CEBM022006

Shop Manual

860E-1KT

DUMP TRUCK

SERIAL NUMBERS **A30004 - A30030**

KOMATSU®

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006

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

Table of contents

00 Index and foreword
Index CEN00004-05
Composition of shop manual 2
Table of contents 4

Foreword, safety and general information CEN00005-06
Foreword 4
How to read the shop manual 5
General safety 7
Precautions before operating the truck 10
Precautions while operating the truck 12
Working near batteries 15
Precautions before performing service 17
Precautions while performing service 18
Tires 20
Precautions for performing repairs 21
Precautions for welding on the truck 22
Handling electrical equipment and hydraulic components 23
How to read electric wire code 31
Standard torque tables 34
Conversion tables 39

Operating instructions CEN00006-03
Preparing for operation 3
Engine start-up 8
After engine start-up 9
Precautions during truck operation 10
Operating on a haul road 11
Starting on a grade with a loaded truck 12
Passing 12
Loading 12
Dumping 12
Trolley operating instructions 15
Using the speed control feature 20
Safe parking procedure 20
Normal engine shutdown procedure 21
Sudden loss of engine power 22
Fuel depletion 22
Towing 23
Disabled truck operation 26

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >

01 Specification
Specification and technical data CEN01002-01
Specification drawing 3
Specifications 4
Weight table 6
Fuel, coolant and lubricants 7

10 Structure, function and maintenance standard
Cab air conditioning CEN10008-01
General information 2
Principles of refrigeration 3
Air conditioning system components 5
Air conditioning system electrical circuit 9

Steering circuit CEN10009-01
Steering circuit operation 3
Steering circuit components 5
Flow amplifier operation 10
Steering/brake pump operation 19
Steering cylinder wear data 22

Hoist circuit CEN10010-00
Hoist circuit operation 3
Hoist circuit components 4
Hoist pilot valve operation 8
Hoist cylinder wear data 18

Brake circuits CEN10011-00
General information 3
Service brake circuit operation 4
Secondary braking and auto apply 4
Rear wheel brake lock circuit operation 6
Parking brake circuit operation 8
Brake lines and test ports 10
Brake warning circuit operation 11
Brake assembly wear data 13

Suspensions CEN10012-00
General information 2
Front suspension wear data 2
Rear suspension wear data 3

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >

Electrical system, 24V CEN10013-02
Battery supply system 3
Auxiliary control cabinet components 4
Relay boards 6
Body-up switch 10
Body position switches (with proximity switch and magnet) 12

Interface module (IM) CEN10014-01
General information 2
Service 2
Sensors 2
Interface module inputs and outputs 3

Electrical system, AC drive CEN10015-01
SR rectifier module 3
ST module (auxiliary voltage inverter) 3
SD phase modules 7
SR/ST/SD module removal 7
Inverter cabinet layout 8
Inverter cabinet water flow 8
Field regulator 9
Field regulator (discharge resistor) 9
Gate unit power supply 10
Gate unit power supply (diode) 10
Gate unit power supply (tuning resistor) 10
Control power filter 10
Filter for TCU 11
Terminal block bus bar 11
Fuses (analog sensor voltage) 12
Fuses (fuse holder for field regulator) 12
Fuses (control power and trolley box contactor) 13
Diode modules 13
Support capacitors 14
3-Phase capacitor bank (for ST module output voltage) 14
Air-cooled inductors (for ST module) 15
3-Phase transformer (for ST module) 15
Diagnostics box 16
Diagnostic and system monitoring panel 17
Current transducers 18
Current transducers (for ST module output) 19
Voltage transducers 19
Voltage transducers (for ST module output) 20
Voltage transducers (SiBAS® 24V DC bus monitoring) 20
Analog inclinometer 21
DC link capacitors 21
Ground tie capacitor 22

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >

Fuses (analog sensor voltage)



FIGURE 10-21. FUSES FOR ANALOG SENSOR VOLTAGES, FRONT VIEW

Technical Data

0.5A, 125V, 5 x 20 fuses

Fuses (field regulator)

Technical Data

50A, 690V

Fuses (fuse holder for field regulator)



