

COLOR ABBREVIATIONS	
ABBREV	COLOR
RD	RED
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
BK	BLACK
GY	GRAY
PU	PURPLE
BR	BROWN
GN	GREEN
BU	BLUE

SYMBOL	DESCRIPTION
+	CIRCUIT CONNECTED
-	CIRCUIT NOT CONNECTED
+	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
-	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
+	CONNECTOR
HE	CIRCUIT GROUPING DESIGNATION
---	ATCH WIRE, CABLE, COMPONENT
+	CIRCUIT CONNECTED
+	BLACK SINGLE RING OR SCREW TERMINAL
*	SPACE

WIRE GROUP COLOR DESCRIPTIONS	
[Red line]	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
[Blue line]	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
[Green line]	VOLTAGE CONVERTER OUTPUT CIRCUIT
[Yellow line]	STARTING CIRCUIT
[Black line]	GROUND CIRCUIT
[Pink line]	CAN DATA LINK A
[Purple line]	CAN DATA LINK B
[Light Blue line]	MONITOR CIRCUIT
[Light Green line]	ENGINE CONTROL CIRCUIT
[Light Purple line]	MACHINE CONTROL CIRCUIT
[Light Brown line]	MACHINE SECURITY CONTROL CIRCUIT
[Light Orange line]	HEATER AND AIR CONDITIONER CIRCUIT
[Light Yellow line]	WIPER/WASHER CIRCUIT
[Light Cyan line]	RS-232 DATA LINK, RS-485 DATA LINK
OTHER COLOR DESCRIPTIONS	
[Blue line]	HIGHWAYS

NOTE A: USE WITH 50A HEATER.
 NOTE B: USE WITH 100 AMP STARTER.
 NOTE C: USE FOR 12V DATA WIRE SUPPLY.
 NOTE D: USE WITH FRONT BUMPER LIGHTS.
 NOTE E: USE WITH LAMP DELAY TIMER.
 NOTE F: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE G: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE H: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE I: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE J: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE K: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE L: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE M: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE N: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE O: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE P: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE Q: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE R: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE S: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE T: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE U: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE V: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE W: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE X: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE Y: USE WITH 100 AMP CONTROL SYSTEM.
 NOTE Z: USE WITH 100 AMP CONTROL SYSTEM.

WIRE NO.	DESCRIPTION	WIRE NO.	DESCRIPTION
100-1	12V BATTERY (+)	100-100	12V BATTERY (-)
100-2	12V BATTERY (+)	100-101	12V BATTERY (-)
100-3	12V BATTERY (+)	100-102	12V BATTERY (-)
100-4	12V BATTERY (+)	100-103	12V BATTERY (-)
100-5	12V BATTERY (+)	100-104	12V BATTERY (-)
100-6	12V BATTERY (+)	100-105	12V BATTERY (-)
100-7	12V BATTERY (+)	100-106	12V BATTERY (-)
100-8	12V BATTERY (+)	100-107	12V BATTERY (-)
100-9	12V BATTERY (+)	100-108	12V BATTERY (-)
100-10	12V BATTERY (+)	100-109	12V BATTERY (-)

THIS SCHEMATIC IS FOR THE 312D AND 313D EXCAVATOR ELECTRICAL SYSTEM
VOLUME 1 of 2: CAB WIRING
 MEDIA NUMBER: KENR6557-05
 SCHEMATIC PART NUMBER: 275-7049, CHANGE: 02
 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.

Schematic 312D and 313D Excavator Electrical System

312D: JBC1-UP LRK1-UP DLPI-UP HCW1-UP TG1Y-UP

313D: KKD1-UP WPK1-UP

Volume 2 of 2: Engine and Chassis Wiring

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Component Identifiers (CID) Module Identifier (MID) Component table with columns for CID, MID No., and Component.

Failure Mode Identifiers (FMI) table with columns for FMI No., Failure Description, and Condition.

Event Codes Machine Control table with columns for Event Code, Machine Control, and Condition.

Wire Description table with columns for Wire Number, Wire Color, Power Circuits, and Description.

