

Fatigue Lab-ARAI

The Fatigue Lab at ARAI has capability of homologation as well as advance R&D for full vehicle and sub systems. The facility is proposed for Centre of Excellence for Fatigue. The existing equipments form an ideal basis for developing the lab into a state-of-the-art lab. The centre is able to provide following Testing and R&D capabilities.

- Full Vehicle endurance testing against cyclic, structural and environmental loads.
- Sub-Systems integration includes body-in-white & mounted sub-system behaviour under structural and environmental loads.

The facilities of Fatigue lab can be functionally divided in two parts, basic and advance R&D capabilities. Under NATRiP following capabilities for Fatigue Lab at ARAI has established.

Basic Fatigue Lab Established By NATRiP

Basic Fatigue Lab
Universal Test Benches
Plate benches
5 kN servo-pneumatic
10 kN servo-pneumatic
25kN servo-hydraulic
100kN servo-hydraulic
150kN servo-hydraulic
25/50 kNm servo-hydraulic rotatory
Bench with integrated actuator
Hydraulic Vibration Table
MAST for components
ED Shaker facility
Electrodynamic shakers with climatic chamber

Advance R&D Capabilities of Fatigue Lab Established By NATRiP

Complete Vehicle & Sub-Systems Integration
MAST for BiW: 6dof + climatic chamber
Multipurpose X Posters test bench (Flexible for 2/3/4/6 posters configuration)
Actuators for up to Heavy Duty Vehicles
Passenger Cars dedicated 4 posters + climatic chamber
Equipment for Lab-Track-Road tests Correlation
Components & Sub-systems
MAST for components: 6dof + climatic chamber
Dynamic pressure testing benches