FIGURE 10-22. FUSE HOLDER FOR FIELD REGULATOR, FRONT VIEW

Technical Data

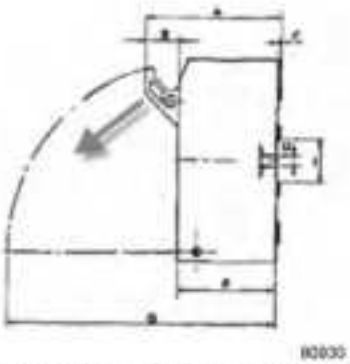


FIGURE 10-23. DOOR OPENS FOR FUSE ACCESS

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >

Fault Code A301: The right rear park brake is not releasing

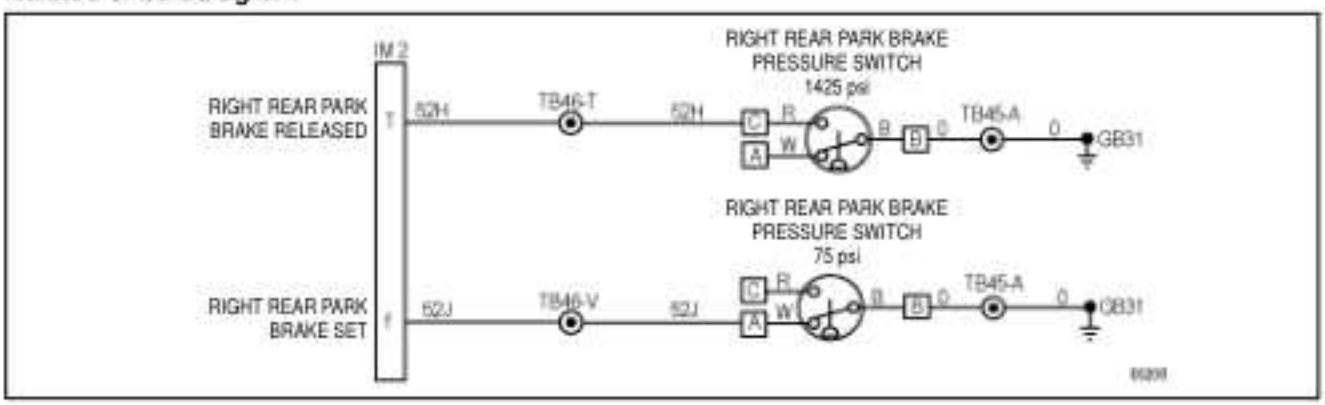
Operator Action	None
Fault Code	A301
Description	The right rear park brake is not releasing.
Fault Conditions	A Park Brake Not Released When Expected fault has been recorded and the right rear park brake set pressure switch is closed or the right rear park brake release pressure switch is open.
Operator Alerting System Response	Repair Monitor Display Fault Description: RR PB NOT RELEASING Display Fault Code: A301
Resulting Problem(s)	Brakes not released can damage the brakes and drive system.
Related Information	A laptop running "IM Realtime Data Monitor" software may be required to resolve this fault.

