

OPERATION MANUAL FOR 19 SEAT “MINE SPEC” BUS MODULE

FITTED TO A NPS 300 4x4 CAB CHASSIS



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1. PREFACE

This Manual should be referred to and used in conjunction with the Truck Manufacturers Owner’s Manual. It is not intended to replace, supersede or contradict any information contained within the chassis manufacturer’s manual. Both manuals should be read by all persons involved in the operation of the vehicle, before it is placed into service.

This manual is intended as a guide for the operators of Able Bus and Coach Vehicles manufactured in 2018.

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2. GENERAL DESCRIPTION

2.1. Description

The product is made of two main assemblies:

- NPS300 4x4 CAB CHASSIS;
- ABLE BUS MODULE.

The vehicle is intended to accommodate 3 persons in the cab chassis and 15 persons in the bus module. All 18 seats are equipped with seatbelts.

Access to the bus module seats is made through the manually operated passenger door. For low light conditions, a flood lights has been mounted above the passenger door.

Access to the rear storage area is done through the manually operated back door.

Two under body boxes can be found on the passenger side of the bus module; in the front one there is the battery, two isolators (one to isolate starter motor only) and a jump start point. The box on the rear side has a set of wheel chocks and warning triangles.

The reversing camera is mounted to the top rear of the bus, set on a downward angle.

Both the cab chassis and bus module have independent air conditioning systems; the bus module system is controlled by a custom cab dashboard panel.

The bus is fitted with one standard spare wheel found under the body (rear side). An additional one can be fitted in the rear storage area.

The fuel tank is standard (a nominal capacity of 140 liters).

The fuel filter has been moved from the cab passenger side to the driver side.

2.2. Range of use

The bus is intended for usage on:

- paved roads;
- unpaved gravel roads.

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3. BULBAR (Optional)

- 3.1. Before tilting the bulbar indoors, make sure there is sufficient clearance -0.9m- in front of the cab.
 3.2. The bull bar must be **fully lowered** before tilting the cab, or damage to the front cabin panels will occur. This can be done by removing the front pin and the eye bolts and lowering the bar down.



- 3.2. Before travelling, ensure that the eyebolts securing the bar are tight, and that the plastic washers are in place under the head of the bolts.



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4. TOW BAR (Optional)

If present on the options list, the bus can be delivered with a tow bar.

Tow bar data:

- 4000Kg tow capacity;
- 400Kg max ball weight.



5. UNDER TRUCK CABIN ACCESS

5.1. Lower bull bar (see section 3) if mounted.

5.2. Remove cab sock, from inside the bus module:

- unclip and remove the internal cab sock;
- remove foam;
- remove sound proofing and place it flat on the ground;
- remove external (white) cab sock.



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5.3. Tilt the cab (See **Truck Manufacturer’s Owner’s Manual** – section 7-12 to 7-15).
ATTENTION: If operation is done indoors please allow min 0.9m front clearance.



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6. BUS MODULE AIR CONDITIONING

All Able Bus and Coach Passenger vehicles are fitted with a separate “ABLE” Air conditioning system in addition to the Truck Cab Chassis Air Conditioning System. This system is designed and manufactured in Australia for harsh conditions. Able aims to supply a system that is simple, easy to use and maintain, that is suitable for remote areas. It is recommended that when operating the air conditioning system, all doors and hatches should be closed.

Each row of seats has a separate manually operated double eyeball air con vent above them.



AIR CONDITIONER MAINTENANCE:

1. Cleaning of return air filters: monthly (or weekly in dusty environments).

The filters are located inside the bus module, in the middle of the passenger area at head height. For this step no tools are required, simply pull the foam filter element from the evaporator covers and wash in soapy water, allow the element to dry, then re-fit the element back into the evaporator cover.

NOTE: *Do not pressure wash the foam filter element!*



2. Under truck cab inspection: monthly.

NOTE. Before inspection the truck cabin **MUST BE TILTED.**

In this inspection:

- check the drive belt tension for the compressor; max allowed deflection – 10mm when measured at the center of the span between pulleys and pressing with a force of 10kgf .
- check the idler pulley for any signs of “wobble”;
- check the alternator and compressor mounting bolts are tightened securely.

