PART NO. TO4FK-E-00

HITACHI

Technical Manual
Operational Principle

ZW

100-G
120-G
Wheel Loader

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TO4FK-E
Technical Manual (Troubleshooting)	: Vol. No.TT4FK-E
Workshop Manual	: Vol. No.W4FK-E

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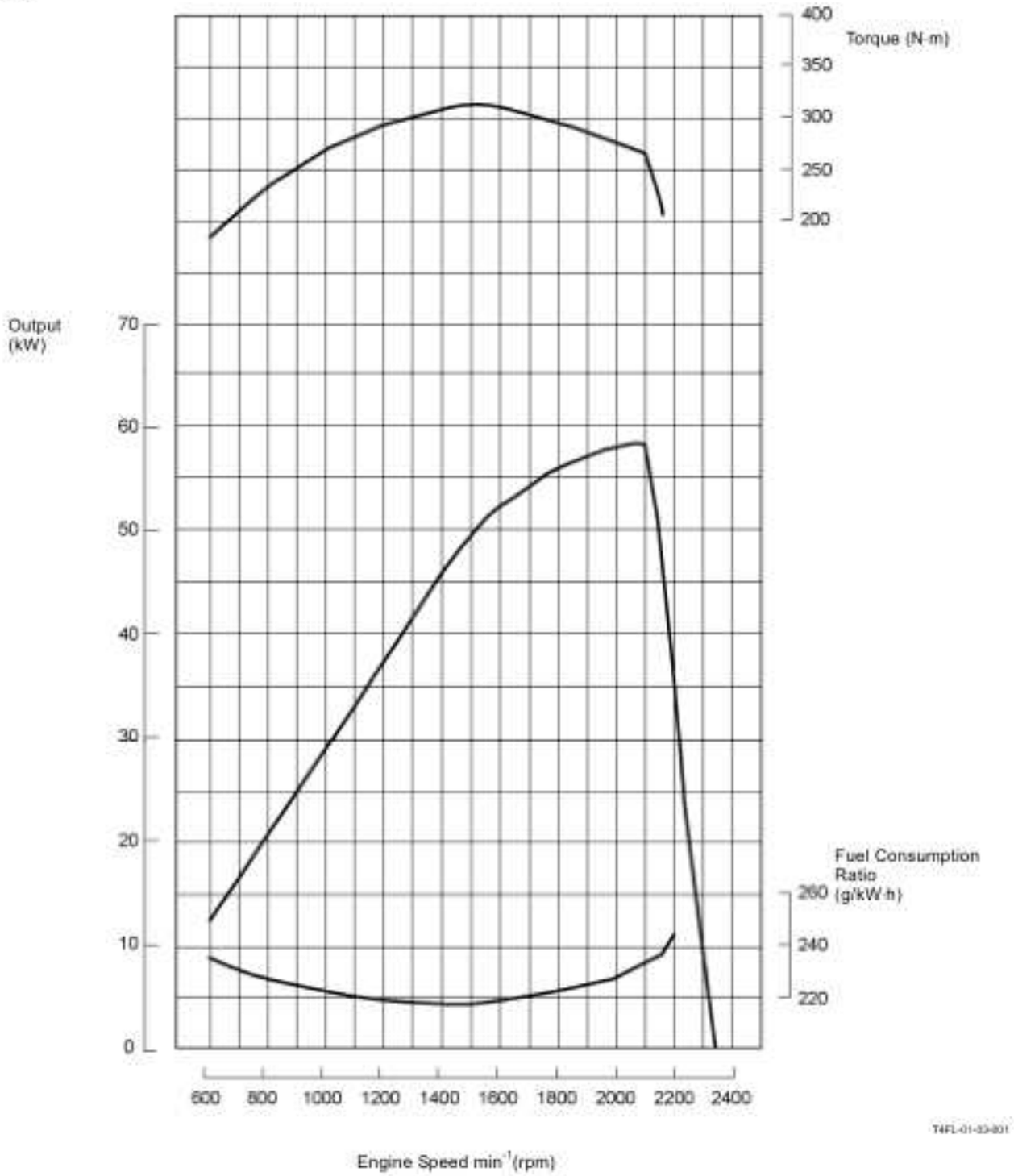
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Engine Performance Curve (V3800)

Test Condition: 1. In conformity with JIS D0006 (Performance Test Method for Diesel Engine Used for Construction Machinery) under standard atmospheric pressure.
2. Equipped with the fan, air cleaner and muffler.

