

Concessional Livestock Loading – Vehicle Rating (S10)

Version 1.0

February 2014

Section 3 of the National Heavy Vehicle Regulator's Code of Practice for the Approval of Heavy Vehicle Modifications

Concessional Livestock Loading – Vehicle Rating

CODE S10

1. Scope

The following is a summary of the ratings which may be approved by officers authorised with modification code S10 – Concessional Livestock Loading Vehicle Rating.

Specific requirements for ratings approved under this Code are included later in this Section S10.

Refer also to Section S – Vehicle Rating for general technical guidelines for ratings performed under this Code.

1.1 Ratings covered under code S10

This code is only to be used to check that when the vehicle's fuels, water, livestock capacity and distribution are assessed and when the vehicle is subjected to specified imposed loading, the vehicle component's mass ratings are not exceeded, for the following types of vehicles:

- Any Prime Mover or Dolly Trailer used for the transportation of livestock.
- Any Rigid Truck, Trailer or Semi Trailer fitted with single or multiple deck stock crates and used for the transportation of livestock.

1.2 Ratings not covered under code S10

Assessment of the following vehicles are not permitted under this code:

- Assessment of a vehicle not used for the transportation of livestock or a Rigid truck, Trailer or Semi Trailer, not fitted with a single or multiple deck stock crate.

2. Specific Requirements

2.1 General

All components must be used within manufacturer's rated capacities. In particular, Approved persons must check suspension, axle, drive train, chassis, brakes, and steering, wheel and tyre capacities.

Checklists are provided to assist the authorised officer in assessing the vehicle. The use of these is mandatory. The authorised officer must also ensure adequate records such as design drawings and calculations are maintained and part E (Declaration Section) of the checklist is completed.

2.2 Imposed Loading and Limiting Provision

For the purpose of assessing vehicles under this code, the following imposed loading is applied to simulate loading due to livestock.

- (a) Semi trailers, dog trailers and rigid trucks.
 - (i) Fitted with single deck stock crates – 420kg per sq. metre of deck space available for the carriage of livestock.

(ii) Fitted with multiple deck stock crates – 840kg per sq. metre of deck space available for the carriage of livestock divided by the number of decks.

(b) Prime movers and converter dolly trailers

Fifteen tonnes applied vertically through the centre of the fifth wheel coupling to simulate loading from a laden semi trailer.

(c) All vehicles

All vehicles are to meet regulatory dimension limits with the following additional conditions detailed in the following table.

Table 1 Dimensional and Mass Requirement

Vehicle type	Minimum D value requirements for couplings			Dimensional Requirements	Mass Requirements
	Fifth wheels and turntables	Automatic pin type couplings	King pins		
Prime mover - Type 2 hauling unit - Type 1 hauling unit - other	160Kn 140Kn 123Kn				- GCM rating must equal or exceed the tare mass of all vehicles in combination + 26 Tonnes for each semi trailer or dog trailer in combination.
Rigid Truck - Type 2 hauling unit - other		17.5 tonnes 16.5 tonnes		Stock crate height not to exceed 4.6m.	- GCM rating must equal or exceed the rated maximum mass of the rigid truck under Section S10 of the Code + tare mass for all trailers towed + 26 tonnes for each semi trailer or dog trailer in combination.
Semi Trailer - fitted with rear pin coupling - without rear pin		21.4 tonnes	190Kn 123Kn	'Loaded deck length' must not exceed 12.5 metres. Stock crate height not to exceed 4.6m.	Tare mass of the trailer must not exceed 15 tonnes.

Vehicle type	Minimum D value requirements for couplings			Dimensional Requirements	Mass Requirements
	Fifth wheels and turntables	Automatic pin type couplings	King pins		
B-double combination	135Kn		135Kn	'Loaded deck length' of both trailers must not exceed 18.8 metres. Stock crate height not to exceed 4.6m.	Tare mass of trailers in combination must not exceed 22 tonnes.
Converter Dolly	190Kn	21.4 tonnes			
Five axle dog trailers with no rear pin coupling	135Kn	16.5 tonnes	135Kn	'Loaded deck length' must not exceed 12.5 metres. Stock crate height not to exceed 4.6m.	Fifth wheel and Ballrace Turntables – 125Kn Kingpins – 125Kn Towing eyes – 17 tonnes

'Loaded deck length' is defined as:

1. for a semi-trailer as the length of the deck of the trailer measured from inside the front wall to inside the back wall of the loading space.
2. for B-double combination as the sum of the lengths of the two decks of the trailers measured from inside the front wall to inside the back wall of the loading space.

2.3 Tyres and Wheel Rims

The load carrying capacity of any tyre or rim must not be exceeded when specified loading is imposed on vehicle.

For vehicles manufactured to comply with ADR 24/01 the tyres and rims must be selected and must comply in all respects with the requirements of that ADR when specified loading is imposed on vehicle.

In the case of vehicles fitted with a 'tyre placard', this placard must indicate the correct tyre specifications for the vehicle when specified loading is imposed on vehicle.

2.4 Carrying Capacity

The vehicles fuels, water and livestock capacity and distribution must be assessed to ensure that, when vehicle is subjected to specified imposed loading, the vehicle component's mass ratings are not exceeded.

2.5 Modification Plate Details

The modification plate must carry the following details:

- GVM or GCM,
- Manufacturers Axle Group Ratings (in tonnes),
- Vehicle Tare Mass.
- King Pin Loads

The tare mass, axle group ratings and king pin loads are to be placed in the "MOD CODES" area of the plate using the following abbreviations.

- Tare Mass T***
- Front Axle Rating F***
- Rear Axle Rating R***
- King – Pin Load KP***
- Where *... is the rating in tonnes
- For convertor dollies the code is R**,

For example a semi-trailer with a tare mass of 15 tonnes, a king pin load of 15 tonnes and a rear axle capacity of 25 tonnes would have "MOD CODE"-:

S10 – T15, KP 15.0, R 25.0

Checklist s10a
Concessional Livestock Loading –
Vehicle Rating (Prime Mover)
CODE S10

Form No: S10a
(Y=Yes, N=No)

APPLICATION CHART

This form is divided into the following parts

A – CONFIGURATION AND DIMENSIONAL LIMITS

B – UNLADEN (TARE) MASS

C – IMPOSED LIVESTOCK LOADING

D – SUMMARY OF MAXIMUM LADEN MASS

E – REGISTRATION OF DETAILS AND REGISTRATION

Complete all applicable parts

NOTES ON PARTS B, C, D AND E

- Declarations are required in PART E by the Approved Person who compiled the form and by the vehicle owner.
- In these calculations, measurements shall be stated to the following orders of accuracy:
 - Mass to the nearest kilogram,
 - Length to the nearest 5 mm, and
 - Volume to the nearest litre.
- “Rear axle line” means the point from which rear overhang is measured.
- “Front axle line” means the centreline of the front axle group.
- “Tow Coupling Overhang” means the distance from the “rear axle line” to the pivot point of the tow coupling.

