MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GENERAL ELECTRIC

IS200TSVOH1BBB

SERVO VALVE TERMINAL BOARD

Used with the applicable Mark VI TSVO Servo Interface configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Original GEH-6421M VSVO section, per-TSVO data p.363 and TSVO section p.369; GEH-6721G p.452 exclusion

Specifications

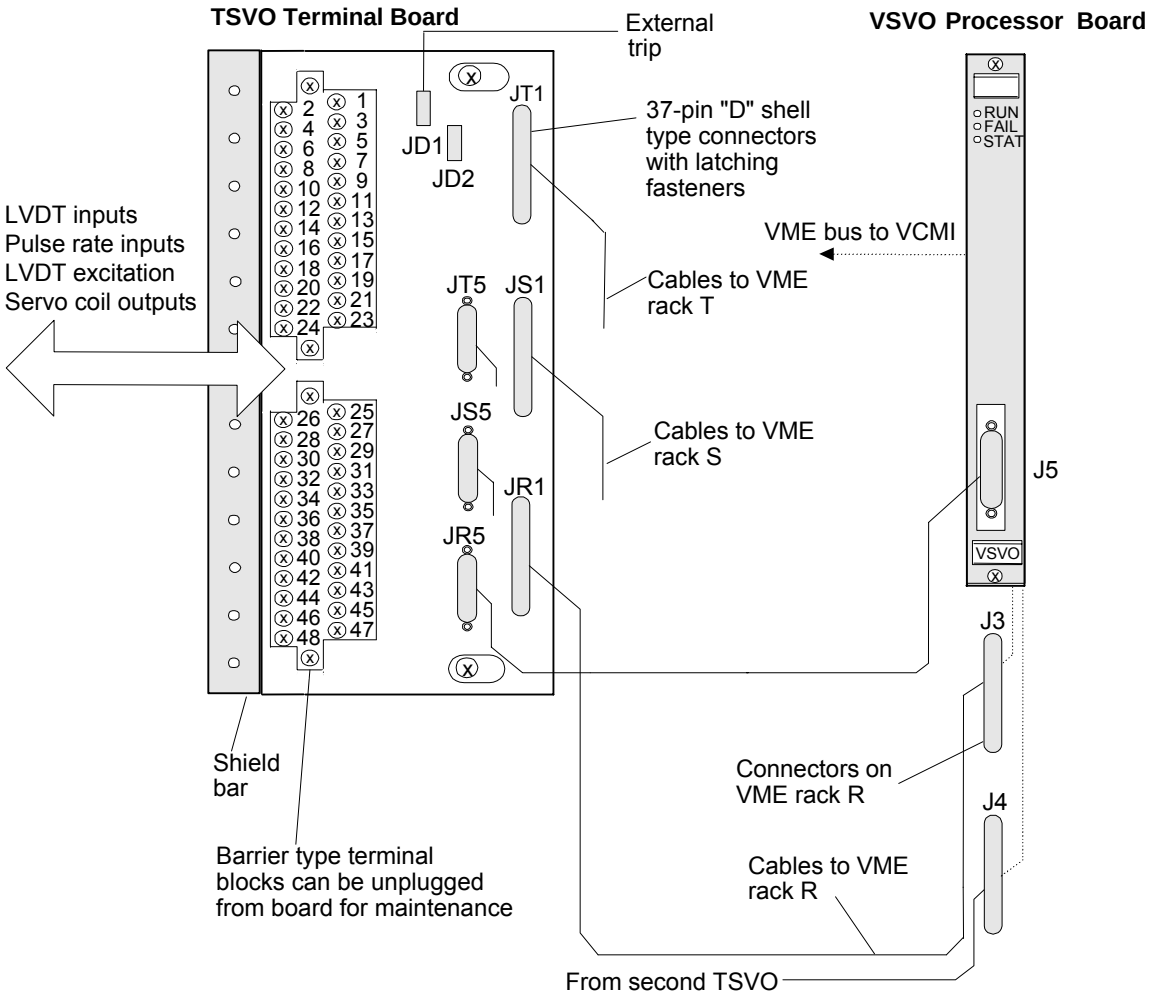
Item	Specification
Number of inputs (per TSVO)	6 LVDT windings
	2 pulse rate signals (total of 2 per VSVO)
	External trip signal
Number of outputs (per TSVO)	2 servo valves (total of 4 per VSVO board)
	4 excitation sources for LVDTs
	2 excitation sources for pulse rate transducers
Internal sample rate	200 Hz
Power supply voltage	Nominal 24 V dc
LVDT accuracy	1% with 14-bit resolution
LVDT input filter	Low pass filter with 3 down breaks at 50 rad/sec ±15%
LVDT common mode rejection	CMR is 1 V, 60 dB at 50/60 Hz
LVDT excitation output	Frequency of 3.2 ± 0.2 kHz
	Voltage of 7.00 ± 0.14 V rms
Pulse rate accuracy	0.05% of reading with 16-bit resolution at 50 Hz frame rate
	Noise of acceleration measurement is less than ± 50 Hz/sec for a 10,000 Hz signal being read at 10 ms
Pulse rate input	Minimum signal for proper measurement at 2 Hz is 70 mVpk, and at 12 kHz is 827 mVpk.
Magnetic PR pickup signal	Generates 150 V p-p into 60 kΩ
Active PR Pickup Signal	Generates 5 to 27 V p-p into 60 kΩ
Servo valve output accuracy	2% with 12-bit resolution
	Dither amplitude and frequency adjustable
Fault detection	Suicide servo outputs initiated by:
	Servo current out of limits or not responding
	Regulator feedback signal out of limits

Fault	Fault Description	Possible Cause
77	Servo output assignment mismatch. Regulator types 8 & 9 use two servo outputs each. They have to be consecutive pairs, and they have to be configured as the same range	Fix the regulator configurations.
128-191	Logic Signal # Voting mismatch. The identified signal from this board disagrees with the voted value	A problem with the input. This could be the device, the wire to the terminal board, the terminal board, or the cable.
224-259	Input Signal # Voting mismatch, Local #, Voted #. The specified input signal varies from the voted value of the signal by more than the TMR Diff Limit	A problem with the input. This could be the device, the wire to the terminal board, the terminal board, or the cable.

TSVO Servo Input/Output

Functional Description

The Servo Input/Output (TSVO) terminal board interfaces with two electro-hydraulic servo valves that actuate the steam/fuel valves. Valve position is measured with LVDTs. Two cables connect to VSVO using the J5 plug on the front of VSVO and the J3 or J4 connector on the VME rack. TSVO provides simplex signals through the JR1 connector, and fans out TMR signals to the JR1, JS1, and JT1 connectors. Plugs JD1 or JD2 are for an external trip from the protection module.



TSVO Servo Terminal Board and VSVO Processor Board