CEBM016701

Shop Manual

830E

DUMP TRUCK

SERIAL NUMBERS **A30816** & **UP**

KOMATSU®

Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

SUBJECT	SECTION
GENERAL INFORMATION	A
STRUCTURES	B
ENGINE, FUEL, COOLING AND AIR CLEANER	C
ELECTRIC SYSTEM (24 VDC. NON-PROPULSION)	D
ELECTRIC PROPULSION AND CONTROL	E
DRIVE AXLE, SPINDLES AND WHEELS	G
HYDRAIR® II SUSPENSIONS	H
BRAKE CIRCUIT	J
HYDRAULIC SYSTEM	L
OPTIONS AND SPECIAL TOOLS	M
OPERATOR'S CAB	N
LUBRICATION AND SERVICE	P
ALPHABETICAL INDEX	Q
SYSTEM SCHEMATICS	R

MidWestTech | Komatsu 830E Dump Truck Service Manual | Publication CEBM016701 Order the manual at mid-west-tech.com >

SECTION A
GENERAL INFORMATION
INDEX

MAJOR COMPONENTS & SPECIFICATIONS A2

GENERAL SAFETY AND OPERATION A3

WARNINGS AND CAUTIONS. A4

STANDARD TORQUE CHARTS AND CONVERSION TABLES. A5

STORAGE PROCEDURES. A7

MidWestTech | Komatsu 830E Dump Truck Service Manual | Publication CEBM016701 Order the manual at mid-west-tech.com >

BODY-UP SWITCH

The body-up switch is designed to prevent propulsion in "Reverse" with the dump body raised. This switch also prevents forward propulsion unless the override button is depressed and held.

The body-up switch, located on the right frame rail ahead of the body guide, must be adjusted to within limits. Improper adjustment or loose mounting bolts may cause false signals or damage to the body-up switch assembly. The switch should be checked daily and the sensing area cleaned of any dirt or metallic dust accumulation.

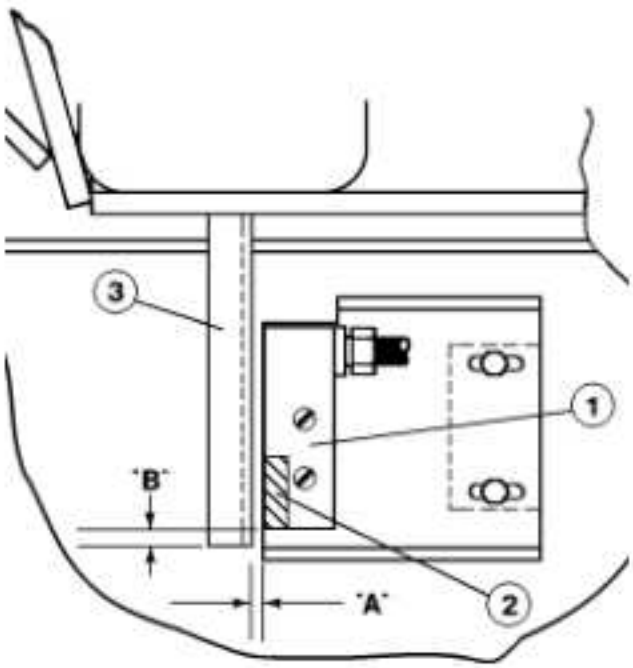


FIGURE 3-4. BODY-UP SWITCH ADJUSTMENT

1. Proximity Switch
2. Sensing Area
3. Actuator

Adjustment

Adjust the proximity switch bracket to maintain an air gap (Dimension "A", Figure 3-4) between the sensing area and actuator bracket, of between 0.50 in. (12.7 mm) minimum and 0.62 in. (15.7 mm) maximum. Set up measurement "B" should be approximately 1.00 in. (25.4 mm).

Service

Keep sensing area clean, free of metallic dust and other debris that may damage or inhibit operation of the proximity switch. If the switch is not functioning or damaged the unit must be replaced.

HOIST LIMIT SWITCH

The hoist limit switch actuates a solenoid in the hoist circuit to stop the hoist cylinders short of full extension and prevent possible damage to the dump body or hoist cylinders.

The hoist limit switch is located inside the right frame rail above the rear suspension. The switch must be properly adjusted at all times. Improper adjustment or loose mounting bolts may cause false signals or damage to the switch assembly.

The hoist limit switch should be checked daily and the sensing area cleaned of any dirt or metallic dust accumulation.

