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# **WA Performance Based Standards (PBS) Scheme**

## **Vehicle Certification Guidelines**

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marked otherwise.

D20#826341  
October 2025

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# Document Control

|                  |                                                     |
|------------------|-----------------------------------------------------|
| Owner            | Heavy Vehicle Access Improvement and Policy Manager |
| Custodian        | Heavy Vehicle Access and Improvement Coordinator    |
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## Amendments

| Revision Number | Revision Date     | Description of Key Changes                                                                                                                                                                                                           | Section / Page No.                               |
|-----------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| 1               | August 2021       | Review entire document on transferred onto new template                                                                                                                                                                              | All                                              |
| 2               | August 2021       | Added 60m Road Train Signage requirements                                                                                                                                                                                            | 24                                               |
| 3               | 27 April 2023     | Updated Document Owner and Custodian. Added new compliance plate note. Added 3.2.6 for generic tyres. Updated Level 4B signage requirements. Updated Related Documents to include Certification Workbook and Voltage Test Procedure. | s.3, p. 4<br>s.3, p.15<br>s.4, p.25<br>s.5, p.26 |
| 4               | 30 September 2025 | Updated document for Self-Certification.                                                                                                                                                                                             | All                                              |
| 5               | 28 October 2025   | Updated links within the referenced and related documents table.                                                                                                                                                                     | -                                                |

## REFERENCES AND RELATED DOCUMENTS

The following documents are related to the WA PBS Scheme and the vehicle certification process. These documents are available on the Performance Based Standards (PBS) page on the Main Roads website.

| Document Name                                                                             | Location                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WA PBS Manufacturer's Vehicle Certification Application                                   | <a href="https://www.mainroads.wa.gov.au/4a763a/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-pbs-manufacturers-vehicle-certification-application.pdf">https://www.mainroads.wa.gov.au/4a763a/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-pbs-manufacturers-vehicle-certification-application.pdf</a>                                                           |
| WA PBS Vehicle Certification Application                                                  | <a href="https://www.mainroads.wa.gov.au/4a75d2/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standard-scheme-vehicle-certification-application.pdf">https://www.mainroads.wa.gov.au/4a75d2/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standard-scheme-vehicle-certification-application.pdf</a>                           |
| PBS Vehicle Dimension Guide                                                               | <a href="https://www.mainroads.wa.gov.au/4a7995/globalassets/heavy-vehicles/permits-orders-schemes/pbs/pbs-vehicle-dimension-guide.pdf">https://www.mainroads.wa.gov.au/4a7995/globalassets/heavy-vehicles/permits-orders-schemes/pbs/pbs-vehicle-dimension-guide.pdf</a>                                                                                                                 |
| WA Performance Based Standards (PBS) Scheme – Access Levels and Principles                | <a href="https://www.mainroads.wa.gov.au/4a1640/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-access-levels-and-principles.pdf?v=4aff42">https://www.mainroads.wa.gov.au/4a1640/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-access-levels-and-principles.pdf?v=4aff42</a>         |
| WA Performance Based Standards (PBS) Scheme – Application and Approval Process            | <a href="https://www.mainroads.wa.gov.au/4aa436/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-application-and-approval-process.pdf?v=4aff24">https://www.mainroads.wa.gov.au/4aa436/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-application-and-approval-process.pdf?v=4aff24</a> |
| WA Performance Based Standards (PBS) Scheme – Assessment Results (Part A)                 | <a href="https://www.mainroads.wa.gov.au/4afff7/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-assessment-results-part-a.docx?v=4afff7">https://www.mainroads.wa.gov.au/4afff7/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-assessment-results-part-a.docx?v=4afff7</a>             |
| WA Performance Based Standards (PBS) Scheme – Audit Framework                             | <a href="https://www.mainroads.wa.gov.au/4a96c3/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-audit-framework.pdf?v=4928cb">https://www.mainroads.wa.gov.au/4a96c3/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-audit-framework.pdf?v=4928cb</a>                                   |
| WA Performance Based Standards (PBS) Scheme - Manufacturer's Declaration - Towing Vehicle | <a href="https://www.mainroads.wa.gov.au/49df4a/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-manufacturers-declaration-towing-vehicle.docx">https://www.mainroads.wa.gov.au/49df4a/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-manufacturers-declaration-towing-vehicle.docx</a> |
| WA Performance Based Standards (PBS) Scheme - Manufacturer's Declaration – Trailer        | <a href="https://www.mainroads.wa.gov.au/4adeb5/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-manufacturers-declaration-trailer.docx">https://www.mainroads.wa.gov.au/4adeb5/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-manufacturers-declaration-trailer.docx</a>               |

