



FREIGHT PASS

User Guide

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Freight PASS

Freight PASS is an application that allows users to compare a range of *Productivity, Asset impact, Safety, and Sustainability* measures from the operation of freight vehicles on roads.

Freight PASS is based on data, assumptions and methodologies from a range of sources, including from the [Australian Transport Assessment and Planning Guidelines](#). Information on source material and assumptions are provided in this user Guide and in the [Terms of Use](#).

Conditions of use

The user is solely responsible for conducting their own investigations and due diligence before making any decisions based on the Freight PASS Tool or Materials (refer to the [Terms of Use](#) for definitions).

The user should not rely solely on the Materials without considering the context and seeking their own appropriate professional advice where necessary.

The Tool is a support tool only. It is not a decision tool and is not intended to replace professional engineering judgment or comprehensive technical assessments.

The Tool does not influence, imply, direct or determine access rights to road networks. It should not be used as the basis for assumptions about current or future access entitlements.

The Tool is not part of the Heavy Vehicle National Law (HVNL) and does not replace any legal requirements. It is the user's responsibility to ensure compliance with the HVNL and other applicable laws.

The Tool is based on modelling assumptions and methodologies derived from third-party materials. The user is responsible for reviewing and adjusting default inputs to ensure they reflect the specific context and conditions of their intended application.

The inputs and assumptions are subject to change as the tool is updated over time. The NHVR may revise data and assumptions without prior notice to users.

For full terms of use, visit: [Terms of Use](#) or select *Terms of Use*, located on the Freight PASS interface.

Freight PASS modules

Freight PASS is an application comprising three inter-related modules. Users can access these modules through the menu located on the left side of the interface (Appendix A - Figure 1).

- *Vehicle Selection* – Enables users to select or configure up to two heavy vehicle combinations.

- *Freight Task Impact Comparison* – Provides a comparison of the relative performance of the selected combinations across a range of productivity, safety, and sustainability measures.
- *Pavement Impact Comparison* – Provides a comparison of the relative impacts of the selected combinations across a range of pavement measures.

Vehicle selection module

The *Vehicle Selection* module is the default landing page (Appendix A - Figure 2). On this page the user can configure up to two vehicles to use across the *Freight Task Impact Comparison* and *Pavement Impact Comparison* modules.

The user can return to this module at any stage to further modify or change the combination.

Configuring Vehicle A

Step 1. To configure Vehicle A, first select the *Combination Type* by clicking on the dropdown and selecting the appropriate combination (Appendix A -Figure 3).

The vehicle image and description will update following the user's selection.

Step 2. To configure the vehicle components and masses, click *Modify* (Appendix A - Figure 4). A page will appear showing the various components that make up the combination. These components are presented in individual vertically scrolling selectors, enabling users to browse and select configuration / axle options (Appendix A - Figure 5).

To select the heavy vehicle components, scroll through the available options and click on the image of the desired component. The number of available components corresponds to the parent vehicle. To view the name of the component hover over the image (Appendix A - Figure 6).

Default values have been assigned to each heavy vehicle component and axle group (Appendix A -Figure 7). These default values do not reflect what is allowable for access or real-world conditions. You are encouraged to review and adjust these values.

- *Tare mass (t)* – Refers to the total mass of the vehicle or combination with no payload.
- *Axle group* – Refers to one or more shafts positioned in a line across a vehicle, on which one or more wheels intended to support the vehicle turn.
- *Tyre arrangement* – Refers to the configuration of tyres on an axle, such as single tyres or dual tyres. As a default, all tyre arrangements are dual, apart from the steer which is single.

- *Tyre size (mm)* – Width of a tyre.
- *Axle mass (t)* – The total load carried by an axle, including both the vehicle's tare weight and its payload.

Once the vehicle components are selected, check that all values are correct and click *Save* (Appendix A - Figure 8). You will return to the *main vehicle selection*.

Step 3. The user can now select the *Fuel Type* using the dropdown (Appendix A - Figure 9).

As electric 'fuel type' can increase vehicle mass, the message *Check axle masses – adjust if required* will appear when this option is selected. To check the masses, click *Modify* to re-open the configuration page.