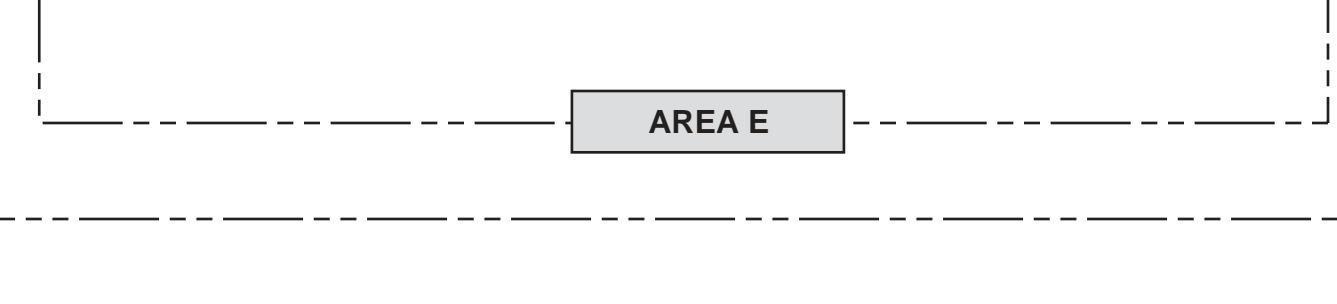
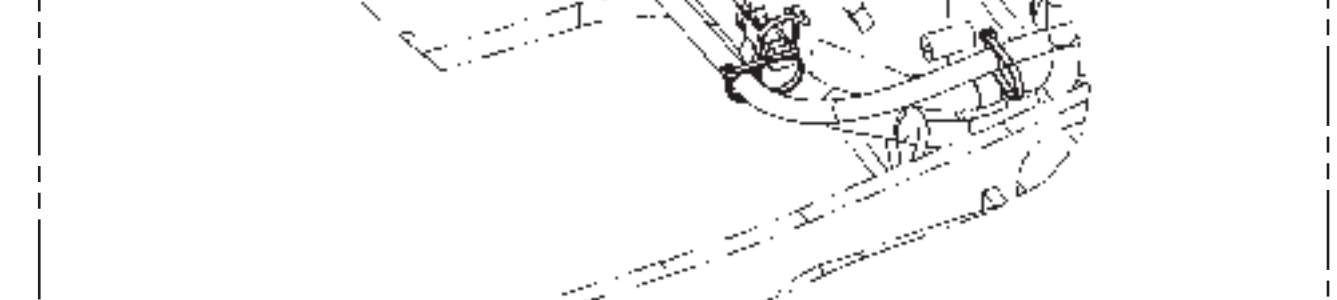
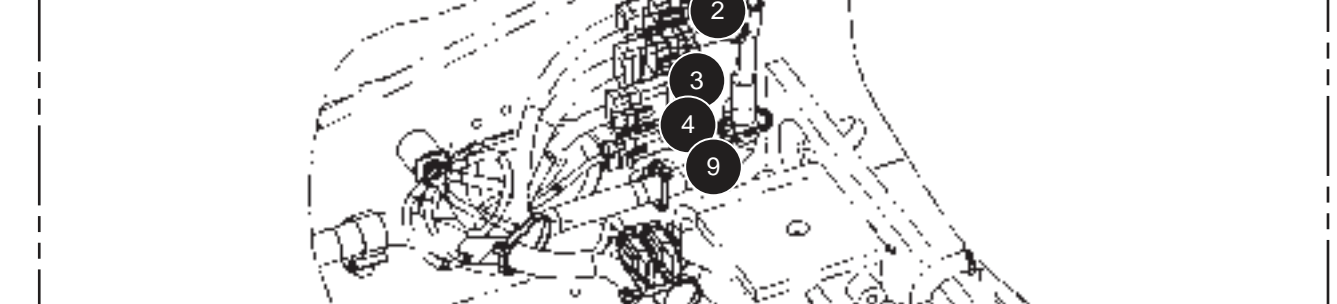
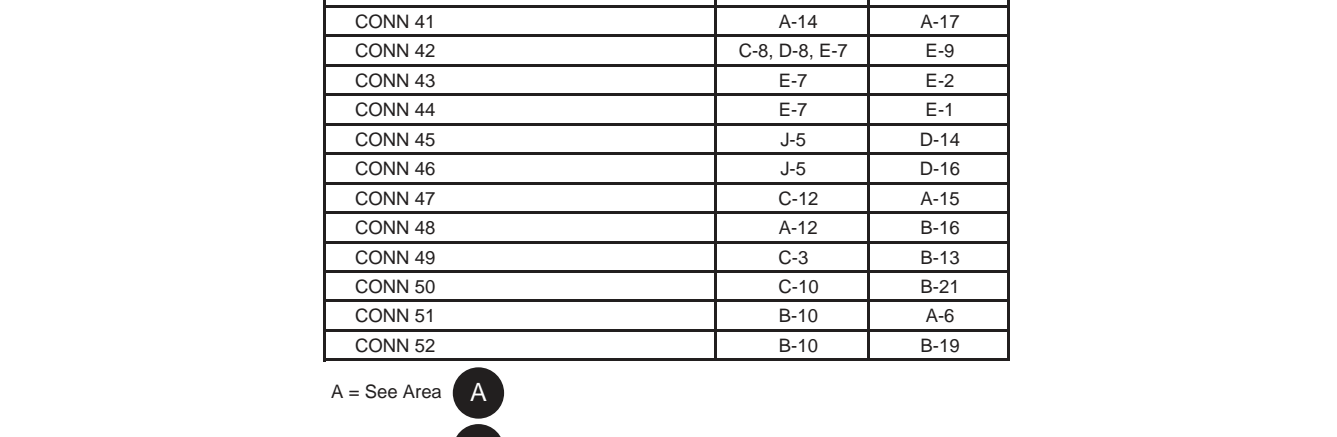
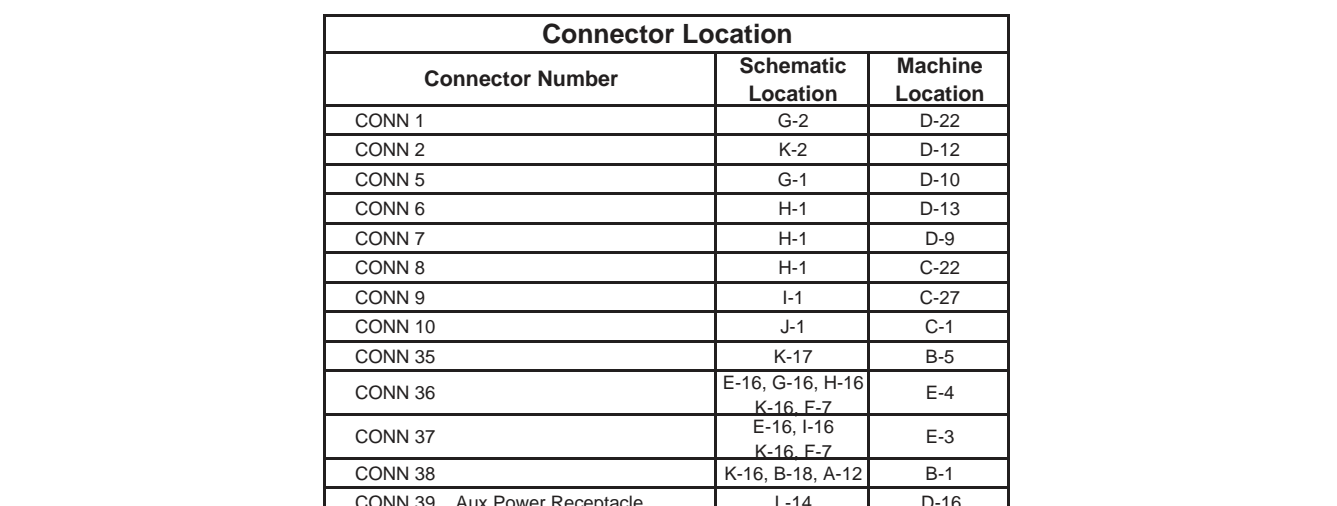