| Document Name                                                                        | Location                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WA Performance Based Standards (PBS) Scheme - Road Train TEBS Voltage Test Procedure | <a href="https://www.mainroads.wa.gov.au/4a65ab/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-pbs-scheme-road-train-tebs-voltage-test-procedure.pdf?v=4a65ab">https://www.mainroads.wa.gov.au/4a65ab/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-pbs-scheme-road-train-tebs-voltage-test-procedure.pdf?v=4a65ab</a>                                                         |
| WA Performance Based Standards (PBS) Scheme – Standards and Vehicle Assessment Rules | <a href="https://www.mainroads.wa.gov.au/4a7901/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-standards-and-vehicle-assessment-rules.pdf?v=4affd4">https://www.mainroads.wa.gov.au/4a7901/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-standards-and-vehicle-assessment-rules.pdf?v=4affd4</a> |
| WA Performance Based Standards (PBS) Scheme - Vehicle Certification Guidelines       | <a href="https://www.mainroads.wa.gov.au/4a750f/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-vehicle-certification-guidelines.pdf">https://www.mainroads.wa.gov.au/4a750f/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-vehicle-certification-guidelines.pdf</a>                               |
| WA Performance Based Standards (PBS) Scheme – Vehicle Specifications (Part B)        | <a href="https://www.mainroads.wa.gov.au/4ae8e1/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standard-pbs-scheme-vehicle-specifications-part-b.docx?v=4afb7e">https://www.mainroads.wa.gov.au/4ae8e1/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standard-pbs-scheme-vehicle-specifications-part-b.docx?v=4afb7e</a>                   |

# 1 PURPOSE

This document outlines the steps a certifier should follow when conducting a Performance Based Standards (PBS) certification under the WA PBS Scheme.

# 2 SCOPE

These procedures apply to the WA PBS Scheme only. The NHVR PBS Vehicle Certification Rules must be followed when certifying vehicles under the National PBS Scheme.

# 3 CERTIFICATION RECORDS

## 3.1 Certification Records

- 3.1.1** All details verified during the certification inspection must be recorded in the WA PBS Scheme – Vehicle Specifications (Part B) form, or a similar document.
- 3.1.2** The vehicle must not be certified unless the evidence recorded during the inspection verifies the vehicle complies with all the specifications in the WA PBS Scheme – Vehicle Specifications (Part B) form and the Vehicle Design Approval.
- 3.1.3** All certification records must be maintained for a minimum of 7 years and produced to Main Roads Heavy Vehicle Services personnel upon request.

## 3.2 Photographic Evidence

During the inspection, photos must be taken of all components inspected, including compliance plates, modification plates, ratings plates, any other relevant plates fitted, signs, all couplings, tyre groups and individual tyres clearly showing the sizes, makes and model. Photos also need to be taken of the front view, the rear view and the full combination (where applicable). The certifier should take photos of anything else in this document that requires evidence to be recorded and a photo is a practical means of verification.

# 4 VEHICLE CERTIFICATION PROCEDURE

## 4.1 Towing Vehicle Certification

- 4.1.1** Record the Vehicle Identification Number (VIN) of the towing vehicle that is on the plate or chassis. The VIN number in a manufacturer's declaration for a towing vehicle must match with VIN number on the compliance plate.
- 4.1.2** Record the Engine Make and Model.
- 4.1.3** Record the Power and Torque information.

|                      |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                     |                                                                                |                                            |
|----------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------|
| Engine and Driveline | Make, model and rating<br>Engine torque-speed | Cummins: ISX600-20-50 (Signature) Euro 5 – 448 kW (600 hp), 2781 Nm (2050 <u>lb.ft</u> )<br><br>Volvo D16G 600, Euro 5 – 441 kW (600 hp), 2800 Nm (2065 <u>lb.ft</u> )<br><br>Mack: MP10 Euro 5 – 441 kW (600 Hp), 2800 Nm (2065 <u>lb.ft</u> )<br><br>Note: Engines a higher power and torque output over the engine rpm range can be considered equivalent, refer section 8 – Engine power and torque curves. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Cummins X15 Euro V 600 – 615<br>Power: 459kW@1800rpm<br>Torque: 2779Nm@1200rpm | Manufactures rating letter and declaration |
|                      |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                     |                                                                                |                                            |

**4.1.4 Record the clutch engagement torque.**

|                                                |                                                                 |                                                                     |        |                                          |
|------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------|--------|------------------------------------------|
| Clutch engagement torque (manual transmission) | 50 % peak torque assumed in assessment (1389.5 = 50% of 2779Nm) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 1390Nm | Updated manufacture declaration received |
|------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------|--------|------------------------------------------|