If an electric vehicle is selected, an additional field will appear for entering energy consumption (Appendix A – Figure 10). Manually enter in the consumption in kilowatt hours per 100km. Note that no default value is provided.

This concludes the selection of Vehicle A. The user can return and edit Vehicle A at any stage.

Configuring Vehicle B

To support comparison, the user can select a second vehicle. This vehicle, referred to as Vehicle B, can be based on one of three options: Vehicle A, one of the two pre-defined reference vehicles, or manual configuring a vehicle (similar steps to configuring Vehicle A).

The reference vehicles represent common configurations typically seen on Australian roads and can be viewed by selecting *Show reference vehicles* on the main vehicle selection page (Appendix A - Figure 11). These vehicles are described as Reference Vehicle A and Reference Vehicle B.

Step 4. To add Vehicle B, select *Add new vehicle*, located to the left of Vehicle A (Appendix A - Figure 12). Select either Vehicle A, Reference Vehicle A or Reference Vehicle B.

To configure Vehicle B, repeat the steps for configuring Vehicle A.

This concludes the selection of Vehicle B. The user can return and edit Vehicle B at any stage.

To remove Vehicle B, click *Remove* (Appendix A - Figure 13).

To reset all vehicle selections and inputs, click *Reset to default* in the upper right corner (Appendix A - Figure 14).

For ease of reference, a summary of vehicle selections is illustrated at the bottom of the menu panel (Appendix A - Figure 15).

Freight task impact comparison module

This module allows users to compare the selected vehicles across a range of productivity, safety and sustainability measures for a given freight task.

The module can be divided into two sections: Scenario inputs and Results (Appendix A - Figure 16). The influence of the scenario inputs on the results is illustrated in Table 1.

Scenario inputs

Users can modify the freight task – the payload of goods to be transported over a specified distance – enabling a like-for-like comparison (Appendix A - Figure 17). For example, a smaller vehicle may have a lower impact per trip, but completing multiple trips to move the same total payload may result in a higher cumulative impact over time compared with a larger vehicle, which may require fewer trips. This module highlights how these differences, as well as other types of inputs, may influence productivity, safety, and sustainability outcomes.

1. *Journey length* – The distance between the origin and destination, measured in kilometres (one-way).
2. *Total load* – The total payload of goods to be transported, measured in tonnes.

The *Total freight task* is an automatically generated value representing the total task in tonne-kilometres (tkm). Calculated as journey length multiplied by total load. For example, transporting 1,000 t over 1,000 km equals 1 million tkm.

3. *Average speed* – The average travel speed across the entire journey, measured in kilometres per hour (km/h).
4. *Urban–rural split* – An estimate of the proportion of the journey occurring in urban versus rural environments. Users can adjust the slider to set the percentage split. The default setting is 75% urban and 25% rural.
5. *Road curvature* – An estimate of road curvature. Representative values are paired with qualitative descriptions. The default selection is Straight (20°/km).
6. *Road rise/fall* – An estimate of road gradient. Representative values are paired with qualitative descriptions. The default selection is Flat (0%).
7. *Road roughness* – An estimate of road surface roughness. Values are based on the International Roughness Index (IRI) and paired with qualitative descriptions. The default selection is Very Smooth (IRI = 1).
8. *Traffic density* – An estimate of the traffic density expected along the route. The default selection is Thin.

9. **Time of day** – The expected portion of day for the journey. The default selection is Day.
10. **Charging hours** – The total EV charging time required for the freight task (in hours). This field appears only when an electric vehicle is selected.

Results

The results can be viewed across three tabs labelled Productivity, Safety and Sustainability (Appendix A - Figure 18).

The results can be exported into PDF or Excel format. The export will include a description of the Vehicle And the scenario inputs. The export button is located at the top right of the interface (Appendix A - Figure 19).