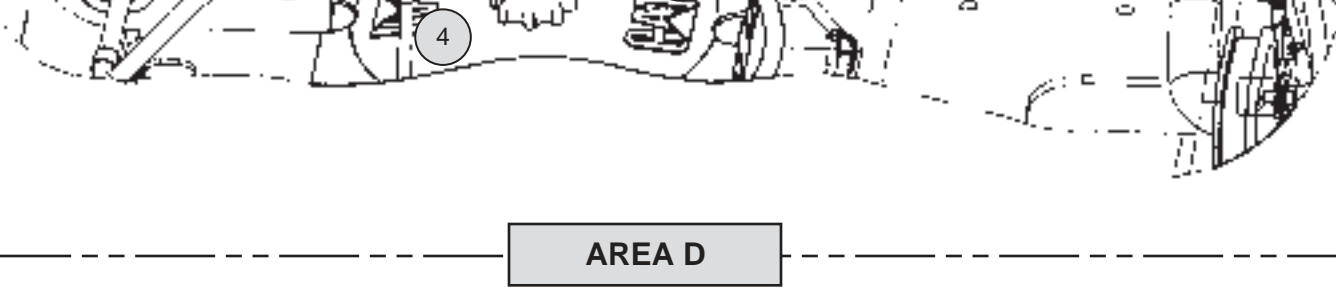
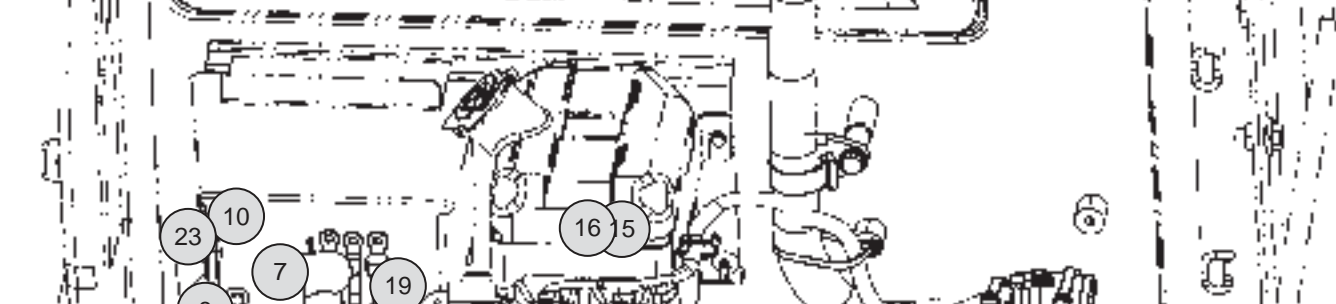
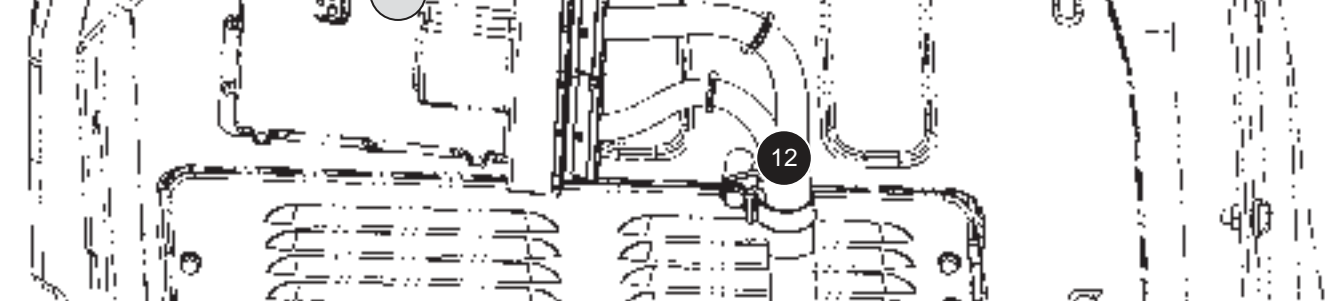
Event Codes Engine Control table with columns for Event Code, Engine Control, and Condition.

