

Olympus Operator's Handbook







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Olympus Operator's Handbook

This Operator's Handbook contains information about the Olympus Refuse Collection Vehicle.

The information in this Handbook must be used in conjunction with the Operator's Handbooks for the chassis-cab and any ancillary equipment such as waste container lifting devices fitted to the refuse collection vehicle.



IMPORTANT: BEFORE OPERATING THE REFUSE COLLECTION VEHICLE.

It is most important that before operating the refuse collection vehicle, all operators:

- Have undertaken a recognised training course in the safe operation of the refuse collection vehicle.
- Read, understand and observe all the instructions stated in Chapter 2 'Safety precautions' of this Handbook.

This Operator's Handbook must always be kept in a safe place in the vehicle it was supplied with.

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Dennis Eagle Ltd. (the Company) reserves the right to change the specification, design, material, procedures and dimensions of the vehicles described within this publication without prior notice at any time in the future, in accordance with the Company's policy of continuous product improvement.

Whilst the Company has made every effort to supply an accurate and comprehensive guide to the safe and economic running of the equipment and ensure complete accuracy of information in this manual, no liability for inaccuracies or the consequences thereof, including loss or damage to property, or injury to persons can be accepted by the Company.

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Description

The Olympus refuse collection bodywork is a rear loaded, fixed refuse collection bodywork manufactured to EN 1501-1.

Intended use

The Olympus refuse collection bodywork shall be mounted on chassis-cabs specified for refuse collection application and shall be used to collect and transport domestic and industrial waste and recyclable materials.

The Olympus refuse collection bodywork is not designed for:

- operation in severe conditions, e.g. extreme environmental conditions such as:
 - below 25 °C and above + 40 °C temperatures;
 - operation in a tropical environment;
 - operation in wind velocity in excess of 75 km/h;
 - operation in a contaminating environment;
- operation in a corrosive environment;
- operation in potentially explosive atmospheres;
- handling of loads the nature of which could lead to dangerous situations (e.g. hot wastes, acids and bases, radioactive materials, contaminated waste, especially fragile loads, explosives);
- operation on ships.

Manufacturer's name and address

Dennis Eagle Ltd. Heathcote Way Heathcote Industrial Estate Warwick CV34 6TE United Kingdom.

Edition	Publication reference	Publication date	Comments
This edition	OL1D-OH-GB02D	June 2013	New edition for new cab control panel. Original instructions.
Previous editions	OL1OHGB01DD	January 2010	First edition

Publication Record





Olympus Operator's Handbook

About this Operator's Handbook

Dennis Eagle Ltd. welcome you as the owner/operator of a new Olympus Refuse Collection Vehicle.

The purchase of the Olympus vehicle represents a major investment on behalf of your organisation.

To protect this investment, it is of utmost importance that you read, understand and observe all the instructions in the appropriate sections of this publication and equivalent publications about machinery and ancillary equipment fitted to the vehicle relating to:

- Safety.
- Correct operation.
- Performance.
- Cleaning.
- Scheduled maintenance.

This Operator's Handbook and the accompanying Service Manual contain information about the Dennis Eagle Ltd. units fitted to the vehicle and are divided into sections appropriate to the configuration of the vehicle supplied, namely:

- Refuse collection body.
- Waste container lifting device.
- Optional equipment (i.e. Footboards).

The Operator's Handbook and Service Manual contain all the relevant information and data necessary to operate the appropriate Olympus unit and carry out designated cleaning, maintenance and inspection procedures.

The information in this Operator's Handbook must be used in conjunction with the Operator's Handbooks for any other manufacturer's chassis-cab, equipment or machines that form part of the vehicle.

Important:

This Operator's Handbook must always be kept in a safe place in the vehicle it was supplied with.

Always consult the Supplementary Information chapters of each section of the handbook which provide space for inclusion of additional information specific to a particular vehicle or late-breaking information.

Take time to become fully familiar with this vehicle by carefully reading all the publications supplied with the vehicle; the more you know about the vehicle, the greater will be your safety, comfort and economy when driving it.

It is important to read the equivalent publications about machinery and ancillary equipment fitted to the vehicle as such equipment may incorporate interlocks or similar devices which affect the operation or performance of the vehicle. Failure to do this could have a drastic effect on safety, vehicle life, operating costs and downtime.

Failure to observe the instructions, particularly those relating to scheduled maintenance, may affect the terms of our warranty.

If in doubt consult your Dennis Eagle Ltd. representative.



Aftermarket support

Dennis Eagle Ltd. recognises the importance of offering a strong Aftermarket support throughout the life of the vehicle and sees it very much as an extension of the initial vehicle offering.

The Aftermarket business comprises a service network with regional centres and a parts business operated from its headquarters at Warwick.

Comprehensive training courses which are well presented and set the standard for the industry are also provided.

For further information about aftermarket operations please contact:

Dennis Eagle Ltd. Heathcote Way Heathcote Industrial Estate Warwick CV34 6TE United Kingdom Telephone: +44 (0)1926 316000 Facsimile: +44 (0)1926 316550 www.dennis-eagle.com

Body identification label



The body identification label is attached to the front of the body on the lower right-hand corner.

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The information on the label is shown below:

Machine category / Body type

Serial number

Order number

Year of manufacture



Owner's information

This section provides space for you, the owner, to record the appropriate serial numbers for the chassis-cab, body and equipment fitted to the vehicle.

Vehicle registration number:	
Date of purchase:	
Chassis-cab model:	
Chassis-cab VIN:	

Equipment (i.e. Body)	Manufacturer	Model	Serial number



Dimensions and specifications

Unless otherwise stated, all dimensions are in mm and represent the unladen condition. All specifications are subject to manufacturers' tolerances. All weights are in kg and include oil and water. Additional equipment may alter dimensions and weights quoted.

Conventions – Right-hand and left-hand side of the vehicle

Where reference is made in this Operator's Handbook to the right-hand and left-hand side of the vehicle, this is relative to a person sitting in the driver's seat.





Where reference is made in this Operator's Handbook

'Clockwise' or 'Counter-clockwise' this relates to the

direction of rotation when seen from the front face of

Clockwise and counter-clockwise

to turning an item, for example a key switch,

1. Clockwise

the item.

2. Counter-clockwise

Related publications

The following publications are available in support of the Olympus Refuse Collection Vehicle:

- Service Manual.
- Workshop Manual.
- Electronic Illustrated Parts Catalogue.

They are available from your Olympus supplier.

- 1. Front
- 2. Right
- 3. Back
- 4. Left



Safety symbol, warnings, cautions and notes

The following Safety Symbol is used throughout this Manual to indicate information that is essential to Health and Safety. The symbol applies to ALL information contained in this chapter.



All Safety Information MUST be strictly adhered to.

WARNINGS



WARNING:

A WARNING IS PRINTED IN THIS STYLE. IT REFERS TO ANY PROCEDURE WHICH MUST BE FOLLOWED PRECISELY TO AVOID POSSIBILITY OF PERSONAL INJURY OR DEATH.



Caution: A Caution is printed in this style. It refers to any procedure which must be followed to avoid damage to components or cause them to malfunction.

Note:

A Note is printed in this style. It refers to essential information about any operation or event that is not a **WARNING** or **Caution.**

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1 Introduction

1.1 Refuse collection vehicle

A Refuse Collection Vehicle (RCV) is used to collect and transport domestic and industrial waste. The waste is compacted in the collection body by an hydraulically operated mechanism to achieve maximum payload before transfer to a refuse tip.

The Olympus refuse collection bodywork is generally mounted on Dennis Eagle Elite chassis-cab. The bodywork can also be mounted on other manufacturers' chassis-cab specified for refuse collection application.

The variant on body size governs the chassis length, the size of body dictating body payload. This Operator's Handbook is common to all body sizes.

1.2 Olympus body sizes

The Olympus refuse collection body is available in the following body sizes:

Compaction body size/type	10N	11N	14N	16N	19N	
Effective volume (m ³).	10.3	11.3	13	15.6	18.7	
Compaction body size/type	13W	16W	20W	21W	23W	27W



The location of major bodywork features for the Olympus series of refuse collection vehicles is shown in Figs. 1-1 (right-hand side of vehicle) and 1-2 (left-hand side of vehicle):

- 1. Cab control panel (see '4.3 Cab control panel' on page 4-8).
- 2. Body hydraulic oil tank and control valve (inside front of body).
- 3. Body.
- 4. Ejection cylinder.
- 5. Ejection plate.
- 6. Tailgate raise/lower cylinder.
- 7. Tailgate.
- 8. Compaction mechanism hydraulic control valve.
- 9. Carriage plate.
- 10. Packer plate cylinder.
- Compaction mechanism control panel (see '4.5 Compaction mechanism control panel' on page 4-38).
- 12. Rave rail (hand loading).
- Emergency stop push-buttons (beneath rave rail) (see '4.7 Emergency stop push-buttons' on page 4-44).
- 14. Packer plate.
- 15. Carriage plate cylinder (behind covers).

- 16. Tailgate drain.
- 17. Tailgate prop (see '5.7 Propping/unpropping the tailgate' on page 5-23).
- 18. Leachate tank*.
- 19. Tailgate/body lock.
- 20. Tailgate lowering control station (see '4.4.23 Tailgate lowering control panel' on page 4-37).
- 21. Tailgate/body seal.
- 22. Body access door.
- 23. Body drain.
- 24. External discharge control panel* (see '4.4.16 External discharge control panel (option)' on page 4-32).
- 25. Access ladder*.
- 26. Hand pump* (see Service Manual).
- 27. Electrical distribution cupboard.
- 28. Body junction box.
- 29. Hydraulic filler point.
- * = Optional features.

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Fig. 1-1 Olympus refuse collection bodywork features (right-hand side of vehicle)



Fig. 1-2 Olympus refuse collection bodywork features (left-hand side of vehicle)



1.4 Duo vehicles

On Duo vehicles, the Olympus refuse collection bodywork is combined with a top loaded bodywork located behind the cab to provide a twin compartment recycling vehicle.



1.5 High capacity tailgate option

A high capacity tailgate is available as a customer option to improve loading when collecting industrial waste.



1.6 Waste container lifting devices and interface frames

Your vehicle may be fitted with a waste container lifting device to allow the discharging of waste containers. Operation, maintenance and workshop instructions and data will be supplied with the waste container lifting device and must be read in conjunction with these instructions.

Waste container lifting devices and interface frames fitted to this refuse collection bodywork will be installed to Dennis Eagle approved specification and in compliance with the requirements of EN 1501-5.

1.7 Waste container lifting device options

The Olympus refuse collection vehicle is available in three basic configurations:

- Open system (see Fig. 1-3).
- Open waste container lifting device (see Fig. 1-4).
- Closed waste container lifting device (see Fig. 1-5).









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Fig. 1-4 Open waste container lifting device





1.8 CE certification

This machine is supplied in compliance with a CE certified type. Any change to specification of hardware or controls is at the machine owner's own risk and may nullify CE certification status. Unauthorised modification may also invalidate the warranty granted with this product. If in doubt please consult Dennis Eagle Ltd.



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SAFETY PRECAUTIONS









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2 Safety precautions

2.1 Introduction

This chapter gives guidelines for the safe operation of refuse collection vehicles.

The information in this chapter must be read in conjunction with the Safety Precautions stated in the manufacturer's instructions for the chassis-cab on which the refuse collection bodywork is fitted and any ancillary equipment fitted to the refuse collection bodywork.

This chapter incorporates all the information contained in the 'Code of Practice for the safe operation of rear end loaders and refuse collection vehicles' issued by the Container Handling Equipment Manufacturers (CHEM).

It is everyone's responsibility to make sure that they and their colleagues work safely. The intention of these guidelines is to bring safety to every operative's attention. Read them very carefully and use them as a guide to good working practice at all times.

The guidelines contained in this manual are not definitive. There may be additional ways to make sure that operator organisations work safely and you must also follow any local rules and safe working practices that may apply.

2.2 Use of Refuse Collection Vehicle

The refuse collection vehicle must only be used to collect and transport domestic and trade waste.





2

2.3 Safety symbol, warnings, cautions and notes

The following Safety Symbol is used throughout this Manual to indicate information that is essential to Health and Safety. The symbol applies to ALL information contained in this chapter.



All Safety Information MUST be strictly adhered to. **WARNINGS**



WARNING:

A WARNING IS PRINTED IN THIS STYLE. IT REFERS TO ANY PROCEDURE WHICH MUST BE FOLLOWED PRECISELY TO AVOID POSSIBILITY OF PERSONAL INJURY OR DEATH.



A Caution is printed in this style. It refers to any procedure which must be followed to avoid damage to components or cause them to malfunction.

Note:

A Note is printed in this style. It refers to essential information about any operation or event that is not a **WARNING** or **Caution.**

2.4 Trained personnel

The vehicle may be dangerous in the wrong hands, and only suitably trained and authorised persons using approved safety equipment where relevant, should operate, service and repair this vehicle.

2.5 Use of these instructions

These instructions are only intended for use by trained and authorised personnel with the machinery for which this publication is applicable. They should not be used by any other persons, on any other machinery or for any other purpose.

2.6 Personal hygiene

Personal hygiene is important at all times, particularly for those working in the waste disposal environment where rats can breed and spread diseases such as LEPTOSPIROSIS.

Leptospirosis, or Weil's disease, is a form of jaundice with early stages similar to influenza. The infection sometimes enters the body through breaks in the skin, so thorough first aid treatment of all wounds is important.

Leptospirosis is carried in the urine of rats. If you have the slightest suspicion that you are working in a contaminated environment follow these rules rigidly:

- 1. Wear protective clothing at all times.
- 2. Apply barrier creams before each work period.

Note: Preparations containing lanolin replace the natural skin oils which can be removed when washing.

