

Technical Manual

Operational Principle

EH

3500ACII

Rigid Dump Truck

 **Hitachi Construction Machinery**

URL:<http://www.hitachi-c-m.com>

INTRODUCTION

TO THE READER

- This manual is written for an experienced technician to provide technical information needed to maintain and repair this machine.
- Be sure to thoroughly read this manual for correct product information and service procedures.
- If you have any questions or comments, at if you found any errors regarding the contents of this manual, please contact using "Service Manual Revision Request Form" at the end of this manual.
(Note: Do not tear off the form. Copy it for usage.):
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FAX:81-29-831-1162
E-mail: dc@hitachi-kenki.com

ADDITIONAL REFERENCES

- Please refer to the other materials (operator's manual, parts catalog, engine technical material and Hitachi training material etc.) in addition to this manual.

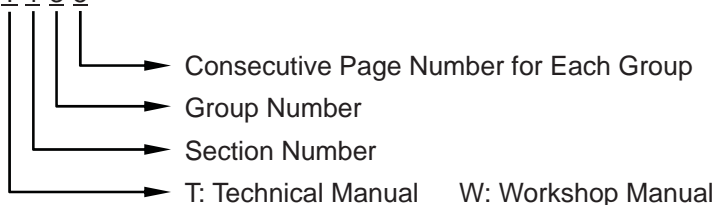
MANUAL COMPOSITION

- This manual consists the Technical Manual and the Workshop Manual.
- Information included in the Technical Manual: technical information needed for redelivery and delivery, operation and activation of all devices and systems, operational performance tests, and troubleshooting procedures.
- Information included in the Workshop Manual: technical information needed for maintenance and repair of the machine, tools and devices needed for maintenance and repair, maintenance standards, and removal/installation and assemble/disassemble procedures.

PAGE NUMBER

- Each page has a number, located on the center lower part of the page, and each number contains the following information:


Example : T 1-3-5





INTRODUCTION

SAFETY ALERT SYMBOL AND HEADLINE NOTATIONS

In this manual, the following safety alert symbol and signal words are used to alert the reader to the potential for personal injury or machine damage.

 This is the safety alert symbol. When you see this symbol, be alert to the potential for personal injury. Never fail to follow the safety instructions prescribed along with the safety alert symbol. The safety alert symbol is also used to draw attention to component/part weights. To avoid injury and damage, be sure to use appropriate lifting techniques and equipment when lifting heavy parts.

-  **CAUTION:**
Indicated potentially hazardous situation which could, if not avoided, result in personal injury or death.
- **IMPORTANT:**
Indicates a situation which, if not conformed to the instructions, could result in damage to the machine.
-  **NOTE:**
Indicates supplementary technical information or know-how.

UNITS USED

- SI Units (International System of Units) are used in this manual. MKSA system units and English units are also indicated in parentheses just behind SI units.

Example : 24.5 MPa (250 kgf/cm², 3560 psi)

A table for conversion from SI units to other system units is shown below for reference purposes.

Quantity	To Convert From	Into	Multiply By	Quantity	To Convert From	Into	Multiply By
Length	mm	in	0.03937	Pressure	MPa	kgf/cm ²	10.197
	mm	ft	0.003281		MPa	psi	145.0
Volume	L	US gal	0.2642	Power	kW	PS	1.360
	L	US qt	1.057		kW	HP	1.341
	m ³	yd ³	1.308	Temperature	°C	°F	°C×1.8+32
Weight	kg	lb	2.205	Velocity	km/h	mph	0.6214
Force	N	kgf	0.10197		min ⁻¹	rpm	1.0
	N	lbf	0.2248	Flow rate	L/min	US gpm	0.2642
Torque	N·m	kgf·m	0.10197		mL/rev	cc/rev	1.0
	N·m	lbf·ft	0.7375				

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All information, illustrations and specifications in this manual are based on the latest product information available at the time of publication. The right is reserved to make changes at any time without notice.

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-

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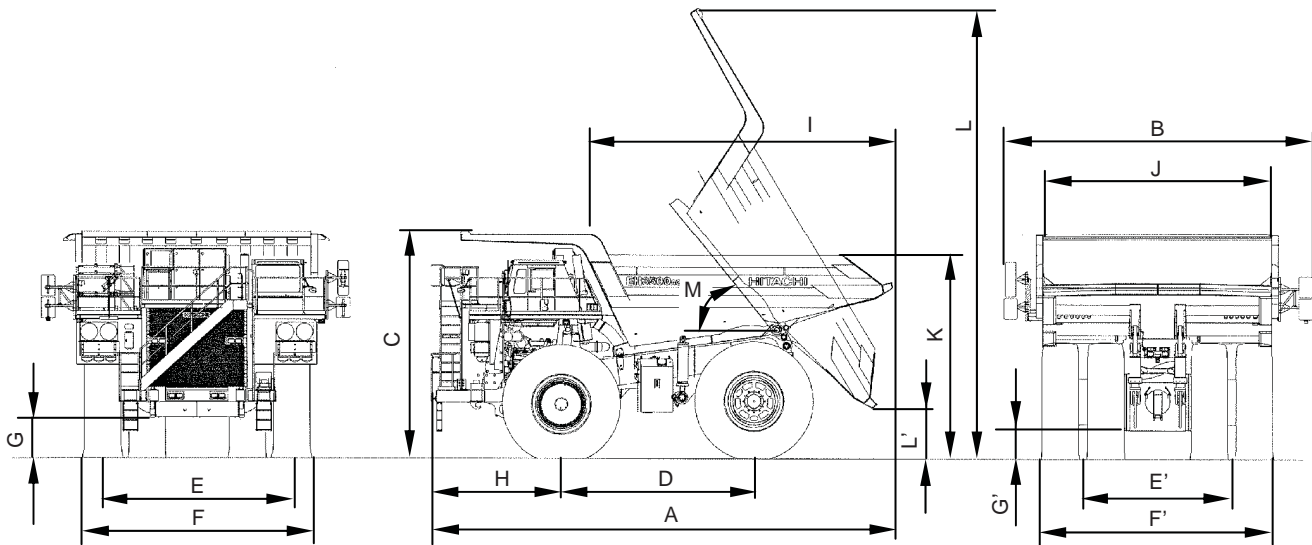
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GENERAL / Machine Specifications

MACHINE SPECIFICATIONS



M8R8-12-002

Model	EH3500AC II
Dump Body Capacity (Heap)	111 m ³ (145 yd ³)
Operating Weight	141000 kg (310800 lb)
Nominal Payload With Standard Equipment	168000 kg (370000 lb)
Target Gross Machine Operating Weight (TGMOW)	309000 kg (681000 lb)
Engine	Cummins QSK50 1491 KW/1900 rpm (2027 PS/1900 rpm)
A: Overall Length	13510 mm (44 ft 4 in)
B: Overall Width	8990 mm (29 ft 6 in)
C: Overall Height	6770 mm (22 ft 3 in)
D: Wheel Base	5620 mm (18 ft 5 in)
E, E': Tread (Front Tire/Rear Tire WT)	5500 mm (18 ft 1 in)/4320 mm (14 ft 2 in)
F, F': Tires Overall (Front Tire/Rear Tire)	6660 mm (21 ft 10 in)/6720 mm (22 ft 1 in)
G, G': Ground Clearance (Front Axle/Rear Axle)	1150 (3 ft 9 in)/806 mm (2 ft 8 in)
H: Front Overhang	3800 mm (12 ft 6 in)
I, J: Body Inside (Length/Width)	8680 mm (28 ft 6 in)/6650 mm (21 ft 10 in)
K: Body Height	5630 mm (18 ft 6 in)
L, L': Body Dump Height (Max./Min.)	12760 (41 ft 10 in)/1450 mm (4 ft 9 in)
M: Body Dump Angle	51°
Minimum Rotation Radius	27.3 m (89 ft 7 in)
Travel Speed	56 Km/h (35 mile/h)
Electric Drive	Hitachi AC-Drive System
Tires Size	37.00R57

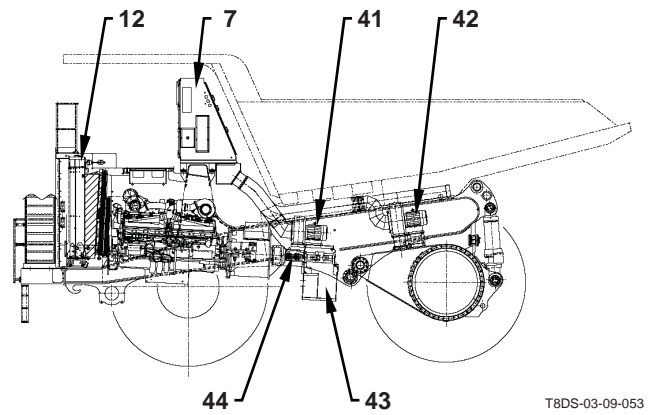
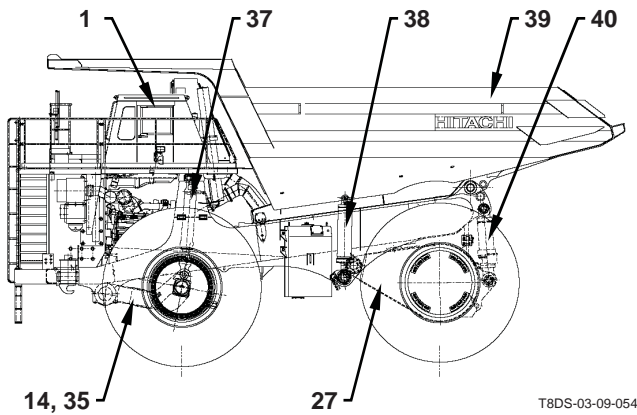
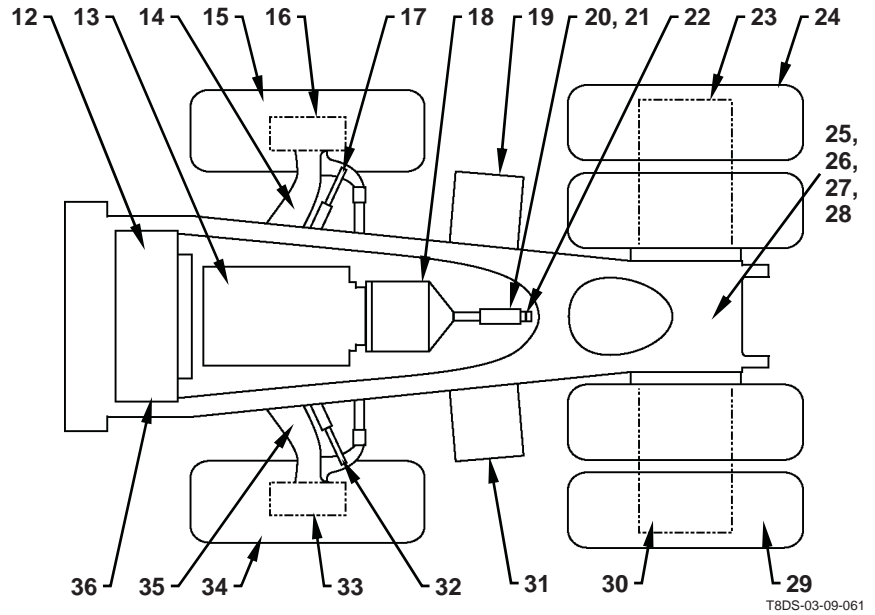
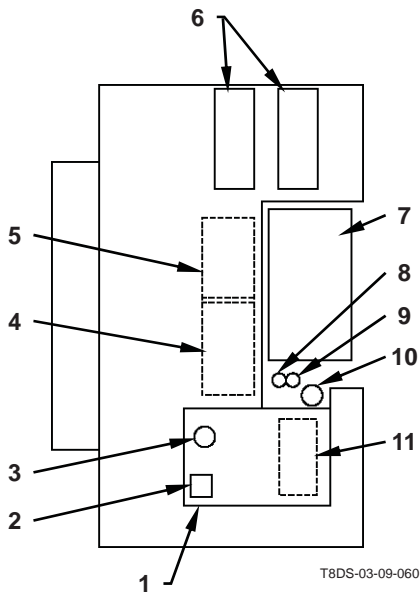
NOTE: These specifications are subject to change without notice.

