

Heavy Vehicle Driveline Test Rigs

CAPABILITY SHEET - TRANSMISSION, TORSION BAR & ROAD WHEEL - ENGINEERED TO ORDER

THE MACHINE

WHAT	A test rig that reproduces the duty a heavy vehicle driveline really endures - transmission, torsion bar, road wheel or final drive - and finds where it gives up.
MACHINE	Drive machine, article under test, in-line torque transducer and a four-quadrant load machine on a fabricated bedplate, with regeneration back to the site bus.
OUR ROLE	Machines, converters, transducers and encoders are bought-in; Neometrix engineers the rig - torsional design, fixturing, instrumentation, control and safety.

TORQUE IS THE EASY PART

THE SPECTRUM	A steady torque figure proves little. Drivelines die by accumulation - reversals, shock steps, gear changes - so the rig replays a spectrum, not a number.
NO DYNAMICS OF ITS OWN	A rig is itself a driveline. Flywheels, couplings and shafting give it natural frequencies; one inside the test band and it invents loads the vehicle never makes.
THE WORSE FAILURE	A resonance sitting somewhere flattering absorbs load the article should have taken - so a marginal part passes, and nothing in the data says so.

TORSION BARS & ROAD WHEELS

WHAT IT ABSORBS	A torsion bar is the suspension spring, rated by the angle it takes repeatedly without a permanent set - so the test is angle-controlled and cycle-counted.
AT THE ARTICLE	Angle read at the drive includes the rig's own wind-up, so every bar reads softer than it is. The encoder belongs on the bar's own clamped end.
ROLLING LIFE	A road wheel is asked how long it lasts, not how much it takes - loaded against a drum for millions of revolutions, with heat build-up governing.

DISTINCTNESS & ENGAGEMENT

THE FAMILY	The heavy-vehicle leg of our test-rig family - alongside the helicopter main gearbox load rig, the acoustic axle rig and the dynamic turret rig.
NOT A DYNO	Distinct from an engine or chassis dynamometer: the article here is the driveline itself - gearbox, torsion bar, final drive, running gear - not the engine.
ENGAGEMENT	Send the articles and ratings, the duty cycle, the test programme and the standard to sales@neometrixgroup.com for a compliance matrix in two working days.

DEFENCE PROGRAMMES DESK

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