- 3. After removing protective clothing wash it thoroughly and allow it to dry.
- 4. Wash hands and forearms thoroughly after working and especially before eating and drinking.
- 5. Wash every scratch, graze or cut of the skin, treat it with antiseptic, and cover it with a sterile dressing, e.g. plaster. This applies to ALL wounds; not just those suffered at work.
- 6. If the vehicle's First-Aid kit requires replenishing report it to your supervisor.
- With any injury that is more than a scratch or slight cut, consult your doctor and mention the type of work you do.
- 8. Obtain medical advice if skin disorders develop.
- 9. At all visits to your doctor, mention the type of work you do and the environment you work under.
- 10. Do not allow the inside of protective clothing to become soiled.
- 11. Do not rub your mouth, nose or eyes when working.
- 12. Do not wash skin with fuels, thinners or solvents.





1 metre.

DO NOT DIRECT PRESSURE WASHER AT A PERSON. HIGH-PRESSURE WATER JETS CAN CAUSE INJURY.

equipment, such as waste container lifting devices,

do not allow the jet nozzle to approach closer than

SAFETY PRECAUTIONS



Caution: High-pressure water jets can cause severe damage to electrical equipment.

10. Never operate the refuse collection vehicle and any supplementary devices, such as waste container lifting devices, unless:

9. When pressure washing the refuse collection

vehicle, its chassis-cab, bodywork, refuse

compaction mechanism and any ancillary

- You are a trained operative.
- It is in a well-maintained condition with all systems operational and their safety features operating to specification.
- The refuse collection vehicle must not be operated if any of its protective covers are missing or damaged. Such covers are essential to the safety of operating personnel as they protect them from potential hazards from moving components (i.e. cylinders) and ejection of refuse.
- 12. Do not exceed the plated axle and/or gross vehicle weights for the chassis-cab. All chassis-cabs have axle and gross vehicle weight information on a plate situated in the cab. It is important that gross vehicle weights are monitored carefully in the first few weeks of operation. If for any reason maximum plated weights are exceeded on a regular basis please contact Dennis Eagle Ltd., Service Department or local agent for advice.
- Do not stare directly into the beams of high brightness LEDs, such as LED lamps and warning lamps; doing so may cause permanent damage to your eyes.



While operating the refuse collection vehicle, wear protective clothing complying with Health and Safety Legislation and Standards applicable to the country in which the vehicle is being used, including:

- 1. A boiler suit, or a two piece protective overall, not too loosely fitting and of a distinctive colour.
- 2. Protective boots or shoes with steel toe caps and insoles.
- 3. A hard protective hat.
- 4. Protective gloves.
- 5. Protective spectacles.
- 6. Goggles and particle mask if working in dusty conditions.
- 7. Reflective armbands or jacket should be worn when working on the road or in any other situation where there may be a hazard from moving vehicles or manually operated machinery.

2.8 General

- 1. The operator of a refuse collection vehicle has a duty to ensure that the operatives understand the principles and procedures of operation and all relevant safety instructions.
- 2. Operatives must not climb on the roof of the refuse collection vehicle, on the refuse compaction mechanism or on any ancillary equipment, such as waste container lifting devices.
- Operatives must not tamper with any of the controls and safety devices fitted to the refuse collection vehicle, its chassis-cab, bodywork, refuse compaction mechanism or any ancillary equipment, such as waste container lifting devices.
- 4. It is forbidden to use a refuse collection vehicle if any of its safety devices is modified or not operating to specification.
- 5. It is essential to lock the vehicle doors, remove the keys and place warning notices when working on the vehicle or its mechanisms.
- 6. Operatives must never ride on any part of the vehicle except in the cab, or on the footboards, where fitted.
- The refuse collection vehicle, its chassis-cab bodywork, refuse compaction mechanism and any ancillary equipment, such as waste container lifting devices, must be correctly operated and maintained in accordance with the manufacturers' instructions at all times.
- 8. Never store refuse in the body it is only to be used for collection and transportation.





2.9 Before leaving the depot

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Before leaving the depot check and ensure that:

- 1. There is no refuse, paper or flammable materials near the engine or exhaust. These could cause a fire when the engine is started. If necessary, tilt the cab (see Chassis-cab Manufacturer's Operator's Handbook) to make a thorough inspection.
- 2. The chassis and cab systems are working to specification: lights, windscreen wipers, tyre condition and pressures, etc. (see the relevant chapter(s) of the Chassis-cab Operator's Handbook).
- All ancillary equipment is working to specification. (see the relevant chapter(s) of the Equipment Manufacturer's Operator's Handbook).
- 4. All safety circuits, interlocks and operational features are working to specification.
- 5. All marking plates are clean and clearly visible.
- 6. All warning instruction labels are clean and legible.
- 7. All audible and visual alarms are working to specification.
- 8. The following fluid levels are correct:
 - **Chassis-cab** See Chassis-cab Operator's Handbook.
 - **Bodywork** Hydraulic system oil level (see Service Manual).
- 9. The vehicle crew is trained in the safe operation of the machine and has suitable protective clothing.
- 10. The number of crew does not exceed the seating capacity of the vehicle cab.
- 11. The tailgate is properly locked to the body.
- 12. The 'Body main' switch is in the OFF position with the key removed (see '4.2.1 Body main switch' on page 4-6).
- 13. The chassis, cab, bodywork and ancillary units, when fitted, and their systems are free from accumulated mud or debris from landfill, which could impair or damage the systems and render the vehicle unsafe and/or inoperable.

2.10 Travelling to collection point

While travelling to the collection point:

- 1. All crew members must be seated and wearing seat belts.
- 2. The tailgate must be properly locked to the body.
- The 'Body main' switch must be in the OFF position (see '4.2.1 Body main switch' on page 4-6).
- 4. Personal items (i.e. coats, lunch boxes, etc.) must be securely stowed in the cab - use coat hooks if provided.
- 5. Bottles, cans, etc. MUST NOT BE left on the cab floor as they can roll under the brake or clutch pedals causing an obstruction that can be dangerous.
- 6. Any waste container lifting devices must be in the stowed or travel position before moving the vehicle (refer to Waste Container Lifting Device Operator's Handbook).
 - When travelling over rough ground the waste container lifting device may be raised to avoid grounding. The rear lights MUST NOT be obstructed by leaving the waste container lifting device in a mid-position.

SAFETY PRECAUTIONS

2.11 Collecting refuse

While collecting refuse:

- 1. All personnel must be familiar with the position, use and function of the 'Emergency stop' pushbuttons.
- 2. Always keep the cab floor, access ladder and soles of footwear clean and free from debris.
- Check that the road or pavement is clear of oncoming/overtaking vehicles, pedestrians or other obstructions before opening the cab door and stepping out. The crew must always exit from the kerb side of the vehicle.
- 4. Take particular care when stepping out from the rear of the vehicle to cross the road.
- 5. Use the signal buzzer regularly with a predetermined signal to keep your driver informed.
- 6. Use the flashing warning beacons to warn people in the vicinity of your presence.
- 7. During continual stop/start operations be especially aware of other road users.
- 8. Be careful when loading glass, cover it with refuse before operating the compaction mechanism.
- 9. Ensure the packer blade covers all refuse before moving the vehicle.
- 10. Do NOT drive the vehicle with the cab door open.
- 11. Do NOT leave the vehicle unattended.
- 12. Do NOT under any circumstances leave the cab without applying the parking brake.
- 13. Do NOT reverse the vehicle without supervision.
- 14. Do NOT allow yourself to be distracted whilst operating the equipment.
- 15. Do NOT allow members of the public to approach the vehicle whilst the machine is in operation.
- 16. Do NOT remove objects from nor reach into the tailgate at any time during the compaction cycle.
- 17. Do NOT hold large objects whilst the packer blade chops them.
- 18. Do NOT overload the tailgate before packing.
- 19. Do NOT enter any part of the bodywork.
- 20. Do NOT adjust any hydraulic pressure or sequence valves this may render the machine unsafe.
- 21. Do NOT load pressure containers.
- 22. Do NOT load television sets.
- 23. Do NOT load refrigerators containing CFC gases.
- 24. Do NOT load hot ashes or burning debris.



WARNING: IN CASE OF FIRE VACATE THE VEHICLE AND CALL THE EMERGENCY FIRE SERVICE.

25. Do NOT load automotive wet charged batteries.

26. Do NOT load known hazardous waste.

While using a waste container lifting device to collect refuse:

- 27. Ensure that the waste container is undamaged and that the lid (if fitted) is closed.
- 28. Ensure that the waste container is not over-filled. The lid must be fully closed and contents must not protrude from the waste container.
- 29. Position the waste container correctly before operating the equipment.
- 30. Personnel must keep clear of the rear of the vehicle whilst the waste container lifting device is in operation.
- 31. The waste container may be stopped in any position by releasing the Waste Container Lifting Device Raise Button.
- 32. Any waste container lifting device equipment must be in the stowed or travel position before moving the vehicle (refer to Waste Container Lifting Device Operator's Handbook).
- 33. Do NOT attempt to empty waste containers or skips that are incompatible with the waste container lifting device fitted to the vehicle (refer to Waste Container Lifting Device Operator's Handbook).
- 34. Do NOT walk under or reach under raised waste containers.
- 35. Do NOT violently shake the waste container when depositing refuse. This may damage the waste container or the waste container lifting device and could result in a hazardous situation. If the refuse is jammed in the waste container, it should be lowered to the ground and the obstruction removed.
- 36. NEVER assist the waste container lifting device by hand. If the waste container is too heavy it should be lowered to the ground and the weight reduced.
- 37. Do NOT climb into waste containers or tailgate to re-arrange refuse.
- 38. Do NOT drive with waste containers suspended from the waste container lifting device.





2.12 Safety light curtain (option)

- 1. The safety light curtain is part of a safety system and MUST NOT be modified or overridden in any way.
- 2. The safety light curtain does not take away any responsibility from the operator in the 'hold to run' carriage plate down function.
- When operating 'hold to run' carriage plate down always watch the compaction mechanism danger zone - DO NOT RELY ON THE SAFETY LIGHT CURTAIN.

2.13 Travelling to discharge site

When travelling to the discharge site:

- 1. Always drive carefully, especially when the vehicle is fully loaded, as its handling and performance characteristics will have altered. The driver must take this change from unladen to laden condition into account.
- 2. The packer blade must cover the refuse.
- 3. The 'Body main' switch must be in the OFF position (see '4.2.1 Body main switch' on page 4-6).
- 4. Crew members MUST be seated and wearing seat belts.
- 5. The tailgate must be properly locked to the body.
- 6. Personal items (i.e. coats, lunch boxes, etc.) must be securely stowed in the cab use coat hooks if provided.
- 7. Bottles, cans, etc. MUST NOT BE left on the cab floor as they can roll under the brake or clutch pedals causing an obstruction that can be dangerous.
- 8. Any waste container lifting device equipment must be in the stowed or travel position before moving the vehicle (refer to Waste Container Lifting Device Operator's Handbook).
 - When travelling over rough ground the waste container lifting device may be raised to avoid grounding. The rear lights MUST NOT be obstructed by leaving the waste container lifting device in a mid-position.

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2.14 At discharge site

At the discharge site:

- 1. Switch on the warning beacons before commencing the discharge operation.
- 2. Always follow the instructions specific to that site.
- 3. Only essential crew members should leave the cab during the discharge operation if allowed by the discharge site instructions.
- 4. Ensure that you are familiar with the physical size of the vehicle, in particular the height with the tailgate and waste container lifting device, if fitted, raised.
- 5. Ensure that the ground/surface is level and firm before attempting to raise the tailgate (see Tip Face Operational Guidelines).
- 6. Ensure tailgate area is clear before raising/lowering the tailgate.
- 7. Ensure tailgate area is clear before ejecting the load.
- 8. Do NOT go to the back of the vehicle at the tip face.
- 9. Do NOT walk under tailgate when it is being raised or lowered.
- 10. Do NOT walk under raised tailgate unless it is supported by its prop(s).
- 11. Do NOT walk under a raised tailgate during the tailgate clear cycle.
- 12. Do NOT drive the vehicle with the tailgate raised.

2.15 Before leaving discharge site

Before leaving the discharge site ensure that:

- 1. There is no refuse, paper or flammable materials near the engine or exhaust. These could cause a fire when the engine is started. If necessary, tilt the cab (see Chassis-cab Manufacturer's Operator's Handbook) to make a thorough inspection.
- 2. The tailgate seals are free from debris and undamaged.
- 3. The tailgate is down and properly locked.
- 4. The vehicle is free from damage to its chassis-cab and bodywork.
- 5. The lights used for the safe operation of the vehicle on the public highway are still functioning correctly, clean and visible.
- 6. All bodywork placards (e.g. number plates, marker plates, and warning instructions to other road users) are clean and clearly visible.
- 7. The 'Body main' switch is in the OFF position (see '4.2.1 Body main switch' on page 4-6).
- 8. The vehicle is SAFE to continue.
- 9. The chassis, cab, bodywork and ancillary units, when fitted, and their systems are free from accumulated mud or debris from landfill, which could impair or damage the systems and render the vehicle unsafe and/or inoperable.





2.16 Warning labels

Warning labels (see Figs. 2-1, 2-2, 2-3, 2-4, 2-5 and 2-6) are fixed to the body to:

- Warn operatives or maintenance personnel not to carry out actions which may cause death (red labels).
- Warn operatives or maintenance personnel of actions which may cause injury or damage to the bodywork operation (yellow labels).
- Provide important safety information (blue labels).
- Identify safety fittings (green labels).



Fig. 2-1 Warning labels; right-hand rear of refuse collection bodywork



Fig. 2-2 Warning labels; right-hand front of refuse collection bodywork

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Fig. 2-3 Warning labels; left-hand front of refuse collection bodywork



Fig. 2-4 Warning labels; left-hand rear of refuse collection bodywork

2

SAFETY PRECAUTIONS



Fig. 2-5 Warning labels; rear of collection bodywork



Fig. 2-6 Warning labels; cab



?