GENERAL / Machine Specifications

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GENERAL / Component Location

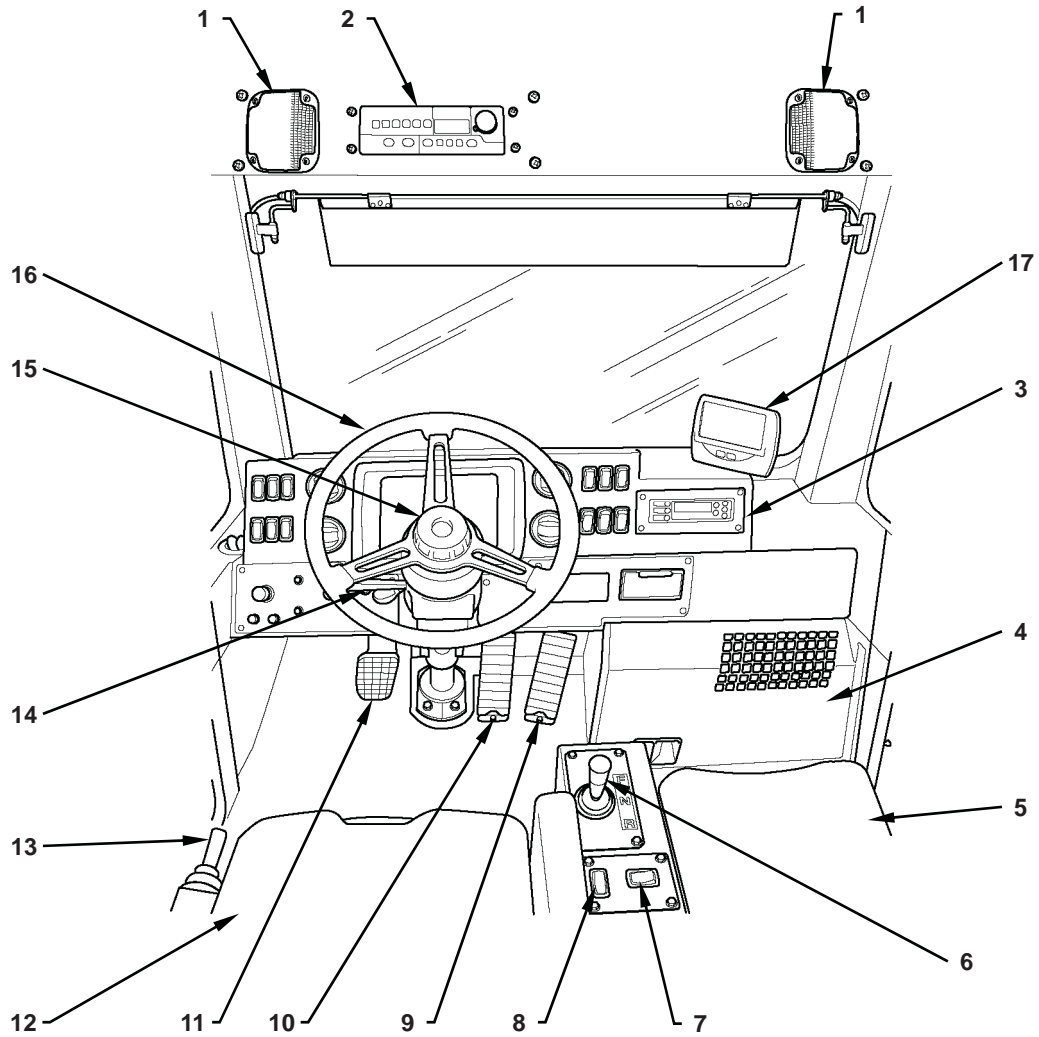
MAIN PART / COMPONENT LOCATION DIAGRAM



- | | | | |
|-----------------------------|--|---------------------------------|-----------------------------------|
| 1 - Cab | 12 - Radiator | 23 - Wheel Reduction Device (R) | 34 - Tire (FL) |
| 2 - Brake Valve | 13 - Engine | 24 - Tire (RR) | 35 - Front Axle (L) |
| 3 - Steering Valve | 14 - Front Axle (R) | 25 - Wheel Motor (R) | 36 - Frame |
| 4 - Deck Up Relay Box | 15 - Tire (FR) | 26 - Parking Brake (RL) | 37 - Suspension Cylinders(FR, FL) |
| 5 - Batteries (4 Used) | 16 - Front Wheel (R) | 27 - Rear Axle | 38 - Hoist Cylinders (R, L) |
| 6 - Grid Boxes (4 Used) | 17 - Steering Cylinder (R) | 28 - Wheel Motor (L) | 39 - Body |
| 7 - Control Cabinet | 18 - Main/ Auxiliary Alternator | 29 - Tire (RL) | 40 - Suspension Cylinders(RR, RL) |
| 8 - Front Brake Accumulator | 19 - Fuel Tank | 30 - Wheel Reduction Device (L) | 41 - Alternator Blower |
| 9 - Rear Brake Accumulator | 20 - Main Pump 1 | 31 - Hydraulic Oil Tank | 42 - Wheel Motor Blower |
| 10 - Main Accumulator | 21 - Main Pump 2 | 32 - Steering Cylinder (L) | 43 - Hoist Control Valve |
| 11 - Relay Box | 22 - Gear Pump (Transmission Lubrication) (2 Used) | 33 - Front Wheel (L) | 44 - Drive Shaft |

GENERAL / Component Location

OPERATOR'S SEAT

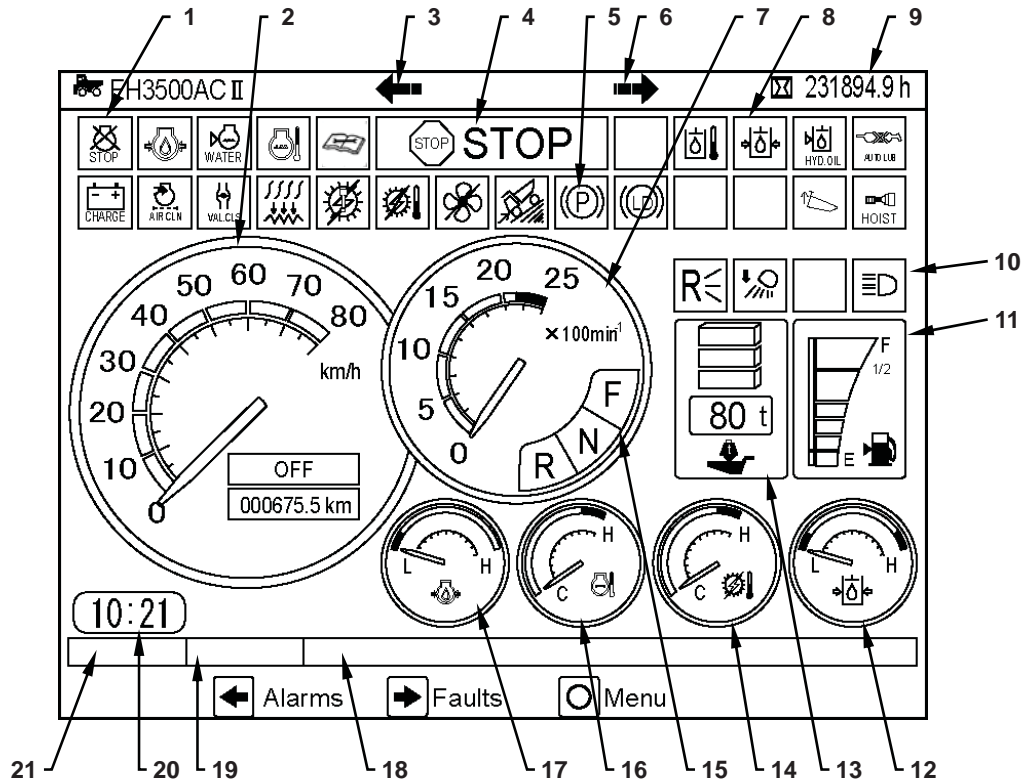


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- | | | |
|--------------------------|----------------------------|--|
| 1 - Speakers (2 Used) | 7 - Load Dump Brake Switch | 13 - Hoist Lever |
| 2 - Radio | 8 - Dump Override Switch | 14 - Turn Signal Light Lever / High Beam Lever |
| 3 - Console Panel | 9 - Accelerator Pedal | 15 - Horn Switch |
| 4 - Air Conditioner Unit | 10 - Retarder Brake Pedal | 16 - Steering Wheel |
| 5 - Trainer's Seat | 11 - Service Brake Pedal | 17 - Camera Monitor |
| 6 - Shift Lever | 12 - Seat | |

GENERAL / Component Location

LIQUID CRYSTAL DISPLAY (LCD) (NORMAL OPERATION SCREEN)

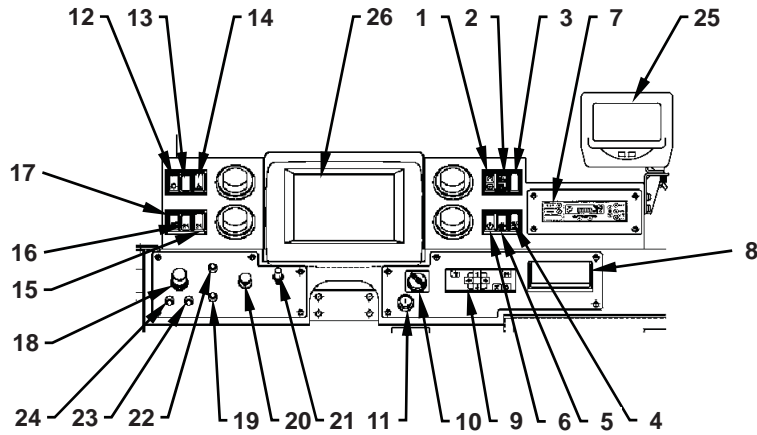


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- | | | | |
|--|---|--|--------------------------------|
| 1 - Engine Related Warning Indicator | 7 - Tachometer | 12 - Brake / Steering Hydraulic Oil Pressure Gauge | 17 - Engine Oil Pressure Gauge |
| 2 - Speedometer (With Odometer) | 8 - Hydraulic Related Warning Indicator | 13 - Payload Indicator | 18 - Message Display |
| 3 - Turn Signal Indicator | 9 - Hour Meter | 14 - Wheel Motor Temperature Gauge | 19 - SAE Code Display |
| 4 - STOP Indicator / CAUTION Indicator | 10 - Light Indicator | 15 - Shift Lever Indicator | 20 - Clock |
| 5 - Driving Related Warning Indicator | 11 - Fuel Gauge | 16 - Coolant Temperature Gauge | 21 - HCM Code Display |
| 6 - Turn Signal Indicator | | | |

GENERAL / Component Location

CONSOLE PANEL

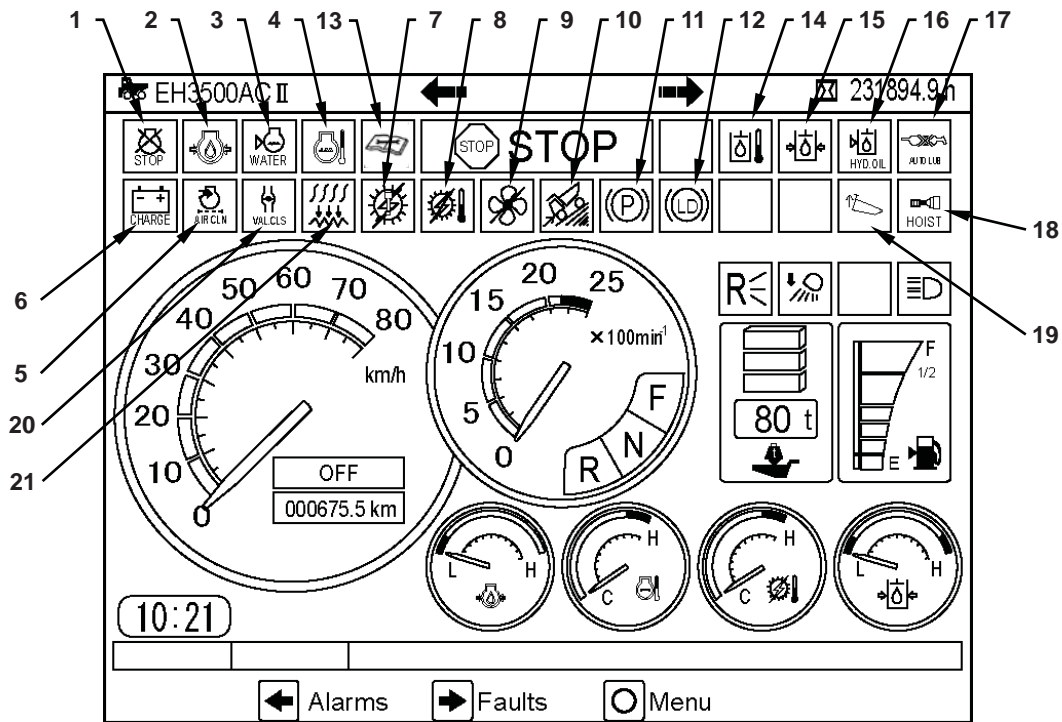


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|---|--|---------------------------------------|
| 1 - Cruise Control/Auto Retarder Main Switch | 10 - Emergency Engine Stop Switch | 19 - AC Drive Fault Reset Switch |
| 2 - Cruise Control/Auto Retarder Speed Setting Switch | 11 - Key Switch | 20 - Cigar Lighter |
| 3 - Not Available (Optional) | 12 - Headlight Switch | 21 - Dimmer Switch |
| 4 - Grid Dry Switch | 13 - Not Available (Optional) | 22 - Buzzer Deactivation Switch |
| 5 - AC Drive Shut Down Switch | 14 - Not Available (Optional) | 23 - Engine Room Work Light Indicator |
| 6 - Parking Brake Switch | 15 - Side Deck Light Switch (Optional) | 24 - Rear Axle Work Light Indicator |
| 7 - Air Conditioner Control Panel | 16 - Manual Rear Light Switch | 25 - Camera Monitor |
| 8 - Ash Tray | 17 - Entrance Light Switch | 26 - LCD |
| 9 - Key Pad | 18 - Wiper/ Washer Switch | |

GENERAL / Component Location

ENGINE/DRIVING/HYDRAULIC RELATED INDICATORS



M8R8-01-107E

Engine Related Indicator

- 1 - Engine Warning Indicator
- 2 - Engine Oil Pressure Warning Indicator
- 3 - Coolant Overheat Indicator
- 4 - Coolant Level Warning Indicator
- 5 - Air Cleaner Restriction Warning Indicator
- 6 - Alternator Warning Indicator