Productivity results

- a. **Return trips** – estimates the number of round trips assuming 100% payload transported and 0% payload return.

$$\text{Return trips} = \frac{\text{Total load (t)}}{\text{Max payload of vehicle (t)}}$$

- b. **Journey time (h)** - estimates the total travel time.

$$\text{Journey time (h)} = \left(\frac{\text{One way journey length (km)}}{\text{Average speed (km/h)}} \times \right.$$

$$\left. \text{Number of return trips} \times 2 \right) + \text{Charging hours (h)}^*$$

*Charging hours only applicable when an electric vehicle is selected

- c. **Distance travelled (km)** – estimates the total kilometres driven.

$$\text{Distance travelled (km)} = \text{One way journey length (km)} \times \text{Number of return trips} \times 2$$

- d. **Travel time cost (\$)** – estimates the value of travel time of vehicle occupants. Vehicle occupants is defined as the number of people in a vehicle including the driver.

$$\text{Travel time cost (\$)} = \text{Journey time (h)} \times \text{Vehicle occupants} \times \text{Value of travel time (\$/h)}$$

- e. **Vehicle operating cost (\$)** – estimates the Vehicle Operating Cost (VOC). The VOC considers items such as oil, tyres, repairs, maintenance and depreciation.

To calculate the VOC output (if the average speed is >60km/h), the following formula will be used:

$$\begin{aligned} \text{VOC (cents)} = & (\% \text{rural} \times \text{Total km travelled} \\ & \times \text{Rural BaseVOC} \\ & \times (k1 + k2V + k3 \times V2 + k4 \times \text{IRI} \\ & + k5 \times \text{IRI2} + k6 \times \text{GCM})) \\ & + (\% \text{urban} \times \text{Total km travelled} \\ & \times (C0 + C1 \times V + C2 \times V2)) \end{aligned}$$

To calculate the VOC output (if the average speed is <60km/h), the following formula will be used:

$$\begin{aligned} \text{VOC (cents)} = & (\% \text{rural} \times \text{Total km travelled} \\ & \times \text{Rural BaseVOC} \\ & \times (k1 + k2V + k3 \times V2 + k4 \times \text{IRI} \\ & + k5 \times \text{IRI2} + k6 \times \text{GCM})) \\ & + (\% \text{urban} \times \text{Total km travelled} \\ & \times (A + BV)) \end{aligned}$$

BaseVOC is the lowest VOC point in a curve from raw HDM-4 outputs; V is the vehicle speed (km/h); IRI is the international roughness index (m/km); GCM is the gross combination mass (tonnes); k1 to k6 are the rural modelled coefficients; C0 to C2 are the urban modelled coefficients (average speed >60km/hour); A and B are the urban modelled coefficients (average speed <60km/hour) (Table 1)

VOC calculations assume free-flow conditions, and utilise the ATAP Guidelines structure and coefficients for uninterrupted flow model (Rural) and the free-flow model (Urban).

Table 1. IRI, rise/fall and road curvature options

Factor	Quantitative option	Qualitative mapping
International Roughness Index (IRI)	1-2	Very smooth
	2-3	Smooth
	3-4	Moderate
	4-5	Rough
	5-6	Very rough
Rise/fall (gradient) of the road	0%	Flat
	4%	Slightly hilly
	6%	Moderately hilly
	8%	Hilly
	10%	Very hilly
Road curvature	20°	Straight
	120°	Moderately curvy
	300°	Curvy

Safety results

- f. Estimates on crash events are dependent on:
 - Total distance travelled
 - Crash rates per 1 million kilometres, at different crash severities, derived from the National Heavy Vehicle Driver Competency Framework Decision Regulatory Impact Statement.
 - PBS crash factors, derived from the Review of Major Crash Rates for Australian Higher Productivity Vehicles: 2015-2019 (applied to PBS vehicle combinations only).

For the conventional fleet:

$$\text{Crash events} = \text{Crash severity rate} \times \text{Distance travelled (km)}$$

For the PBS fleet:

$$\text{Crash events} = \text{Crash severity rate} \times \text{Distance traveled (km)} \times \text{PBS crash factor}$$

Fatal crash costs:

$$\begin{aligned} \text{Fatal crash cost} = & (\text{Fatal crash events} \\ & \times \text{Deaths per fatal crash} \\ & \times \text{Value of statistical life}) \\ & + (\text{Fatal crash events} \\ & \times \text{Other fatal crash costs}) \end{aligned}$$

Non-fatal crash costs:

$$\text{Non – fatal crash cost} = \text{Crash events} \times \text{Crash costs}$$

Crash costs are assigned based on the equivalent crash severity level (e.g. hospitalisation crash events x hospitalisation crash cost).

