

Spray Suppression

Legislation

EC Directive

91/226/EC

Road wheels must have associated with them equipment or part of the body which, as far as is practicable, catches mud or water thrown up by the wheels as they rotate.

Check that the wing covers the whole width of the tyre especially where wide “Super Single” tyres are fitted to the front axle.

The spray suppression material must be of an approved type.

Mud flaps

If a mud flap is an extension to a wing or similar fitting, where a mud flap is fitted in place of a wing, i.e. it serves the purpose of a wing (as on some semi-trailers) it must be treated as a wing and be securely fixed to prevent excessive movement.

Spray Suppression

The test includes only a basic visual check for general compliance and it will normally not be necessary to take measurements.

Lifting axles

Where a vehicle is fitted with one or more lifting axles, the spray-suppression system must cover all the wheels when the axle is lowered and the remaining wheels which are in contact with the ground when the axle is raised.

Self-tracking axles

Where a vehicle is fitted with a self-tracking axle, the spray suppression system must satisfy the conditions applicable to non-steered wheels if mounted on the pivoting part. If not mounted on that part, it must satisfy the conditions that are applicable to steered wheels.

Note: Where the spray-suppression device meets the specifications relating to rain flaps no additional rain flap is required.

Note: In the case of single or multiple axles where the distance between the adjacent tyres is at least 250 mm. The valance should cover the area extending from the underside of the body to at least a line formed by the tangent to the top of the tyres and between the outer edge of the wheel flap, with which it should form a seal and the vertical plane formed by the tangent at the front of the tyre. An outer valance must be fitted over each wheel. The whole inner face of the outer valance, the depth of which should not be less than 100mm, must be fitted with a suppression material.

Component Check

1. Evidence must be supplied to demonstrate compliance with the approval of Spray Suppression Material.

Installation Check

Spray Suppression systems fitted with energy absorption spray suppression devices for axles fitted with non steered or self steering or steered wheels.

Mud Guards

2. The mudguards must cover the zone immediately above, ahead and behind the tyre or tyres see Figure 1 and 2.

3. The front edge of the mudguard must be no more than 20 degrees above the horizontal line of the axle (A on figure 1) (non steered axles).

4. The front edge of the mudguard must be no more than 30 degrees above the horizontal line of the axle (A on figure 1) (steered axles).

5. The rear edge of the mud guard must be no more than 100mm above the horizontal line of the axle (as in Figure 1 C).

6. The mudguard must cover at least the full width of the tyre or tyres.

7. Spray Suppression material must be fitted to the front face of the rear of the guard.

8. Where the wheel guard consists of several components there must be no gaps between or within individual parts when assembled that will permit the exit of spray when the vehicle is in motion.

Outer valance

9. In the case of steered and self-steered wheels, the distance between the tyre wall and the vertical face of the valance "C" must not exceed 100mm. see Figure 2.

10. In the case of non-steered wheels the distance between the tyre wall and the vertical face of the valance "C" must not exceed 75mm, see Figure 2.

11. The depth of the outer valance must extend to not less than 45mm, at all points behind a vertical line passing through the centre of the wheel see Figure 2.

12. The lower edge of the outer valance shall not exceed $1.5 \times$ tyre radius on steered wheel at points A,B and C as in Figure 4.

13. The lower edge of the outer valance shall not exceed $1.25 \times$ tyre radius on non-steered wheel at points A,B and C as in Figure 4.

14. There must be no openings in the outer valances or between the outer valances and other parts of the mud guard enabling spray to emerge when the vehicle is moving.

Rain Flaps

15. The rain flap must be at least the full width of the tyre/s.
16. The orientation of the flap must be basically vertical.
17. The maximum height of the bottom edge must be no more than 200 mm above the ground.
18. The flap must be no more than 300 mm from the rearmost edge of the tyre.
19. There must be no openings between the rain flap and the lower edge of the wheel guard enabling spray to emerge.
20. The whole face of the rain flap must be covered in spray suppression material.
21. In the case of multiple axles where distance between the tyres on adjacent axles is less than 250 mm, only the rear set of wheels must be fitted with rain flaps.
22. There must be a rain flap behind each wheel when distance between the tyres on adjacent axles is at least 250 mm.

Spray Suppression systems fitted with air / water separator spray suppression devices for axles fitted with steered and non steered wheels

Mud guard (items 2 - 8 must also be met)

23. In the case, of multiple axles where the distance between the tyres on adjacent axles does not exceed 300 mm the mudguards must also conform to the model shown in Figure 7.