Resistor, Sender and Solenoid Specifications table with columns for Part No., Component Description, and Resistance (Ohms).

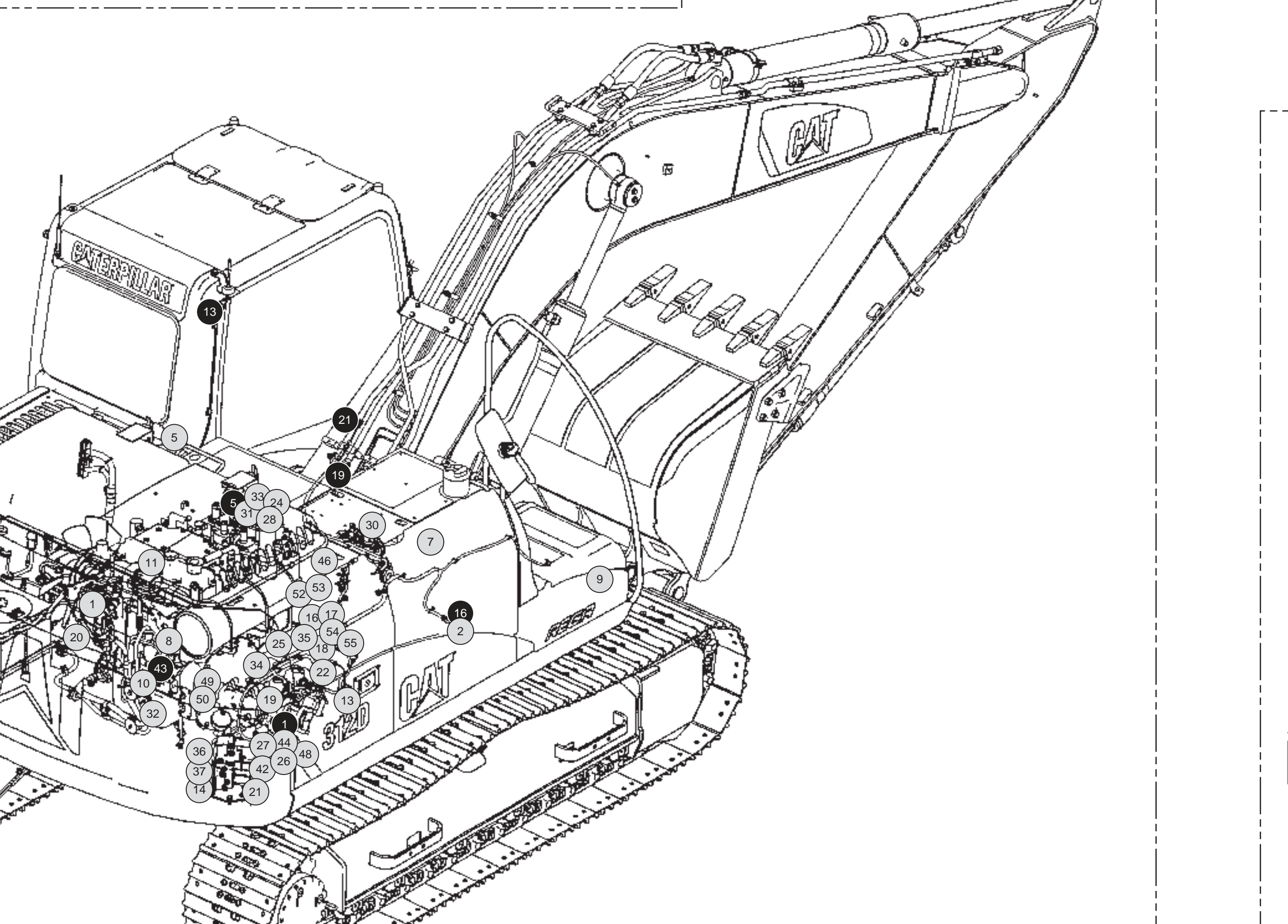