Part A – Configuration and Dimensional Limits

Vehicle Owner's Details					
Name					
Company / Business					
Address					
Vehicle Details					
Make		Model		Date of Manufacture	
Body Type			Body Colour		
VIN					
Chassis Number (if applicable)					
Engine Details					
Engine Number			Capacity		
Number of Cylinders			Fuel Type		
Vehicle Dimensions					
Overall Vehicle Length			Wheelbase		
Front Overhang			Rear Overhang		
Front Axle(s) Specifications					
Make		Model		Capacity	
Drive Axle(s) Specification					
Make		Model		Capacity	
Fifth Wheel Specifications					
Make		Model		D Value	
Turntable Specifications					
Make		Model		D Value	

Manufacturer's Mass Ratings *(From Identification plate or manufacturer's advice)*

GVM

GCM

1. Suitability for Livestock Loading

1.1	Is vehicle fitted with tandem or triaxle device?	Y	N
1.2	Are drive axles fitted with dual tyres?	Y	N
1.3	If twin steer configuration, is load sharing suspension system fitted to steer axles?	Y	N
1.4	Length- is overall length of vehicle including fittings less than or equal to 12.5m?	Y	N
1.5	Width- is overall width of vehicle excluding signalling devices less than or equal to 2.5m?	Y	N
1.6	Height – Is overall height less than or equal to: <ul style="list-style-type: none"> • 4.3 single deck crate; or • 4.6m multiple deck crate 	Y	N
1.7	Fifth Wheel and Turntable- is the rating of the fifth wheel and ball race turntable greater than or equal to: <ul style="list-style-type: none"> • For type 2 hauling unit 160Kn • For type 1 hauling unit 140Kn • For other units 123Kn 	Y	N

Note: If the answer is NO to any of the above limits the vehicle is not suitable for livestock loading scheme rating. **DO NOT PROCEED WITH RATING**

Part B – Unladen Mass

1. Tare Mass

For rating purposes, the tare mass of the vehicle is its actual mass with all permanent equipment fitted, and all fuel and water tanks empty.

The vehicle must be weighed at a registered public weighbridge to determine the actual loads on the front axle and rear axle groups.

PIN WEIGHBRIDGE TICKET HERE

VEHICLE MANUFACTURERS SPECIFICATIONS TO BE ATTACHED

Details to include make, model, year of manufacture, front and rear axle manufacturers and specifications.

WRITE AXLE LOADS IN BOXES BELOW FROM WEIGHBRIDGE TICKET

Front Axle Group Tare Mass (Ft) = kg

Rear Axle Group Tare Mass (Rt) = kg

Tare Mass (Rt + Ft) = kg

2. Ancillary Equipment

Draw a plan of the chassis layout showing position of fuel/water tanks, tyre racks, spare tyres etc. and the distance from the rear axle line to centre of each tank.

3. Fuel/Water Loading

Calculate the mass of fuel/water in each tank by multiplying the volume of each tank by 0.85kg/l for diesel, 0.78kg/l for petrol and 1.0kg/l for water. This is then multiplied by the distance from the rear axle line to the centre of each tank. These values are then added together to determine the Principal fuel/water factor. Note if the centre of any tank is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Tank	(ii) Contents (Diesel) (Petrol) (Water)	(iii) Volume (l)	(iv) (iii) x 0.85kg/l for diesel (iii) x 0.78kg/l for petrol (iii) x 1.0kg/l for water	(v) Distance from rear axle line (negative if space behind rear axle) (m)	(vi) Fuel/Water loading factor (iv x v) (kgm)
1					
2					
3					
4					
5					
6					
Total Fuel/ Water mass (kg)			PFWF (kgm)		
= TFWM (Sum iv) =			= (Sum vi) =		

Front axle line to rear axle line distance $F_{rad} = \dots\dots\dots m$

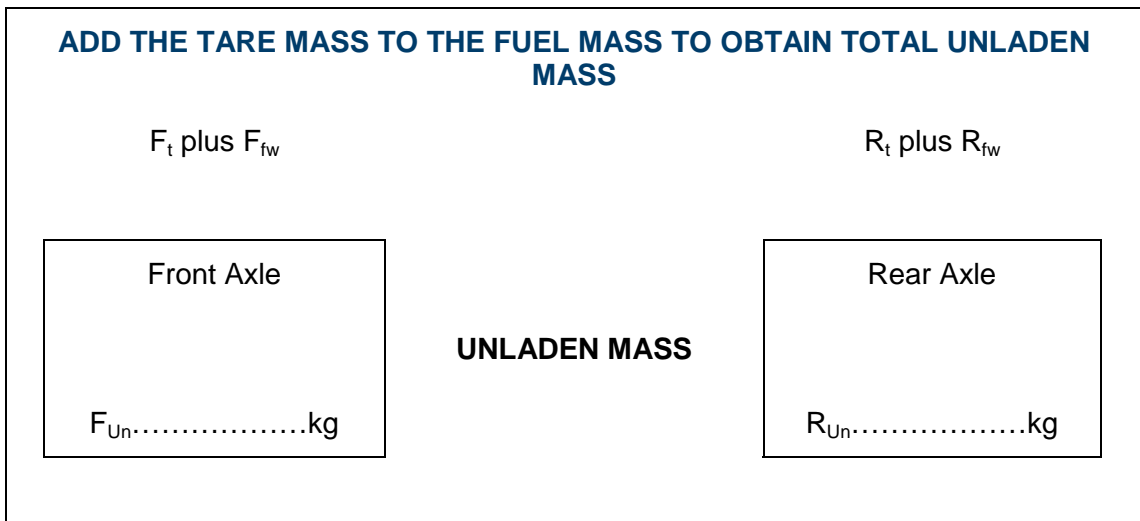
For the purposes of determining unladen mass of the vehicle, the mass of two thirds of the fuel tank and water tank capacities is included.

Additional front axle load due to fuel/water is given by:

$$F_{fw} = 0.66PFWF/F_{rad} = \dots\dots\dots kg$$

Additional rear axle load due to fuel/water is given by:

$$R_{fw} = 0.66 \times TFWM - F_{fw} = \dots\dots\dots kg$$



Part C – Imposed Livestock Loading

Imposed Livestock Load due to semitrailer is taken to be the minimum allowable semitrailer king pin load of 15 tonnes applied through the centreline of the fifth wheel.

Rear axle line to centreline of fifth wheel distance

$$D_{cfw} = \dots\dots\dots\text{m}$$

The loads due to livestock are calculated below:

Front Axle Load Livestock (F_{li})

= (Imposed Livestock Load x Rear axle line to centreline of fifth wheel distance) /
(Front axle line to rear axle line distance)

$$\begin{aligned} &= \frac{(15000\text{kg} \times D_{cfw})}{F_{rad}} \\ &= 15000\text{kg} \times \dots\dots\dots \end{aligned}$$

$$F_{li} = \dots\dots\dots\text{kg}$$

Rear axle Load Livestock (R_{li}) = Imposed Livestock Load – Front Axle Load Livestock (F_{li})

$$\begin{aligned} &= 15000\text{kg} - F_{li} \\ &= 15000\text{kg} - \dots\dots\dots \end{aligned}$$

$$R_{li} = \dots\dots\dots\text{kg}$$

WRITE FRONT AXLE AND REAR AXLE LOADS DUE TO LIVESTOCK HERE

Front Axle Livestock (F_{li})=kg

Rear Axle Livestock (R_{li})=kg

Part D – Maximum Laden Mass

Complete the following:

	FRONT AXLE GROUP	REAR AXLE GROUP	TOTAL
UNLADEN MASS	F_{Un}	R_{Un} .....	.....
LIVESTOCK	F_{li}	F_{li} .....	.....

(A) GROSS LADEN MASS (kg)

FRONT AXLE GROUP $F_{un} + F_{li} =$

REAR AXLE GROUP $R_{un} + R_{li} =$

TOTAL = FRONT AXLE GROUP + REAR AXLE GROUP =

COMBINATION MASS = UNLADEN MASS PLUS SEMI TRAILER MASS

= $F_{un} + R_{un}$ plus 41000kg NB: (15t tare + 26t load)

=

(B) MANUFACTURER'S LOAD LIMITS

FRONT AXLE GROUP

REAR AXLE GROUP

GROSS VEHICLE MASS (GVM)

GROSS COMBINATION MASS (GCM)

FRONT AXLE GROUP TYRE CAPACITY

TYRE DESIGNATION x.....