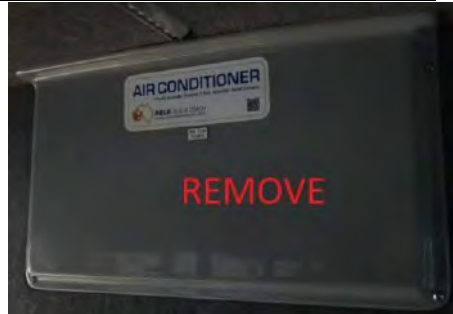
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3. Checking the refrigerant level in the system: annually, or if cooling stops/reduces in power.

A lack of refrigerant will reduce the performance of the AC unit.

To check the refrigerant level:

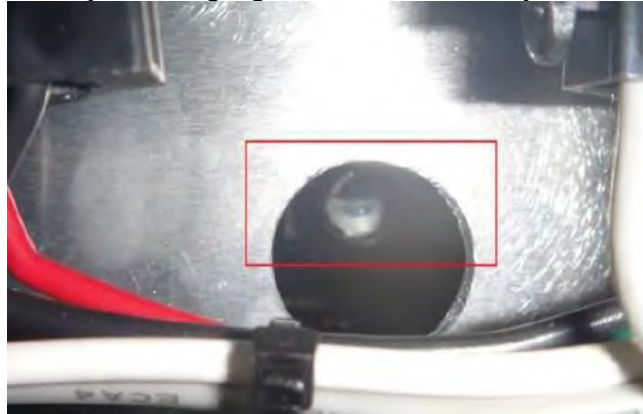
- remove front fuse cover on the inside of the front wall of the bus module



- Remove rubber blanking grommet



- inspect the sight glass on the receiver dryer unit



First, start the engine and wind the engine speed up to 1500rpm and select the highest fan speed and the COLD setting on the temperature switch. After 5 minutes, if there is foam present in the sight glass, the unit will need to be re-charged; if it is clear the system is working correctly. However, it may be possible that the sight glass may be clear if there is no refrigerant at all in the system. This would mean the system would not cool the air, at all. If the system is being re-charged the compressor oil level should be checked during the process.

4. Report and have system repaired by certified personnel

If any refrigerant needs to be added be sure to find the leak and have it repaired before re-charging the system. If any major repairs are being carried out, it is recommended to replace the receiver dryer uni

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AIR CONDITIONER SPARE PARTS LIST

Item:	AIR CON PARTS Description:	Part#	Location:	QTY:
1	Compressor – TM21 VALEO	TM2521565	A/C	1
2	Compressor fitting plate	TP2560105	A/C	1
3	Receiver Drier	RD1011	A/C	2
4	TX Valve	TX3015	A/C	2
5	Pressure switch	PS3110	A/C	2
6	A/C Belt (Rear A/C)	15A1540	A/C	1
7	Evaporator Blower Assembly	EM2014	A/C	4
8	Condenser Fans	EF3538	A/C	3
9	Relays (24volt)	PR0016	A/C	10
10	Relay (24volt C/O)	PR0015	A/C	1
11	Circuit Breaker	30055-50B	A/C	1
12	Fuse – 10amp	FU0010	A/C	2
13	Fuse - 15 amp	FU0015	A/C	7
14	Fuse -20amp	FU0020	A/C	2
15	Fan Speed Switch	SE2002	A/C	1
16	Thermostat	TS7018	A/C	1
17	Evaporator	EV3205	A/C	2
18	Condenser	CN3245	A/C	2
19	Idler pulley (bearing included)	IP9705	A/C	1
20	Pulley bolt	IP8750	A/C	1
21	Pulley spacer	IP8720	A/C	1
22	Adjuster Bolt	IP8000	A/C	1

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7. BUS MODULE CONTROLS



- 7.1 Multimedia System
- 7.2 Central controls
- 7.3 Drivers left side controls
- 7.4 Drivers right side controls

DETAILS:

7.2



- 1. Opened Passenger Door's Bus module (warning light)
- 2. Dash panel
- 3. Air Con Fan Speed
- 4. Condenser Box Switch

In case the passenger module door is not closed, the designated light will be illuminated.