Sustainability results

- g. Fuel consumption (L) – estimates how much fuel is consumed.

To calculate the fuel consumption output (if the average speed is >60km/h), the following formula will be used:

$$\begin{aligned} \text{Fuel consumption (Litres)} &= (\%_{\text{rural}} \times \text{Total km travelled} \\ & \times \text{Rural BaseFuel} \\ & \times (k1 + k2V + k3 \times V2 + k4 \times IRI \\ & + k5 \times GCM)) \\ & + (\%_{\text{urban}} \times \text{Total km travelled} \\ & \times (C0 + C1 \times V + C2 \times V2)) \end{aligned}$$

To calculate the fuel consumption output (if the average speed is <60km/h), the following formula will be used:

$$\begin{aligned} \text{Fuel consumption (Litres)} &= (\%_{\text{rural}} \times \text{Total km travelled} \\ & \times \text{Rural BaseFuel} \times (k1 + k2V \\ & + k3 \times V2 + k4 \times IRI + k5 \times GCM)) \\ & + (\%_{\text{urban}} \times \text{Total km travelled} \\ & \times (A + BV)) \end{aligned}$$

BaseFuel is the lowest fuel consumption point in a curve from raw HDM-4 outputs; V = Average speed (km/h); IRI = international road roughness index (m/km); GCM is the gross combination mass (t), k1 to k5 are the rural modelled coefficients; C0 to C2 are the urban modelled coefficients (average speed >60km/hour); A and B are the urban modelled coefficients (average speed <60km/hour) (Table 1)

Fuel consumption calculations assume free-flow conditions, and utilise the ATAP Guidelines structure and coefficients for uninterrupted flow model (Rural) and the free-flow model (Urban).

Nominal fuel consumption at 50% load is used to provide a consistent basis for comparing vehicles. This represents a simplified assumption that an average trip comprises a fully loaded outbound journey (100% load) and an unloaded return (0% load). While fuel consumption is non-linear and would ideally be calculated separately for each leg, this approach offers a practical and sufficient method for the purposes of the Freight PASS.

- h. CO₂ equivalent emissions (t) – estimates how much CO₂ equivalent (CO₂-e) emissions are emitted. CO₂-e is used to represent masses of a range of different greenhouse gases in a single carbon dioxide-equivalent metric (e.g. Carbon

dioxide, Carbon monoxide, Methane, Nitrogen oxide, particulate matter etc.).

For Diesel vehicles, CO₂-e emissions are based on the nominal fuel consumption rate at 50% load and the diesel to CO₂-e conversion rate.

$$\begin{aligned} \text{CO}_2 \text{ equivalent emissions (t)} &= \text{Fuel consumption (L)} \times \\ \text{CO}_2 \text{ conversion factor} &\left(\frac{\text{kgCO}_2\text{-e}}{\text{LDiesel}} \right) \times 1000 \end{aligned}$$

For electric vehicles, the energy consumption is converted to CO₂ equivalent emissions using an electricity consumption to CO₂-e conversion factor.

$$\begin{aligned} \text{CO}_2 \text{ equivalent emissions (t)} &= \\ \text{Energy consumption (kWh)} &\times \\ \text{CO}_2 \text{ conversion factor} &\left(\frac{\text{kgCO}_2\text{-e}}{\text{kWh}} \right) \times 1000 \end{aligned}$$

- i. CO₂ emissions cost (\$) – estimates the cost of CO₂ equivalent emissions.

$$\text{CO}_2 \text{ cost (\$)} = \text{CO}_2 \text{ equivalent emissions (t)} \times \text{unit cost of carbon (\$/t)}$$

- j. Air pollution impact cost (\$) – estimates the cost of air and noise pollution caused by freight travel, including health impacts, damage to buildings and materials, and crop losses.

$$\text{Air pollution cost (\$)} = \text{Total km traveled} \times \text{Rural – urban air pollution cost parameter}$$