Table

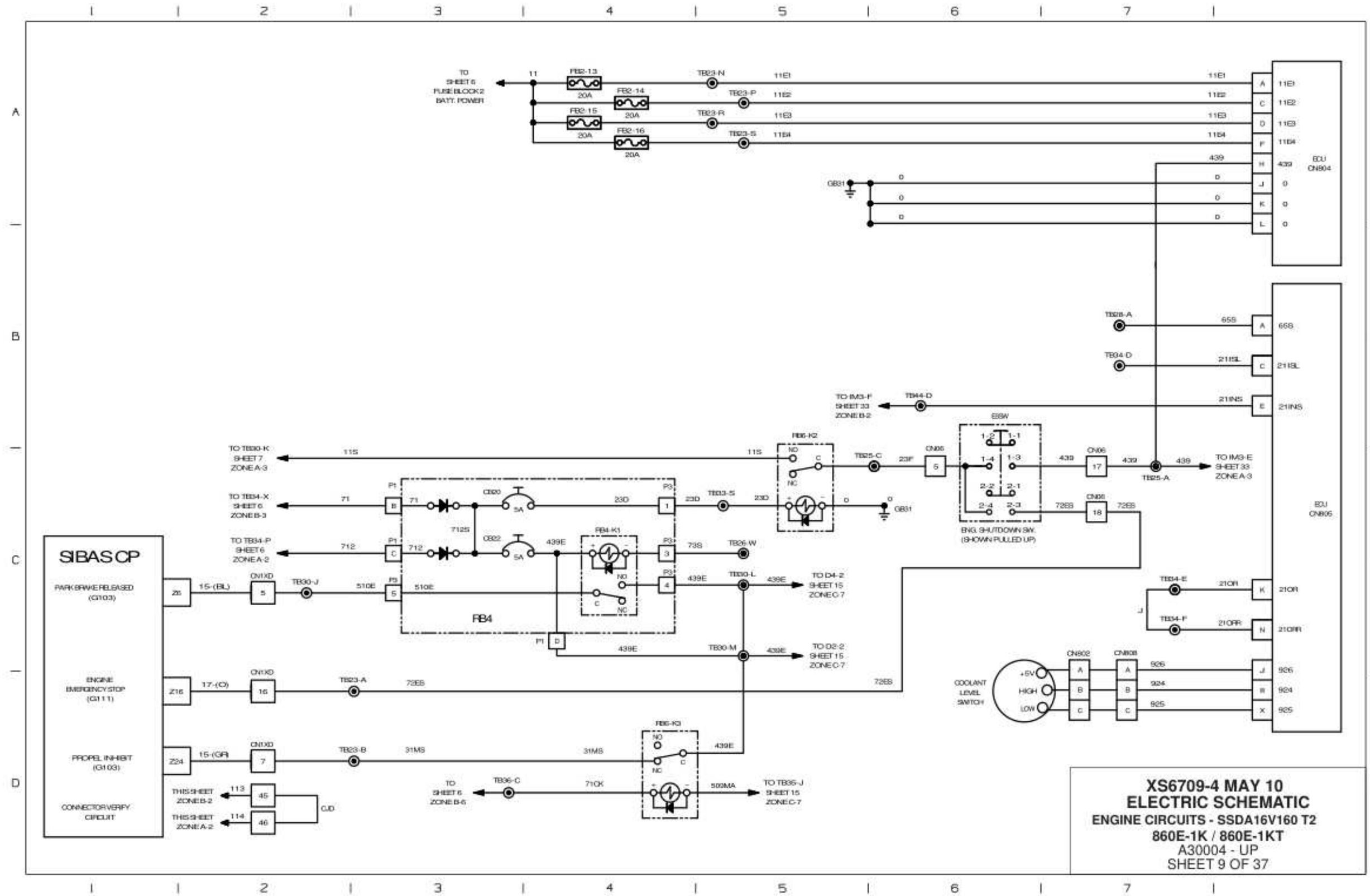
1. This fault's logic contains more than one parameter, each of which may have its own related fault code(s). This fault may be resolved by resolving the parameter(s) active fault code(s). Refer to the Troubleshooting Instructions for the active parameter fault(s).
2. If there are no active parameter fault codes, then based on the truck's setup while this fault is active, determine which of the parameters in the Table is not shown in its expected state on the IM Realtime Data Monitor program. Refer to the schematic to identify which item(s) may be causing the parameter(s) to be in the unexpected state. Troubleshoot these items.
3. If this fault is not currently active or if no parameters are currently in the unexpected state and the malfunction is still unresolved, then check each of the parameters in the Table for proper functionality. Troubleshoot all item(s) related to the parameter(s) which are found to be malfunctioning.

Parameter	Expected State and/or Related Fault(s)
Right Rear Park Brake Set (IM 2f)	0: parking brake pressure switch indicating low pressure and an applied parking brake 1: parking brake pressure switch indicating higher pressure and an unapplied parking brake Fault(s): A214, A297
Right Rear Park Brake Released (IM 2T)	0: parking brake pressure switch indicating high pressure and a released parking brake 1: parking brake pressure switch indicating low pressure and an applied parking brake Fault(s): A214, A297