7.3

7.4

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1. Pole Beacon Light
2. Bus Module Passenger Lights



1. Interior Bus Module Lights
2. Spot Lights (optional)

8. CHECKING THE OIL LEVEL

For easier access the dipstick position has been moved in between the truck cab and bus module. The steps and conditions for engine oil level check remain the same as described in **Truck Manufacturer’s Owner’s Manual** – section 7-24 to 7-27.



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9. AUDIO AND NAVIGATION SYSTEM

The bus module is equipped with 6 (six) speakers. There are 3 (four) speakers on each side of the bus, in line with the double eyeball air con vents.

The speakers are connected and controlled by the truck central Multimedia Audio System. For details on this system, please refer to the ***DIR6200 Touchscreen Multimedia System Manual***, delivered together with Truck Manufacturer’s Owner’s Manual.



10. DOORS

10.1. The passenger entry door is manually operated.

The door can be opened by turning the black handle in a clock wise direction and then gently pulling the door open. If any of the door components need replacing, their part numbers can be found in the body hardware section of the Able Bus and Coach Materials list, found in section 15.

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Close door



Open door

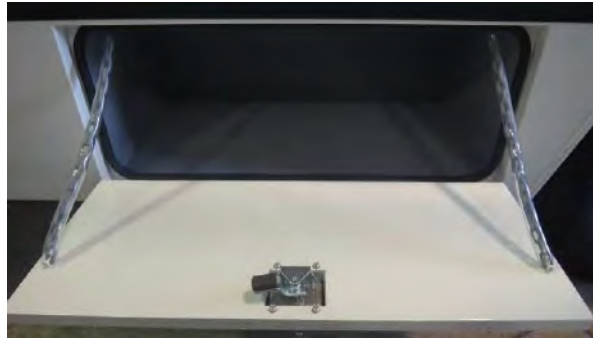


10.2. The box doors are manually operated.

To open doors: rotate door handle towards outside of the module, rotate counter clock wise and then gently pull. The doors opening angle is limited by two chains (on each door) connected between doors and body.



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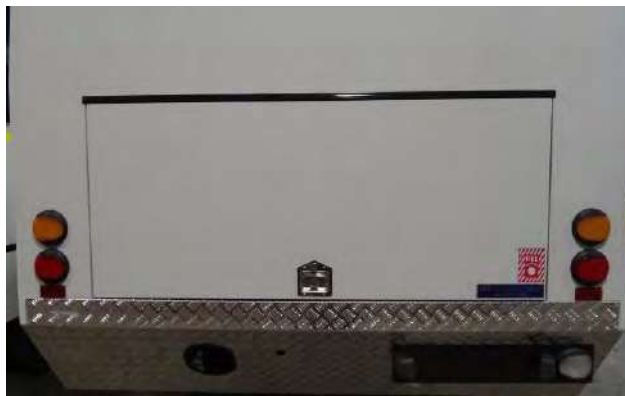


10.3. The rear storage door is manually operated.

ATTENTION: If rear door is opened indoors ensure a minimum space of 1200mm is provided at the back of the bus module.

To open rear door: rotate door handle towards outside of the module, rotate counter clock wise and then gently pull. The door has two gas struts fitted to the sides. They will push the door into the open position. A person opening/closing the door should always control the opening/closing speed, by securing the door with one/two hands.

ATTENTION: When opening/closing the door, make sure there are no other persons in the 1200x900mm surrounding the door.



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11. REVERSING CAMERA

The reversing camera is mounted to the bus module, on the top-rear face facing down to keep it out of the dust. When the reverse gear is selected, the image from the camera is displayed on the touchscreen of the multimedia unit.



The Isuzu Multimedia unit will sometimes return to factory settings when it is isolated from power (see chapter 12).