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3 How it works

3.1 Body

The body (1) is a fabricated steel box which is closed by a movable ejection plate (2) at the front and by the tailgate at the rear.

Bodies are of varying capacity according to individual vehicle specification.

Refuse is contained within the body during collection and transportation to the tip.

The refuse is discharged from the body by the ejection plate (2) operated by the ejection cylinder.

3.2 Tailgate

The tailgate (4) is pivoted at the top rear of the body and is raised and lowered by two hydraulic cylinders, the tailgate raise/lower cylinders.

The tailgate consists of a hopper (7), into which refuse is loaded, and the compaction mechanism, which transfers the refuse from the hopper into the body and at the same time compacts it.

The tailgate provides a mounting point for the waste container lifting device mechanism when fitted to the vehicle.

3.2.1 Compaction mechanism

The compaction mechanism comprises two parts:

- The carriage plate (5) This travels in slideways and is operated by two hydraulic cylinders, the carriage plate cylinders.
- The packer plate (6) This is hinged on the carriage plate and is operated by two hydraulic cylinders, the packer plate cylinders.

The packer plate and carriage plate compact the refuse that has been emptied into the hopper between the ejection plate (2) in the body and the refuse retaining plate (3) in the tailgate.

When the body is empty, the ejection plate is at the rear of the body. As refuse is loaded into the body, the ejection plate moves forwards in the body.

As the load pushing against the ejection plate increases, the hydraulic system controls its forward movement in the body to give a uniformly compressed load.



Fig. 3-1 Major operating components

- 1. Body.
- 2. Ejection plate.
- 3. Refuse retaining plate.
- 4. Tailgate.
- 5. Carriage plate.
- 6. Packer plate.
- 7. Hopper.



3.2.2 **Operating cycle**

The compaction mechanism operating cycle is divided into four events:

1. The packer plate opens.

3



3. The packer plate closes.



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The packer plate encloses the refuse and sweeps it from the hopper.

- 4. The carriage plate moves up.





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The packer plate and carriage plate compress the refuse in the body between the ejection plate in the body and the refuse retaining plate in the tailgate. As more refuse is packed into the body, the ejection plate moves towards the front of the body.

2. The carriage plate moves down into the hopper.



3.2.3 Discharging operation

Discharging collected refuse from the body involves four operations:

1. Raising the tailgate.

The tailgate together with any waste container lifting device (if fitted) is raised clear of the rear of the body. As the tailgate begins to raise, it first moves up the rear face of the body until a hook (1) mounted on each side of the tailgate has disengaged from a pin (2) mounted on each side of the body. At this point the tailgate is 'Out-of-locks'.



The tailgate then rotates about the tailgate pivots mounted in the roof of the body until it reaches its fully raised position.



2. Tailgate clear cycle.

When the 'Tailgate clear cycle' has been enabled, the compaction mechanism will perform between one and four cycles immediately the tailgate reaches full height to clear any accumulation of refuse from the tailgate hopper.



3. Discharging.



The ejection plate pushes the refuse out of the rear of the body.

4. Closing the tailgate.



The tailgate together with any waste container lifting device (if fitted) is lowered onto the rear of the body, mechanically locking the tailgate to the body.

As the tailgate lowers, it rotates about the tailgate pivots mounted in the roof of the body until it makes contact with the rear face of the body and then slides down the body until a hook (1) mounted on each side of the tailgate engages a pin (2) mounted on each side of the body, locking the tailgate to the body.



3.3 Hydraulic system

The compaction, tailgate lifting and ejection mechanisms are operated by an hydraulic system comprising a tank, pump, control valves and hydraulic cylinders.

3.3.1 Hydraulic pump

Hydraulic power is supplied to the system by one or more pumps driven by a Power Take-Off (PTO).

All Dennis Eagle Elite chassis-cabs have a permanently driven PTO installed on the gearbox.

Where the Olympus body is mounted on other manufacturers' chassis-cab, the PTO is installed to manufacturer's instructions and may be gearbox mounted or engine driven via timing cover gears.

3.3.2 Hydraulic tank and valve module

The body hydraulic pack, comprising hydraulic tank and valve module, is installed in the front of the body behind the cab. The cab must be tilted to reach the hydraulic pack.

The tailgate hydraulic valve module is located in the tailgate roof tray.



Caution: Only authorised personnel should adjust or maintain these units.

3.3.3 Hydraulic cylinders

All the hydraulic cylinders used in the Olympus body range are double-acting, that is they are hydraulically powered out (extension) and hydraulically powered in (retraction).




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4 **Operator's controls**

4.1 Control panel location



Operator's control panels are located at the following points on the vehicle:

- 1. Cab control station (see '4.2 Cab control station' on page 4-4).
- External discharge control panel* (see '4.4.16 External discharge control panel (option)' on page 4-32).
 - Right-hand drive vehicles.
- 3. Tailgate lowering control panel (see '4.4.23 Tailgate lowering control panel' on page 4-37).
 - Right-hand drive vehicles.
- 4. Compaction mechanism control panel (see '4.5 Compaction mechanism control panel' on page 4-38).
- Packing sequence control panel* (see '4.6 Packing sequence control panel (option)' on page 4-42).
- 6. Emergency stop push-buttons (Open-back only) (see '4.7 Emergency stop push-buttons' on page 4-44).
 - If a waste container lifting device is fitted, the emergency stop push-buttons are mounted on the waste container lifting device frame.

- External discharge control panel*, (see '4.4.16 External discharge control panel (option)' on page 4-32).
 - Left-hand drive vehicles.
- 8. Tailgate lowering control panel (see '4.4.23 Tailgate lowering control panel' on page 4-37).
 - Left-hand drive vehicles.
- * = Optional features.



4.2 Cab control station

The cab control station (see Fig. 4-1 & Fig. 4-2) comprises the following controls mounted on the fascia of Dennis Eagle Elite 2 chassis-cabs:

- 1. Warning beacon switch (see '4.2.2 Warning beacon switch (if fitted)' on page 4-6).
- 2. Body main switch (see '4.2.1 Body main switch' on page 4-6).
- 3. Cab control panel (see '4.3 Cab control panel' on page 4-8).
- 4. Emergency stop push-button (see '4.7 Emergency stop push-buttons' on page 4-44).
- Tailgate out-of-locks/autobrake interlock override switch (Optional) (see '4.2.3 Tailgate out-of-locks/ autobrake interlock override switch (option)' on page 4-7).
- 6. Audible warning buzzer.

When the Olympus refuse collection bodywork is fitted on chassis-cabs other than the Dennis Eagle Elite 2 chassis-cabs, the cab control station (see Fig. 4-3) normally comprises:

- The cab control panel mounted on top of the fascia.
- A switch panel mounted on top or in the fascia, dependent on chassis-cab type.



Fig. 4-1 Cab control station, Dennis Eagle Elite 2 chassis-cab, right-hand drive





Fig. 4-2 Cab control station, Dennis Eagle Elite 2 chassis-cab, left-hand drive



4.2.1 Body main switch

Controls the operation of the body control electrical system.

OFF:



OL1OHGB01-101

Switches the body control electrical system off.

The key must be in the off position before switching the ignition on.

The key must be in the off position before it can be removed.

RUN:



4.2.2



The warning beacons are also controlled by a switch function on the cab control panel (see '4.4.3 Warning beacon switch' on page 4-22).

Warning beacon switch (if fitted)

Switches the warning beacons fitted on the tailgate and front of body or on cab (if fitted) on and off.

This warning beacon switch overrides the equivalent switch function in the cab control panel.



Switches the body control electrical system on (see '4.3.1 Switching cab control panel on' on page 4-9).

This switch must be turned off and then on again to energise the body control system after the following:

- When an 'Emergency stop' push-button has been reset.
- After a 'Rescue' push-button has been operated.
- If the cab control panel does not initialise.



4.2.3 Tailgate out-of-locks/autobrake interlock override switch (option)



Pressing the 'Tailgate out-of-locks/autobrake interlock' override switch enables the driver to override the 'Tailgate out-of-locks/autobrake Interlock' in the event of an emergency (see '5.5 Tailgate out-of-locks/ autobrake interlock (option)' on page 5-22).

The switch incorporates a safety catch to prevent accidental operation.

To operate the switch, press the red safety catch into the switch (A) and then press the front of the switch downwards (B).

To reset the switch, press the rear of the switch downwards (C); the safety catch automatically resets.



4.2.4 Audible warning devices

Located under the fascia but not shown is a buzzer which emits the following audible warnings:

Emergency stop operated buzzer

If any 'Emergency stop' switch is operated, a loud pulsating buzzer will be heard in the cab.

Tailgate signal buzzer

If either of the signal switches on the compaction mechanism control panels are operated, a continuous buzzer will be heard in the cab.

Tailgate out-of-locks buzzer

When the tailgate is raised out of its locks and any gear is selected, a high pitched continuous buzzer will be heard in the cab.

Waste container lifting device down buzzer

When the waste container lifting device hoist is too low for safe driving, a high pitched continuous buzzer will be heard in the cab.

4.2.5 Neutral interlock

On chassis-cabs fitted with an automatic transmission, an interlock stops the packing cycle operating unless the gearbox is in neutral.

After the compaction cycle has started it is possible to move the vehicle, allowing the cycle to continue until complete.

An interlock prevents tip functions operating unless the gearbox is in neutral.



4.3 Cab control panel



The cab control panel is mounted in the fascia on all Dennis Eagle Elite 2 chassis-cab. It comprises the following components:

- 1. Screen.
- 2. Status lamp.
- 3. Operating switches.

The cab control panel comprises a full colour screen. The screen operates as the monitor for the rear view camera and, at the same time, a control panel for the body system functions.

Note: An optional monitor can be fitted for dedicated cameras.



4.3.1 Switching cab control panel on

When the ignition is switched on, the cab control panel will first carry out a self test sequence during which time the screen displays a picture of a Dennis Eagle refuse collection vehicle (1) and the status lamp flashes green (2).

As soon as it has completed this, the screen will briefly show the manufacturing company logo (3) and then the 'Body system off' control screen (4).

If no activity, i.e. if none of the cab control panel switches are operated, occurs for 10 seconds after the ignition is switched on, the whole of the screen with show the view from the rear view camera (5).

If any one of the cab control panel switches are operated while the whole of the screen is showing the view from the rear view camera, the screen with display the 'Body system off' control screen (6).





4.3.2 Body system controls

Control of the body system functions is achieved using four screen mode displays:

Body system off

Disables the compaction mechanism controls (see '4.4.11 System off' on page 4-31).





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Body system run

Energises the compaction mechanism controls (see '4.4.13 Body system run controls' on page 4-31).



Energises the body discharge controls on the cab control panel, (see:

'4.4.12 Discharge controls' on page 4-31 and,

'4.4.15 In-Cab discharge controls' on page 4-32).



Body discharge, - External discharge control panel (option)

Energises the body discharge controls on the external discharge panel, when fitted (see '4.4.14 External discharge controls' on page 4-32).



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4.3.3 Screen display



When showing a control function, the screen display is divided into 6 areas of information:

- 1. Date and time.
- 2. Hydraulic oil temperature and hydraulic oil pressure.
- 3. System status and warning pictograms (see '4.4 Warning pictograms' on page 4-12
- 4. Error messages (see '4.4.1 Error messages' on page 4-16).
- 5. Switch functions (see '4.4.2 System switches' on page 4-20).
- 6. View from rear view camera.

Date and time

01.06.2013 09:00:00

The date is shown on the right and the time on the left.

The date is shown as day. month. year (dd.mm.yy).

The time displays a 24 hour clock shown as hours: minutes: seconds (hh.mm.ss).

To adjust the displayed date and/or time (see 7.2.2 Setting the clock/calender in the Olympus Service Manual)

Hydraulic oil temperature and hydraulic oil pressure

Hyd Oil Temp	32 °C
Hyd Oil Pressure	2 Bar
Hyd_OII_Pressure	z Dál

The temperature of the oil in the hydraulic tank is shown at all times.

The normal operating range for the oil temperature is between 0° and 80°C. If the temperature exceeds specific limits, appropriate warnings will be displayed in the 'System status and warning pictograms' (see '4.4 Warning pictograms' on page 4-12) and 'Error messages' (see '4.4.1 Error messages' on page 4-16) areas of the screen display.

System status and warning pictograms

(see '4.4 Warning pictograms' on page 4-12).



Pictograms are displayed to:

- Advise the driver of the operating status of the refuse collection mechanism control system.
- Alert the driver to a hazard (see '4.4 Warning pictograms' on page 4-12).
- Alert the driver to malfunctions occurring in the system (see '4.4.1 Error messages' on page 4-16).

If more than one warning occurs, the appropriate pictograms will display sequentially.



4.4 Warning pictograms

Pictogram	Function	Operation	Cause	Action to be taken if pictogram is displayed on the cab control panel screen
0	The refuse collection body control system is switched off.	The ignition switch is on. The body master switch is off.	Not applicable.	None, Advisory only.
	The refuse collection body control system is switched on.	The ignition switch is on. The body master switch is on.	Not applicable.	None, Advisory only.
	Packer plate opening.	The compaction mechanism is operating. The packer plate opening.	Not applicable.	None, Advisory only.
	Packer plate closing.	The compaction mechanism is operating. The packer plate is closing.	Not applicable.	None, Advisory only.
<u>I</u>	Carriage plate moving down.	The compaction mechanism is operating. The carriage plate is moving down.	Not applicable.	None, Advisory only.
<u>I</u>	Carriage plate moving up.	The compaction mechanism is operating. The carriage plate is moving up.	Not applicable.	None, Advisory only.
	Tailgate raising.	The tailgate is raising.	Not applicable.	None, Advisory only.
	Tailgate Iowering.	The tailgate is lowering.	Not applicable.	None, Advisory only.
	Eject.	The ejection plate is ejecting.	Not applicable.	None, Advisory only.
	Retract.	The ejection plate is retracting.	Not applicable.	None, Advisory only.
+/0	Tailgate out-of- locks/autobrake function.	The 'Tailgate out- of-locks'/autobrake function has applied the parking brake.	The tailgate is out of its locks while: Tip mode has been selected. The vehicle speed is below 3 km/h. The gearbox is in neutral. The driver has not applied the parking brake.	Apply the vehicle parking brake. Lower the tailgate into its locks. The 'Tailgate out-of-locks'/autobrake override switch may be operated to release the parking brake in an emergency (see 'Fig. 4-1 Cab control station, Dennis Eagle Elite 2 chassis-cab, right-hand drive' on page 4-4).