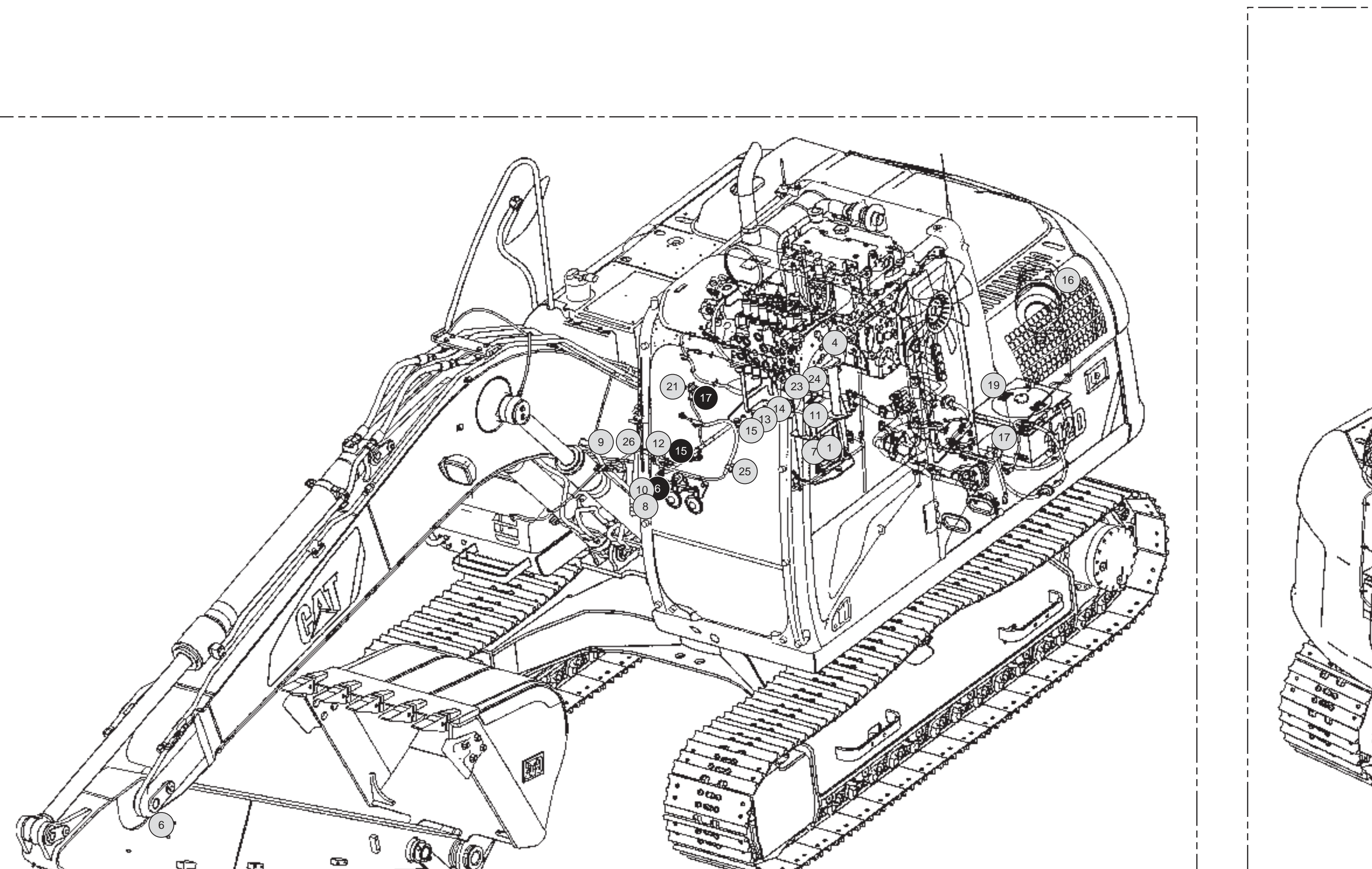
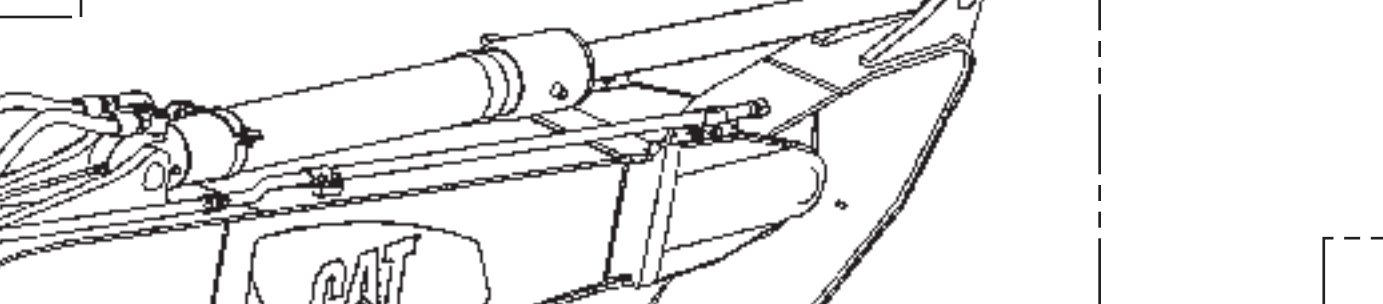
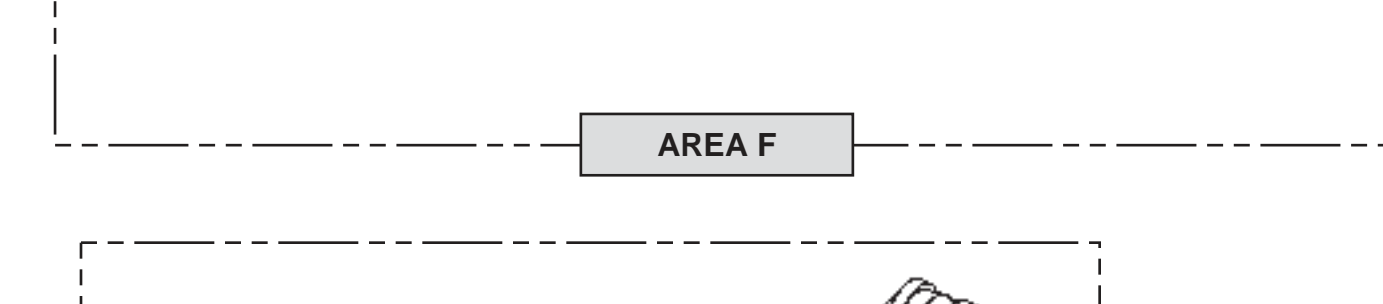
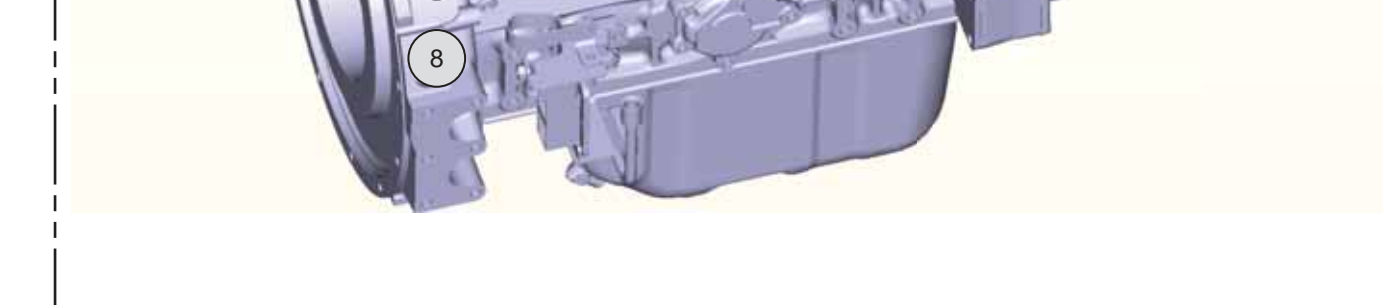
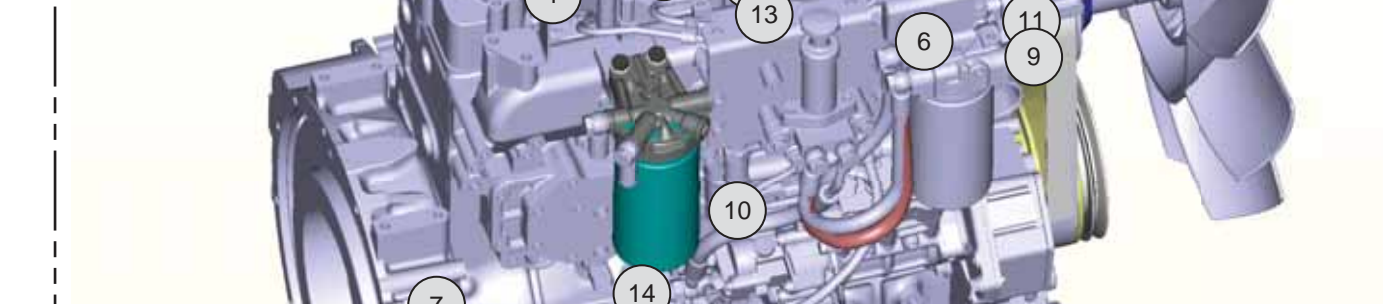