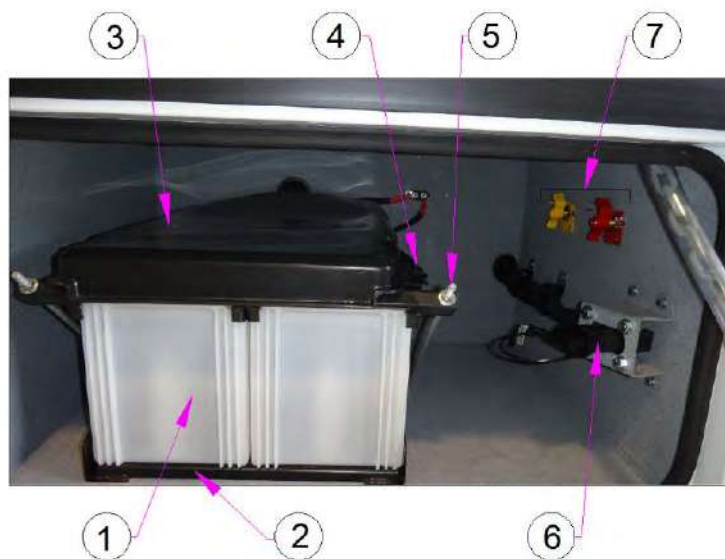
To reset the reversing signal so that the camera displays on the screen when the reverse gear is selected, please follow the steps below:

1. Turn on the battery isolation switch.
2. Ensuring the Park brake is on and the gearbox is in neutral, turn the key and start the engine.
3. Depress the knob on the Isuzu radio unit, to turn the system on.
4. Press the “Home” button on the top right hand side of the unit, to bring up the home menu screen.
5. Select the “Settings” icon by pressing the icon on the touch screen.
6. Select the “Video” icon by pressing the icon on the touch screen.
7. Select the “Camera ON” icon by pressing the icon on the touch screen. This icon will be located in the bottom left corner of the display above the “Camera OFF” icon.
8. Keeping your foot on the clutch pedal and the park brake on, select the reverse gear and check that the camera is displayed on the multimedia screen.
9. Place the Gear selector back to the neutral gear and turn off the engine. This setting will remain until the vehicle is isolated.

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12. BATTERY BOX

The battery box is placed on the driver’s side, between the rear wheels and the cab.

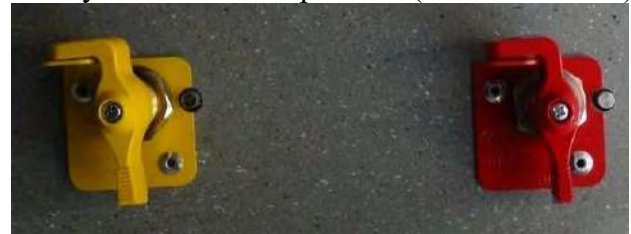


1. Battery
2. Battery support
3. Battery cover
4. Battery cover fastener
5. Fixation rod (x 2)
6. Jump Start Point
7. Battery isolators (one red, one yellow)

Battery isolator *opened* position (when in use)



Battery isolator *closed* position (when not in use)

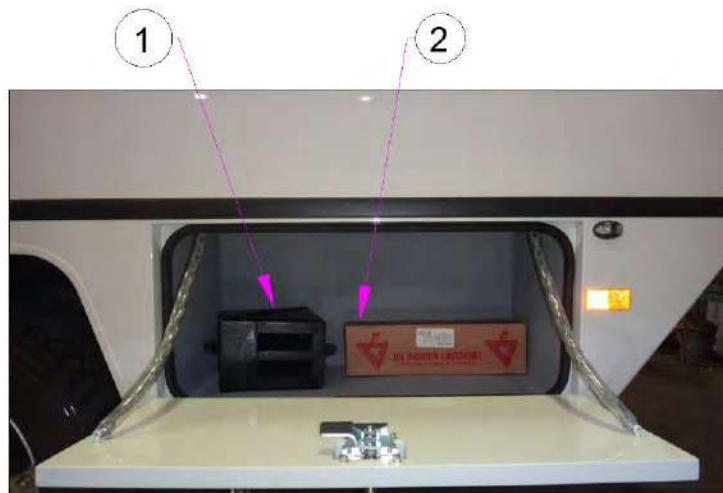


NOTE: The yellow isolator **can** be turned ON and the red isolator turned OFF to allow the bus to be worked on and electrical systems to be tested, but **not allow the engine to start**.