Outer Valance

24. The lower edges of the outer valances must be fitted with air/water separator spray-suppression devices.
25. The depth of the outer valance must extend to not less than 45mm, at all points behind a vertical line passing through the centre of the wheel.
26. The lower edge of the outer valance shall not exceed $1.05 \times$ tyre radius on steered wheel Figure 7.
27. The lower edge of the outer valance shall not exceed $1.00 \times$ tyre radius on non-steered wheel Figure 7.

28. There must be no openings in the outer valances or between the outer valances and the mud guard enabling spray to emerge.

Rain Flap (standards 14, 15, 18, 20 & 21 must also be met)

29. A rain flap fitted with air / water separator must not be more than 200 mm from the rearmost edge of the tyre, measured horizontally.

30. The air / water separator spray-suppression device must be at least 100 mm deep when fitted to a rain flap.

Spray Suppression systems fitted with energy absorption spray suppression devices for axles fitted with non steered or self steering wheels that are covered by the bodywork, floor or the lower part of the load area

Mud Guards (standards 31& 32 not required if standards 2-8 & 23 are met)

31. Mud guards must cover the zone above the tyre or tyres from the front edge of the tyre to the rain flap located behind the wheel see figure 5.

32. All the inner rear part of the mud guard must be fitted with a spray suppression device.

Outer Valance (standards 33- 36 not required if standards 9-14 & 24-28 are met)

33. In the case of multiple axles an outer valance must be located above each wheel.

34. The entire inner surface of the outer valance must be fitted with an energy absorption spray-suppression device which must be a minimum of 100mm high.

35. There must be no openings between the outer valances and the inner part of the mud guard enabling spray to emerge.

36. Where rain flaps are not fitted behind each wheel (see item 20), the outer valance must be unbroken between the outer edge of the rain flap to the vertical plane that is tangent to the point furthest to the front of the tyre (Figure 5) of the first axle.

Rain Flaps

37. These flaps must extend to the lower part of the mud guard and comply with standards 14 to 21.

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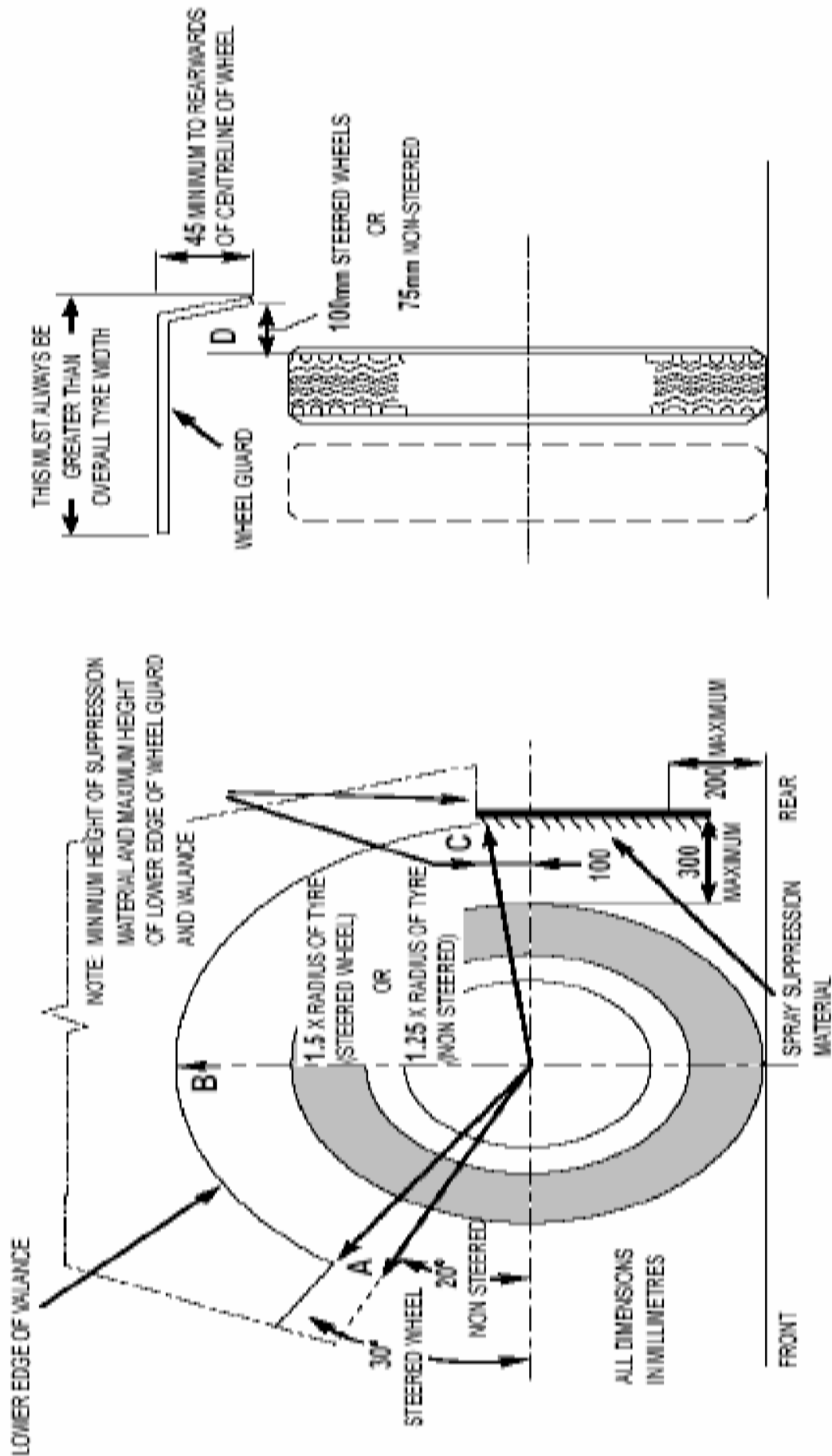