**4.1.5 Record the gearbox make.**

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                     |                                                                                                                                                                   |                                                                     |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Gearbox | <p>Make, model and gearbox ratios</p> <p>Eaton Fuller RTLO14918B/RTLO16918B 18-speed<br/>14.40, 12.29, 8.56, 7.30, 6.05, 5.16, 4.38, 3.74, 3.20, 2.73, 2.29, 1.95, 1.62, 1.38, 1.17, 1.00, 0.86, 0.73</p> <p>Eaton Fuller RTLO18918B/RTLO20918B/RTLO22918B 18-speed<br/>14.40, 12.29, 8.51, 7.26, 6.05, 5.16, 4.38, 3.74, 3.20, 2.73, 2.28, 1.94, 1.62, 1.38, 1.17, 1.00, 0.86, 0.73</p> <p>Eaton Fuller FOxxE318B-xXP (Ultrashift)<br/>14.40, 12.29, 8.51, 7.26, 6.05, 5.16, 4.38, 3.74, 3.20, 2.73, 2.28, 1.94, 1.62, 1.38, 1.17, 1.00, 0.86, 0.73</p> <p>Volvo ATO3112D<br/>11.73, 9.21, 7.09, 5.57, 4.35, 3.41, 2.7, 2.12, 1.63, 1.28, 1.0, 0.78</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <p>Fuller RTLO22918B<br/>Overall ratio 19.72<br/>14.40, 12.29, 8.51, 7.26, 6.05, 5.16, 4.38, 3.74, 3.20, 2.73, 2.28, 1.94, 1.62, 1.38, 1.17, 1.00, 0.86, 0.73</p> | <p>Manufacturers declaration</p> <p>Manufacturers rating letter</p> |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|

**4.1.6 Record the final drive ratio.**

|              |                                                                                                                                                                                          |                                                                     |                                   |                                                                     |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------|
| Differential | <p>Make, model and final drive ratio</p> <p>5.19:1 – 5.56:1: Eaton Fuller RTLOxx918B 18-speed, Eaton Fuller FOxxE318B-xXP (Ultrashift)</p> <p>3.4:1 – 4.55:1: Volvo I-Shift ATI3112D</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <p>Dana T78-590<br/>FDR: 5.19</p> | <p>Manufacturers declaration</p> <p>Manufacturers rating letter</p> |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------|

**4.1.7 Record the steer axle rating as provided in the manufacturer's declaration.****4.1.8 Record the steer axle and drive axle suspension details.**

|            |                |                                                                                                                                                              |                                                                     |                                        |                                                                     |
|------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------|
| Suspension | Make and Model | <p><b>Variant 1</b><br/>Steer – Taper leaf springs 7.0 t (minimum)</p> <p><b>Variant 2</b><br/>Steer – Taper leaf or multi-leaf springs 13.0 t (minimum)</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Steer: Kenworth Leaf Spring 7.2 tonnes | <p>Manufacturers declaration</p> <p>Manufacturers rating letter</p> |
|            |                | Twin steer (if applicable) – load sharing                                                                                                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No            | N/A                                    |                                                                     |
|            |                | <p><b>Variant 1</b><br/>Drive – <u>Neway</u>: AD 390/10</p> <p><b>Variant 2</b><br/>Drive – Volvo: RADD-GR RAL27</p>                                         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Drive: <u>Neway</u> AD390/10           | <p>Manufacturers declaration</p> <p>Manufacturers rating letter</p> |
|            |                |                                                                                                                                                              |                                                                     |                                        |                                                                     |

**4.1.9 Measure and record the steer axle track width, drive axle track width and dual tyre spacing and record the measurements. Refer to the PBS Vehicle Dimension Guide.****4.1.10 Record the drive axle group tractive effort distribution / differential torque distribution.**

|                  |                                               |                                                                                                                                                                                                                   |                                                                     |                                                                                               |                           |
|------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------|
| Wheels and axles | Track width and dual tyre spacing             | <p>Steer: 2,000 mm (minimum)</p> <p>Drive: 1,850 mm (minimum)</p> <p>Dual tyre spacing: 320 mm (minimum)</p>                                                                                                      | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <p>Steer Track – 2,150 mm</p> <p>Drive Track – 1,870 mm</p> <p>Dual tyre spacing – 340 mm</p> | Inspected                 |
|                  | Drive axle group tractive effort distribution | <p>50:25:25</p> <p>or equally distributed with maximum difference in tractive force between any two axles in the group is not greater than 10 % of the total tractive force delivered by the drive axle group</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 33:33:33                                                                                      | Manufacturers declaration |

**4.1.11** Inspect the tyres fitted on the towing vehicle and record details of the make, model and tyre size. Identify if tyres are re-treads and if so, ensure re-treads are approved on the Part B.