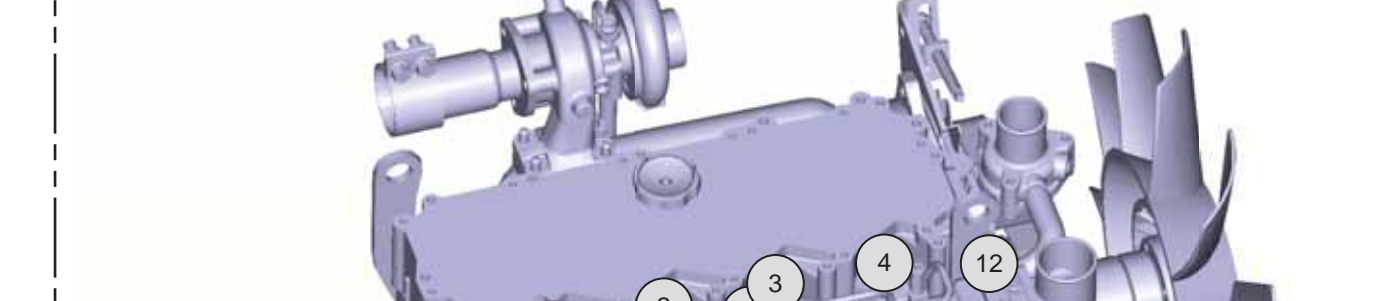
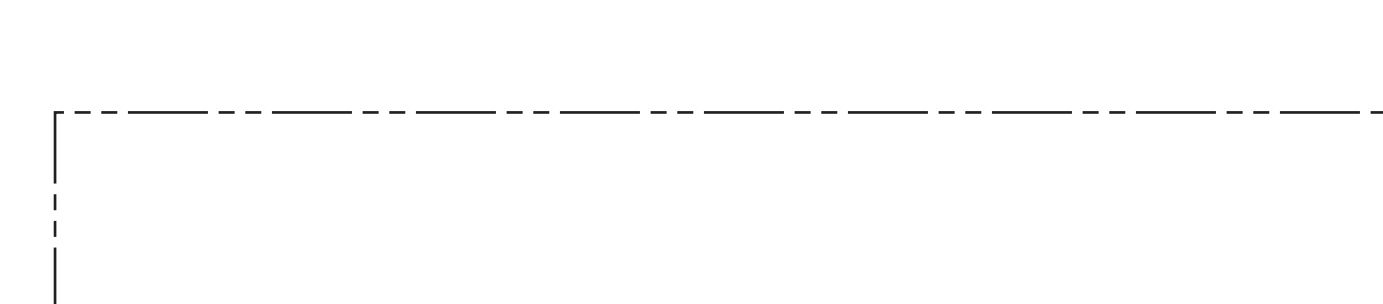
Related Electrical Service Manual table with columns for Title and Form Number.

