



APPENDIX 7

STRUCTURAL LOADING OF FIRE ENGINE ON ACCESSWAY

The following information will assist structural engineers in the design of accessway.

Accessway sizes

- (i) In general, the minimum width of the accessway shall be 6m wide and the minimum length shall be 15m long. Diagram A shows the relationship between the accessway and parked fire engine with its front and rear jacks extended

Accessway loading

- (ii) Accessway shall be on
 - (a) suspended slabs, or
 - (b) on metalled or paved ground, or
 - (c) ground laid with strengthened perforated slabs or
 - (d) approved materials to withstand the loading requirements of fire engine.

- (iii) The accessway required to serve building shall be constructed to sustain the load of a 30 tonnes fire engine. The wheel load shall be considered separately with the jack loads for both global and local effects.

Axles load

- (iv) Axles load for accessway shall be as follows:

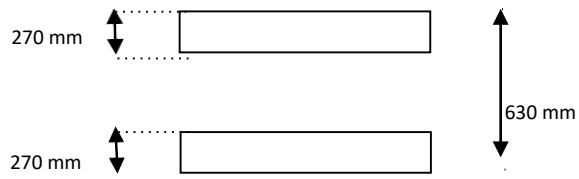
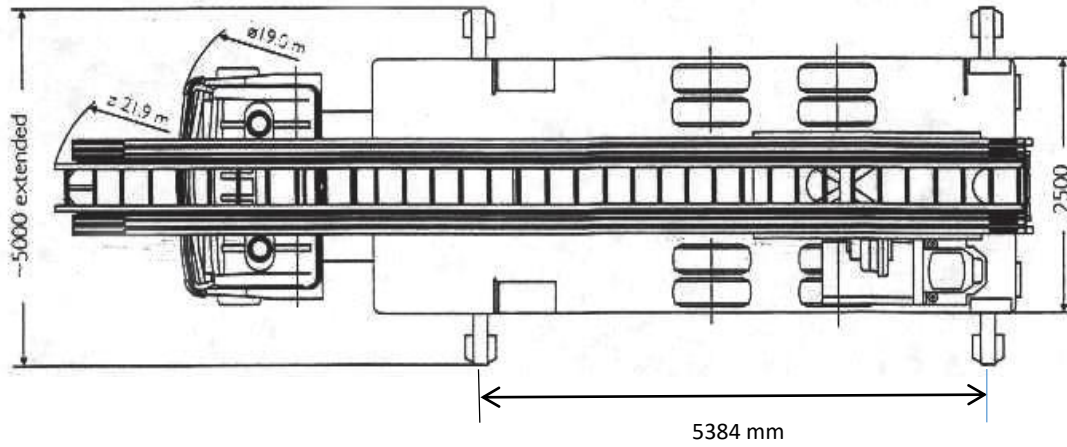
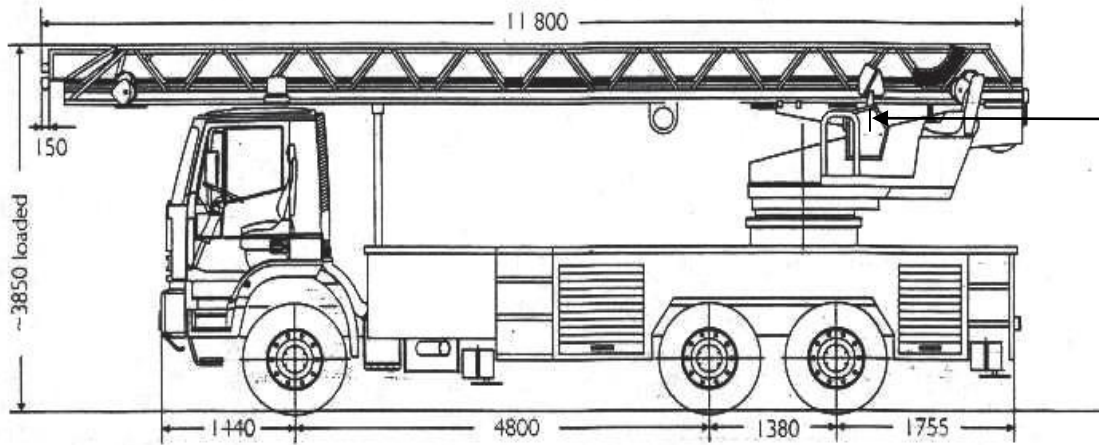
Front Axle	7500kg	2 wheels
Rear Axle	21,000kg	8 wheels

- (v) The jack load shall be assumed to be uniformly distributed over a rectangular contact area of 980 cm² for both local and global analysis.
- (vi) The maximum pressure on one jack, even in the worst case, will not exceed 80N/cm².
- (vii) In the absence of more exact calculations, live load surcharge for accessway on suitable material properly consolidated may be assumed to be at least 10KN/m²



Diagram A

ACCESSWAY (WHEELS & JACKS LAYOUT)



Wheel Spacing