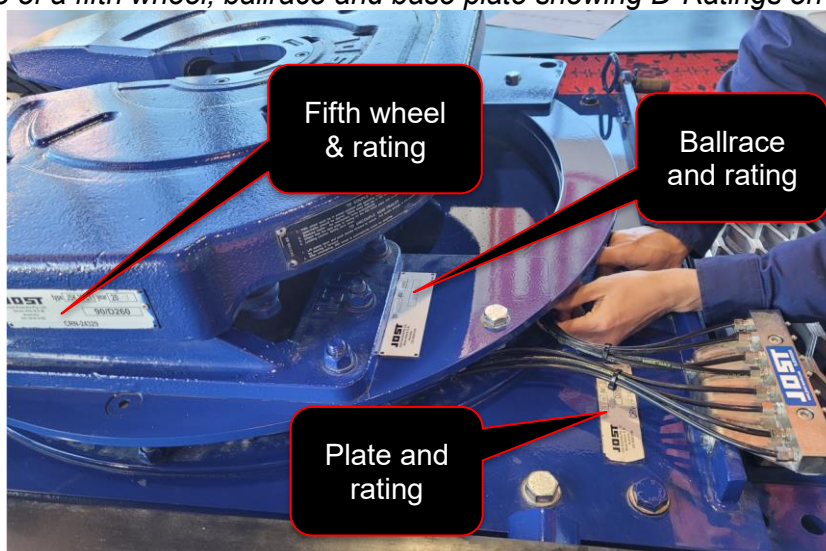
|       |                                 |                                                                                                                                                                                                        |                                                                     |                                    |           |
|-------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------|-----------|
| Tyres | New tyre size, make, model      | Steer – Non-brand-specific (22.5-inch rim diameter)                                                                                                                                                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 385/65R22.5<br>Michelin x Multiway | Inspected |
|       |                                 | Drive<br>Dunlop 295/80R22.5                                                                                                                                                                            | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Dunlop<br>295/80R22.5              | Inspected |
|       |                                 | Goodyear 295/80R22.5                                                                                                                                                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                                    |           |
|       | Re-tread tyre size, make, model | Steer - Non-brand-specific (22.5-inch rim diameter)                                                                                                                                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                                    |           |
|       |                                 | Drive - <u>Retread</u> or regroove tyres are permitted, provided they are certified by the manufacturer as having performance equivalent to that of a new tyre that is acceptable under this approval. | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                                    |           |



**4.1.12** Inspect the tow coupling, including fifth wheel, ballrace and the base plate (as applicable), and record the make and D-Rating on the identification plates fitted to each component.

|           |                |                                |                                                                     |                                                                              |           |
|-----------|----------------|--------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------|-----------|
| Couplings | Type, D rating | Fifth-wheel<br>D $\geq$ 236 kN | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Fifth wheel: 90/D260<br>Jost DR38 C1-160<br>90mm ballrace<br>Ballrace: 275kN | Inspected |
|           |                |                                |                                                                     |                                                                              |           |

*Example of a fifth wheel, ballrace and base plate showing D-Ratings on each unit*



**4.1.13** Record the braking system details, including the braking system's electrical power output and confirm the system provides Controlled Area Network (CAN) control signals.

|        |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                          |                                                                                                                           |                                                                                             |
|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Brakes | EBS, ABS, LPV | In accordance with the Main Roads WA requirements:<br>• The prime mover must supply sufficient power to ensure that the Trailer Electronic Braking System (TEBS) on all trailers functions as per manufacturer's specifications when all vehicle units are coupled together and the electrical system is under maximum permissible load from all current-drawing electrical devices in the vehicle combination.<br>Note: It is expected that this requirement will be complied with if the prime mover provides 24-Volt power with a minimum of 25 amperes continuous capacity to the Trailer Electronic Brake System (TEBS). Also, provided that the voltage measured at the rearmost trailer is at | <input type="checkbox"/> Yes <input type="checkbox"/> No | Drum Brake<br>EBS<br>ESP<br>Bendix Fusion<br>ACB with collision mitigation<br>24v TRM<br><br>Confirmed CAN Bus connection | Manufacturer Declaration.<br>Updated Manufacturer's Declaration received (refer Section 6). |
|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

**4.1.14** Obtain the tare weight of the prime mover using one of the following methods:

- Physically weigh the vehicle(s) using portable scales,
- Physically weigh the vehicle(s) on a certified weighbridge,
- A weight declaration or weighbridge docket(s) from the manufacturer.

|      |                   |        |                                                                     |        |                                            |
|------|-------------------|--------|---------------------------------------------------------------------|--------|--------------------------------------------|
| Tare | Minimum tare (kg) | 12,000 | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 14,200 | Manufactures rating letter and declaration |
|------|-------------------|--------|---------------------------------------------------------------------|--------|--------------------------------------------|

**4.1.15** Inspect the ratings plate of the towing vehicle and record the manufacturer's Gross Vehicle Mass (GVM) and Gross Combination Mass (GCM).

|      |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                     |                                       |                                            |
|------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------|--------------------------------------------|
| Mass | Gross Vehicle Mass (kg)<br>Gross Combination Mass (Tonnes) | <b>Variant 1:</b><br>GVM: 30.5 t (minimum)<br>GCM: 210.0 t (minimum)<br><b>Variant 2:</b><br>GVM: 35.5 t (minimum)<br>GCM: 215.0 t (minimum)<br>Note: the required GVM/GCM may be reduced if it aligns with the approved axle group weights which may be adjusted:<br>1. to comply with road access restrictions<br>2. to comply with appropriate steer axle load<br>3. to align with the manufacturer's recommended maximum GVM/GCM. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | GVM 32.00 tonnes<br>GCM 246.00 tonnes | Manufactures rating letter and declaration |
|------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------|--------------------------------------------|

**4.1.16** Where the towing vehicles GVM and/or GCM ratings have been modified, inspect the modification plate (the "blue plate") and record the modified GCM and GVM ratings.