Driving Related Indicator

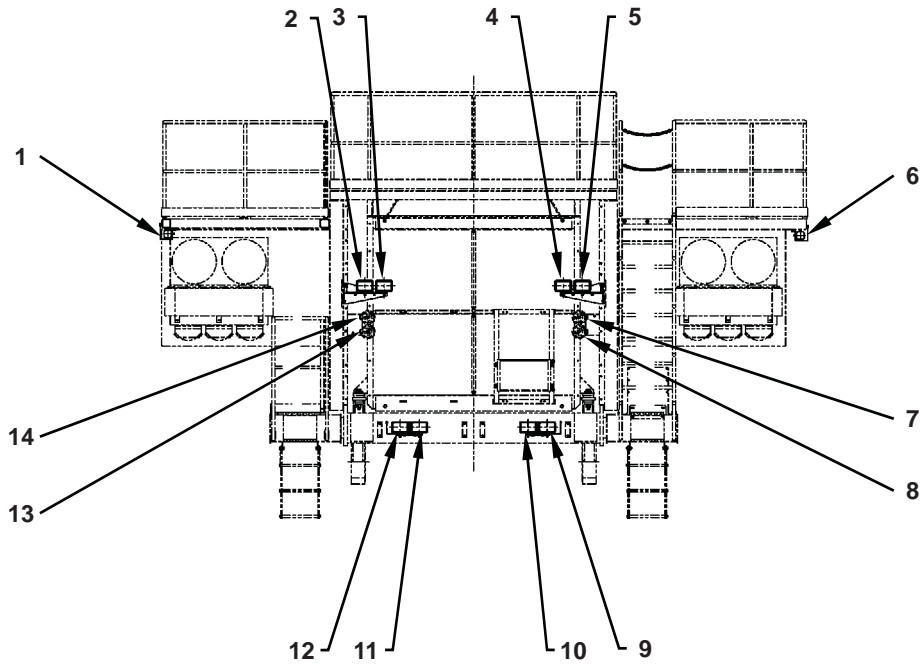
- 7 - Traction Warning Indicator
- 8 - Wheel Motor Temperature Warning Indicator
- 9 - Alternator Blower Warning Indicator
- 10 - Retarder Indicator
- 11 - Parking Brake Indicator
- 12 - Load Dump Brake Indicator
- 13 - AC Drive Maintenance Request Indicator

Hydraulic Related Indicator

- 14 - Hydraulic Oil Temperature Warning Indicator
- 15 - Steering Oil Pressure Warning Indicator
- 16 - Hydraulic Oil Level Warning Indicator
- 17 - Auto Lubrication Abnormality Warning Indicator
- 18 - Hoist Lever Position Indicator
- 19 - Body Up Indicator
- 20 - Stop Valve Warning Indicator
- 21 - Grid Dry ON Indicator

GENERAL / Component Location

HEADLIGHTS / FRONT COMBINATION LIGHTS / HORNS

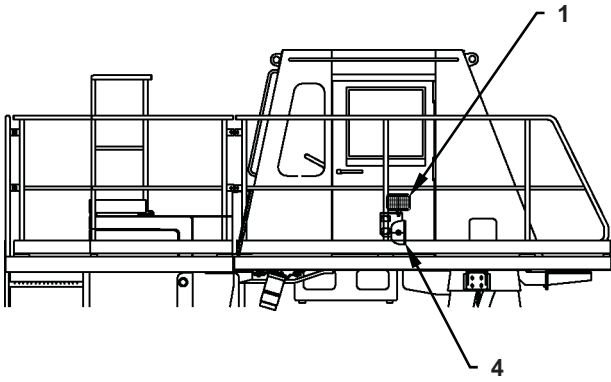


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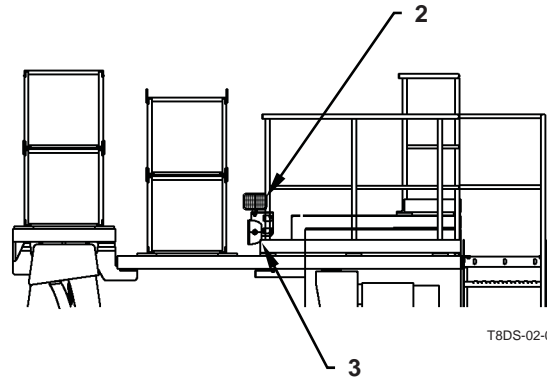
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|-------------------------------|-------------------------------|--------------------|
| 1 - Front Combination Light R | 6 - Front Combination Light L | 11 - Headlight LRI |
| 2 - Headlight URO | 7 - Horn (L) High | 12 - Headlight LRO |
| 3 - Headlight URI | 8 - Horn (L) Low | 13 - Horn (R) Low |
| 4 - Headlight ULI | 9 - Headlight LLO | 14 - Horn (R) High |
| 5 - Headlight ULO | 10 - Headlight LLI | |

GENERAL / Component Location

SIDE LIGHTS



Left Side



Right Side

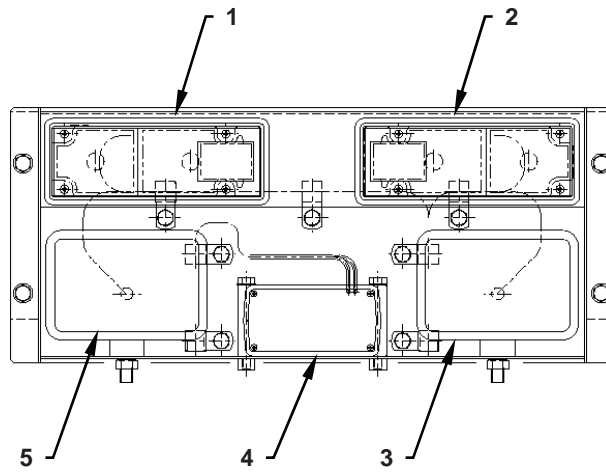
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- 1 - Side Deck Light L (OPT.)
- 2 - Side Deck Light R (OPT.)

- 3 - Deck Mounted Manual Rear Light R
- 4 - Deck Mounted Manual Rear Light L

GENERAL / Component Location

REAR LIGHTS

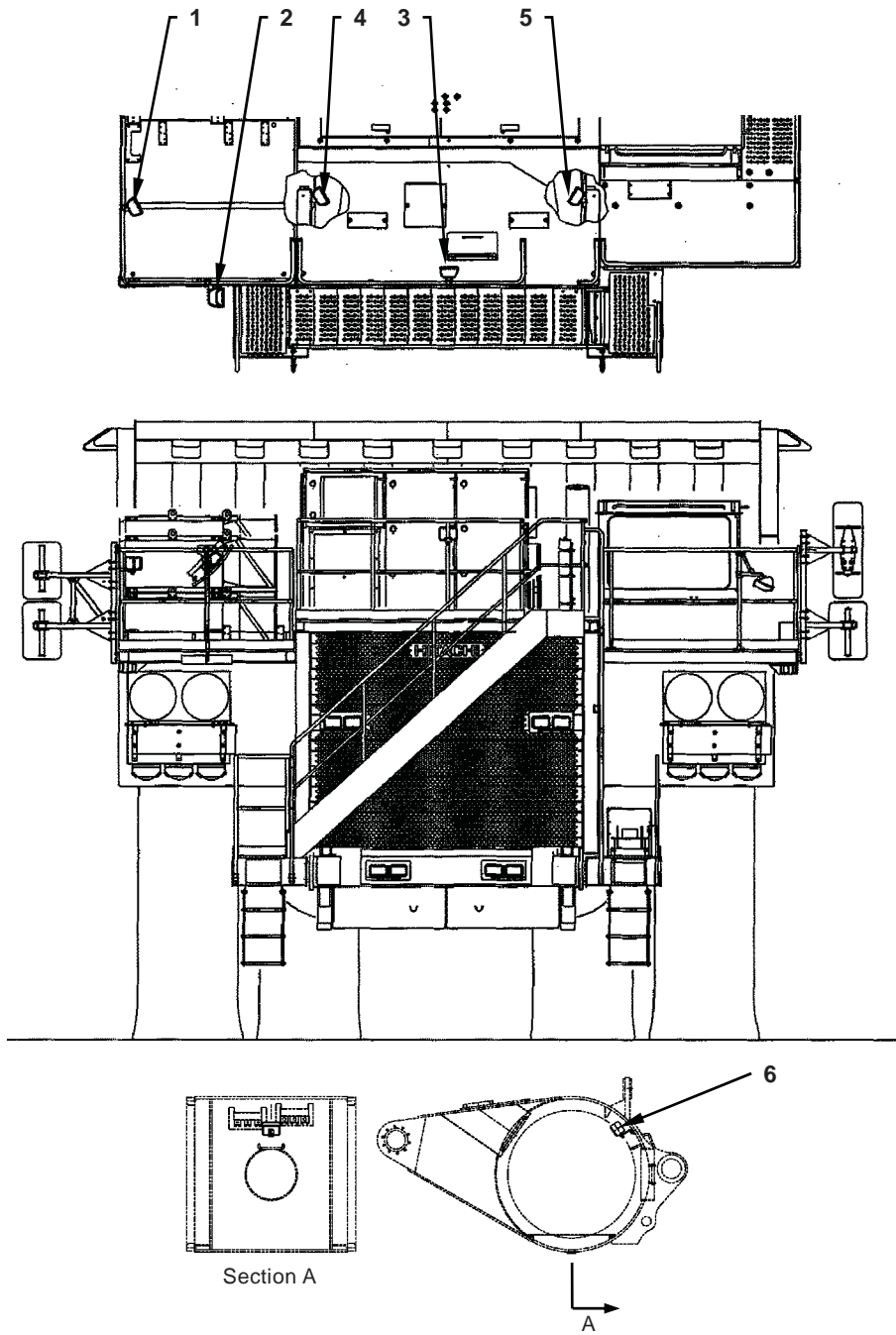


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- | | |
|------------------------------|-------------------------|
| 1 - Rear Combination Light L | 4 - Backup Alarm Buzzer |
| 2 - Rear Combination Light R | 5 - Rear Light L |
| 3 - Rear light R | |

GENERAL / Component Location

MAINTENANCE LIGHTS



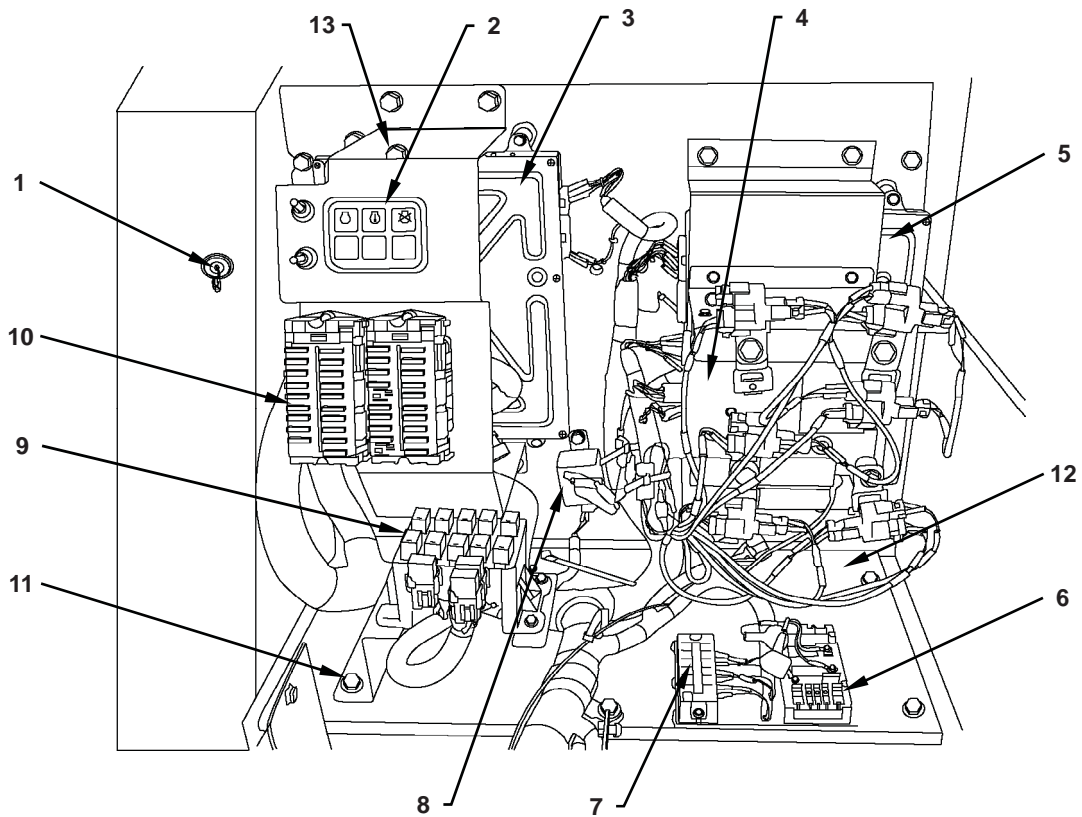
Lights in the Rear Axle Housing

- | | |
|------------------------|------------------------------|
| 1 - Entrance Light (1) | 4 - Engine Room Work Light R |
| 2 - Entrance Light (2) | 5 - Engine Room Work Light L |
| 3 - Entrance Light (3) | 6 - Rear Axle Work Light |

T8DS-02-04-119

GENERAL / Component Location

ELECTRICAL EQUIPMENT BOX (BEHIND CAB)