Figure 2

Figure 1

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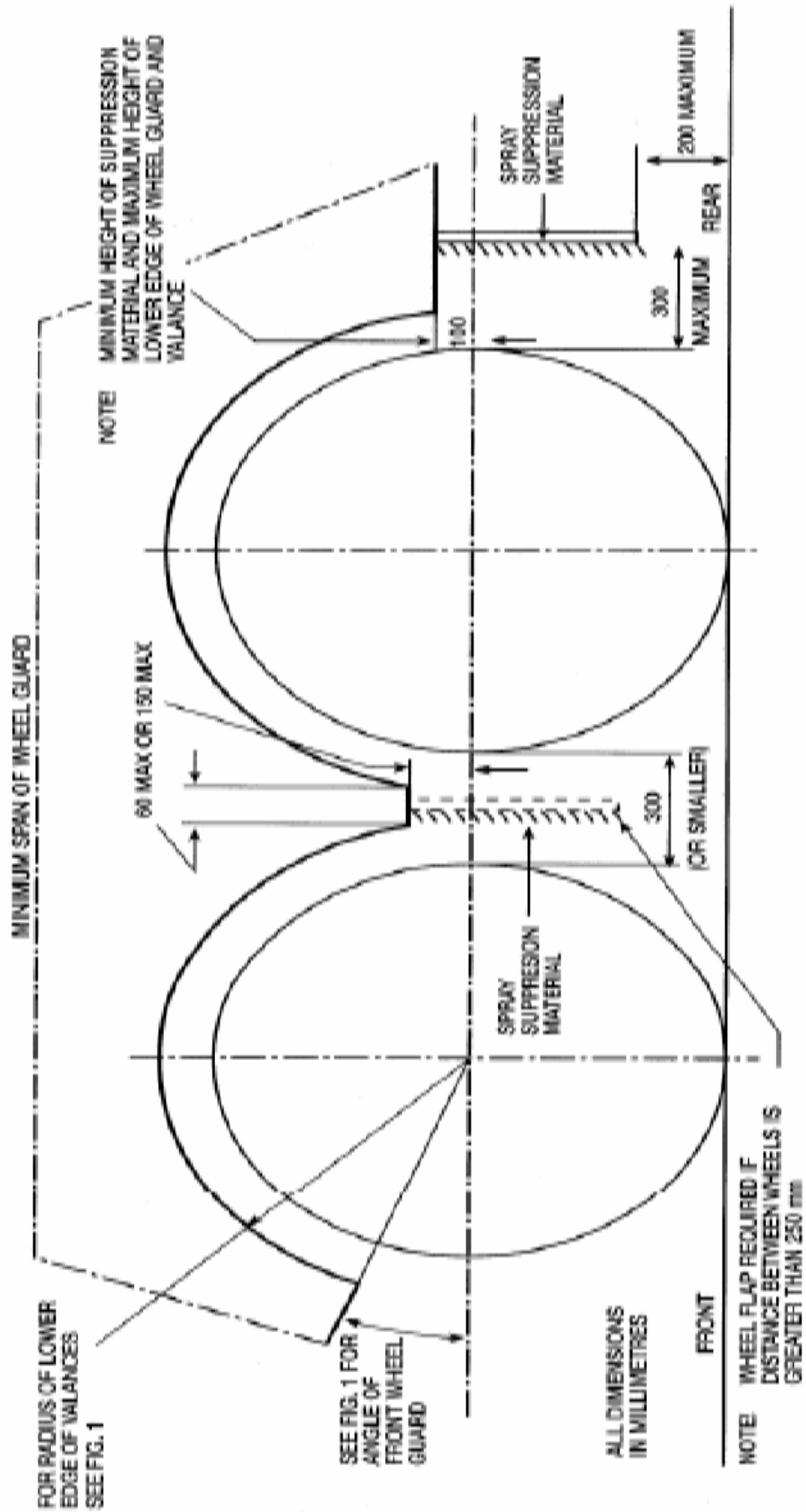


