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Issued July 2015

# BESSACARR

## TECHNICAL HANDBOOK

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# Specifications

Model	Bessacarr 412 Standard	Bessacarr 412 Optional
Roof Profile	Low Line	Low Line
Engine	130 MJT	130 MJT AUTO
Engine Capacity	2287cc	2287cc
Max Power	96kW @ 3600rpm	96kW @ 3600rpm
Torque	320 @ 1800rpm	320 @ 1800rpm
Chassis	SWB Fiat Low Line Chassis	SWB Fiat Low Line Chassis
Wheel base	3.00m/9'10"	
Designated Passenger Seats excluding Driver	1	
Berths (sleeping positions)	2	
Overall Length (no ladder)**	5.98m/19'7"	
Overall Width (mirrors folded)	2.38m/7'10"	
Overall Height**	2.82m/9'3"	
Maximum Technical Permissible Laden Mass (A)	3500kg	
Mass in Running Order (B)	2885kg	2902kg
Maximum User Payload (A-B)	615kg	598kg
Unladen Weight	2728kg	2745kg
Essential Habitation Equipment	10kg	
Thermal Insulation Grade	Three	
<b>Bed Sizes</b>		
Front Double	2.11m x 1.30m/6'11" x 4'3"	
Front Nearside Single	1.87m x 0.70m/6'2" x 2'4"	
Front Offside Single	1.87m x 0.70m/6'2" x 2'4"	
Rear Double		
Rear Nearside Single		
Rear Offside Single		
Overcab Bed		

Bessacarr 424 Standard	Bessacarr 424 Optional	Bessacarr 462 Standard	Bessacarr 462 Optional
High Line	High Line	High Line	High Line
130 MJT	130 MJT AUTO	130 MJT	130 MJT AUTO
2287cc	2287cc	2287cc	2287cc
96kW @ 3600rpm	96kW @ 3600rpm	96kW @ 3600rpm	96kW @ 3600rpm
320 @ 1800rpm	320 @ 1800rpm	320 @ 1800rpm	320 @ 1800rpm
MLWB Fiat Low Line Chassis	MLWB Fiat Low Line Chassis	MWB Fiat Low Line Chassis	MWB Fiat Low Line Chassis
3.80m/12'6"		3.45m/11'4"	
3		1	
4		2	
5.99m/19'8"		6.53m/21'5"	
2.38m/7'10"		2.38m/7'10"	
2.82m/9'3"		2.82m/9'3"	
3500kg		3500kg	
2990kg	3007kg	2970kg*	2987kg*
510kg	493kg	530kg*	513kg*
2834kg	2851kg	2814kg*	2831kg*
10kg		10kg	
Three		Three	
2.13m x 1.50m/104cm / 7'0" x 4'11"/3'5"			
		2.11m x 1.86m/6'11" x 6'1"	
		1.86m x 0.66m/6'1" x 2'2"	
		1.86m x 0.66m/6'1" x 2'2"	
1.87m x 1.24m/6'2" x 4'1"			

**NOTE:** 1. The **Maximum User Payload** includes:

- a) the **conventional load** (this is the allowance for passengers)
- b) **essential habitation equipment** (items and fluids required for safe and proper functioning of habitation equipment)
- c) **optional equipment** (items available from the manufacturer over and above the standard specification)
- d) **personal effects** (those items not covered by the above)

2. The **Mass in Running Order** is the mass of the unladen vehicle including a 75kg allowance for the driver plus engine coolants, 90% of the fuel tank and 1 x 6kg Calor Lite cylinder. The MRO is calculated with the fresh water tank empty. If you travel with water in the fresh water tank then the payload will reduce accordingly.

3. PLEASE TAKE CARE TO ENSURE THAT YOU HAVE ALLOWED FOR THE MASSES OF ALL ITEMS YOU INTEND TO CARRY IN THE MOTOR CARAVAN, e.g. passengers, optional equipment, essential

habitation equipment and personal effects, such as clothing, food, pets, bicycles, sailboards, sports equipment etc.

4. **WARNING** - UNDER NO CIRCUMSTANCES SHOULD THE MAXIMUM TECHNICAL PERMISSIBLE LADEN MASS OF THIS MOTOR CARAVAN BE EXCEEDED.

\* Estimated

\*\* For optional roof ladder add 125mm to length and 40mm to Low Line height.

# Specifications

Model	Bessacarr 484 Standard	Bessacarr 484 Optional Engine	Bessacarr 484 Lounge Standard	Bessacarr 484 Lounge Optional Engine
Roof Profile	Low Line		Low Line	
Engine	130 MJT	130 MJT AUTO	130 MJT	130 MJT AUTO
Engine Capacity	2287cc		2287cc	
Max Power	96kW @ 3600rpm		96kW @ 3600rpm	
Torque	320 @ 1800 rpm		320 @ 1800rpm	
Chassis	LWB Fiat Low Line Chassis		LWB Fiat Low Line Chassis	
Wheel base	4.04m/13'3"			
Designated Passenger Seats excluding Driver	3	3	1	1
Berths (sleeping positions)	4			
Overall Length (no ladder)**	7.08m/23'3"			
Overall Width (mirrors folded)	2.38m/7'10"			
Overall Height**	2.82m/9'3"			
Maximum Technical Permissible Laden Mass (A)	3500kg			
Mass in Running Order (B)	3105kg	3122kg	3070kg*	3087kg*
Maximum User Payload (A-B)	395kg	378kg	430kg*	413kg*
Unladen Weight	2949kg	2966kg	2913kg*	2930kg*
Essential Habitation Equipment	10kg			
Thermal Insulation Grade	THREE			
<b>Bed Sizes</b>				
Front Double	2.13m x 1.23m/1.04m/7'0" x 4'0"/3'5"			
Front Nearside Single				
Front Offside Single				
Rear Double	1.99m x 1.30m/6'6" x 4'3"			
Rear Nearside Single				
Rear Offside Single				
Overcab Bed				