Pictogram	Function	Operation	Cause	Action to be taken if pictogram is displayed on the cab control panel screen
	Tailgate out-of- locks/autobrake override switch.	Tailgate out-of- locks/autobrake override switch has been operated.	The 'Tailgate out-of-locks'/ autobrake override switch has been operated to release the parking brake while: The tailgate is out of its locks. Tip mode has been selected. The vehicle speed is below 3 km/h. The gearbox is in neutral. The driver has not applied the parking brake.	Apply the vehicle parking brake. Lower the tailgate into its locks. Reset the 'Tailgate out-of-locks'/autobrake override switch.
	Rear view camera failed.	The screen will not show the view from the rear view camera.	The control system is not receiving a signal from the rear view camera.	Switch system off and restart. If warning recurs, refer the incident/ machine to supervision for attention.
	Green switch failed.	The green switch function will not work.	The green switch function has timed out or failed.	Switch system off and restart. If warning recurs, refer the incident/ machine to supervision for attention.
	Tailgate signal button operated.	Tailgate signal buzzer will sound.	The tailgate signal button on a compaction mechanism control panel has been operated.	This function is used as a means of communication between the loading crew and driver.
	Emergency stop operated.	The 'Emergency stop' operated buzzer will sound. All refuse collection operations except 'Rescue' are inhibited.	An 'Emergency stop' push- button has been operated.	Establish reason for 'Emergency stop' push-button being operated. Reset the 'Emergency stop'. Restart the refuse collection mechanism.
†	Rescue function.	None.	The rescue function is being operated.	Do not attempt to drive vehicle.
	Body full.	Operation of compaction mechanism is inhibited.	The ejector plate has reached the front of the body.	Proceed to tip and eject refuse from body.
	Control systems communication error.		The system electronic control unit has detected a fault in the control system.	Switch system off and restart. If warning recurs, refer the incident/ machine to supervision for attention.
AR/201	Control systems communication error.		The control system has detected a fault between the electronic control unit and the screen.	Switch system off and restart. If warning recurs, refer the incident/ machine to supervision for attention.



Pictogram	Function	Operation	Cause	Action to be taken if pictogram is displayed on the cab control panel screen
	Hydraulic oil hot (Temperature > 85°C).	The refuse collection mechanism may not operate to specification.	The hydraulic oil temperature is too hot for normal operation of the refuse collection mechanism.	See 'System warnings', (see '5.8 System warnings' on page 5-29).
+	Hydraulic oil filter blocked.	The refuse collection mechanism may not operate to specification.	The hydraulic oil filter is blocked.	Refer the incident/ machine to supervision for attention.
+	Hydraulic system overpressure.	All refuse collection operations are inhibited.	An hydraulic stall out has caused the oil pressure to exceed a preset pressure.	Refer the incident/machine to supervision for attention.
	System fault	The refuse collection mechanism may not operate to specification.	One of the control system electrical solenoid valves has failed.	Refer the incident/machine to supervision for attention.
	Tailgate out-of- locks.	Tailgate out-of- locks buzzer will sound if gear is engaged. Operation of the compaction mechanism is inhibited.	The tailgate is out of its locks.	None, Advisory only.
	Flashing pictogram. Tailgate position switch fault.	None.	The tailgate position switch is faulty.	Refer the incident/machine to supervision for attention.
	Tailgate raised.	Tailgate out-of- locks buzzer will sound if gear is engaged.	The tailgate is fully raised.	Be aware of the height of the raised tailgate. Make sure raised tailgate will not impact on surrounding structures, overhanging cables, etc.
	Body access door open.	All refuse collection operations are inhibited.	Body access door is open.	Establish reason for body access door being open. Check that there are no personnel inside the refuse collection body. Close the body access door. Restart the refuse collection mechanism.
1 <u>[</u>]	Waste container lifting device low.	Waste container lifting device down buzzer will sound.	The waste container lifting device has not been raised to the required height for travelling.	Refer to Waste Container Lifting Device Operator's Handbook. Raise waste container lifting device until warning is cleared.
	Footboard occupied.	Refer to Footboard Operator's Handbook.		
	Footboard test switch operated.	Refer to Footboard Operator's Handbook.		
1	Overriding footboard safety device.	Refer to Footboard C	perator's Handbook.	



Pictogram	Function	Operation	Cause	Action to be taken if pictogram is displayed on the cab control panel screen
	Footboard interlock override switch operated.	Refer to Footboard Operator's Handbook.		
	Footboard interlock override switch delay timer.	Refer to Footboard Operator's Handbook.		
КС	Waste container overweight for weighing system.	All refuse collection operations are inhibited.	The weight of a waste container being lifted by a waste container lifting device system incorporating a load weighing device, exceeds weight limit.	Remove waste container. Restart the refuse collection mechanism.
	Maximum body weight sensed by body weighing system.	All refuse collection operations are inhibited.	The body weighing system has detected that the body weight has reached the maximum set for the vehicle.	Proceed to tip and discharge body. If weighing system fitted with override function, this may be operated (refer to body weighing system operating instructions.
	Body weighing system switched off.	Body system functions operate as normal.	The body weighing system has been switched off.	None, Advisory only.
	Hydraulic oil level low.	None.	The level of hydraulic oil in the refuse collection mechanism oil tank is low.	Check and replenish hydraulic oil (see 'Service Manual').
	Hydraulic oil over temperature cut out (Temperature > 90°C).	All refuse collection operations are inhibited.	The hydraulic oil temperature is too hot for normal operation of the refuse collection mechanism.	See '5.8 System warnings' on page 5-29. Refer the incident/machine to supervision for attention.
	Battery voltage low.	The refuse collection mechanism may not operate to specification.	The vehicle's battery voltage is too low for normal operation of the refuse collection mechanism.	Refer the incident/machine to supervision for attention.



4.4.1 Error messages



4

If a fault occurs in the control system operation, one or more error messages will be displayed in this area of the screen.

If more than one error occurs, then the most recent error is shown at the top.

If more than 3 warnings occur, the appropriate messages will display sequentially.

Each 'Error message' line comprises two parts:

A white number which identifies the fault number (1).

A text message in yellow which provides a brief description of the fault (2).

When the system is operating correct all 3 lines of text should read:

0 No errors

Fault number	Message	Explanation	Pictogram displayed
0	No errors.	There are no errors in the operating system.	
1	Clamp 15 Undervoltage.	The vehicle's battery voltage is too low for normal operation of the refuse collection mechanism.	
2	Emergency stop pressed.	One or more 'Emergency stop' push-buttons have been operated.	
3	Low oil level.	The level of hydraulic oil in the refuse collection mechanism oil tank is low.	
4	Oil filter blocked.	The hydraulic oil filter is blocked.	
5	Hydraulic oil overtemperature.	The hydraulic oil over temperature cut out has operated.	
6	Hydraulic oil temp warning.	The hydraulic oil temperature is too hot for normal operation of the refuse collection mechanism.	
7	Hydraulic over pressure.	An hydraulic stall out has caused the oil pressure to exceed a preset pressure.	•



Fault number	Message	Explanation	Pictogram displayed
12	Access door/adapt. Frame sensor fault.	A fault has occurred in the electrical circuit to the access door and/or adaption frame sensor. Either fault number '50 Access door sensor fault' or '51 Adapt. frame sensor fault' will display at the same time.	
14	Reverse rescue pb.	One or more reverse rescue push-buttons have been operated.	
36	Weigh system compactor stop.	The body weighing system has stopped the compaction mechanism working.	L. KG
37	Footboard override switch.	The footboard override switch has been operated.	
39	Footboard test switch.	The footboard test switch has been operated.	
40	Carriage plate down stall flag.		
41	Close packer plate stall flag.		
50	Access door sensor fault.	A fault has occurred in the electrical circuit to the access door sensor. Fault number '12 Access door/adapt. Frame sensor fault' will display at the same time.	
51	Adapt. frame sensor fault.	A fault has occurred in the electrical circuit to the adaption frame sensor. Fault number '12 Access door/adapt. Frame sensor fault' will display at the same time.	
52	Auto cycle pb fault.		-
53	Carr plate lower pb fault.	A fault has occurred in the electrical circuit to the lower carriage plate push-button.	-
54	Carr plate raise pb fault.	A fault has occurred in the electrical circuit to the raise carriage plate push-button.	-
55	Close pack plate pb fault.	A fault has occurred in the electrical circuit to the close packer plate push-button.	-
56	Cycle start push button fault.	A fault has occurred in the electrical circuit to the start pack cycle push-button.	
57	Eject push button fault.	A fault has occurred in the electrical circuit to the ejection plate eject push-button.	
58	Emergency stop push button fault.	A fault has occurred in the electrical circuit to the emergency stop push-buttons.	
59	LH footboard switch fault.	A fault has occurred in the electrical circuit to the left-hand footboard switch.	
60	Open packer plate push button fault.	A fault has occurred in the electrical circuit to the open packer plate push-button.	



Fault number	Message	Explanation	Pictogram displayed
61	Retract push button fault.	A fault has occurred in the electrical circuit to the ejection plate retract push-button.	
62	Reverse rescue push button fault.	A fault has occurred in the electrical circuit to the reverse rescue push-button.	
63	RH footboard switch fault.	A fault has occurred in the electrical circuit to the right-hand footboard switch.	
64	Tailgate lower push button fault.	A fault has occurred in the electrical circuit to the tailgate lower push-button.	
65	Tailgate raise push button fault.	A fault has occurred in the electrical circuit to the tailgate raise push-button.	-
66	Tailgate position sensor fault.	A fault has occurred in the electrical circuit to the tailgate position sensor.	
67	Rave rail sw fault.	A fault has occurred in the electrical circuit to the rave rail switch.	-
68	Cab master sw fault.	A fault has occurred in the electrical circuit to the body master switch in the cab.	-
69	Carriage plate sensor fault.	A fault has occurred in the electrical circuit to the carriage plate sensor.	
71	Zone safe input fault.	A fault has occurred in the Zone safe electrical circuit.	
100	Open packer plate ev open circuit.	An open circuit has occurred in the electrical circuit to the packer plate open solenoid valve.	
101	Open packer plate ev short circuit.	A short circuit has occurred in the electrical circuit to the packer plate open solenoid valve.	
102	Carriage plate down ev open circuit.	An open circuit has occurred in the electrical circuit to the carriage plate down solenoid valve.	-
103	Carriage pl. down ev short circuit.	A short circuit has occurred in the electrical circuit to the carriage plate down solenoid valve.	
104	Carriage plate up ev open circuit.	An open circuit has occurred in the electrical circuit to the carriage plate up solenoid valve.	-
105	Carriage plate up ev short circuit.	A short circuit has occurred in the electrical circuit to the carriage plate up solenoid valve.	
106	Close packer plate ev open circuit.	An open circuit has occurred in the electrical circuit to the packer plate close solenoid valve.	-
107	Close packer plate ev short circuit.	A short circuit has occurred in the electrical circuit to the packer plate close solenoid valve.	-
120	Side 1 can1 warning.	An internal error has occurred in the controller.	
121	Side 1 can2 warning.	An internal error has occurred in the controller.	
122	Side 1 error.	An internal error has occurred in the controller.	
123	Side 1 error analog.	An internal error has occurred in the controller.	
124	Side 1 error can safety.	An internal error has occurred in the controller.	
125	Side 1 error io.	An internal error has occurred in the controller.	
126	Side 1 error outblanking.	An internal error has occurred in the controller.	



Fault number	Message	Explanation	Pictogram displayed
127	Side 1 error temperature.	An internal error has occurred in the controller.	
128	Side 1 error timebase.	An internal error has occurred in the controller.	
129	Side 1 error vbbr.	An internal error has occurred in the controller.	
130	Side 2 can1 warning.	An internal error has occurred in the controller.	
131	Side 2 can2 warning.	An internal error has occurred in the controller.	
132	Side 2 error.	An internal error has occurred in the controller.	
133	Side 2 error analog.	An internal error has occurred in the controller.	-
134	Side 2 error can safety.	An internal error has occurred in the controller.	- · · ·
135	Side 2 error io.	An internal error has occurred in the controller.	
136	Side 2 error outblanking.	An internal error has occurred in the controller.	
137	Side 2 error temperature.	An internal error has occurred in the controller.	-
138	Side 2 error timebase.	An internal error has occurred in the controller.	-
139	Side 2 error vbbr.	An internal error has occurred in the controller.	-
150	Eject ev open circuit.	An open circuit has occurred in the electrical circuit to the ejection plate eject solenoid valve.	
151	Eject ev short circuit.	A short circuit has occurred in the electrical circuit to the ejection plate eject solenoid valve.	
152	Unloader ev open circuit.	An open circuit has occurred in the electrical circuit to the unloader solenoid valve.	
153	Unloader ev short circuit.	A short circuit has occurred in the electrical circuit to the unloader solenoid valve.	-
154	Lifter ev open circuit.	An open circuit has occurred in the electrical circuit to the waste container lifting device solenoid valve.	-
155	Lifter ev short circuit.	A short circuit has occurred in the electrical circuit to the waste container lifting device solenoid valve.	
156	Retract ev open circuit.	An open circuit has occurred in the electrical circuit to the ejection plate retract solenoid valve.	
157	Retract ev short circuit.	A short circuit has occurred in the electrical circuit to the ejection plate retract solenoid valve.	- · · ·
158	Tailgate raise ev open circuit.	An open circuit has occurred in the electrical circuit to the tailgate raise solenoid valve.	-
159	Tailgate raise ev short circuit.	A short circuit has occurred in the electrical circuit to the tailgate raise solenoid valve.	
160	Tailgate lower ev open circuit.	An open circuit has occurred in the electrical circuit to the tailgate lower solenoid valve.	
161	Tailgate lower ev short circuit.	A short circuit has occurred in the electrical circuit to the tailgate lower solenoid valve.	
200	Node 1 not operational.	Circuits connected to Node 1 are not working.	
201	Node 2 not operational.	Circuits connected to Node 2 are not working.	
202	Node 5 not operational.	Circuits connected to Node 5 are not working.	