Adjustment

With body raised and hoist cylinders within 10 in. (254 mm) of maximum travel, make the following adjustments:

Adjust the proximity switch bracket to maintain an air gap (Dimension "A", Figure 3-5) between the sensing area and actuator bracket, of between 0.50 in. (12.7 mm) minimum and 0.62 in. (15.7 mm) maximum. Set up measurement "B" should be approximately 1.50 in. (38.1 mm).

Service

Keep sensing area clean, free of metallic dust and other debris that may damage or inhibit operation of the limit switch. If the switch is not functioning or damaged the unit must be replaced.

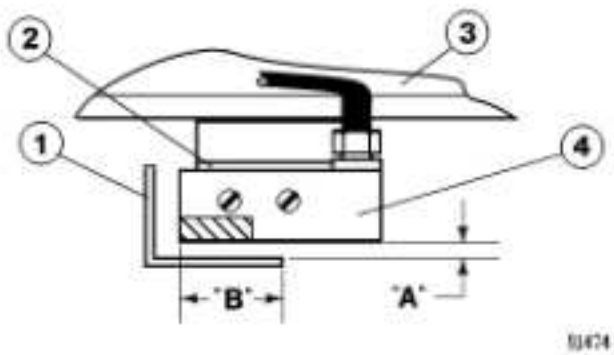


FIGURE 3-5. HOIST LIMIT SWITCH ADJUSTMENT

1. Actuator (On Body)
2. Mounting Bracket
3. Frame
4. Proximity Switch

MidWestTech | Komatsu 830E Dump Truck Service Manual | Publication CEBM016701 Order the manual at mid-west-tech.com >

VHMS LED Display Fault Codes

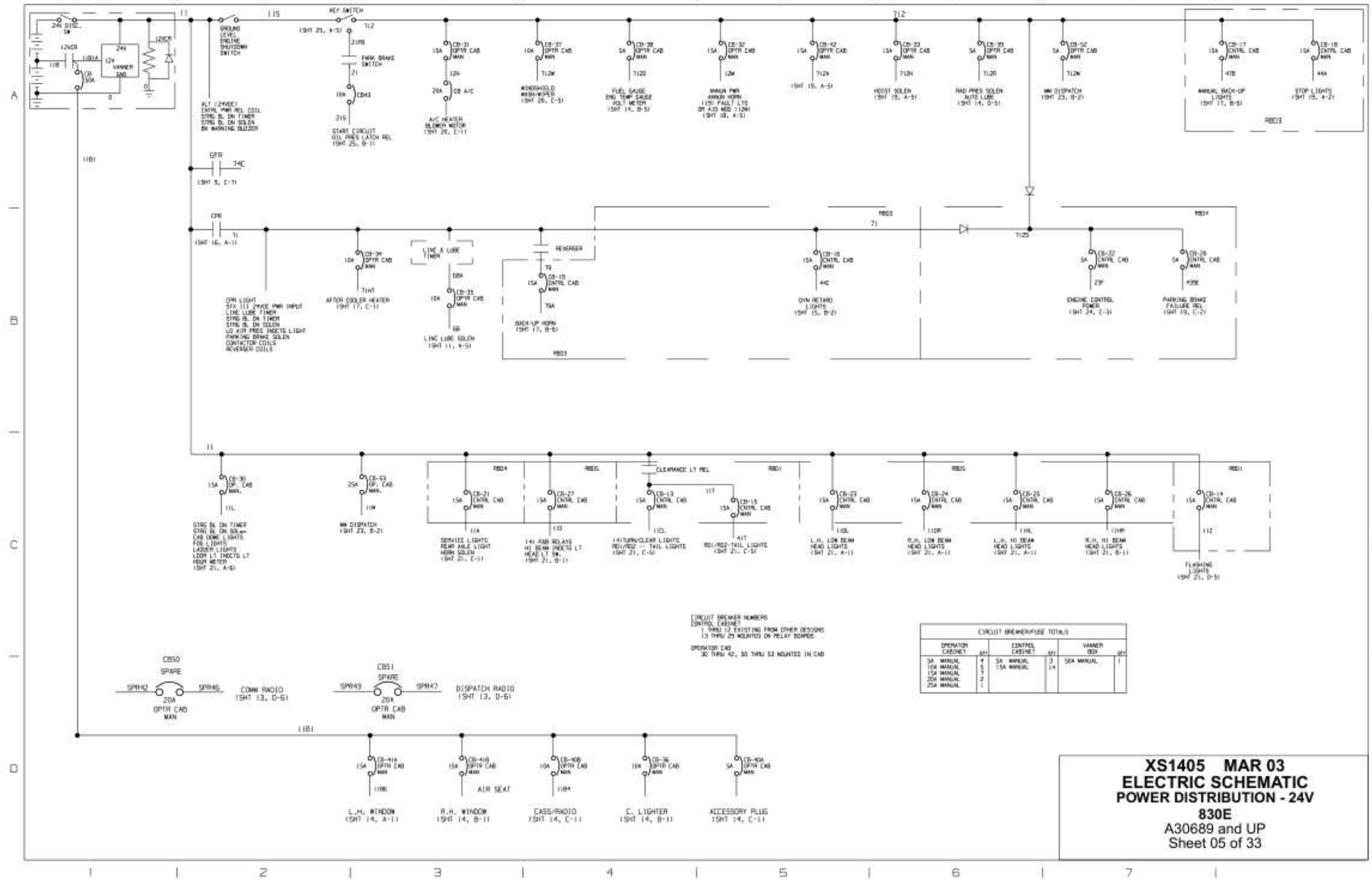
The VHMS controller also indicates some faults on the two red LED digits on the top of the controller. Fault codes are flashed as a two part sequence, as shown in the table below.