**NOTE:** 1. The **Maximum User Payload** includes:

- a) the **conventional load** (this is the allowance for passengers)
- b) **essential habitation equipment** (items and fluids required for safe and proper functioning of habitation equipment)
- c) **optional equipment** (items available from the manufacturer over and above the standard specification)
- d) **personal effects** (those items not covered by the above)

2. The **Mass in Running Order** is the mass of the unladen vehicle including a 75kg allowance for the driver plus engine coolants and 90% of the fuel tank and 1 x 6kg Calor Lite cylinder. The MRO is calculated with the fresh water tank empty. If you travel with water in the fresh water tank then the payload will reduce accordingly.

3. PLEASE TAKE CARE TO ENSURE THAT YOU HAVE ALLOWED FOR THE MASSES OF ALL ITEMS YOU INTEND TO CARRY IN THE MOTOR CARAVAN, e.g. passengers, optional equipment, essential

habitation equipment and personal effects, such as clothing, food, pets, bicycles, sailboards, sports equipment etc.

4. **WARNING** - UNDER NO CIRCUMSTANCES SHOULD THE MAXIMUM TECHNICAL PERMISSIBLE LADEN MASS OF THIS MOTOR CARAVAN BE EXCEEDED.

\* Estimated

\*\* For optional roof ladder add 125mm to length and 40mm to Low Line height.

Bessacarr 454 Standard	Bessacarr 454 Optional Engine	Bessacarr 454 Lounge Standard	Bessacarr 454 Lounge Optional Engine
Low Line		Low Line	
130 MJT	130 MJT AUTO	130 MJT	130 MJT AUTO
2287cc		2287cc	
96kW @ 3600rpm		96kW @ 3600rpm	
320 @ 1800rpm		320 @ 1800rpm	
LWB Fiat Low Line Chassis		LWB Fiat Low Line Chassis	
4.04m/13'3"			
3	3	1	1
4			
7.08m/23'3"			
2.38m/7'10"			
2.82m/9'3"			
3500kg	3500kg	3500kg	3500kg
3080kg	3097kg	3045kg*	3062kg*
420kg	403kg	455kg*	438kg*
2923kg	2940kg	2889kg*	2906kg*
10kg			
THREE			
2.13m x 1.23m/1.04m/7'0" x 4'0"/3'5"			
1.91m x 1.33m/6'3" x 4'4"			

# Specifications

Model	Bessacarr 442 Standard	Bessacarr 442 Optional
Roof Profile	Low Line	Low Line
Engine	130 MJT	130 MJT AUTO
Engine Capacity	2287cc	2287cc
Engine Power	96kW @ 3600rpm	96kW @ 3600rpm
Torque	320 @ 1800rpm	320 @ 1800rpm
Chassis	LWB Fiat Low Line Chassis	LWB Fiat Low Line Chassis
Wheel base	4.04m/13'3"	
Designated Passenger Seats excluding Driver	1	
Berths (sleeping positions)	2	
Overall Length (no ladder)**	7.36m/24'2"	
Overall Width (mirrors folded)	2.38m/7'10"	
Overall Height**	2.82m/9'3"	
Maximum Technical Permissible Laden Mass (A)	3500kg	
Mass in Running Order (B)	3055kg	3072kg
Maximum User Payload (A-B)	445kg	428kg
Unladen Weight	2899kg	2916kg
Essential Habitation Equipment	10kg	
Thermal Insulation Grade	THREE	
<b>Bed Sizes</b>		
Front Double	2.11m x 1.42m/6'11" x 4'8"	
Front Nearside Single	1.88m x 0.70m/6'2" x 2'4"	
Front Offside Single	1.88m x 0.70m/6'2" x 2'4"	
Rear Double		
Rear Nearside Single		
Rear Offside Single		
Overcab Bed		

Bessacarr 494 Standard	Bessacarr 494 Optional Engine	Bessacarr 494 Lounge Standard	Bessacarr 494 Lounge Optional Engine
High Line		High Line	
130 MJT		130 MJT AUTO	
2287cc		2287cc	
96kW @ 3600rpm		96kW @ 3600rpm	
320 @ 1800rpm		320 @ 1800rpm	
Fiat/AL-KO Low Line Chassis		Fiat/AL-KO Low Line Chassis	
4.48m/14'8"			
3	3	1	1
4			
7.36m/24'2"			
2.38m/7'10"			
2.76m/9'1"			
3700kg	3700kg	3500kg	3500kg
3195kg	3212kg	3160kg*	3177kg*
505kg	488kg	340kg*	323kg*
3039kg	3056kg	3003kg*	3020kg*
10kg			
THREE			
2.13m x 1.23m/1.04m/7'0" x 4'0"/3'5"			
1.95m x 1.33m/6'5" x 4'4"			

**NOTE:** 1. The **Maximum User Payload** includes:

- a) the **conventional load** (this is the allowance for passengers)
- b) **essential habitation equipment** (items and fluids required for safe and proper functioning of habitation equipment)
- c) **optional equipment** (items available from the manufacturer over and above the standard specification)
- d) **personal effects** (those items not covered by the above)

2. The **Mass in Running Order** is the mass of the unladen vehicle including a 75kg allowance for the driver plus engine coolants and 90% of the fuel tank and 1 x 6kg Calor Lite cylinder. The MRO is calculated with the fresh water tank empty. If you travel with water in the fresh water tank then the payload will reduce accordingly.

