NEOMETRIX DEFENCE NMX-ASV-91

Aircraft Brake Valve Test Bench

CAPABILITY SHEET · THE OUTLET TELLS THE TRUTH · A SUPPLY, A TEST MANIFOLD, A LEVER AND A CURRENT D

THE ONE IDEA

PRINCIPLE	The outlet tells the truth.
WHY IT MATTERS	A brake valve is good when the pressure at its outlet follows its command. The bench measures the outlet against the command, and its repeat, its answer to a step and its leakage.

THE BENCH

SUPPLY	A pump, a reservoir, fine filters, a heat exchanger and an accumulator, with a sample point for a particle-code check of the fluid.
MANIFOLD	A test manifold with quick-change adapter plates for each valve type, and a model of the brake on the outlet, so that the valve works into a load.
DRIVE	A lever actuator with force and travel measured, for the metering valve, and a current source with dither, for the anti-skid valve.
MEASUREMENT	Reference and fast pressure transducers at the outlet, and a metered collection for leakage, logged by a controller that runs the steps in order.
RECORD	The curves are kept against each valve's serial number, so that the next overhaul is compared with the last.

THE METHOD

ORDER	Survey, supply, fit the valve, drive, measure and prove. The supply and the proof are the two that a quick job skips.
LIMITS	Pressures, currents, flows, times and sizes come from the valve maker's manual and the customer, and are not printed here.

CONFIGURATIONS

METERING BENCH	For brake metering, shuttle and relief valves, with a lever drive.
ANTI-SKID BENCH	For electro-hydraulic anti-skid valves, with a current drive and a fast time base.
COMBINED BENCH	Both valve types on one supply, with a stage for the hydraulic brake unit.

STANDARDS & SCOPE

STANDARDS	Public reference: SAE ARP1070 for antiskid brake control systems, and ISO 4406 for the contamination code of hydraulic fluid.
SCOPE BOUNDARY	It is the aircraft brake and anti-skid valve test bench: not an engine servo valve bench, not a tyre charging rig and not a landing gear rig.
STATUS	Neometrix has quoted against successive aircraft brake and anti-skid valve test bench requirements, and no delivered aircraft brake and anti-skid valve test bench is claimed.

DEFENCE PROGRAMMES DESK

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