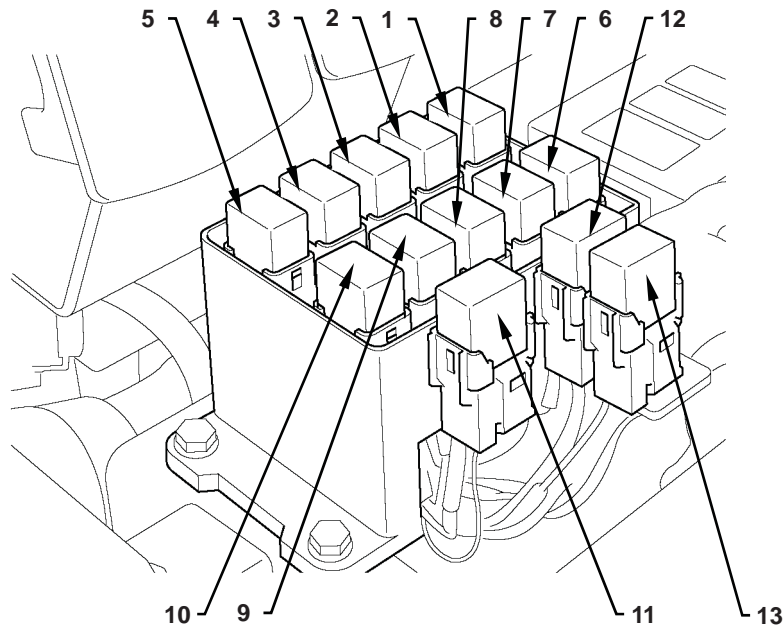


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- | | |
|------------------------------------|---|
| 1 - Download Connector | 8 - Flasher |
| 2 - Engine Diagnostic Lamp | 9 - Relays (Refer to the next page.) |
| 3 - Central Control Unit (CCU) | 10 - Fuses (Refer to T1-2-13.) |
| 4 - Data Logging Unit (DLU) | 11 - DSC Ignition Relay |
| 5 - Information Display Unit (IDU) | 12 - ORBCOMM (Satellite Communication Terminal)(Optional) |
| 6 - DC/DC Converter | 13 - Hour Meter |
| 7 - Optional Terminal Board | |

GENERAL / Component Location

RELAY (Up to Serial No.10040)



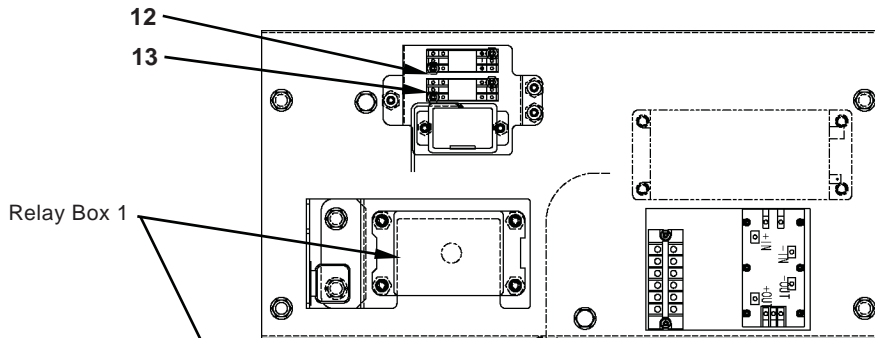
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Relay Alignment

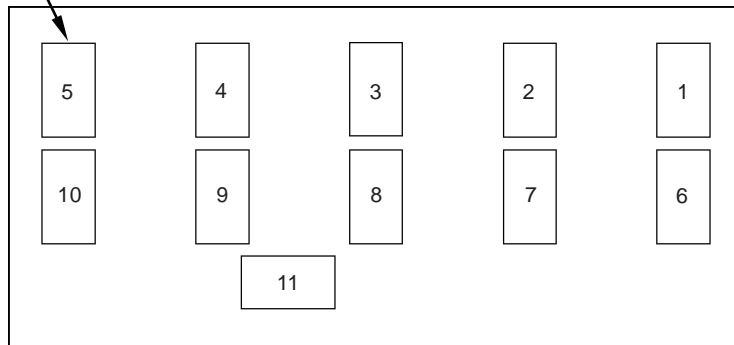
- | | | |
|---|---|-----------------------------------|
| 1 - RY-01 (Engine Start) | 6 - RY-06 (Payload Indicator Light - Yellow) | 11 - RY-11 (Forward) |
| 2 - RY-02 (Surge Prevention) | 7 - RY-07 (Payload Indicator Light - Green) | 12 - RY-12 (Retarder Brake Light) |
| 3 - RY-03 (Steering Bleed Down) | 8 - RY-08 (Wheel Reduction Device Oil Pressure-
Left) | 13 - RY-13 (Cold Start Aid) |
| 4 - RY-04 (Brake Light) | 9 - RY-09 (Wheel Reduction Device Oil Pressure-
Right) | |
| 5 - RY-05 (Payload Indicator Light - Red) | 10 - RY-10 (Hydraulic Oil Level Warning) | |

GENERAL / Component Location

RELAY (Serial No.10041 and Up)



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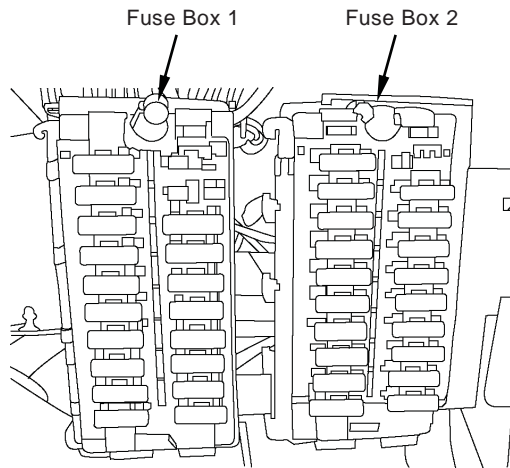
Relay Box 1 Alignment

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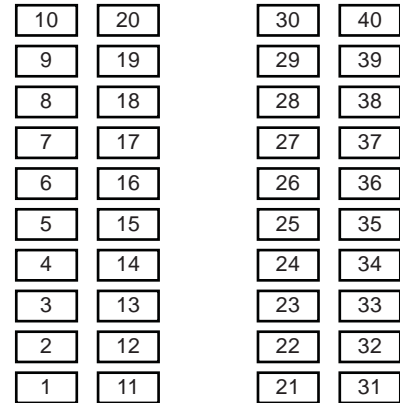
- | | | |
|---------------------------------|---|---|
| 1 - RY-01 (Engine Start) | 6 - RY-06 (Cold Start Aid) | 11 - RY-11 (Payload Indicator Light - Green) |
| 2 - RY-02 (Surge Prevention) | 7 - RY-07 (Retarder Brake Light) | 12 - SSRY-01 (Payload Indicator Light - Red) |
| 3 - RY-03 (Steering Bleed Down) | 8 - RY-08 (Wheel Reduction Device Oil Pressure-Left) | 13 - SSRY-02 (Payload Indicator Light - Yellow) |
| 4 - RY-04 (Brake Light) | 9 - RY-09 (Wheel Reduction Device Oil Pressure-Right) | |
| 5 - RY-05 (Forward) | 10 - RY-10 (Hydraulic Oil Level Warning) | |

GENERAL / Component Location

FUSES



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Fuse Box 1

Fuse Box 2

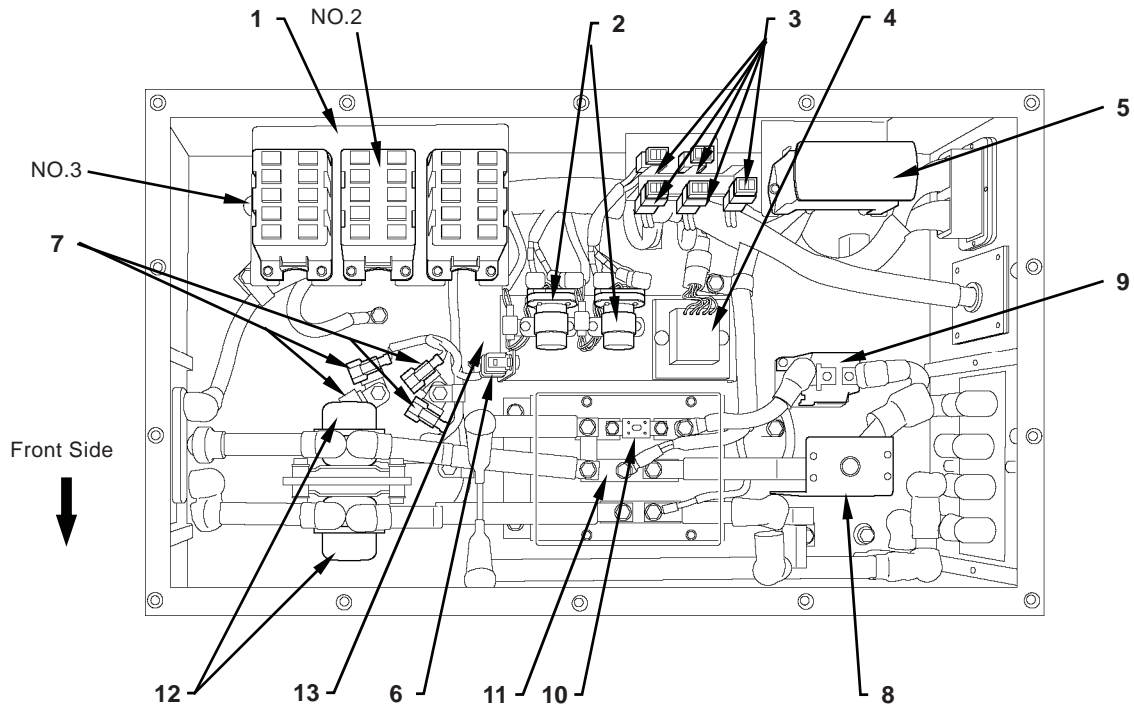
Fuse Alignment

Refer to the right figure for the fuse alignment.

- | | | |
|--|--|---|
| 1 - FU-01 (Key Switch) | 16 - FU-16 (Shift Lever) | 31 - FU-31 (Air Conditioner 1) |
| 2 - FU-02 (PLU Power) | 17 - FU-17 (Cigar Lighter) | 32 - FU-32 (Air Conditioner 2) |
| 3 - FU-03 (IDU Power) | 18 - FU-18 (Radio) | 33 - FU-33 (Wiper/Washer) |
| 4 - FU-04 (CCU Power) | 19 - FU-19 (Terminal Base) | 34 - FU-34 (Seat) |
| 5 - FU-05 (Engine Start) | 20 - FU-20 (OPT. MMS COMMUNICATION UNIT) | 35 - FU-35 (Payload Indicator Light) |
| 6 - FU-06 (Turn Signal/Hazard) | 21 - FU-21 (Parking Brake) | 36 - FU-36 (OPT. Cold Start) |
| 7 - FU-07 (Light) | 22 - FU-22 (Load/Dump Brake) | 37 - FU-37 (OPT. Heat Type Mirror Switch) |
| 8 - FU-08 (Brake Light) | 23 - FU-23 (AC Drive Switch) | 38 - FU-38 (OPT. MMS/Option Switch 2) |
| 9 - FU-09 (Dome Light/Radio) | 24 - FU-24 (DSC Start (via Key Switch)) | 39 - FU-39 (OPT. Option Switch 1) |
| 10 - FU-10 (OPT MODULAR MINING/OPT. ORBCOMM) | 25 - FU-25 (Hydraulic Oil Tank Switch) | 40 - FU-40 (OPT. Auxiliary) |
| 11 - FU-11 (Battery Relay) | 26 - FU-26 (OPT. ORBCOMM/MMS) | |
| 12 - FU-12 (Emergency Engine Stop) | 27 - FU-27 (OPT. Camera) | |
| 13 - FU-13 (DLU via Key Switch) | 28 - FU-28 (DLU Service Tool) | |
| 14 - FU-14 (IDU via Key Switch) | 29 - FU-29 (12V Power) | |
| 15 - FU-15 (CCU via Key Switch) | 30 - FU-30 (12V Output) | |

GENERAL / Component Location

DECK UP RELAY BOX

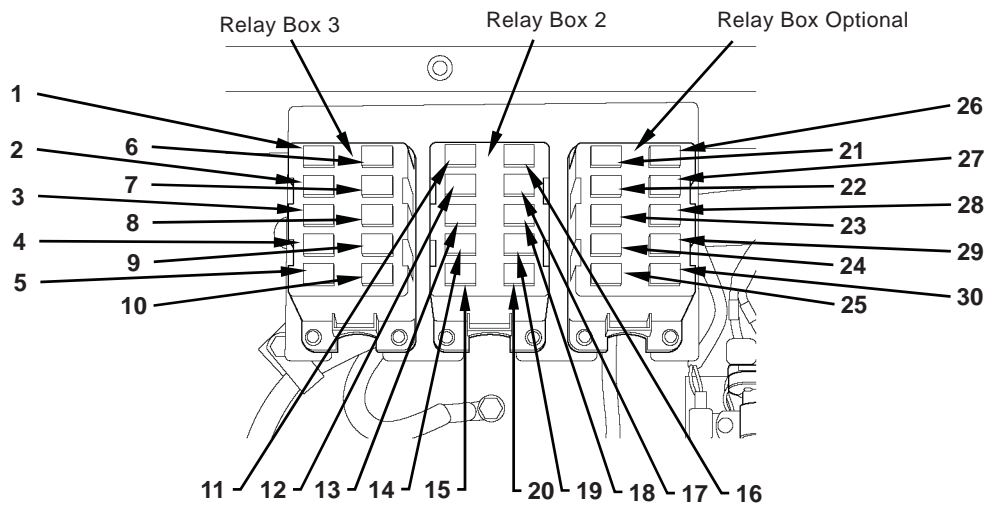


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- | | | | |
|--|---------------------------------------|----------------------|--|
| 1 - Relay
(Refer to the next page.) | 4 - Pre-lube Timer | 7 - Diode (4 Used) | 10 - Fuse (Pre-lube) |
| 2 - Starter Relay (2 Used) | 5 - Fuse Box 3
(Refer to T1-2-16.) | 8 - Circuit Breaker | 11 - Terminal |
| 3 - Fusible Link (5 Used)
(Refer to T1-2-17.) | 6 - Starter Relay | 9 - Relay (Pre-lube) | 12 - Battery Relay (2 Used) |
| | | | 13 - Relay (24V Convert)
(Serial No.10041 and up) |

