SM560C99/1E

SERVICE MANUAL

560C

SERIAL NUMBER
15001 AND UP



DRESSTA Co. Ltd.
A JOINT VENTURE OF KOMATSU AMERICA INTERNATIONAL CO. AND HUTA STALOWA WOLA S.A.

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DRIVE SHAFTS

NOTE: *Install the mounting hardware in the bearing cap holes that are not wired and tighten only enough to hold the caps in place. Remove wire and install hardware in the remaining mounting holes.*

8. Torque all the mounting bolts to 130 Nm.

9. Drive shaft must be fully lubricated as described in the Operator's Manual before the machine is moved.

TRANSFER DRIVE

9. DESCRIPTION

The function of the transfer drive is to support the ends of the transmission to front axle drive shafts while transmitting the power between them. The transfer drive is basically a grease filled housing containing a short shaft (3, Fig. 7D.4) mounted by taper roller bearings. Oil seals (4) and (11) are used at each end of the assembly to contain the grease and prevent dirt from entering. The housing (9) is secured to the front frame of the machine near the hinge area. Lubrication is provided by the use of a tube (17) extending from the housing to a lubrication fitting (16) located in the front frame on the right of the machine.

10. SPECIFICATIONS

Special torques:

Yoke retainer mounting bolts . . . . . 80 Nm
Housing mounting bolts . . . . . 380 Nm

11. SERVICE DIAGNOSIS

Troubleshooting

COMPLAINT	
PROBABLE CAUSE	REMARKS
Excessive Noise	
1. Lack of lubricant	Refer to **Loss of Lubricant** complaint
2. Bearings damaged	Replace bearings
3. Vibration due to incorrect shaft end play	Adjust shaft shim pack as described in "REASSEMBLY"
Loss of Lubricant	
1. Worn or damaged oil seal	Replace oil seal
2. Foaming due to incorrect type or grade of lubricant	Fill with correct lubricant.

12. REMOVAL

WARNING! Before servicing the machine be sure the bucket is lowered, the engine is off, the transmission shift lever is locked in neutral (N), the electrical system master switch is off and the key is removed from master switch and starting switch.

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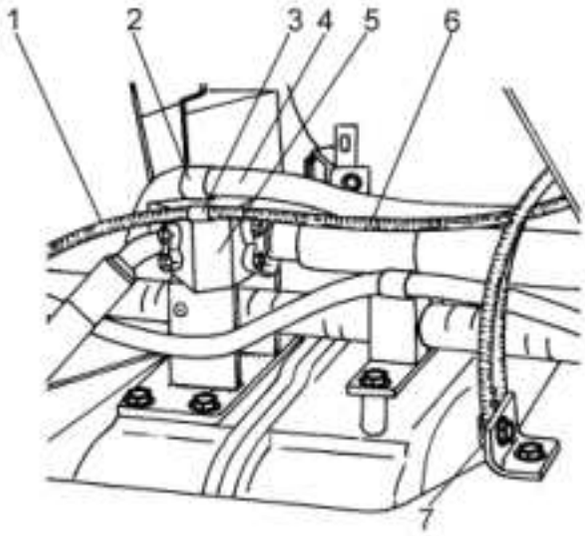


Fig. 9.4. Frame Disconnect Points

1. Accelerator Pedal Cable
2. Electrical Harness Clamp
3. Cable Clamp
4. Electrical Harness
5. Manifold
6. Loader Pilot Valve Return Hose
7. Cable Clamp

10. Disconnect the hose (6, Fig. 9.4) from the bracket on the hose support mounted to the front frame to allow the hose to stay with the rear frame.
11. Disconnect the hose (1, Fig. 9.5) at the manifold (4). Disconnect the hose (2) at the hydraulic reservoir and remove the clamp (3) securing the hose to the manifold (4). Both hoses will remain with the front frame. To provide clearance for removal of the top hinge pin, free the hoses from the clamps (8) and chain the hoses up put of the way to the front frame.
12. Close the two shut off valves for the heater hoses (5, Fig. 9.5) located on the left hand side of the machine. Free the heater hoses from the hose clamps (7 and 6). Disconnect the hoses from the heater and position them so they will not "hang up" as the frames are separated.