PLY TYPE/RATING Radial/

(Bias)

MAXIMUM LOAD PER TYRE

(C)	TOTAL TYRE CAPACITY (FRONT AXLE GROUP)	.....
	REAR AXLE GROUP TYRE CAPACITY	.....
	TYRE DESIGNATION	.....X.....
	PLY TYPE/RATING	Radial/..... (Bias)
	MAXIMUM LOAD PER TYRE	.....
(D)	TOTAL TYRE CAPACITY (REAR AXLE GROUP)	.....
<p>Are the GROSS LADEN MASSES (A) less than or equal to the above limits (B, C and D)?</p> <p style="text-align: center;">YES/NO</p> <p>If the answer is NO the vehicle is not suitable for livestock loading scheme rating.</p> <p>DO NOT PROCEED WITH RATING.</p>		

Note: The front axle load is not to exceed 7 tonnes for a single steer axle and the maximum axle capacity to be shown on the plate is to be 7 tonnes.

This page has been left blank for any additional calculations

Part E – Vehicle Details and Declarations

DECLARATION BY COMPLIER*	
Authorised Officer	
MA Number	
I am the authorised officer who completed the calculations of laden mass and declare that the information in this form is true and correct.	
Signature	Date
Company/Business	Telephone

DECLARATION BY VEHICLE OWNER*	
Vehicle Owner	
Owner's Address	
Name of Authorised Officer	
As the owner of the vehicle described in this form, I declare that the calculations have been completed by the authorised officer mentioned above.	
Signature	Date
Company/Business	Telephone

The vehicle described in this form has been assessed for component load compliance for livestock loading	
Authorised officer who examined and approved vehicle	
Name	
Company / Business	
MA Number	
Signature	Date

Checklist s10b
Concessional Livestock Loading -
Vehicle Rating (Rigid Truck)
CODE S10

Form No: S10b
(Y=Yes, N=No)

APPLICATION CHART

This form is divided into the following parts

A – CONFIGURATION AND DIMENSIONAL LIMITS

B – UNLADEN (TARE) MASS

C – MASS OF LIVESTOCK

D – SUMMARY OF MAXIMUM LADEN MASS

E – REGISTRATION OF DETAILS AND DECLARATIONS

Complete all applicable parts

NOTES ON PARTS B, C, D AND E

- Declarations are required in PART E by the Approved Person who compiled the form and by the vehicle owner.
- In these calculations, measurements shall be stated to the following orders of accuracy:
 - Mass to the nearest kilogram,
 - Length to the nearest 5 mm, and
 - Volume to the nearest litre.
- “Rear axle line” means the point from which rear overhang is measured.
- “Front axle line” means the centreline of the front axle group.
- “Tow Coupling Overhang” means the distance from the “rear axle line” to the pivot point of the tow coupling.

Part A – Configuration and Dimensional Limits

Vehicle Owner's Details					
Name					
Company / Business					
Address					
Vehicle Details					
Make		Model		Date of Manufacture	
Body Type			Body Colour		
VIN					
Chassis Number (if applicable)					
Engine Details					
Engine Number		Capacity			
Number of Cylinders		Fuel Type			
Vehicle Dimensions					
Overall Vehicle Length		Loaded Deck Length*			
Wheelbase		Rear Overhang			
Front Overhang					
Front Axle(s) Specifications					
Make		Model		Capacity	
Drive Axle(s) Specification					
Make		Model		Capacity	
Fifth Wheel Specifications					
Make		Model		D Value	

Turntable Specifications			
Make		Model	
Manufacturer's Mass Ratings <i>(From Identification plate or manufacturer's advice)</i>			
GVM		GCM	

* Loaded deck length is defined as the length of the deck measured from inside the front wall to inside the rear wall of the stock crate.

1. **Suitability for Livestock Loading –
Vehicles with Single Steer with Single Drive Configuration only**
 - 1.1 Is the drive axle fitted with dual tyres? Y N
 - 1.2 Is a single deck stock crate fitted to vehicle? Y N
2. **Suitability for Livestock Loading –
Vehicles with other axle configurations only**
 - 2.1 Is the vehicle fitted with tandem or tri-axle drive? Y N
 - 2.2 Are drive axles fitted with dual tyres? Y N
 - 2.3 If twin steer configuration, is a load sharing suspension system fitted to steer axles? N/A Y N
3. **Suitability for Livestock Loading –
General requirements for all vehicles**
 - 3.1 Length- is overall length of vehicle including fittings less than or equal to 12.5m? Y N
 - 3.2 Width- Is overall width of vehicle excluding signalling devices less than or equal to 2.5m? Y N
 - 3.3 Height – Is overall height less than or equal to: Y N
 - 4.3 single deck crate; or
 - 4.6m multiple deck crate
 - 3.4 Tow coupling – is rating of the tow coupling greater than or equal to: Y N
 - For type 2 hauling unit - 17.5 tonnes
 - Other units - 16.5 tonnes

Note: If the answer is NO to any of the above limits the vehicle is not suitable for livestock loading scheme rating **DO NOT PROCEED WITH RATING.**

Part B – Unladen Mass

1. Tare Mass

For rating purposes, the tare mass of the vehicle is its actual mass with all permanent equipment fitted, and all fuel and water tanks empty.

The vehicle must be weighed at a registered public weighbridge to determine the actual loads on the front axle and rear axle groups.

PIN WEIGHBRIDGE TICKET HERE

VEHICLE MANUFACTURERS SPECIFICATIONS TO BE ATTACHED

Details to include make, model, year of manufacture, front and rear axle manufacturers and specifications.

WRITE AXLE LOADS IN BOXES BELOW FROM WEIGHBRIDGE TICKET

Front Axle Group Tare Mass (F_t) = kg

Rear Axle Group Tare Mass (R_t) = kg

Tare Mass ($R_t + F_t$) = kg

2. Ancillary Equipment

Draw a plan of the chassis layout showing position of fuel/water tanks, tyre racks, spare tyres etc. and the distance from the rear axle line to centre of each tank.

3. Fuel/Water Loading

Calculate the mass of fuel/water in each tank by multiplying the volume of each tank by 0.85kg/l for diesel, 0.78g/l for petrol and 1.0kg/l for water. This is then multiplied by the distance from the rear axle line to the centre of each tank. These values are then added together to determine the Principal fuel/water factor. Note if the centre of any tank is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Tank	(ii) Contents (Diesel) (Petrol) (Water)	(iii) Volume (l)	(iv) (iii) x 0.85g/l for diesel (iii) x 0.78g/l for petrol (iii) x 1.0kg/l for water	(v) Distance from rear axle line (negative if space behind rear axle) (m)	(vi) Fuel/Water loading factor (iv x v) (kgm)
1					
2					
3					
4					
5					
6					
Total Fuel/ Water mass (kg)			PFWF (kgm)		
= TFWM (Sum iv) =			= (Sum vi) =		

Front axle line to rear axle line distance $F_{rad} = \dots\dots\dots m$

For the purposes of determining unladen mass of the vehicle, the mass of two thirds of the fuel tank and water tank capacities is included.

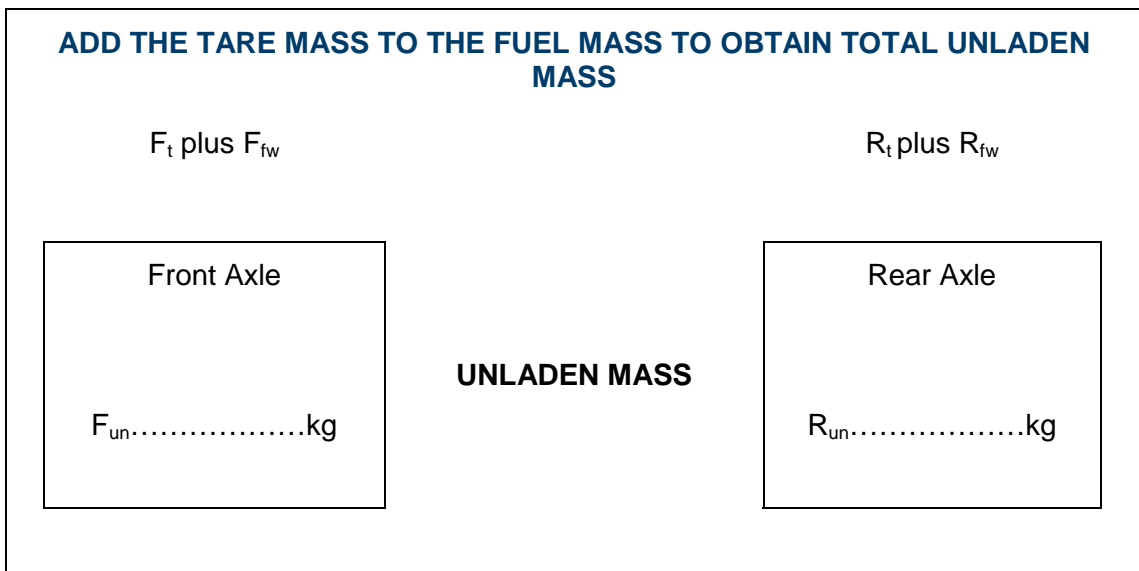
For the purposes of determining unladen mass of the vehicle, the mass of two thirds of the fuel tank and water tank capacities is included.