3. PLEASE TAKE CARE TO ENSURE THAT YOU HAVE ALLOWED FOR THE MASSES OF ALL ITEMS YOU INTEND TO CARRY IN THE MOTOR CARAVAN, e.g. passengers, optional equipment, essential

habitation equipment and personal effects, such as clothing, food, pets, bicycles, sailboards, sports equipment etc.

4. **WARNING** - UNDER NO CIRCUMSTANCES SHOULD THE MAXIMUM TECHNICAL PERMISSIBLE LADEN MASS OF THIS MOTOR CARAVAN BE EXCEEDED.

\* Estimated

\*\* For optional roof ladder add 125mm to length and 40mm to Low Line height.

# Specifications

Model	Bessacarr 496 Standard	Bessacarr 496 Optional
Roof Profile	High Line	High Line
Engine	130 MJT	130 MJT AUTO
Engine Capacity	2287cc	2287cc
Engine Power	96kW @ 3600rpm	96kW @ 3600rpm
Torque	320 @ 1800rpm	320 @ 1800rpm
Chassis	Fiat/AL-KO Low Line Chassis	Fiat/AL-KO Low Line Chassis
Wheel base	4.70m/15'5"	
Designated Passenger Seats excluding Driver	5	
Berths (sleeping positions)	6	
Overall Length (no ladder)**	7.75m/25'5"	
Overall Width (mirrors folded)	2.38m/7'10"	
Overall Height**	2.82m/9'3"	
Maximum Technical Permissible Laden Mass (A)	4250kg	
Mass in Running Order (B)	3330kg	3347kg
Maximum User Payload (A-B)	920kg	903kg
Unladen Weight	3173kg	3190kg
Essential Habitation Equipment	10kg	
Thermal Insulation Grade	THREE	
<b>Bed Sizes</b>		
Front Double	2.13m x 1.80m/1.21m/7'0" x 5'11"/4'0"	
Front Nearside Single		
Front Offside Single	1.80m x 0.92m/5'11" x 3'0"	
Rear Double	2.11m x 1.67m/6'11" x 5'6"	
Rear Nearside Single	1.86m x 0.66m/6'1" x 2'2"	
Rear Offside Single	1.67m x 0.66m/5'6" x 2'2"	
Overcab Bed	1.95m x 1.30m/6'5" x 4'3"	

**NOTE:** 1. The **Maximum User Payload** includes:

- a) the **conventional load** (this is the allowance for passengers)
- b) **essential habitation equipment** (items and fluids required for safe and proper functioning of habitation equipment)
- c) **optional equipment** (items available from the manufacturer over and above the standard specification)
- d) **personal effects** (those items not covered by the above)

2. The **Mass in Running Order** is the mass of the unladen vehicle including a 75kg allowance for the driver plus engine coolants and 90% of the fuel tank and 1 x 6kg Calor Lite cylinder. The MRO is calculated with the fresh water tank empty. If you travel with water in the fresh water tank then the payload will reduce accordingly.

3. PLEASE TAKE CARE TO ENSURE THAT YOU HAVE ALLOWED FOR THE MASSES OF ALL ITEMS YOU INTEND TO CARRY IN THE MOTOR CARAVAN, e.g. passengers, optional equipment, essential

habitation equipment and personal effects, such as clothing, food, pets, bicycles, sailboards, sports equipment etc.

4. **WARNING** - UNDER NO CIRCUMSTANCES SHOULD THE MAXIMUM TECHNICAL PERMISSIBLE LADEN MASS OF THIS MOTOR CARAVAN BE EXCEEDED.

\* Estimated

\*\* For optional roof ladder add 125mm to length and 40mm to Low Line height.

# Capacities

## Water Tank Capacities

	Fresh Water Tank	Waste Water Tank	Water Heater
Bessacarr	90 litre	68 litre	10 litre
Bessacarr 462	94 litre	60 litre	10 litre

## LPG Locker Capacity

	Capacity
Bessacarr	2 x 13kg
Bessacarr 424	2 x 7kg

The above are recommended gas bottle sizes

**NOTICE : For technical data on the base vehicle please refer to the manufacturer's handbook**

# Towing Capabilities

## Bessacarr Towing Capabilities

Model	Engine / Chassis
Bessacarr 412**	130MJT (2.3L)
Bessacarr 412**	130MJT (2.3L) AUTO
Bessacarr 424**	130MJT (2.3L)
Bessacarr 424**	130MJT (2.3L) AUTO
Bessacarr 462	130MJT (2.3L)
Bessacarr 462	130MJT (2.3L) AUTO
Bessacarr 484 Lounge**	130MJT (2.3L)
Bessacarr 484 Lounge**	130MJT (2.3L) AUTO
Bessacarr 484**	130MJT (2.3L)
Bessacarr 484**	130MJT (2.3L) AUTO
Bessacarr 454	130MJT (2.3L)
Bessacarr 454	130MJT (2.3L) AUTO
Bessacarr 442	130MJT (2.3L)
Bessacarr 442	130MJT (2.3L) AUTO
Bessacarr 442	130MJT (2.3L)
Bessacarr 442	130MJT (2.3L) AUTO
Bessacarr 494 Lounge	130MJT (2.3L)
Bessacarr 494 Lounge	130MJT (2.3L) AUTO
Bessacarr 494**	130MJT (2.3L)
Bessacarr 494**	130MJT (2.3L) AUTO
Bessacarr 496**	130MJT (2.3L)
Bessacarr 496**	130MJT (2.3L) AUTO

**CAUTION:** When fitting a towbar, it must meet certain minimum requirements as specified by Type Approval Regulations. The bar will have marked on it the approval standard (94/20/EC or 55RECE) and the maximum download, or noseweight, that it can accept. It must fit the manufacturer's approved mounting points and must not obscure the towing vehicle's number plate.