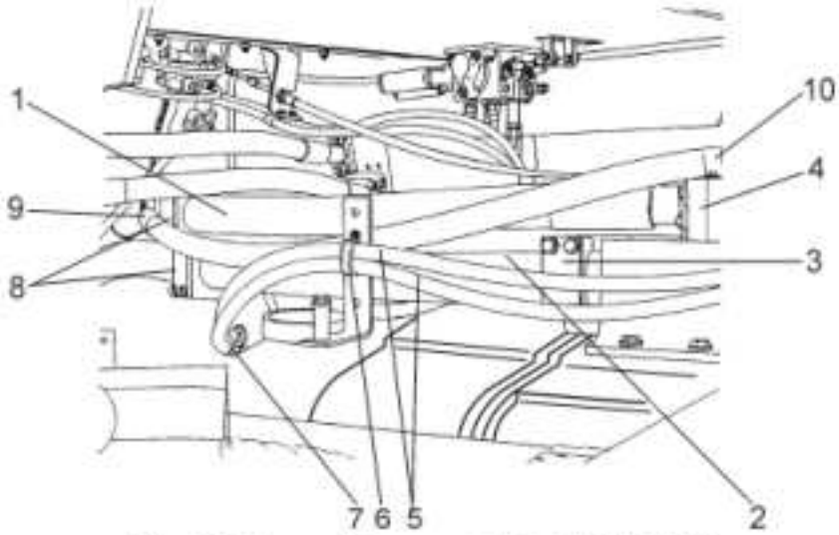


Fig. 9.5. Frame Disconnect Points (Left Side)

1. Loader Control Valve to Manifold Hose
2. Loader Control Valve to Reservoir Hose
3. Hose Clamp
4. Manifold
5. Heater Hoses
6. Hose Clamp
7. Hose Clamp
8. Hose Clamps
9. Electrical Harness Clamp
10. Electrical Harness Clamp

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25. To reassemble the low pressure relief valve (18):
    a. Install the backup ring (21) and O-ring (20) into the groove of the valve body (26), with the O-ring closest to the end of the body.
    b. Install the poppet (25) and spring (24).
    c. Install the adjusting screw (23) into the valve body until resistance is felt by the spring. After this point, one complete turn of the adjusting screw changes the pressure setting by 485 kPa. Refer to "SPECIFICATIONS" for correct low pressure relief valve setting. An approximation of the pressure setting can be made at this time by turning in the adjusting screw 2 to 2-1/2 complete turns.
    d. Hold the adjusting screw in position at the approximate pressure setting and install the lock nut (22) over the screw. Torque the lock nut to 61 Nm.
26. Install the low pressure relief valve (18), lock nut end first, into the valve body (19).
27. Install O-rings (15) onto both plugs (16). Install the plugs into the cover block (14) and torque the plugs to 20 Nm.
28. Lightly coat the two cover block O-rings (2) with clean grease and install the O-rings in their valve body grooves. Place the cover block (14) in position, with the spring (17) placed between the low pressure relief assembly (18) and the counter bore of the cover block. Install the screws and torque the screws to 80 Nm in a cross corner sequence.
29. Install an O-ring (29) with a backup ring (28 and 30) on either side, in the groove of the sleeve (27). Install the dampening poppet (31) into the sleeve, with the small end of the poppet (31) inward in the sleeve.
30. Install the dampening poppet and sleeve assembly into the inlet cover (32) with the dampening poppet end inward in the cover.
31. Apply Loctite 271 to the threads of the set screw. Install the set screw into the inlet cover (32) and torque to 7 ± 1 Nm.
32. Install an O-ring (34) onto the elbow (35). Install the elbow into the inlet cover (32). Position the open end of the elbow parallel with the cover face and torque the elbow nut to 40 ± 5 Nm.
33. Lightly coat the inlet cover O-ring (2) with clean grease and install the O-ring in the groove of the cover. Place the pilot supply cover plate (13) in position. Install the screws and torque the screws to 80 Nm in a cross corner sequence.
34. Lightly coat the spacer O-ring (12) with clean grease and install the O-ring in the groove of the spacer (11). Install the screws which mount the spacer and torque the screws to 7 ± 1 Nm.
35. Install an O-ring (9) onto the connector (8) and torque the connector to 40 ± 5 Nm.
36. Install the filter (10) in the end of the pilot feed tube (7) which attaches to the elbow (35). Install the tube between the elbow and the connector (8). Torque the tube nuts to 35 Nm.