Fig. 3

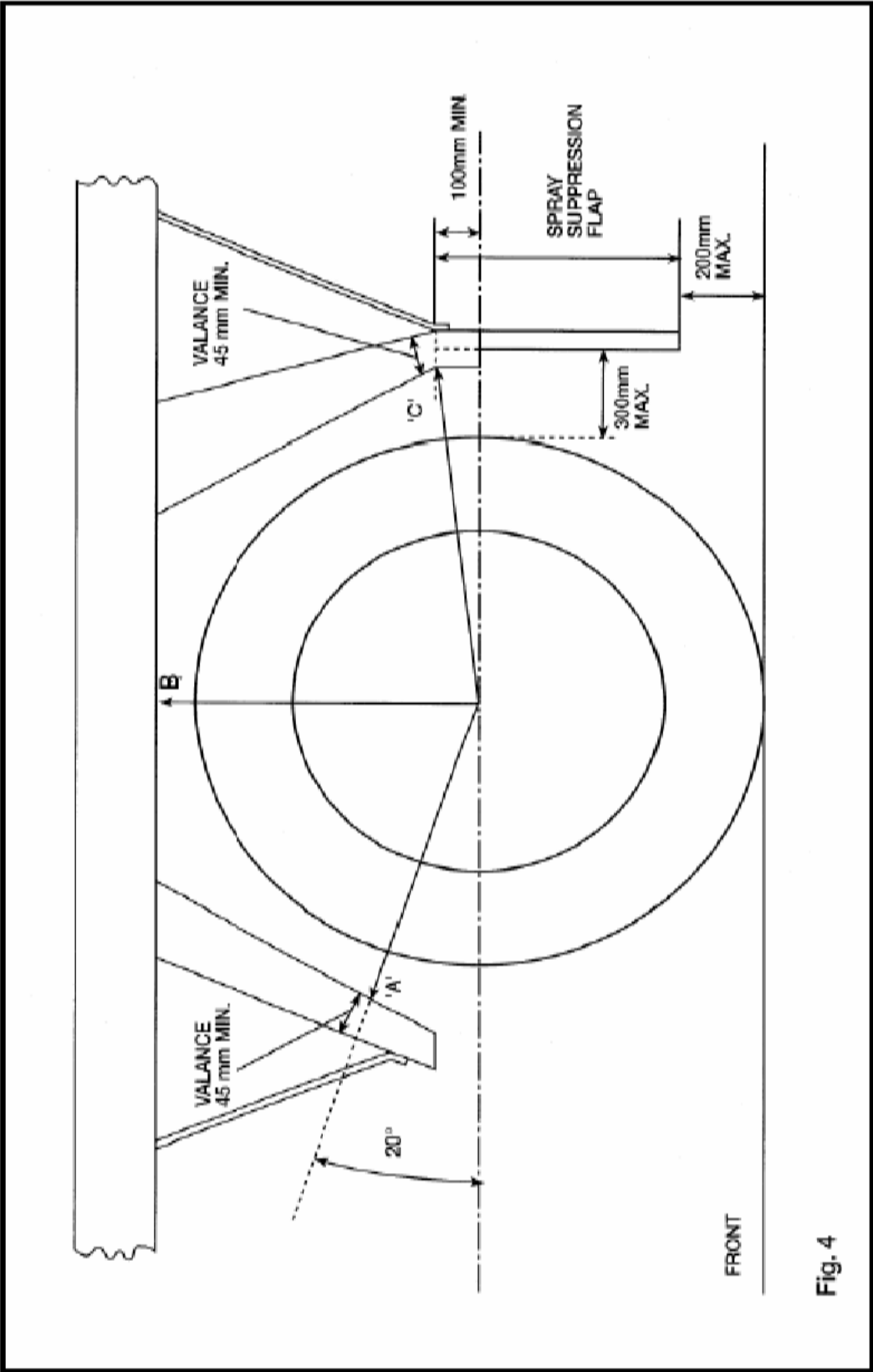


Fig. 4

The lower edge of the outer valance shall not exceed 1.5 x tyre radius on steerable wheels or 1.25 x tyre radius on non-steerable wheels at points A, B and C.