4.4.2 System switches



2748-DS003-OL1-D-GB-G2

The eight push-button switches mounted in the panel below the screen provide the switches for the body system functions according to the adjoining pictograms in the screen display. Each switch is backlit and illuminates when the switch is active.

Pressing the button below the pictogram activates the function depicted by the pictogram. (see 'Switch functions' on page 4-21).



The pictogram above the switch may turn green immediately the switch has been pressed to indicate that the function has been switched on.

Inactive Switches



The absence of a pictogram above a switch indicates that the switch does not control any function in the operating mode selected. At the same time, the backlighting to the switch is turned off.

Disabled Switches



A red cross superimposed over a switch pictogram indicates that the function of the switch is disabled in the operating mode selected (see '4.4 Warning pictograms' on page 4-12). At the same time, the

back-lighting to the switch is turned off.

For example, when the optional external tip controls are selected, the go to body system run controls, raise tailgate, eject and retract switches are disabled.



4

Switch functions

Switch	Function	Switch	Function
	Switch warning beacons on/off (see '4.4.3 Warning beacon switch' on page 4-22).		Eject (see '4.4.19 Eject' on page 4-34).
	Switch work lamps on/off (see '4.4.4 Work lamp switch' on page 4-22).		Retract (see '4.4.20 Retract' on page 4-35).
	Brighten screen display (see '4.4.5 Screen brightness adjustment' on page 4-23).		Raise tailgate (see '4.4.17 Tailgate raise' on page 4-33).
O	Darken screen display (see '4.4.5 Screen brightness adjustment' on page 4-23).		Lower tailgate to 1 metre (see '4.4.21 Lower tailgate to 1 metre' on page 4-35).
~~~~	Go to Datalog information screen.		Select/adjust tailgate clear operation (see '4.4.22 Tailgate clear selection' on page 4-36).
	Go to maintenance screens (see '4.4.7 Maintenance' on page 4-25).		Move upwards through selection in pop- up menu.
<u>J</u>	Select/adjust compaction rate.		Move downwards through selection in pop-up menu.
	Single compaction mechanism cycle selected. Select/adjust compaction mechanism multi-cycle function.	Set	Set function to selected value.
	Adjust compaction mechanism multi- cycle function.	Cancel	Cancel function and return to default condition.
The second secon	Go to body discharge controls (see '4.4.14 External discharge controls' on page 4-32).	EX	Eject disabled (see '4.4.19 Eject' on page 4-34).
	Return to previous page.		Retract disabled (see '4.4.20 Retract' on page 4-35).
	Go to external body discharge controls (see '4.4.14 External discharge controls' on page 4-32).		Raise tailgate disabled (see '4.4.17 Tailgate raise' on page 4-33).
	Go to cab control panel body discharge controls(see '4.4.15 In-Cab discharge controls' on page 4-32).		





#### 4.4.3 Warning beacon switch

Press and release the switch to turn the warning beacons on and off.



The pictogram will illuminate green when the warning beacons are switched on.

The warning beacons will automatically switch off if the vehicle speed exceeds 15 mph (25 km/h).

The warning beacons may also be controlled by a separate switch in the cab header or fascia switch panel (see '4.2.2 Warning beacon switch (if fitted)' on page 4-6).

If a separate warning beacon switch is fitted, it overrides the cab control panel switch function.



#### 4.4.4 Work lamp switch



Press and release the switch to turn the tailgate loading lamps and all work lamps on and off.



The pictogram will illuminate green when the lamps are switched on.







The tailgate loading lamps and work lamps will automatically switch off if the vehicle speed exceeds 20 mph (35 km/h).



### 4.4.5 Screen brightness adjustment



Press the switch to brighten the screen display.





2748-DS015-OL1-D-GB-G2



Press the switch to darken the screen display.





2748-DS014-OL1-D-GB-G2





### **Datalog information**

Press this switch to access the datalog screen.







Press this switch to return to the off screen.





2748-DS017-OL1-D-GB-G2

	Weight Information				
1	Axle 1:	0			
	Axle 2:	0			
	Axle 3:	0			
	Axle 4:	0			
2	GVW:	0			
3	Limit:	0			
	Compaction Working Time				
4	Compaction Worki	ng Time			
4	Compaction Worki	<b>U</b>			
4 5		0 s			
	0 h 0 m	0 s 0 cycles			
5	0 h 0 m Compaction Cycles	0 s 0 cycles Time			
5	0 h 0 m Compaction Cycles Lifter Working	0 s 0 cycles Time			

2748-DS018-OL1-D-GB-G1

The Datalog screen displays the following information:

- 1. Individual axle weights (kg.)**.
- 2. Gross Vehicle Weight (kg.)**.
- 3. Weight Limit (kg.)**.
- 4. Compaction mechanism working time.
- 5. Compaction mechanism cycles counter.
- 6. Waste container lifting device working time.
- 7. Waste container lifting device cycles counter.



Pressing this switch resets the waste container lifting device cycles counter to zero.

** When on-board weighing system is fitted.



#### 4.4.7 Maintenance



Press this switch to access the maintenance screen.





2748-DS019-OL1-D-GB-G2



Press this switch to return to the off screen.





2748-DS020-OL1-D-GB-G2

The maintenance screen is a password protected gateway which allows authorised technicians to access screens where changes to the system configuration can be made. Select/adjust compaction rate



### 4.4.8



Press this switch to access the compaction rate selection/adjustment screen.

 This function may be password protected using the 'Fleet manager' menu. If the correct password is entered on the password screen, the compaction rate selection/adjustment is accessed.









Press this switch to return to the on screen.

The compaction rate selection/adjustment screen allows the compaction rate to be adjusted to maximise the compaction for different types of waste.



2748-DS023-OL1-D-GB-G1

10 different compaction rates can be selected:

Compaction rate	Type of refuse
rest with organic (default)	Household refuse with organic
rest without organic	Household refuse without organic
organic – garden	Garden waste
organic – restaurant	Food waste
paper	Paper
paperboard	Cardboard
plastic	
plastic - dsd	
glass	
not selected	

The compaction pressure can be adjusted between 10 and 40 Bar.



2748-DS083-OL1-D-GB-G2



#### To change the compaction rate:

1. Press either the 'up' switch or the 'down' switch until the top row in the pop-up menu is highlighted by the red boundary.





2748-DS084-OL1-D-GB-G2

2. Press the 'Set' switch to confirm your selection.



the colour inside the red boundary will change to yellow. This indicates that the selection can be changed.



3. Press either the 'up' switch or the 'down' switch until the required selection is shown in the top row of the pop-up menu.



At the same time, the compaction level in the bottom row will change to the value preset for the type of waste selected.



4. Press the 'Set' switch to confirm your selection.



Cance

the colour inside the red boundary will change to grey. This indicates that the selection has been set.



Alternatively press the 'Cancel' switch to cancel your selection and revert to the original selection.

#### To change the compaction level pressure:

Press either the 'up' switch 1. or the 'down' switch until the bottom row in the pop-up menu is highlighted by the red boundary.





2748-DS086-OI 1-D-GB-G2

2. Press the 'Set' switch to confirm your selection.

Set

4

the colour inside the red boundary will change to yellow. This indicates that the selection can be changed.

$\sim$	1	rest with organic				
///	2	compaction level		15	Bar	
$\overline{\mathcal{P}}$	Ę			Set	Cancel	
				2748-	DS086-OL1-	D-GB-G3

Press either the 'up' switch 3. or the 'down' switch until the required selection is shown in the bottom row of the pop-up menu.



$\sim$	1	rest with organic					
	5	compa	ction leve		25	Bar	
$\mathcal{D}$	Ļ	5			Set	Cancel	

2748-DS086-OI 1-D-GB-G3

Press the 'Set' switch to confirm your 4 selection.

Set

the colour inside the red boundary will change to grey. This indicates that the selection has been set.



Alternatively press the 'Cancel' switch to cancel your selection and revert to the original selection.





#### 4.4.9 Select/adjust compaction mechanism multi-cycle function

Press the appropriate switch to access the compaction mechanism multi-cycle function selection/adjustment screen.

- This function may be password protected using the 'Fleet manager' menu. If the correct password is entered on the password screen, the compaction rate selection/ adjustment is accessed.
- This function is switched off on open systems (refuse collection vehicles not fitted with waste container lifting devices).





2748-DS024-OL1-D-GB-G2



Press the appropriate switch to return to the on screen.





00000000

2748-DS025-OL1-D-GB-G2



The compaction mechanism multi-cycle function selection/adjustment screen allows:

- Selection of the number of compaction cycles which the mechanism completes every time it operates.
- Selection of which control starts the compaction mechanism operation, either the body compaction mechanism start control or the waste container lifting device control.



2748-DS054-OL1-D-GB-G2

12 different compaction cycles can be selected:

- Selected back.
- Single (Default).
- Multi-cycle 2, 3, 4, 5, 6, 7, 8, 9 or 10 cycles.
- Continuous.

When a waste container lifting device is fitted to the body, the compaction mechanism can be set to start either when the compaction mechanism control panel push-button is operated or automatically after the lifting device has completed between 1 and 5 cycles.

#### To change the number of compaction cycles:

 Press either the 'up' switch or the 'down' switch until the top row in the pop-up menu is highlighted by the red boundary.





2. Press the 'Set' switch to confirm your selection.

Set

4

• the colour inside the red boundary will change to yellow. This indicates that the selection can be changed.



 Press either the 'up' switch or the 'down' switch until the required selection is shown in the top row of the pop-up menu.



	multi-cycle 4 cycles	
n	Start Press from Lifter - n° lifter cycles 0	
<u>7</u> ]] =	5 1 5et Ca	ncel

2748-DS055-OL1-D-GB-G3

4. Press the 'Set' switch to confirm your selection.

Set

- the colour inside the red boundary will change to grey. This indicates that the selection has been set.
- The switch pictogram will change to multicycle. This confrms that multicycle operation of the compaction mechanism has been selected.



Alternatively press the 'Cancel' switch to cancel your selection and revert to the original selection.





Set

# To change the device which starts the compaction mechanism:

1. Press either the 'up' switch or the 'down' switch until the bottom row in the pop-up menu is highlighted by the red boundary.

Δ





2. Press the 'Set' switch to confirm your selection.



• the colour inside the red boundary will change to yellow. This indicates that the selection can be changed.



 Press either the 'up' switch or the 'down' switch until the required selection is shown in the bottom row of the pop-up menu.





- no = Compaction mechanism control panel switch starts compaction cycle.
- yes = Waste container lifting device switch starts compaction cycle.
- 1 to 5 = the number of waste container lifting device operating cycles completed for each compaction mechanism operating cycle.

4. Press the 'Set' switch to confirm your selection.





Alternatively press the 'Cancel' switch to cancel your selection and revert to the original selection.

Cancel



#### 4.4.10 System run

Insert key into 'Body main' switch and turn key clockwise to run position to enable compaction mechanism controls.



#### 4.4.12 **Discharge controls**



Press and release this switch to enable in-cab discharge controls and disable compaction mechanism controls.



2748-DS028-OL1-D-GB-G2

#### 4.4.13 **Body system run controls**



Press and release this switch to enable compaction mechanism controls and disable in-cab discharge controls.



#### 4.4.11 System off

Turn key counter-clockwise to disable compaction mechanism controls.





2748-DS027-OL1-D-GB-G2





#### **External discharge controls**

Press and release this switch to enable external body discharge controls and disable in-cab discharge controls.



2748-DS031-OL1-D-GB-G2

This switch is functional only when optional external discharge control panel is fitted.

#### 4.4.15 In-Cab discharge controls



Press and release this switch to enable incab discharge controls and disable external body discharge controls.



2748-DS032-OL1-D-GB-G2

This switch is functional only when optional external discharge control panel is fitted.

#### 4.4.16 **External discharge control** panel (option)



The external discharge control panel, when fitted, is located on the right-hand side of the body (righthand drive vehicles) or the left-hand side of the body (left-hand drive vehicles) at the front of the body. It contains the following controls:

- 1. 'Ejector plate eject' push-button, (see '4.4.19 Eject' on page 4-34).
- 'Ejector plate retract' push-button, 2. (see '4.4.20 Retract' on page 4-35).
- 'Tailgate raise' push-button, 3. (see '4.4.17 Tailgate raise' on page 4-33).



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#### 4.4.17 Tailgate raise



Press and hold either:

• The 'Tailgate raise' switch on the cab control panel.

or



• The 'Tailgate raise' push-button on the external discharge control panel (when energised) to raise the tailgate.

As the tailgate raises, the 'Tailgate Raising' pictogram will display on the control panel screen.

When the tailgate is fully raised, the 'Tailgate raised' pictogram will display on the cab control panel screen (A).

As the tailgate rises, the 'Vehicle reversing' audible warning device will sound.

If the button is released at any point while the tailgate is raising:

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- The tailgate will stop in the position it is in until the button is operated again to raise the tailgate.
- The 'Tailgate out-of-locks' pictogram will display on the cab control panel screen (B).

If a gear is selected while the tailgate is out of locks, the 'Tailgate out-of-locks' warning buzzer will sound.

# Vehicles fitted with 'Tailgate out-of-locks/Autobrake function'

If the tailgate is raised while the parking brake is released, neutral is selected and vehicle speed less than 3 Km/h, the parking brake will apply automatically immediately the tailgate is out of its locks.

At the same time the 'Tailgate out-of-locks' pictogram and 'Tailgate out-of-locks/Autobrake function' pictogram will display alternately on the screen (C).





#### 4.4.18 Tailgate clear cycle

When the tailgate clear cycle has been enabled, the compaction mechanism will perform one or more cycles immediately the tailgate reaches full height to clear refuse from the tailgate.



#### 4.4.19 Eject



Press and hold either:

• The 'Ejector plate eject' switch on the cab control panel.

or

EX-

• The 'Ejector plate eject' push-button on the external discharge control panel (when energised) to eject the waste at the discharge site.

If the button is released at any point during the ejection process, the plate will stop in the position it is in until either the button is operated again or the retract button is pressed to retract the ejector plate.

As the ejector plate ejects, the 'Ejector Ejecting' pictogram will display on the cab control panel screen.



2771-OL1-D-GB-G2



#### 4.4.20 Retract



Press and hold either:

The ejector plate retract switch on the cab . control panel.

or



The 'Ejector plate retract' push-button on the external discharge control panel (when energised) to retract the ejector plate.

If the button is released at any point during the retraction process, the ejector plate will stop in the position it is in until either the button is operated again or the eject button is pressed to eject the ejector plate.

As the ejector plate retracts, the 'Ejector Retracting' pictogram will display on the control panel screen.

#### 4.4.21 Lower tailgate to 1 metre



2748-DS081-OL1-D-GB-G2

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Press and hold the 'Lower tailgate to 1 metre' switch on the cab control panel to lower the tailgate to 1 metre.

The engine speed will reduce to idle when the tailgate lowers.

As the tailgate lowers, the 'Vehicle reversing' audible warning device will sound and the 'Tailgate lower to 1 metre' pictogram will display on the cab control panel screen.

The tailgate will stop lowering when it reaches 1 metre and the 'Tailgate out-of-locks' pictogram will display on the cab control panel screen.

If the button is released while lowering the tailgate:

- . The tailgate will stop in the position it is in until the button is operated again, or the external tailgate lowering control panel is operated to lower the tailgate.
- The 'Tailgate out-of-locks' pictogram will display on the cab control panel screen (A).









#### 4.4.22 Tailgate clear selection



Press and release this switch to enable or disable the tip clear function.



If the switch is pressed when the pictogram is white, the pictogram colour will change to green and a white number 1 will display in the pictogram.



If the switch is pressed more than once the white number in the pictogram will increase with each press of the switch to 2, then 3, then 4 at which point the pictogram will change back to white.



When the pictogram is white, the tailgate clear function is disabled. The compaction mechanism will not operate when the tailgate is raised.



When the pictogram is green, the tailgate clear function is enabled. When the tailgate is raised, the compaction mechanism will automatically complete one or more complete cycles immediately the tailgate reaches full height to clear any accumulation of refuse from the tailgate hopper. The number of cycles completed by the compaction mechanism will be the same as the white number in the pictogram.




### 4.4.23 Tailgate lowering control panel



The external tailgate lowering control panel is located on the right-hand side of the body (right-hand drive vehicles) or the left-hand side of the body (left-hand drive vehicles) at the rear of the body. Two tailgate lower push-buttons (1) are fitted.



OL1OHGB01-120

Both push-buttons must be pressed simultaneously to lower the tailgate. This is a two-handed operation.

The engine speed will reduce to idle when the tailgate lowers.

As the tailgate lowers, the 'Vehicle reversing' audible warning device will sound.

When the tailgate is lowered fully and engaged in its locks, the 'System on' pictogram will display on the cab control panel screen (A).

If either button is released while lowering the tailgate:

- The tailgate will stop in the position it is in until both buttons are operated again to lower the tailgate.
- The 'Tailgate out-of-locks' pictogram will display on the cab control panel screen (B).

As the tailgate lowers into the locks, the 'Vehicle reversing' audible warning device silences.



# **OPERATOR'S CONTROLS**



## 4.5 Compaction mechanism control panel



The compaction mechanism control panels are located on the left and right-hand side of the tailgate.

The control panels contain the following controls:

- Start pack cycle push-button (Green) (see '4.5.3 Start pack cycle push-button (Green)' on page 4-40).
- 2. Control panel active warning lamp (Green).
- 3. Signal push-button (Black) (see '4.5.1 Signal pushbutton (Black)' on page 4-39).
- Rescue push-button (Yellow) (see '4.5.2 Rescue push-button (Yellow)' on page 4-39).
- Emergency stop push-button (Red) (see '4.7 Emergency stop push-buttons' on page 4-44).





### 4.5.1 Signal push-button (Black)



Pressing the 'Signal' push-button against spring action sounds the signal buzzer in the cab. The buzzer will sound while the button is pressed and will stop immediately the button is released.

At the same time, the 'Signal' warning pictogram will display on the cab control panel screen while the button is pressed (see '4.4 Warning pictograms' on page 4-12).



The signal buzzer will not sound if an 'Emergency stop' push-button is pressed.

### 4.5.2 Rescue push-button (Yellow)



Pressing and holding the 'Rescue' push-button against spring action will:

- Cause the compaction mechanism packer plate to open and carriage plate to move upwards simultaneously and is used to reverse the mechanism away from the tailgate floor to enable jams to be cleared.
- Cause the 'Rescue' warning pictogram to display on the cab control panel screen.

The mechanism will continue to operate while the button is pressed.

When the button is released, the mechanism will stop immediately.

The mechanism remain in the stopped position until the 'Body main' switch has been turned to off and then back to on and then one of the controls is pressed to operate the mechanism.



**†** 



### 4.5.3 Start pack cycle push-button (Green)



Only one 'Start pack cycle' push-button can be energised at one time.

The green indicator lamp below the button will illuminate to confirm that the push-button is energised.

Each time the 'Body main' switch is turned to on, the 'Start pack cycle' push-button on the left-hand side of the vehicle will be energised.

To energise the opposite 'Start pack cycle' pushbutton, push the de-energised button once. The green indicator lamp below the button will illuminate to confirm that the push-button is now energised.



**Note:** At the same time the green indicator lamp below the previously energised button will extinguish to confirm that the push-button is de-energised.

Open system vehicles (no waste container lifting device fitted).

Vehicles fitted with an open waste container lifting device and guide flap in lowered position.



Pressing and releasing the push-button causes the following sequence of events.

- The engine speed will increase.
- The compaction mechanism packer plate will open and then stop.
- The engine speed will slow down to idle.



2857-0L1-D-GB-G1

As the compaction mechanism packer plate opens, the Packer plate opening pictogram will display on the control panel screen.



2748-IC047-OL1-D-GB-G1

The 'Start pack cycle' push-button must be operated again to complete the compaction cycle.



Pressing the push-button a second time and holding the push-button until the mechanism stops causes the following sequence of events.

- The engine speed will increase.
- The compaction mechanism carriage plate will move downwards and then stop.
- The engine speed will slow down to idle.



As the carriage plate moves down, the 'Carriage plate moving down' pictogram will display on the screen.



The 'Start pack cycle' push-button must be operated a third time to complete the compaction cycle.

Pressing and holding the push-button causes the following sequence of events:

- The engine speed will increase.
- The compaction mechanism packer plate will begin to close.

If the push-button is released after the packer plate has started to close, the packer plate will automatically close and then the carriage plate will move upwards until it is fully packed when it will stop.



As the packer plate closes and then the carriage plate moves up, the 'Packer plate closing' pictogram and the 'Carriage plate moving up' pictogram will display on the control panel screen.



Vehicles fitted with a closed waste container lifting device.

Vehicles fitted with an open waste container lifting device and guide flap in raised position.

Vehicles fitted with an open waste container lifting device and a fixed extended rave rail.



Pressing and releasing the push-button causes the following sequence of events:

- The engine speed will increase.
- The compaction mechanism will carry out one or more complete compaction cycles, dependent on which function has been selected on the cab control panel (see '4.4.9 Select/adjust compaction mechanism multi-cycle function' on page 4-28).
- The engine speed will slow down to idle.









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# **OPERATOR'S CONTROLS**



As the compaction mechanism cycles, the appropriate pictograms will display on the control panel screen as each stage of the cycle occurs, packer plate opening, carriage plate moving downwards, packer plate closing, carriage plate moving upwards.



#### 4.6 **Packing sequence control** panel (option)



2843-OL1-D-GB-G1

Packing sequence controls may be fitted as a customer option.

These control panels feature 4 push-buttons:

- Open packer plate (see '4.6.3 Open packer plate' 1. on page 4-43).
- 2. Carriage plate down (see '4.6.1 Carriage plate down' on page 4-43).
- 3. Close packer plate (see '4.6.4 Close packer plate' on page 4-43).
- 4. Carriage plate up (see '4.6.2 Carriage plate up' on page 4-43).





### 4.6.1 Carriage plate down

Pressing and holding the 'Carriage plate down' pushbutton causes the carriage plate to move down.

If the button is released, the compaction mechanism will stop.





2863-OL1-D-GB-G1

As the carriage plate moves down, the 'Carriage plate moving down' pictogram will display on the screen.



### 4.6.2 Carriage plate up

Pressing and holding the Carriage plate up pushbutton causes the carriage plate to move up.

If the button is released, the compaction mechanism will stop.





2864-OL1-D-GB-G1

As the carriage plate moves up, the 'Carriage plate moving up' pictogram will display on the control panel screen.



### 4.6.3 Open packer plate

Pressing and holding the 'Open packer plate' pushbutton causes the packer plate to open.

If the button is released, the compaction mechanism will stop.





2865-OL1-D-GB-G1

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As the packer plate opens, the 'Packer plate opening' pictogram will display on the control panel screen.



### 4.6.4 Close packer plate

Pressing and holding the 'Close packer plate' pushbutton causes the packer plate to close.

If the button is released, the compaction mechanism will stop.





2866-OL1-D-GB-G1

As the packer plate closes, the 'Packer plate closing' pictogram will display on the control panel screen.



# **OPERATOR'S CONTROLS**



### 4.7 Emergency stop push-buttons



Emergency stop push-buttons are located:

- On the cab control panel.
- On each compaction mechanism control panel.
- Beneath the rave rail on open system vehicles.
- On the waste container lifting device control panel.

Operation of any one 'Emergency stop' push-button will:

- Stop all refuse operations except the rescue function instantly (including waste container lifting device functions, if fitted).
- Cause the 'Emergency stop operated' buzzer to sound.
- Cause the 'Emergency stop operated' pictogram to display in the cab control panel screen (see '4.4 Warning pictograms' on page 4-12).



Operations cannot be resumed until the push-button is reset.

# 4.7.1 Resetting the emergency stop push-button

To reset the 'Emergency stop' push-button.

1. Pull the button outwards.



2. Turn the 'Body main' switch off and on.



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# 5 Operating the machine



### WARNING:

OPERATIVES MUST HAVE A GOOD KNOWLEDGE OF HOW THE EQUIPMENT WORKS.

## 5.1 Operational safety

### WARNING:

IMPORTANT - BEFORE OPERATING THE REFUSE MECHANISM OPERATIVES MUST HAVE READ AND UNDERSTOOD ALL APPLICABLE SAFETY PRECAUTIONS, INCLUDING THE CODE OF PRACTICE FOR THE SAFE OPERATION OF REAR END LOADERS AND REFUSE COLLECTION VEHICLES PUBLISHED BY THE CONTAINER HANDLING EQUIPMENT MANUFACTURERS (CHEM), AND SECTION 2 OF THIS MANUAL.

BEFORE OPERATING THE VEHICLE MAKE SURE THERE IS NO REFUSE, PAPER OR FLAMMABLE MATERIALS NEAR THE ENGINE OR EXHAUST. THESE COULD CAUSE A FIRE WHEN THE ENGINE IS STARTED. IF NECESSARY, TILT THE CAB (SEE CHASSIS-CAB MANUFACTURER'S OPERATOR'S HANDBOOK) TO MAKE A THOROUGH INSPECTION.

IN ADDITION, THE FOLLOWING SAFETY INSTRUCTIONS MUST BE ADHERED TO DURING THE VARIOUS PHASES OF THE OPERATING CYCLE MENTIONED IN THIS SECTION.

### 5.1.1 Packer plate opening

- 1. Operatives must keep clear of the loading area at all times during the compaction cycle as refuse can fall back into the tailgate.
- Do NOT overload the tailgate as the packer plate can push refuse out of the tailgate onto operatives causing damage or injury.

### 5.1.2 Carriage plate moving down

- 1. When moving the carriage plate down under manual control always ensure the loading area is clear.
- 2. When moving down, the carriage plate can crush and then deflect an object from the tailgate. Operatives must stand well clear of the tailgate to avoid possible injury.
- 3. If using manual control to move the carriage plate down, short stroke should be used to prevent the packer plate pushing refuse rearwards over the rave rail.

### 5.1.3 Packer plate closing

1. Operatives must be aware that if refuse escapes under or around the side of the packer plate when it is closing, they must never reach into the tailgate to assist.

### 5.1.4 Carriage plate moving up

- 1. If refuse or liquid escapes through the gap between the body and tailgate the joint seal is probably in need of renewing and must be reported to supervision.
- 2. If the tailgate locks show signs of damage report to supervision.
- 3. As liquid can sometimes squirt from small gaps around the compaction mechanism, operatives must stand well clear when the carriage plate is moving up.



# 5.2 Loading refuse

### 5.2.1 Introduction

The operating cycle comprises operating sequences, which depend on the refuse collection vehicle configuration and use.

# Open system/open waste container lifting device variants

The operating cycle comprises five operating sequences:

- Start loading cycle (see '5.3.4 Manual loading cycle' on page 5-8).
- Emergency stop (see '5.3.7 Emergency stop' on page 5-10).
- 3. Rescue (see '5.3.6 Rescue' on page 5-10).
- 4. Cycle short stroke operation (see '5.3.9 Cycle short stroke operation' on page 5-12).