Additional front axle load due to fuel/water is given by:

$$F_{fw} = 0.66PFWF/F_{rad} = \dots\dots\dots kg$$

Additional rear axle load due to fuel/water is given by:

$$R_{fw} = 0.66 \times TFWM - F_{fw} = \dots\dots\dots kg$$



Part C – Mass of Livestock

Draw a plan of the deck areas on the vehicle that is available for the carriage of livestock. Mark in the position of the rear axle line. (One plan for each deck).

Measure the average length, and width of each livestock section. In cases where the compartment is a non-regular shape, it may be easier to divide the compartment into smaller box-like sections. The table on the next page can be used for calculations.

Measure the distance from the rear axle line to the centre of area of each livestock section.

Calculate the mass of livestock by multiplying the area of each space by 420kg/m² for single deck crates, or (840kg/m²)/n for multiple deck crates where n = no of decks. This is then multiplied by the distance from the rear axle line to the centre of each livestock space. These values are then added together to determine the Principal Livestock factor. Note if the centre of any livestock space is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Livestock Space	(ii) Length (m)	(iii) Width (m)	(iv) Livestock Area (m ²) (ii) x (iii)	(v) (iv) x 420kg/m ² (single deck trailer) or (iv) x 840kg/m ² /n n=no. of decks for multi deck trailer	(vi) Distance from rear axle line to centre of livestock space (negative if space behind rear axle)	(vii) Livestock Loading Factor (v) x (vi)
1						
2						
3						
4						
5						
6						
Total Livestock Area (TLA) (sum iv) = _____m ²						
Total Livestock Mass (TLM) (sum v) _____ = _____ kg						
Principal Livestock Factor (PLF) (sum vii) _____ = _____ kgm						

The loads due to livestock are calculated below:

Front Axle Load Livestock (F_{li})

= Principal Livestock Factor / Front axle line to rear axle line distance
(F_{rad})

= $\frac{PLF}{F_{rad}}$

F_{rad}

$F_{li} = \dots\dots\dots$.kg

Rear axle Load Livestock (R_{li}) = Total Livestock Mass – Front Axle Load Livestock
(F_{li})

= TLM - F_{li}

= $\dots\dots\dots - \dots\dots\dots$

$R_{li} = \dots\dots\dots$.kg

WRITE FRONT AXLE AND REAR AXLE LOADS DUE TO LIVESTOCK HERE

Front Axle Livestock (F_{li})= $\dots\dots\dots$.kg

Rear Axle Livestock (R_{li})= $\dots\dots\dots$.kg

Part D – Maximum Laden Mass

Complete the following:			
	FRONT AXLE GROUP	REAR AXLE GROUP	TOTAL
UNLADEN MASS	F_{un}	R_{un} .....	.....
LIVESTOCK	F_{li}	F_{li} .....	.....
(A) GROSS LADEN MASS (kg)			
FRONT AXLE GROUP	$F_{un} + F_{li} =$		
REAR AXLE GROUP	$R_{un} + R_{li} =$		
TOTAL = FRONT AXLE GROUP + REAR AXLE GROUP =			
COMBINATION MASS = UNLADEN MASS PLUS SEMI TRAILER MASS			
= $F_{un} + R_{un}$ plus 41000kg NB: (15t tare + 26t load)			
=			
(B) MANUFACTURER'S LOAD LIMITS			
FRONT AXLE GROUP	.....	
REAR AXLE GROUP	.....	
GROSS VEHICLE MASS (GVM)	.....	
GROSS COMBINATION MASS (GCM)	.....	
FRONT AXLE GROUP TYRE CAPACITY	.....	
TYRE DESIGNATION	.....X.....		
PLY TYPE/RATING	Radial/		
(Bias)			
MAXIMUM LOAD PER TYRE	.....	

(C)	TOTAL TYRE CAPACITY (FRONT AXLE GROUP)	.....
	REAR AXLE GROUP TYRE CAPACITY	.....
	TYRE DESIGNATION	.....X.....
	PLY TYPE/RATING	Radial/..... (Bias)
	MAXIMUM LOAD PER TYRE	.....
(D)	TOTAL TYRE CAPACITY (REAR AXLE GROUP)	.....
<p>Are the GROSS LADEN MASSES (A) less than or equal to the above limits (B, C and D)?</p> <p style="text-align: center;">YES/NO</p> <p>If the answer is NO the vehicle is not suitable for livestock loading scheme rating.</p> <p>DO NOT PROCEED WITH RATING.</p>		

Note: The front axle load is not to exceed 7 tonnes for a single steer axle and the maximum axle capacity to be shown on the plate is to be 7 tonnes.

This page have been left blank for any additional calculations

Part E – Vehicle Details and Declarations

DECLARATION BY COMPLIER*			
Authorised Officer			
MA Number			
I am the authorised officer who completed the calculations of laden mass and declare that the information in this form is true and correct.			
Signature		Date	
Company/Business		Telephone	

DECLARATION BY VEHICLE OWNER*			
Vehicle Owner			
Owner's Address			
Name of Authorised Officer			
As the owner of the vehicle described in this form, I declare that the calculations have been completed by the authorised officer mentioned above.			
Signature		Date	
Company/Business		Telephone	

The vehicle described in this form has been assessed for component load compliance for livestock loading			
Authorised officer who examined and approved vehicle			
Name			
Company / Business			
MA Number			
Signature		Date	

Checklist s10c
Concessional Livestock Loading –
Vehicle Rating (B-Double Trailer or Semitrailer)
CODE S10

Form No: S10c
(Y=Yes, N=No)

APPLICATION CHART

This form is divided into the following parts

A – CONFIGURATION AND DIMENSIONAL LIMITS

B – UNLADEN (TARE) MASS

C – MASS OF LIVESTOCK

D – SUMMARY OF MAXIMUM LADEN MASS

E – REGISTRATION OF DETAILS AND DECLARATIONS

Complete all applicable parts

NOTES ON PARTS B, C, D AND E:

- Declarations are required in PART E by the Approved Person who compiled the form and by the vehicle owner.
- In these calculations, measurements shall be stated to the following orders of accuracy:
 - Mass to the nearest kilogram,
 - Length to the nearest 5 mm, and
 - Volume to the nearest litre.
- “Rear axle line” means the point from which rear overhang is measured.

Part A – Configuration and Dimensional Limits

Vehicle Owner's Details					
Name					
Company / Business					
Address					
Vehicle Details					
Make		Model		Date of Manufacture	
Body Type			Body Colour		
VIN					
Chassis Number (if applicable)					
Vehicle Dimensions					
Overall Vehicle Length			Wheelbase		
Loaded Deck Length*			Stock Crate Length		
Front Overhang			Rear Overhang		
Rear Axle Group Specifications (trailer)					
Make		Model		Capacity	
King Pin Specification					
Make		Model		D Value	
Tow Coupling Specifications					
Make		Model		D Value	

For B Double Lead Trailer only					
Fifth Wheel Specifications					
Make	<input type="text"/>	Model	<input type="text"/>	D Value	<input type="text"/>
Turntable Specifications					
Make	<input type="text"/>	Model	<input type="text"/>	D Value	<input type="text"/>
Manufacturer's Mass Ratings (From Identification plate or manufacturer's advice)					
ATM	<input type="text"/>				

* Loaded deck length is defined as:

1. For a semi trailer, as the length of the deck of the trailer measured from inside the front wall to the inside of the back wall of the loading space;
2. For B double combinations, as the sum of lengths of the two decks of the trailers measured from inside the front wall to inside of the back wall of the loading space.