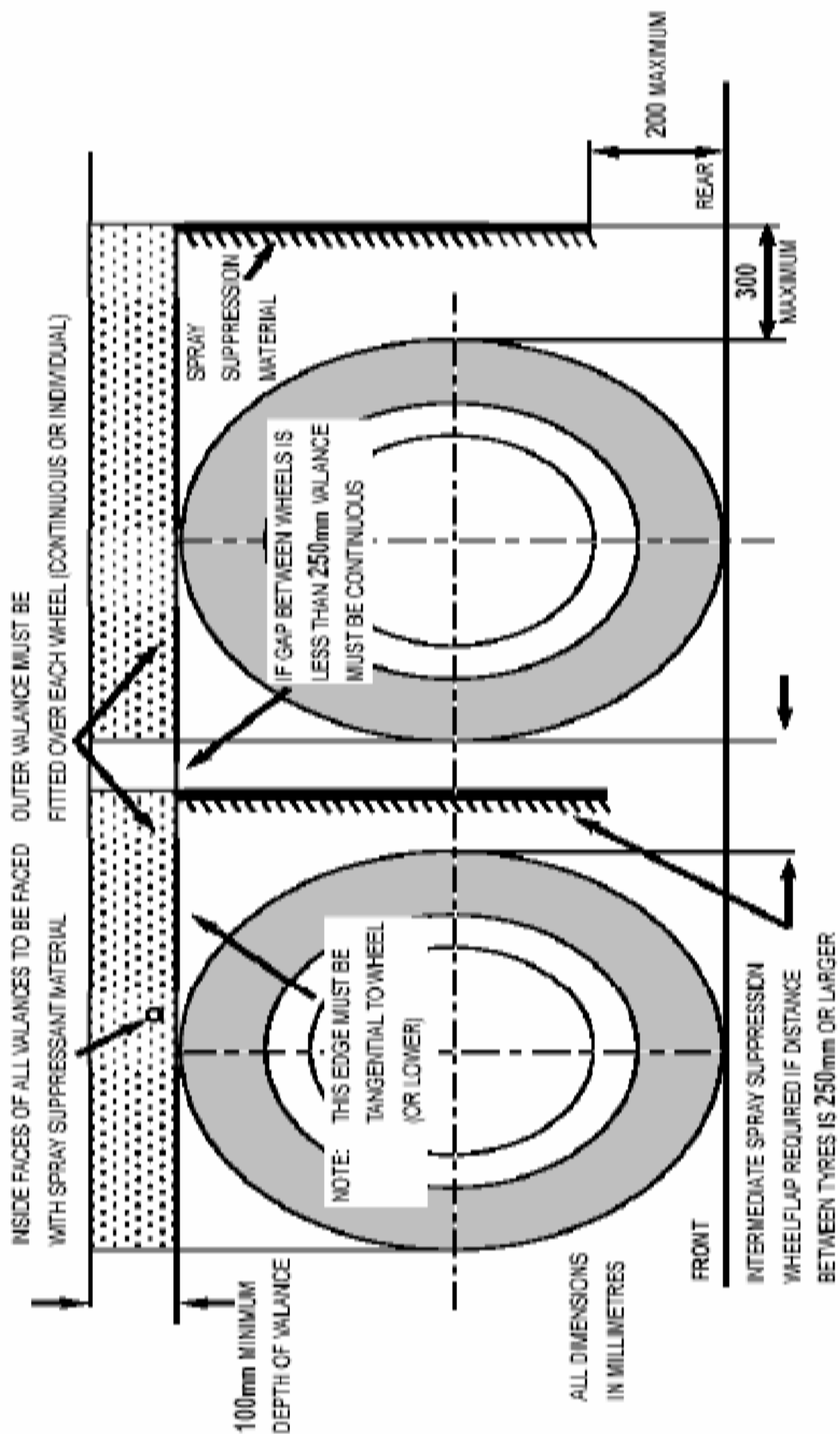
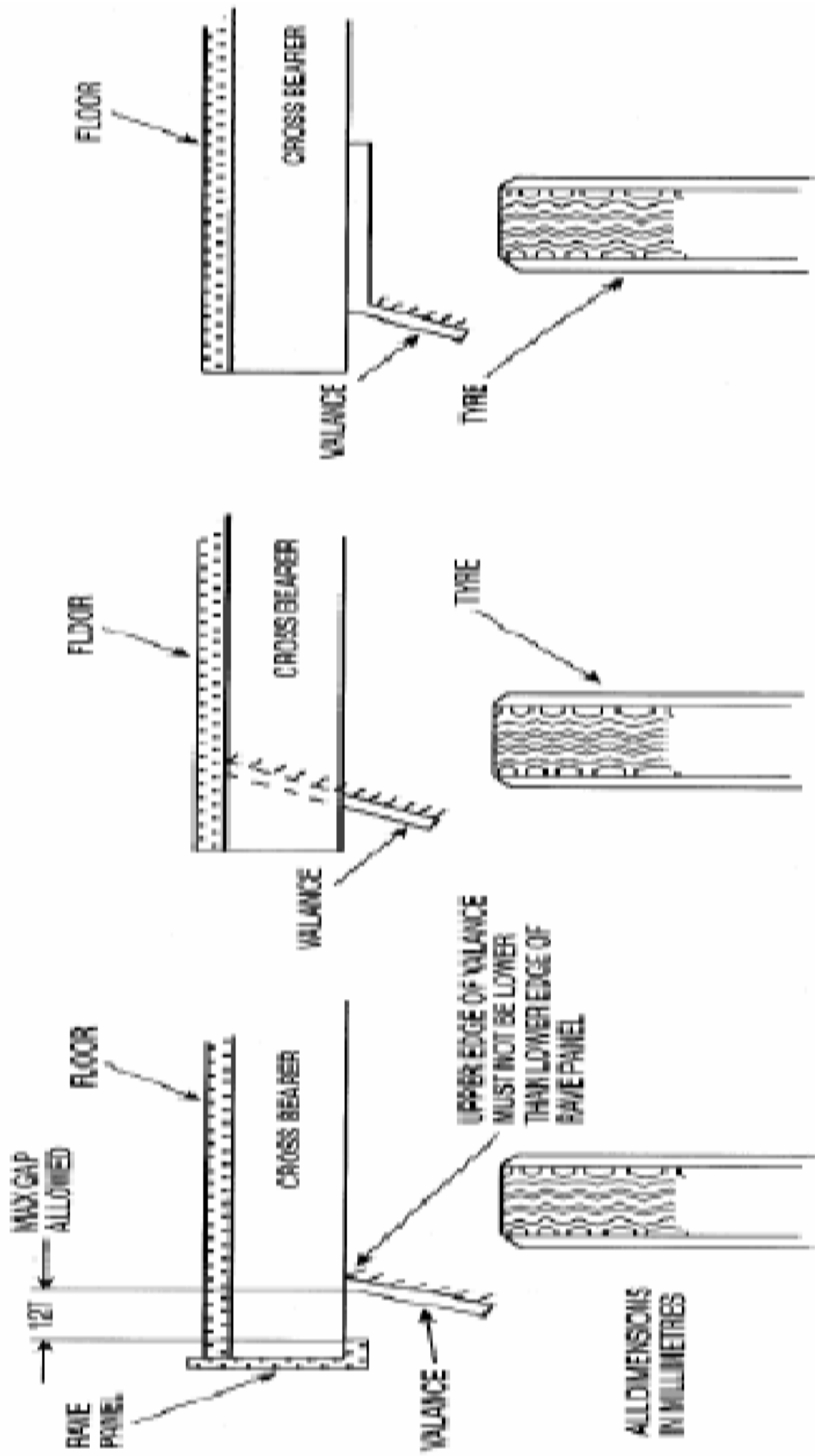


Figure 5



THIS ARRANGEMENT ALLOWS FOR
ROPE HOOKS TO BE FITTED

Fig. 5

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