Off Machine Switch Specification table with columns for Part No., Function, Actuator, Resistance, and Contact Position.

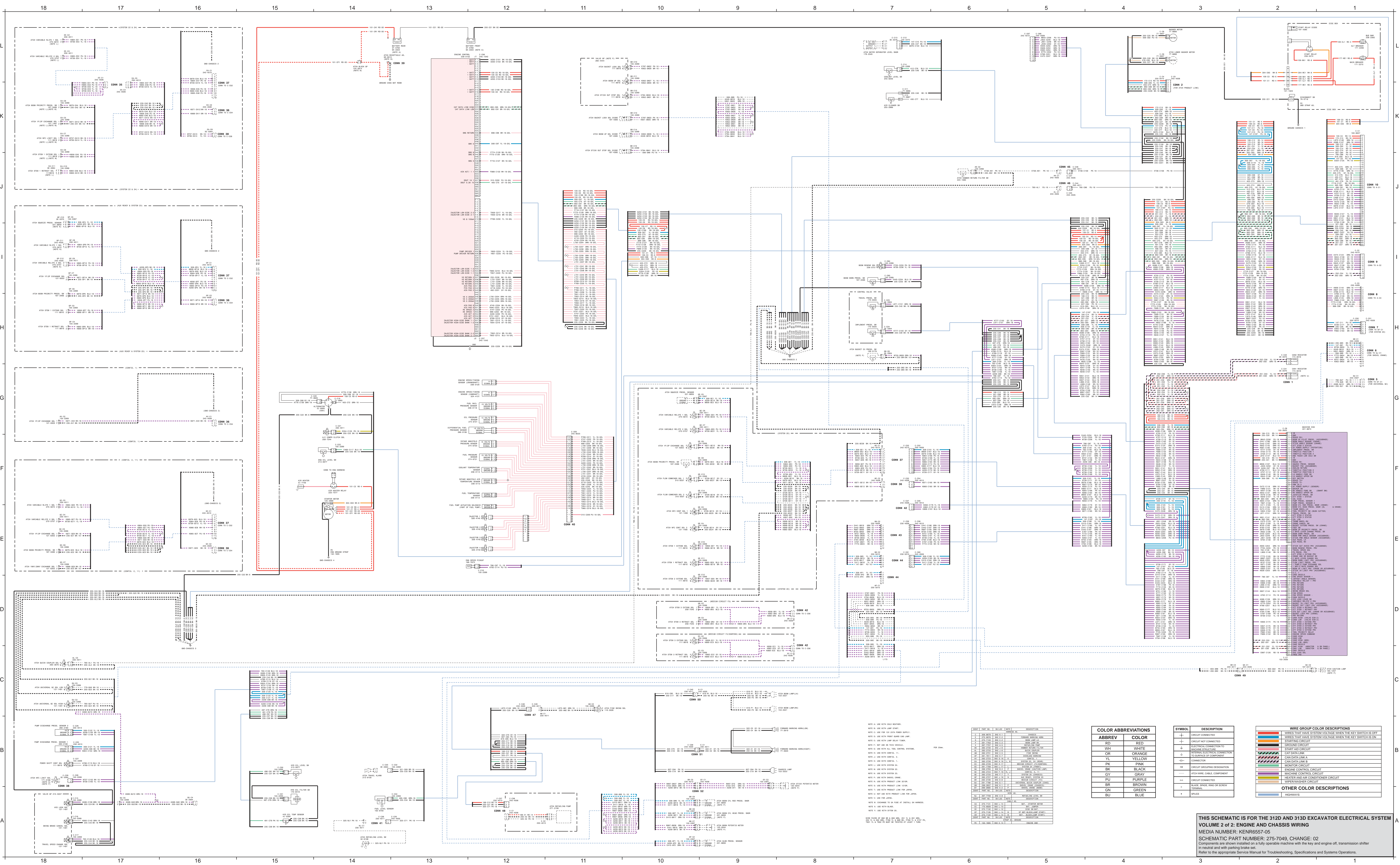
Connector Location table with columns for Connector Number, Schematic Location, and Machine Location.