GENERAL / Component Location

RELAYS



M8R8-01-134

Relay Box 3

- 1 - RY-01 (Headlight UL-H)
- 2 - RY-02 (Headlight UR-H)
- 3 - RY-03 (Headlight LL-H)
- 4 - RY-04 (Headlight LR-H)
- 5 - RY-05 (Headlight Control)
- 6 - RY-06 (Headlight UL-L)
- 7 - RY-07 (Headlight UR-L)
- 8 - RY-08 (Headlight LL-L)
- 9 - RY-09 (Headlight LR-L)
- 10 - RY-10 (Marker Light)

Relay Box 2

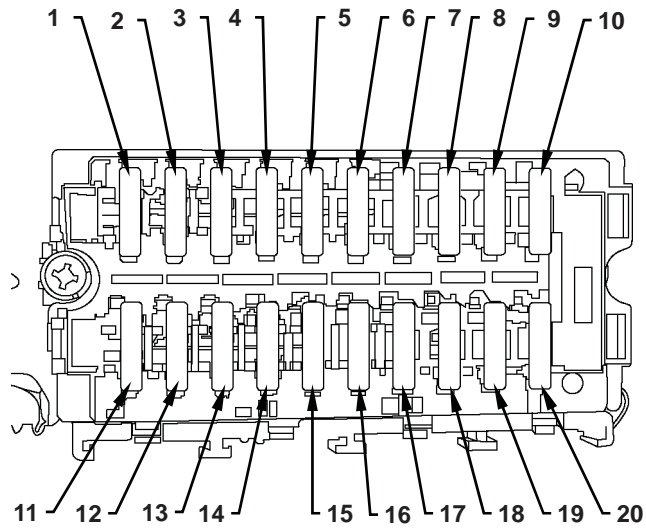
- 11 - RY-11 (Horn RHS)
- 12 - RY-12 (Horn LHS)
- 13 - RY-13 (Entrance Light 1-1, 1-3)
- 14 - RY-14 (Entrance Light 1-2)
- 15 - RY-15 (Side Deck Light 2-2)
- 16 - RY-16 (Rear Light)
- 17 - RY-17 (Backup Alarm Buzzer)
- 18 - RY-18 (Manual Rear Light 3-2)
- 19 - RY-19 (Manual Rear Light 3-1)
- 20 - RY-20 (Side Deck Light 2-1)

Relay Box Optional

- 21 - RY-21 (Neutral Start)
- 22 - RY-22 (Fan Clutch)
- 23 - RY-23 (Heat Type Mirror R-1)
- 24 - RY-24 (Heat Type Mirror R-2)
- 25 - RY-25 (Heat Type Mirror L-1)
- 26 - RY-26 (Heat Type Mirror L-2)
- 27 - RY-27 (Optional Switch 1)
- 28 - RY-28 (Optional Switch 2)
- 29 - RY-29 (Alternator Power Generation Signal)
(Serial No.10041 and up)
- 30 - RY-30 (Optional 1)

GENERAL / Component Location

FUSE BOX 3

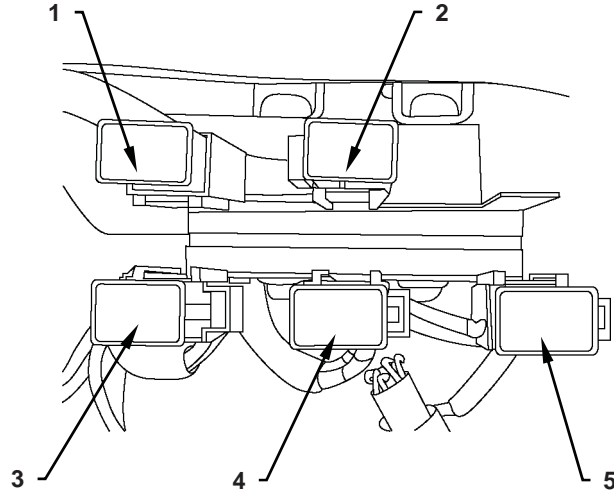


M8R8-01-135

- | | | |
|---|---|--------------------------------------|
| 1 - FU-01 (Horn) | 8 - FU-08 (ECM Data Link)
(Serial No.10041 and up) | 15 - FU-15 (Auxiliary) |
| 2 - FU-02 (Entrance Light) | 9 - FU-09 (Optional Switch 2) | 16 - FU-16 (Payload Indicator Light) |
| 3 - FU-03 (Manual Rear Light) | 10 - FU-10 (Optional 1) | 17 - FU-17 (Heat Type Mirror R) |
| 4 - FU-04 (Marker Light) | 11 - FU-11 (Rear Light/Backup Alarm
Buzzer) | 18 - FU-18 (Heat Type Mirror L) |
| 5 - FU-05 (Work Light) | 12 - FU-12 (Side Deck Light) | 19 - FU-19 (Optional Switch 1) |
| 6 - FU-06 (DSC Un-switched) | 13 - FU-13 (Headlight 1) | 20 - FU-20 (Auxiliary) |
| 7 - FU-07 (Alternator Power Generation
Signal) | 14 - FU-14 (Headlight 2) | |

GENERAL / Component Location

FUSIBLE LINKS

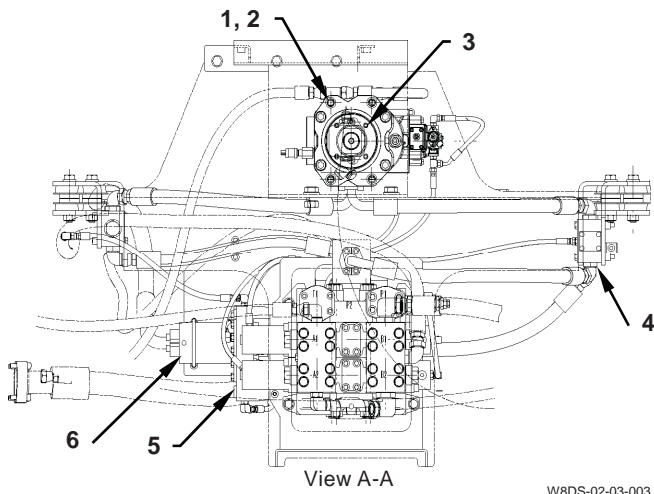


M8R8-07-031

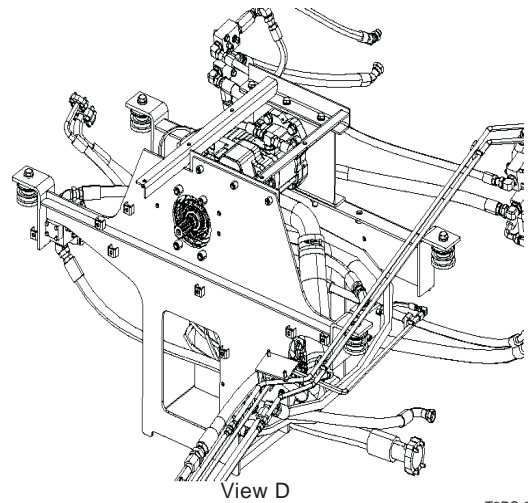
1 -	FL1	75A	(Primary Side)	Cab Fuse Box FU-1 to 10, FU-20
2 -	FL2	75A	(Primary Side)	ECM
3 -	FL3	75A	(Secondary Side)	Engine Starter Relay
4 -	FL4	75A	(Secondary Side)	Cab Fuse Box FU-31 to 40
5 -	FL5	75A	(Secondary Side)	Cab Fuse Box FU-21 to 29