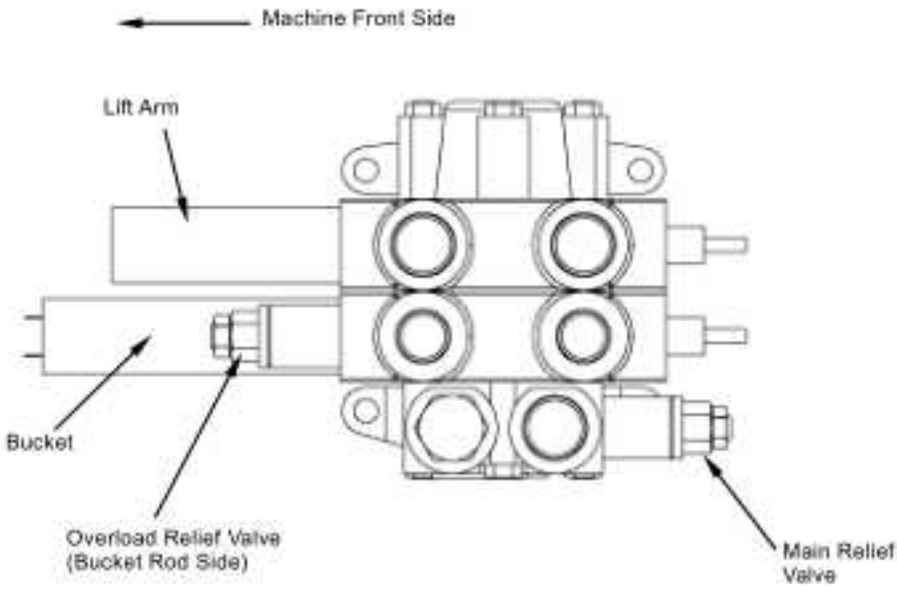
ZW100-G



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OUTLINE

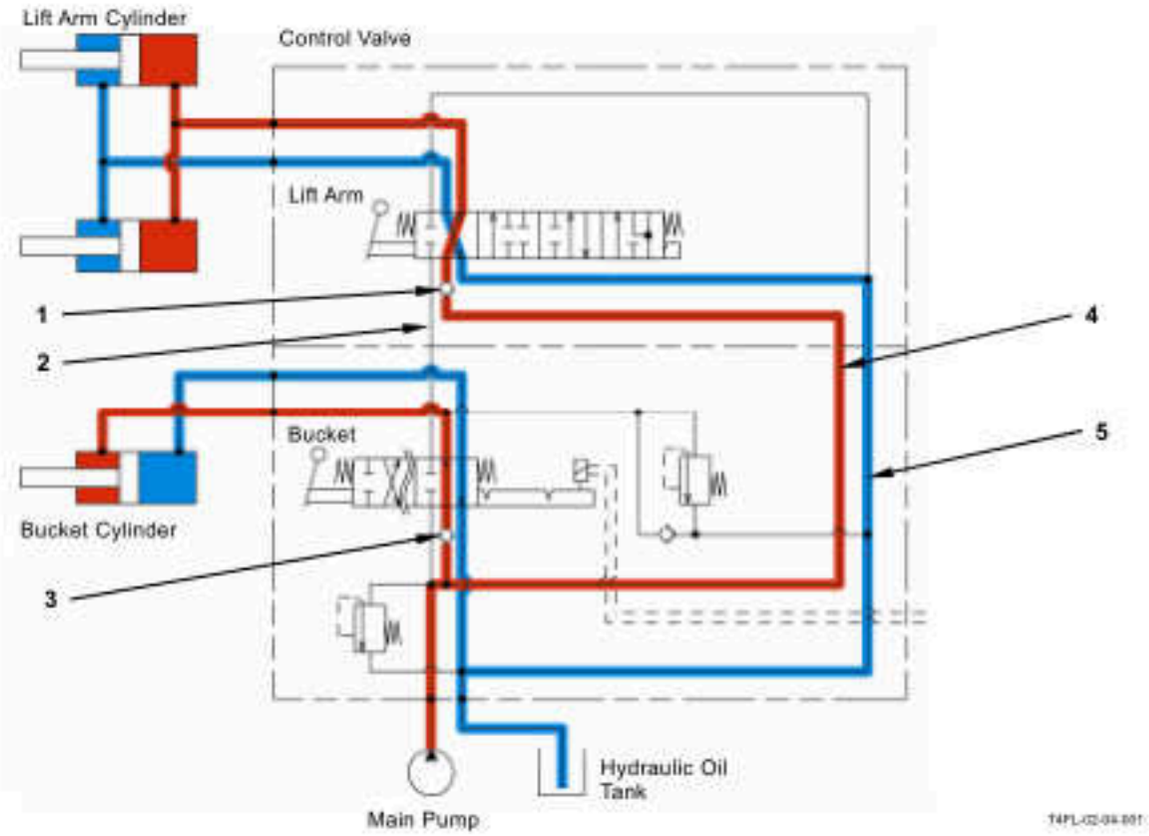
The control valve controls the pressure, flow rate, and flow direction in the hydraulic circuit.
The major parts of the control valve are the main relief valve, the overload relief valve, and the spool. The spool manually operated by a mono-control lever.



