum Propel	376-6405	6	F-3
Motor GP - Fan (Hydraulic)	395-0521	7	D-8
Motor GP - Vibratory	353-5932	8	B-1
Pump GP - Propel	376-9403	9	C-5
Pump GP - Fan/Steering	385-5566	10	C-8
Pump GP - Vibratory (Fixed Frequency)	353-5928	11	B-3
Pump GP - Vibratory (Variable Frequency)	353-5929	12	D-3
Sensor GP - Speed (Axle Motor)	319-6491	13	F-7
Strainer - Suction	363-3445	14	B-5
Tank AS - Hydraulic	374-9833	15	B-5
Valve GP - Shift Pressure	276-2609	16	F-5
Valve GP - Solenoid (Fan Speed Control)	211-2092	17	D-7
Valve GP-Bypass	358-9497	18	B-6
Unit - Hand Metering	361-6048	19	E-1

TAP TABLE

Tap Location Pressure and Sampling		
Tap Number	**Description**	**Schematic Location**
TP1	Axle Propel Forward	E-2
TP2	Drum Propel Forward	E-2
TP3	Axle Propel Reverse	F-2
TP4	Drum Propel Reverse	E-2
TP5	Vibratory High Amplitude (Variable Frequency)	D-3
	Vibratory High Amplitude (Fixed Frequency)	C-3
TP6	Vibratory Low Amplitude (Variable Frequency)	D-3
	Vibratory Low Amplitude (Fixed Frequency)	C-3
TP7	Charge	C-2
TP8	SOS	C-2
TP9	Steering Pump Outlet	C-8

UENR2633-02

30 Page, (Dimensions: 39 inches x 28 inches)

(13) SENSOR GP
SPEED (AXLE MOTOR)
319-6491

(5) MOTOR GP
AXLE PROPEL
353-5927

AXLE
BRAKES
(IF EQUIPPED)

(16) VALVE GP
SHIFT PRESSURE
276-2609

(6) MOTOR GP
DRUM PROPEL
376-9405

(4) MANIFOLD GP
PROPEL TEST AND LOOP BALANCE
398-8500

(2) CYLINDER GP
STEERING
356-2015

(19) UNIT
HAND METERING
361-6048

(7) MOTOR GP
FAN (HYDRAULIC)
395-0521

(1) COOLER GP
RADIATOR
381-7228

(17) VALVE GP
SOLENOID (FAN SPEED CONTROL)
211-2092

NEUTRAL START SWITCH

HW CONTROL

HW CONTROL

(12) PUMP GP
VIBRATORY (VARIABLE FREQUENCY)
353-5929

(3) FILTER GP
OIL (CHARGE)
346-5575

ENGINE
FLYWHEEL

(9) PUMP GP
PROPEL
376-9403

(10) PUMP GP
FAN/STEERING
385-5566

(18) VALVE GP
BYPASS
358-9497

FAN SPEED CONTROL
TEMPERATURE SENSOR
AND GAUGE READOUT

(14) STRAINER
SUCTION
363-3445

(15) TANK AS
HYDRAULIC
374-9833

(11) PUMP GP
VIBRATORY (FIXED FREQUENCY)
353-5928

(8) MOTOR GP
VIBRATORY
353-5932

SOS

Tap Location
Pressure and Sampling

Tap Number	Description	Schematic Location
TP1	Axle Propel Forward	E-2
TP2	Drum Propel Forward	E-2
TP3	Axle Propel Reverse	F-2
TP4	Drum Propel Reverse	E-2
TP5	Vibratory High Amplitude (Variable Frequency)	D-3
	Vibratory High Amplitude (Fixed Frequency)	C-3
TP6	Vibratory Low Amplitude (Variable Frequency)	D-3
	Vibratory Low Amplitude (Fixed Frequency)	C-3
TP7	Charge	C-2
TP8	SOS	C-2
TP9	Steering Pump Outlet	C-8

LINE PATTERNS

- Pressure Line
- Pilot / Load Sensing Pressure
- Drain / Return Lines
- Component Group

CALLOUTS

- Taps (Pressure, Sampling, Sensor - by letter)
- Callout Number (Machine Location from Component Locations/Table)
- (52) VALVE GP - CONTROL (Component Name)
- 138-1234 (Part Number)