**4.1.17** Check that the towing vehicle meets any additional or special requirements specified in the WA PBS Scheme – Vehicle Specifications (Part B) form that have not already been addressed.

|       |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                     |          |                                                       |
|-------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------|-------------------------------------------------------|
| Other | Additional or special requirements | The front connection shall provide a roll-coupling between trailing units which may include up to ±2 degrees of lash. The connection must comply with the static overturning moment performance requirements applied to fifth wheel couplings in Australian/New Zealand Standard AS/NZS 4968.2:2003 Heavy Road Vehicles – Mechanical coupling between articulated vehicle combinations – Part 2: Testing and installing of fifth wheel and associated equipment. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Complies | Confirmation of tow coupling lash Trim<br>D20#1037563 |
|-------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------|-------------------------------------------------------|

## 4.2 Trailer Certification

- 4.2.1** Record the Vehicle Identification Number (VIN) of the trailer that is on the plate or chassis. The VIN number in a manufacturer's declaration for a towing vehicle must match with VIN number on the compliance plate.
- 4.2.2** Record the position number of the trailer in the design, where there are different trailers in the design, e.g. Unit 2 for the lead semi-trailer, Unit 3 for the converter dolly.
- 4.2.3** Record the generic trailer description, the make (i.e. Manufacturer's name) and model number (as per the manufacturer) of the trailer.

|         |                     |                                                                                    |                                                                     |                          |                                      |
|---------|---------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------|--------------------------------------|
| Vehicle | Generic description | Side-tipping tri-axle lead trailer or semi-trailer component of 6-axle dog trailer | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Tri axle semi<br>1TWL329 | Manufacturer Declaration & Inspected |
|         | Make and model      | Howard Porter                                                                      | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Howard Porter Tri470 OD  | Manufacturer Declaration & Inspected |
|         | Body type           | Side tipper                                                                        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Side Tipper              | Manufacturer Declaration & Inspected |

- 4.2.4** Record the make and model number of the suspensions fitted. If the trailer is fitted with a steerable axle, record the steerable axle make and model number separately.

|            |                                          |                                             |                                                                     |                                                         |                          |
|------------|------------------------------------------|---------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------|--------------------------|
| Suspension | Rigid axle suspension make and model     | TMC: 3 leaf <u>overslung</u> 3204017PB-137R | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Load sharing spring TMC<br>3204027PB – 137R<br>(3 Leaf) | Manufacturer Declaration |
|            | Steerable axle suspension make and model | TMC: 3 leaf <u>overslung</u> 3204017PB-137R | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Load sharing spring, TMC<br>3204027PB – 137R            | Manufacturer Declaration |

- 4.2.5** Measure and record the trailer track width and dual tyre spacing. Refer to the PBS Vehicle Dimension Guide.
- 4.2.6** Record the tyre size and check the tyre size and the load rating meet the requirements specified in the Vehicle Design Approval.

|       |                                 |                    |                                                                     |                               |                                      |
|-------|---------------------------------|--------------------|---------------------------------------------------------------------|-------------------------------|--------------------------------------|
| Tyres | New tyre size, make, model      | 11R22.5, any brand | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 11R22.5<br><u>HiFly</u> HH104 | Manufacturer Declaration & Inspected |
|       | Re-tread tyre size, make, model | 11R22.5, any brand | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                               | Manufacturer Declaration             |

- 4.2.7** Inspect the tow coupling, including fifth wheel, ballrace and the base plate (as applicable), and record the make and D-Rating on the identification plates fitted to each component.
- 4.2.8** Inspect the kingpin and record D-Rating, make and model.

*Example of photographic evidence for a kingpin D-Rating*



|           |                |                                                                                                                                                                          |                                                                     |                                                                                     |                                            |
|-----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|
| Couplings | Type, D rating | Fifth wheel or ball-race coupling on<br>rocker feet/hard coupled<br>Kingpin (if applicable), $D \geq 236 \text{ kN}$<br>Fifth-wheel or ballrace, $D \geq 242 \text{ kN}$ | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Kingpin: Jost KP3510<br>260kN<br>Hard coupled<br>Ballrace: KHitch KHDR1000<br>480kN | Manufacturer<br>Declaration &<br>Inspected |
|-----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|

**4.2.9** Record the D-Rating, make and model for the drawbar tow eye (if applicable) for the dolly.



**4.2.10** Record the D-Rating, make and model for the Ringfeder (pin coupling) attached at the rear of the semi-trailer (if applicable).