MTPLM	Permissible Front Axle Load	Permissible Rear Axle Load	Recommended Maximum Trailer Weight	Gross Train Weight
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3650kg	1850kg	2000kg	1600kg	5250kg
3650kg	1850kg	2000kg	1600kg	5250kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	1600kg	5100kg
3500kg	1850kg	2000kg	2000kg	5500kg
3500kg	1850kg	2000kg	2000kg	5500kg
3700kg	1850kg	2000kg	2000kg	5500kg
3700kg	1850kg	2000kg	2000kg	5500kg
4250kg	2100kg	2500kg	2000kg	6000kg
4250kg	2100kg	2500kg	2000kg	6000kg

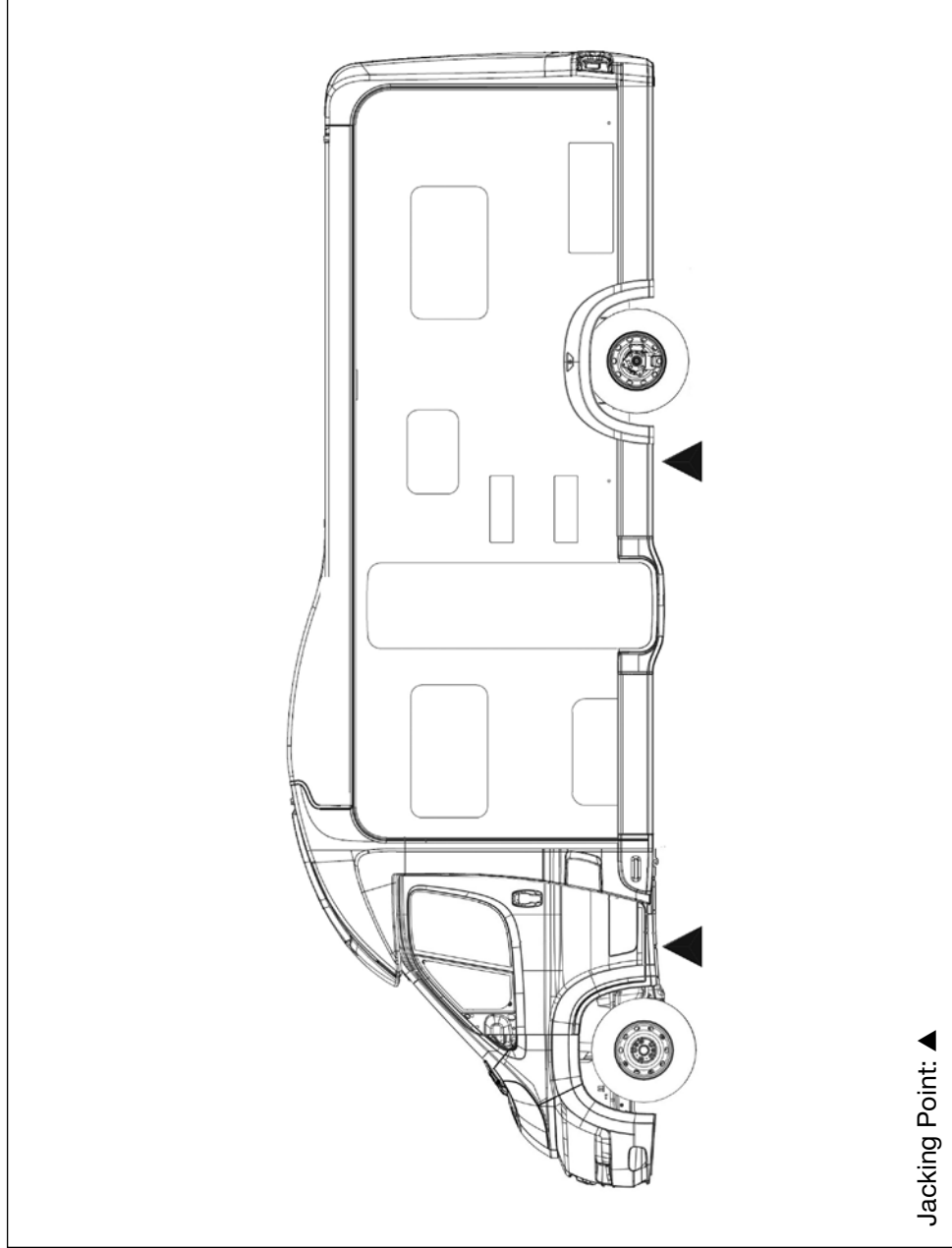
Please note that the additional weight of the tow bar and trailer nose weight increases the rear axle loading of the motor home so care should be taken that the rear axle load is not exceeded when towing.

\*\* With this vehicle configuration it will be necessary to reduce the payload carried inside the van when towing to ensure that the MTPLM and maximum axle loads are not exceeded.

To ensure adequate road holding, the load on the front axle, under all conditions, must not be less than 40% or more than 70% of the total weight.