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13. REAR SIDE MODULE BOX

The rear side module box can be found between the rear wheels and rear of bus module, *on the passenger side.*



- 1. Wheel chocks (x2)
- 2. Triangles

14. BUS MODULE SAFETY FEATURES

14.1. Emergency Exit Hatch: fitted to the bus module roof.

In case of emergency, follow the steps described on the inner side of the hatch.



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14.2. Emergency Exit Window: fitted to the bus module window above the rear axle.
In case of emergency, follow the steps described on the inner side of the window.



14.3. Triangles: fitted in the rear side module box (passenger side).



TRIANGLES



14.4. Fire Extinguishers: fire extinguishers are fitted to the front passenger area of the bus module and the storage area. All are ABE powder type and have signage visible from outside of the module.



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15. SPARE PARTS MATERIALS LIST

BODY HARDWARE	PART NUMBER	SUPPLIER
Drop T lock (under body tool boxes)	9/01501/14	Able Bus
Exterior door handle on main door (black, no clutch)	9/01037/01	Able Bus
Rotary door lock	459	Able Bus
Internal chrome handle	1582	Able Bus
Double air con vent	140900-0121	Able Bus
Rubber stop & catch, female (blue)	0776/001	Able Bus
Rubber stop & catch, male (black)	0666/002	Able Bus
Seat belt buckle	Sob2021	Able Bus
Seat belt (LH)	Sob1114lh	Able Bus
Seat belt (RH)	Sob1113rh	Able Bus
LIGHTING AND ELECTRICAL		
Stop/Tail LED	2366-24V	Able Bus
Turn LED	2133-24V	Able Bus
Number plate LED	2559 bulk (8)	Able Bus
Reversing lamp LED	1433	Able Bus
Dura led Combi high level mine light	2379	Able Bus
Rotating amber led warning beacon	1731-24V	Able Bus
Mine flag	BUG3	Able Bus

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16. STORAGE AND PRESERVATION

16.1. Storage will be done on ground with net area of 39m². (LxI=8500x4600mm).

Height of vehicle: 3850mm – mine flag included.

If mine flag is temporary removed, the bus can be stored in a covered area with min height of 3m.

If vehicle is placed in an enclosed area, please allow:

- Minimum space of 1200mm from rear end to gain access to the storage area
- Minimum space of 900mm from front end to allow bull bar to be tilted.
- Minimum height of roof - 4000mm (3000mm if mine flag is temporary removed)

16.2. When not in use, it is recommended to keep the bus module in an enclosed or covered area. Check:

- The roof hatch is closed;
- Battery isolators (found in battery box compartment) are switched off; (as seen below)
- Doors and rear fold out steps hinges are greased;
- Wheel chocks are fitted to a wheel.

NOTE: Before moving the truck, make sure the wheel chocks are removed and placed in the rear side module box (passenger side).

NOTE: When **in use**, the door hinges need to be **greased every 6 months**.

Recommended grease: G PLEX LX2.



17. SPARE WHEELS

The bus is fitted with at least one spare wheels; it can be found under the body (rear side).

If required, a second spare wheel can be fitted in the rear storage area.

17.1 To remove the spare wheel from under the chassis use the spare wheel handle; it is placed in the rear storage area.



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17.2 (Optional) To remove the spare wheel from the storage area, remove spare wheel bracket first. Use designated key found in the tool bag placed in the cab, behind the seats.



18. ELECTRICAL SPECIFICATION

The electrical system is sectioned into four main groups:

1. The truck chassis wiring harness.
2. The Air conditioning control harness.
3. The Lighting harness.
4. The Accessories harness.

Wiring diagrams for the circuits above are available on request.

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19. PREOPERATIONAL CHECKS

Before starting the day’s operation or after a long period of storage, the driver (or designated person) must check on the bus module:

- all doors can be opened/closed; in close position they are secured and will not open during rides;
- the passenger door open warning switch works;
- all electrical lights are working;
- triangles and wheel chocks are in the rear side box;
- fire extinguishers are in position;
- air conditioning is working;
- safety features are present and stickers are readable.