NOTE: *The body O-rings (5 and 6) are installed when all the valve sections are reassembled.*

Joining the Valve Sections (Refer to Fig. 10B.34)

37. Lightly coat all the body O-rings (inlet section - 5 and 6, Fig. 10B.35) (bucket section - 14 and 15, Fig. 10B.36) (boom section - 23 and 22, Fig. 10B.37) with clean grease and install all the O-rings in the appropriate grooves of the valve bodies.

IMPORTANT: *When putting the valve sections together be sure the O-rings are properly positioned in their grooves so that they are not damaged.*

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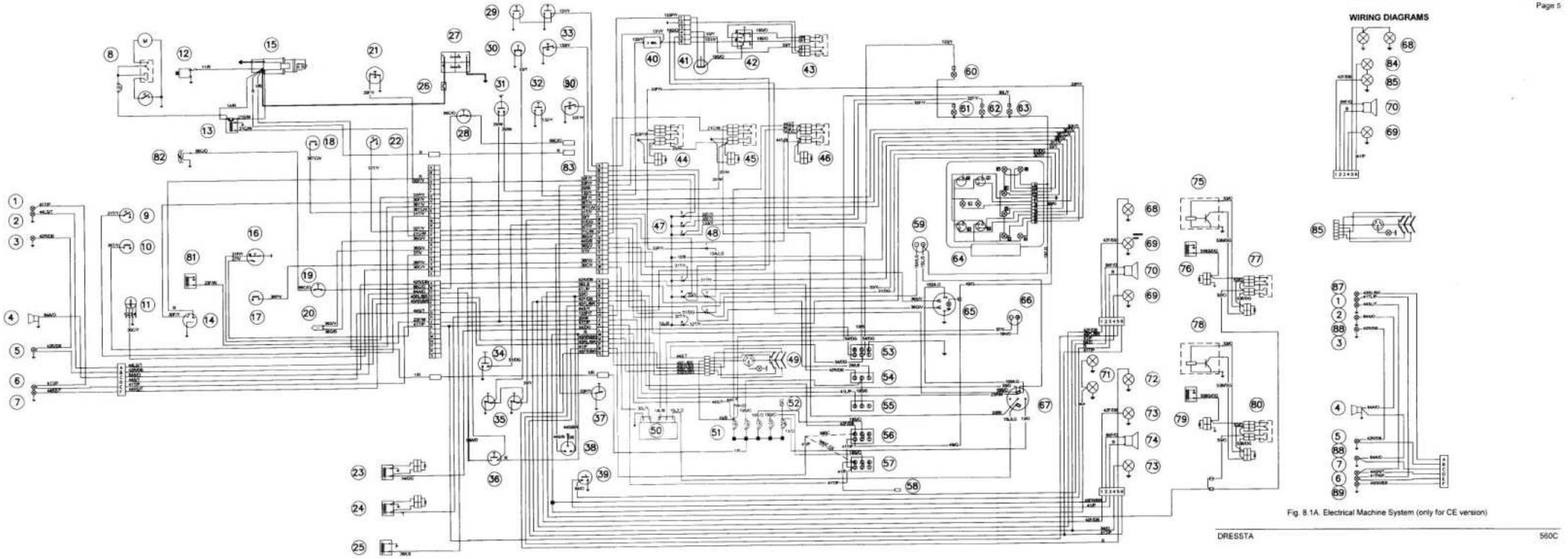


Fig. 8.1A. Electrical Machine System (only for CE version)

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