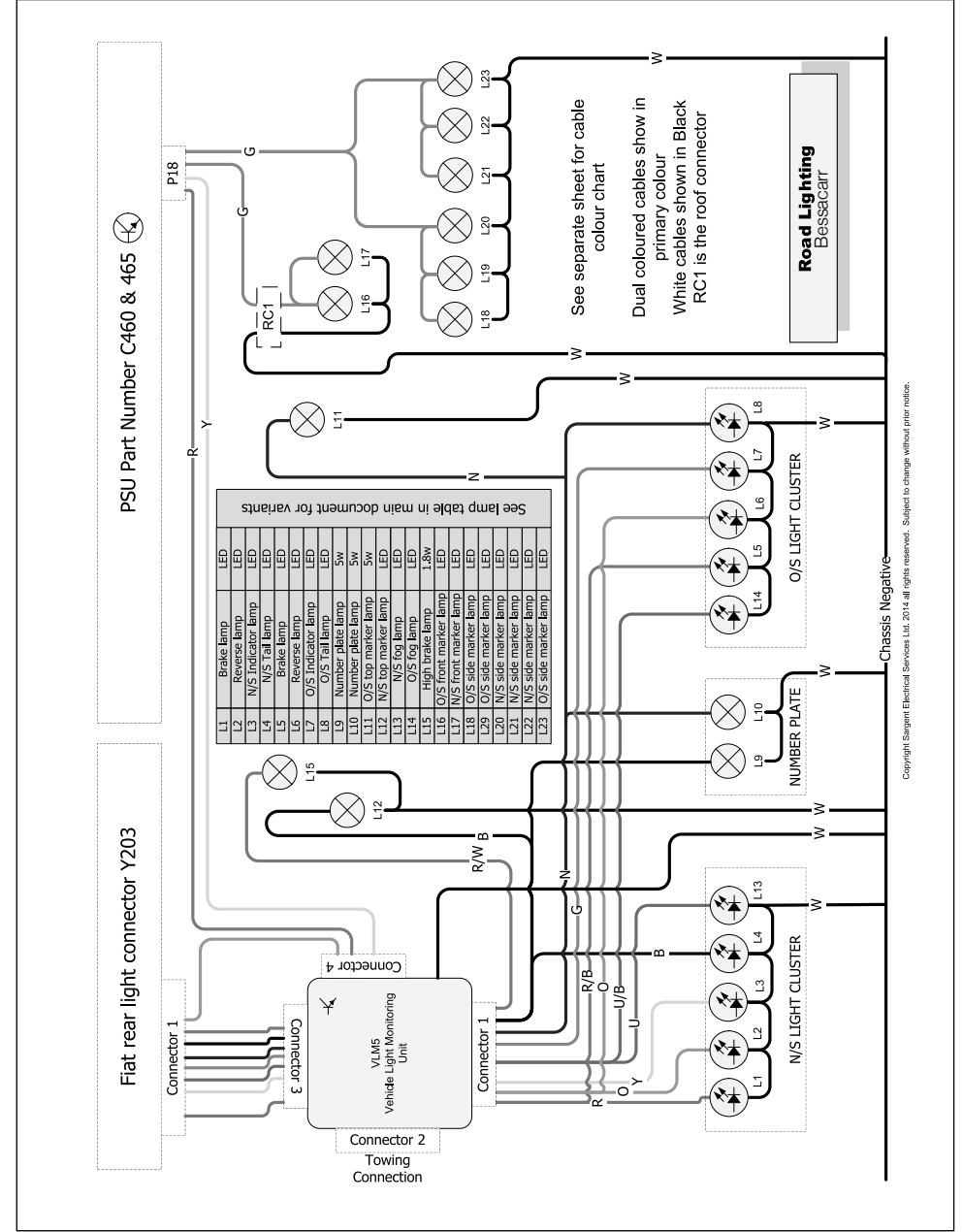
Care must be taken when distributing loads. The loadings and weights above are maximums and must not be exceeded under any circumstances.