Component Location table with columns for Component, Schematic Location, Machine Location, Component, Schematic Location, and Machine Location.



Harness and Wire Electrical Schematic Symbols section containing symbols, definitions, and wiring diagrams.



WIRE NO.	WIRE COLOR	DESCRIPTION
1	WH	WATER PUMP
2	OR	ORBITAL DRIVE
3	YL	YELLOW LIGHT
4	PK	POWER KICK
5	GR	GRASS
6	PU	PURPLE
7	BR	BROWN
8	GN	GREEN
9	BL	BLUE

ABBREV	COLOR
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
GR	GRAY
PU	PURPLE
BR	BROWN
GN	GREEN
BL	BLUE

SYMBOL	DESCRIPTION
1	GROUND CONNECTED
2	CIRCUIT NOT CONNECTED
3	MULTIPOLAR CONNECTOR TO CONTROL CIRCUIT
4	START AIR CIRCUIT
5	SOLENOID OR COMPONENT
6	CONNECTOR
7	CIRCUIT DESCRIPTION
8	WIRE GROUP COMPONENT
9	CIRCUIT CONNECTED
10	POWER SOURCE POWER SOURCE
11	TERMINAL
12	BRIDGE

WIRE GROUP COLOR DESCRIPTIONS	
1	WIRE GROUP THAT MAKES SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
2	WIRE GROUP THAT MAKES SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
3	START AIR CIRCUIT
4	SOLENOID OR COMPONENT
5	CONNECTOR
6	CIRCUIT DESCRIPTION
7	WIRE GROUP COMPONENT
8	CIRCUIT CONNECTED
9	POWER SOURCE POWER SOURCE
10	TERMINAL
11	BRIDGE

THIS SCHEMATIC IS FOR THE 312D AND 313D EXCAVATOR ELECTRICAL SYSTEM
VOLUME 2 of 2: ENGINE AND CHASSIS WIRING
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 SCHEMATIC PART NUMBER: 275-7049, CHANGE: 02
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