- k. Climate change impact cost (\$) – estimates the long-term social and economic impacts of greenhouse gas emissions from heavy vehicles.

$$\text{Climate change cost (\$)} = \text{Total km traveled} \times \text{Rural – urban climate change cost parameter}$$

- l. Well-to-tank emission impact cost (\$) – estimates the indirect upstream and downstream environmental costs of heavy vehicles, including air pollution and greenhouse gas emissions from energy generation and distribution.

$$\text{Well to tank cost (\$)} = \text{Total km traveled} \times \text{Rural – urban well to tank cost parameter}$$

- m. Noise pollution impact cost (\$) – estimates the health, wellbeing and annoyance impacts of heavy vehicles.

$$\text{Noise pollution cost (\$)} = \text{Total km traveled} \times \text{Rural – urban noise pollution cost parameter}$$

- n. Biodiversity impact cost (\$) - estimates the impact of air pollution from heavy vehicles on natural ecosystems.

$$\begin{aligned} \text{Biodiversity impact cost (\$)} &= \text{Number of trips} \times \\ &\% \text{ of trip affecting biodiversity} \times \text{Rural –} \\ &\text{Urban biodiversity impact cost parameter} \end{aligned}$$

- o. Energy consumption – Only appears when fuel type is listed as electric. Estimates the energy consumption in kilowatt hours.

$$\begin{aligned} \text{Energy consumption (kWh)} &= \text{Energy Consumption} \left(\frac{\text{kWh}}{100\text{km}} \right) \\ &\times \text{Distance travelled (km)} \div 100 \end{aligned}$$

Scenario inputs and results summary

The below table summarises how scenario inputs influences the results of different measures.

Table 2. Scenario inputs and results influence

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3		✓		✓	✓		✓	✓	✓						
4				✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
5					✓			✓	✓	✓					
6					✓		✓	✓	✓						
7					✓		✓	✓	✓						
8															✓
9															✓
10		✓		✓											

Scenario inputs (1-11); Results (A-P); blue (productivity results); orange (safety results); green (sustainability results)

Scenario inputs	Results
1. Journey length	a. Return trips
2. Total load	b. Journey time
3. Average speed	c. Distance travelled
4. Urban–rural split	d. Travel time cost
5. Road curvature	e. Vehicle operating cost
6. Road rise/fall	f. The likelihood of a crash
7. Road roughness	g. Fuel consumption
8. Traffic density	h. CO2 equivalent emissions
9. Time of day	i. CO2 emissions cost
10. Charging hours	j. Air pollution impact cost
	k. Climate change impact cost
	l. Well-to-tank emission impact cost
	m. Noise pollution impact cost
	n. Biodiversity impact cost
	o. Energy consumption

Pavement impact comparison module

This module assists users to estimate and standardise comparison of vertical pavement wear effects and costs from use of heavy freight vehicles (Appendix A - Figure 20).

A summary of the axles and masses of the selected vehicles are visible on the module landing page. In the upper left corner, the Vehicle A and Vehicle B buttons can be used to toggle between vehicles (Appendix A - Figure 21).

To proceed to the results, click on *Calculate results* in the lower right corner (Appendix A - Figure 22).

In the upper left corner, the *Single trip* and *Freight task* buttons can be used to toggle between the result pages.

The results can be exported into PDF or Excel format. The export will include a description of the vehicle. The export button is located at the top right of the interface.

Single trip results

The Single Trip tab shows the Estimated Standard Axles (ESA) and Standard Axle Repetition (SAR) results for each axle group in the combination (Appendix A - Figure 23). These are measures of

the vertical wear that vehicles may cause on different road surfaces.