Bessacarr



Jacking Point: ▲

Bessacarr - Road lighting circuits

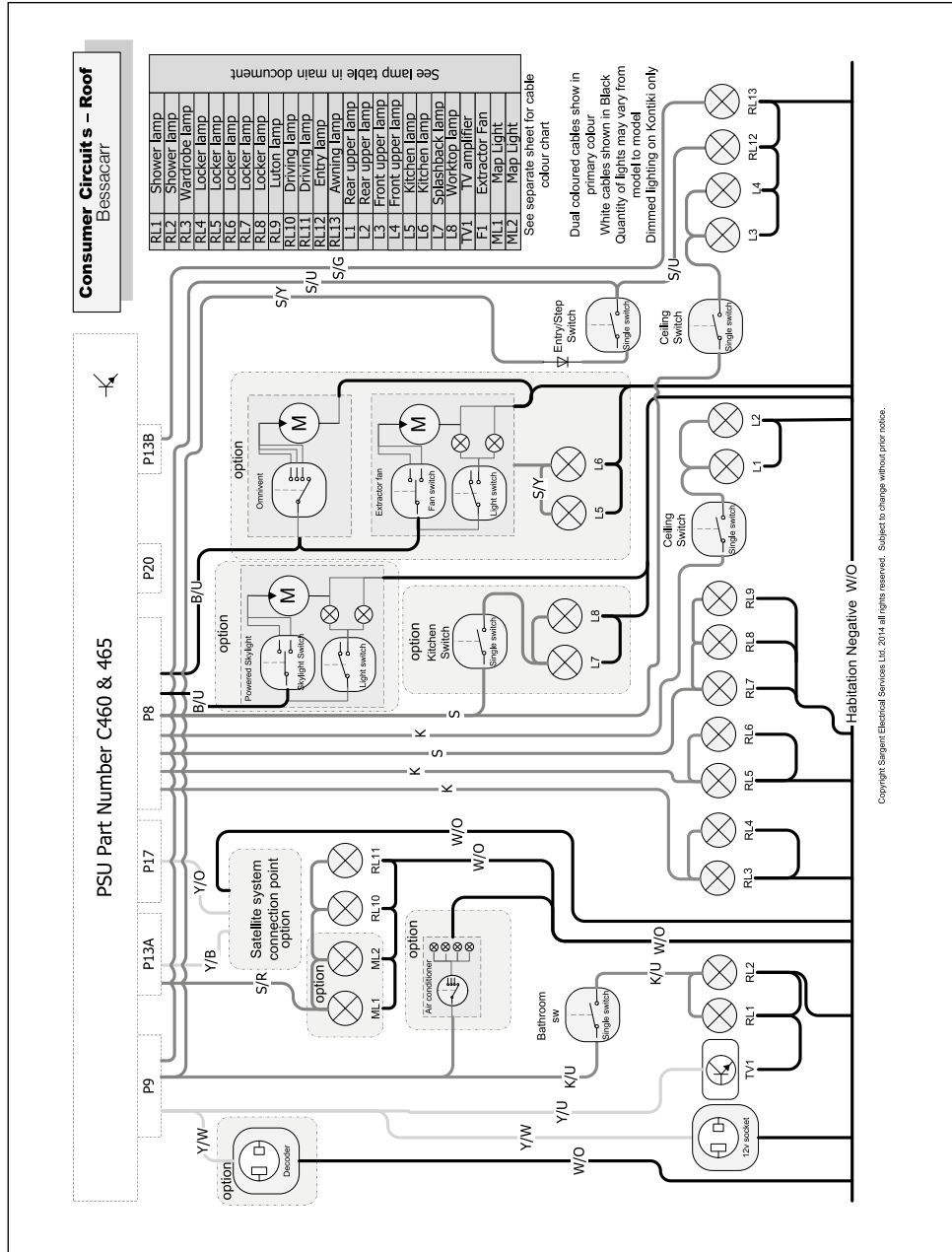


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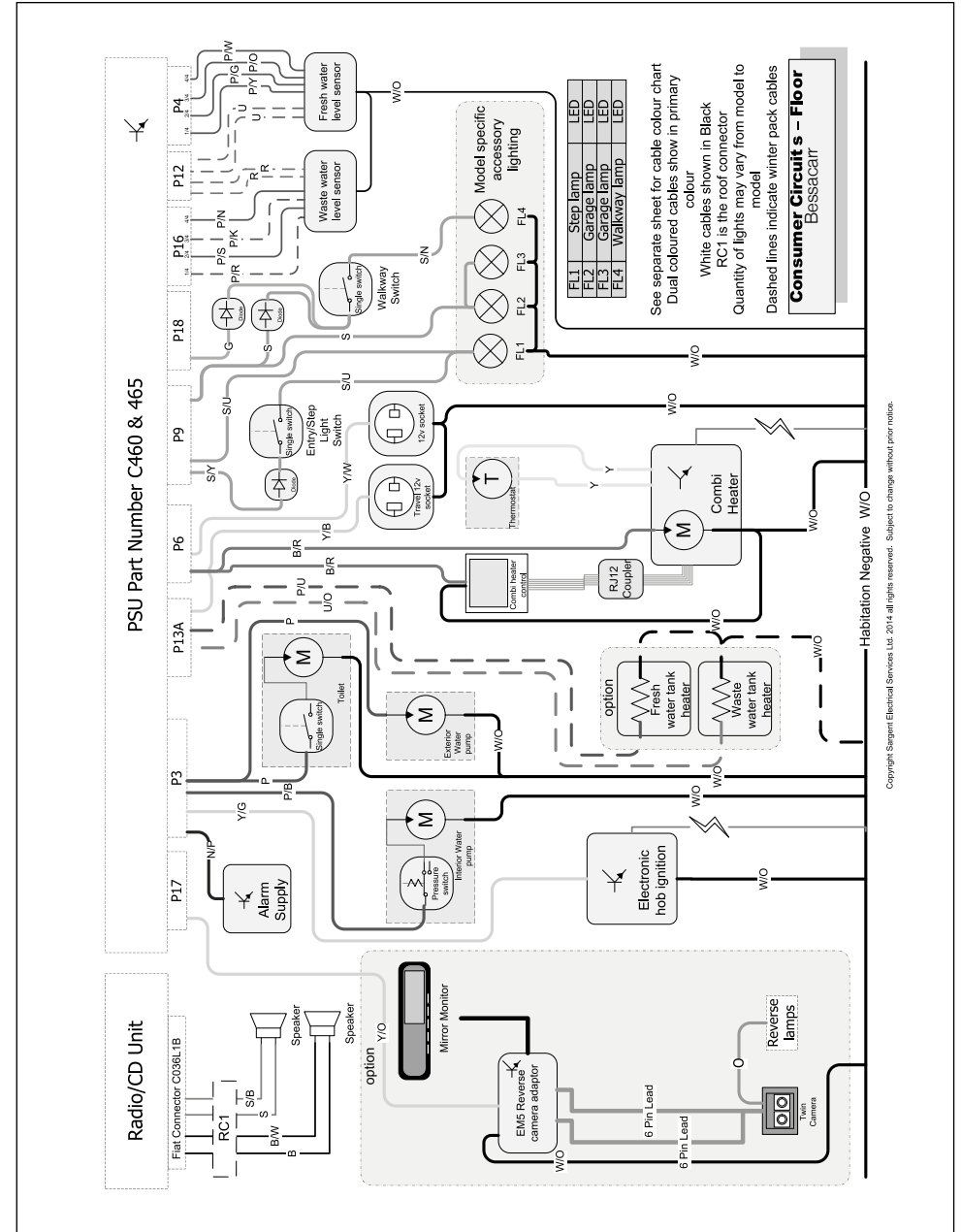
# Wiring Diagrams