1 Suitability for Livestock Loading

1.1	Loaded Deck Length – is the overall deck length of the vehicle or combination less than or equal to: <ul style="list-style-type: none"> • For B doubles - 18.8m • For semi trailers - 12.5m 	Y	N
1.2	Width - is the overall width of the vehicle excluding signalling devices less than or equal to 2.5m?	Y	N
1.3	Height – is the overall height less than or equal to: <ul style="list-style-type: none"> • 4.3m single deck crate or • 4.6m multiple deck crate 	Y	N
1.4	Rear Axle Group – is the trailer fitted with a triaxle rear axle group?	Y	N
1.5	Rear Axle Group - Are all axles fitted with dual tyres?	Y	N
1.6	Rear Tow Coupling - is the tow coupling rating greater than or equal to 21.4 tonnes?	Y	N
1.7	For B Double lead trailers – are the ratings for the fifth wheel and turntable greater than or equal to 135Kn?	Y	N

Note: If the answer is NO to any of the above limits the vehicle is not suitable for Concessional livestock loading. **DO NOT PROCEED WITH RATING**

Part B - Unladen Mass

1. Tare Mass

For rating purposes, the tare mass of the vehicle is its actual mass with all permanent equipment fitted, and all fuel and water tanks empty.

The vehicle must be weighed at a registered public weighbridge to determine the actual loads on the front axle and rear axle groups.

PIN WEIGHBRIDGE TICKET HERE

VEHICLE MANUFACTURERS SPECIFICATIONS TO BE ATTACHED

Details to include make, model, year of manufacture, front and rear axle manufacturers and specifications.

WRITE AXLE LOADS IN BOXES BELOW FROM WEIGHBRIDGE TICKET

King Pin Mass (Kt) = kg

Rear Axle Tare Mass (Rt) = kg

Tare Mass (Rt + Kt) = kg

Is tare mass less than or equal to 15 tonnes? YES/NO

If NO, the vehicle is unsuitable for concessional livestock loading

DO NOT PROCEED WITH RATING

If YES continue with rating

2. Ancillary Equipment

Draw a plan of the chassis layout showing position of fuel/water tanks, tyre racks, spare tyres etc. and the distance from the rear axle line to centre of each tank.

3. Fuel/Water Loading

Calculate the mass of fuel/water in each tank by multiplying the volume of each tank by 0.85g/l for diesel, 0.78g/l for petrol and 1.0kg/l for water. This is then multiplied by the distance from the rear axle line to the centre of each tank. These values are then added together to determine the Principal fuel/water factor. Note if the centre of any tank is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Tank	(ii) Contents (Diesel) (Petrol) (Water)	(iii) Volume (l)	(iv) (iii) x 0.85g/l for diesel (iii) x 0.78g/l for petrol (iii) x 1.0kg/l for water	(v) Distance from rear axle line (negative if space behind rear axle) (m)	(vi) Fuel/Water loading factor (iv x v) (kgm)
1					
2					
3					
4					
5					
6					
Total Fuel/ Water mass (kg)			PFWF (kgm)		
= TFWM (Sum iv) =			= (Sum vi) =		

King pin to rear axle line distance $F_{rad} = \dots\dots\dots m$

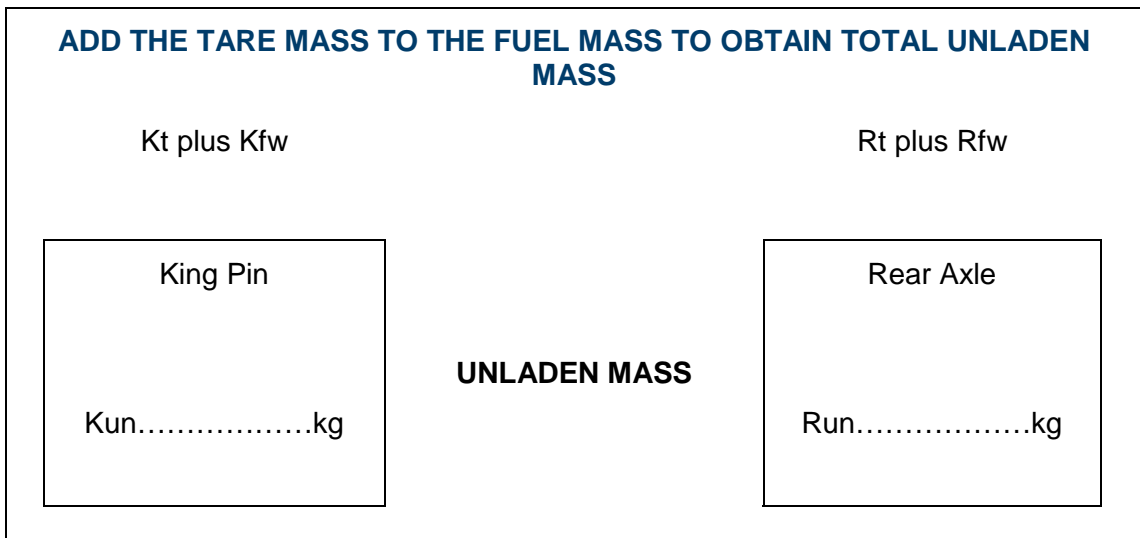
For the purposes of determining unladen mass of the vehicle, the mass of two thirds of the fuel tank and water tank capacities is included.

Additional king pin load due to fuel/water is given by:

$$K_{fw} = 0.66PFWF/K_{rad} = \dots\dots\dots kg$$

Additional rear axle load due to fuel/water is given by:

$$R_{fw} = 0.66 \times TFWM - K_{fw} = \dots\dots\dots kg$$



Part C – Mass of Livestock

Draw a plan of the deck areas on the vehicle that is available for the carriage of livestock. Mark in the position of the rear axle line. (One plan for each deck).

Measure the average length, and width of each livestock section. In cases where the compartment is a non-regular shape, it may be easier to divide the compartment into smaller box-like sections. The table on the next page can be used for calculations.

Measure the distance from the rear axle line to the centre of area of each livestock section.

Calculate the mass of livestock by multiplying the area of each space by 420kg/m² for single deck crates, or (840kg/m²)/n for multiple deck crates where n = no of decks. This is then multiplied by the distance from the rear axle line to the centre of each livestock space. These values are then added together to determine the Principal Livestock factor. Note if the centre of any livestock space is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Livestock Space	(ii) Length (m)	(iii) Width (m)	(iv) Livestock Area (m ²) (ii) x (iii)	(v) (iv) x 420kg/m ² (single deck trailer) or (iv) x 840kg/m ² /n n=no. of decks for multi deck trailer	(vi) Distance from rear axle line to centre of livestock space (negative if space behind rear axle)	(vii) Livestock Loading Factor (v) x (vi)
1						
2						
3						
4						
5						
6						
Total Livestock Area (TLA) (sum iv) = _____m ²						
Total Livestock Mass (TLM) (sum v) _____ = _____ kg						
Principal Livestock Factor (PLF) (sum vii) _____ = _____ kgm						

The loads due to livestock are calculated below:

King Pin Load Livestock (K_{ij})

$$= \text{Principal Livestock Factor} / \text{King pin to rear axle line distance } (K_{rad})$$

$$= \frac{PLF}{K_{rad}}$$

$$K_{rad}$$

$$K_{ij} = \dots\dots\dots \text{kg}$$

Rear axle Load Livestock (R_{ij}) = Total Livestock Mass – King Pin Load Livestock (K_{ij})

$$= TLM - K_{ij}$$

$$= \dots\dots\dots - \dots\dots\dots$$

$$R_{ij} = \dots\dots\dots \text{kg}$$

WRITE KING PIN AND REAR AXLE LOADS DUE TO LIVESTOCK HERE

$$\text{King Pin Load Livestock } (K_{ij}) = \dots\dots\dots \text{kg}$$

$$\text{Rear Axle Livestock } (R_{ij}) = \dots\dots\dots \text{kg}$$

Is Trailer a B-double?