ESA / SAR4 – estimates surface damage in unbound granular pavements with sprayed seals.

$$ESA \text{ or } SAR4 = \left(\frac{\text{Axle Mass}}{\text{Standard Axle Mass}} \right)^4 \div \text{RFS factor (if applicable)}$$

SAR5 – estimates fatigue damage in asphalt-surfaced pavements.

$$SAR5 = \left(\frac{\text{Axle Mass}}{\text{Standard Axle Mass}} \right)^5 \div \text{RFS factor (if applicable)}$$

SAR7 – estimates rutting and shape loss in bound flexible pavements.

$$SAR7 = \left(\frac{\text{Axle Mass}}{\text{Standard Axle Mass}} \right)^7 \div \text{RFS factor (if applicable)}$$

SAR12 – estimates fatigue damage in cemented layers of flexible pavements.

$$SAR12 = \left(\frac{\text{Axle Mass}}{\text{Standard Axle Mass}} \right)^{12} \div \text{RFS factor (if applicable)}$$

Road Friendly Suspension (RFS) factors utilise average load proportioning effect values from rural and urban roads derived from the National Road Transport Commission (1996) *Mass Limits Review*.

Using the dropdown menus the user can select the two vehicles to compare from the following:

- Vehicle A
- Vehicle A with RFS)
- Vehicle B
- Vehicle B with RFS

The axle count is based on the first vehicle selected. For example, if Vehicle A has six axles and is chosen first, and Vehicle B has nine axles, the comparison will be limited to the first six axles. The overall total, however, will also include Vehicle B's additional three axles.

Freight task results

The Freight Task tab contains three tables with information about the relative impact across a freight task.

Similarly to the Single Trip results page, using the dropdown menu the user can select the vehicles to compare.

Note: If two vehicles have been selected under the *Single trip* tab, these will need to be reselected.

Payload per ESA or SAR (t)

This metric (Appendix A - Figure 24) estimates how many tonnes of payload can be moved per unit of pavement damage (ESA or SAR). A higher value indicates a vehicle delivers the freight task more efficiently with comparatively less pavement impact.

Estimated cost of pavement wear to transport 100t payload by 1km (\$)

The user can manually enter the marginal cost inputs for the various pavement types in dollars per SAR-kilometre (Appendix A - Figure 25). Marginal cost inputs are used to estimate the costs associated with pavement wear for each pavement scenario.

Wear Productivity Index Ratio

This metric estimates the productivity difference between the two vehicles as a ratio (first vehicle / second vehicle) (Appendix A - Figure 26). For example, a score of 0.5 means the first vehicle is only half as productive per unit of damage as the second vehicle.

