

Id: ALF (Australia)	Changes to the Australian ALF currently underway	Melbourne
Institution: ARRB Group (formerly the Australian Road Research Board)		Australia

Type: Portable Linear Test Track

Construction (commissioned): 1984/2008



Dimensions

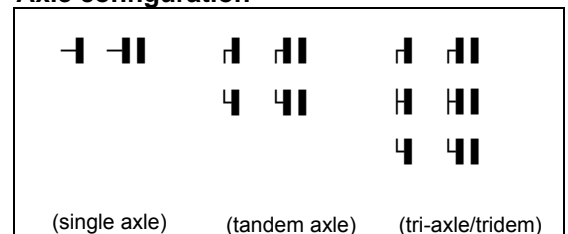
Pavement length	12 m
Useful testing length (at constant speed)	8–12 m

Loading

Range of Load ^(*)	80–200 kN
Transverse distribution	± 375 mm
Loading direction	⇨

^(*) Wheels loads (half axle) are converted to the corresponding axle loads.

Axle configuration



Speed

Vehicle Speed (max.)	20 km/h
Test frequency (max.) (passes/hour/section)	370
Practical output (loadings/month/section)	200 000

Sections

No. of Sections	1
Thickness	any
Width	Outdoors: any In shed: 18 m

Measured Variables

	Surface	Asphalt	Unbound Layers	Subgrade
Temperature	x	x		
Moisture content			x	x
Suction				
Deflection (transient)	x	x	x	x
Vertical Stress	x			
Horizontal Stress				
Vertical Strain	x	x	x	
Horizontal Strain		x		x

Environmental control

Placement	Currently indoors
Air temperature	®
Pavement temperature	@
Air moisture	-
Freeze-thaw cycles	-
Water table	@
Rainfall	©

- © total control
- @ partial control
- @* indirect control (air Temp.)
- ® registered

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Brief description of Topics/Tests carried out during recent years
<p>A new axle assembly for ALF will be commissioned September–December 2008. This assembly will allow ALF to traffic with either a full tri-axle group, a tandem group or the standard single axle. The assembly allows for both single and dual tyres on each axle.</p>
<p>Commencing in January 2009, the new assembly will be used in a project examining the effect of multiple axle groups on the performance of unbound granular pavements.</p>
<p>Recent tests conducted with the current single axle configuration, commissioned in 1984, have focussed on using ALF as a research tool rather than as a means of proof loading pavement structures. Recent work has largely focussed on improving the understanding of unbound granular pavement performance.</p>
<p>Deformation performance of sprayed seal surfaced unbound granular pavements. Comparison of observed performance with repeat load triaxle laboratory testing.</p>
<p>Effect of ultra-wide single tyres on a sprayed seal surfaced unbound granular pavement.</p>
<p>Fatigue of cement treat crushed rock bases (3–4% cement) with different axle loads.</p>
<p>Axle load equivalence for sprayed seal surfaced unbound granular pavements.</p>
<p>Examination of maintenance intervention techniques on sprayed seal surface granular pavements, including development and calibration of work effects models for pavement management systems.</p>