Lead Trailer Yes/No

If Yes complete following section

If No go to Part D – Maximum Laden Mass

ADDITIONAL CALCULATIONS FOR B-DOUBLE LEAD TRAILERS

Draw side view of trailer showing king pin, axle group centreline and fifth wheel positions.

Record king pin to centreline of axle group distance in metres $D_{fw} =$

Record centreline of fifth wheel to centreline of axle group distance in metres $D_{fw} =$

(Negative if fifth wheel centreline is behind axle C/L).

15 tonne load is imposed on fifth wheel of B-Double lead trailer to simulate maximum imposed loading from live stock semi trailer.

Calculate additional load on lead trailer as follows

$$\text{King Pin load } KP_{it} = \frac{15 \times D_{fw}}{D_{kp}} \text{ tonnes}$$

(Negative value means a reduction in king pin mass)

Triaxle group load $A_{it} = 15 - (KP_{it})$ tonnes

Add KP_{it} and A_{it} to already calculated values to obtain Total Masses on trailer.

Part D – Maximum Laden Mass

Complete the following:			
	KING PIN	REAR AXLE GROUP	TOTAL
UNLADEN MASS	K_{Un}	R_{Un} .....	.....
LIVESTOCK	K_{li}	R_{li} .....	.....
<hr/>			
(A)	GROSS LADEN MASS (kg)		
	KING PIN	$K_{un} + K_{li} =$	
	REAR AXLE GROUP	$R_{un} + R_{li} =$	
	TOTAL = KING PIN + REAR AXLE GROUP =		
<hr/>			
(B)	MANUFACTURER'S LOAD LIMITS		
	KING PIN	.....
	REAR AXLE GROUP	.....
	AGGREGATE TRAILER MASS (ATM)	.....
<hr/>			
(C)	MAXIMUM KING PIN LOAD LESS THAN OR EQUAL TO 15 TONNES		
<hr/>			
(D)	REAR AXLE GROUP TYRE CAPACITY		
	TYRE DESIGNATION	.....x.....	
		Radial/.....	
	PLY TYPE/RATING	(Bias)	
	MAXIMUM LOAD PER TYRE	.....
	TOTAL TYRE CAPACITY (REAR AXLE GROUP)	.....
<hr/>			
Are the GROSS LADEN MASSES (A) less than or equal to the above limits (B, C and D)?			
YES/NO			
If the answer is NO the vehicle is not suitable for livestock loading scheme rating.			
DO NOT PROCEED WITH RATING.			

This page has been left blank for any additional calculations

Part E – Vehicle Details and Declarations

DECLARATION BY COMPLIER*

Authorised Officer

MA Number

I am the authorised officer who completed the calculations of laden mass and declare that the information in this form is true and correct.

Signature

Date

Company/Business

Telephone

DECLARATION BY VEHICLE OWNER*

Vehicle Owner

Owner's Address

Name of Authorised Officer

As the owner of the vehicle described in this form, I declare that the calculations have been completed by the authorised officer mentioned above.

Signature

Date

Company/Business

Telephone

The vehicle described in this form has been assessed for component load compliance for livestock loading

Authorised officer who examined and approved vehicle

Name

Company / Business

MA Number

Signature

Date

Checklist s10d
Concessional Livestock Loading –
Vehicle Rating (Dog Trailer or Semitrailer)
CODE S10

Form No: S10d
(Y=Yes, N=No)

APPLICATION CHART

This form is divided into the following parts

A – CONFIGURATION AND DIMENSIONAL LIMITS

B – UNLADEN (TARE) MASS

C – MASS OF LIVESTOCK

D – SUMMARY OF MAXIMUM LADEN MASS

E – REGISTRATION OF DETAILS AND DECLARATIONS

Complete all applicable parts

NOTES ON PARTS B, C, D AND E

- Declarations are required in PART E by the Approved Person who compiled the form and by the vehicle owner.
- In these calculations, measurements shall be stated to the following orders of accuracy:
 - Mass to the nearest kilogram,
 - Length to the nearest 5 mm, and
 - Volume to the nearest litre.
- “Rear axle line” means the point from which rear overhang is measured.
- “Front axle line” means the centreline of the front axle group.

Part A – Configuration and Dimensional Limits

Vehicle Owner's Details					
Name					
Company / Business					
Address					
Vehicle Details					
Make		Model		Date of Manufacture	
Body Type			Body Colour		
VIN					
Chassis Number (if applicable)					
Vehicle Dimensions					
Overall Vehicle Length		Wheelbase			
Loaded Deck Length*		Loaded Tray Length			
Front Overhang		Rear Overhang			
Drawbar Length					
Front Axle Group Specifications (trailer)					
Make		Model		Capacity	
Rear Axle Group Specifications (trailer)					
Make		Model		Capacity	
King Pin Specification					
Make		Model		D Value	
Fifth Wheel Specifications					
Make		Model		D Value	

Turntable Specifications					
Make	<input type="text"/>	Model	<input type="text"/>	D Value	<input type="text"/>
King Pin Specifications					
Make	<input type="text"/>	Model	<input type="text"/>	D Value	<input type="text"/>
Fifth Wheel Specifications					
Make	<input type="text"/>	Model	<input type="text"/>	D Value	<input type="text"/>
Manufacturer's Mass Ratings <i>(From Identification plate or manufacturer's advice)</i>					
ATM	<input type="text"/>				

*Loaded deck length is defined as the length of the deck of the stock crate measured from inside the front wall to the inside of the rear wall.

1 Suitability for Livestock Loading

- | | | | |
|------------|---|----------|----------|
| 1.1 | Loaded Deck Length – is the overall deck length of the vehicle less than or equal to 12.5m? | Y | N |
| 1.2 | Drawbar Length – is the distance from the centre of the drawbar coupling to Front Axle Line less than or equal to 5.0m? | Y | N |
| 1.3 | Width- is the overall width of the vehicle excluding signalling devices less than or equal to 2.5m? | Y | N |
| 1.4 | Height – is the overall height less than or equal to:- <ul style="list-style-type: none"> • 4.3m single deck crate or • 4.6m multiple deck crate | Y | N |
| 1.5 | Rear Axle Group – is the trailer fitted with a triaxle rear axle group? | Y | N |
| 1.6 | Front Axle Group- is the trailer fitted with a tandem axle front axle group? | Y | N |
| 1.7 | Are all axles fitted with dual tyres? | Y | N |
| 1.8 | King Pin- is the rating of the King Pin greater than or equal to: <ul style="list-style-type: none"> • For dog trailers with a rear coupling - 190Kn • For dog trailers without a rear coupling - 135Kn | Y | N |

1.9	Fifth Wheel – is the rating of the fifth wheel and/or turntable greater than or equal to: <ul style="list-style-type: none"> • For dog trailers with a rear coupling - 190Kn • For dog trailers without a rear coupling - 135Kn 	Y	N
1.10	Towing Eye – is the rating for the drawbar towing eye greater than or equal to: <ul style="list-style-type: none"> • For dog trailers with a rear coupling - 190Kn • For dog trailers without a rear coupling - 135Kn 	Y	N
1.11	Rear Tow Coupling – is the tow coupling rating greater than or equal to 16.5 tonnes?	Y	N

Note: If the answer is NO to any of the above limits the vehicle is not suitable for Concessional livestock loading. **DO NOT PROCEED WITH RATING**

Part B – Unladen Mass

1. Tare Mass

For rating purposes, the tare mass of the vehicle is its actual mass with all permanent equipment fitted, and all fuel and water tanks empty.