## Bessacarr - Roof lighting circuits

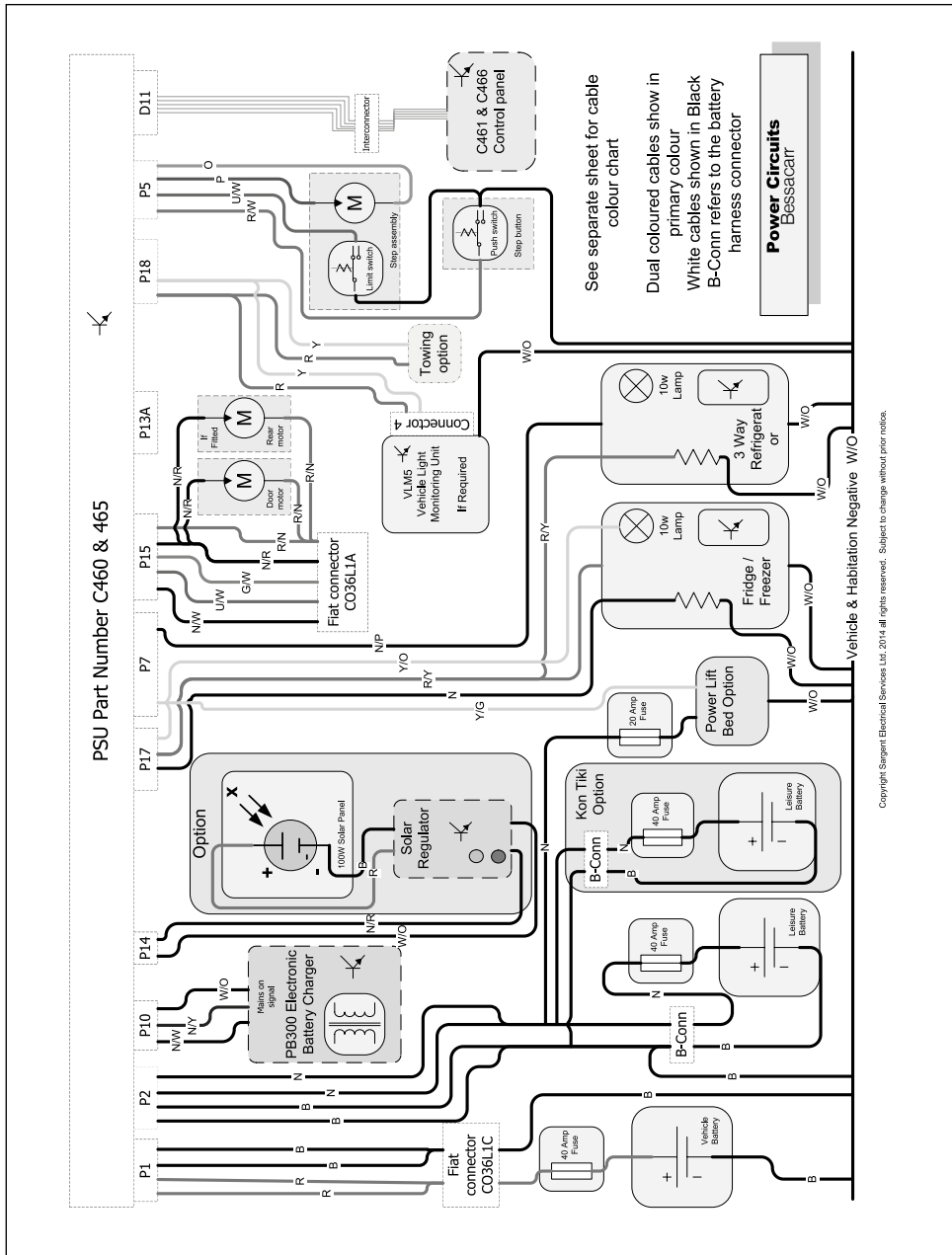


# Wiring Diagrams

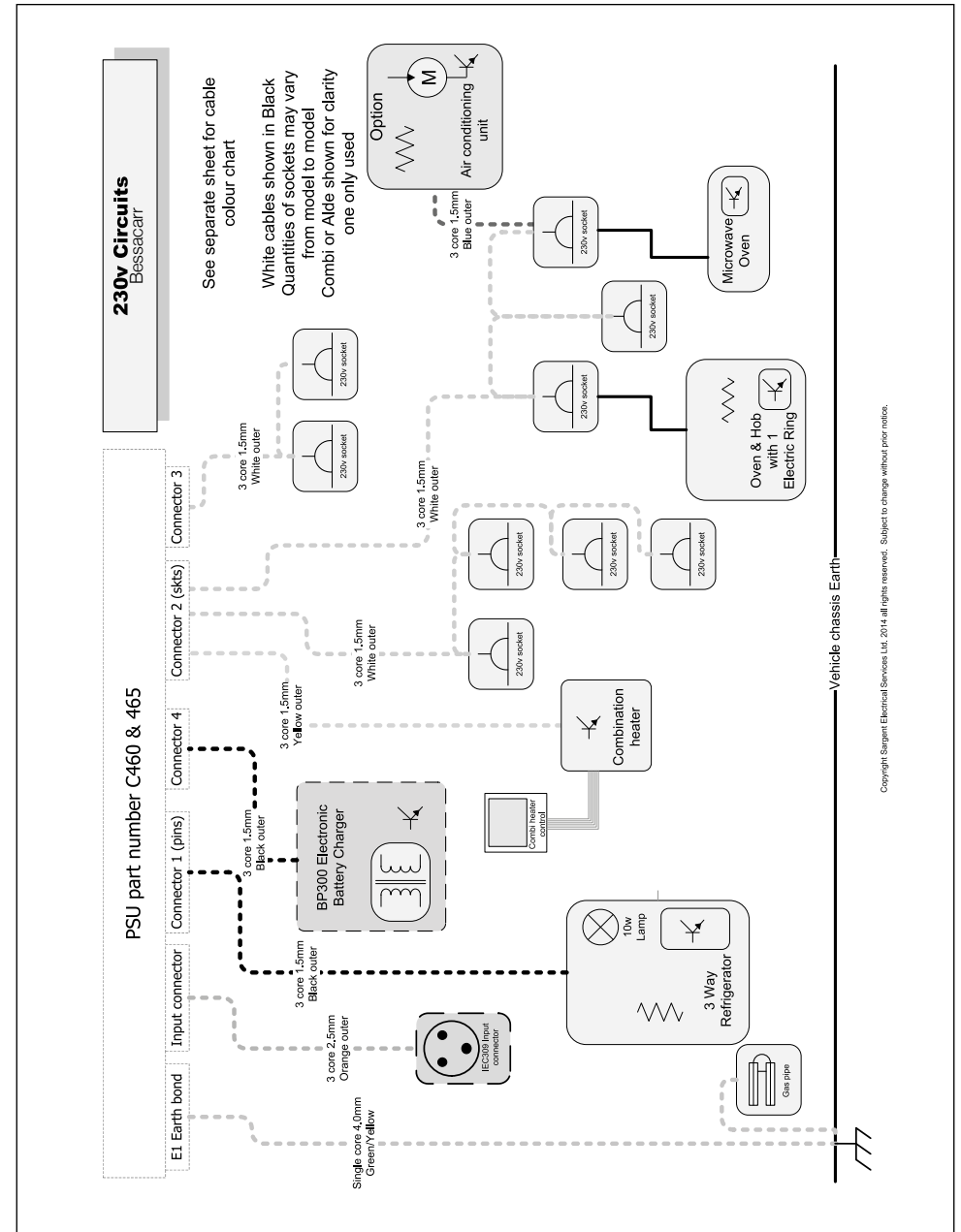
## Bessacarr - Consumer Circuits - Floor circuits



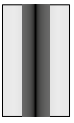
## Bessacarr - Power circuits



## Bessacarr - 230v with combi heating



## Bessacarr - Cable Colour Chart



**Y/U**  
Yellow cable with Blue stripe

Example

**Cable Colour Chart**  
Swift Group

12v Cable Colours	
B	BLACK
N	BROWN
R	RED
O	ORANGE
Y	YELLOW
G	GREEN
U	BLUE
P	PURPLE
S	SLATE GREY
W	WHITE
K	PINK

230v Cable Colours	
B	BLACK
N	BROWN
W	WHITE
O	ORANGE
Y	YELLOW
G	GREEN
U	BLUE

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Road Lights		
Application	Bulb Reference	Bulb Rating
Front marker light	LED complete unit - Britax L98.00.12v & L98.01.12v	12v LED
Side marker light	LED complete unit L99.01.12V	12v LED
Rear high level marker light	LED complete unit L99.02.12V	12v LED
Rear light cluster (Multi function)	Britax L79.00.12v (LH) & L79.01.12v (RH)	12v LED
High level brake light	ZDA 343-800-057	12v LED
Number plate light	C5W	12v 5w
Application	Bulb Reference	Bulb Rating
Locker spotlights, LED with dimmer	LED complete lamp FEM1168	12v LED
China locker light	LED complete lamp FEM1374	12v LED
B-pillar map reading lamps	LED Complete lamp on 'swan neck' flexible arm	12v LED
Over locker / high level furniture lights	Flexible LED light strip (cut to length) FEM1214	12v LED
Illuminated panel backlighting	Flexible LED light strip (cut to length) FEM1214	12v LED
Downlights	LED complete lamp FEM01189	12v LED
Walkway low level lights	LED complete lamp FEM0993	12v LED
Awning lamp, LED	LED complete lamp FEM0945	12v LED
Step well light	LED complete lamp	12v LED