20. DOCUMENTS

At delivery, the bus will be accompanied by the following documents:

- Bus Module Operation Manual;
- Truck Manufacturer’s Owner’s Manual;

21. WARRANTY AND SUPPORT NETWORK

Able Bus and Coach has a great parts and support network for its operators. Should you require technical support or parts supplied to anywhere in the world our friendly team will be able to help. Simply call our office on (08) 9371 7100 between 8am - 4pm, Monday to Friday.

Warranty Statement

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty is given by Able Bus and Coach (ABN 93 067 420 080) whose business address is 48 to 50 Raymond Avenue, Bayswater, Western Australia (post code 6933). (Phone number 93717100) (In conjunction to the vehicle’s Truck Cab chassis Manufacturer’s warranty coverage)

The benefits conferred by this warranty are in addition to all other rights and remedies in respect of the product (or service) which the consumer has under the Australian Consumer Law and any other law in relation to goods and services to which this warranty relates.

Able Bus and Coach Bus Modules

The Bus or multi-purpose vehicle body, Manufactured by Able Bus and Coach, carries a warranty coverage period from the time of delivery to the client (end user/operator). This coverage is not limited to kilometres travelled in this period. The time period for this coverage is as follows: 5 years structural warranty, 2 year coverage on the vehicle body and 1 year coverage on the Air conditioning system and body hardware. Subject to the terms and conditions listed below.

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Warranty Parts can be sent to the client or repairer free of charge under the warranty agreement. The provider can request a broken or damaged part be sent back to the Manufacturer for warranty purposes. If the broken or damaged part is not returned after a four week period from the time the Warranty part has been received by the client, the provider may charge the client for the parts.

Warranty Repairs can be carried out free of charge to the client by Able Bus and Coach or other qualified repairers around Australia under the warranty agreement. In the event of a vehicle requiring a repair of a large nature the warranty provider may request the vehicle be returned to Able Bus and Coach or the truck manufacturer’s authorised dealership to carry out the repair.

In this event it is the responsibility of the owner/operator of the vehicle to transport the vehicle to Able Bus and Coach and/ or the truck Manufacturer’s dealership.

In either case of Warranty Parts or Warranty Repairs, the provider can request evidence of the warranty issue. It is the responsibility of the owner/operator of the vehicle to disclose accurate evidence of an issue with the vehicle to the provider of the warranty as evidence.

Trucks

The Warranty periods apply to the Truck (Cab chassis) are identified in your Owner's Manual as distributed in Australia. It is provided to the original owner/operator driving the Truck within Australia during the warranty periods. Subsequent owner/operators obtain the benefit of any unexpired portion of this warranty, subject to its terms, limitations and exclusions.

The Owner's Manual contains all of the terms and conditions that apply to the Truck Manufacturer’s Warranty in regards to the Truck Cab Chassis, and you should consult it for further information.

How to Make a Claim

If a defect in any goods becomes apparent, an owner/operator must do the following things to make a valid claim under this warranty:

1. Immediately contact your Authorised Dealer and notify them of the defect as well as provide any other relevant information;
2. Arrange to have the Goods delivered immediately to an Authorised Dealer as advised by them. (You should note that delivery may be included as part of the Manufacturer’s Warranty. Conditions apply. Please see the relevant information in the Owner's Manual for more details);
3. If necessary, use all reasonable means to protect the Goods from further damage once the defect becomes apparent until it is delivered and or assessed;
4. Delivering goods to an Authorised Dealer is the responsibility of the owner/operator;
5. Any costs incurred by an owner/operator in delivering the Goods to an Authorised Dealer are not covered under this warranty, but may be covered under the truck manufacture’s care programs or an agreement is made to do so. Able Bus and Coach may cover this also if an agreement is reached to do so. (Conditions apply);
6. Only repairs or any other works carried out by an Authorised Dealer of the truck manufacturer as authorised are free of charge.

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If an owner or operator is dissatisfied with any aspect of Claiming under this warranty supplied by Able Bus and Coach, please call (08) 93717100 to discuss any grievance. If an owner or operator is dissatisfied with a Truck Manufacturer’s Warranty the contacts for discussing their Grievances are listed in the Owner’s manual supplied with the vehicle.

This manual is intended as a guide for the operators on Able Bus and Coach Vehicles only and for vehicles manufactured in the year 2018.

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