Related circuit diagram



MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >



XS6709-4 MAY 10
ELECTRIC SCHEMATIC
ENGINE CIRCUITS - SSDA16V160 T2
860E-1K / 860E-1KT
A30004 - UP
SHEET 9 OF 37

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

4. Loosen, but do not remove, nine capscrews (7) that secure each inlet box (8) to the motor mounting frame.

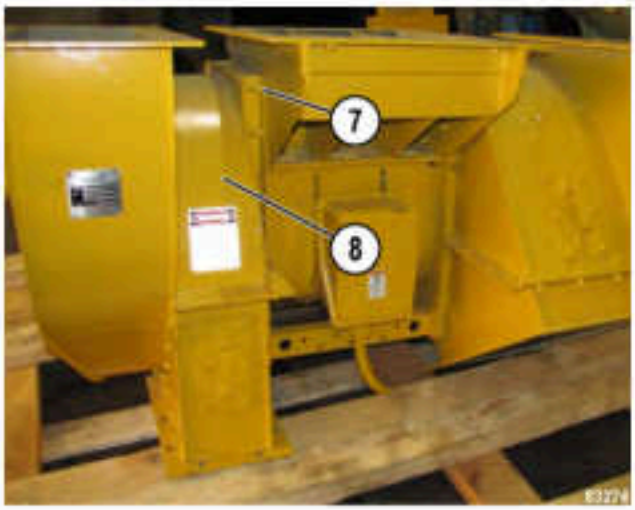


FIGURE 50-5. LOOSENING THE FAN HOUSING

7. Capscrew 8. Inlet Box

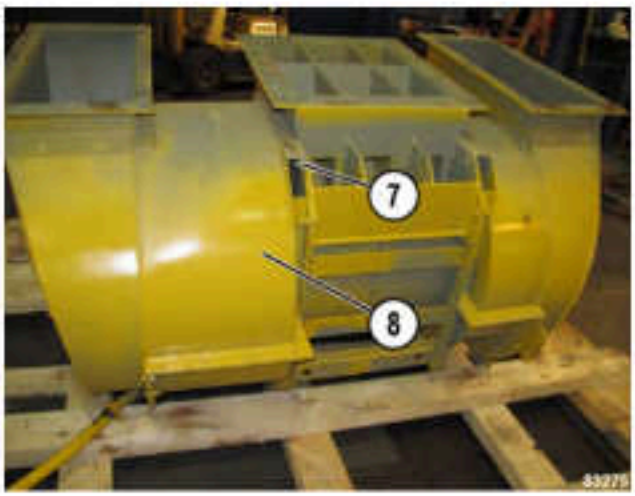


FIGURE 50-6. LOOSENING THE FAN HOUSING

7. Capscrew 8. Inlet Box

5. Remove any clamps (9) that are retaining the electrical harness to the inlet box.

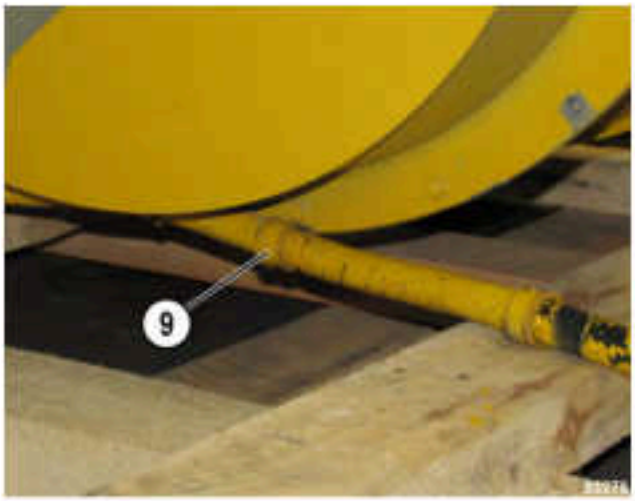


FIGURE 50-7. REMOVING HARNESS CLAMPS

9. Clamp

6. Attach a suitable lifting chain and hoist to lifting eyes (10). Lift the entire main blower assembly and remove the pallet.



FIGURE 50-8. LIFTING THE BLOWER ASSEMBLY

10. Lifting Eyes

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >



FIGURE 30-7. Orbcomm SATELLITE FOOTPRINT (ORBITRON VIEW)