The vehicle must be weighed at a registered public weighbridge to determine the actual loads on the front axle and rear axle groups.

PIN WEIGHBRIDGE TICKET HERE

VEHICLE MANUFACTURERS SPECIFICATIONS TO BE ATTACHED

Details to include make, model, year of manufacture, front and rear axle manufacturers and specifications.

WRITE AXLE LOADS IN BOXES BELOW FROM WEIGHBRIDGE TICKET

Front Axle Tare Mass (Ft) = kg

Rear Axle Tare Mass (Rt) = kg

Tare Mass (Rt + Ft) = kg

Is tare mass less than or equal to 15 tonnes? YES/NO

If NO, the vehicle is unsuitable for concessional livestock loading

DO NOT PROCEED WITH RATING

If YES continue with rating

2. Ancillary Equipment

Draw a plan of the chassis layout showing position of fuel/water tanks, tyre racks, spare tyres etc. and the distance from the rear axle line to centre of each tank.

3. Fuel/Water Loading

Calculate the mass of fuel/water in each tank by multiplying the volume of each tank by 0.85kg/l for diesel, 0.78kg/l for petrol and 1.0kg/l for water. This is then multiplied by the distance from the rear axle line to the centre of each tank. These values are then added together to determine the Principal fuel/water factor. Note if the centre of any tank is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Tank	(ii) Contents (Diesel) (Petrol) (Water)	(iii) Volume (l)	(iv) (iii) x 0.85kg/l for diesel (iii) x 0.78kg/l for petrol (iii) x 1.0kg/l for water	(v) Distance from rear axle line (negative if space behind rear axle) (m)	(vi) Fuel/Water loading factor (iv x v) (kgm)
1					
2					
3					
4					
5					
6					
Total Fuel/ Water mass (kg)				PFWF (kgm)	
= TFWM (Sum iv) =				= (Sum vi) =	

Front axle line to rear axle line distance $F_{rad} = \dots\dots\dots m$

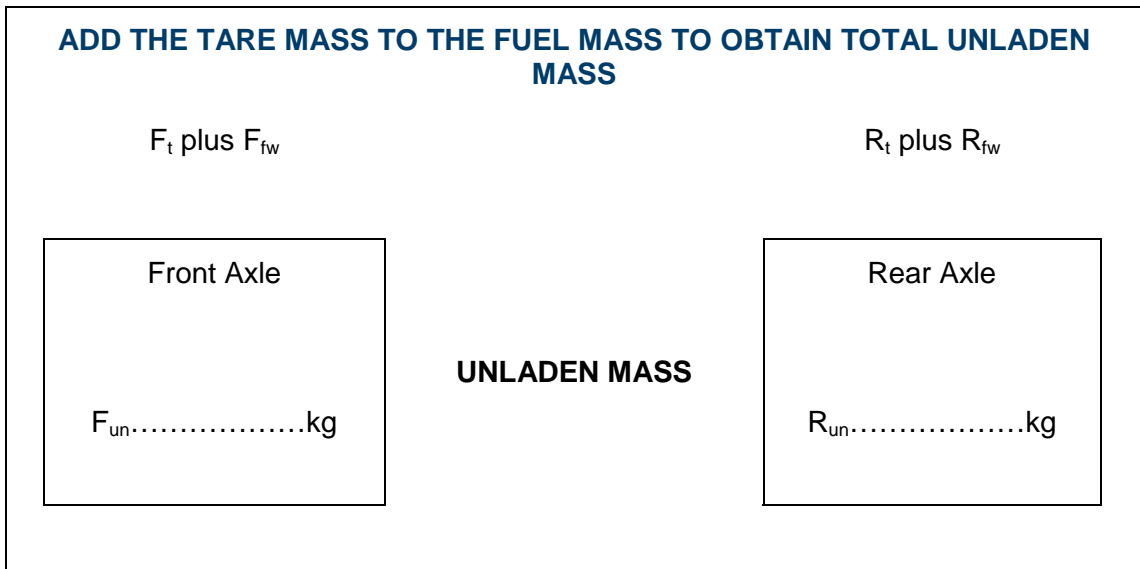
For the purposes of determining unladen mass of the vehicle, the mass of two thirds of the fuel tank and water tank capacities is included.

Additional front axle load due to fuel/water is given by:

$$F_{fw} = 0.66PFWF/F_{rad} = \dots\dots\dots kg$$

Additional rear axle load due to fuel/water is given by:

$$R_{fw} = 0.66 \times TFWM - F_{fw} = \dots\dots\dots kg$$



Part C – Mass of Livestock

Draw a plan of the deck areas on the vehicle that is available for the carriage of livestock. Mark in the position of the rear axle line. (One plan for each deck).

Measure the average length, and width of each livestock section. In cases where the compartment is a non-regular shape, it may be easier to divide the compartment into smaller box-like sections. The table on the next page can be used for calculations.

Measure the distance from the rear axle line to the centre of area of each livestock section.

Calculate the mass of livestock by multiplying the area of each space by 420kg/m² for single deck crates, or (840kg/m²)/n for multiple deck crates where n = no of decks. This is then multiplied by the distance from the rear axle line to the centre of each livestock space. These values are then added together to determine the Principal Livestock factor. Note if the centre of any livestock space is behind the rear axle line, the loading factor is subtracted rather than added.

(i) Livestock Space	(ii) Length (m)	(iii) Width (m)	(iv) Livestock Area (m ²) (ii) x (iii)	(v) (iv) x 420kg/m ² (single deck trailer) or (iv) x 840kg/m ² /n n=no. of decks for multi deck trailer	(vi) Distance from rear axle line to centre of livestock space (negative if space behind rear axle)	(vii) Livestock Loading Factor (v) x (vi)
1						
2						
3						
4						
5						
6						
Total Livestock Area (TLA) (sum iv) = _____m ²						
Total Livestock Mass (TLM) (sum v) _____ = _____ kg						
Principal Livestock Factor (PLF) (sum vii) _____ = _____ kgm						

The loads due to livestock are calculated below:

Front Axle Load Livestock (F_{li})

= Principal Livestock Factor / Front Axle Line to rear axle line distance
(F_{rad})

= $\frac{PLF}{F_{rad}}$

F_{rad}

$F_{li} = \dots\dots\dots$.kg

Rear axle Load Livestock (R_{li}) = Total Livestock Mass – Front Axle Load Livestock
(F_{li})

= TLM - F_{li}

= $\dots\dots\dots - \dots\dots\dots$

$R_{li} = \dots\dots\dots$.kg

WRITE KING PIN AND REAR AXLE LOADS DUE TO LIVESTOCK HERE

Front Axle Livestock (F_{li})= $\dots\dots\dots$.kg

Rear Axle Livestock (R_{li})= $\dots\dots\dots$.kg

Part D – Maximum Laden Mass

Complete the following:			
	FRONT AXLE GROUP	REAR AXLE GROUP	TOTAL
UNLADEN MASS	F_{Un}	R_{Un} .....	.....
LIVESTOCK	F_{li}	R_{li} .....	.....
(A) GROSS LADEN MASS (kg)			
FRONT AXLE GROUP	$F_{un} + F_{li} =$		
REAR AXLE GROUP	$R_{un} + R_{li} =$		
TOTAL = FRONT AXLE GROUP + REAR AXLE GROUP =			
(B) MANUFACTURER'S LOAD LIMITS			
FRONT AXLE GROUP	.....	
REAR AXLE GROUP	.....	
AGGREGATE TRAILER MASS (ATM)	.....	
(C) FRONT AXLE GROUP TYRE CAPACITY			
TYRE DESIGNATION	.....x.....		
PLY TYPE/RATING	Radial/..... (Bias)		
MAXIMUM LOAD PER TYRE	.....	
TOTAL TYRE CAPACITY (FRONT AXLE GROUP)	.....	