GENERAL / Component Location

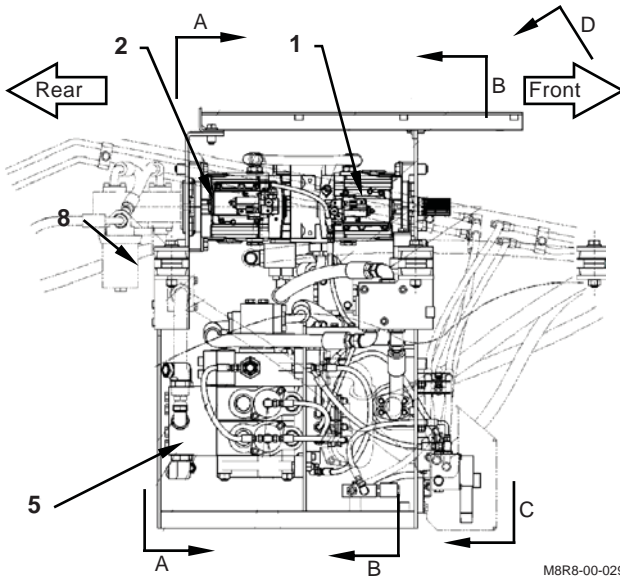
HYDRAULIC COMPONENTS MAIN PUMP SYSTEM



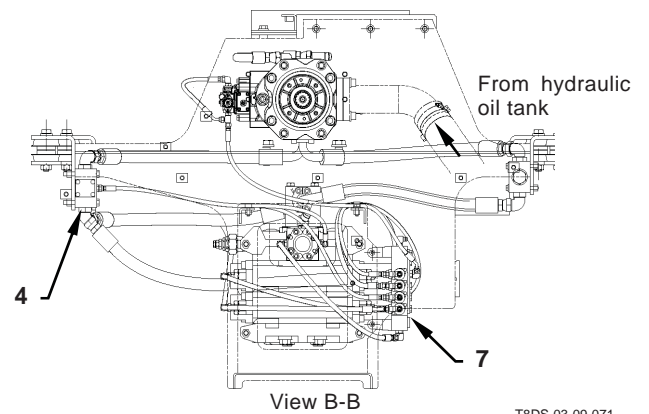
W8DS-02-03-003



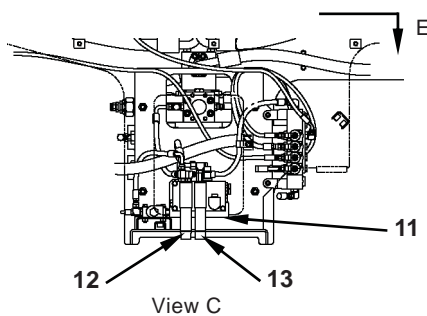
T8DS-03-09-073



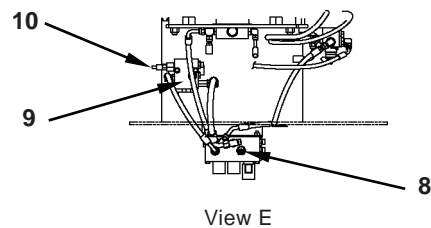
M6R8-00-029



T8DS-03-09-071



T8R8-01-02-003

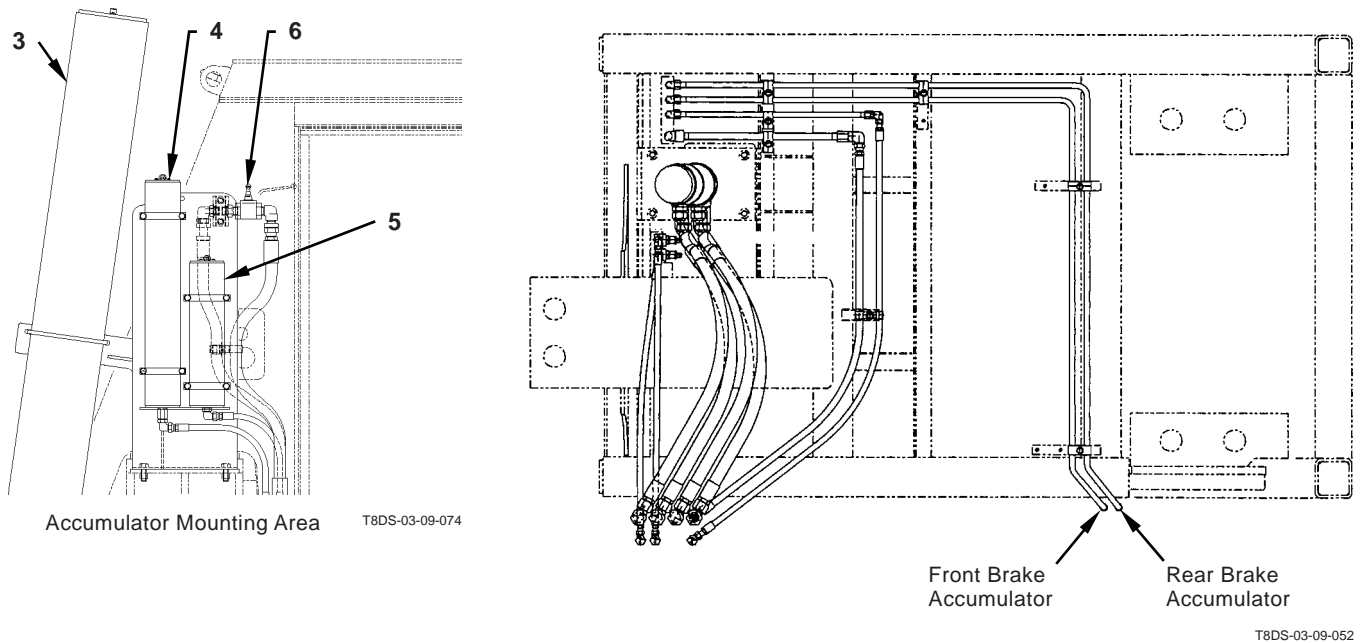
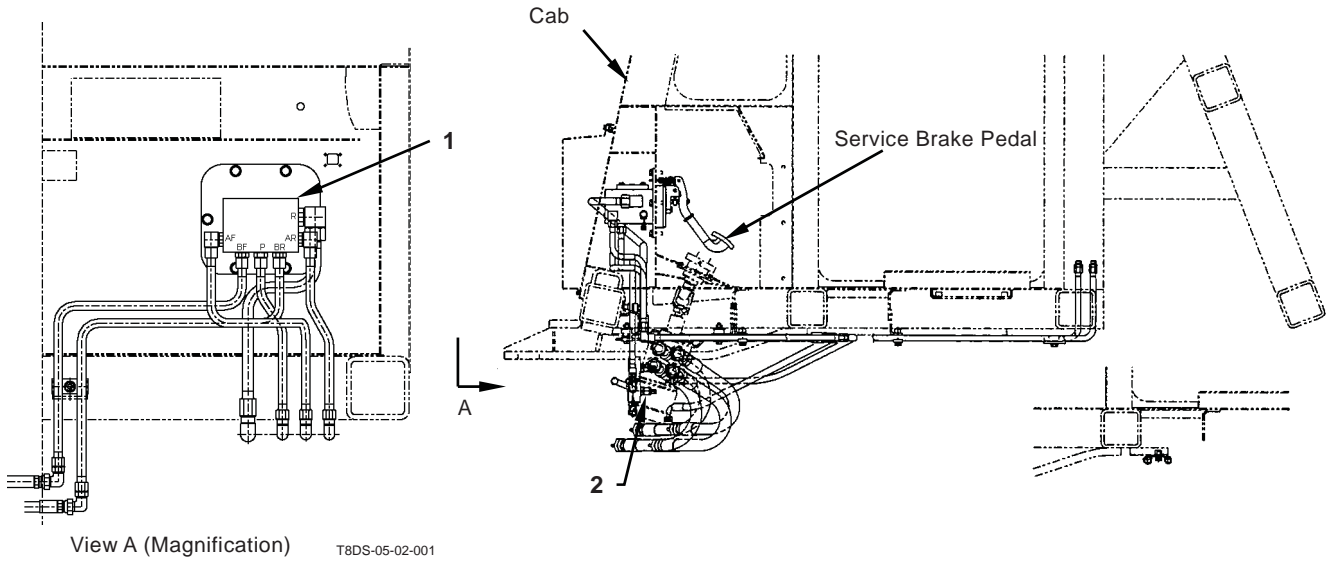


T8R8-01-02-004

- | | | | |
|--|--|-------------------------------------|--|
| 1 - Main Pump 1 (for Hoist) | 5 - Hoist Control Valve | 9 - Parking Brake Solenoid Valve | 12 - Pressure Reducing Valve (for Pilot Pressure) |
| 2 - Main Pump 2 (for Staring) | 6 - Line Fitter | 10 - Parking Brake Pressure Sensor | 13 - Pressure Reducing Valve (for Load/Dump Brake) |
| 3 - Gear Pump (Wheel Reduction Device Cooling) | 7 - 4-Unit Proportional Control Solenoid Valve | 11 - Load/Dump Brake Solenoid Valve | |
| 4 - Hoist Priority Valve | 8 - Service Brake Pressure Sensor | | |

GENERAL / Component Location

OPERATOR'S SEAT ENVIRONMENT



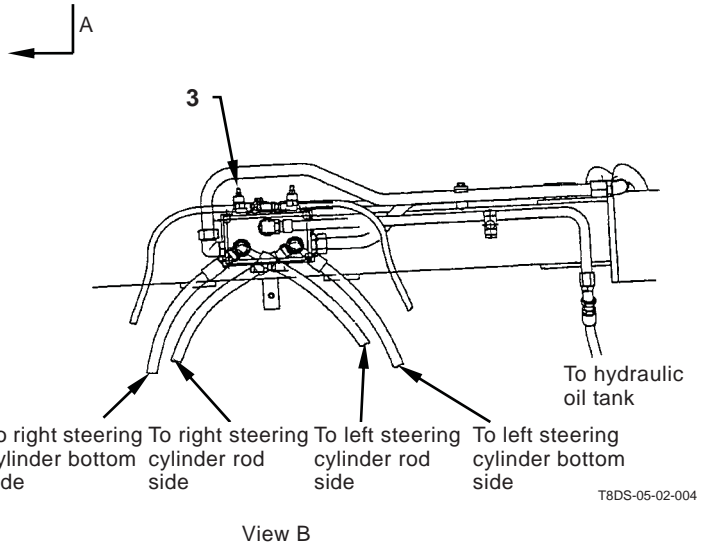
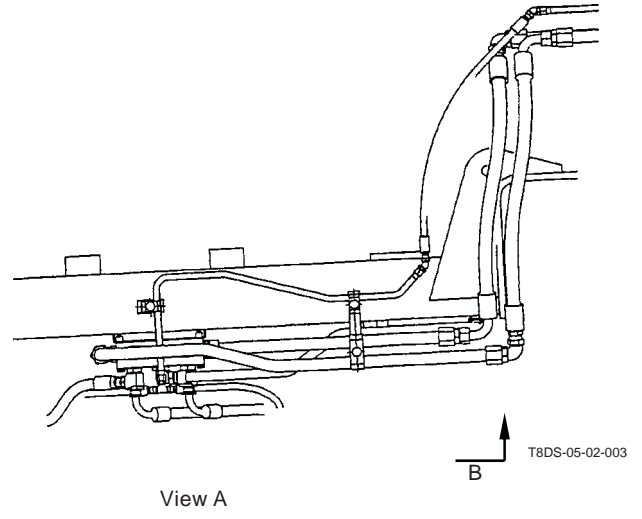
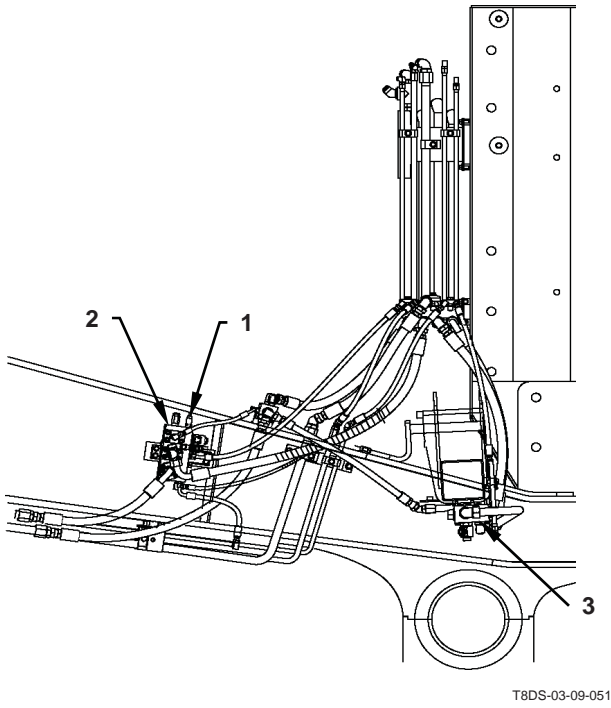
- 1 - Brake Valve
- 2 - Steering Valve