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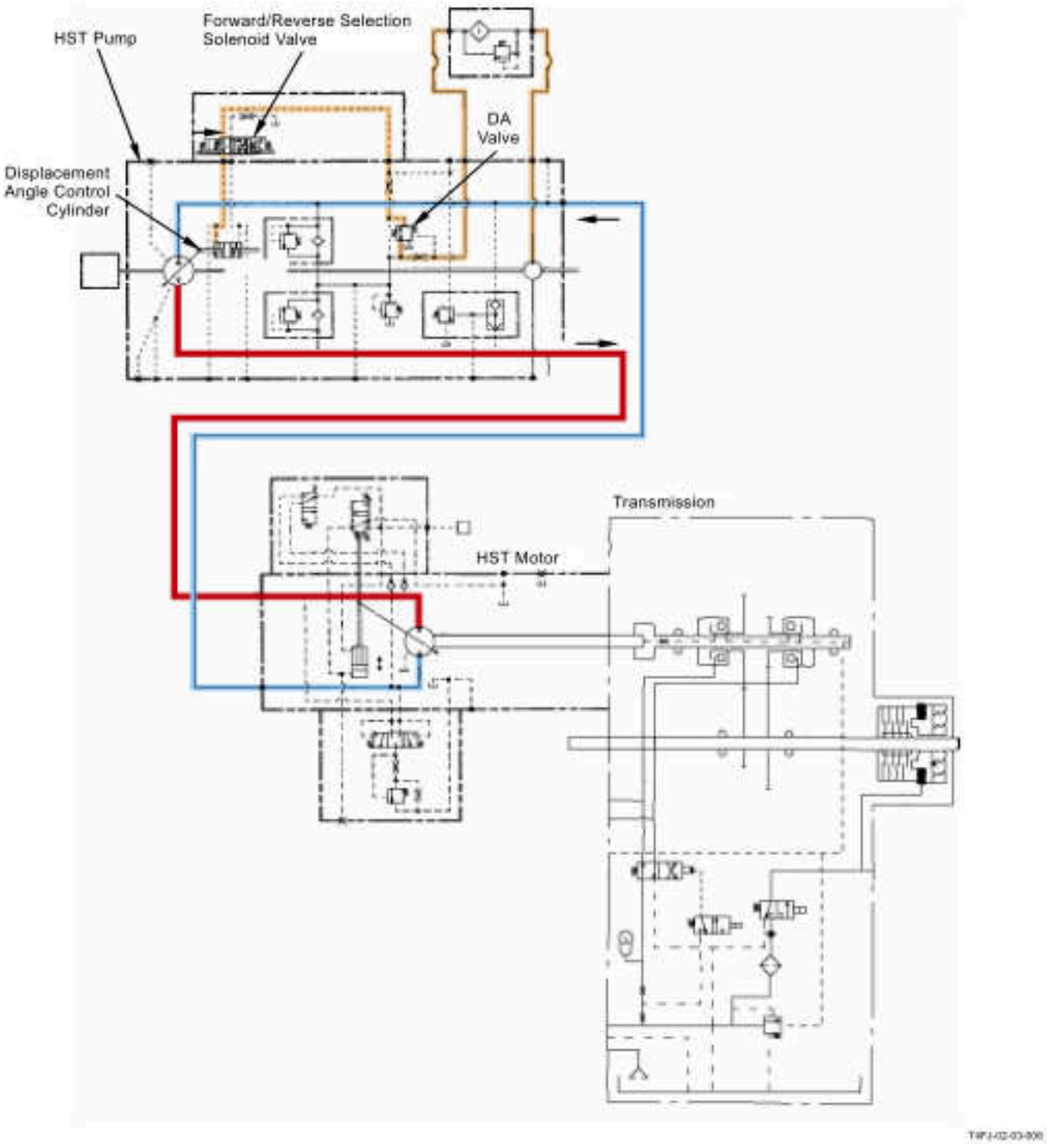
Combined Operation Circuit

- Lift Arm Raise / Bucket Dump
- When lift arm raise and bucket dump are operated by the control lever at the same time, the spools of lift arm and bucket move to the position as illustrated.
- The neutral circuit of control valve is closed by the spools of lift arm and bucket at this time. Therefore, pressure oil from the main pump flows to the parallel circuit of control valve.
- Pressure oil flowing through the parallel circuit flows to the bottom side of lift arm cylinder and the rod side of bucket cylinder through load check valves (1, 2) and the spools of lift arm and bucket.
- Therefore, the bucket can be dumped while the lift arm is raised.
- Returning oil from each cylinder returns to the hydraulic oil tank through the spools of lift arm and bucket in control valve.



1 - Load Check Valve (Lift Arm Tandem Circuit)
2 - Neutral Circuit
3 - Load Check Valve (Bucket Tandem Circuit)
4 - Parallel Circuit
5 - Return Circuit

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NOTE: *The illustration shows the forward circuit.*

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