Appendix A – Figures

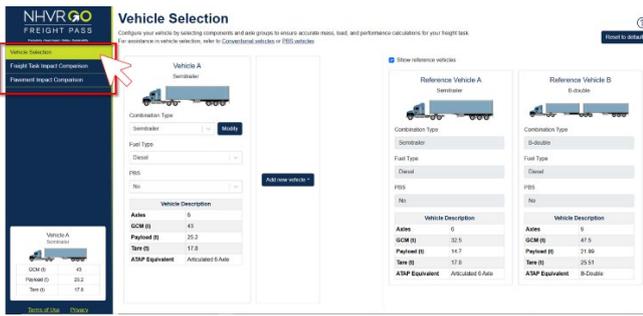


Figure 1. Module menu

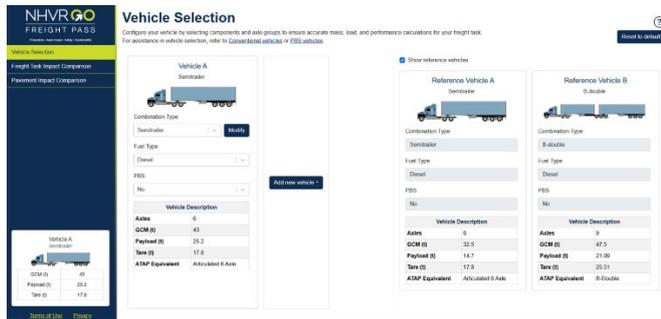


Figure 2. Vehicle selection module

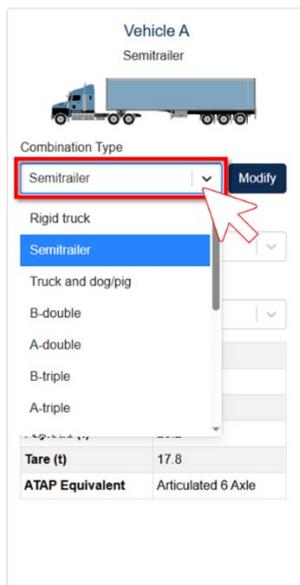


Figure 3. Combination type menu

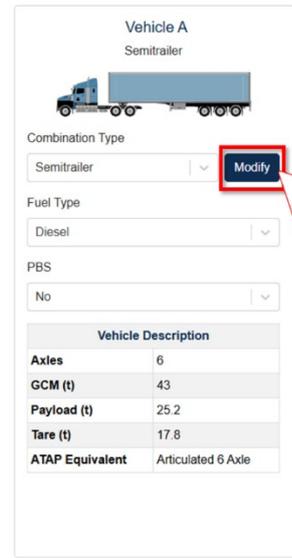


Figure 4. Modifying a combination type

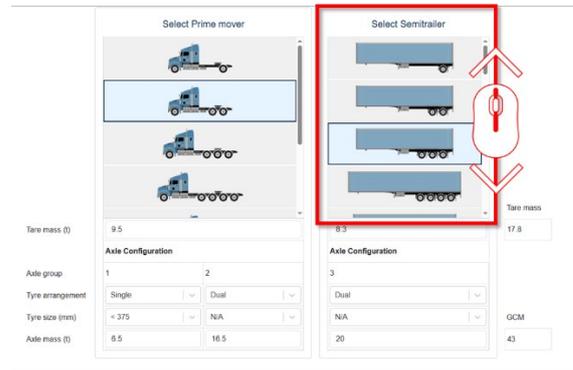


Figure 5. Selecting a component

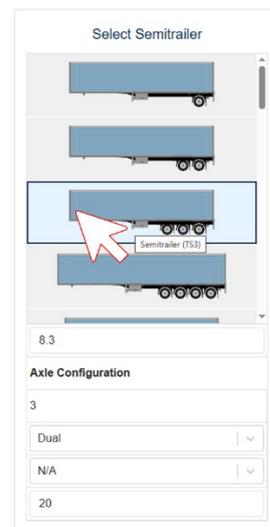


Figure 6. Highlighting component name

Select Prime mover | Select Semitrailer

Tare mass (t)	9.5	8.3	17.8
Axle group	< 375	2	
Type arrangement	> 450	Dual	
Type size (mm)	< 375	N/A	
Axle mass (t)	6.5	20	43

Figure 7. Default component values

Vehicle A
Semitrailer

Combination Type: Semitrailer

Fuel Type: Electric

Energy Consumption (kWh /100km): 0

Vehicle Description	
Axes	6
GCM (t)	43
Payload (t)	22.7
Tare (t)	20.3

Figure 10. Electric vehicle energy consumption

Select Prime mover | Select Semitrailer

Cancel Save

Figure 8. Saving customised vehicle

Vehicle Selection

Vehicle A: Semitrailer, Fuel Type: Diesel, GCM (t): 43, Payload (t): 25.2, Tare (t): 17.8

Vehicle B: B-double, Fuel Type: Diesel, GCM (t): 47.5, Payload (t): 21.99, Tare (t): 25.51

Reference Vehicle A: Semitrailer, Fuel Type: Diesel, GCM (t): 14.7, Payload (t): 25.51, Tare (t): 17.8

Reference Vehicle B: B-double, Fuel Type: Diesel, GCM (t): 47.5, Payload (t): 21.99, Tare (t): 25.51

Show reference vehicles

Figure 11. Showing reference vehicles

Vehicle A
Semitrailer

Combination Type: Semitrailer

Fuel Type: Diesel

Vehicle Description	
Axes	6
GCM (t)	43
Payload (t)	25.2
Tare (t)	17.8
ATAP Equivalent	Articulated 6 Axle

Figure 9. Fuel type menu

Vehicle A
Semitrailer

Combination Type: Semitrailer

Fuel Type: Diesel

PBS: No

Vehicle Description	
Axes	6
GCM (t)	43
Payload (t)	25.2
Tare (t)	17.8
ATAP Equivalent	Articulated 6 Axle

Add new vehicle +

- From Vehicle A
- From Reference Vehicle A
- From Reference Vehicle B

Figure 12. Adding vehicle B

Figure 13. Removing vehicle B

Vehicle Selection

Configure your vehicles by selecting components and sets/groups to ensure accurate mass, load, and performance calculations for your freight task. For assistance in vehicle selection, refer to [Component set tables](#) or [FAQs](#).