- 3 - Main Accumulator
- 4 - Rear Brake Accumulator

- 5 - Front Brake Accumulator
- 6 - Manual Body Down Valve

GENERAL / Component Location

FRONT AXLE



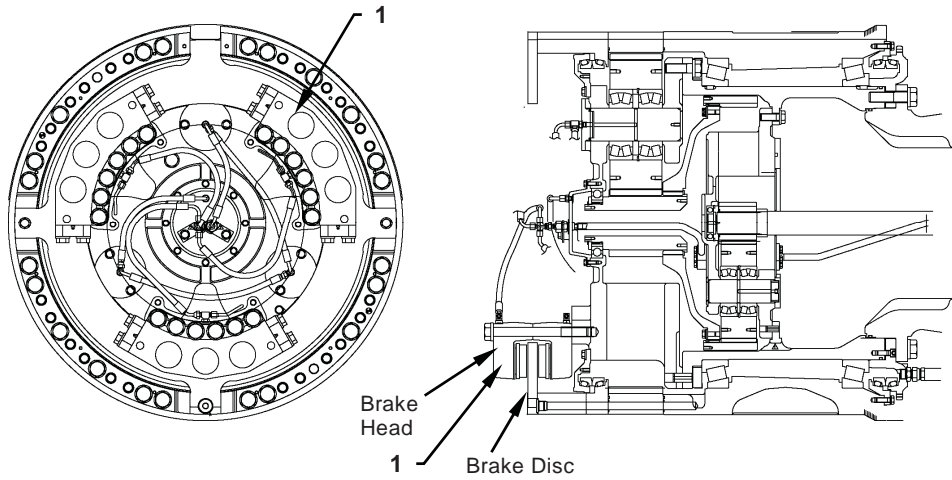
1 - Relief Valve

2 - RCB Valve

3 - Crossover Relief Valve

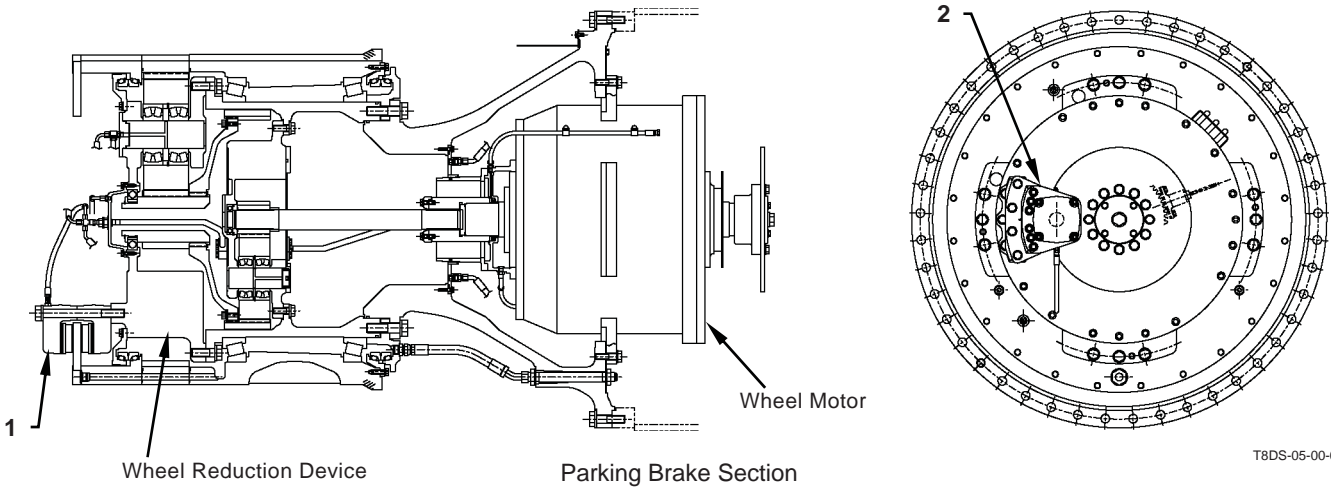
GENERAL / Component Location

BRAKE



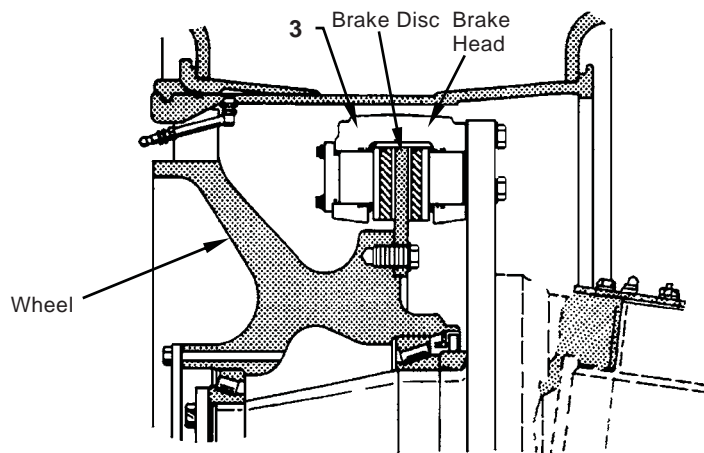
T8DS-05-00-023

Rear Brake Mounting Section



T8DS-05-00-024

Parking Brake Section



T8DS-05-11-001

Front Brake Mounting Section

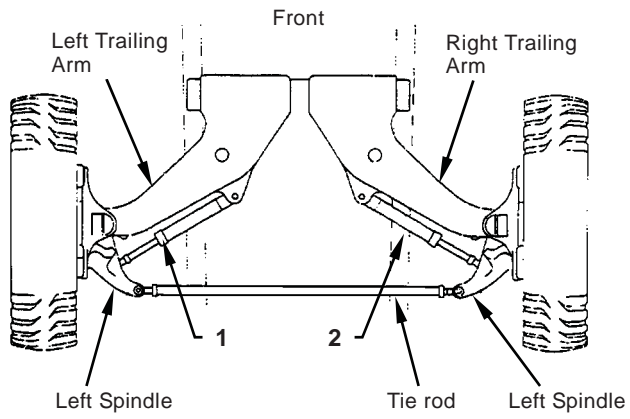
1 - Rear Brake

2 - Parking Brake

3 - Front Brake

GENERAL / Component Location

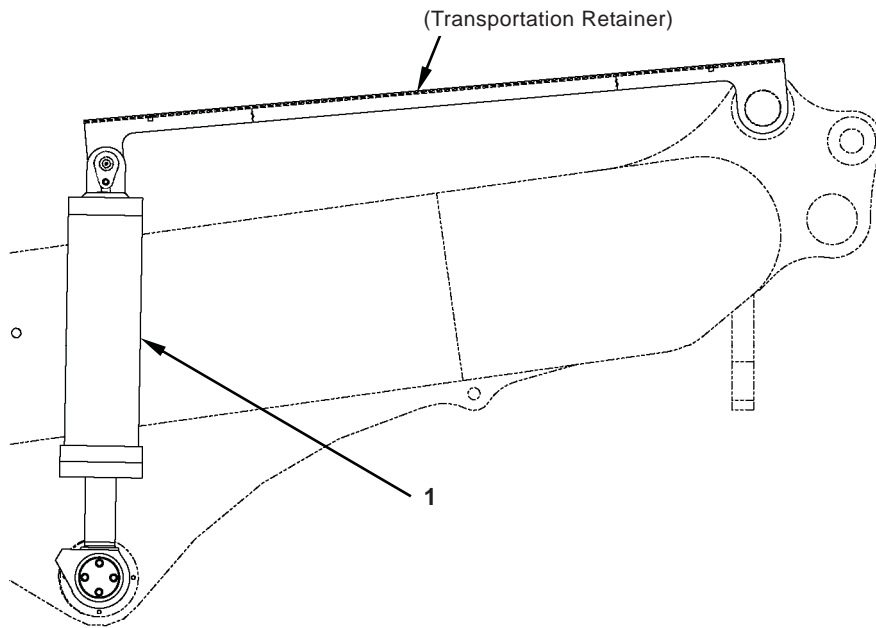
STEERING CYLINDER



T704-06-00-002

1 - Left Steering Cylinder 2 - Right Steering Cylinder

HOIST CYLINDER

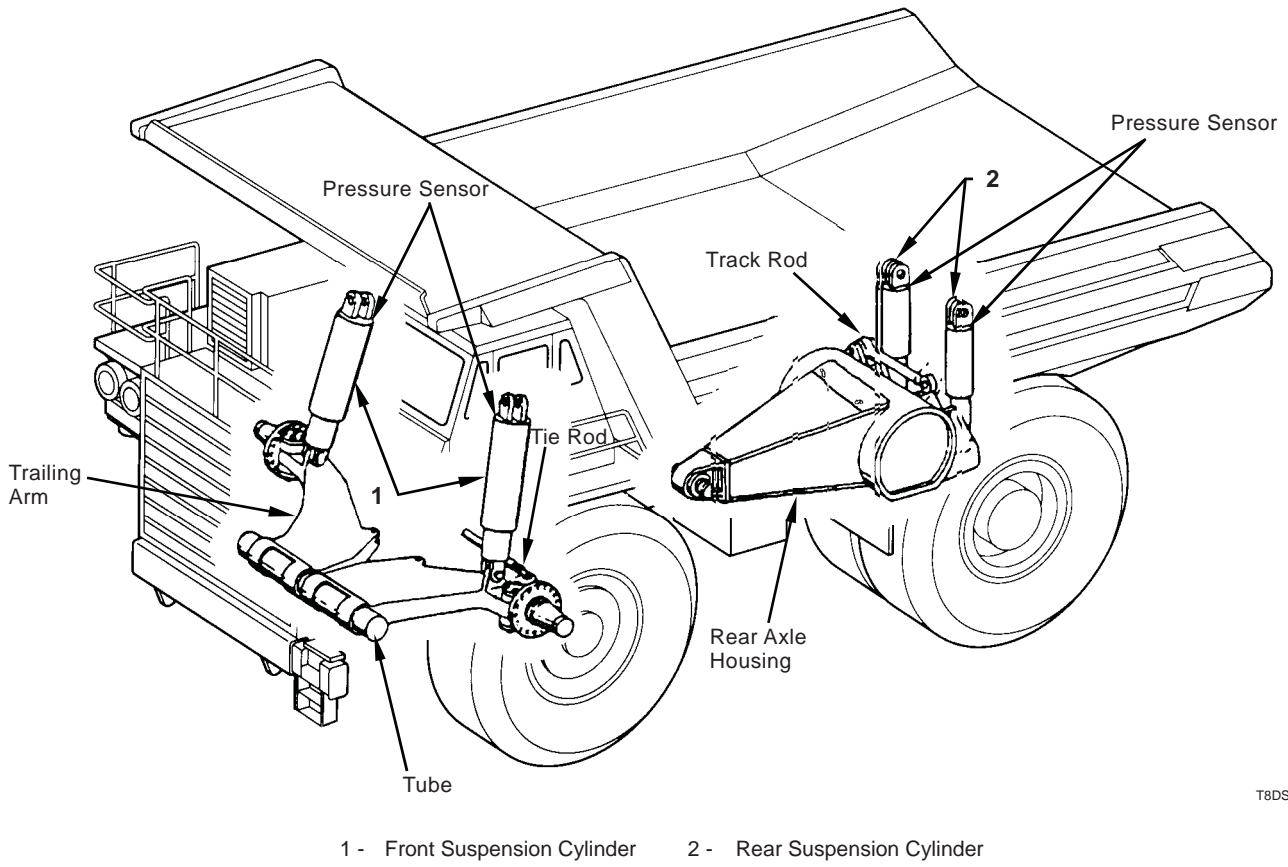


T8DS-09-15-005

1 - Hoist Cylinder

GENERAL / Component Location

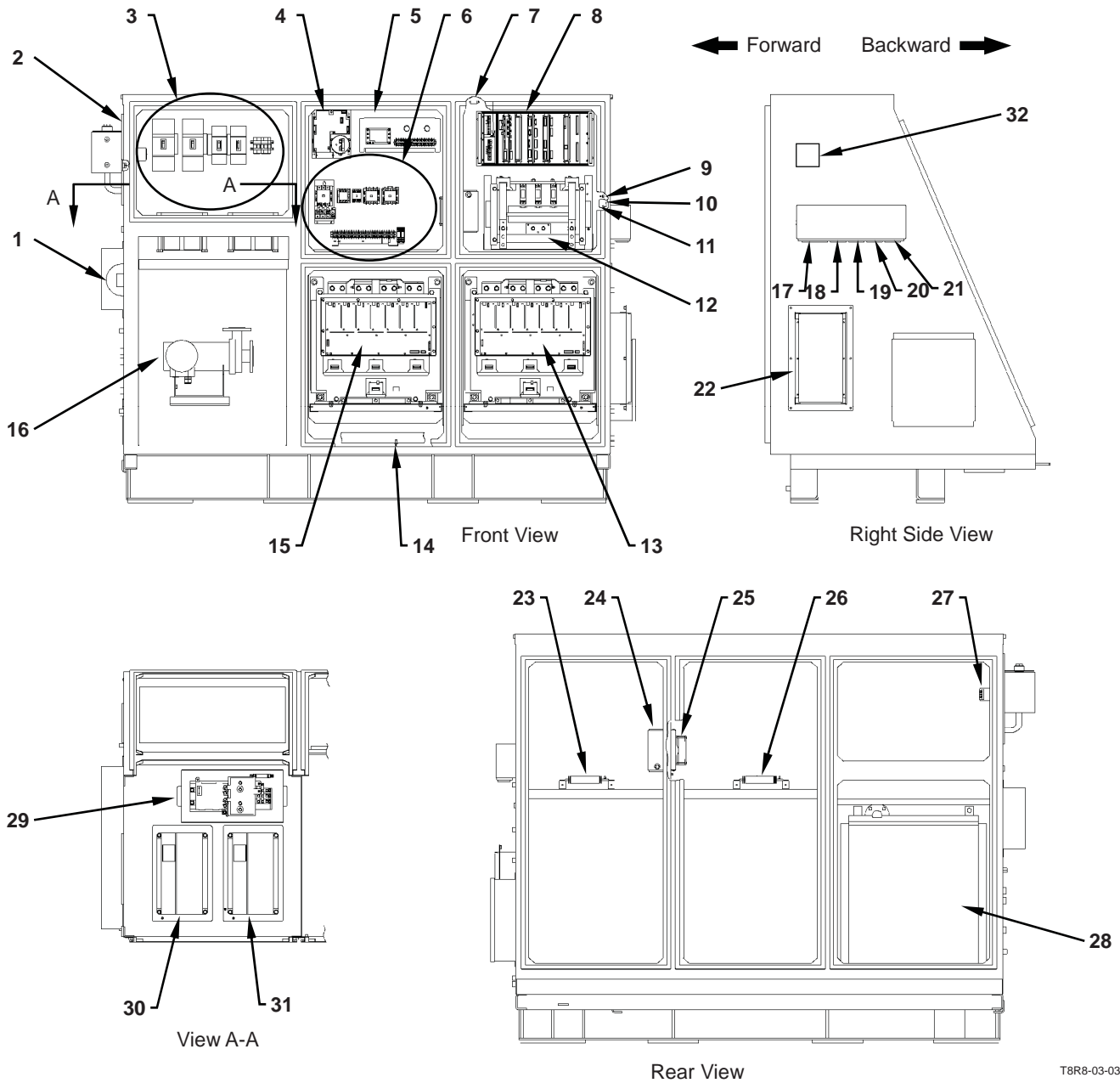
SUSPENSION CYLINDER



T8DS-07-26-005

GENERAL / Component Location

CONTROL CABINET

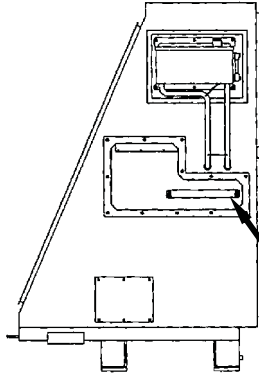


T8R8-03-03-001

- | | | | |
|--|----------------------------|------------------------|---|
| 1 - Terminal Block (TB3) | 9 - Capacitor | 17 - Connector (CN1) | 25 - Fan Unit |
| 2 - Coolant Level Sensor (WS301) | 10 - Resistor | 18 - Connector (CN2) | 26 - Heater (H302) |
| 3 - Breaker/Fuse | 11 - Connector (TBZ2) | 19 - Connector (CN3) | 27 - Current Transformer |
| 4 - Aux. Alternator Field Regulator (AFR) Unit | 12 - Rectifier Unit | 20 - Connector (CN4) | 28 - Radiator (RAD301) |
| 5 - Control Power (CS) Unit | 13 - Inverter Unit (Left) | 21 - Connector (CN5) | 29 - Main Alternator Field Regulator (MFR) Unit |
| 6 - Contactor/ Diode/ Relay/Others | 14 - Temperature Sensor | 22 - Filter | 30 - Aux. Inverter (INV301) |
| 7 - Thermal Switch (TSW301) | 15 - Inverter Unit (Right) | 23 - Heater (H303) | 31 - Aux. Inverter (INV302) |
| 8 - Drive System Controller (DSC) | 16 - Pump (PUMP301) | 24 - Radiator (RAD302) | 32 - Program Upload Interface |

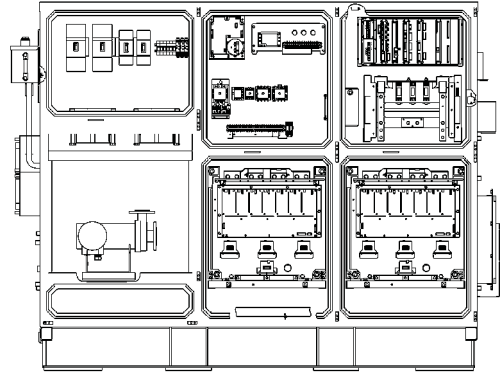
GENERAL / Component Location

TERMINAL BOARD (TB3)-OUTPUT CONNECTOR



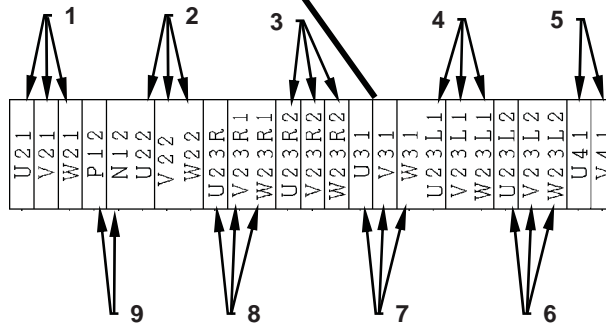
Control Cabinet: Right Side View

W8DS-04-01-097



Control Cabinet: Front View

W8DS-04-01-021

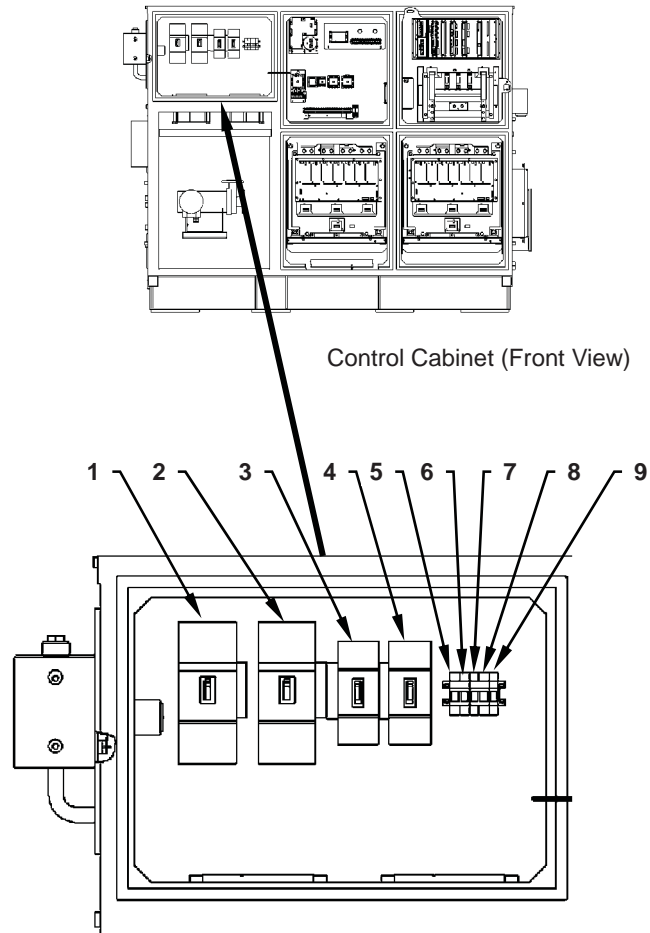


T8DS-05-04-005

- | | | |
|-------------------------------|---------------------------|---------------------------------------|
| 1 - Wheel Motor Blower Output | 4 - Grid Blower L1 Output | 7 - External 3-Phase Current Input |
| 2 - Alternator Blower Output | 5 - Engine Heater Output | 8 - Grid Blower R1 Output |
| 3 - Grid Blower R2 Output | 6 - Grid Blower L2 Output | 9 - Aux. Alternator Field Coil Output |