### **Closed waste container lifting device variant**

The operating cycle comprises four operating sequences:

- 1. Start an automatic loading cycle (see '5.3.5 Automatic loading cycle' on page 5-9).
- 2. Emergency stop (see '5.3.7 Emergency stop' on page 5-10).
- 3. Rescue (see '5.3.6 Rescue' on page 5-10).
- 4. Cycle short stroke operation (see '5.3.9 Cycle short stroke operation' on page 5-12).

### Dual mode variants

Some waste container lifting device systems offer the option of selecting an open or closed system operation by the positioning of a hinged/moveable guide flap that has a low or high operating position. With the guide flap positioned low (see Fig. 5-1, A), the compaction mechanism will operate as an open System. With the guide flap positioned high (see Fig. 5-1, B), the compaction mechanism will operate as the Closed Waste Container Lifting Device Variant.



### Fig. 5-1 Dual mode vehicle, guide flap

- A. Guide flap at low position.
- B. Guide flap at high position.

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### 5.2.2 Loading the hopper



#### Caution: Do not to overfill the hopper when loading refuse.

During loading, refuse must not be allowed to accumulate above the level of the tailgate structural rave rail, i.e. above a line extending from where the hopper floor meets the body floor (X) and the top of the structural rave rail (Y).



Overloading may cause damage to the rave rail, waste container lifting device interface frame or waste container lifting device.

### Vehicles with rave rail extension

Most open system vehicles are fitted with a structural rave rail extension. On these vehicles refuse can be loaded to a higher level.



2791-OL1-D-GB-G2



# 5.3 Operating the controls

### 5.3.1 Introduction

All operating cycle sequences of the compaction mechanism are operated using the control panels mounted on the side of the tailgate.

Discharging the refuse is normally achieved using the cab control panel, although external controls may be fitted as an option.



#### **Cautions:**

When switching the ignition on, allow the screen to complete its self test sequence before selecting reverse or operating any of the body system functions.

Always turn the 'Body main' switch to off when the body control systems are not being used.

## 5.3.2 Energising the control panels

To prevent unauthorised use, the compaction mechanism controls are energised by operating switches on the cab control panel.

The control panels are energized as follows.

- 1. Switch the ignition on, then start and run the engine.
  - The cab control panel will initialise and then display the 'Body system off' mode.











2748-DS029-OL1-D-GB-G2

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2. Turn the 'Body main' switch on.



The screen will display the 'Body system run' • mode.



2748-DS003-OL1-D-GB-G2

Check that the 'System on' pictogram displays on the cab control panel screen.





WARNING: IF A WARNING PICTOGRAM DISPLAYS IN THE MESSAGE AREA OF THE SCREEN, INVESTIGATE AND RECTIFY THE CAUSE OF THE WARNING BEFORE OPERATING THE SYSTEM.

- 3. The compaction mechanism controls are now energised.
- 4. If necessary, press and release the de-energised 'Start pack cycle' push-button to activate it.





2773-OL1-D-GB-G1

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# 5.3.3 Operating the compaction mechanism controls

When operating the compaction mechanism controls stand beside the control panel and observe the operation of the compaction mechanism through the observation window, arrowed.



WARNING: OPERATIVES MUST KEEP CLEAR OF THE LOADING AREA AT ALL TIMES DURING THE COMPACTION CYCLE AS REFUSE CAN FALL BACK INTO THE TAILGATE.



# 5.3.4 Manual loading cycle

# Open system/open waste container lifting device variant with guide flap at lowest position.

To start one loading cycle:

- 1. Check that the tailgate area is clear.
- 2. Press and release the 'Start pack cycle' pushbutton on the compaction mechanism control panel.



- The engine speed will increase.
- The compaction mechanism packer plate will open and stop.
- The engine speed will slow down to idle.



3. Press the 'Start pack cycle' push-button again and keep it depressed until the mechanism stops.



• The engine speed will increase.



• The carriage plate will move downwards and then stop.



4. Press and hold the 'Start pack cycle' push-button.



- 5. When the packer plate starts to close, release the 'Start pack cycle' push-button.
  - The packer plate will continue to close and the carriage plate will move upwards automatically.







### **Cautions:**

While it is possible for a vehicle to be driven between stops during the automatic part of the loading cycle, the driver does NOT control the minimum road speed as minimum engine speed is governed by operation of the compaction mechanism. Should an emergency arise, turn the 'Body main' switch to Off to return the engine speed to idle.



Alternatively, if a manual gearbox is fitted, declutch and apply the brakes.

### 5.3.5 Automatic loading cycle

### Closed waste container lifting device variants only

To start one loading cycle:

- 1. Check that the tailgate area is clear.
- 2. Press and release the 'Start pack cycle' pushbutton on the compaction mechanism control panel.



 The engine speed will increase. The compaction mechanism will carry out one or more complete compaction cycles, dependent on which function has been selected on the cab control panel (see 4.4.9 Select/adjust compaction mechanism multi-cycle function). The engine speed will slow down to idle.





### 5.3.6 Rescue

To reverse the mechanism:

1. Press and hold down the 'Rescue' push-button on the compaction mechanism control panel.



• The packer plate will open and the carriage plate will move upwards simultaneously from any position.



2855-OL1-D-GB-G1

• The 'Rescue' warning pictogram will display on the cab control panel screen.



**Note:** It is not necessary to stop the mechanism before pressing the 'Rescue' push-button, it can be pressed any time during the loading cycle. Pressing the 'Rescue' push-button will automatically stop the loading cycle. The function is also available when an 'Emergency stop' push-button has been pressed, or when 'Drive' or 'Reverse' has been selected on the vehicle's automatic transmission. The engine speed will not increase.

When the button is released, the mechanism will stop immediately.

Turn the 'Body main' switch off and then on again.



# 5.3.7 Emergency stop

To stop the mechanism in an emergency, either:

1. Press any 'Emergency stop' push-button.



- The 'Emergency stop' buzzer to sound.
- The 'Emergency stop operated' pictogram will display in the cab control panel screen.



 All refuse operations (including waste container lifting device functions, if fitted) except the rescue function will stop instantly.

## or;

2. Turn the 'Body main' switch to Off.



The screen will display the 'Body system off' mode.



2748-DS002-OL1-D-GB-G2

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To resume the loading cycle, either:

1. Pull out the 'Emergency stop' push-button, and then turn the 'Body main' switch off and then on again.



• The 'System on' pictogram will display in the cab control panel screen.



or (if the mechanism has been stopped by turning the 'Body main' switch off);

2. Turn the 'Body main' switch to On.



• The screen will display the 'Body system run' mode.



2748-DS003-OL1-D-GB-G2

3. Press the 'Start pack cycle' push-button on the compaction mechanism control panel.





### 5.3.8 Body full

When the ejector plate has moved to the front of the body and the body is full of refuse, the body full pictogram will display on the cab control panel.



2748-DS089-OL1-D-GB-G1

### 5.3.9 Cycle short stroke operation

### Closed waste container lifting device variants only

If the tailgate is overloaded, the refuse cannot be contained as the carriage plate and packer plate descend.



2794-OL1-D-GB-G2

This may result in the packer plate pushing refuse out of the tailgate.

In this case a cycle short stroke can be executed by taking the following action:

1. Press and release the 'Start pack cycle' pushbutton on the compaction mechanism control panel.



- The packer plate will open.
- The carriage plate will move downwards.



# **OPERATING THE MACHINE**

2. When the packer plate engages the refuse anywhere while the carriage plate is moving downwards, press and release the 'Start pack cycle' push-button again.



2795-OL1-D-GB-G2



• The packer plate will begin to close early and the carriage plate will move upwards in the normal manner.



2796-OL1-D-GB-G2

3. Repeat this operation until the tailgate is clear.

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# 5.3.10 Operation using packing sequence controls



## Cautions:

If the packing sequence controls are used to operate the compaction mechanism, it is important that the mechanism is returned to the fully packed position (i.e. the packer plate is closed and the carriage plate is fully raised) before using any other controls to operate compaction mechanism.

**Note:** On some vehicles fitted with footboards, operation of the packing sequence controls is inhibited when the footboard is occupied.

To use the packing sequence controls:

- 1. Check that the tailgate area is clear.
- 2. Press and hold the 'Open packer plate' pushbutton until the packer plate is fully open.





2865-OL1-D-GB-G1

4. Press and hold the 'Close packer plate' pushbutton until the packer plate is fully closed.





2866-OL1-D-GB-G1

5. Press and hold the 'Carriage plate up' push-button to move the carriage plate and packer plate upwards until the mechanism is fully packed.





2864-OL1-D-GB-G1





2863-OL1-D-GB-G1

**Note:** This switch function is inhibited on open system variants or when a guide flap is in the lowered position. Press and hold the 'Start pack cycle' push-button (see '4.5.3 Start pack cycle push-button (Green)' on page 4-40) to move the carriage plate and packer plate downwards to engage the refuse.

Press and hold the 'Carriage plate down' pushbutton to move the carriage plate and packer plate

3.

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### 5.4 Discharging refuse



#### WARNING:

AFTER DISCHARGING THE REFUSE, MAKE SURE THERE IS NO REFUSE, PAPER OR FLAMMABLE MATERIALS NEAR THE ENGINE OR EXHAUST. THESE COULD CAUSE A FIRE WHEN THE ENGINE IS STARTED. IF NECESSARY, TILT THE CAB (SEE CHASSIS-CAB MANUFACTURER'S OPERATOR'S HANDBOOK) TO MAKE A THOROUGH INSPECTION.

### 5.4.1 Discharging refuse using in-cab controls

- 1. Ensure the vehicle is suitably positioned on stable ground and the rear of the vehicle is clear.
- 2. Switch the ignition on, then start and run the engine.
  - The cab control panel will initialise and then display the 'Body system off' mode.





3. Turn the 'Body main' switch on.



 The screen will display the 'Body system run' mode.



Check that the 'System on' pictogram displays in the message area of the screen.



4. Press and release the internal discharge switch.





2748-DS029-OL1-D-GB-G2



The screen will display the 'Body discharge internal controls' mode.





### WARNING: MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE RAISED.

5. Press and hold the 'Tailgate raise' switch until the tailgate is fully raised and then release the button.



6. Press and hold the eject switch to discharge contents of the body. Release the button when discharging has been completed.



Leave the ejector plate at rear of body ready for next collection.

7. If travelling a long distance, press and hold the retract switch to position the ejector plate at the front of the body to prevent bounce on the hydraulic cylinder.



• The 'Vehicle reversing' audible warning device will sound when the tailgate rises.

• When the tailgate is fully raised, the 'Tailgate raised' pictogram will display on the cab control panel screen.



• If the 'Tailgate clear cycle' function has been switched on, the compaction mechanism will perform one or more packing cycles to clear refuse from the tailgate.



5-16 огір-он-двозд



# **OPERATING THE MACHINE**

Move the ejector plate to the rear of the body at the first collection point.



**Note:** The tailgate must be raised until the 'Tailgate out-of-locks' warning sounds before the ejector plate can be moved.



WARNINGS: MAKE SURE THAT THE TAILGATE AREA IS CLEAR OF PERSONNEL.

MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE, IF FITTED, RAISED.

8. Move the vehicle to a safe area.



### WARNINGS:

MAKE SURE THAT THE TAILGATE AREA AND BODY/TAILGATE SEAL IS CLEAR OF DEBRIS BEFORE LOWERING TAILGATE.

ALWAYS INSERT THE TAILGATE PROPS TO SUPPORT THE TAILGATE IF CLEANING REQUIRES YOU TO WORK BENEATH IT.

THE TAILGATE SEAL SHOULD BE KEPT IN GOOD CONDITION AND REPLACED IF DAMAGED. 9. Press the two push-buttons on the 'Tailgate lowering' control panel simultaneously to lower the tailgate fully into its locks.



- The engine speed will lower to tick-over.
- The 'Vehicle reversing' audible warning device will sound when the tailgate lowers.
- When the tailgate is lowered fully and engaged in its locks, the 'System on' pictogram will display on the cab control panel screen.
- As the tailgate moves down into the locks, the 'Vehicle reversing' audible warning device will silence.



2850-OL1-D-GB-G1



# 5.4.2 Discharging refuse using external controls

- 1. Ensure the vehicle is suitably positioned on stable ground and the rear of the vehicle is clear.
- 2. Switch the ignition on, then start and run the engine.
  - The cab control panel will initialise and then display the 'Body system off' mode.





 The screen will display the 'Body system run' mode.



2748-DS003-OL1-D-GB-G2

Check that the 'System on' pictogram displays in the message area of the screen.



4. Press and release the internal discharge switch.



2748-DS028-OL1-D-GB-G2

• The screen will display the 'Body discharge internal controls' mode.



**DENNIS EAGLE** 

2748-DS029-OL1-D-GB-G2

3. Turn the 'Body main' switch on.





5. Press and release external discharge switch.



- 2748-DS031-OL1-D-GB-G2
- The screen will display the 'Body discharge external controls' mode.



WARNING: MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE, IF FITTED, RAISED.

6. Press the 'Tailgate raise' push-button on the 'External discharge' control panel until the tailgate is fully raised and then release the push-button. The 'Vehicle reversing' audible warning device will sound when the tailgate rises.

•

• When the tailgate is fully raised, the 'Tailgate raised' pictogram will display on the cab control panel screen.



 If the 'Tailgate clear cycle' function has been switched on, the compaction mechanism will perform one or more packing cycles to clear refuse from the tailgate.



2831-OL1-D-GB-G1

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2832-OL1-D-GB-G1