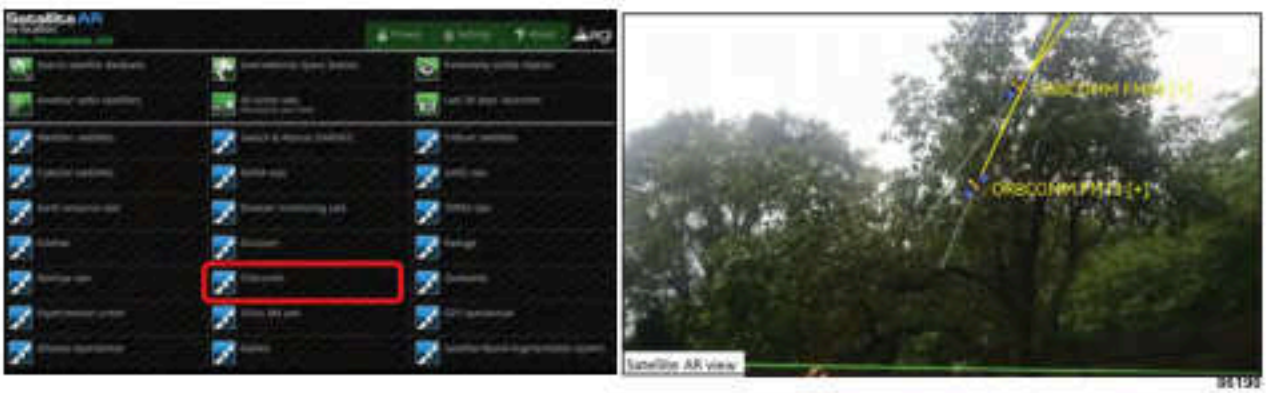
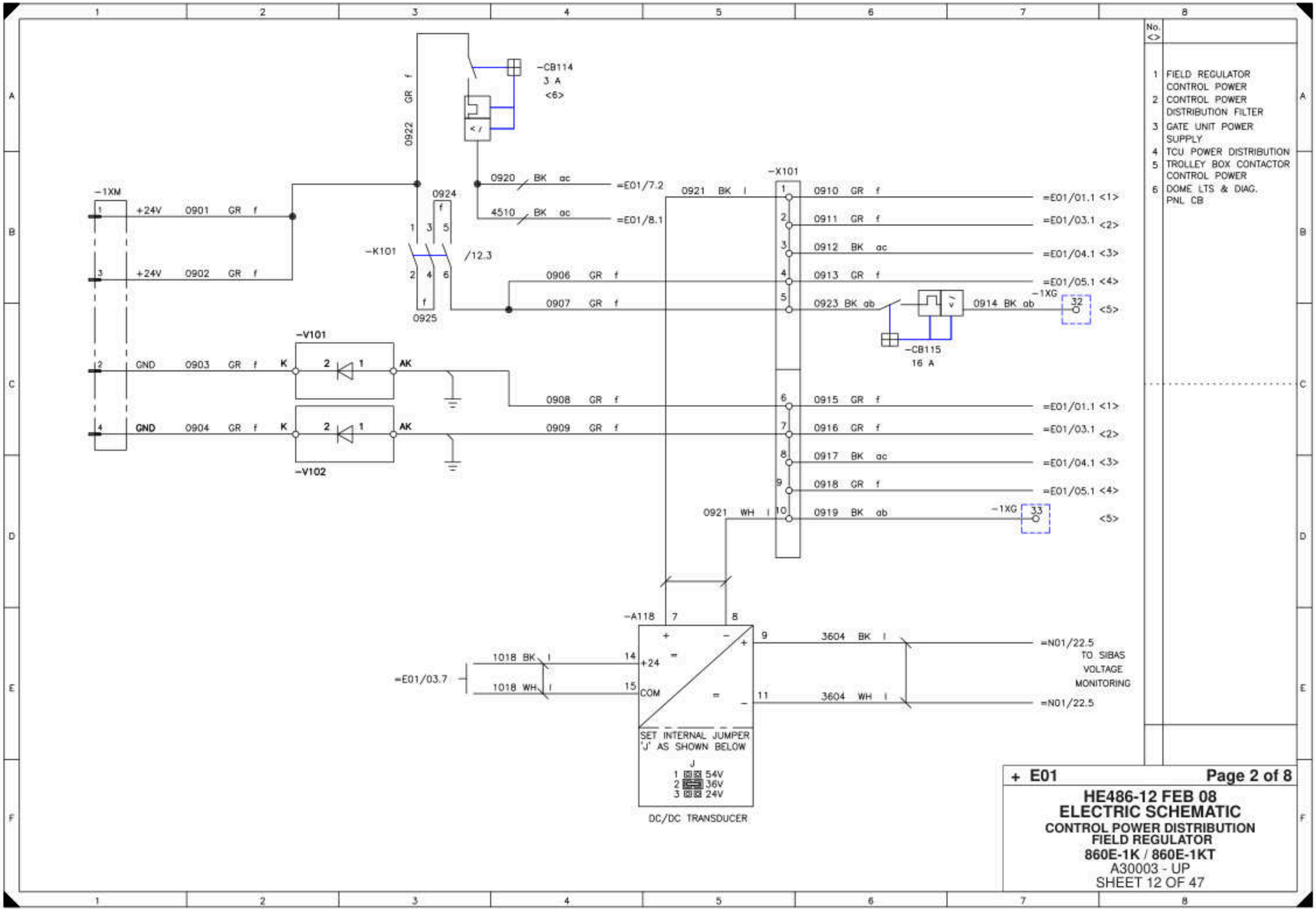


FIGURE 30-8. SATELLITE AR HOME SCREEN AND AUGMENTED CAMERA VIEW

MidWestTech | Komatsu 860E-1KT Dump Truck Service Manual | Publication CEBM022006 Order the manual at mid-west-tech.com >



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