**4.2.11** Record the D-Rating, make and model for the gooseneck drawbar and/or roll-coupling (if applicable).

**4.2.12** The certifier must confirm the following braking system requirements and keep a record of how these details were verified:

- The prime mover must be fitted with an Antilock Braking System (ABS) or an Electronic Braking System (EBS).
- All vehicles must be fitted with and have a functioning EBS wiring network to support CAN communications across the entire combination, with adequate power to support the Trailer Electronic Braking System (TEBS) of all trailers and dollies (where applicable) in the combination.
- All prime movers / rigid trucks must supply a CAN / TEBS brake application signal.
- All trailers with TEBS must be fitted with a green TEBS power-on indicator lamp and a red or flashing green TEBS fault indicator lamp, or a diagnostic board. The green lamp must illuminate when the TEBS is powered, and red lamp must illuminate when there is a system fault, or the green lamp must flash when there is a system fault.
- All semi-trailers must be fitted with TEBS, with a fully functional Rollover Stability System (RSS) and a compatible CAN connection linking all units in the combination.
- If dollies are not fitted with TEBS, the EBS cabling can bypass the dolly and directly connect semi-trailer to semi-trailer.

|        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                     |                                                                                                                                                            |                          |
|--------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Brakes | EBS, RSS, ABS, LPV | <p>As per ADR 38/05 or<br/>In accordance with the Main Roads WA requirements:</p> <ul style="list-style-type: none"> <li>EBS with RSS;</li> <li>The prime mover must supply sufficient power to ensure that the Trailer Electronic Braking System (TEBS) on all trailers functions as per manufacturer's specifications when all vehicle units are coupled together and the electrical system is under maximum permissible load from all current-drawing electrical devices in the vehicle combination.</li> </ul> <p>Note: It is expected that this requirement will be complied with if the prime mover provides 24-Volt power with a minimum of 25 amperes continuous capacity to the Trailer Electronic Brake System (TEBS). Also, provided that the voltage measured at the rearmost trailer is at least 9 Volts when all vehicle units are coupled together and the electrical system is under maximum permissible load from all current-drawing electrical devices in the vehicle combination.</p> <ul style="list-style-type: none"> <li>The prime mover EBS system must provide a CAN (Controller Area Network) control signal. A CAN generation device activated by the pneumatic brake control pressure is acceptable.</li> </ul> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <div style="border: 2px solid red; padding: 10px; text-align: center;">           Disc brake<br/>EBS with RSS<br/>CAN Bus connection fitted         </div> | Manufacturer Declaration |
|--------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|

**4.2.13** Inspect the trailer to confirm a Trailer Electronic Braking System (TEBS) plate is fitted. Obtain an End of Line (EOL) Test Report of each individual unit that is fitted with an ABS/EBS unit.

**4.2.14** Inspect the compliance / ratings plate of the trailer and record the manufacturer's Aggregate Trailer Mass (ATM).

|      |                             |       |                                                                     |          |                                      |
|------|-----------------------------|-------|---------------------------------------------------------------------|----------|--------------------------------------|
| Mass | Aggregate Trailer Mass (kg) | 47000 | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 47,000kg | Manufacturer Declaration & Inspected |
|------|-----------------------------|-------|---------------------------------------------------------------------|----------|--------------------------------------|

**4.2.15** Obtain the tare weight of each trailer using one of the following methods:

- Physically weigh the vehicle(s) using portable scales,
- Physically weigh the vehicle(s) on a certified weighbridge,

- c) Weight declaration or weighbridge docket(s) from the manufacturer.
- d) Manufacturers declaration.

|      |                   |      |                                                                     |         |                          |
|------|-------------------|------|---------------------------------------------------------------------|---------|--------------------------|
| Tare | Minimum tare (kg) | 7300 | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 7,400kg | Manufacturer Declaration |
|------|-------------------|------|---------------------------------------------------------------------|---------|--------------------------|

**4.2.16** Check that the trailer meets any additional or special requirements specified in the WA PBS Scheme – Vehicle Specifications (Part B) form that have not already been addressed. These items are generally declared by the relevant manufacturer.

|       |                                    |  |                                                          |  |  |
|-------|------------------------------------|--|----------------------------------------------------------|--|--|
| Other | Additional or special requirements |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |  |
|-------|------------------------------------|--|----------------------------------------------------------|--|--|

### 4.3 Vehicle Combination Onsite Measurements

- 4.3.1** Using the WA PBS Scheme – Vehicle Specifications (Part B) form, or similar document, record all vehicle measurements in accordance with the schematic contained within the Part B and confirm all measurements.
- 4.3.2** All measurements shown in Part 8 of the WA PBS Scheme – Vehicle Specifications (Part B) form must be recorded as a minimum.