HYDRAULIC CIRCUIT COLOR DESCRIPTIONS

- CHARGE CIRCUIT
- DRUM PROPEL PUMP CIRCUIT
- STEERING HMU CIRCUIT
- SUPPLY LINE
- BRAKE CONTROL CIRCUIT
- VIBRATORY CIRCUIT
- AXLE PROPEL PUMP CIRCUIT
- DRAIN / RETURN LINE
- HYDRAULIC FAN CIRCUIT
- SHIFT CONTROL CIRCUIT
- VIBRATORY PUMP CONTROL CIRCUIT

THIS SCHEMATIC IS FOR THE CP54B, CS54B AND CS64B VIBRATORY SOIL COMPACTOR HYDRAULIC SYSTEM

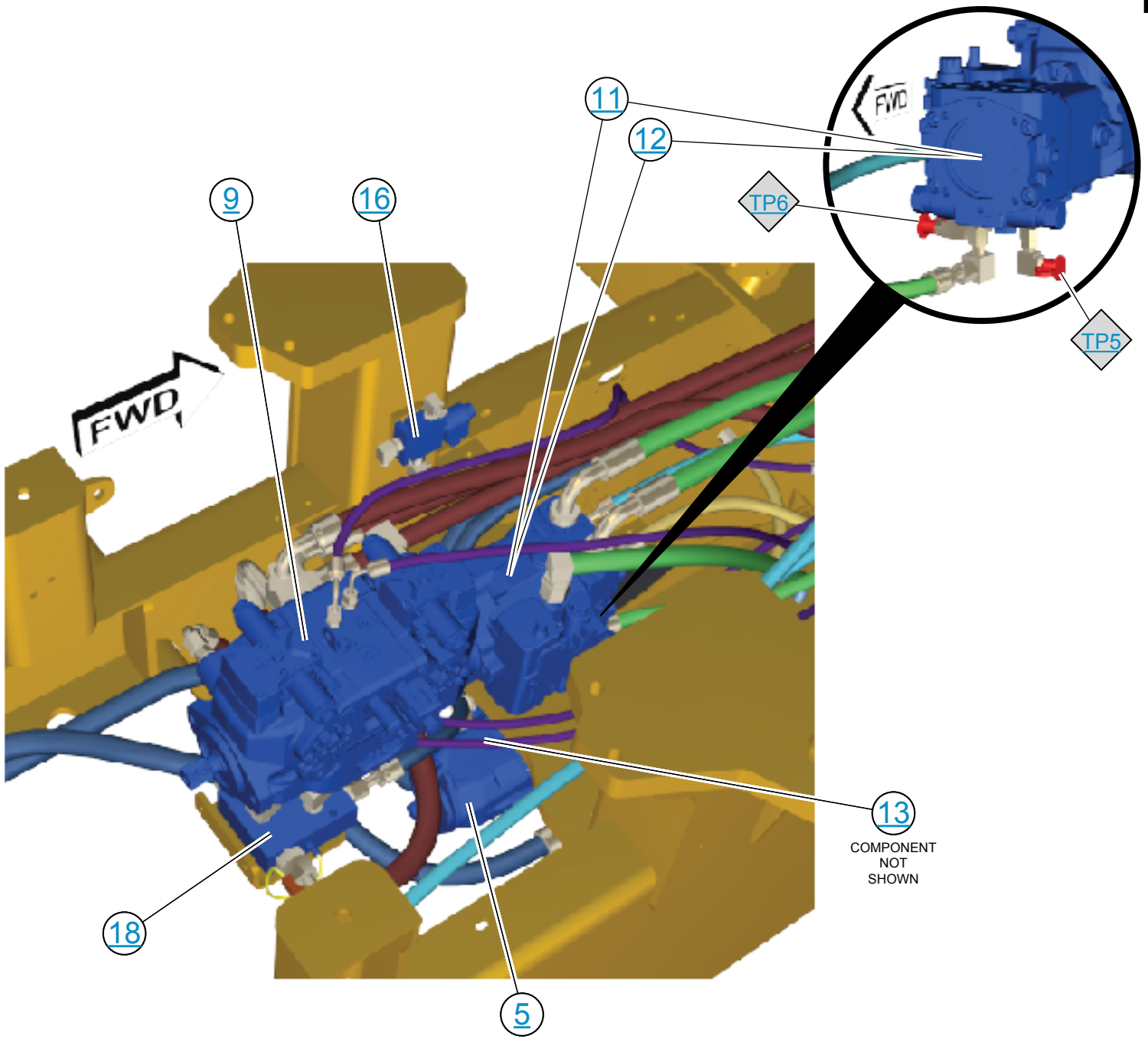
MEDIA NUMBER: UENR2633-02

SCHEMATIC PART NUMBER: 377-0669, CHANGE: 02, VERSION: -

Components are shown installed on a fully operable machine with the key and engine off, and propel handle in neutral.
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.

