

SECTION 2

UNION INSPECTION PROCEDURES

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2.1 SCOPE

This standard covers the requirements for the inspection by both Union and Management representatives of newly constructed or substantially modified freight vehicles for both standard and broad gauge operation.

2.2 GENERAL PRINCIPLES AND REQUIREMENTS

- 2.2.1 Union/Management Agreement for New and Substantially Modified Freight Vehicles as certified by the Industrial Relations Commission on 28 March 1989 must be adhered to and no deviation can be made from this Agreement or certified amendments.

Certified amendments to the requirements of this Section may be implemented by agreement between the related Union(s) and all Systems. Such amendments may be applicable to all classes of vehicles, or to a specific vehicle or vehicles. Details of certified amendments shall be circulated to all Systems and Unions, and shall be incorporated into this Section at the earliest opportunity.

It is the responsibility of all Systems to be fully aware of and comply with the content of this Agreement.

- 2.2.2 The Inspection Report and Checklist as detailed in Section 2.3 is to be completed and signed after each vehicle inspection by representatives of both the Union and the owning System Management in attendance.
- 2.2.3 The inspection procedure as detailed in this Section is to be undertaken for all new and substantially modified freight vehicles prior to the vehicles being made available for intra-state or intersystem operational traffic.
- 2.2.4 Variations to the requirements of the above Agreement and this Section in relation to a specific vehicle or class of vehicle are permitted, provided that agreement between the Unions and rail System(s) to the variations is evidenced in writing prior to the finalisation of the vehicle design and/or completion of the prototype vehicle.

RAILWAYS OF AUSTRALIA

MANUAL OF STANDARDS AND PRACTICES

CHECKLIST FOR NEW AND SUBSTANTIALLY MODIFIED FREIGHT VEHICLES

This vehicle is inspected under the agreement of the Arbitration Commission
Act S28 Agreement of 1988

INSPECTION REPORT AND CHECK SHEET

REPRESENTING UNION

Name Position

Western Australian Branch

1

2

South Australian Branch

1

2

Victorian Branch

1

2

New South Wales Branch

1

2

National/State Union Official

.....

REPRESENTING MANAGEMENT

Name Position

1

2

1

2

1

2

1

2

Vehicle Inspection Location

Which State

Commenced Inspection am/pm

Completed Inspection am/pm

Vehicle Owned by

New/Modified Vehicle

Previous Class of Vehicle

No

New Vehicle Classification

No

Drawing No.

Issue

End step (Diagram 10.4) YES/NO?

Any Comment/Agreed Variation
.....
.....

Handrail (Diagram 10.1) YES/NO?

Any Comment/Agreed Variation
.....
.....

Stirrup Step (Diagram 10.2) YES/NO?

Any Comment/Agreed Variation
.....
.....

Stirrup Step with Toe Guard (Diagram 10.3 or 10.9) YES/NO?

Any Comment/Agreed Variation
.....
.....

Uncoupling Lever Equipment Solid/Telescopic? (Diagram 2-7, 10-8)

Any Comment/Agreed Variation
.....
.....

Handbrake Arrangement, (Diagram 2-1 to 2-6) Transverse or AAR Geared (strike out word)

Any Comment/Agreed Variation
.....
.....

Access to Air Cock from Step YES/NO?

Any Comment/Agreed Variation
.....
.....

Other Field Maintenance aspect such as access to underframe of vehicles and easy maintenance in freight yards - Any Comment/Agreed Variation.....

.....
.....
.....

Other comments

.....
.....
.....
.....
.....
.....

- 1. The above vehicle is approved for operational services)
- 2. Approved for operational services subject to inspection) Strike out whichever
of modifications stated below) is not applicable
- 3. Not approved for operational services)

Union Official/Representative

Owning System Representative

.....

.....

Date / /

Date / /

MODIFICATIONS REQUIRED

COMPLETED DATE

.....
.....
.....
.....
.....

.....
.....
.....
.....
.....

Local Union Representatives

Owning System Representative

.....

.....

Date / /

Date / /

2.4 UNION INSPECTION REQUIREMENTS

2.4.1 GENERAL

- 2.4.1.1 Brackets used for securing handrails/footsteps to the vehicle shall be at least equivalent to 75 x 75 x 10 steel angle welded to the vehicle by 6 mm minimum x 50 mm minimum length fillet welds both sides of the joint. Where flat bar or plate is used the minimum thickness shall be 12 mm.
- 2.4.1.2 Brackets may be of steel or aluminium and may be welded to the vehicle or attached using M16 bolts or swage lock pin fasteners of equivalent strength. Welding shall be in accordance with AS 1554.1 for steel and AS 1665 for aluminium.
- 2.4.1.3 Handrails and footsteps shall be attached to the underframe, body or securing brackets by means of M16 bolts or swage lock pin fasteners of similar diameter. Swage lock pin fasteners shall be of a type which is removable in the field without special tools and the fastener holes shall accommodate M16 bolts for field replacement when required.
- 2.4.1.4 All nuts or swage collars shall be on the outside of the connection.
- 2.4.1.5 No fastener shall protrude past the nut or collars by more than 5 mm and shall be cut/ground if required to remove the excess and any sharp edges.
- 2.4.1.6 Bolts shall be secured by any of the following:
- (a) spring washer and nut
 - (b) nut and approved locking compound
 - (c) unused nylon insert nut
 - (d) self-locking nut
- 2.4.1.7 Air brake end cock shall be on the right hand side of the coupler when facing the end of the vehicle.
- 2.4.1.8 Uncoupling rod handles shall have a minimum clearance of 50 mm at all times, including full coupler swing, from any structural member or attachment (refer Diagram 2.7).

2.4.2 FLAT CAR WITH TRANSVERSE HANDBRAKE (Refer Diagram 2.1).

- 2.4.2.1 Four (4) stirrup steps (diagram 10.2) shall be fitted, one at each corner on side of car.
- 2.4.2.2 When stirrup steps are positioned less than 200 mm from any part of bogie, toe guard stirrup steps (diagram 10.3) shall be fitted.
- 2.4.2.3 Two (2) toe guard stirrup steps (diagram 10.3) shall be fitted to side of car 600-750 mm from centre line of handbrake wheel.
- Steps shall be positioned such that the handbrake wheel rotates in a downward stroke from the step position when applying the brake.
- 2.4.2.4 Handholds shall be fitted at a minimum of 760 mm above each stirrup step in accordance with diagram 2.1.
- A lateral tolerance of ± 50 mm is allowed between the centreline of the step and handhold. Protection lugs shall be fitted if handhold is above deck height.
- 2.4.2.5 Where existing end footsteps are fitted to cars that are not required to be modified for a different operational requirement the footsteps are to be retained.
- End footsteps are to be removed from cars when the cars are modified for a different operational requirement, however the footsteps may be retained if the owning System has a specific requirement for them.
- End steps can only be fitted to new constructions if the owning System has a specific requirement for them to be fitted.

2.4.2.6 The handbrake wheel shall be of the steel rimmed spoked type as shown on Diagram 7-17. The release lever shall be positioned adjacent to the step and the lever must not foul the step bracket. A minimum clearance of 65 mm shall be maintained around handwheel, handwheel pawl handle and release lever.

2.4.2.7 The brake shall be released with an upward movement of the release lever.

2.4.3 FLAT CAR WITH END HANDBRAKE (Refer Diagram 2.2)

2.4.3.1 Four (4) stirrup steps (diagram 10.2) shall be fitted, one at each corner on the side of car.

2.4.3.2 When stirrup steps are positioned less than 200 mm from any part of bogie, toe guard stirrup steps (diagram 10.3) shall be fitted.

2.4.3.3 Two (2) end steps (diagram 10.4) shall be fitted to outer face of headstock on the left hand side at each end of car.

2.4.3.4 Handholds shall be fitted at a minimum of 760 mm above each step in accordance with diagram 2.2.

A lateral tolerance of ± 50 mm is allowed between the centreline of the step and handhold. Protection lugs shall be fitted if handhold is above deck height.

2.4.3.5 Handbrake shall be of the AAR geared type with a solid handwheel of the steel rimmed spoked type. The release lever shall be positioned adjacent to the step.

Position of handbrake shall be in accordance with diagram 2.2.

2.4.4 OPEN CAR AND BOX TYPE CAR WITH TRANSVERSE HANDBRAKE (INCLUDING HOPPER CARS AND CAR CARRIERS) (Refer Diagrams 2.3 and 2.5)

2.4.4.1 Four (4) stirrup steps (diagram 10.2) shall be fitted, one at each corner on the side of the car.

2.4.4.2 When stirrup steps are positioned less than 200 mm from any part of the bogie, toe guard stirrup steps (diagram 10.3) shall be fitted.

2.4.4.3 Two (2) toe guard stirrup steps (diagram 10.3) shall be fitted to the side of the car 600-750 mm from centreline of handbrake.

Steps shall be positioned such that the handbrake wheel rotates in a downward stroke from the step position when applying the handbrake.

2.4.4.4 Two (2) vertical and one (1) horizontal handholds shall be fitted above each step in accordance with diagrams 2.3 and 2.5 (total of 18 handholds per car).

Handholds shall be positioned centrally above steps within ± 100 mm longitudinally.

2.4.4.5 Handhold mounting bars shall be used if body material is less than 3 mm. Bar sizes of 100 x 6 mm and 50 x 6 mm to be used with a minimum weld length per bracket of 100 mm each side. Alternatively angle brackets 6 mm thick may be used in conjunction with body sheet contour.

2.4.4.6 Where existing end footsteps are fitted to cars that are not required to be modified for a different operational requirement the footsteps are to be retained.

End footsteps shall be removed from vehicles when the vehicles are modified for a different operational requirement, however the footsteps may be retained if the owning System has a specific requirement for them.

End steps can only be fitted to new constructions if the owning System has a specific requirement for them to be fitted.

2.4.4.7 Handbrake wheel shall be of the steel rimmed spoked type as shown on Diagram 7-17. The release lever shall be positioned adjacent to the step and the lever must not foul the step bracket.

2.4.4.8 The brake shall be released with an upward movement of the release lever.

A minimum clearance of 65 mm shall be maintained around spider, handwheel, pawl handle, and release lever.

**2.4.5 OPEN CAR AND BOX TYPE CAR WITH END HANDBRAKE
(INCLUDING HOPPER CARS AND CAR CARRIERS)** (Refer Diagrams 2.4 and 2.6)

2.4.5.1 Four (4) stirrup steps (diagram 10.2) shall be fitted, one at each corner on side of car.

2.4.5.2 When stirrup steps are located less than 200 mm from any part of the bogie, toe guard stirrup steps (diagram 10.3) shall be fitted.

2.4.5.3 Two (2) end steps (diagram 10.4) shall be fitted to the outer face of the headstock at diagonally opposite corners of car.

2.4.5.4 Two (2) vertical and one (1) horizontal handholds shall be fitted above each side stirrup step in accordance with diagrams 2.4 and 2.6. One (1) vertical and two (2) horizontal handholds shall be fitted above each end step in accordance with diagrams 2.4 and 2.6 (18 handholds per car).

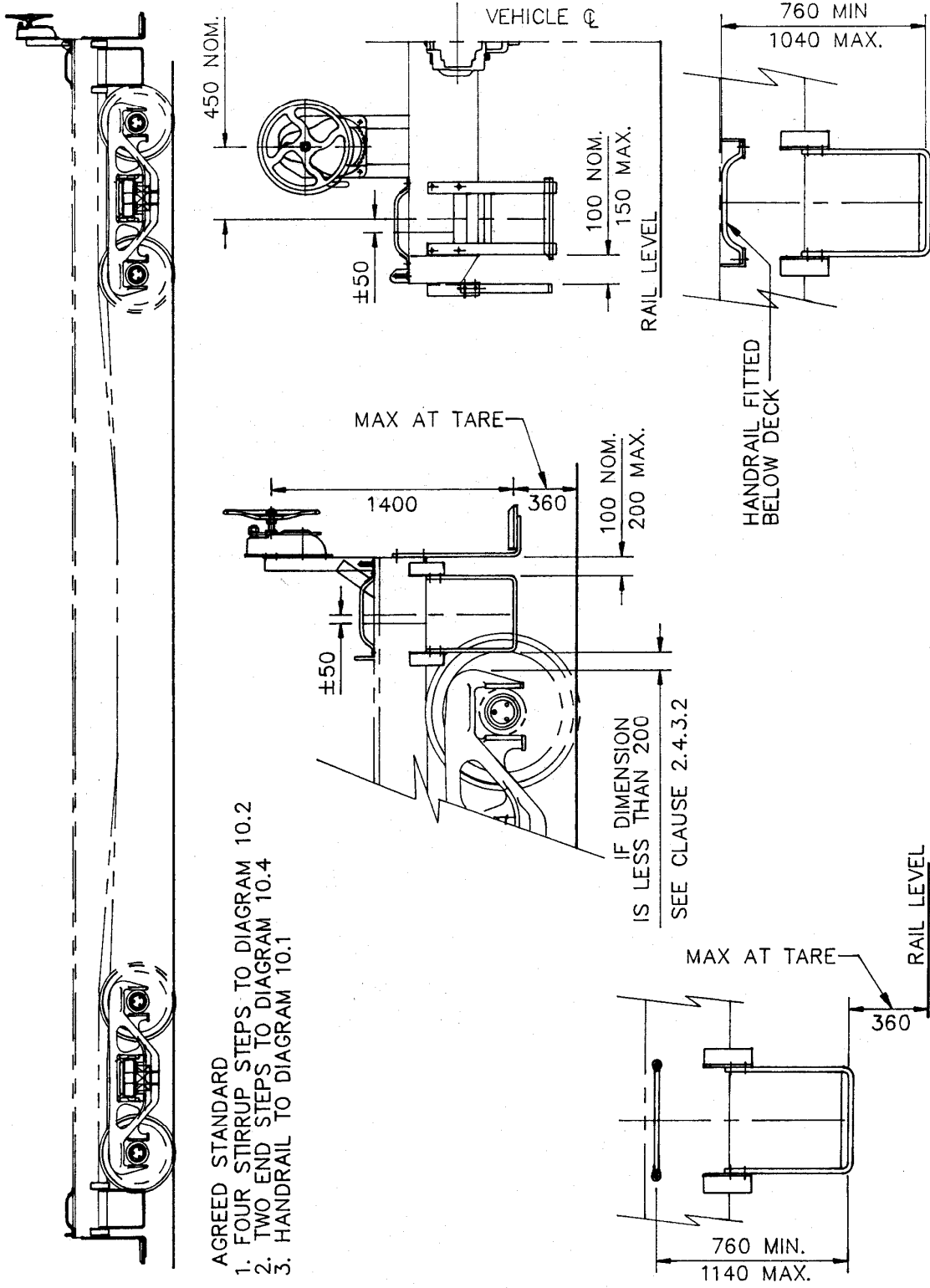
Handholds shall be positioned centrally above steps within ± 100 mm longitudinally.

2.4.5.5 Handhold mounting bar shall be used if the body material is less than 3 mm. Bar sizes of 100 x 6 mm and 50 x 6 mm shall be used with a minimum weld length per bracket of 100 mm each side. Alternatively angle brackets 6 mm thick may be used in conjunction with body sheet contour.

2.4.5.6 Handbrake shall be of the AAR geared type with a handwheel of the steel rimmed spoked type. The release lever shall be positioned adjacent to the step. Position of handbrake shall be in accordance with diagrams 2.4 and 2.6.

DIAGRAM 2-2

FLAT CAR WITH END HANDBRAKE



- AGREED STANDARD
1. FOUR STIRRUP STEPS TO DIAGRAM 10.2
 2. TWO END STEPS TO DIAGRAM 10.4
 3. HANDRAIL TO DIAGRAM 10.1

DIAGRAM 2-3

OPEN CAR WITH TRANSVERSE HANDBRAKE

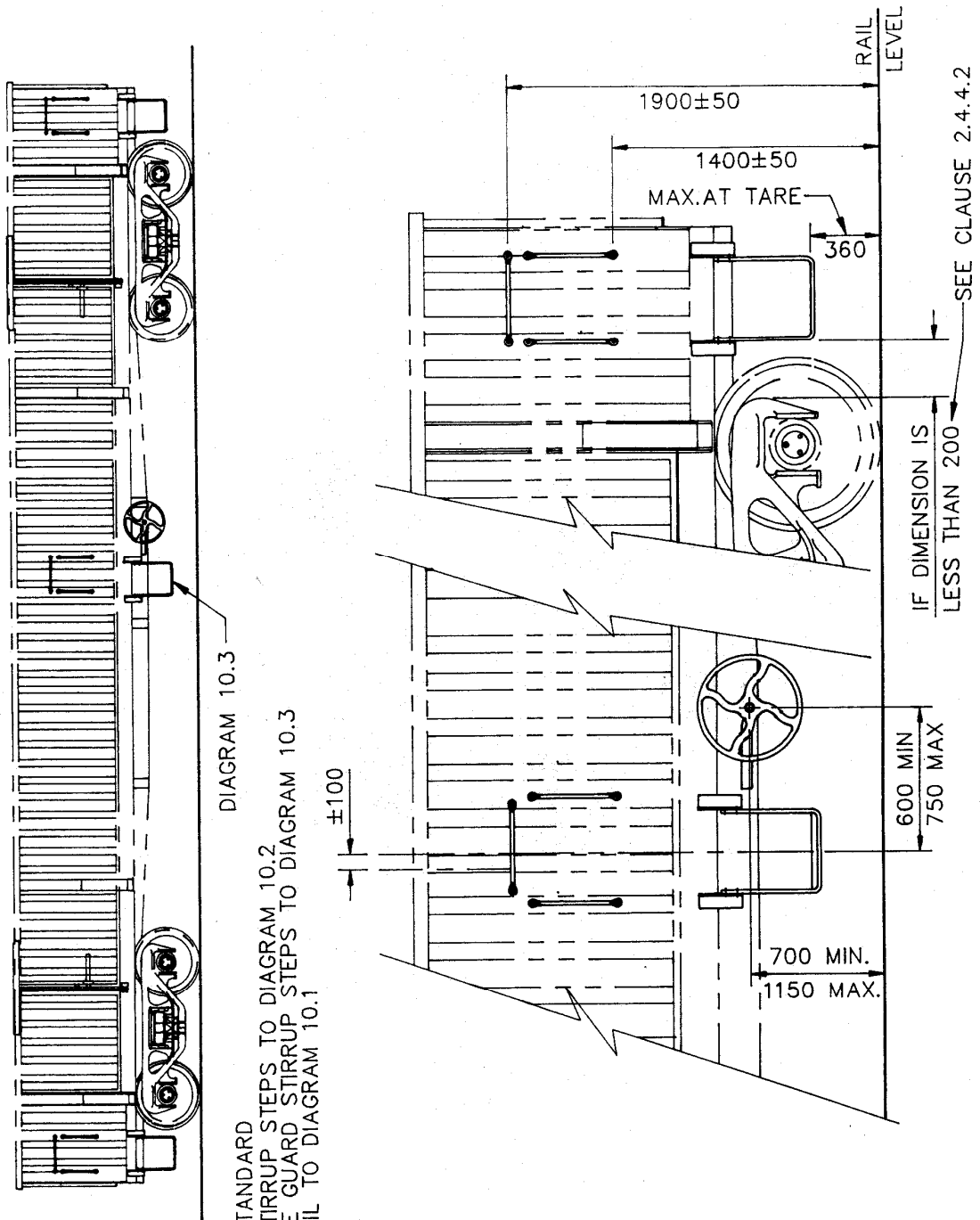


DIAGRAM 10.3

AGREED STANDARD

1. FOUR STIRRUP STEPS TO DIAGRAM 10.2
2. TWO TOE GUARD STIRRUP STEPS TO DIAGRAM 10.3
3. HANDRAIL TO DIAGRAM 10.1

DIAGRAM 2-4

OPEN CAR WITH END HANDBRAKE

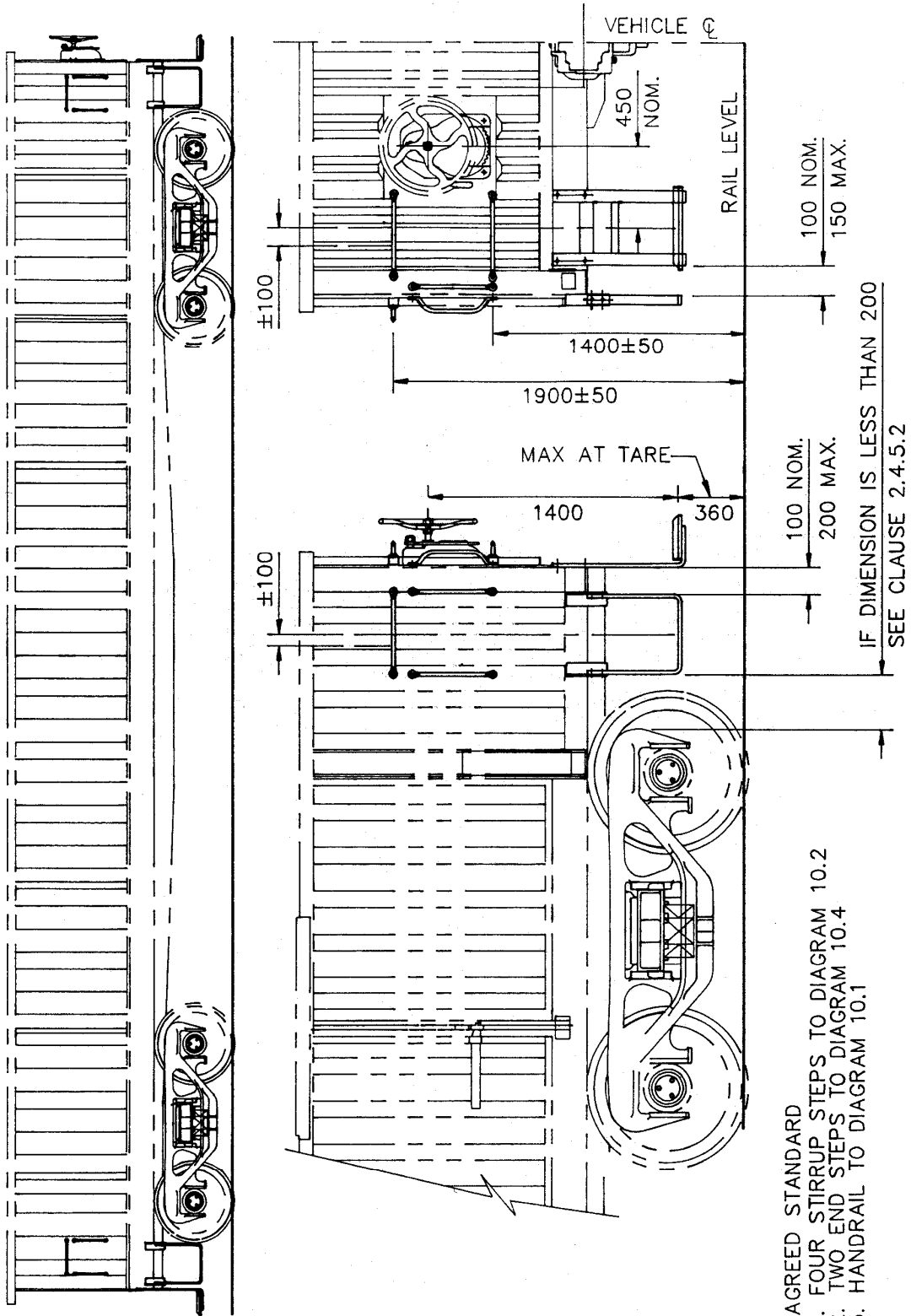


DIAGRAM 2-5

BOX TYPE CAR WITH TRANSVERSE HANDBRAKE

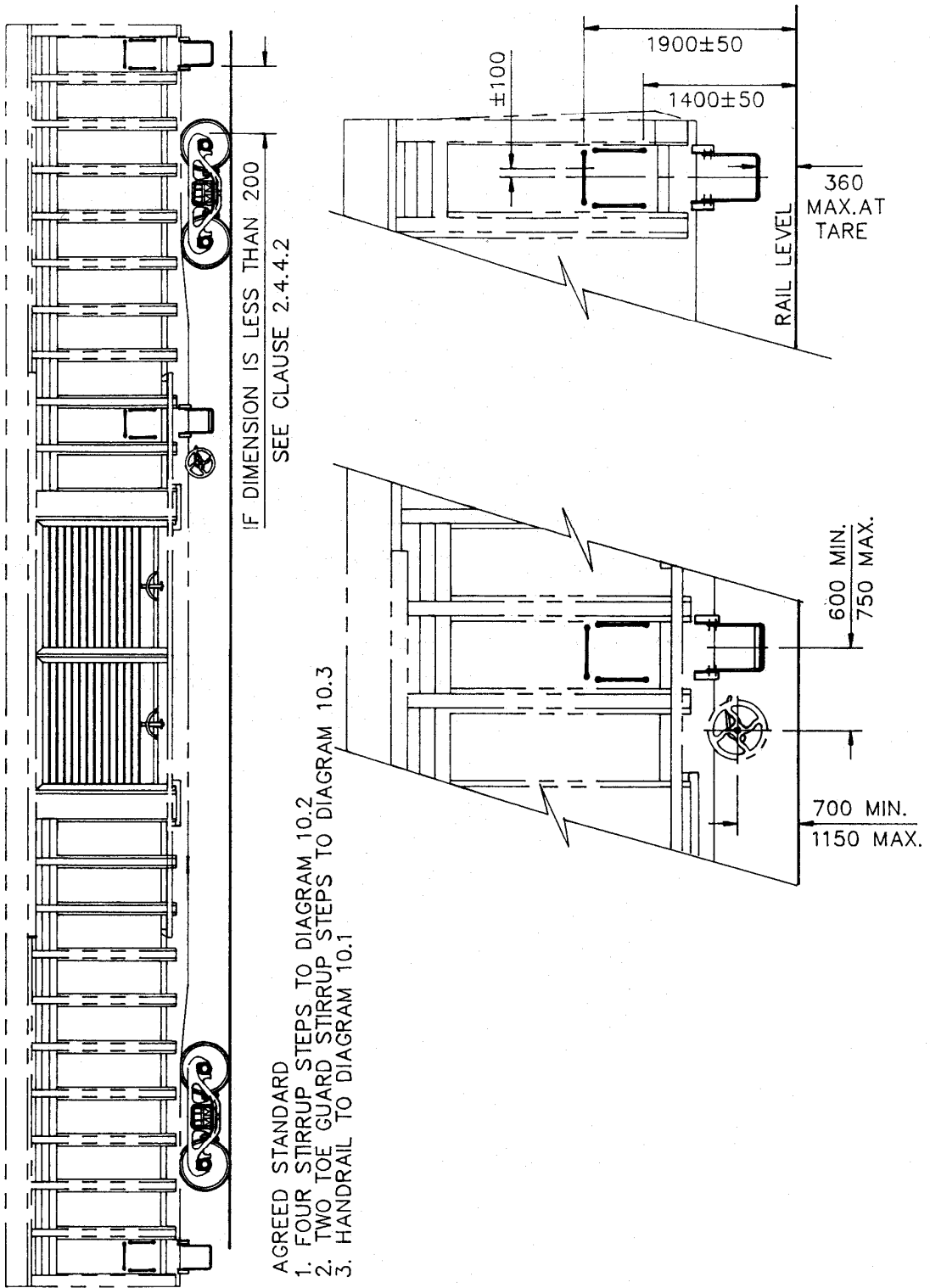
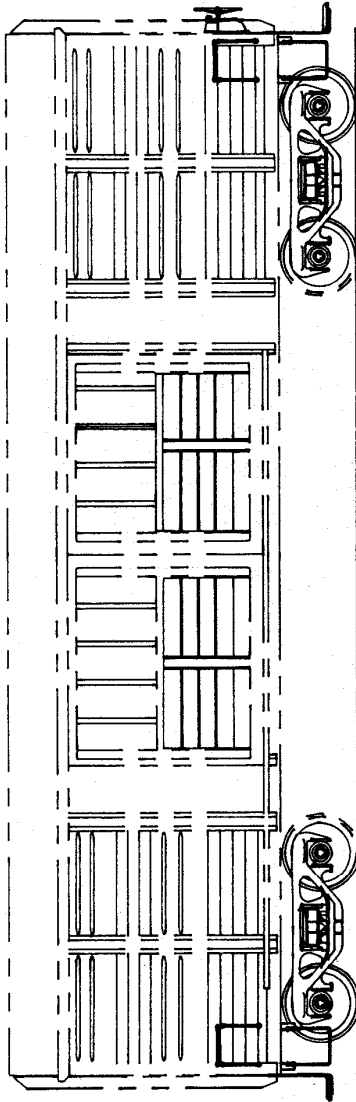


DIAGRAM 2-6

BOX TYPE CAR WITH END HANDBRAKE



- AGREED STANDARD
1. FOUR STIRRUP STEPS TO DIAGRAM 10.2
 2. TWO END STEPS TO DIAGRAM 10.4
 3. HANDRAILS TO DIAGRAM 10.1

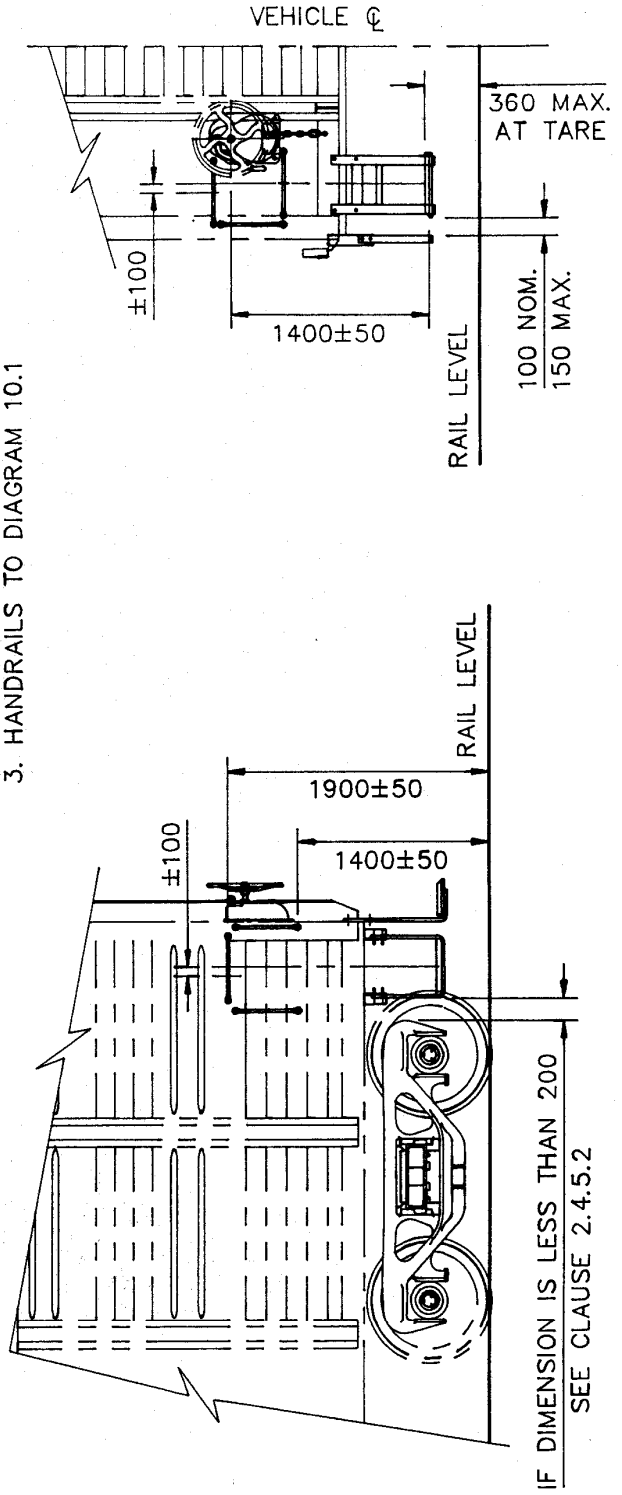


DIAGRAM 2-7

ATTACHMENTS