When no communication errors are occurring, the VHMS LED digits count from 00 - 99 continuously at a rate of ten numbers per second.

Table 2: VHMS LED Display Error Codes

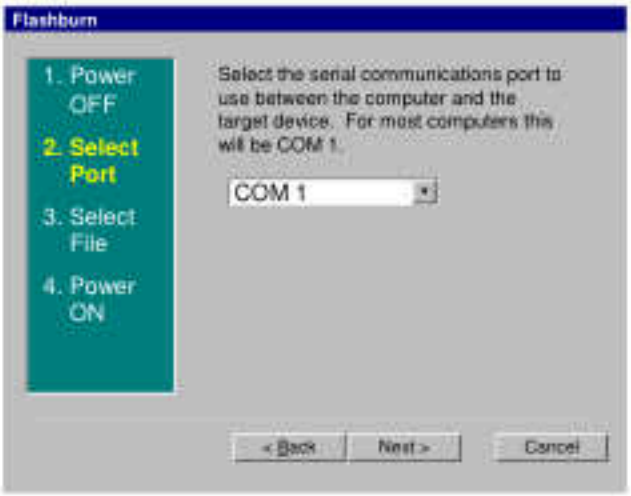
Fault Code	Fault Condition	VHMS LED Display
M101	Truck Frame Number Changed	Alternates 'n1' and '01'
M801	Can-net System (J1939)	Alternates 'n8' and '01'
M804	Can-net System (RPC)	Alternates 'n8' and '04'
M806	IM Stopped Real Time Data	Alternates 'n8' and '06'
M807	Too Much Payload Data For Requested Period	Alternates 'n8' and '07'
M808	PLMIII Stopped Real Time Data	Alternates 'n8' and '08'
M809	Can-net System	Alternates 'n8' and '09'
M80A	Can-net System	Alternates 'n8' and '0A'
M901	Source Voltage Error	Alternates 'n9' and '01'
M902	VHMS 24V Source System Error	Alternates 'n9' and '02'
M903	VHMS 12V Source System Error	Alternates 'n9' and '03'
M904	VHMS 5V Source System Error	Alternates 'n9' and '04'
M905	Abnormality in VBAT Voltage (VHMS VBAT <10V)	Alternates 'n9' and '05'
MC10	MEMORY CLEAR: Failure History	Alternates 'nc' and '10'
MC31	MEMORY CLEAR:	Alternates 'nc' and '31'
MC40	MEMORY CLEAR:	Alternates 'nc' and '40'
MC60	MEMORY CLEAR:	Alternates 'nc' and '60'
MC91	MEMORY CLEAR:	Alternates 'nc' and '90'
ME01	Change Service Meter	Alternates 'ne' and '01'
ME02	Change Calendar	Alternates 'ne' and '02'
ME03	Orbcomm Settings	Alternates 'ne' and '03'
ME04	Other Settings	Alternates 'ne' and '04'
ME05	MEMORY CLEAR: All	Alternates 'ne' and '05'
ME06	Initialized	Alternates 'ne' and '06'
MF11	VHMS Connector Mismatch	Alternates 'nf' and '11'
MFA0	Manual Trigger	Alternates 'nf' and 'A0'