Figure 14. Reset to default

Figure 15. Vehicle selection summary

Figure 16. Freight task impact comparison module

Figure 17. Scenario inputs

Figure 18. Results

Figure 19. Exporting results

Figure 20. Pavement Impact Comparison module

Freight PASS – User Guide

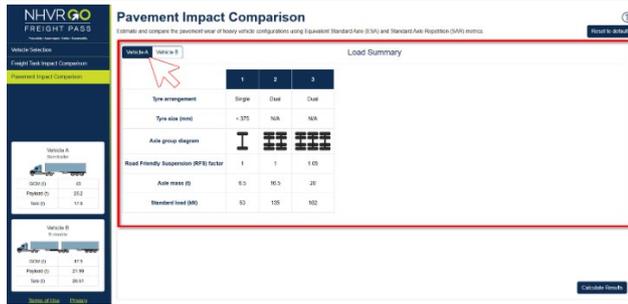


Figure 21. Load summary

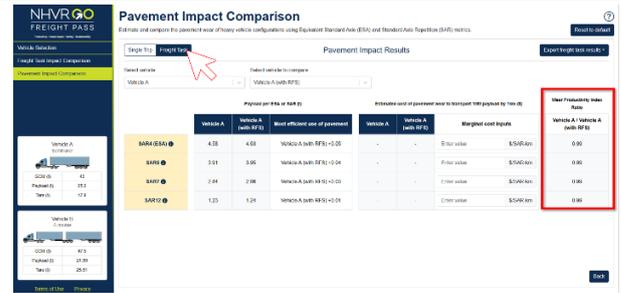


Figure 26. Wear Productivity Index Ratio

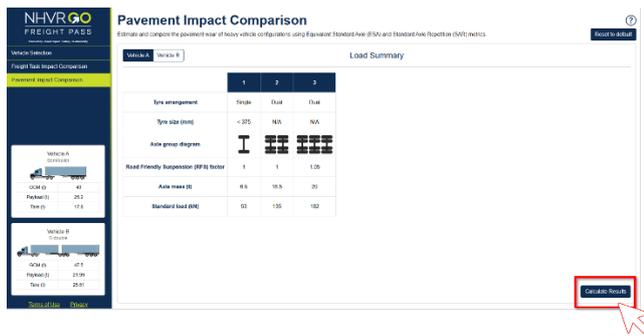


Figure 22. Calculate results

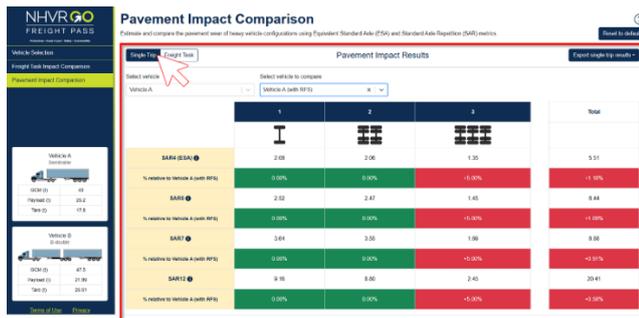


Figure 23. Single trip pavement impact comparison



Figure 24. Payload per ESA or SAR

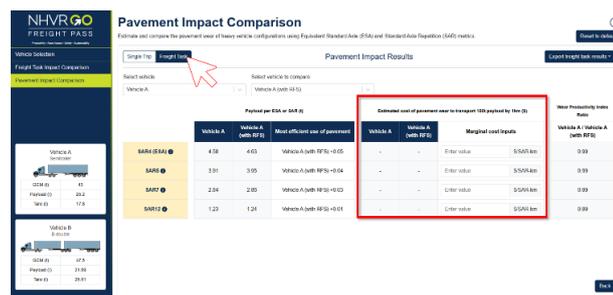


Figure 25. Estimated cost of pavement wear to transport 100t payload by 1km