Manual No. : KM-18GE
Vol. No. : TT18G-E-00

Technical Manual

(Troubleshooting)

EX8000

Excavator

Service Manual (Manual No. KM-18GE) consists of the following three separate volumes;

Technical Manual (Operational Principle)	: Vol. No. TO18G-E
Technical Manual (Troubleshooting)	: Vol. No. TT18G-E
Workshop Manual	: Vol. No. W18G-E

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SECTION 4

OPERATIONAL PERFORMANCE TEST



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Adjustment of Torque Control

The torque control is performed by pump delivery pressure P. Therefore, the torque constant control is adjusted by changing the set-force of inner spring (2) and outer spring (1).

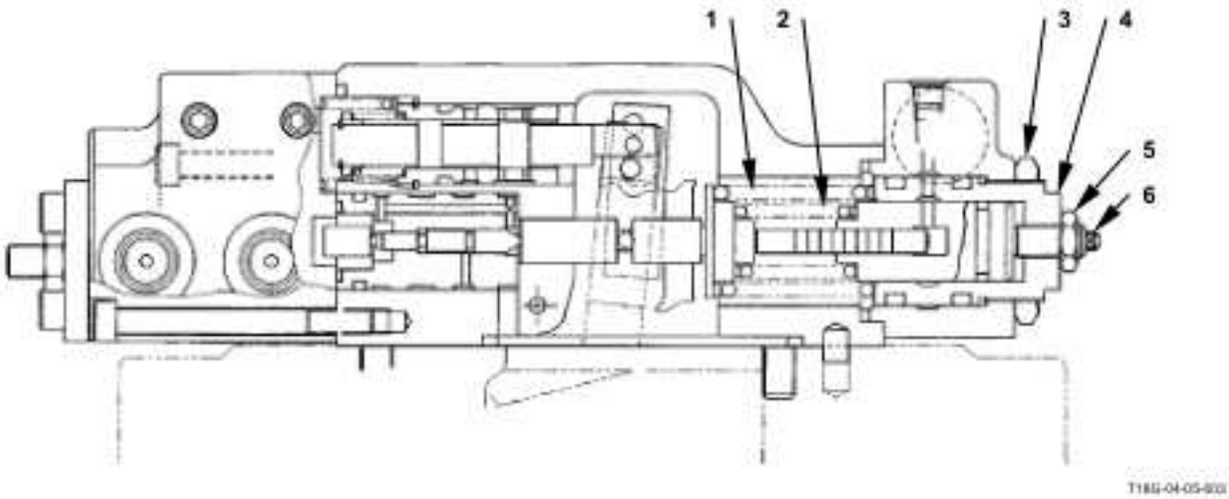
(Before adjust the screws (4) and (6), mark the end of the adjusting screw with a white marker for the record of the original position.)

When resetting inner spring (2), loosen nut (5) and adjust screw (6).

When resetting outer spring (1), loosen nut (3) and adjust screw (4).

NOTE: When adjusting screw (4) is turned, inner spring (2) set-force varies. Therefore, when adjusting screw (4) is turned, turn adjusting screw (6) 2.17 times the turns of adjusting screw (4) in the opposite direction to keep inner spring (2) set-force unchanged.

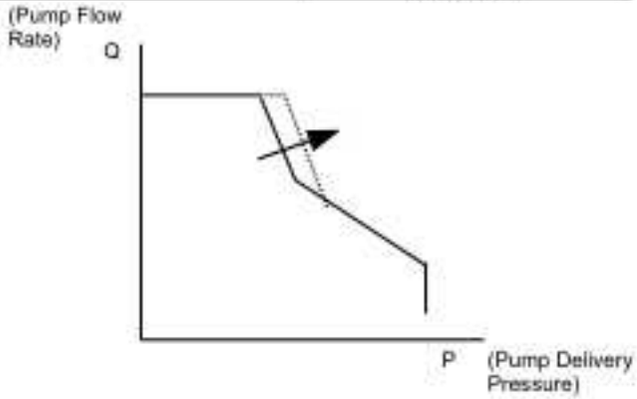
: 36 mm : Nut (3)
: 24 mm : Screw (4)
: 13 mm : Nut (5)
: 4 mm : Screw (6)



T18G-04-05-003

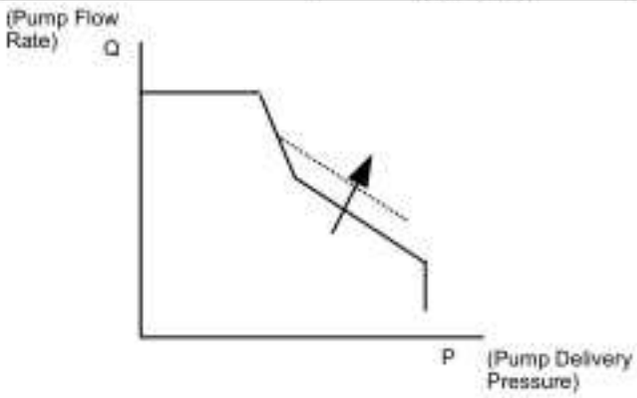
Outer Spring Adjustment Data

Adjusting Screw Turn	1/4
Flow Rate Change	42 L/min (11 US gal/min)
Pressure Change	1.86 MPa (19 kgf/cm^2) (270 psi)
Engine Torque Change	74.5 N·m (7.6 kgf·m) (55 lbf·ft)



Inner Spring Adjustment Data

Adjusting Screw Turn	1/4
Flow Rate Change	19 L/min (5 US gal/min)
Pressure Change	1.77 MPa (18 kgf/cm^2) (256 psi)
Engine Torque Change	85 N·m (8.7 kgf·m) (63 lbf·ft)



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INTRODUCTION

Refer to the inspection and troubleshooting procedures after any machine trouble has occurred. The inspection and troubleshooting procedures are presented in an orderly fashion in this section to help you quickly find the cause and solution of the machine trouble.

The troubleshooting section in this manual consists of 7 groups; General, Cross Reference Table, Component Layout, Troubleshooting A (base machine diagnosis using the built-in diagnosing system's fault codes), Troubleshooting B (engine diagnosis indicated by the flashing pattern of indicator lights), Troubleshooting C (Air conditioner diagnosis), and Electrical System Inspection.

- General
- Cross Reference Table
- Component Layout
- Troubleshooting A (base machine diagnosis using the built-in diagnosing system's fault codes)
- Troubleshooting B (engine diagnosis relies on the flashing pattern of indicator lights)
  The engine is diagnosed by referring to the flashing pattern of the engine warning indicator.
- Troubleshooting C (Air conditioner diagnosis)
  Refer to these procedures when troubleshooting by inspecting abnormal machine operational status.

  Example: Air conditioner malfunction.
- Electrical System Inspection
  Refer to this group when required to obtain precautions and/or information for the electrical system inspection.

  Example: Fuse Inspection

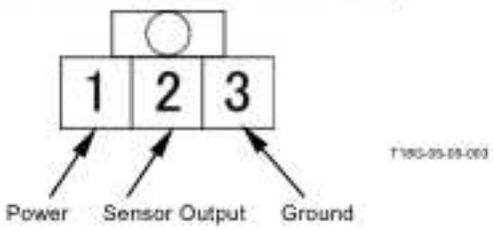
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Inspection Method

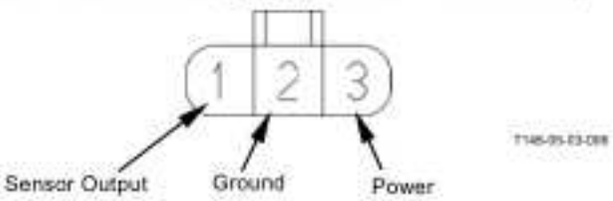
Referring to the trouble status shown in the table, check the harness between the ECM and each sensor for discontinuity and short circuit. When the harness is normal, either the corresponding sensor or the ECM may be faulty.

Connector Terminal Layout of ECM and Sensors

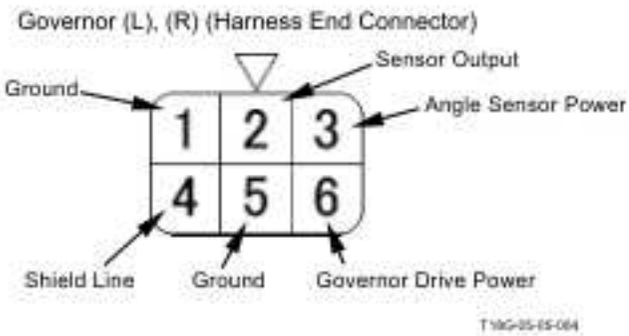
Acceleration Sensor (Harness End Connector)



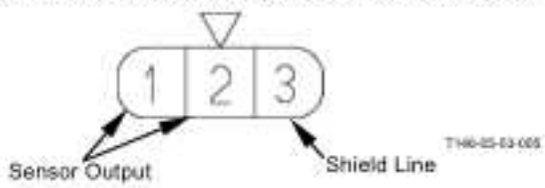
Boost Pressure Sensor (L), (R) (Harness End Connector)



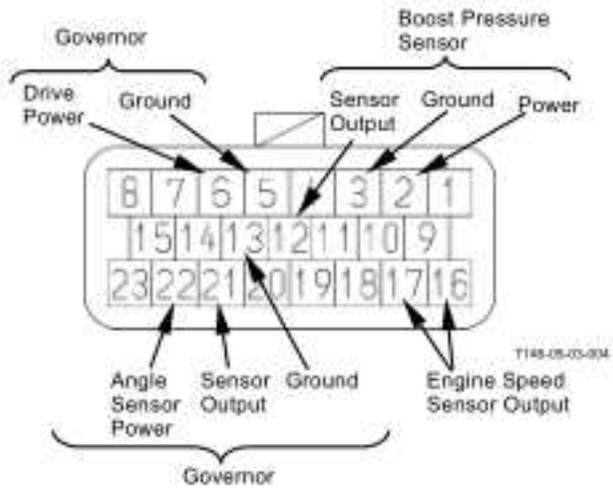
Governor (L), (R) (Harness End Connector)



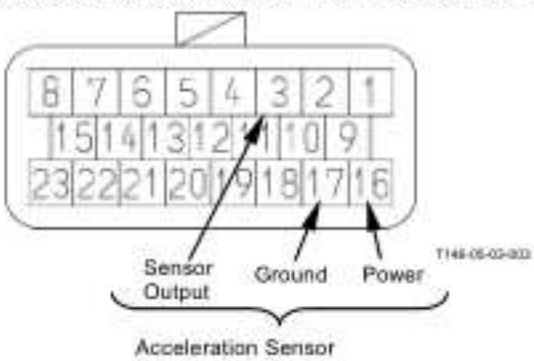
Engine Speed Sensor (L2), (R2) (Harness End Connector)



ECM J1 (L), (R) Connector (Black) (Harness End Connector)

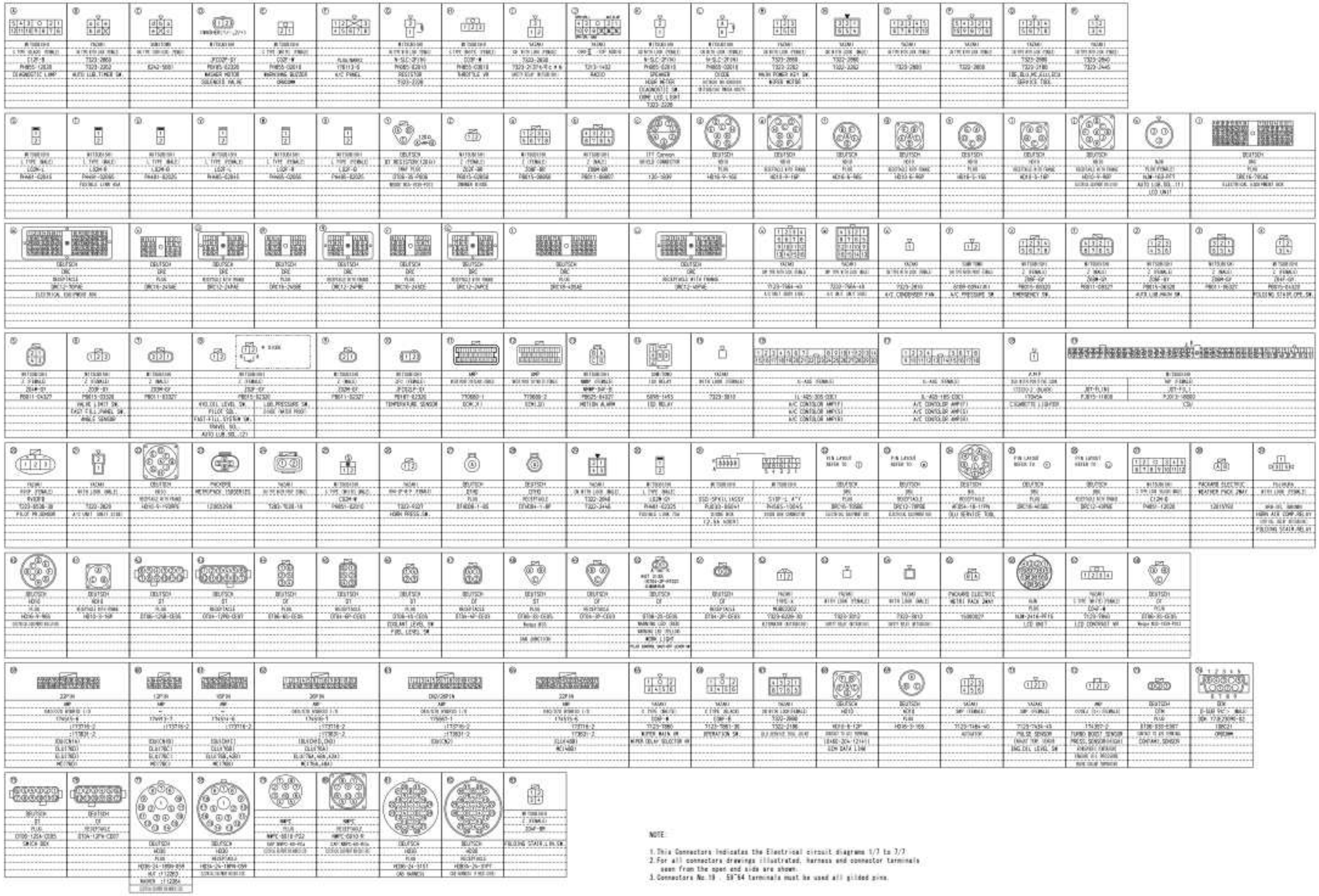


ECM J2 (L), (R) Connector (White) (Harness End Connector)



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EX8000 CONNECTOR



NOTE

1. This Connectors Indicates the Electrical circuit diagrams 1/7 to 7/7
2. For all connectors drawings illustrated, harness and connector terminals seen from the open end side are shown.
3. Connectors No.19 , 59"64 terminals must be used all gilded pins.

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