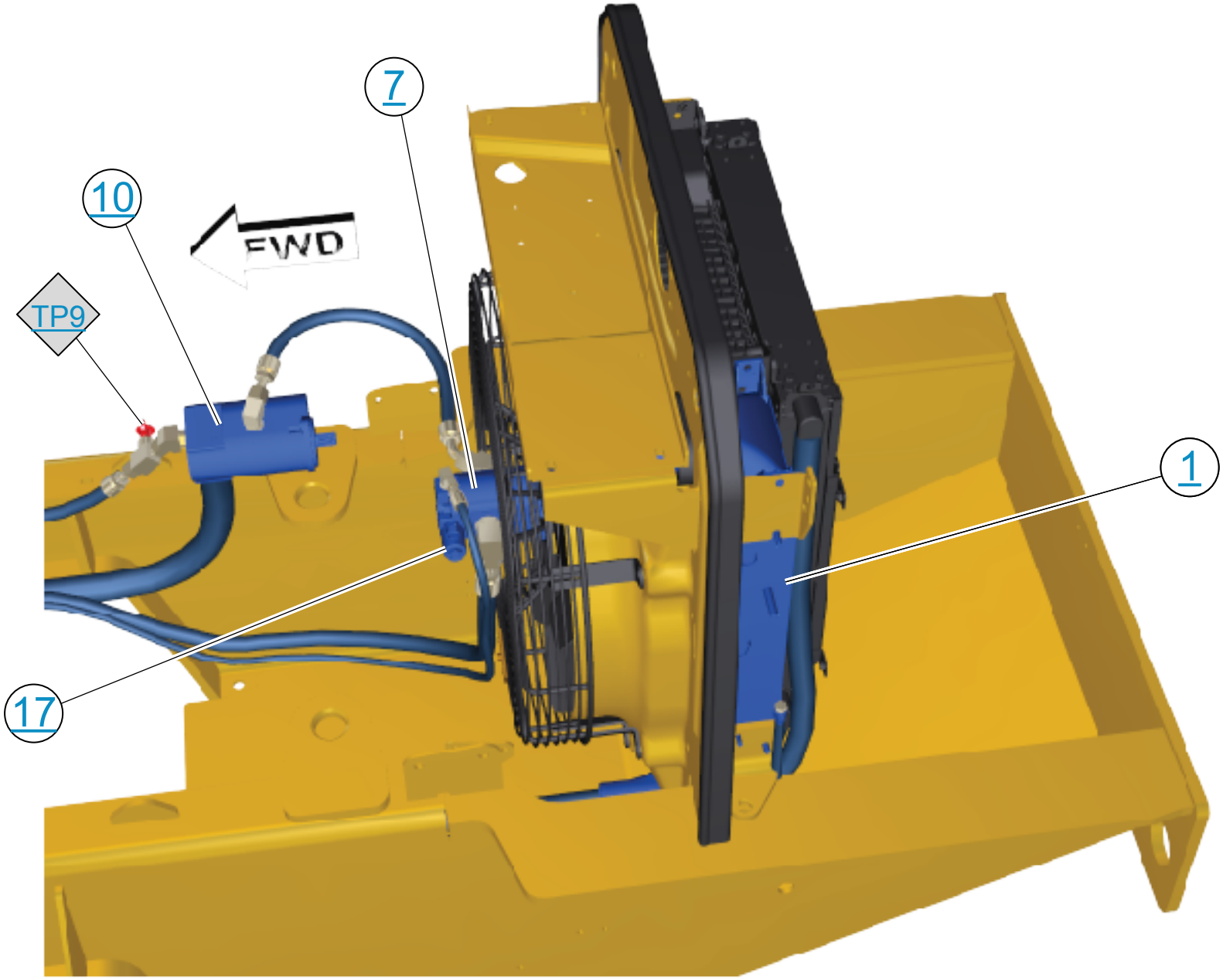
MOTORS AND PUMPS

VIEW ALL CALLOUTS