MidWestTech | Komatsu 830E Dump Truck Service Manual | Publication CEBM016701 Order the manual at mid-west-tech.com >

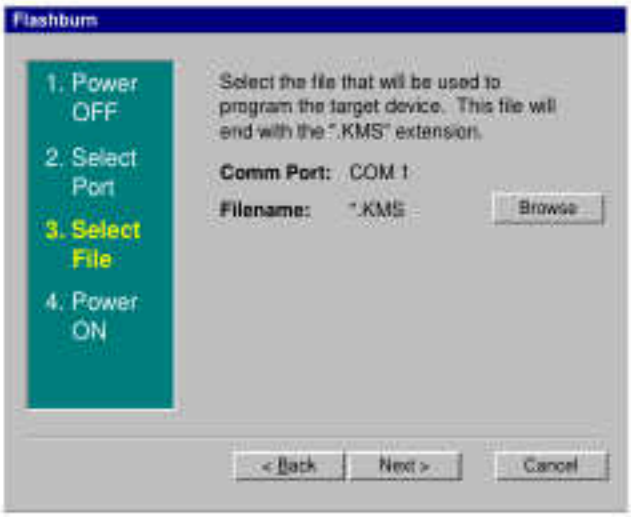


Order the manual at mid-west-tech.com >

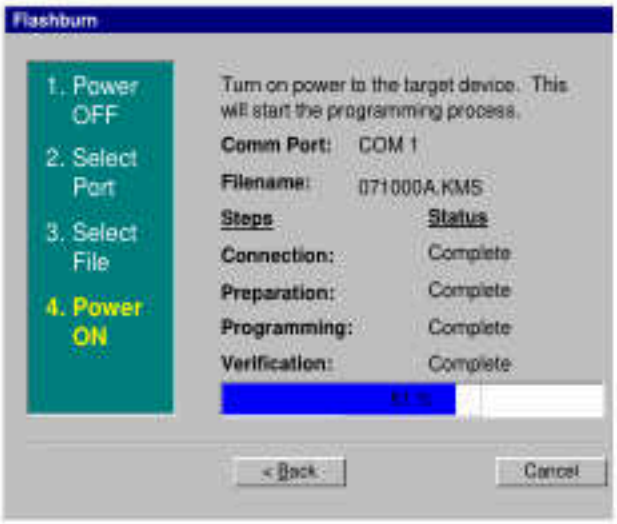
4. Confirm the proper communications port for the programming laptop. This is usually COM 1. Press "NEXT".



5. Press "BROWSE" and select the ".kms" file to program into the payload meter. Press "NEXT".



6. When instructed, turn the key switch ON in order to power-up the payload meter. The PC will begin to reprogram the payload meter. This process takes approximately 5 minutes.



7. After successful programming, turn the key witch OFF.
8. Wait 20 seconds and turn the key switch ON.
9. The payload meter will need to be configured as instructed in the manual using the Payload Data Manager software on the laptop computer.

MidWestTech | Komatsu 830E Dump Truck Service Manual | Publication CEBM016701 Order the manual at mid-west-tech.com >

PLM III SYSTEM CONFIGURATION

Starting Communications

The PDM software allows users to download and configure the system.



Before connecting to the payload meter, select "Change Program Options" and confirm that the program has selected the correct laptop serial port. Most laptops use Comm 1 for serial communications. The units displayed for reports and graphs by the PC software can be set on this form. Click "Done" to return to the main menu.



From the main menu, click the "Connect to Payload Meter" button. The PC will try to connect to the payload meter and request basic information from the system. In the event of communications trouble, the PC will try 3 times to connect before "timing-out". This may take several seconds.