GENERAL / Component Location

BREAKERS / FUSES (Machine Serial No.10001)



T8DS-02-04-103

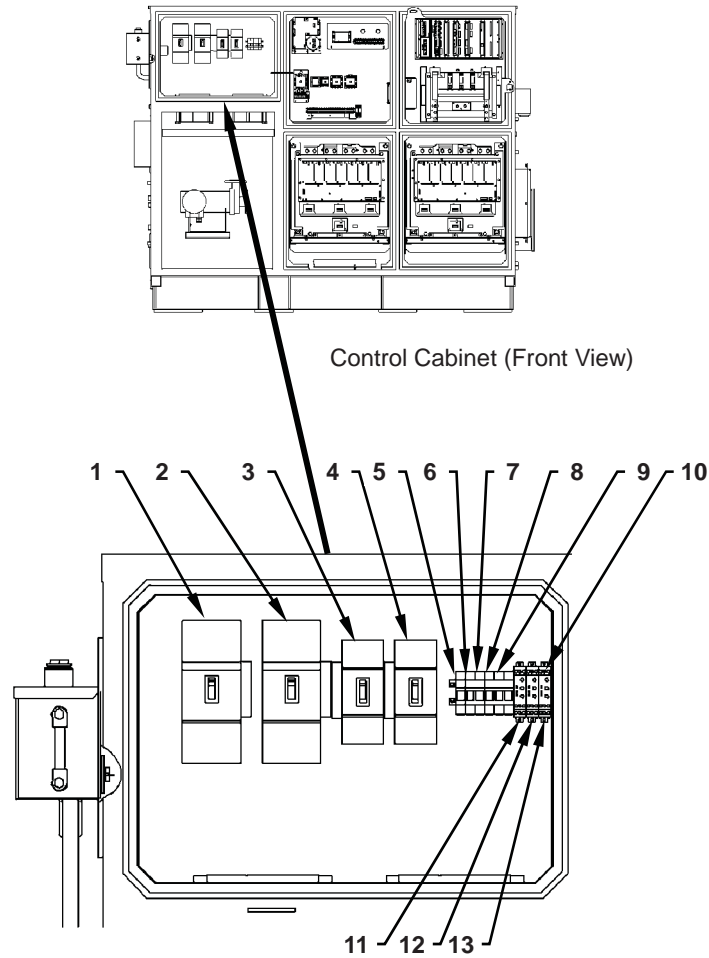
1 - Breaker (CB301)
2 - Breaker (CB302)
3 - Breaker (CB303)

4 - Breaker (CB304)
5 - Fuse (F301)
6 - Fuse (F302)

7 - Fuse (F303)
8 - Fuse (F304)
9 - Fuse (F305)

GENERAL / Component Location

BREAKERS / FUSES / RELAYS (Machine Serial No.10002 and up)



- 1 - Breaker (CB301)
- 2 - Breaker (CB302)
- 3 - Breaker (CB303) *
- 4 - Breaker (CB304) *

- 5 - Fuse (F311)
- 6 - Fuse (F301)
- 7 - Fuse (F302)

- 8 - Fuse (F303)
- 9 - Fuse (F304)
- 10 - Fuse (F305)

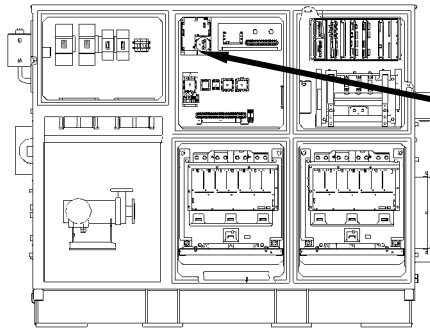
- 11 - Relay (RY303)
- 12 - Relay (RY304)
- 13 - Relay (RY305)

 NOTE: *: option

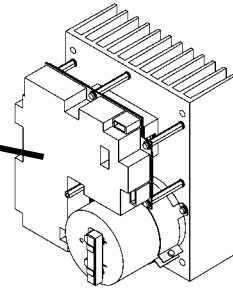
T8DS-02-04-126

GENERAL / Component Location

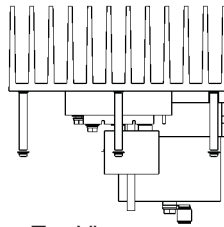
AUX. ALTERNATOR FIELD REGULATOR (AFR) UNIT



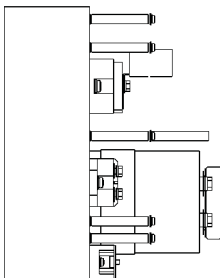
Control Cabinet (Front View)



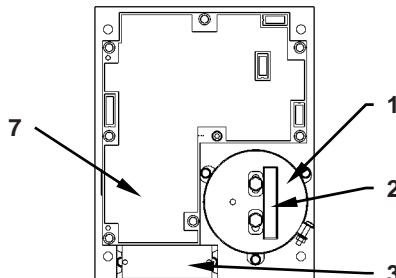
Aux. Alternator Field Regulator (AFR) Unit



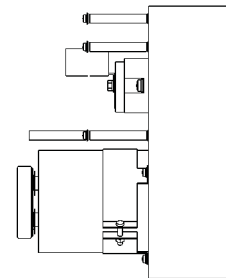
Top View



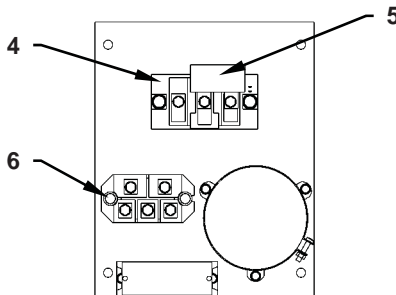
Left Side View



Front View



Right Side View



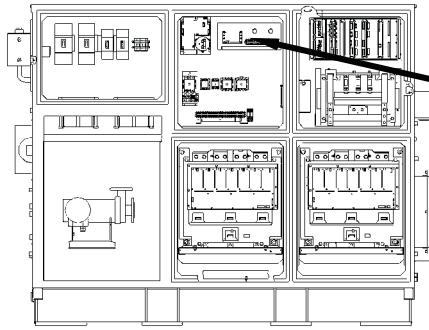
Front View (Without Board)

- | | | |
|------------------------|-----------------------|--|
| 1 - Capacitor | 4 - IGBT (TRS311) | 7 - Auxiliary Alternator Field Regulator Board (VPM08) |
| 2 - Resistor (R311) | 5 - Capacitor (C311B) | |
| 3 - Terminal Box (TB1) | 6 - Diode (D311) | |

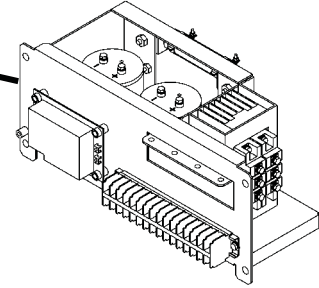
T8DS-02-04-108

GENERAL / Component Location

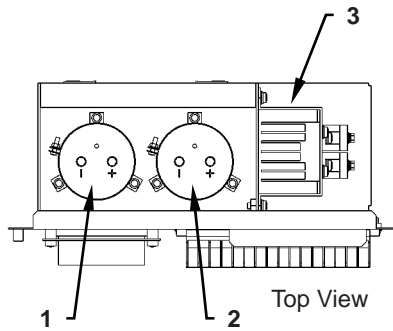
CONTROL POWER (CS) UNIT



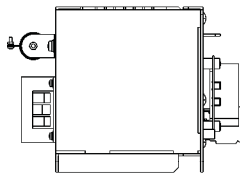
Control Cabinet (Front View)



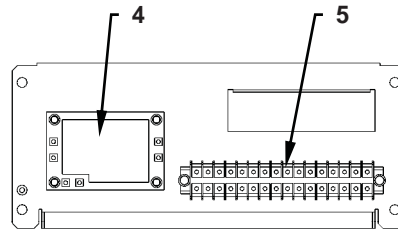
Control Power (CS) Unit



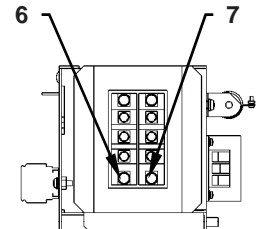
Top View



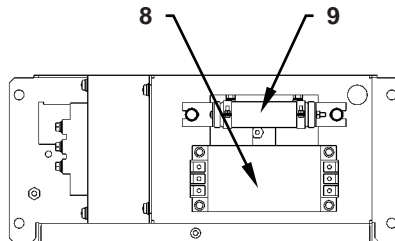
Left Side View



Front View



Right Side View



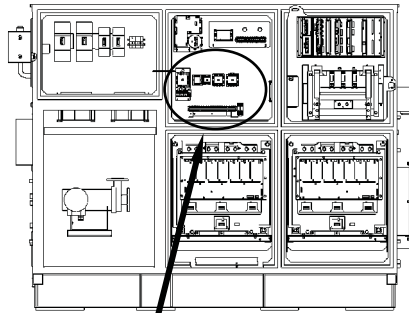
Rear View

- | | | |
|-----------------------|---|---------------------|
| 1 - Capacitor (C302A) | 4 - Overvoltage Protection Module (VAX03) | 7 - Diode (D305) |
| 2 - Capacitor (C302B) | 5 - Terminal Board (TBZ6) | 8 - Filter (FLT301) |
| 3 - Fin | 6 - Diode (D301) | 9 - Resistor (R302) |

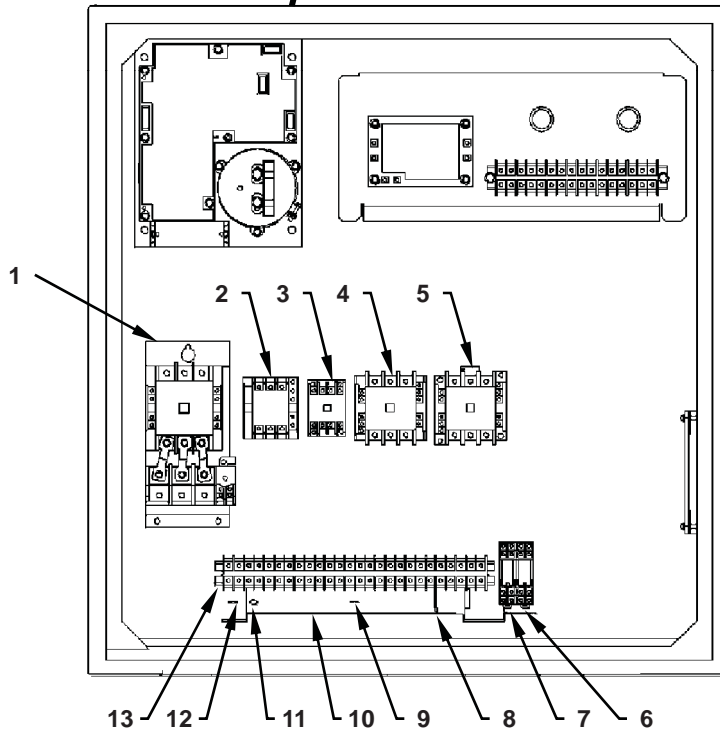
TBDS-02-04-107

GENERAL / Component Location

CONNECTOR / DIODES / RELAYS / OTHERS



Control Cabinet (Front View)



T8DS-02-04-104

- | | | |
|--------------------------|--------------------------------|-----------------------|
| 1 - Contactor (CTT301) | 6 - Relay (23E) | 10 - Heater (H301) |
| 2 - Contactor (CTT302) | 7 - Relay (RY302) | 11 - Diode (D306) |
| 3 - Contactor (CTT303) | 8 - Temperature Sensor (TH301) | 12 - Diode (D303) |
| 4 - Contactor (CTT304) * | 9 - Diode (D304) | 13 - Connector (TBZ1) |
| 5 - Contactor (CTT305) * | | |

 NOTE: *: option

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