Wardrobe light	12v Halogen capsule	12v G4 5w

Note: Not all lights feature on all models within a range

## Bulb replacement

### **BESSACARR ROAD LIGHTING, COACH-BUILT BODY MOUNTED LAMPS**

#### **REAR LIGHT CLUSTERS (CONTAINING INDICATOR, TAIL / STOP, REVERSE AND FOG LAMPS)**

These multi-function lights are LED and have no user serviceable parts inside.

Replacement clusters can be fitted in the following way:

Remove three screws visible around the perimeter of the cluster

Pull the cluster away from the rear panel of the tourer, taking care to not put excessive strain on the electrical connections behind the lamp

Unplug the electrical connection from the rear of the lamp, by releasing the tab and lifting the connector upwards relative to the cluster

Plug the connector back into the replacement lamp, position the lamp into the recess and replace the three fixing screws.

### **HIGH LEVEL BRAKE LAMP**

These lamps are LED and have no user serviceable parts inside.

Replacements should be undertaken by your dealer, as the lamps are sealed onto the mounting panel.

### **FRONT AND REAR UPPER MARKER / POSITION LAMPS**

These lamps are LED and have no user serviceable parts inside.

Replacements should be undertaken by your dealer, as the lamps are sealed onto the mounting panel.

### **SIDE MARKER / POSITION LAMPS**

These lamps are LED and have no user serviceable parts inside.

Replacements should be undertaken by your dealer, as the lamps are sealed onto the mounting panel.

### **NUMBER PLATE LIGHTS**

Bulb access is via the front lens of each lamp.

Remove the two screws in the lens of the lamp, and remove.

Lever the bulb out of retaining clips.

Reverse the procedure to re-fit a new bulb and the light lens.