Displayed Payload Units

Three options are available for the display of units in the PC software, reports, and graphs:



Short Tons: Payload is displayed in short tons, distances and speeds will be displayed in Miles

Metric Tons: Payload is displayed in metric tons, distances and speeds are displayed in Kilometers

Long Tons: Payload is displayed in long tons, distances and speeds are displayed in Miles

Time Units

Minutes and Seconds Example:
Five minutes and thirty-two seconds = 5:32

Decimal Minutes Example:
Five minutes and thirty-two seconds = 5.53

Connection Menu

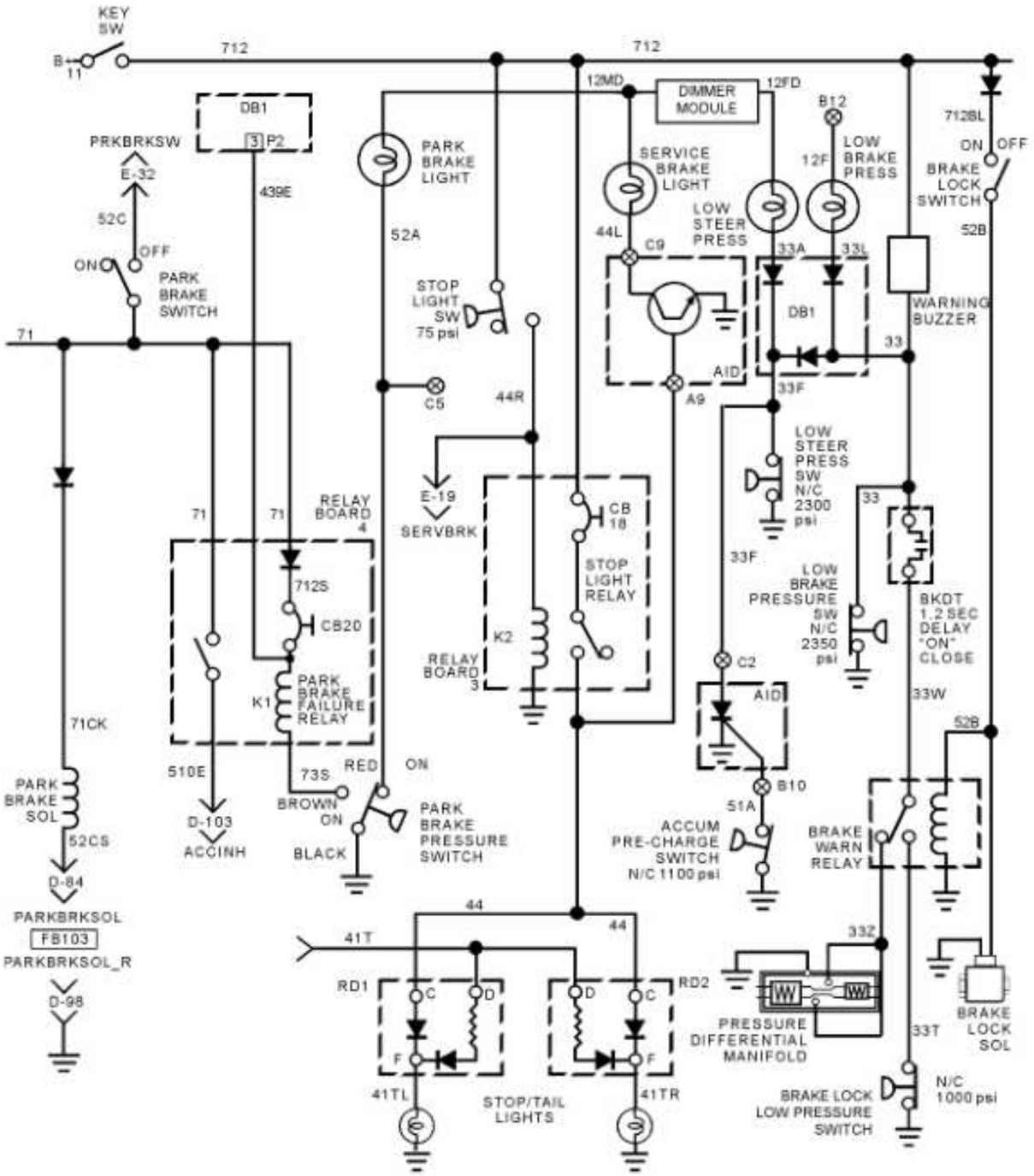


The connection screen displays basic system information to the user.