(D)	REAR AXLE GROUP TYRE CAPACITY	.....
	TYRE DESIGNATION	.....x.....
	PLY TYPE/RATING	Radial/..... (Bias)
	MAXIMUM LOAD PER TYRE	.....
	TOTAL TYRE CAPACITY (REAR AXLE GROUP)	.....

Are the GROSS LADEN MASSES (A) less than or equal to the above limits (B, C and D)?

YES/NO

If the answer is NO the vehicle is not suitable for livestock loading scheme rating.

DO NOT PROCEED WITH RATING.

This page has been left blank for any additional calculations

Part E – Vehicle Details and Declarations

DECLARATION BY COMPLIER*

Authorised Officer

MA Number

I am the authorised officer who completed the calculations of laden mass and declare that the information in this form is true and correct.

Signature

Date

Company/Business

Telephone

DECLARATION BY VEHICLE OWNER*

Vehicle Owner

Owner's Address

Name of Authorised Officer

As the owner of the vehicle described in this form, I declare that the calculations have been completed by the authorised officer mentioned above.

Signature

Date

Company/Business

Telephone

The vehicle described in this form has been assessed for component load compliance for livestock loading

Authorised officer who examined and approved vehicle

Name

Company / Business

MA Number

Signature

Date

Checklist s10e
Concessional Livestock Loading -
Vehicle Rating (Dolly Trailer)
CODE S10

Form No: S10e
(Y=Yes, N=No)

APPLICATION CHART

This form is divided into the following parts

A – CONFIGURATION AND DIMENSIONAL LIMITS

B – UNLADEN (TARE) MASS

C – IMPOSED LIVESTOCK LOADING

D – REGISTRATION OF DETAILS AND DECLARATIONS

Complete all applicable parts

NOTES ON PARTS B, C, AND D

- Declarations are required in PART D by the Approved Person who compiled the form and by the vehicle owner.
- In these calculations, measurements shall be stated to the following orders of accuracy:
 - Mass to the nearest kilogram,
 - Length to the nearest 5 mm, and
 - Volume to the nearest litre.
- “Front axle line” means the centreline of the front axle group.

Part A – Configuration and Dimensional Limits

Vehicle Owner's Details					
Name					
Company / Business					
Address					
Vehicle Details					
Make		Model		Date of Manufacture	
Body Type			Body Colour		
VIN					
Chassis Number (if applicable)					
Vehicle Dimensions					
Overall Vehicle Length			Rear Overhang		
Drawbar Length					
Axle Group Specifications					
Make		Model		Capacity	
King Pin Specifications					
Make		Model		D Value	
Fifth Wheel Specifications					
Make		Model		D Value	
Turntable Specifications					
Make		Model		D Value	
Towing Eye Specifications					
Make		Model		D Value	

Manufacturer's Mass Ratings (From Identification plate or manufacturer's advice)

ATM

1	Suitability for Livestock Loading		
1.1	Length – is the overall length of vehicle including fittings but excluding drawbar less than or equal to 12.5m?	Y	N
1.2	Drawbar Length – is the distance from the centre of the drawbar coupling to Front Axle Line less than or equal to 5.0m?	Y	N
1.3	Width- is the overall width of the vehicle excluding signalling devices less than or equal to 2.5m?	Y	N
1.4	Height – is the overall height less than or equal to: <ul style="list-style-type: none"> • 4.3m single deck crate or • 4.6m multiple deck crate 	Y	N
1.5	Dolly Axle Group – is the trailer fitted with a tandem axle group?	Y	N
1.6	Dolly Axle Group - Are all axles fitted with dual tyres?	Y	N
1.7	Fifth Wheel – is the rating of the fifth wheel and/or turntable greater than or equal to 190Kn?	Y	N
1.8	Turntable – is the rating for the turntable greater than or equal to 190Kn?	Y	N
1.9	Towing Eye – is the rating for the drawbar towing eye greater than or equal to 21.4 tonnes?	Y	N

Note: If the answer is NO to any of the above limits the vehicle is not suitable for Concessional livestock loading. **DO NOT PROCEED WITH RATING**

Part B – Unladen Mass

1. Tare mass

For rating purposes, the tare mass of the vehicle is its actual mass with all permanent equipment fitted, and all fuel and water tanks empty.

The vehicle must be weighed at a registered public weighbridge to determine the actual loads on the front axle and rear axle groups.

PIN WEIGHBRIDGE TICKET HERE

VEHICLE MANUFACTURERS SPECIFICATIONS TO BE ATTACHED

Details to include make, model, year of manufacture, front and rear axle manufacturers and specifications.

WRITE AXLE LOADS IN BOXES BELOW FROM WEIGHBRIDGE TICKET

Dolly Axle Tare Mass (Dt) = kg

2. Ancillary Equipment

Draw a plan of the chassis layout showing position of fuel/water tanks, tyre racks, spare tyres etc. and the distance from the rear axle line to centre of each tank.

3. Fuel/Water Loading

Calculate the mass of fuel/water in each tank by multiplying the volume of each tank by 0.85kg/l for diesel, 0.78kg/l for petrol and 1.0kg/l for water.

(i) Tank	(ii) Contents (Diesel) (Petrol) (Water)	(iii) Volume (l)	(iv) (iii) x 0.85kg/l for diesel (iii) x 0.78kg/l for petrol (iii) x 1.0kg/l for water
1			
2			
3			
Total Fuel/ Water mass (kg) = TFWM (Sum iv) =			

For the purposes of determining unladen mass of the vehicle, the mass of two thirds of the fuel tank and water tank capacities is included.

Additional dolly axle load due to fuel/water is given by:

$$D_{fw} = 0.66PFWF = \dots\dots\dots\text{kg}$$

Additional rear axle load due to fuel/water is given by:

$$R_{fw} = 0.66 \times TFWM - D_{fw} = \dots\dots\dots\text{kg}$$

ADD THE TARE MASS TO THE FUEL MASS TO OBTAIN TOTAL UNLADEN MASS	
	D _t plus D _{fw}
	= +
TOTAL UNLADEN MASS	= Kg

Part C – Imposed Livestock Loading

Imposed Livestock Loading due to semi-trailer is taken to be the maximum allowable semi trailer kingpin of 15 tonnes applied through the centre line of the fifth wheel.

$D_{li} = 15$ tonnes

Complete the following:	
DOLLY AXLE GROUP	
UNLADEN MASS	D_{un}
LIVESTOCK	$D_{li} = 15$ tonnes
(A) GROSS LADEN MASS (kg)	
DOLLY AXLE GROUP	$D_{un} + F_{li} =$
(B) MANUFACTURER'S LOAD LIMITS	
DOLLY AXLE GROUP	.....
AGGREGATE TRAILER MASS (ATM)	.....
(C) DOLLY AXLE GROUP TYRE CAPACITY	.....
TYRE DESIGNATION	.....x.....
PLY TYPE/RATING	Radial/..... (Bias)
MAXIMUM LOAD PER TYRE	.....
TOTAL TYRE CAPACITY (FRONT AXLE GROUP)	..... .....
Are the GROSS LADEN MASSES (A) less than or equal to the above limits (B, C and D)?	
YES/NO	
If the answer is NO the vehicle is not suitable for livestock loading scheme rating.	
DO NOT PROCEED WITH RATING.	

This page has been left blank for any additional calculations

Part D – Vehicle Details and Declarations

DECLARATION BY COMPLIER*

Authorised Officer

MA Number

I am the authorised officer who completed the calculations of laden mass and declare that the information in this form is true and correct.

Signature

Date

Company/Business

Telephone

DECLARATION BY VEHICLE OWNER*

Vehicle Owner

Owner's Address

Name of Authorised Officer

As the owner of the vehicle described in this form, I declare that the calculations have been completed by the authorised officer mentioned above.

Signature

Date

Company/Business

Telephone

The vehicle described in this form has been assessed for component load compliance for livestock loading

Authorised officer who examined and approved vehicle

Name

Company / Business

MA Number

Signature

Date