# **OPERATING THE MACHINE**



 Press the 'Ejector plate eject' push-button on the 'External discharge' control panel to discharge contents of body and then release the pushbutton.



Z834-0L1-D-GB-G1

Leave barrier at rear of body ready for next collection.

8. If travelling a long distance, press the 'Ejector plate retract' push-button on the 'External discharge' control panel to position the ejector plate at the front of the body.





Move the ejector plate to the rear of the body at the first collection point.



2872-OL1-D-GB-G2

**Note:** The tailgate must be raised until the 'Tailgate out-of-locks' warning sounds before the ejector plate can be moved.



WARNINGS: MAKE SURE THAT THE TAILGATE AREA IS CLEAR OF PERSONNEL.

MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE, IF FITTED, RAISED.





9. Move vehicle to a safe area.



WARNINGS:

MAKE SURE THAT THE TAILGATE AREA AND BODY/TAILGATE SEAL IS CLEAR OF DEBRIS BEFORE LOWERING THE TAILGATE.

ALWAYS INSERT THE TAILGATE PROPS TO SUPPORT THE TAILGATE IF CLEANING REQUIRES YOU TO WORK BENEATH IT.

### THE TAILGATE SEAL SHOULD BE KEPT IN GOOD CONDITION AND REPLACED IF DAMAGED.

10. Press the two push-buttons on the 'Tailgate lowering' control panel simultaneously to lower the tailgate fully into its locks.



• The engine speed will lower to tick-over.

• The 'Vehicle reversing' audible warning device will sound when the tailgate lowers.

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- When the tailgate is lowered fully and engaged in its locks, the 'System on' pictogram will display on the cab control panel screen.
- As the tailgate moves down into the locks, the 'Vehicle reversing' audible warning device will silence.





## 5.5 Tailgate out-of-locks/ autobrake interlock (option)

The optional 'Tailgate out-of-locks/autobrake interlock' ensures that the parking brake is applied if the tailgate is out of its locks when the vehicle is stationary (vehicle speed below 1.5 Km/h, neutral selected). The interlock will not engage the parking brake if the vehicle is travelling at more than 1.5 Km/h.

In the event of the operative raising the tailgate without having first applied the parking brake, an electronically controlled circuit will automatically apply the parking brakes immediately the tailgate rises out of its locks.

At the same time the control circuit will cause the 'Tailgate out-of-locks/autobrake interlock' pictogram to display on the cab control panel screen.



## 5.6 Overriding the tailgate out-oflocks/autobrake interlock





In the event of an emergency, the 'Tailgate outof-locks/autobrake interlock' override switch can be operated to release the parking brake after the 'Tailgate out-of-locks/autobrake interlock' has engaged it, as follows:



#### WARNING: MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE, IF FITTED, RAISED.

- 1. Apply the footbrake.
- 2. Select Drive.
- Press the safety catch on the 'Tailgate out-of-locks/ autobrake interlock' override switch into the switch (A).
- Press the front of the 'Tailgate out-of-locks/ autobrake interlock' override switch downwards (B).
- 5. The parking brake will release.

At the same time the 'Tailgate out-of-locks/autobrake interlock' override switch operated' pictogram will display on the cab control panel screen.



6. Stop the vehicle, apply the parking brake, lower the tailgate into its locks and reset the 'Tailgate out-of-locks/autobrake interlock' override switch as soon as possible.



## 5.7 Propping/unpropping the tailgate



## WARNING:

DO NOT WALK UNDER RAISED TAILGATE UNLESS IT IS SUPPORTED BY ITS PROP(S).

### 5.7.1 To prop the tailgate

**Note:** Bodies are normally fitted with one prop; two props are available as a customer option.

One prop, correctly positioned, will be sufficient to hold the tailgate.

- 1. Stand the vehicle on clean, level and stable ground.
- 2. Engage the parking brakes.
- 3. Select Neutral 'N'



# WARNING:

MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE, IF FITTED, RAISED.

4. Switch the ignition on, then start and run the engine.











2748-DS029-OL1-D-GB-G2

• The cab control panel will initialise and then display the 'Body system off' mode.

5. Turn the 'Body main' switch on.



 The screen will display the 'Body system run' mode.



Check that the 'System on' pictogram displays in the message area of the screen.



# **OPERATING THE MACHINE**



- 6. Press and release the internal discharge switch.
  - The screen will display the 'Body discharge internal controls' mode.



2748-DS028-OL1-D-GB-G2



WARNING: MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE,

IF FITTED, RAISED.

7. Press and hold the tailgate raise switch until the tailgate is approximately 1 metre from the body and then release the button.





- The 'Vehicle reversing' audible warning device will sound when the tailgate rises.
- When the tailgate is raised, the 'Tailgate out-oflocks' pictogram will display on the cab control panel screen.







8. Release the prop from tailgate by turning the anti loose clip and swing into position using the slotted eye feature at the tailgate end of the prop to engage the prop securely on the landing pad bracket at the rear of the body.



2874-OL1-D-GB-G1

9. Press the two push-buttons on the 'Tailgate lower' control panel simultaneously to lower the tailgate until the prop is fully closed taking the full weight of the tailgate.





2873-OL1-D-GB-G1

• When the tailgate is propped, the 'Tailgate out-of-locks' pictogram will display on the cab control panel screen.



10. Stop the engine.



### 5.7.2 To unprop the tailgate

- 1. Engage the parking brakes.
- 2. Select Neutral 'N'.



MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE IF FITTED, RAISED.

- 3. Switch the ignition on, then start and run the engine.
  - The cab control panel will initialise and then display the 'Body system off' mode.









4. Turn the 'Body main' switch on.



 The screen will display the 'Body system run' mode.



2748-DS042-OL1-D-GB-G2

Check that the 'Tailgate out-of-locks' pictogram displays in the message area of the screen.









2748-DS045-OL1-D-GB-G2



# **OPERATING THE MACHINE**

- 5. Press and release the internal discharge switch.
  - The screen will display the 'Body discharge ٠ internal controls' mode.





WARNING:

IF FITTED, RAISED.

2748-DS043-OL1-D-GB-G2

MAKE SURE THAT YOU KNOW THE HEIGHT

AND WASTE CONTAINER LIFTING DEVICE,

OF YOUR VEHICLE WITH THE TAILGATE

6. Press and hold 'Tailgate raise' switch to raise the tailgate approximately 100mm to take the weight off the prop and then release the button.



- The 'Vehicle reversing' audible warning device will sound when the tailgate rises.
- The 'Tailgate out-of-locks' pictogram will display on the cab control panel screen.



# **OPERATING THE MACHINE**



Disengage the prop from the tailgate lower pin, swing the prop into the stow position on the tailgate and secure with the retaining clip.

- 7. Press the two push-buttons on the 'Tailgate lowering' control panel simultaneously to lower the tailgate fully into its locks.
  - Check that the tailgate lowers and engages • both locks evenly.



2875-OL1-D-GB-G1



2873-OL1-D-GB-G1



- The engine speed will lower to tick-over. •
- The 'Vehicle reversing' audible warning device • will sound when the tailgate lowers.
- When the tailgate is lowered fully and engaged • in its locks, the 'System on' pictogram will display on the cab control panel screen.
- As the tailgate moves down into the locks, the 'Vehicle reversing' audible warning device will silence.



8. Check that the tailgate is sitting square on the body.


#### 5.8 System warnings

#### 5.8.1 Hydraulic oil temperature warning

The hydraulic system is fitted with a temperaturesensing switch, which will display the 'Hydraulic oil hot' warning pictogram on the cab panel screen if the hydraulic oil is too hot.



This may occur when the vehicle is full and still packing or if there is an hydraulic system fault. If the 'Hydraulic oil hot' warning pictogram displays, take the following action:

#### 5.8.2 Body full - collection complete

- 1. Turn the 'Body main' switch to Off. or press any 'Emergency stop' push-button.
  - Operating any 'Emergency stop' push-button will cause the 'Emergency stop' buzzer to sound.
- 2. Proceed to discharge site and discharge the refuse from the body.

### 5.8.3 Body not full - compaction mechanism jammed



WARNING: BEFORE CLEARING A JAM, THE OPERATIVE MUST:

- 1. Turn the 'Body main' switch to Off and remove the key.
- 2. Stop the engine and remove the ignition key.
- 3. Lock the cab door and remove the key.
- 4. Keep the 'Body main' switch key, the ignition key and the cab door key in your possession until the jam is cleared.
- 5. Clear the jam.
- 6. Restart the vehicle and operate the compaction system to run normally.
- 7. The warning light should extinguish after 2-3 minutes.
- 8. Start collection again.

#### 5.8.4 Recurring fault

If a fault occurs which causes the temperature to continue to rise and the 'Hydraulic oil hot' warning pictogram continues to be displayed, a second switch will automatically shut down the compaction mechanism.

At the same time the 'Hydraulic oil over temperature cut out' warning pictogram will be displayed.



To restart the mechanism:

- 1. Turn the 'Body main' switch to Off.
- 2. Wait until the 'Hydraulic oil over temperature cut out' warning pictogram has extinguished (the time is dependent on the temperature of the ambient air).
- 3. Restart the mechanism again.
- If the compaction mechanism shuts down a second time due to a temperature rise, refer the incident/ machine to supervision for attention.

#### 5.9 Breakdown

#### 5.9.1 Refuse collection bodywork breakdown

In the event of a refuse collection bodywork operating system failure, preventing the operation of the compaction mechanism or body discharge the refuse collection vehicle should be driven/recovered to a suitably equipped repair workshop and repaired.

#### 5.9.2 Chassis-cab breakdown

Consult the appropriate sections of the chassis-cab operator's handbook for information about how to recover the refuse collection following a breakdown of the chassis-cab.

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### 6 Optional equipment

#### 6.1 Safety light curtain (option)

#### 6.1.1 Introduction

An optional safety light curtain (see Fig. 6-1) enables an automatic packing cycle to be used while still providing a low rave rail position for hand loading.



#### Fig. 6-1 Safety light curtain

- 1. Light emitter/receiver column, one each side.
- 2. Light curtain.
- 3. Rave rail.

#### 6.1.2 Description

Two light emitter/receiver columns (see Fig. 6-1, 1), one mounted on each side of the tailgate above the rave rail are part of the electrical system which controls the operation of the refuse collection body compaction mechanism.

The light emitter/receiver columns are energised whenever the compaction mechanism control panels are energised and create a narrow vertical light curtain (see Fig. 6-1, 2) across the loading area of the tailgate.

The light curtain is only active when the carriage plate is moving downwards, allowing loading to continue through the light curtain at all other times, i.e. when the packer plate is closing and the carriage plate is moving upwards, without interruption.

If the light curtain is interrupted by the intrusion of an object when the carriage plate is moving downwards, the compaction mechanism stops immediately.

If the light curtain is interrupted by the intrusion of an object when the packer plate is closing and the carriage plate is moving upwards, the compaction mechanism continues to operate normally.

All other control functions of the machine remain unaltered.

Should the curtain fail to operate, the machine will simply revert to the Open System 'move carriage plate downwards' control.



#### 6.1.3 Operation - hand loading

To hand load refuse:

- 1. Energise the control panels.
- 2. Check that the tailgate area is clear.
- 3. Press and release the 'Start pack cycle' pushbutton.



- The compaction mechanism will complete one complete packing cycle and stop, i.e. the packer plate opens, the carriage plate moves downwards, the packer plate closes, the carriage plate moves upwards.
- 4. Load refuse into the hopper while the packer plate is closing, or the carriage plate moving upwards.



• The mechanism will complete its cycle.

- 5. If the light curtain is interrupted by refuse being loaded or the intrusion of an object while the carriage plate is moving downwards:
  - The mechanism will stop immediately.



The 'Safety light curtain reset' push-button will flash.





#### 6.1.4 Restarting the compaction cycle

To restart the compaction cycle after the compaction mechanism has been stopped by the operation of the light curtain, during hand loading:

- 1. Check that the obstruction is clear.
- 2. Press and release the 'Safety light curtain reset' push-button.



3. Press and release the 'Start pack cycle' pushbutton.



• The cycle should now complete automatically.



To restart the compaction cycle after the compaction mechanism has been stopped by the operation of the light curtain, while the light curtain beams are still interrupted:



#### WARNING: WHEN OPERATING 'HOLD TO RUN - MOVE CARRIAGE PLATE DOWNWARDS' ALWAYS WATCH THE COMPACTION MECHANISM DANGER ZONE.

1. Press and hold the 'Start pack cycle' push-button until the packer plate begins to close, and then release the push-button.



The cycle should now complete automatically.



### 6.1.5 Operation - waste container lifting device loading

To load refuse using the waste container lifting device:

- 1. Energise the control panels.
- 2. Check that the tailgate area is clear.
- 3. Press and release the 'Start pack cycle' pushbutton.



• The compaction mechanism will complete one complete packing cycle and stop, the packer plate opens, the carriage plate moves downwards, the packer plate closes, the carriage plate moves upwards.

- 4. Operate the waste container lifting device to discharge the contents of the waste container into the hopper.
  - If the waste container lifting device interrupts the light curtain when the carriage plate is moving downwards, A, the compaction mechanism will stop immediately and will restart automatically when the waste container lifting device has lowered clear of the safety light curtain.

**Note:** The 'Safety light curtain reset' push-button will flash while the compaction mechanism has stopped, but it is not necessary to press the push-button.

• If the waste container lifting device interrupts the light curtain when the packer plate is closing B, and carriage plate is moving upwards C, the compaction mechanism continues to operate normally.



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#### 7 Supplementary information

#### Supplementary information/owners comments









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