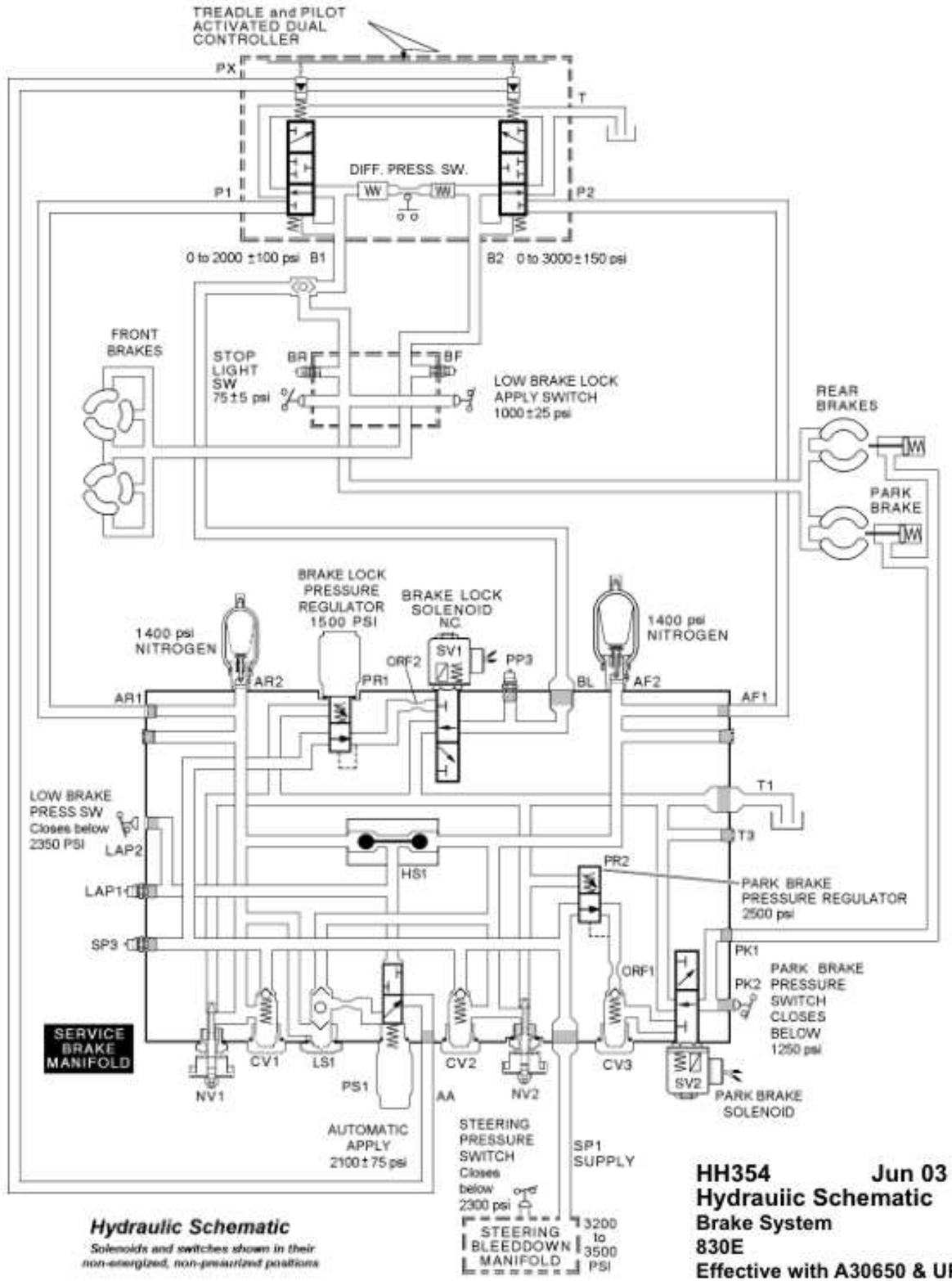
- Frame S/N should agree with the truck serial number from the serial plate located on the truck frame.
- Truck Number is an ID number assigned to the truck by the mine.
- The Payload Meter Date / Time values come from the payload meter at the moment of connection.
- Number of Haul Cycle Records is the number of haul cycles records stored in memory and available for download.
- Number of Active Alarms shows how many alarms are currently active in the system at the time of connection. If there are active alarms, the "Display Active Alarms" button is available.
- Number of Inactive Alarms shows how many alarms have been recorded in memory and are available for download.
- PLM Software Version displays the current version of software in the payload meter.

The information on the connection menu comes from the configuration of the payload system on the truck.

MidWestTech | Komatsu 830E Dump Truck Service Manual | Publication CEBM016701 Order the manual at mid-west-tech.com >



Electrical Schematic



Hydraulic Schematic

Solenoids and switches shown in their non-energized, non-pressurized positions

HH354 Jun 03
Hydrauiic Schematic
Brake System
830E
Effective with A30650 & UP

Order the manual at mid-west-tech.com >