## 5 ROAD TRAIN SIGNAGE

The certifier must confirm the correct signage is fitted to the rear trailer in the PBS combination, as per the following requirements:

### 5.1 Warning Signs for Certain Combinations

- 5.1.1** A Level 2 RAV exceeding 22 metres in length, but not exceeding 27.5 metres in length, must display a 27.5m Long RAV Warning Sign, as specified in [Appendix 1](#).
- 5.1.2** A Level 2B RAV exceeding 27.5 metres in length, but not exceeding 30 metres in length, must display a 30m Long RAV Warning Sign, as specified in [Appendix 1](#).
- 5.1.3** A Level 2B RAV exceeding 30 metres in length, must display a Specific Length RAV Warning Sign, with the actual vehicle combination length rounded up to the nearest metre, and showing a car equivalent based on a 5-metre-long car (rounded up), as per the example in [Appendix 1](#).
- 5.1.4** A Level 3 RAV exceeding 30 metres in length, but not exceeding 36.5 metres in length, must display a 36.5m Long RAV Warning Sign, as specified in [Appendix 1](#).
- 5.1.5** A Level 3B RAV exceeding 36.5 metres in length, but not exceeding 42 metres in length, must display a 42m Long RAV Warning Sign, as specified in [Appendix 1](#).
- 5.1.6** A Level 4 RAV exceeding 42 metres in length, but not exceeding 53.5 metres in length, must display a 53.5m Long RAV Warning Sign, as specified in [Appendix 1](#).
- 5.1.7** A Level 4B RAV exceeding 53.5 metres in length, but not exceeding 60 metres in length, must display a 60m Long RAV Warning Sign, as specified in [Appendix 2](#).
- 5.1.8** The RAV warning sign must only be fitted horizontally on the rear of the RAV.

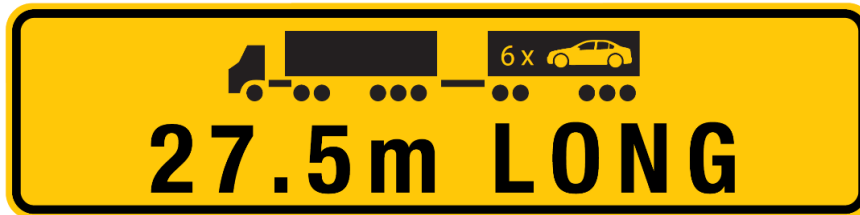
## 5.2 Warning Signs Specifications

- 5.2.1** The RAV warning sign must be manufactured in one or 2 parts from:
- (a) sheet steel with a minimum thickness of 0.8 mm thick; or
  - (b) a sticker attached to an equivalent rigid surface; or
  - (c) a flexible vinyl material, provided the sign is attached in such a manner that ensures it remains taut and clearly visible.
- 5.2.2** The RAV warning sign must be the minimum dimensions shown in [Appendix 3](#).
- 5.2.3** The RAV warning sign must display the words specified in [Appendix 1](#) or [Appendix 2](#), in black capital letters, in typeface Helvetica Neue Bold Condensed, and the size shown [Appendix 3](#).
- 5.2.4** If the RAV warning sign is in 2 parts, it must be split through the centre as shown in [Appendix 4](#).
- 5.2.5** The RAV warning sign must have a black border. A black border is not required on the inside of a RAV warning sign split in 2 parts.
- 5.2.6** The RAV warning sign must display the sign manufacturer's name or logo, and the brand and class of retro-reflective material used, in block letters not over 10 mm high.
- 5.2.7** The RAV warning sign must be coated with yellow retro-reflective material that complies with class 100 or 400 of AS1906.1 – 2017 *Retroreflective Materials and Devices for Road Traffic Control Purposes – Retroreflective Sheeting*.
- 5.2.8** The RAV warning sign must only be fitted on the rear of the RAV and so:
- (a) no part of the sign is —
    - (i) over 2.75 m above ground level; or
    - (ii) under 500 mm above ground level;and
  - (b) if the sign is in 2 parts, the parts are fitted at the same height above ground level.

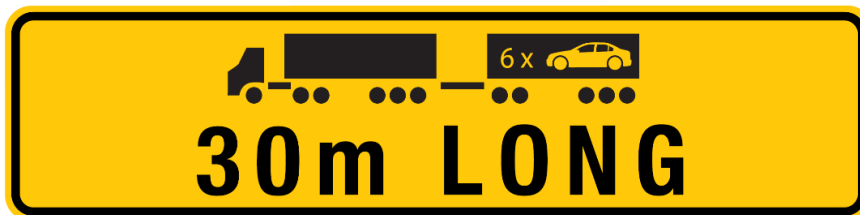
**Note:** The 60m RAV Warning Size cannot be split into 2 parts.