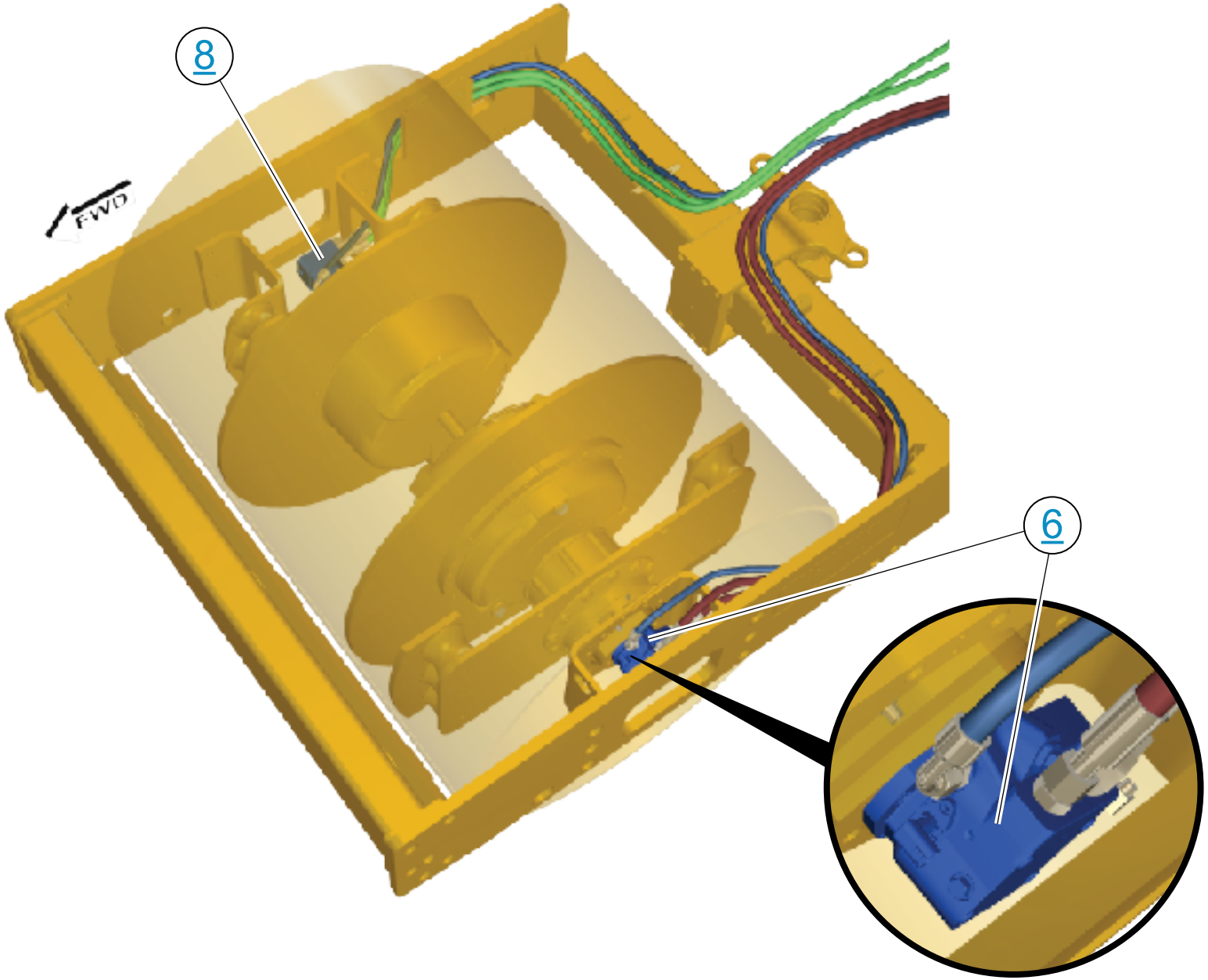
LEFT REAR OF MACHINE

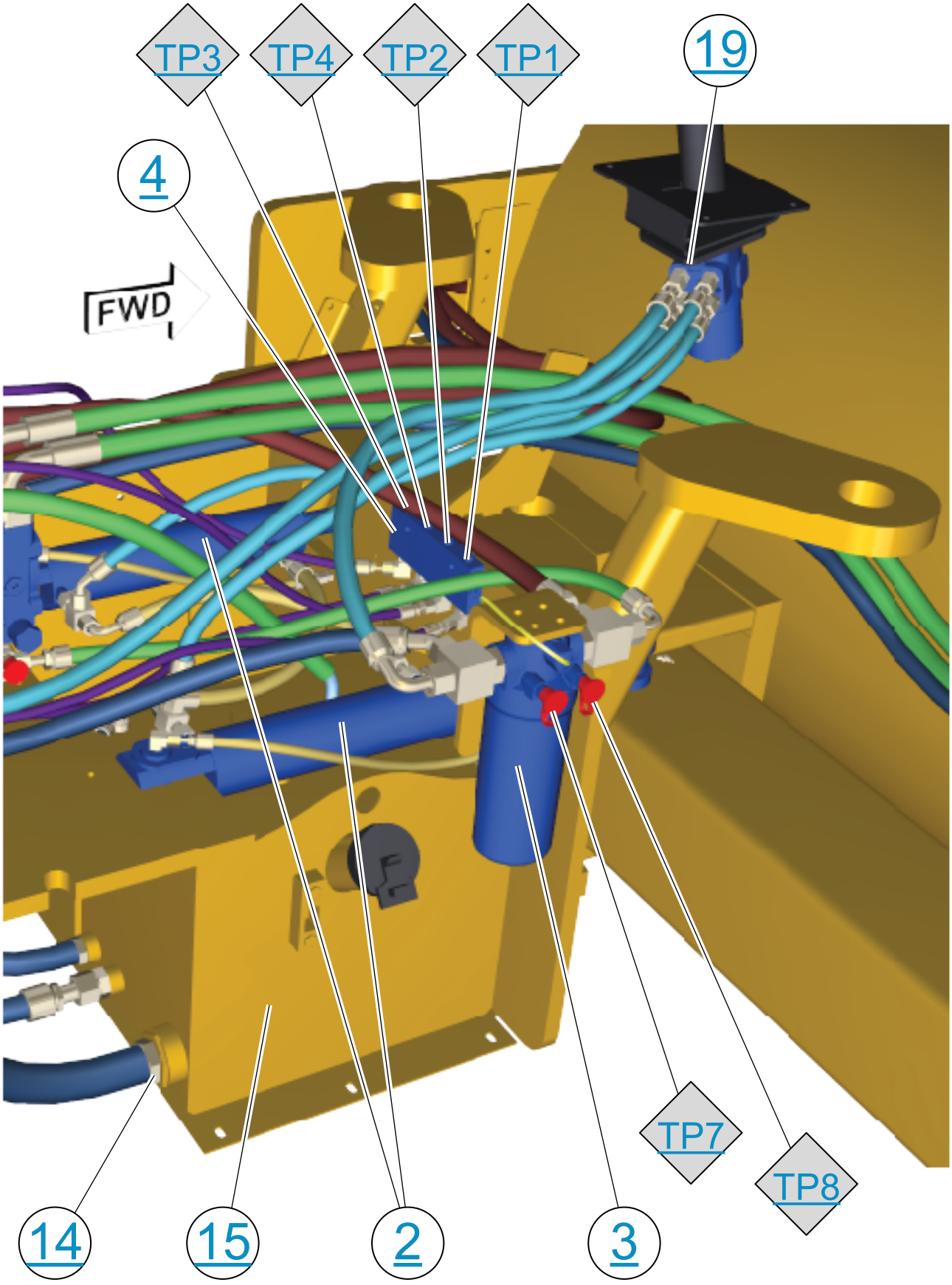
VIEW ALL CALLOUTS



DRUM

VIEW ALL CALLOUTS



UNDER PLATFORM

VIEW ALL CALLOUTS