## Appendix 1 – RAV Warning Signs

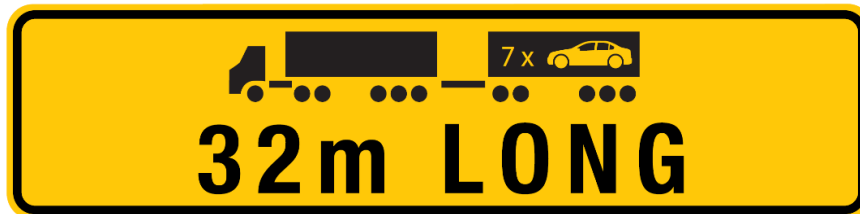
27.5m Long RAV Warning Sign:



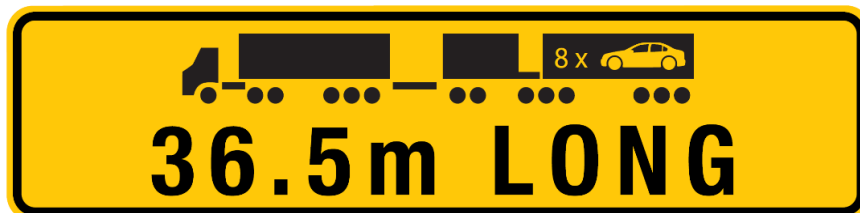
30m Long RAV Warning Sign:



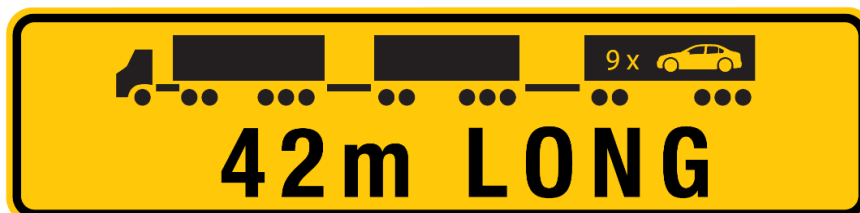
Specific Length RAV Warning Sign:



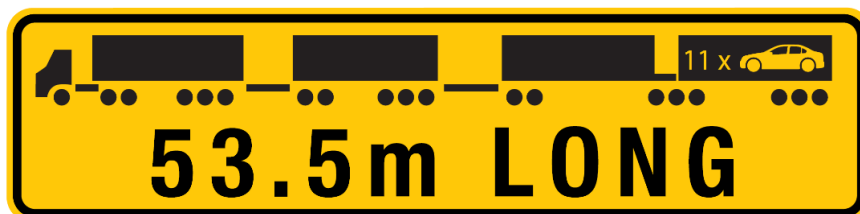
36.5m Long RAV Warning Sign:



42m Long RAV Warning Sign:



53.5m Long RAV Warning Sign:



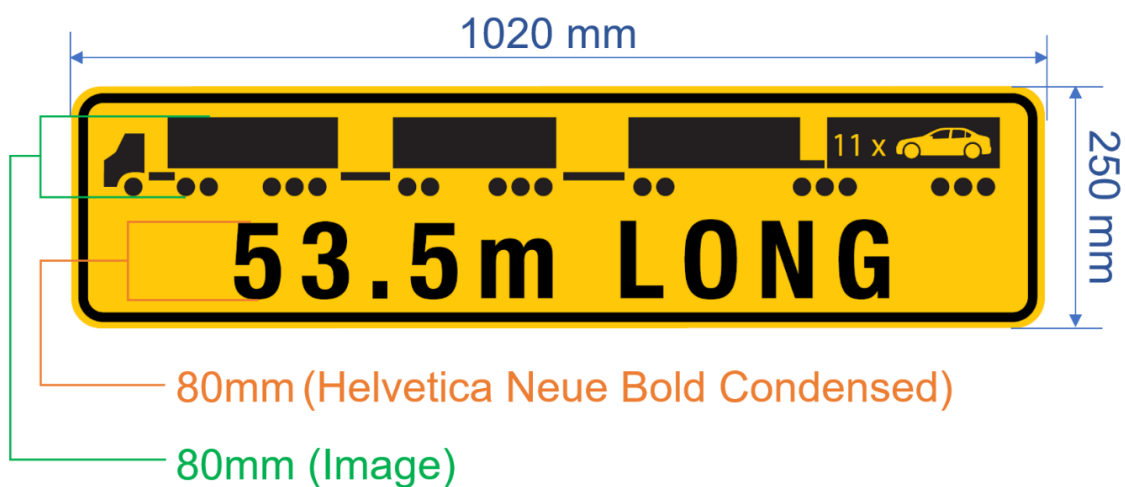
## Appendix 2 – 60m RAV Warning Sign

60m Long RAV Warning Sign:



## Appendix 3 – RAV Warning Sign Dimensions & Font Specifications

All Signs other the 60m Long RAV Warning Sign:



60m Long RAV Warning Sign:



## Appendix 4 – Split RAV Warning Signs

Example of Split RAV Warning Sign:

