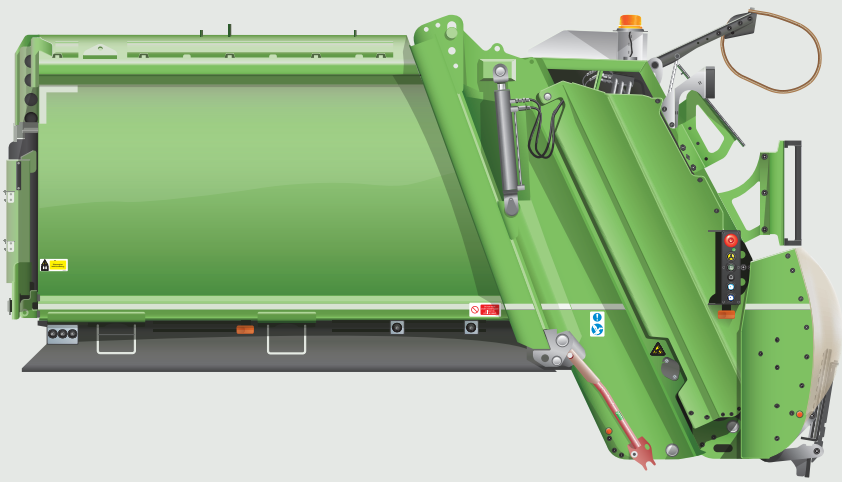
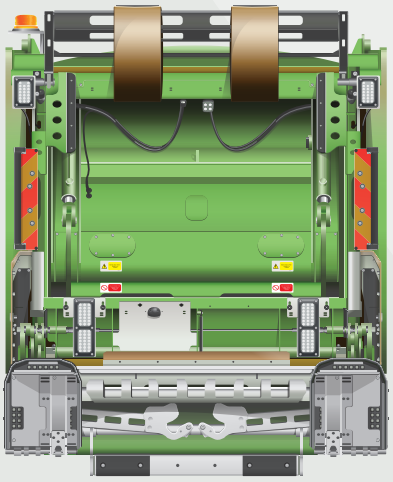
DENNIS EAGLE



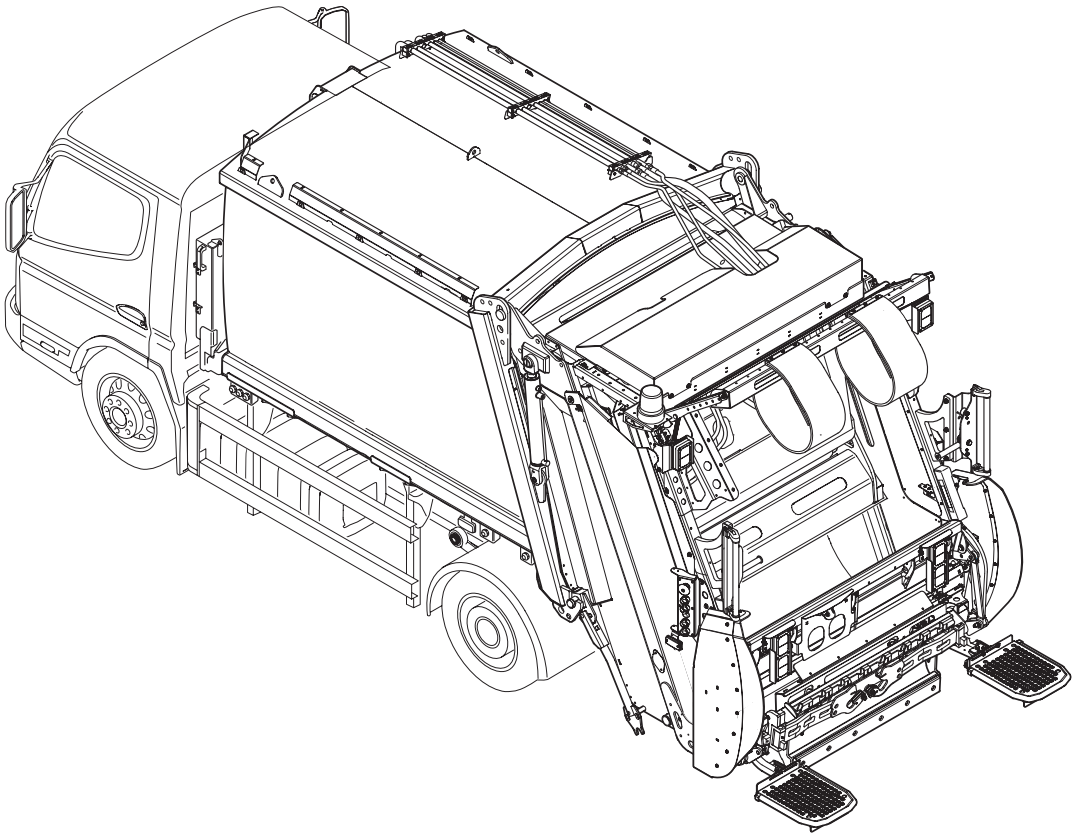


OLYMPUS MINI

OPERATOR'S HANDBOOK

This Operator's Handbook contains information about the Olympus Mini 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 installed on 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.

Ros Roca S.A. (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.

FOREWORD

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.

Original instructions.

Compiled and Published by:

ROS ROCA S.A.

Avda. Cervera

Tàrrega

España

Teléfono: +(34) 973 50 81 00

www.rosroca.com

Description

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

Intended use

The Olympus Mini 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 Mini 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

ROS ROCA S.A.

Avda. Cervera

Tàrrega

España

Publication Record

EDITION	PUBLICATION REFERENCE	PUBLICATION DATE	COMMENTS
This edition.	OM1R-OH-GB03R	March 2022	This version has been issued to add the new version 4 cab control panel and controls.
Previous edition.	OM1R-OH-GB02R	March 2017	Footboards information updated. Style for Warning, Caution & Note paragraphs revised.
	OM1R-OH-GB01R	June 2015	First edition.

ABOUT THIS OPERATOR'S HANDBOOK

Ros Roca S.A. welcome you as the owner/operator of a new Olympus Mini Refuse Collection Vehicle.

The purchase of the Olympus Mini 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 installed on the vehicle relating to:

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

This Operator's Handbook and the accompanying Service Manual contain information about the Ros Roca S.A. units installed on 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 Mini 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 the 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 installed on 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 Ros Roca S.A. representative.

AFTERMARKET SUPPORT

Ros Roca S.A. 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 Tàrrega.

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:

ROS ROCA S.A.

Avda. Cervera

Tàrrega

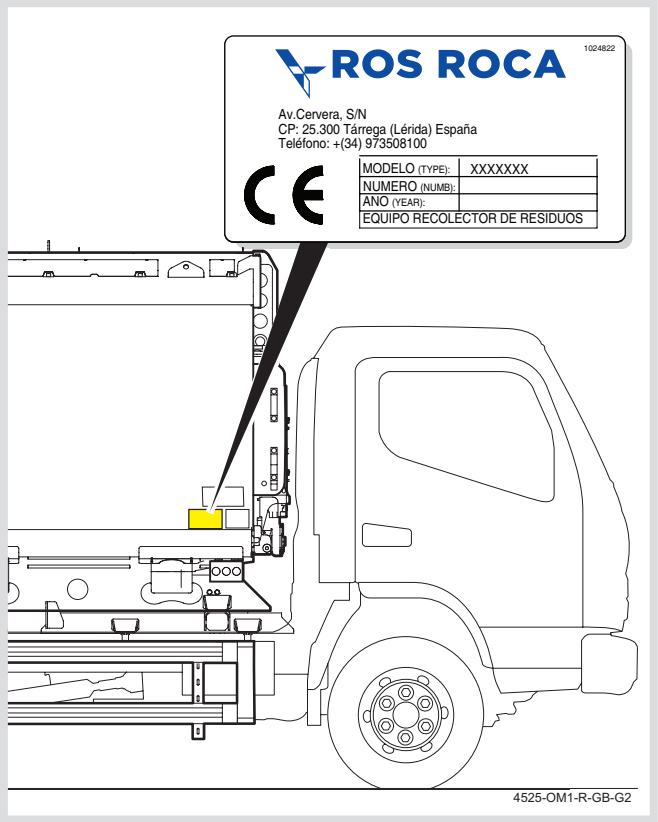
España

Teléfono: +(34) 973 50 81 00

www.rosroca.com

For spare parts consult the Electronic Parts Catalogue: http://www.msys-epc.com/DENEAGLE/Login.aspx.

BODY IDENTIFICATION LABEL



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

The information on the label is shown below:

Machine category / Body type

Serial number

Order number

Year of manufacture

EU DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

CE

ROS ROCA

Address: Avda. Cervera s/n - 25300 Tàrrega - Lleida (Spain)

Certifies that the machine :	Refuse Collection Body
Type:	Olympus Mini
Capacity (Volume) :	
Serial Number (Kit Serial Number) :	
Equipped :	Lifting device ROS ROCA
Type:	Mini CE / Bar lifter Mini CE
Chassis:	
Chassis Serial Number:	
Construction Month and Year:	

It conforms with the essential requirements of Health and Safety of the Machinery Directive 2006/42/CE of May 17th 2006, of the Directive CEM 2014/30/UE and of the Low Voltage Directive 2014/35/UE.

It conforms with the general requirements of the Standards EN 1501-1 + A1 : 2015 and 1501-5 : 2011.
The conformity of this assembly is constituted from the Type Examination Certificate of the notified organisation APAVE placed in ‘191 rue de Vaugirard 75738 PARIS Cedex 15’. The testing and validation have been performed at the end of the fabrication.
Mr Ramon Aparicio of the society Ros Roca is the person authorized to constitute the technical file.

Tarrega, (Date)
Ramon Aparicio
Operations Manager

FOREWORD

OWNER'S INFORMATION

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

Vehicle registration number: .....

Date of purchase: .....

Chassis-cab model:.....

Chassis-cab VIN: .....

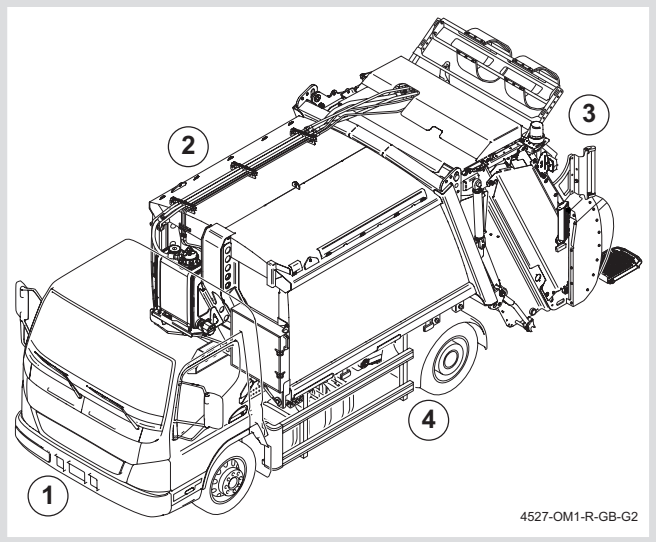
Equipment (i.e. Body)	Manufacturer	Model	Serial number
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

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

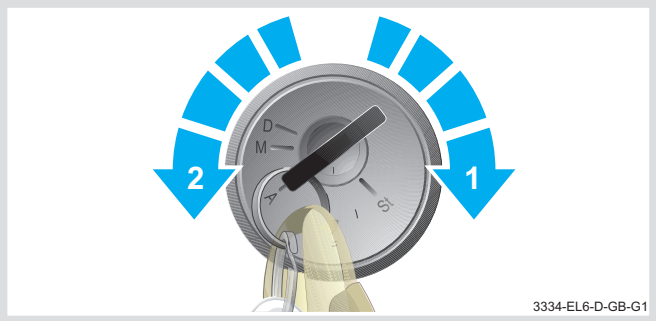
Where reference is made in this Operator's Handbook to the right-hand and left-hand side of the vehicle, this is relative to a person sitting in the driver's seat.



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

CLOCKWISE AND COUNTER-CLOCKWISE

Where reference is made in this Operator's Handbook to turning an item, for example a key switch, 'Clockwise' or 'Counter-clockwise' this relates to the direction of rotation when seen from the front face of the item.



1. Clockwise
2. Counter-clockwise

RELATED PUBLICATIONS

The following publication is available in support of the Olympus Mini Refuse Collection Vehicle:

- Service Manual.
- Quick Reference Guide.

It is available from your Olympus Mini supplier.

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.**

CONTENTS

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CONTENTS

1

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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 Mini refuse collection bodywork is mounted on chassis-cabs specified for refuse collection application.

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

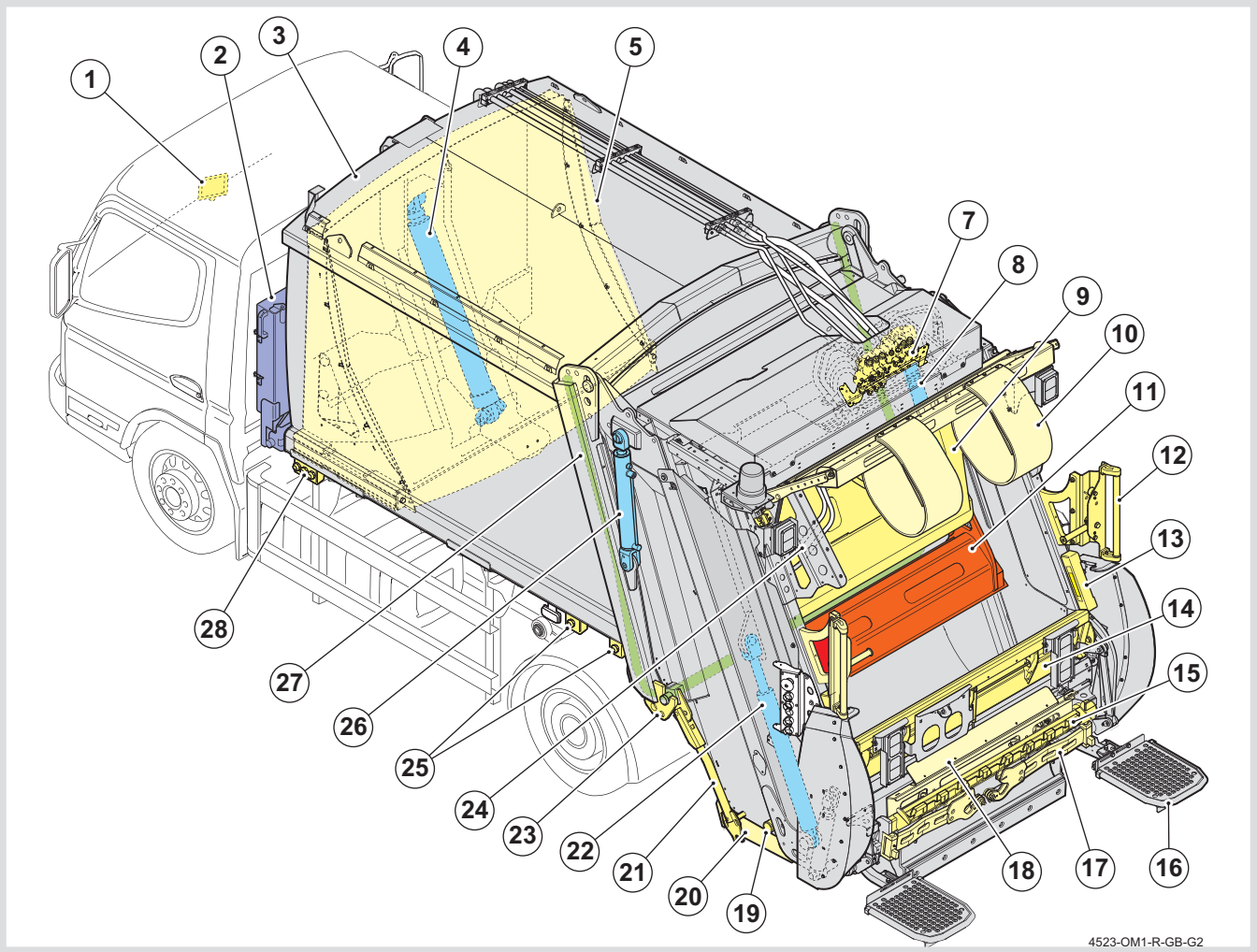
1.2 OLYMPUS MINI BODY SIZES

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

COMPACTION BODY SIZE/TYPE	MINI 6	MINI 7	MINI 8
Effective volume (m^3).	6	7	8
Wheel base (mm).	2700 - 2900	3100 - 3350	3500 - 3800

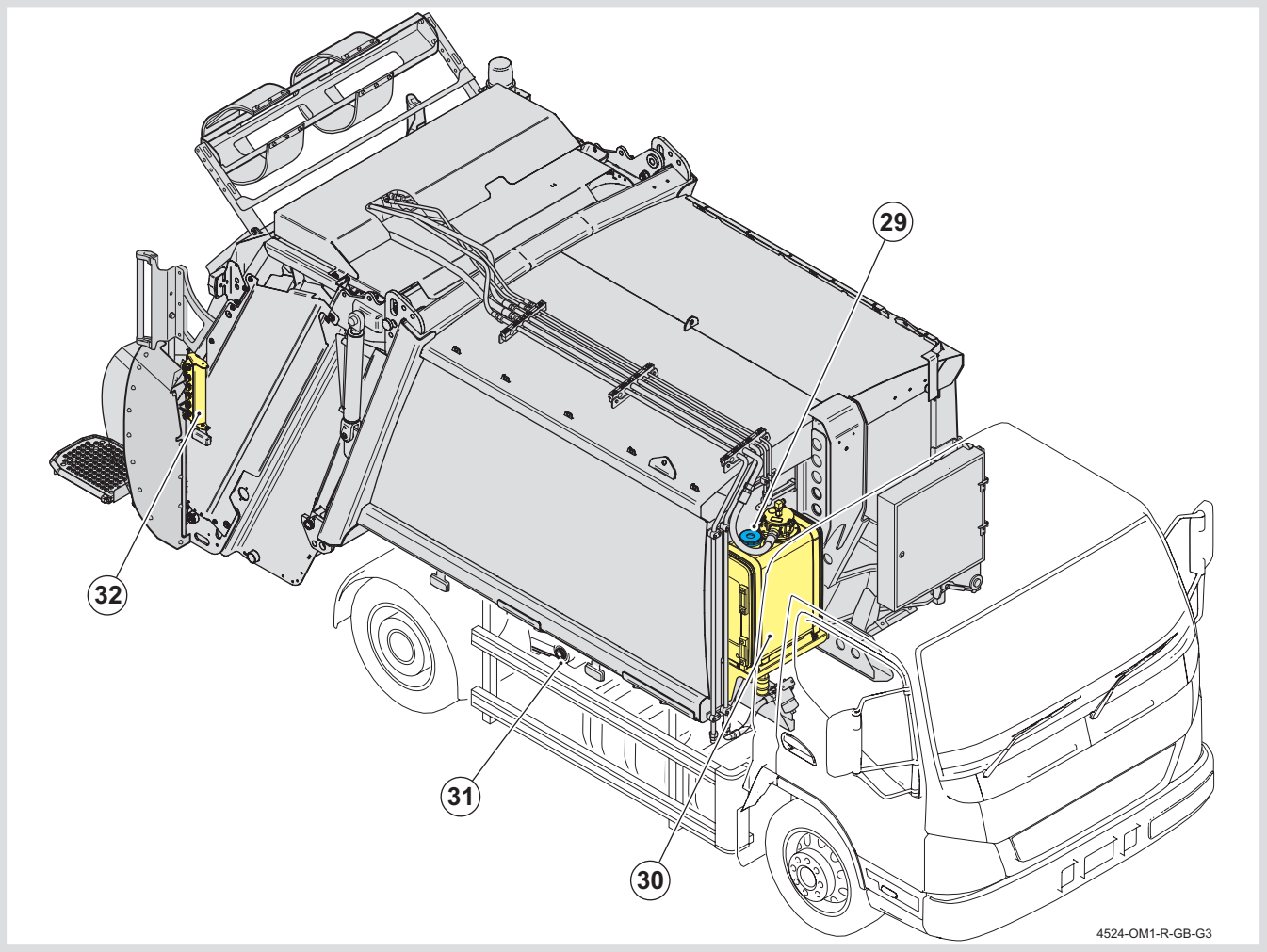
1.3 LOCATION OF MAJOR FEATURES

Olympus Mini refuse collection bodywork features (left-hand side of vehicle)



1. Cab control panel (see ‘4.3 Cab control panel’ on page 4-7).
2. Body junction box/Electrical distribution cupboard.
3. Body.
4. Ejection cylinder.
5. Ejection plate.
6. Tailgate.
7. Compaction mechanism hydraulic control valve.
8. Packer plate cylinder.
9. Carriage plate.
10. Bump bar.
11. Packer plate.
12. Hand rail.
13. Safety light curtain emitter/receiver column*.
14. Rave rail.
15. Lifting device carriage.
16. Footboard.
17. DIN arm.

Olympus Mini refuse collection bodywork features (righthand side of vehicle)



18. Lip clamp.
19. Tailgate drain.
20. Leachate tank*.
21. Tailgate prop (see ‘5.7 Propping/unpropping the tailgate’ on page 5-32).
22. Carriage plate cylinder (behind covers).
23. Tailgate/body lock.
24. Lid opener.
25. Tailgate lowering control station (see ‘4.4.18 Tailgate lowering control panel’ on page 4-33).
26. Tailgate raise/lower cylinder.
27. Tailgate/body seal.
28. External discharge control panel* (see ‘4.4.11 External discharge control panel (option)’ on page 4-27).
29. Hydraulic oil filler point.
30. Body hydraulic oil tank and control valve (inside front of body).
31. Body drain.
32. Compaction mechanism control panel (see ‘4.5 Compaction mechanism control panel’ on page 4-34).

* = Optional features.

1.4 WASTE CONTAINER LIFTING DEVICE OPTIONS

The Olympus Mini refuse collection vehicle is available in two basic configurations:

- Without waste container lifting device.
- With waste container lifting device.

1.5 WASTE CONTAINER LIFTING DEVICES

Your vehicle may have a waste container lifting device to allow the discharging of waste containers.

The lifting device will lift lipped waste containers from different manufacturers conforming to:

- EN 840-1 (Up to 390 litres).
- EN 840-2 (Up to 1100 litres).
- EN 840-3 (Up to 1100 litres).

The waste container lifting device has passed the specific dynamic and static load tests with maximal weight (550 kg).

1.6 FOOTBOARDS

Where legislation permits the use of footboards, your vehicle may have retractable footboards and fixed hand rails to allow operatives to ride on the rear of the vehicle when collecting refuse.

1.7 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 Ros Roca S.A.

CONTENTS

2

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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 installed and any ancillary equipment installed on the refuse collection bodywork.

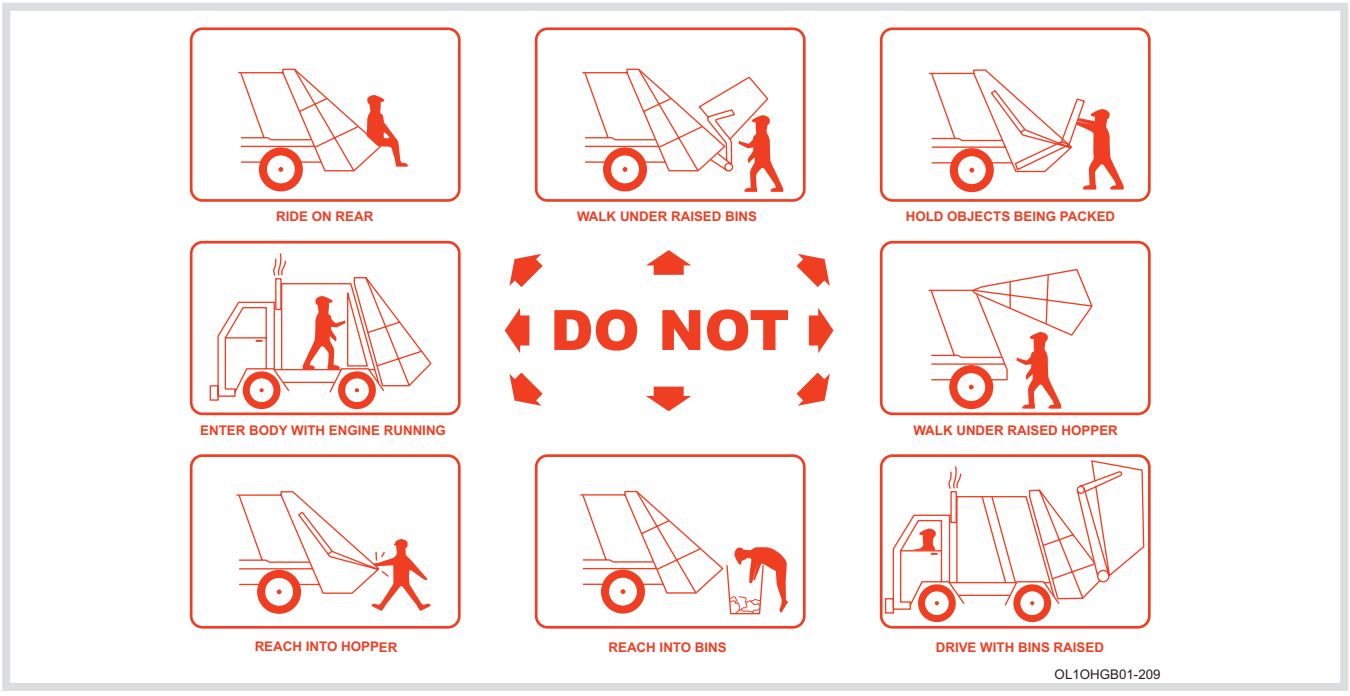
This chapter incorporates all the information contained in the 'Code of Practice for the safe operation of rear end loaders and refuse collection vehicles' issued by the Container Handling Equipment Manufacturers (CHEM).

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.



2.3 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

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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.

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.
7. 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.

2.7 PROTECTIVE CLOTHING

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 make sure 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.
3. Operatives must not tamper with any of the controls and safety devices installed on 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.
7. 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.
9. When pressure washing the refuse collection vehicle, its chassis-cab, bodywork, refuse compaction mechanism and any ancillary equipment, such as waste container lifting devices, do not allow the jet nozzle to approach closer than 1 metre.

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

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:
    - You are a trained operative.
    - It is in a well-maintained condition with all systems operational and their safety features operating to specification.
11. 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 Ros Roca S.A., Service Department or local agent for advice.
13. 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.

2.9 BEFORE LEAVING THE DEPOT

Before leaving the depot check and make sure 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).
3. 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' button must be off (white in colour) (see '4.2.1 Body main button' on page 4-5).
13. The chassis, cab, bodywork and ancillary units 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.
14. Make sure that all body and tailgate drains are closed and that their operating levers are not protruding from the side of the vehicle.

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.
3. The 'Body main' button must be off (white in colour) (see '4.2.1 Body main button' on page 4-5).
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. The waste container lifting device must be in the stowed or travel position before moving the vehicle.
    - 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.

2.11 COLLECTING REFUSE

While collecting refuse:

1. All personnel must be familiar with the position, use and function of the 'Emergency stop' push-buttons.
2. Always keep the cab floor, access ladder and soles of footwear clean and free from debris.
3. 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 pre-determined 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. Make sure 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.

2.12 USING A WASTE CONTAINER LIFTING DEVICE TO COLLECT REFUSE

1. If one or more footboards is fitted, lower footboard(s) before operating waste container lifting device.
2. Make sure that the waste container is undamaged and that the lid is closed.
3. Make sure that the waste container is not over-filled. The lid must be fully closed and contents must not protrude from the waste container.
4. Position the waste container correctly before operating the equipment.
5. Personnel must keep clear of the rear of the vehicle whilst the waste container lifting device is in operation.
6. The waste container may be stopped in any position by releasing the 'Waste container lifting device raise' button.
7. The waste container lifting device equipment must be in the stowed or travel position before moving the vehicle.
8. Do NOT attempt to empty waste containers or skips that are incompatible with the vehicles waste container lifting device.
9. Do NOT walk under or reach under raised waste containers.
10. 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.
11. 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.
12. Do NOT climb into waste containers or tailgate to re-arrange refuse.
13. Do NOT drive with waste containers suspended from the waste container lifting device.

2.13 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.
3. When operating ‘hold to run’ carriage plate down always watch the compaction mechanism danger zone - DO NOT RELY ON THE SAFETY LIGHT CURTAIN.

2.14 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’ button must be off (white in colour) (see ‘4.2.1 Body main button’ on page 4-5).
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. The waste container lifting device equipment must be in the stowed or travel position before moving the vehicle.
    - 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.

2.15 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. Make sure that you are familiar with the physical size of the vehicle, in particular the height with the tailgate and waste container lifting device raised.
5. Make sure that the ground/surface is level and firm before attempting to raise the tailgate - (see Tip Face Operational Guidelines).
6. Make sure tailgate area is clear before raising/lowering the tailgate.
7. Make sure 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.

2.16 BEFORE LEAVING DISCHARGE SITE

Before leaving the discharge site make sure 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' button must be off (white in colour) (see '4.2.1 Body main button' on page 4-5).
8. The vehicle is SAFE to continue.
9. The chassis, cab, bodywork and ancillary units 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.
10. All body and tailgate drains are closed and that their operating levers are not protruding from the side of the vehicle.

2.17 USING THE FOOTBOARD

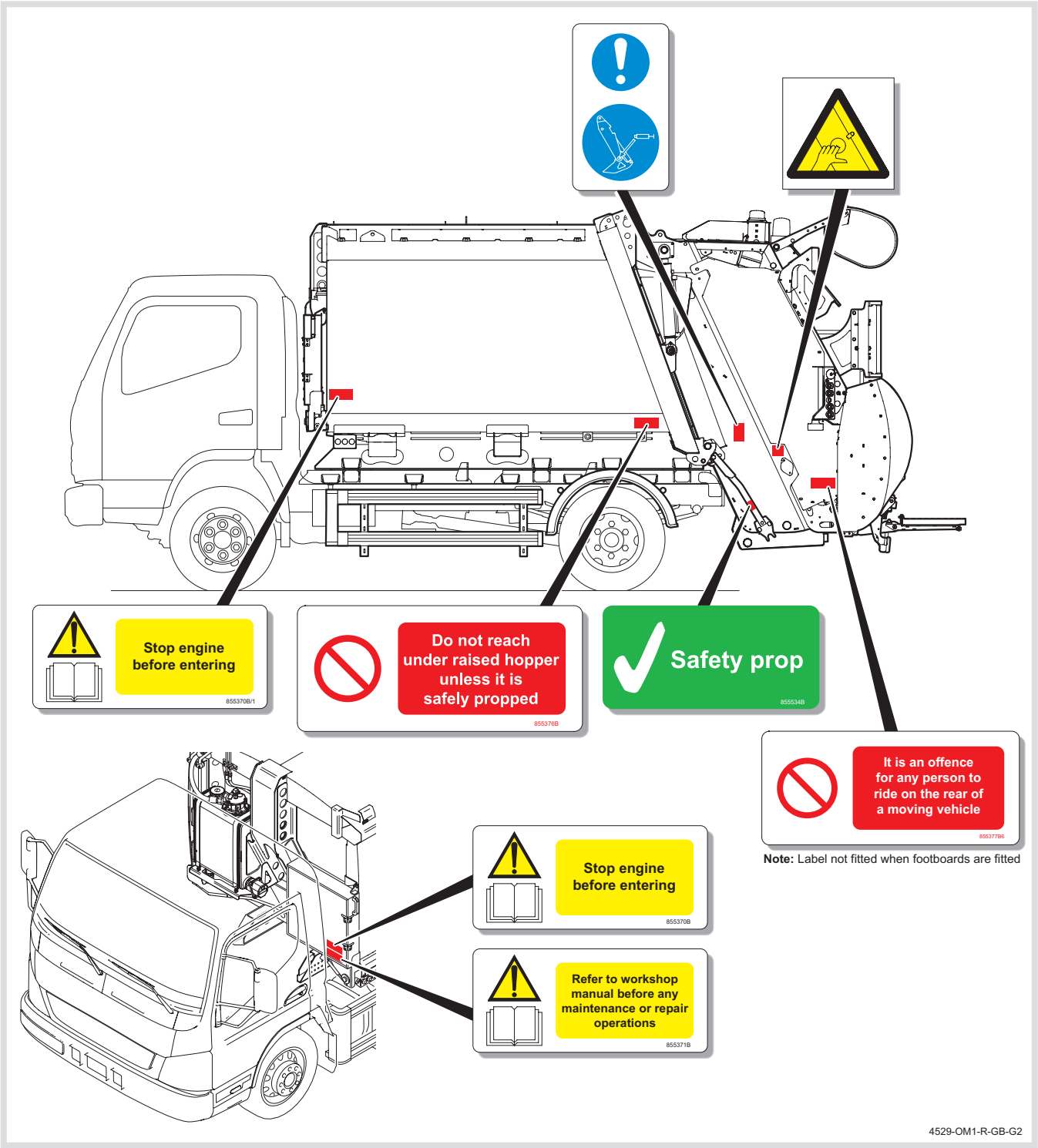
1. If the refuse collection body control system fails, return the vehicle to the depot and report the failure to supervision immediately.
2. Keep the footboard surface and sensor face clean and free from debris.
3. Only one operative should stand on each footboard.
4. The operative must wear suitable footwear.
5. The operative must stand in the centre of the footboard surface and hold onto the handrail with both hands.
6. Never use the footboards if the safety interlocks are not operational.
7. Operatives must never ride on the footboards when the interlock override switch has been pressed and the interlock override is active.
8. The operative must not jump onto or off the footboard while the vehicle is moving.
9. The operative must not distract the driver while riding on the footboard.
10. The operative must not operate any of the refuse collection body or waste container lifting device controls except the Emergency Stop buttons while riding on the footboard.
11. The operative must not reach, lean or allow any part of their body to protrude outside the vehicle width when standing on the footboard.
12. Operatives must never ride on any other part of the refuse collection body or waste container lifting device.
13. Never attempt to drive at speeds exceeding 30 km/h (25 km/h in France) with an operative riding on a footboard.
14. Do not drive the vehicle long distances with an operative riding on a footboard.
15. Do not drive the vehicle on high-speed roads (e.g. motorways) while the 30 km/h (25 km/h in France) interlock is operating, with an operative on a footboard.
16. Do not use the footboards to carry objects.
17. Do not use the footboards to load refuse into the hopper.
18. If the vehicle is supplied with a waste container lifting device, lower the footboard(s) before operating the waste container lifting device.

2.18 WARNING AND ADVISORY LABELS

Warning and advisory labels are fixed to the body to:

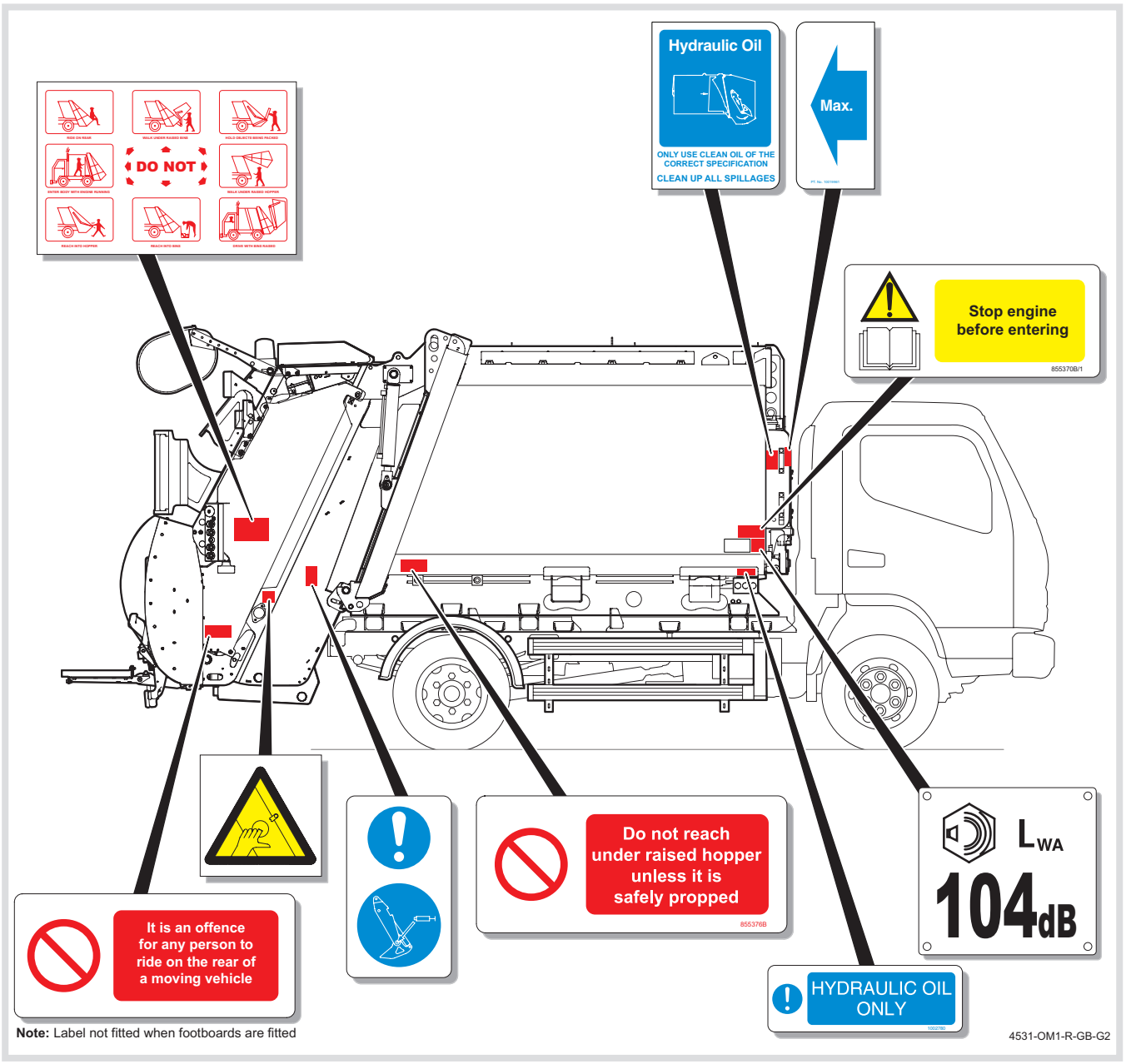
- Warn operatives or maintenance personnel not to carry out actions which may cause death (red labels).
- Warn operatives or maintenance personnel of actions which may cause injury or damage to the bodywork operation (yellow labels).
- Provide important safety information (blue labels).
- Identify safety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

Warning labels; left-hand side of refuse collection bodywork



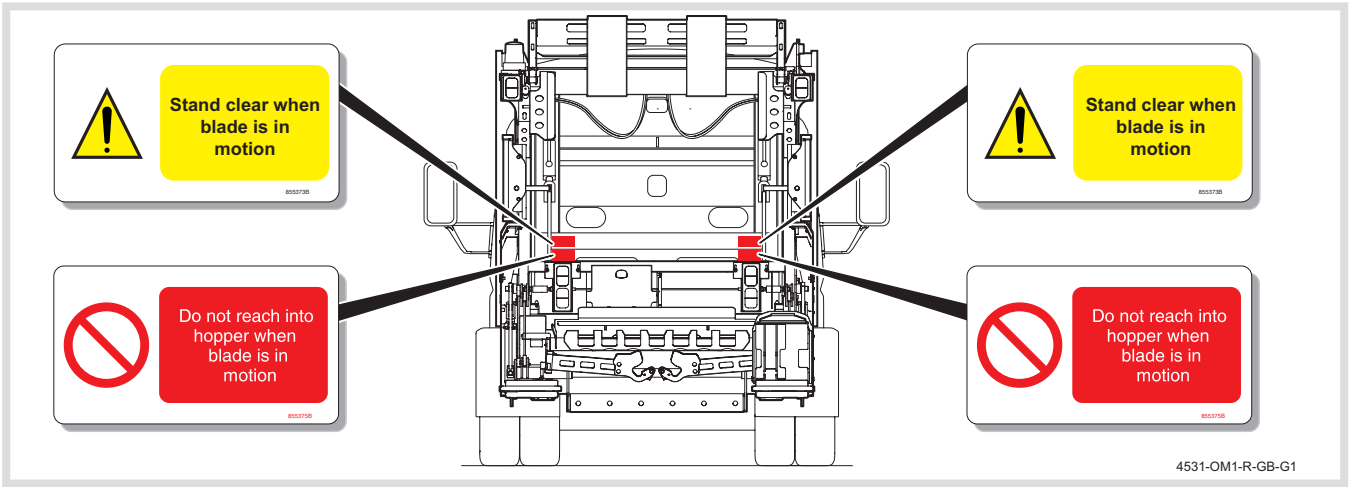
Note: Label not fitted when footboards are fitted

Warning labels; right-hand side of refuse collection bodywork

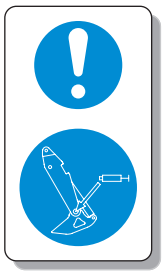


Note: Label not fitted when footboards are fitted

Warning labels; rear of refuse collection bodywork

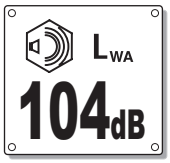


2.19 EXPLANATION OF PICTORIAL WARNING LABELS



Lubrication point.

Do not put fingers into hole.



Maximum A-weighted sound pressure level at operator's work-stations.

CONTENTS

3

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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:

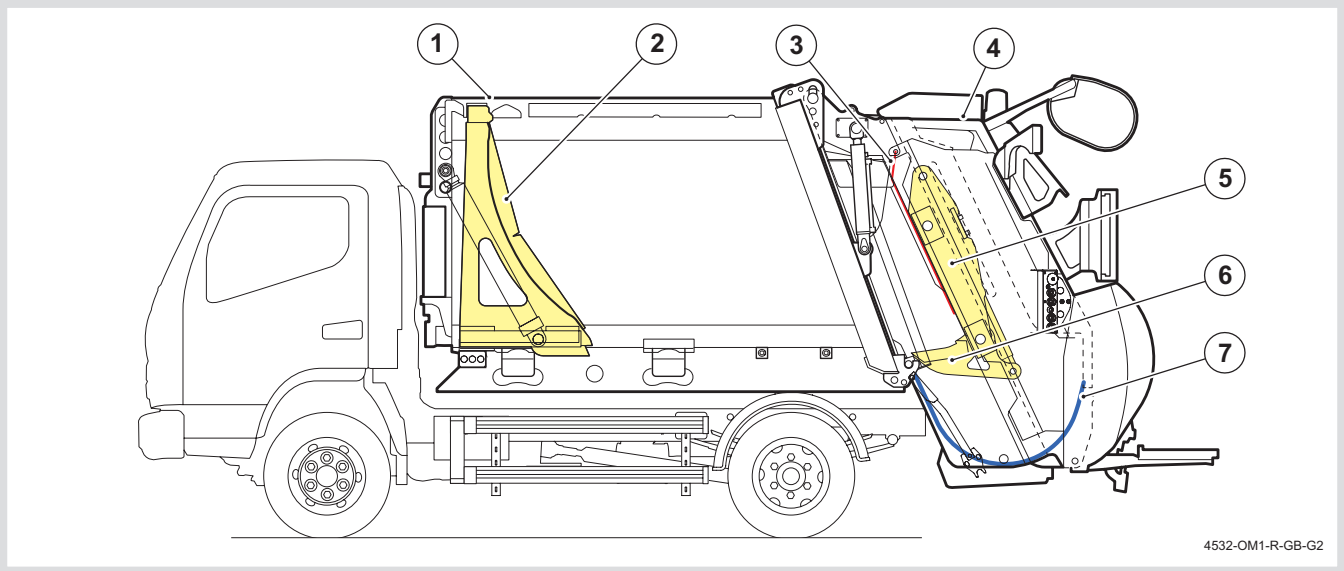
- The carriage plate (5)
  This travels in slideways and is operated by two hydraulic cylinders, the carriage plate cylinders.
- The packer plate (6)
  This is hinged on the carriage plate and is operated by two hydraulic cylinders, the packer plate cylinders.

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.

Major operating components

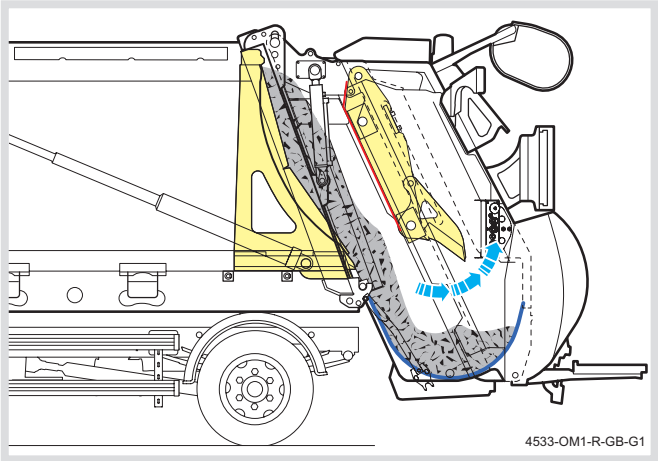


1. Body.
2. Ejection plate.
3. Refuse retaining plate.
4. Tailgate.
5. Carriage plate.
6. Packer plate.
7. Hopper.

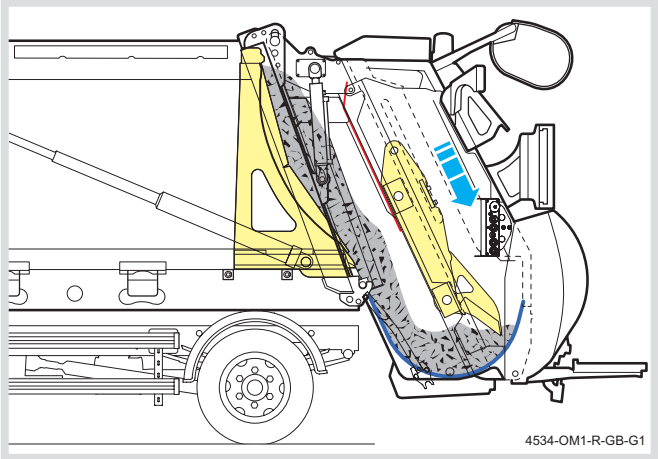
3.2.2 OPERATING CYCLE

The compaction mechanism operating cycle is divided into four events:

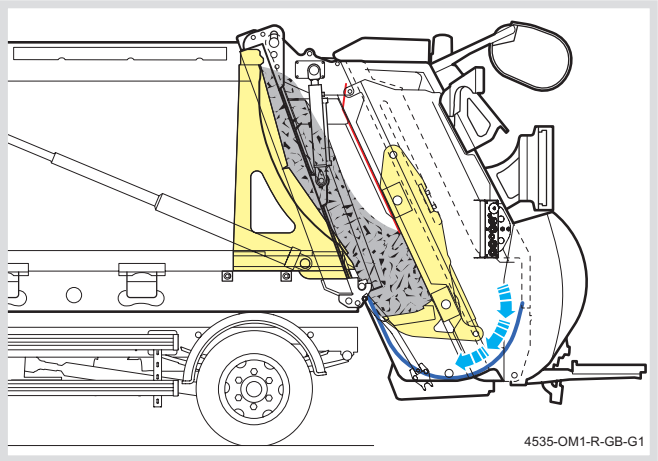
1. The packer plate opens.



2. The carriage plate moves down into the hopper.

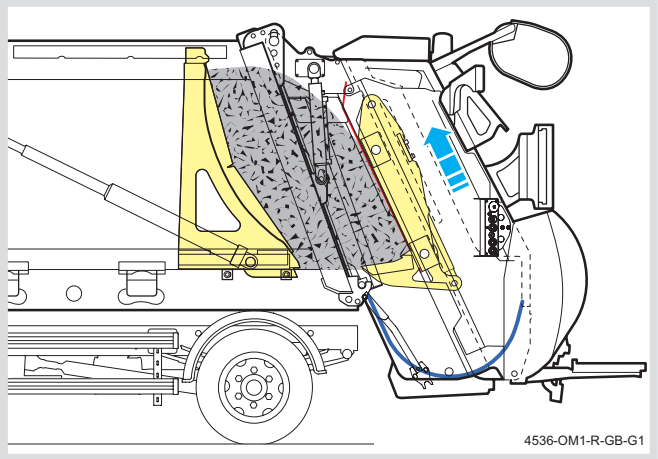


3. The packer plate closes.



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

4. The carriage plate moves up.



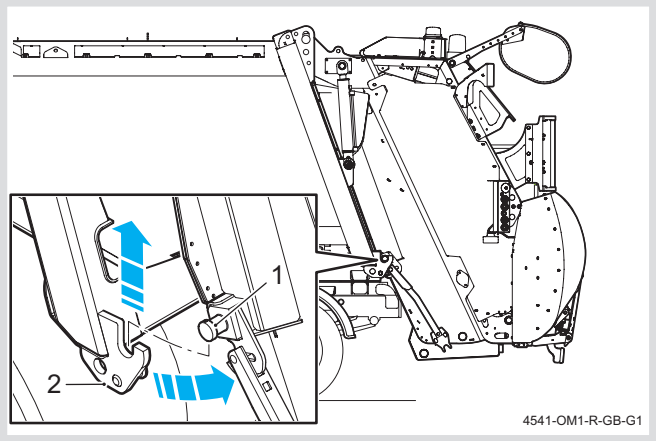
The packer plate and carriage plate compress the refuse in the body between the ejection plate in the body and the refuse retaining plate in the tailgate. As more refuse is packed into the body, the ejection plate moves towards the front of the body.

3.2.3 DISCHARGING OPERATION

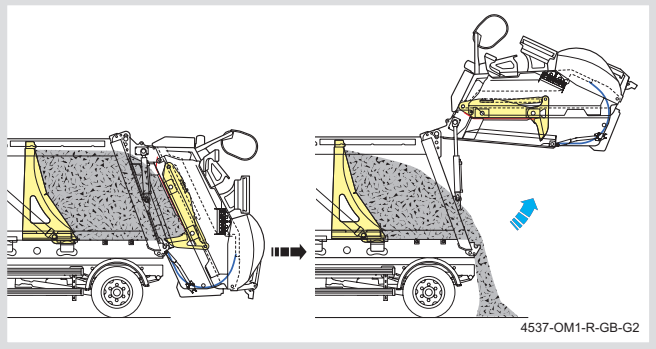
Discharging collected refuse from the body involves four operations:

1. Raising the tailgate.

The tailgate together with the waste container lifting device 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 pin (1) mounted on each side of the tailgate has disengaged from a hook (2) mounted on each side of the body. At this point the tailgate is 'Out-of-locks'.

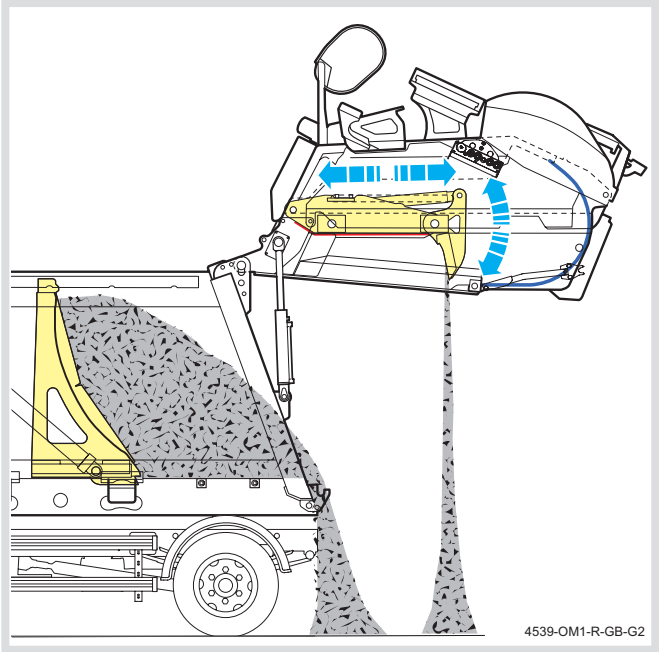


The tailgate then rotates about the tailgate pivots mounted in the roof of the body until it reaches its fully raised position.

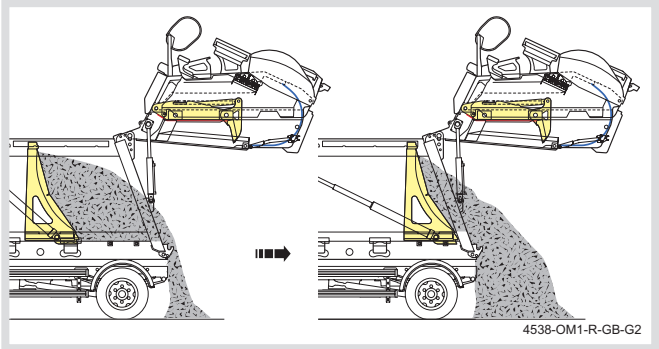


2. Tailgate clear cycle.

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.

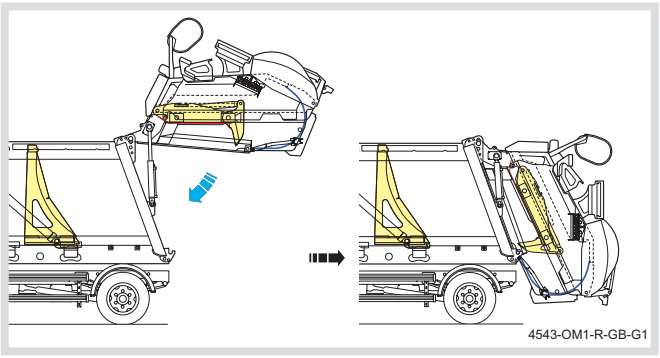


3. Discharging.



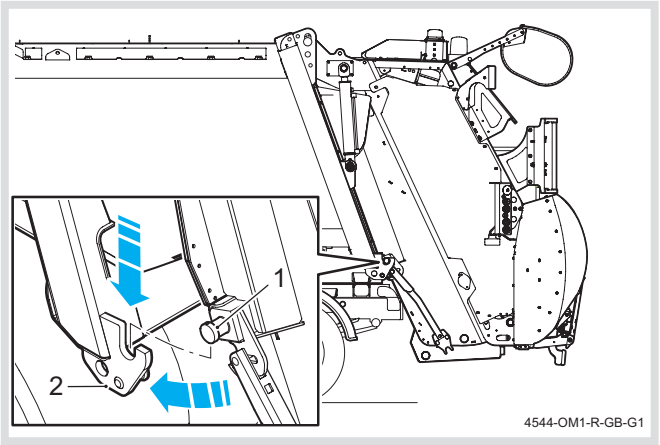
The ejection plate pushes the refuse out of the rear of the body.

4. Closing the tailgate.



The tailgate together with the waste container lifting device 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 pin (1) mounted on each side of the tailgate engages a hook (2) mounted on each side of the body, locking the tailgate to the body.



3.3 WASTE CONTAINER LIFTING DEVICE

The liplift type lifting device comprises a frame mounted on the tailgate of the refuse collection vehicle, a carriage (5) and a mechanically operated lip clamp (3).

The carriage is attached to the frame by movable links and is raised and lowered by hydraulic cylinders.

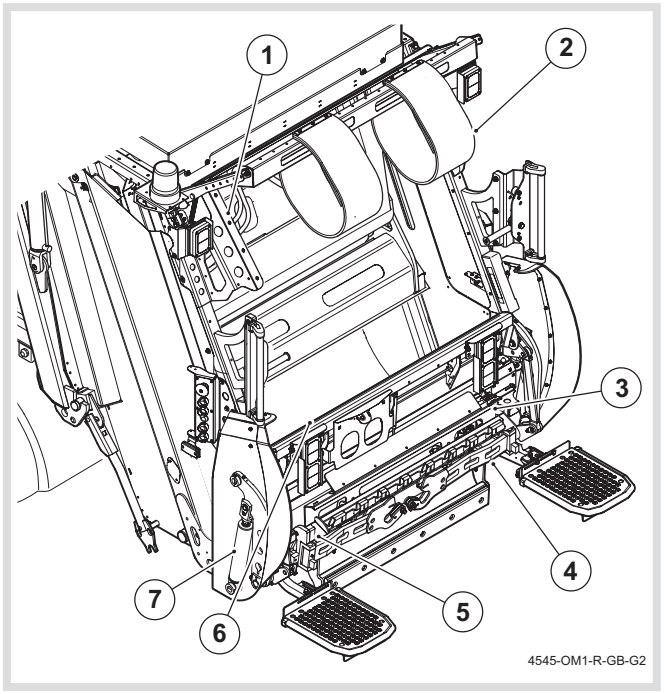
The mechanically operated lip clamp is mounted on the carriage and automatically clamps the lip of the waste containers to the carriage to secure them to the carriage as the lifting device is raised and lowered.

As the waste container reaches the top of its lifting cycle, the side of the waste container impacts on a bump bar (2), ensuring all the waste container's contents are emptied into the hopper.

When large waste containers with roll-top lids are being emptied, spigots on the lid engage the lid openers (1) and open the lid as the waste container is raised.

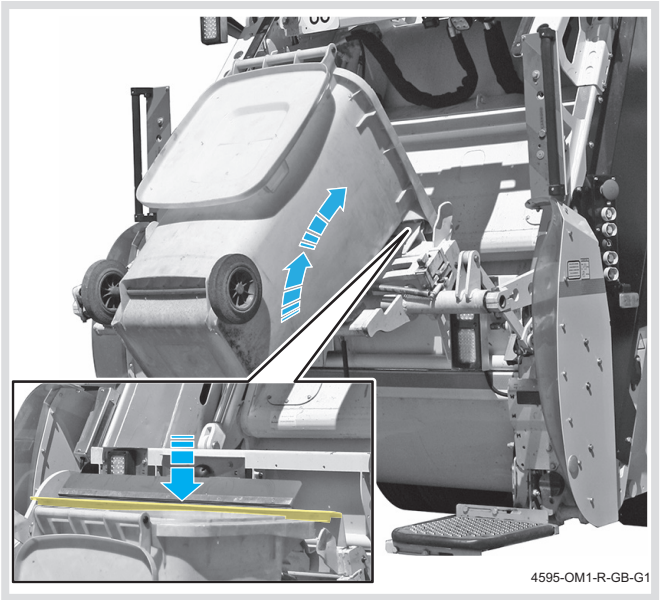
Optional DIN arms (4) attached to the carriage can be opened outwards and used to lift large waste containers with DIN trunnions.

Lifting device components

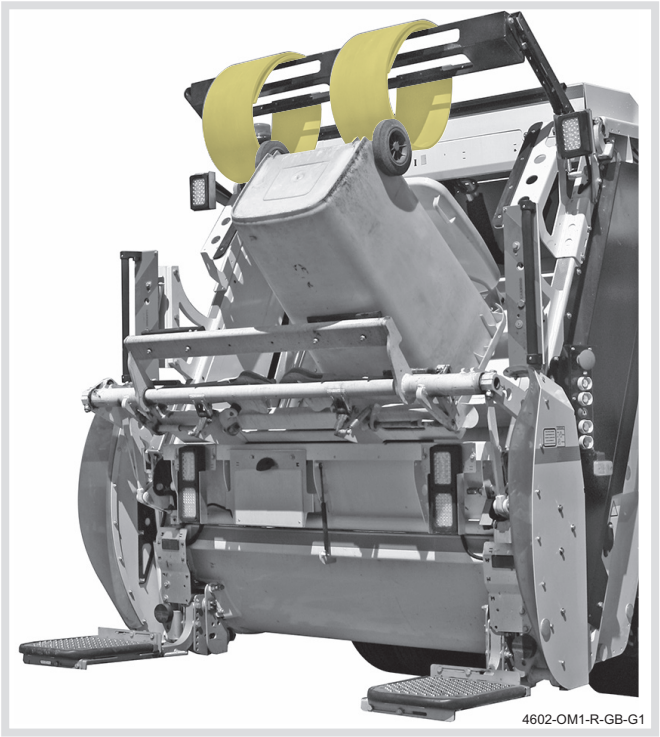


1. Lid opener.
2. Bump bar.
3. Lip clamp.
4. DIN arm (option).
5. Lifting device carriage.
6. Fixed rave rail (optional hinged rave rail).
7. Hydraulic cylinder (behind guard).

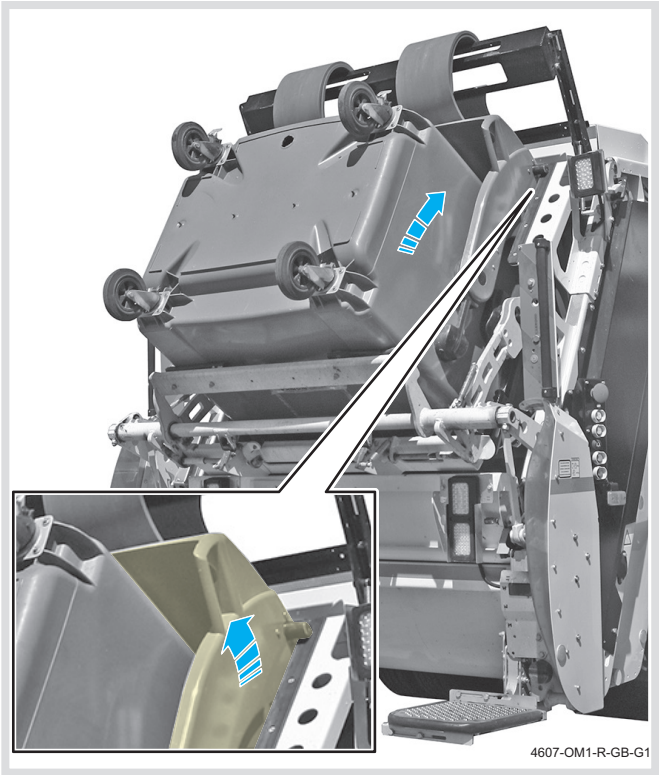
Lip clamp operation



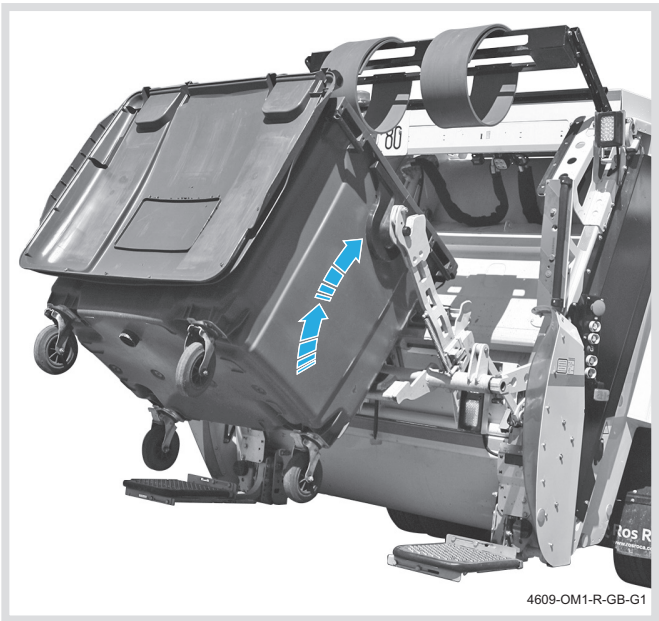
Bump bar operation



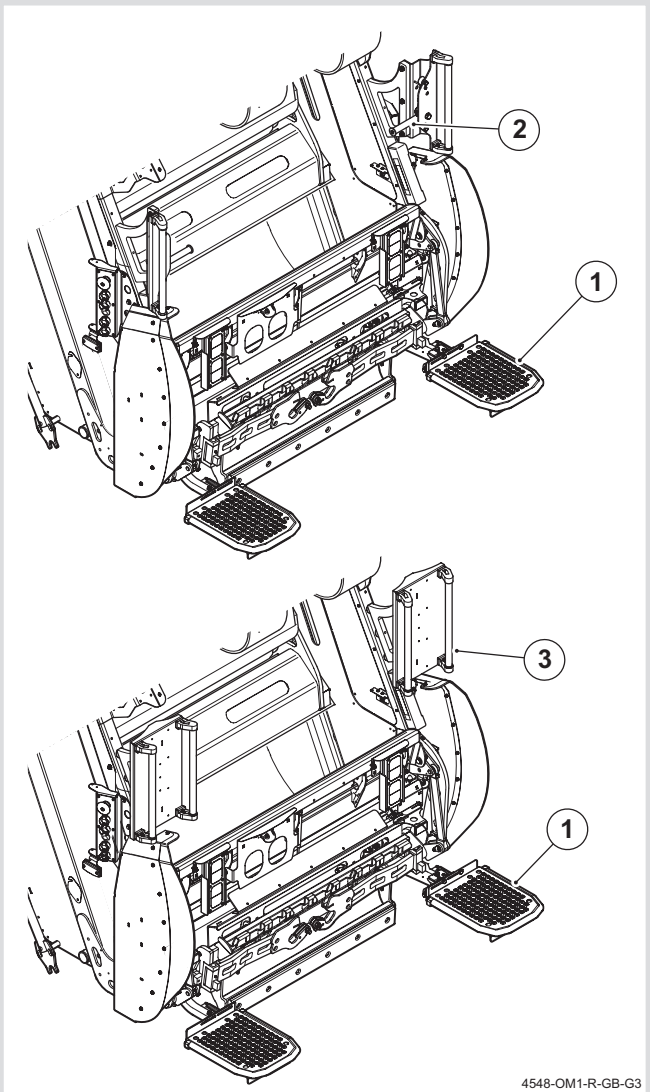
Lid opener operation



DIN arm operation



3.4 FOOTBOARDS



Retractable footboards (1) and either folding hand rails (2) or fixed hand rails (3) provide the facility for operatives to ride on the rear of the vehicle when collecting refuse, where legislation permits the use of footboards.

Each footboard is hinged to a frame attached to the tailgate and is held in either its open or stowed position by a spring.

The presence of an operative on the footboard is detected by a weight activated switch incorporated in the footboard mounting structure.

When a sensor detects the presence of an operative on the footboard, the refuse collection body control system operates driver warnings and vehicle interlocks to restrict the vehicle speed and prevent the selection of reverse gear.

Operation of the interlocks is described in Chapter 4 of this Operator's Handbook.

3.5 HYDRAULIC SYSTEM

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

3.5.1 HYDRAULIC PUMP

Hydraulic power is supplied to the system by one or more pumps driven by a Power Take-Off (PTO), which may be gearbox mounted or engine driven via timing cover gears, dependent on chassis-cab manufacturer.

3.5.2 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.

3.5.3 HYDRAULIC CYLINDERS

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

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4

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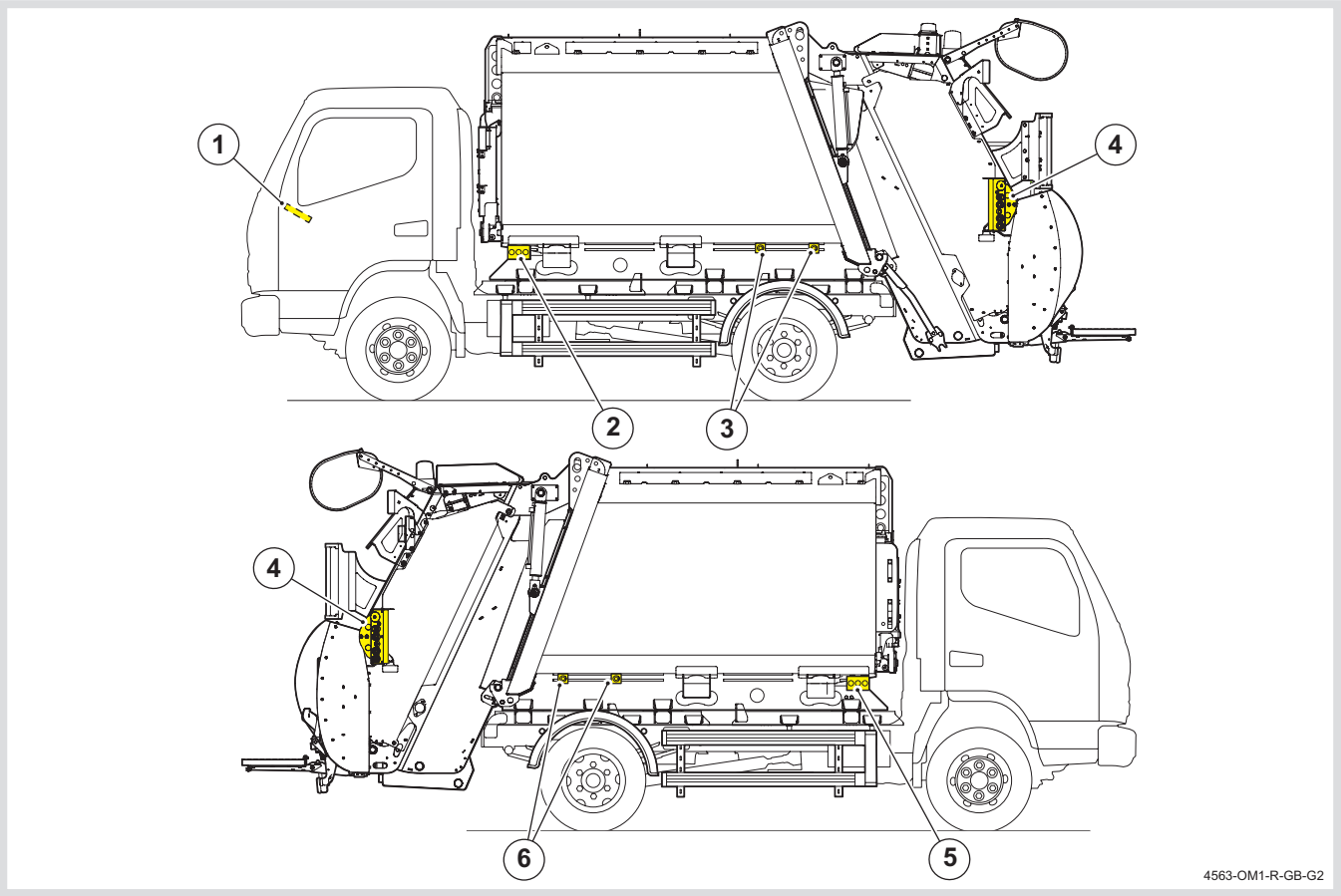
4 OPERATOR'S CONTROLS

4.1 CONTROL PANEL LOCATION



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

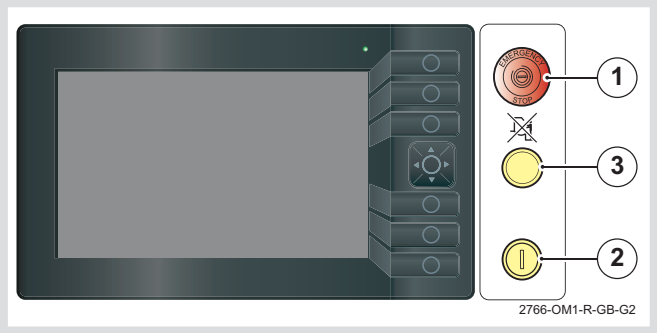
1. Cab control station (see '4.2 Cab control station' on page 4-4).
2. External discharge control panel* (see '4.4.11 External discharge control panel (option)' on page 4-27).
   - Left-hand drive vehicles.
3. Tailgate lowering control panel (see '4.4.18 Tailgate lowering control panel' on page 4-33).
   - Left-hand drive vehicles.
4. Compaction mechanism control panel (see '4.5 Compaction mechanism control panel' on page 4-34).
5. External discharge control panel*, (see '4.4.11 External discharge control panel (option)' on page 4-27).
   - Right-hand drive vehicles.
6. Tailgate lowering control panel (see '4.4.18 Tailgate lowering control panel' on page 4-33).
   - Right-hand drive vehicles.

* = Optional features.

4.2 CAB CONTROL STATION

The cab control station comprises the following controls mounted on the fascia.

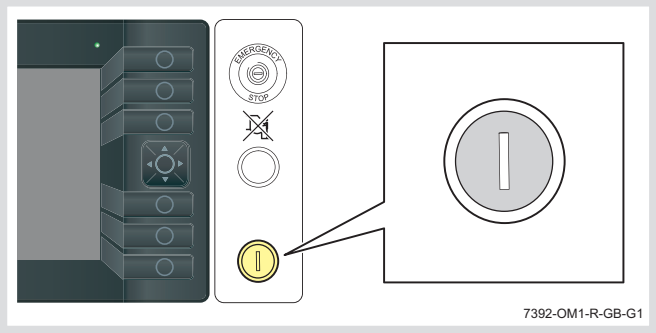
1. Emergency stop push-button (see '4.6 Emergency stop push-buttons' on page 4-40).
2. Body main button (see '4.2.1 Body main button' on page 4-5).
3. Footboard interlock override switch (see '4.2.4 Footboard interlock override switch' on page 4-6)
4. Audible warning buzzer (not shown).



4.2.1 BODY MAIN BUTTON

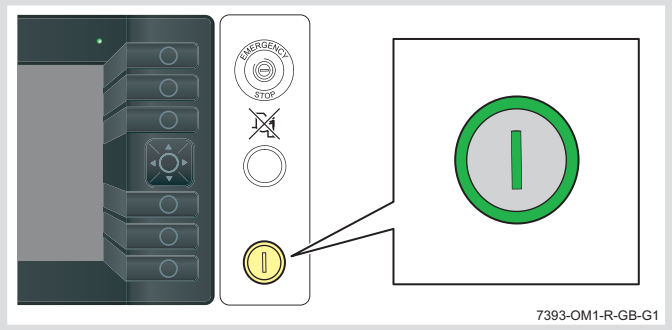
Controls the operation of the body control electrical system.

OFF:



Enables or disables the 'Body main' electrical system.

RUN:



to enable the body press the 'Main body' button. The button will illuminate green when enabled (see '4.3.1 Switching cab control panel on' on page 4-8).

The 'Body main' button must be turned off and then on again to enable 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.

4.2.2 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 a signal switch on a compaction mechanism control panels is 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.

Footboard warning buzzer

A high pitched continuous buzzer will be heard in the cab when:

- An operative is detected on the footboard and the vehicle speed exceeds 30 km/h (25 km/h in France).
- The Footboard interlock override switch is 'on'.

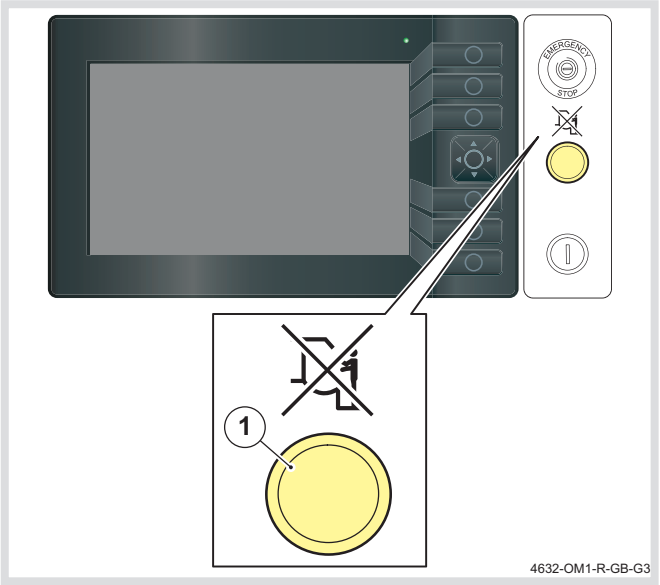
4.2.3 NEUTRAL INTERLOCK

On chassis-cabs supplied 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 (Vehicles supplied with 'Pack on the move option' only).

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

4.2.4 FOOTBOARD INTERLOCK OVERRIDE SWITCH

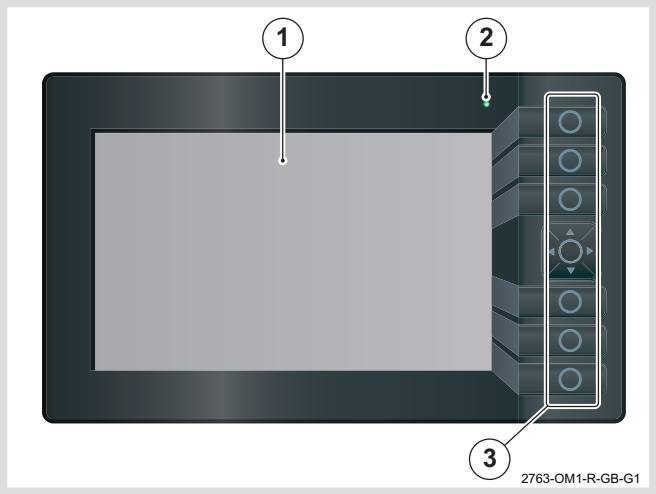


Operating the 'Footboard interlock override switch' enables the driver to override the reverse inhibit and speed limit interlock in the event of an emergency (see page 5-8).

The switch has a safety lock to prevent it being operated accidentally.

To operate the switch, press the footboard interlock override switch button (1).

4.3 CAB CONTROL PANEL

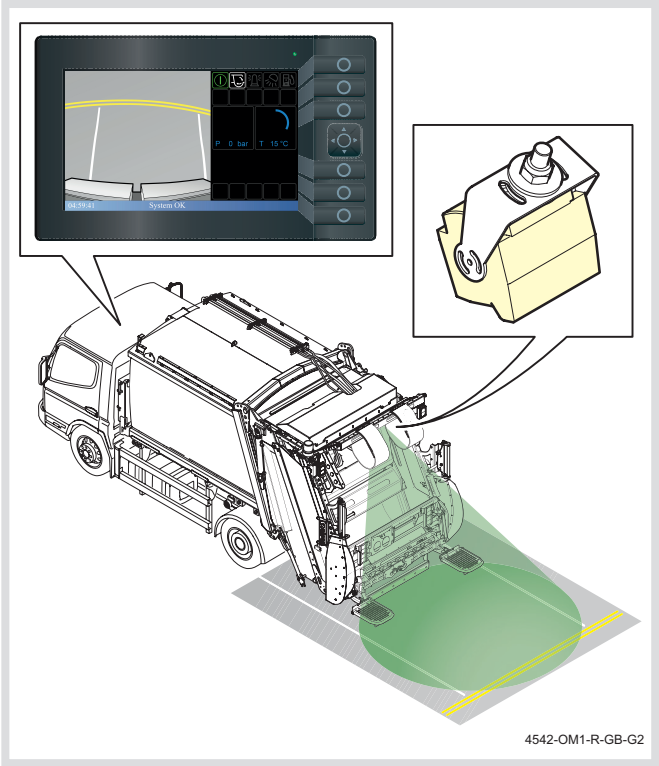


The cab control panel is mounted in the fascia. It comprises the following components:

1. Screen.
2. Status lamp.
3. Operating buttons.

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.

An optional monitor can be installed for dedicated cameras.



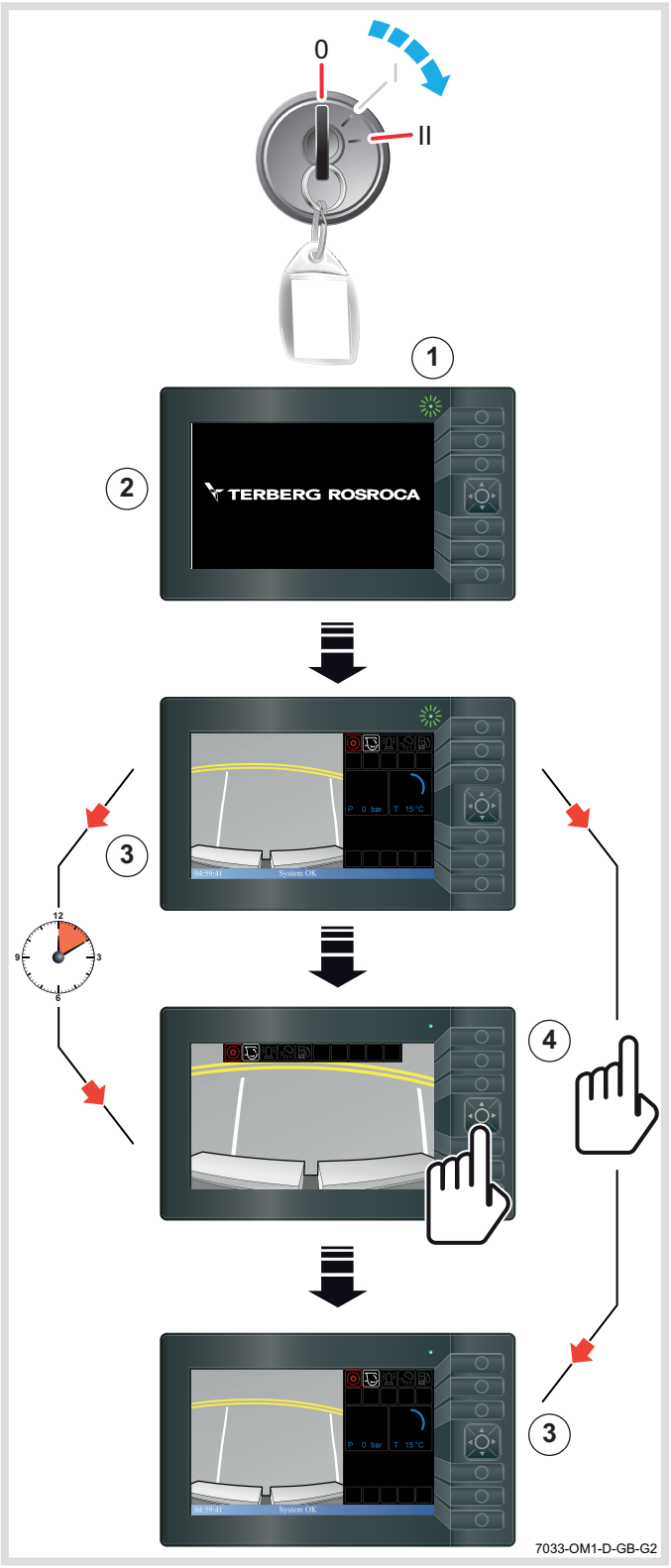
4.3.1 SWITCHING CAB CONTROL PANEL ON

When the ignition is switched on, the cab control panel will first carry out a self test sequence during which time the status lamp flashes green (1).

As soon as it has completed this, the screen will breifly show the manufacturing company logo (2) and then the 'Body system off' control screen (3).

If no activity, i.e. none of the cab control panel buttons are pressed for 10 seconds after the ignition is switched on , the whole of the screen will show the view from the rear view camera (4).

If any of the cab control buttons are pressed while the whole screen is showing the view from the rear view camera, the screen will display the 'Body system off' control screen (3).

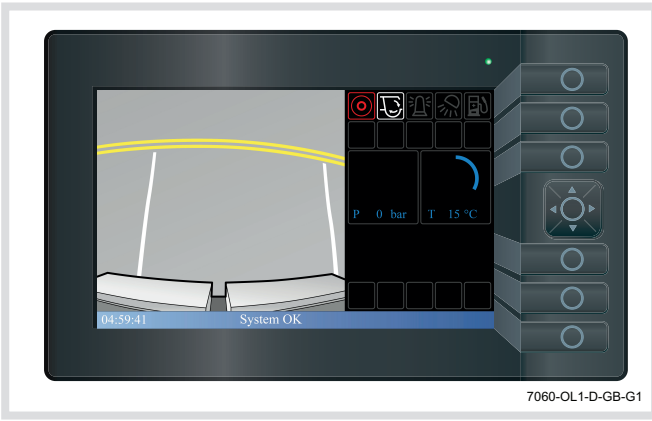


4.3.2 BODY SYSTEM CONTROLS

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

Body system off

Disables the compaction mechanism controls (see '4.4.8 System off' on page 4-25).



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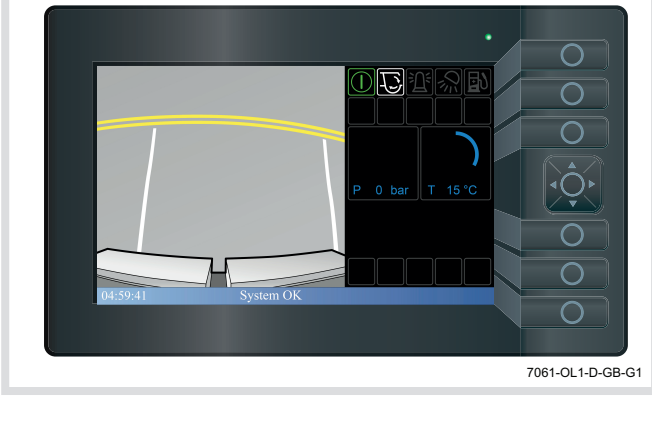
Body system run

Energises the compaction mechanism controls (see '4.3.2 Body system controls' on page 4-9).



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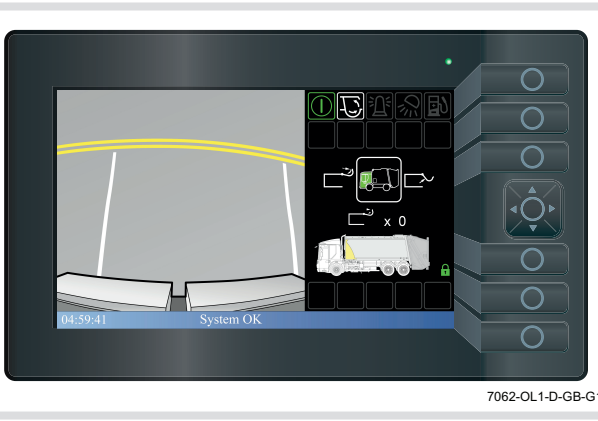
Body discharge - Cab control panel

Energises the body discharge controls on the cab control panel, (see:
'4.4.9 External body controls' on page 4-25 and,
'4.4.10 In-Cab discharge controls' on page 4-26).



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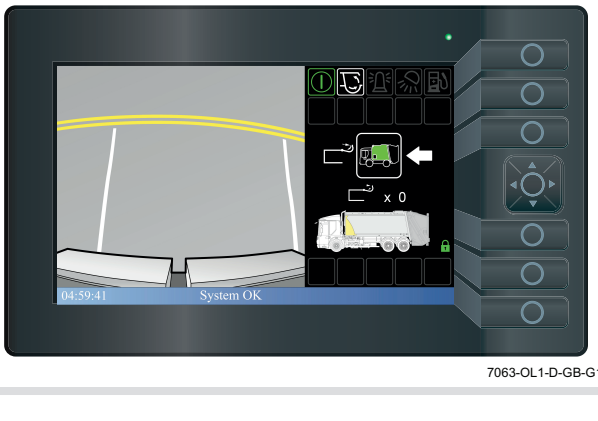
Body discharge, - External discharge control panel (option)

Energises the body discharge controls on the external discharge panel (see '4.4.9 External body controls' on page 4-25).



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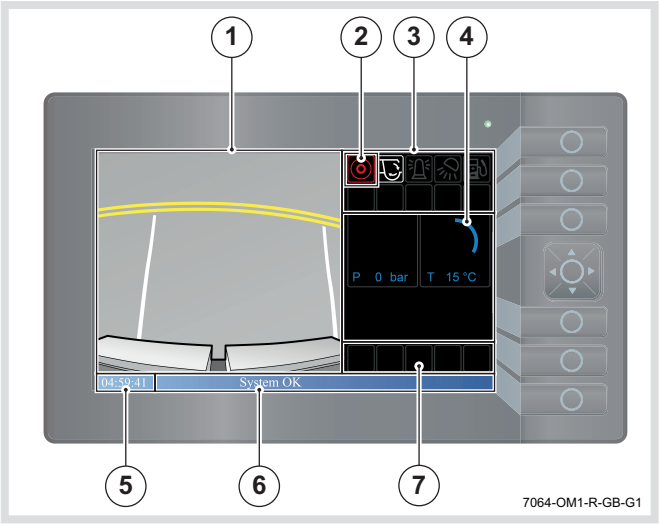
4.3.3 SCREEN DISPLAY

The screen layout displayed below is for the UK version. This layout can change depending on world wide customer requirements.



When showing a control function, the screen display is divided into 7 areas of information:

1. View from rear view camera.
2. Body status ON/OFF.
3. Icon functions.
4. Hydraulic oil temperature and hydraulic oil pressure.
5. Time.
6. System status and error messages.
7. Warning pictograms.

Date and time

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

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 Mini Service Manual).

Hydraulic oil temperature and hydraulic oil pressure

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 4-11) and 'Error messages' (see '4.4.1 Error messages' on page 4-15) areas of the screen display.

System status and warning pictograms
(see '4.4 Warning pictograms' on page 4-11).

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 4-11).
- Alert the driver to malfunctions occurring in the system (see '4.4.1 Error messages' on page 4-15).

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

4.4 WARNING PICTOGRAMS

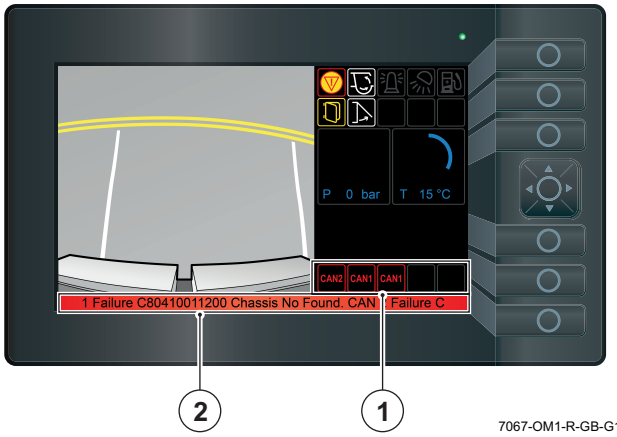
PICTOGRAM	FUNCTION	OPERATION	CAUSE	ACTION TO BE TAKEN IF PICTOGRAM IS DISPLAYED ON THE CAB CONTROL PANEL SCREEN
	The refuse collection body control system is switched off.	The ignition switch is on. The body master switch is off.	Not applicable.	None, Advisory only.
	The refuse collection body control 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.
	Carriage plate moving down.	The compaction mechanism is operating. The carriage plate is moving down.	Not applicable.	None, Advisory only.
	Carriage plate moving up.	The compaction mechanism is operating. The carriage plate is moving up.	Not applicable.	None, Advisory only.
	Tailgate raise.	The tailgate will start to raise. The warning buzzer will sound whilst the tailgate is raising.	The tailgate will raise until the button is released or the tailgate reaches maximum height.	Be aware of the height of the raised tailgate. Make sure the raised tailgate will not impact on surrounding structures, overhanging cables, etc.
	Tailgate lowering.	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.
	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.

PICTOGRAM	FUNCTION	OPERATION	CAUSE	ACTION TO BE TAKEN IF PICTOGRAM IS DISPLAYED ON THE CAB CONTROL PANEL SCREEN
	Rescue function.	None.	The rescue function is being operated.	Do not attempt to drive vehicle.
	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.
	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.
	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.
	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.
	Engine temperature warning.	The refuse collection mechanism may not operate to specification.	The engine oil temperature is approaching maximum.	See 'System warnings', (see '5.8 System warnings' on page 5-38).
	Engine temperature is too high.	The refuse collection mechanism may not operate to specification.	The engine temperature is too hot for normal operation of the refuse collection mechanism.	See 'System warnings', (see '5.8 System warnings' on page 5-38).
	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 warning.	All refuse collection may not operate to specification.	The hydraulic pressure is close to the maximum limit.	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 the maximum limit.	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.

PICTOGRAM	FUNCTION	OPERATION	CAUSE	ACTION TO BE TAKEN IF PICTOGRAM IS DISPLAYED ON THE CAB CONTROL PANEL SCREEN
	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.
	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.
	Waste container lifting device high.	Waste container lifting device up buzzer will sound.	The waste container lifting device has not been lowered.	Lower waste container lifting device until warning is cleared.
	Footboard occupied left.	Refer to Footboard Operator's Handbook.		-
	Footboard occupied right.	Refer to Footboard Operator's Handbook.		-
	Footboard test switch operated.	Refer to Footboard Operator's Handbook.		-
	Footboard interlock override switch delay timer.	Refer to Footboard Operator's Handbook.		-
	Waste container overweight for weighing system.	Over maximum body weight.	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.
	Waste container close to maximum body weight (below 500 kg).	None.	The weight of a waste container being lifted by a waste container lifting device system incorporating a load weighing device is close to the maximum weight (below 500 kg).	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').

PICTOGRAM	FUNCTION	OPERATION	CAUSE	ACTION TO BE TAKEN IF PICTOGRAM IS DISPLAYED ON THE CAB CONTROL PANEL SCREEN
	Hydraulic oil over temperature cut out (Temperature > 85°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 5-38. Refer the incident/machine to supervision for attention.
	Hydraulic oil over temperature is below 75°C.	All refuse collection operations are inhibited.	The hydraulic oil temperature is below 75°C.	None, advisory only.
	Hydraulic oil over temperature is above 75°C.	None.	The hydraulic oil temperature is above 75°C.	None, advisory only.
	Body full.	None.	Body full of refuse.	The vehicle will need to be emptied of refuse.

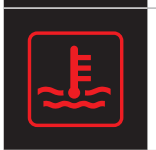
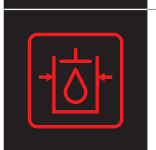
4.4.1 ERROR MESSAGES



If a fault occurs in the control system operation, one or more error messages will be displayed in this area of the screen.
Each 'Error message' line comprises two parts:
An icon in red or yellow (1) which will identify the fault.
A message in red or yellow (2) will scroll across the bottom of the screen which provides a brief description of the fault.
When the system is operating correct 'System Ok' will display at the bottom of the screen.

For full error code information contact Dennis Eagle.

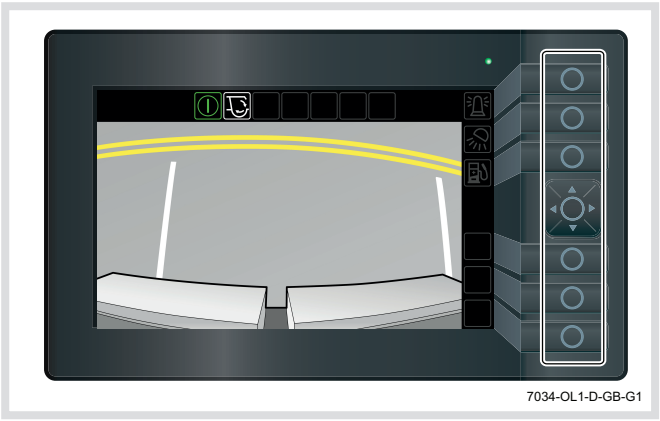
PICTOGRAM DISPLAYED	EXPLANATION
	One or more 'Emergency stop' push–buttons have been operated.
	The level of hydraulic oil in the refuse collection mechanism oil tank is low.
	The hydraulic oil filter is blocked.
	The hydraulic oil over temperature cut out has operated (Temperature over 85°C).
	The hydraulic oil temperature is below 75°C.
	The hydraulic oil temperature is over 75°C.

PICTOGRAM DISPLAYED	EXPLANATION
	Engine temperature warning.
	Engine temperature too hot for normal operation. Stop engine.
	An hydraulic stall out has caused the oil pressure to exceed a preset pressure.
	High hydraulic pressure has been detected and is approaching the maximum limit.
	A fault has occurred in the electrical circuit to the access door and/or adaption frame sensor.
	One or more reverse rescue push–buttons have been operated.
	Waste container overweight for weighing system.
	Waste container close to maximum weight (below 500 kg).
	The footboard override switch has been operated.
	The footboard test switch has been operated.
	The body is full of refuse.

PICTOGRAM DISPLAYED	EXPLANATION
	A fault has occurred in the electrical circuit to the lower carriage plate push-button.
	A fault has occurred in the electrical circuit to the raise carriage plate push-button.
	A fault has occurred in the electrical circuit to the close packer plate push-button.
	A fault has occurred in the electrical circuit to the start pack cycle push-button.
	A fault has occurred in the electrical circuit to the ejection plate eject push-button.
	A fault has occurred in the electrical circuit to the emergency stop push-buttons.
	A fault has occurred in the electrical circuit to the left-hand footboard switch.
	A fault has occurred in the electrical circuit to the open packer plate push-button.
	A fault has occurred in the electrical circuit to the ejection plate retract push-button.
	A fault has occurred in the electrical circuit to the reverse rescue push-button.
	A fault has occurred in the electrical circuit to the right-hand footboard switch.
	A fault has occurred in the electrical circuit to the tailgate lower push-button.
	A fault has occurred in the electrical circuit to the tailgate raise push-button.
	A fault has occurred in the electrical circuit to the tailgate position sensor.
	A fault has occurred in the electrical circuit to the rave rail switch.
	A fault has occurred in the electrical circuit to the body master switch in the cab.
	A fault has occurred in the electrical circuit to the carriage plate sensor.
	A fault has occurred in the Zone safe electrical circuit.
	An open circuit has occurred in the electrical circuit to the packer plate open solenoid valve.
	A short circuit has occurred in the electrical circuit to the packer plate open solenoid valve.
	An open circuit has occurred in the electrical circuit to the carriage plate down solenoid valve.
	A short circuit has occurred in the electrical circuit to the carriage plate down solenoid valve.
	An open circuit has occurred in the electrical circuit to the carriage plate up solenoid valve.
	A short circuit has occurred in the electrical circuit to the carriage plate up solenoid valve.
	An open circuit has occurred in the electrical circuit to the packer plate close solenoid valve.
	A short circuit has occurred in the electrical circuit to the packer plate close solenoid valve.

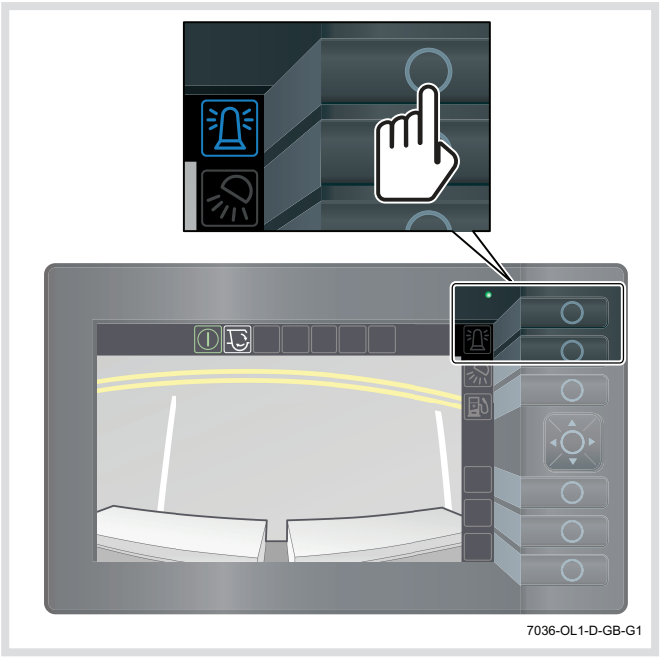
PICTOGRAM DISPLAYED	EXPLANATION
	An open circuit has occurred in the electrical circuit to the ejection plate eject solenoid valve.
	A short circuit has occurred in the electrical circuit to the ejection plate eject solenoid valve.
	An open circuit has occurred in the electrical circuit to the unloader solenoid valve.
	A short circuit has occurred in the electrical circuit to the unloader solenoid valve.
	An open circuit has occurred in the electrical circuit to the waste container lifting device solenoid valve.
	A short circuit has occurred in the electrical circuit to the waste container lifting device solenoid valve.
	An open circuit has occurred in the electrical circuit to the ejection plate retract solenoid valve.
	A short circuit has occurred in the electrical circuit to the ejection plate retract solenoid valve.
	An open circuit has occurred in the electrical circuit to the tailgate raise solenoid valve.
	A short circuit has occurred in the electrical circuit to the tailgate raise solenoid valve.
	An open circuit has occurred in the electrical circuit to the tailgate lower solenoid valve.
	A short circuit has occurred in the electrical circuit to the tailgate lower solenoid valve.
	An internal error has occurred on CAN bus 1.
	An internal error has occurred on CAN bus 2.
	An internal error has occurred on CAN bus 3.
	An internal error has occurred on CAN bus 4.

4.4.2 SYSTEM SWITCHES



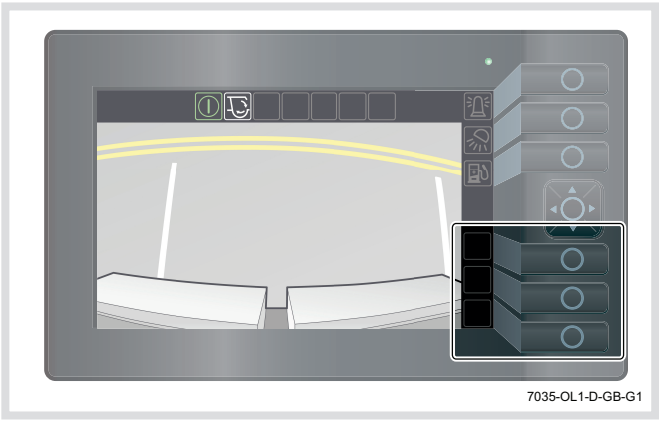
The six buttons mounted on the right hand side of the screen provide the buttons for the body system functions according to the adjoining icons in the screen display.

Pressing the button to the right of the icon activates the function depicted by the icon (see 'Button functions' on page 4-20).



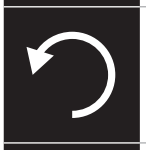
The icon to the left of the button will change colour immediately the button has been pressed to indicate that the function has been switched on.

Inactive buttons



The absence of an icon next to a button indicates that the button does not control any function in the operating mode selected.

Button functions

BUTTON	FUNCTION
	Switch rotary beacons on/off (see '4.4.3 Warning beacon button (option)' on page 4-21).
	Switch work lamps on/off (see '4.4.4 Work lamp button' on page 4-21).
	Brighten and darken the screen display (see '4.4.5 Screen brightness adjustment' on page 4-22).
	Engineering menu.
	Refuse selection.
	Single compaction mechanism cycle selected. Select/adjust compaction mechanism multi-cycle function.
	Adjust compaction mechanism multi-cycle function.
	Return to previous page.
	Go to the in-cab control panel body discharge controls (see '4.4.10 In-Cab discharge controls' on page 4-26).
	Go to external body discharge controls (see '4.4.9 External body controls' on page 4-25).
	Eject (see '4.4.14 Eject' on page 4-29).
	Retract (see '4.4.15 Retract' on page 4-30).
	Raise tailgate (see '4.4.12 Tailgate raise' on page 4-27).

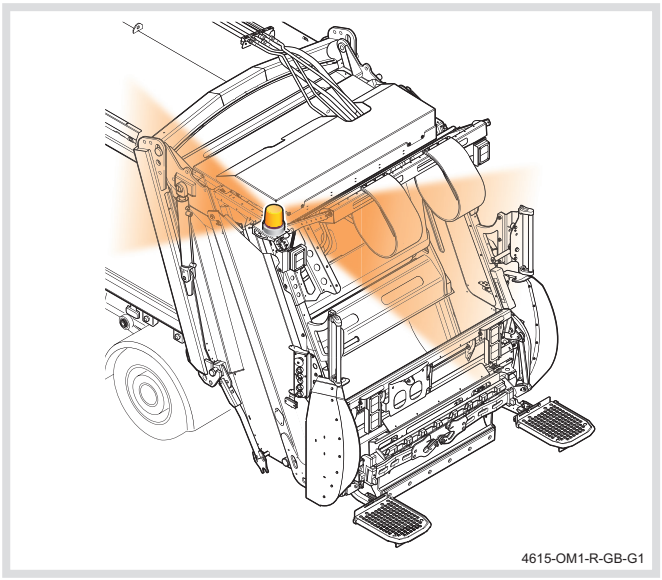
BUTTON	FUNCTION
	Lower tailgate to 1 metre (see '4.4.16 Lower tailgate to 1 metre' on page 4-31).
	Select/adjust tailgate clear operation (see '4.4.17 Tailgate clear selection' on page 4-32).
	Move upwards through selection in pop-up menu.
	Move downwards through selection in pop-up menu.
	Move left through selection in pop-up menu.
	Move right through selection in pop-up menu.
	Option select button.
	Unload menu.

4.4.3 WARNING BEACON BUTTON (OPTION)

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

The icon will illuminate blue when the warning beacons are switched on.

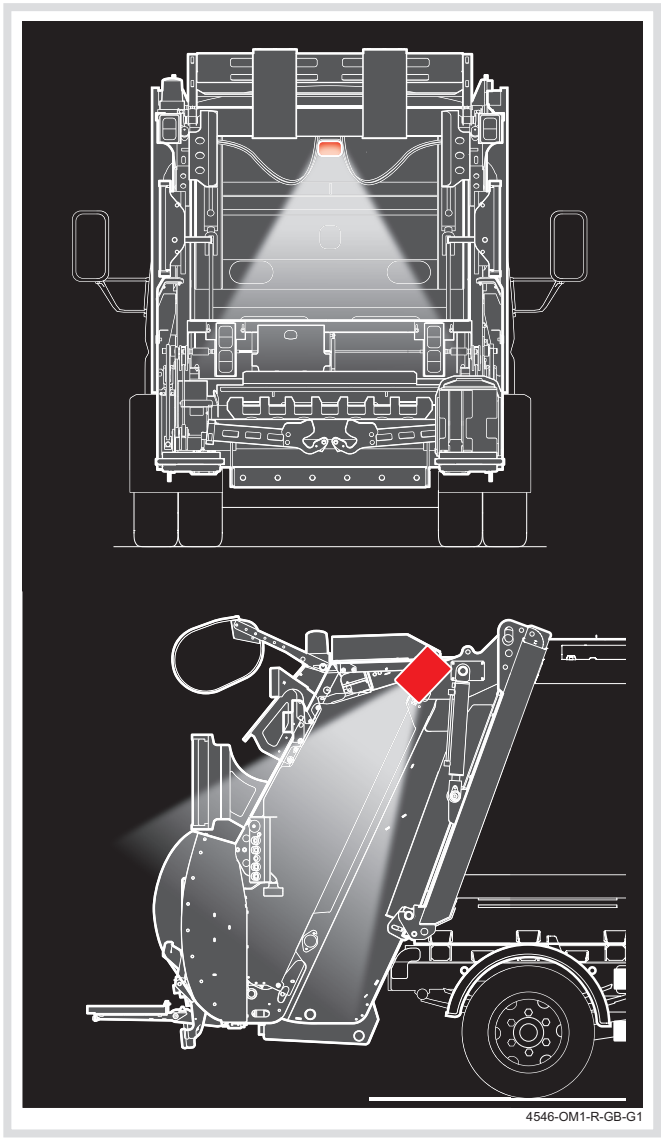
The warning beacons will automatically switch off if the vehicle speed exceeds 25 km/h.



4.4.4 WORK LAMP BUTTON

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

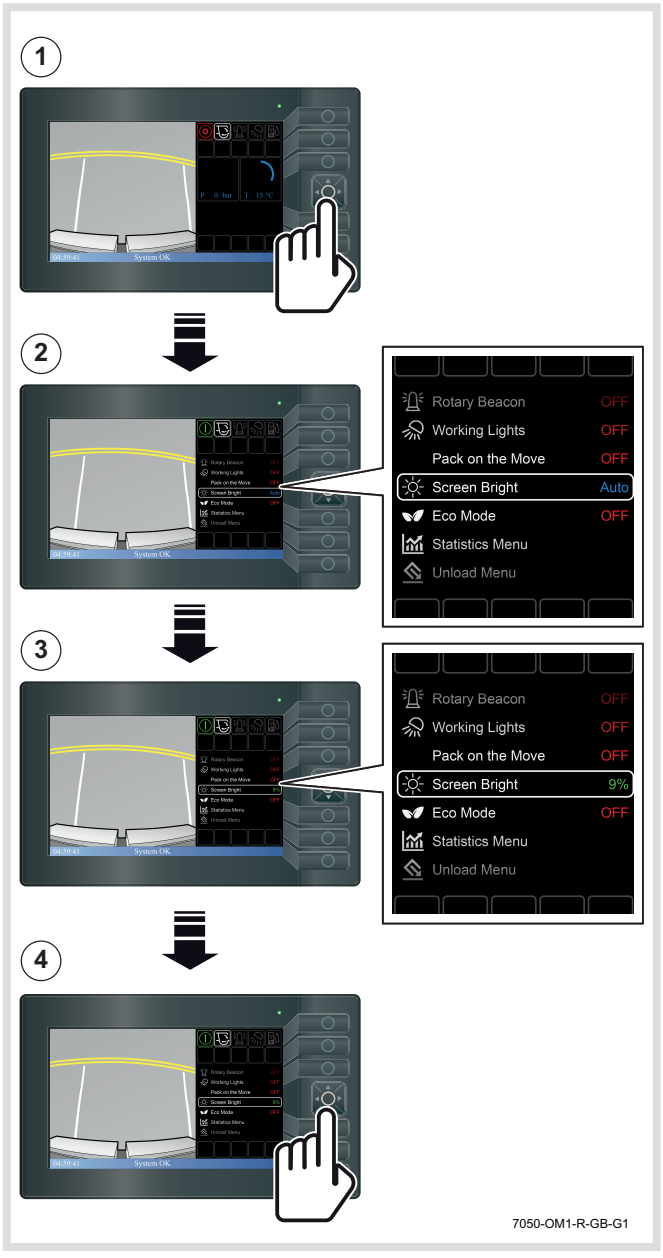
The icon will illuminate blue when the lamps are switched on.



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

4.4.5 SCREEN BRIGHTNESS ADJUSTMENT

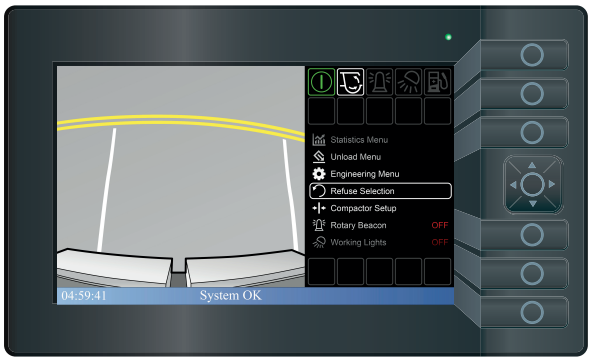
Press the button to brighten or darken the screen display.



1. Press the button in the middle of the cursor.
2. Use the up and down arrows to scroll through the menu to select 'Screen Bright'. When it is highlighted press the select button (middle of the cursor).
3. Use the left and right arrows to choose the brightness of the screen between Auto and 100 percent. Default setting is Auto.
4. When the desired screen brightness has been set, press the select button to confirm the setting.

4.4.6 SELECT/ADJUST COMPACTION RATE

1. Use the cursor to select 'Refuse Selection' on the main menu, then press the button in the middle of the cursor to select this option.



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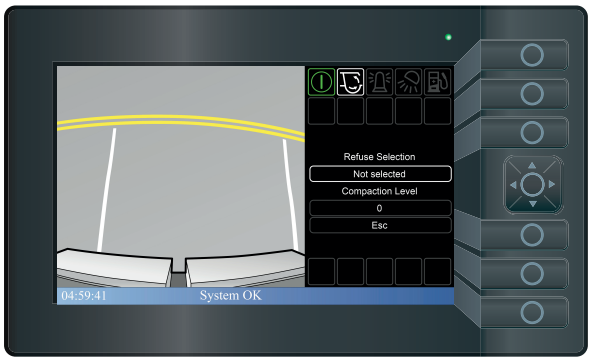
2. Use the up and down cursor buttons to select the section below 'Refuse Selection'. This will be shown by the solid outline around the type of refuse selected.



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3. Use the left and right cursor buttons to select the type of refuse required. There are 10 different refuse selections, see the table below:

REFUSE SELECTION	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.
Plastic - DSD.	Plastic - DSD.
Glass.	Glass.
Not selected.	-

4. Once you have selected the type of refuse required, use the up and down on the cursor to highlight 'Esc' and then press the button in the middle of the cursor to return to the main screen. If no buttons are pressed for 20 seconds and the screen will return main screen automatically.

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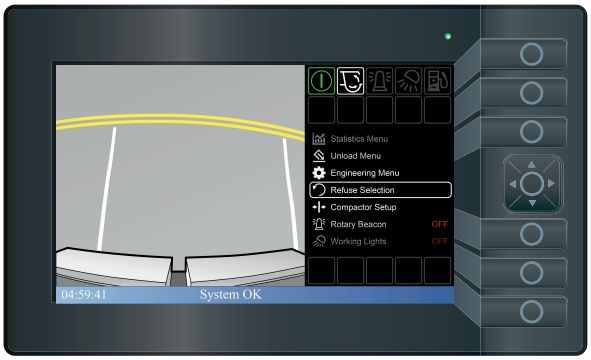
To change the compaction rate:

1. Use the cursor to select 'Refuse Selection' on the main menu, then press the button in the middle of the cursor to select this option.



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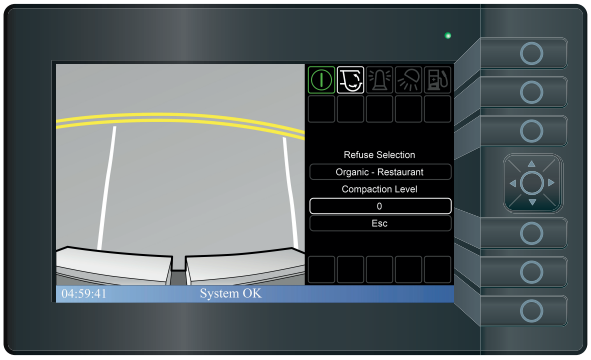
2. Use the up and down buttons on the cursor to highlight the number below compaction level.



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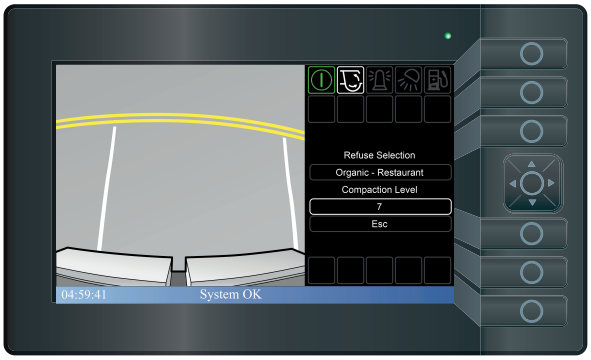
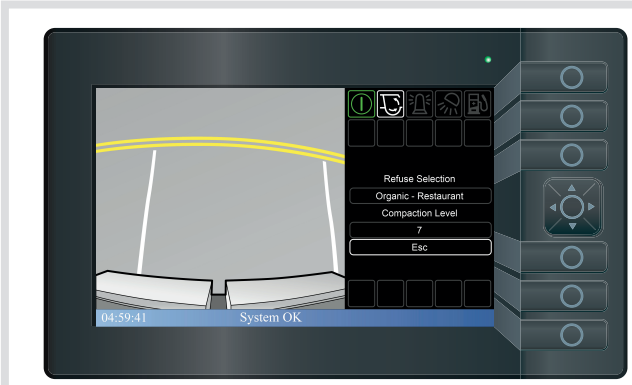
3. Use the left and right cursor arrows to select the required compaction level from 0 - 9.



7075-OL1-D-GB-G1

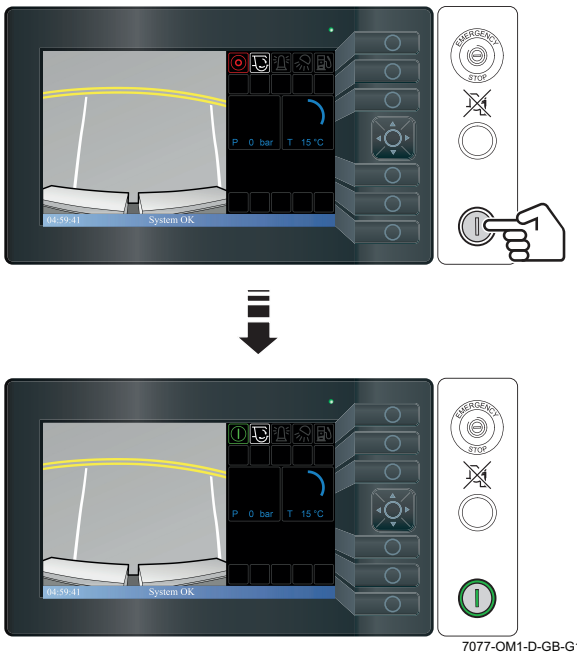
4. Once you have selected the compaction level that is required, use the up and down arrow on the cursor to highlight 'Esc' and then press the button in the middle of the cursor to return to the main screen. If no buttons are pressed for 20 seconds the screen will return to the main screen automatically.



7076-OL1-D-GB-G1

4.4.7 SYSTEM RUN

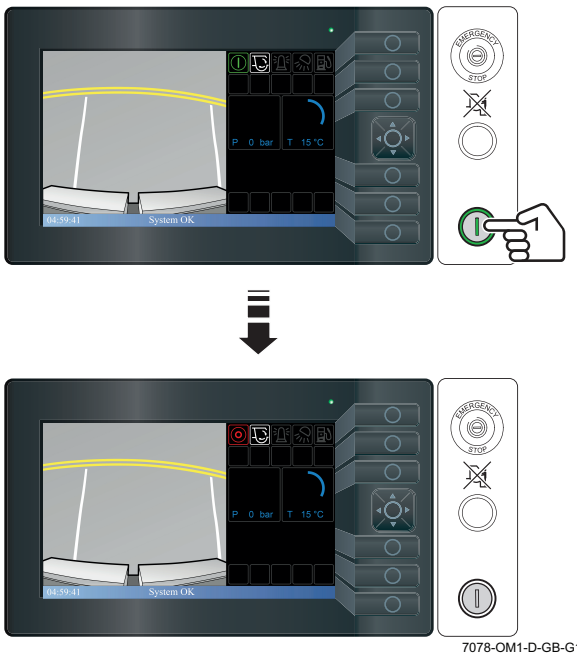
Press the body on button to enable the compaction mechanism controls.



7077-OM1-D-GB-G1

4.4.8 SYSTEM OFF

Press the body control button to disable the compaction mechanism.



7078-OM1-D-GB-G1

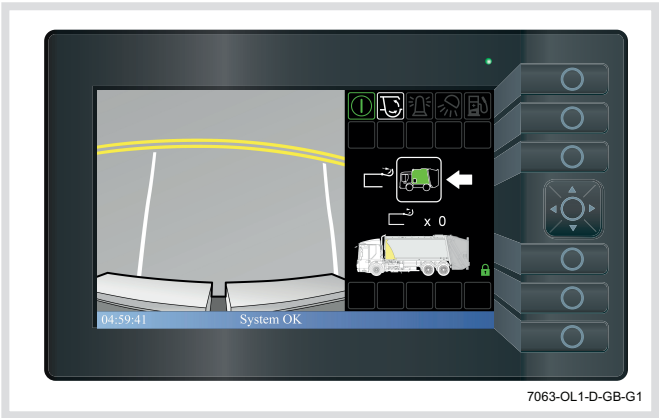
4.4.9 EXTERNAL BODY CONTROLS

To enable the external controls follow the steps below:

1. Use the cursor up and down arrows to highlight the 'Unload Menu'. When highlighted press the button in the middle of the cursor to select the 'Unload Menu'.

7079-OL1-D-GB-G1

2. Use the cursor left and right arrows to highlight the in-cab or external body controls options. The body option is selected when the body is shown in green. To select between the in-cab and external body control option press the middle button on the cursor.



7063-OL1-D-GB-G1

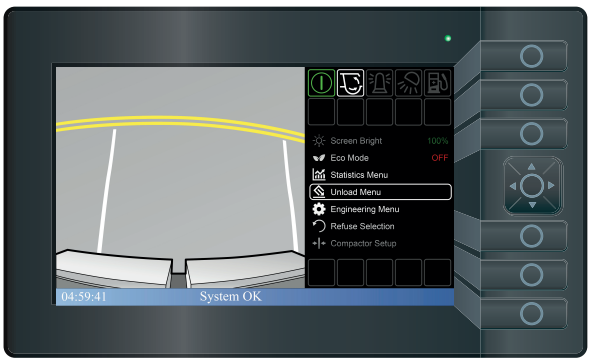
3. To return to the main menu, use the left and right arrows on the cursor to highlight the return arrow and press the button in the middle of the cursor to return to the main menu.

7080-OL1-D-GB-G1

4.4.10 IN-CAB DISCHARGE CONTROLS

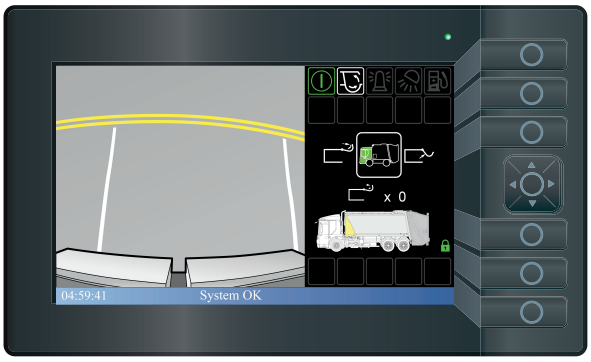
To enable the in-cab controls follow the steps below:

1. Use the cursor up and down arrows to highlight the 'Unload Menu'. When highlighted press the button in the middle of the cursor to select the 'Unload Menu'.



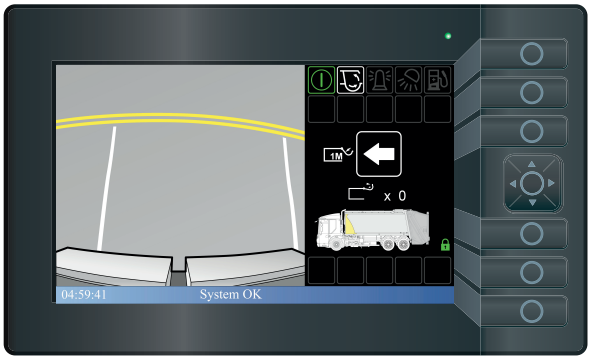
7079-OL1-D-GB-G1

2. Use the cursor left and right arrows to highlight the in-cab discharge controls or external body controls options. The in-cab discharge controls option is selected when the cab is shown in green. To select between the in-cab discharge controls and external body control option press the middle button on the cursor.



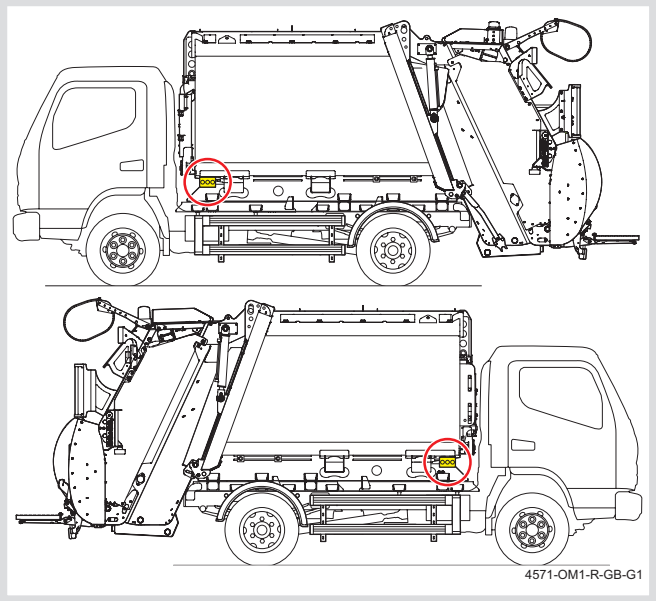
7062-OL1-D-GB-G1

3. To return to the main menu, use the left and right arrows on the cursor to highlight the return arrow and press the button in the middle of the cursor to return to the main menu.



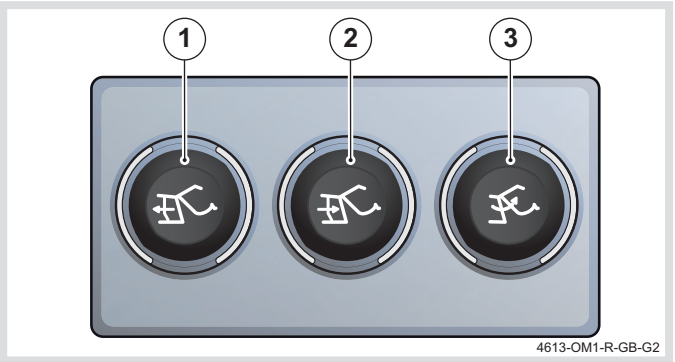
7081-OL1-D-GB-G1

4.4.11 EXTERNAL DISCHARGE CONTROL PANEL (OPTION)



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

1. 'Ejector plate retract' push-button, (see '4.4.15 Retract' on page 4-30).
2. 'Ejector plate eject' push-button, (see '4.4.14 Eject' on page 4-29).
3. 'Tailgate raise' push-button, (see '4.4.12 Tailgate raise' on page 4-27).

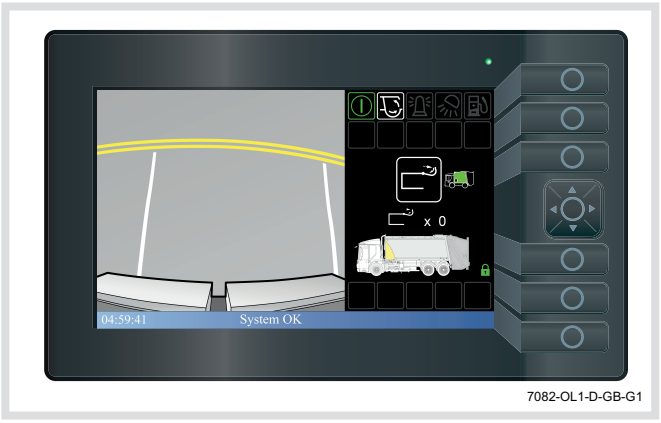


4.4.12 TAILGATE RAISE

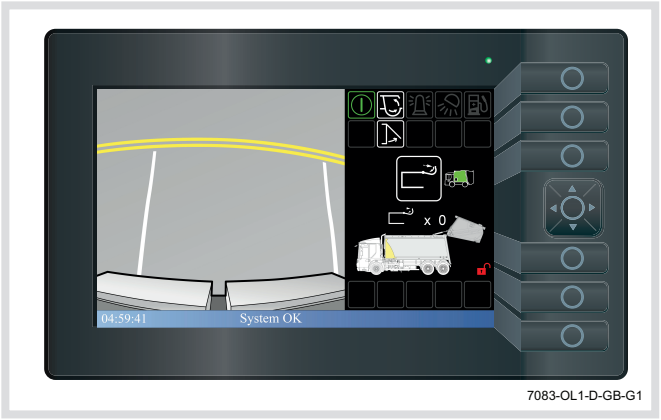
The tailgate can be raised in two ways when the external body controls option has been selected.

1. In-cab tailgate raise when external body control option selected:

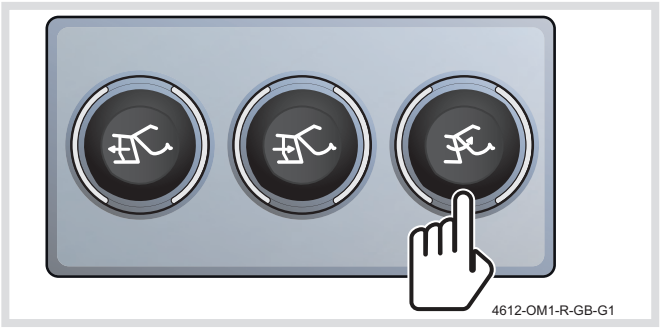
   Use the left and right cursor arrows to highlight the tailgate raise icon. When the tailgate raise icon is highlighted, hold down the button in the middle of the cursor to raise the tailgate.



When the tailgate is raised the green padlock will now turn red to indicate the tailgate is out of lock and the tailgate will appear raised on the screen.



2. External discharge control panel:



Press and hold the 'tailgate raise' push-button on the external discharge control panel to raise the tailgate.

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

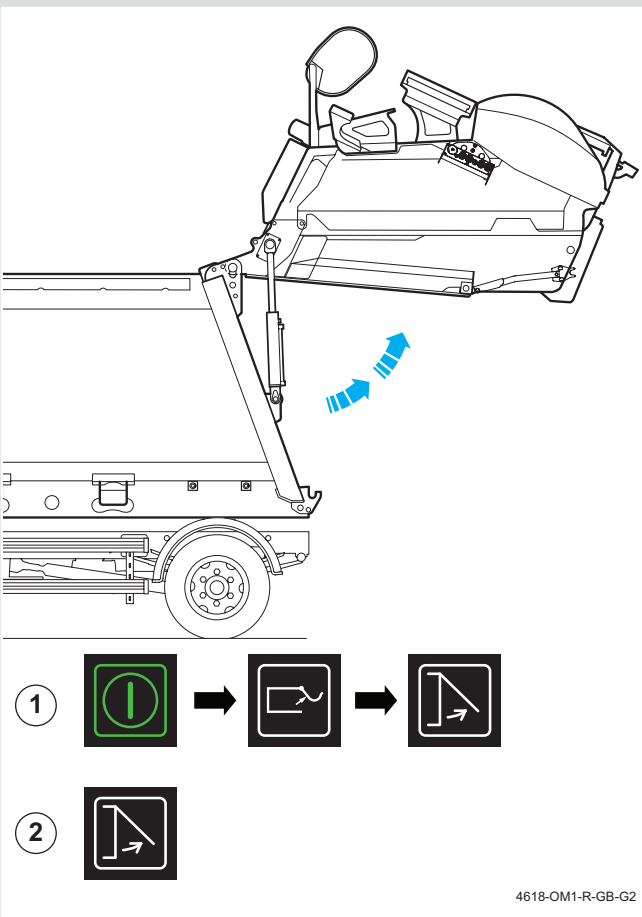
When the tailgate is fully raised, the 'Tailgate raised' pictogram will display on the cab control panel screen (1).

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:

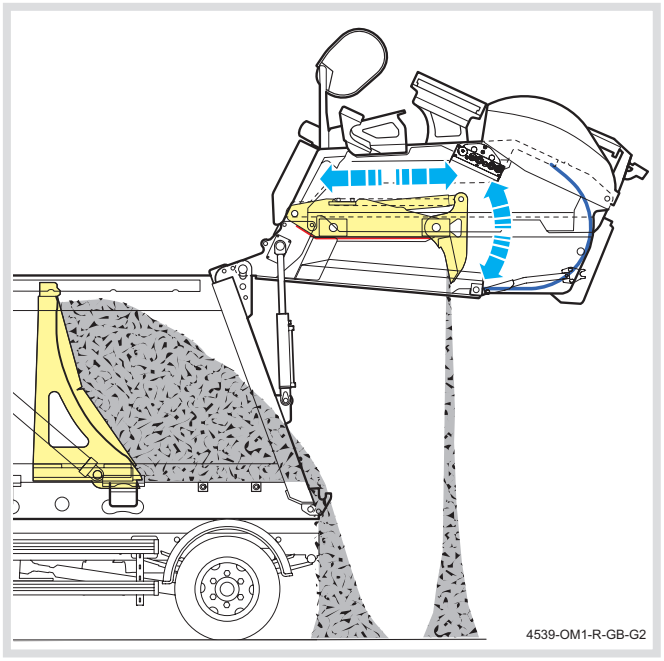
- The tailgate will stop in the position it is in until the button is operated again to raise the tailgate.
- The 'Tailgate out-of-locks' pictogram will display on the cab control panel screen (2).

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



4.4.13 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.

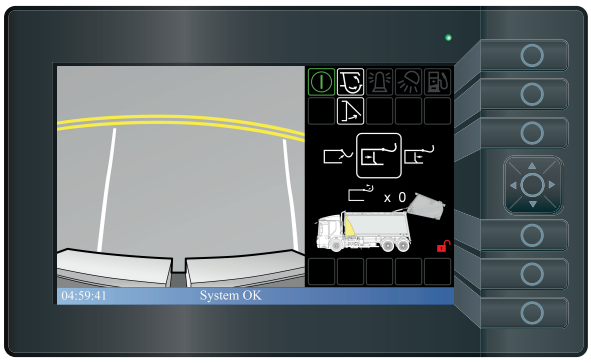


4.4.14 EJECT

The 'Ejector plate eject' can be completed in two ways, by using the in-cab controls or the external body controls.

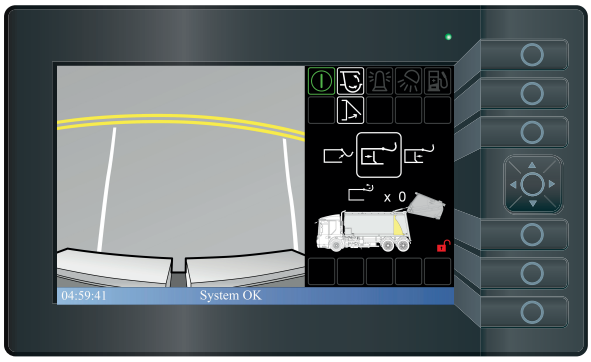
1. In-cab ejector plate eject controls:

   When the in-cab controls have been selected, use the left and right cursor arrows to highlight the 'Ejector plate eject' icon. When the 'Ejector plate eject' icon is highlighted, hold down the button in the middle of the cursor to eject the ejector plate.



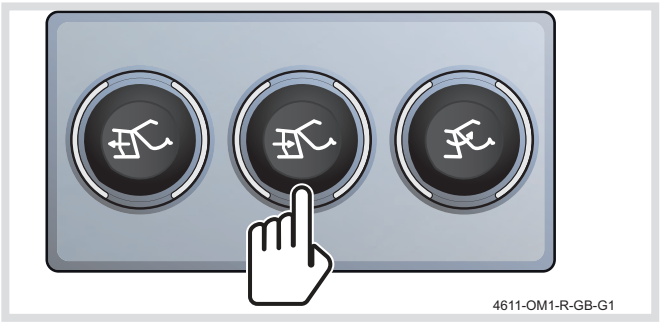
7084-OL1-D-GB-G1

   When the ejector plate has fully ejected, the ejector plate will appear at the rear of the vehicle on the screen. If the button is released at any point during the ejection process, the ejector plate will stop and show on the vehicle display in the position it has stopped. Pressing the button will continue the ejection process.



7085-OL1-D-GB-G1

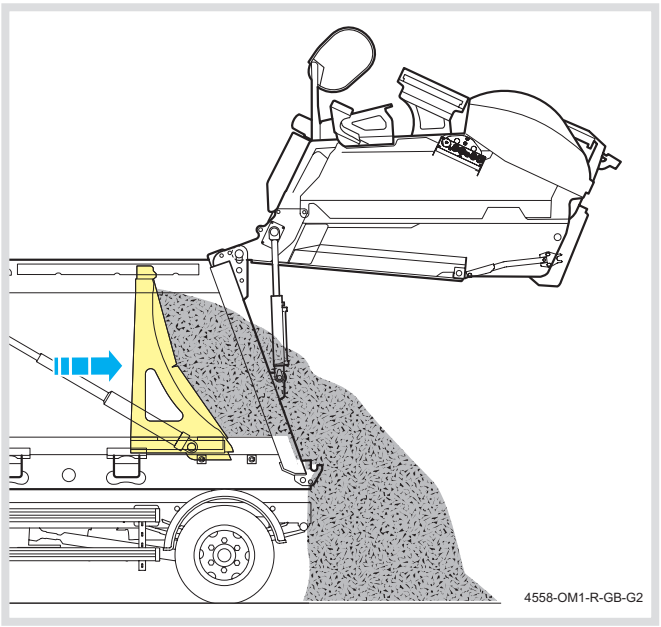
2. External control panel:



4611-OM1-R-GB-G1

   - 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 push-button is pressed to retract the ejector plate.



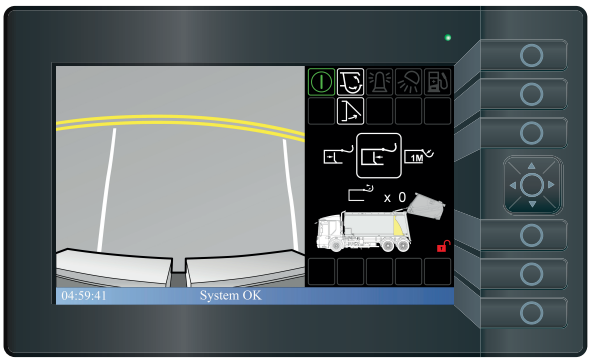
4558-OM1-R-GB-G2

4.4.15 RETRACT

The 'Ejector plate retract' can be completed in two ways, by using the in-cab controls or the external body controls.

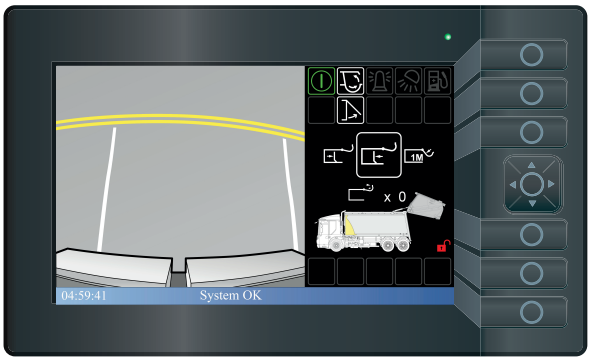
1. In-cab ejector plate retract controls:

   When the in-cab controls have been selected, use the left and right cursor arrows to highlight the 'Ejector plate retract' icon. When the 'Ejector plate retract' icon is highlighted, hold down the button in the middle of the cursor to retract the 'Ejector plate'.



7086-OL1-D-GB-G1

   When the ejector plate has fully retracted the ejector plate will appear at the front of the vehicle on the screen. If the button is released at any point during the retraction process, the ejector plate will stop and show on the vehicle display in the position it has stopped. Pressing the button will continue the retraction process.



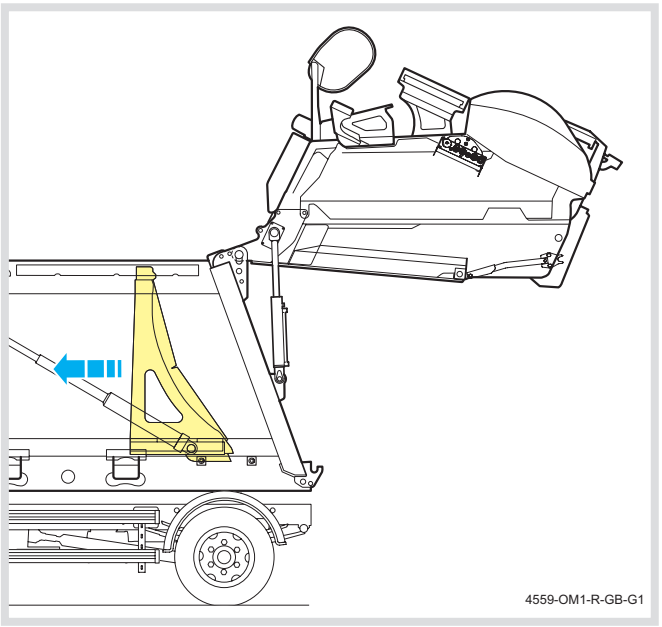
7087-OL1-D-GB-G1

2. External control panel:

4619-OM1-R-GB-G1

   - 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 push-button is pressed to eject the ejector plate.

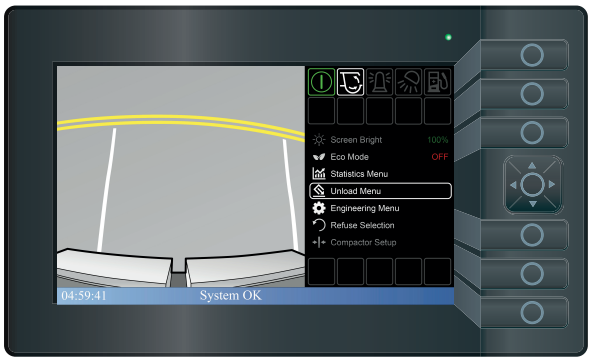


4559-OM1-R-GB-G1

4.4.16 LOWER TAILGATE TO 1 METRE

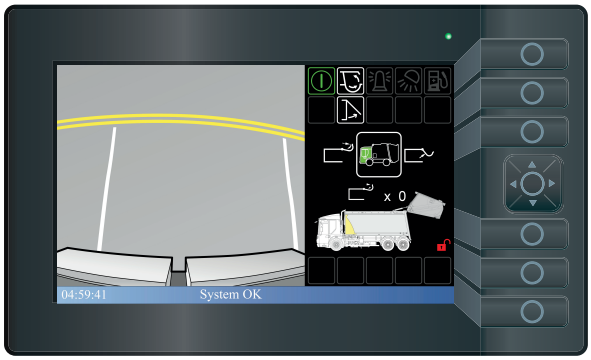
To lower the tailgate to 1 metre, follow the steps below:

1. Use the cursor up and down arrows to highlight the 'Unload Menu'. When highlighted press the button in the middle of the cursor to select the 'Unload Menu'.



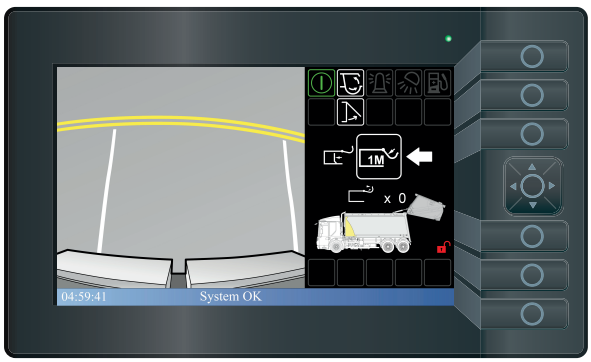
7079-OL1-D-GB-G1

2. Use the left and right arrows on the cursor to highlight the in-cab controls. The in-cab controls option is selected when the cab is shown in green.



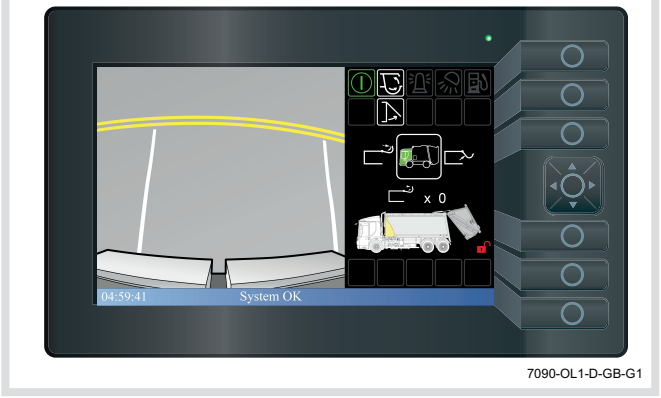
7088-OL1-D-GB-G1

3. Use the left and right arrows on the cursor to navigate to the lower by 1 metre icon.



7089-OL1-D-GB-G1

4. When the lower tailgate by 1 metre icon is highlighted, press and hold the button in the middle of the cursor to lower the tailgate by 1 metre.



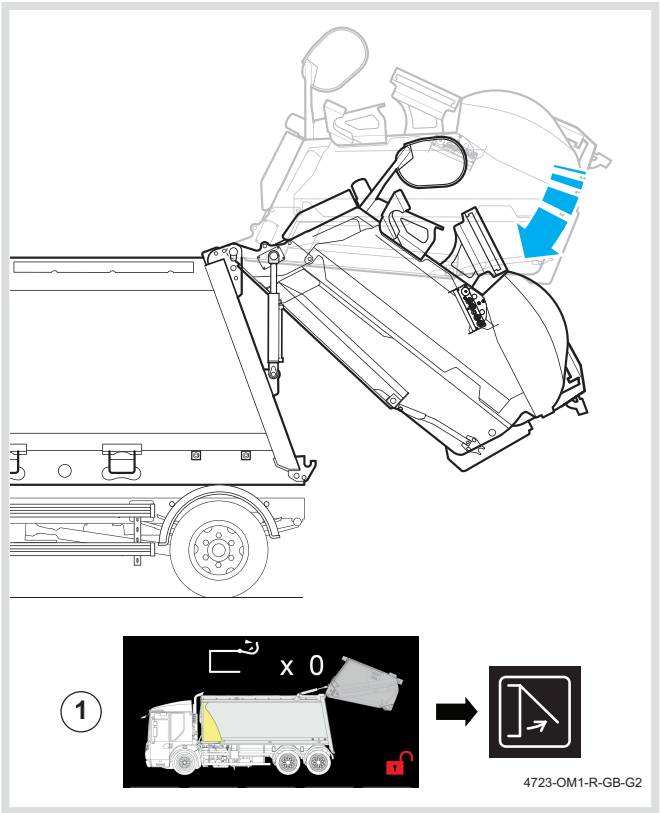
7090-OL1-D-GB-G1

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

The tailgate will stop lowering when it reaches 1 metre and the 'Tailgate out-of-locks' red padlock 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 will be shown raised, the red out-of-locks padlock will be shown and the tailgate out-of-locks icon will be displayed (1).



4723-OM1-R-GB-G2

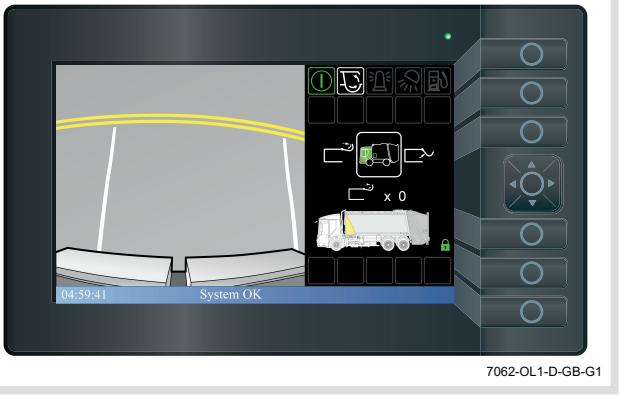
4.4.17 TAILGATE CLEAR SELECTION

To select the tailgate clear option, follow the steps below:

1. Use the cursor up and down arrows to highlight the 'Unload Menu'. When highlighted press the button in the middle of the cursor to select the 'Unload Menu'.

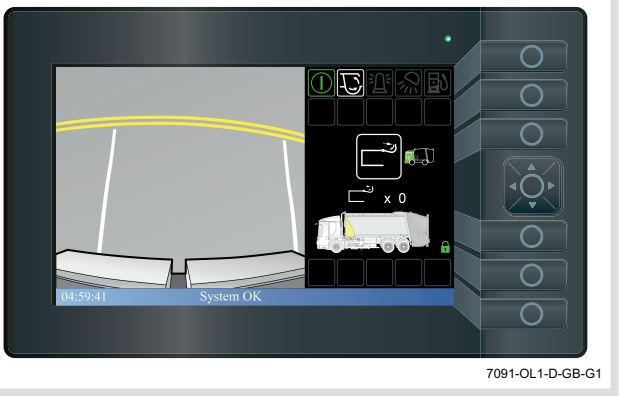
7079-OL1-D-GB-G1

2. Use the left and right arrows on the cursor to navigate and highlight the in-cab controls. The in-cab controls option is selected when the cab is shown in green.



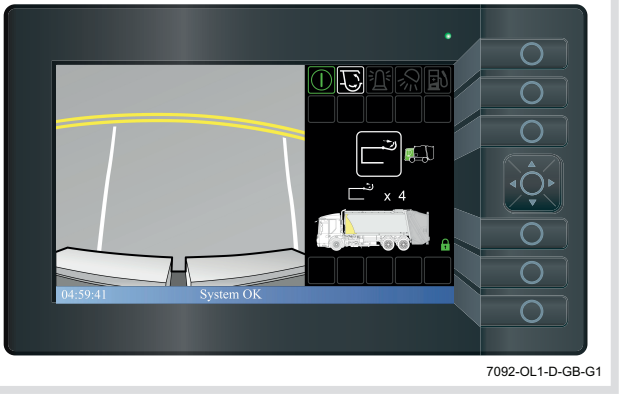
7062-OL1-D-GB-G1

3. Use the left and right arrows on the cursor to navigate and highlight the 'Tailgate clear' icon.



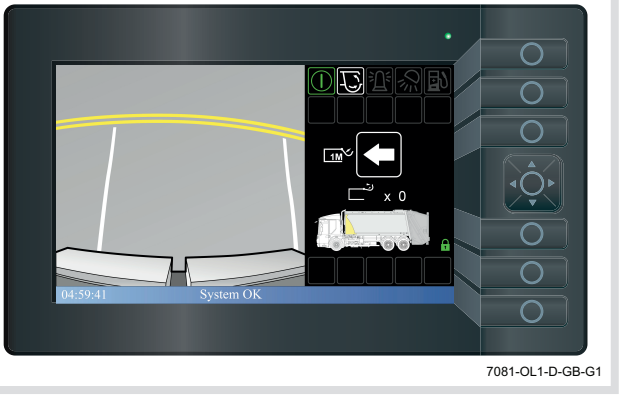
7091-OL1-D-GB-G1

4. When the 'Tailgate clear' icon is highlighted, use the up and down arrows or the button in the middle of the cursor or to select the amount of tailgate clear cycles required. The options range from x 0 - x 5.



7092-OL1-D-GB-G1

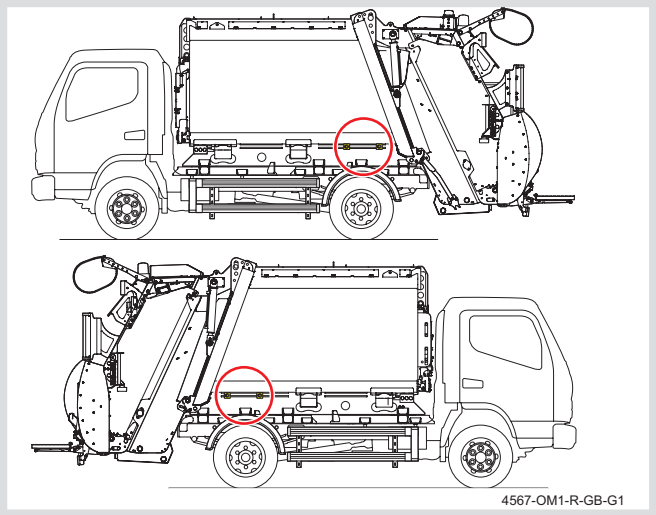
5. To return to the main menu use the left and right arrow on the cursor to navigate and highlight the return arrow and then press the button in the middle of the cursor.



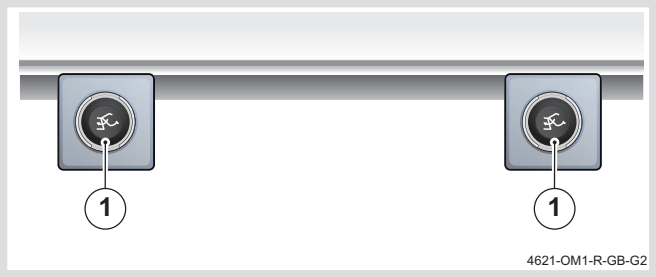
7081-OL1-D-GB-G1

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.

4.4.18 TAILGATE LOWERING CONTROL PANEL



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



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

The engine speed will increase when the tailgate lowers.

If the ejection plate is still in eject position, it will retract into the body before tailgate starts to lower.

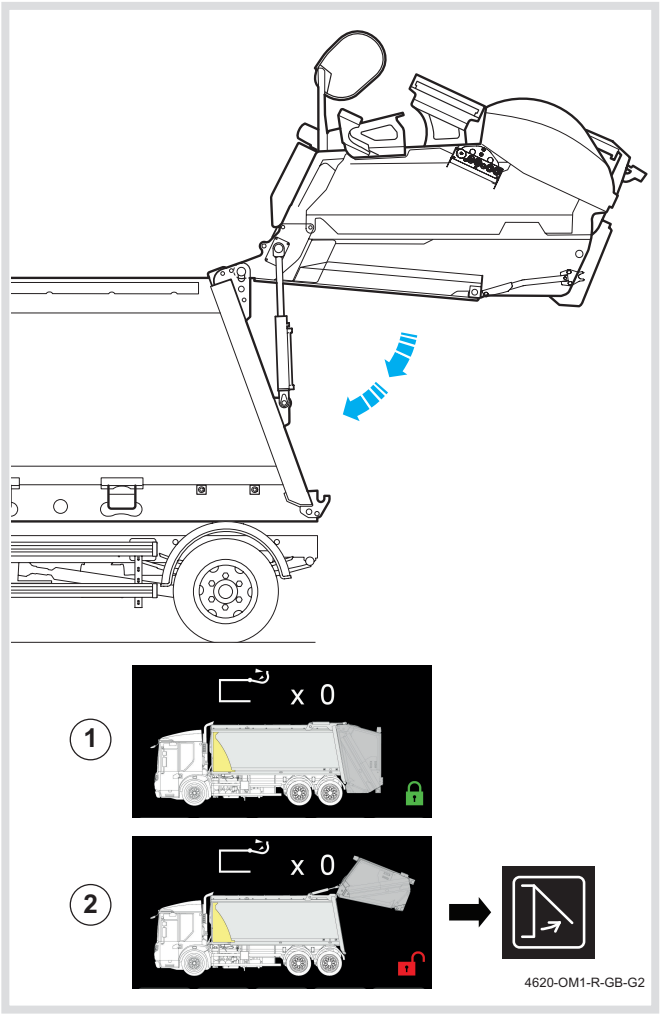
As the tailgate lowers, the 'Vehicle reversing' audible warning device will sound.

When the tailgate is lowered fully and engaged in its locks, the green padlock will display on the cab control panel (1).

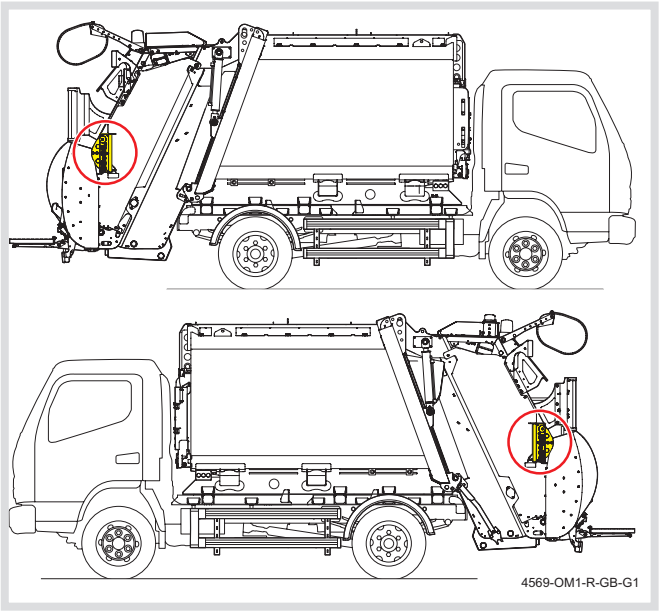
If either button is released while lowering the tailgate:

- 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' and red out-of-locks padlock pictogram will display on the cab control panel screen (2).

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



4.5 COMPACTION MECHANISM CONTROL PANEL

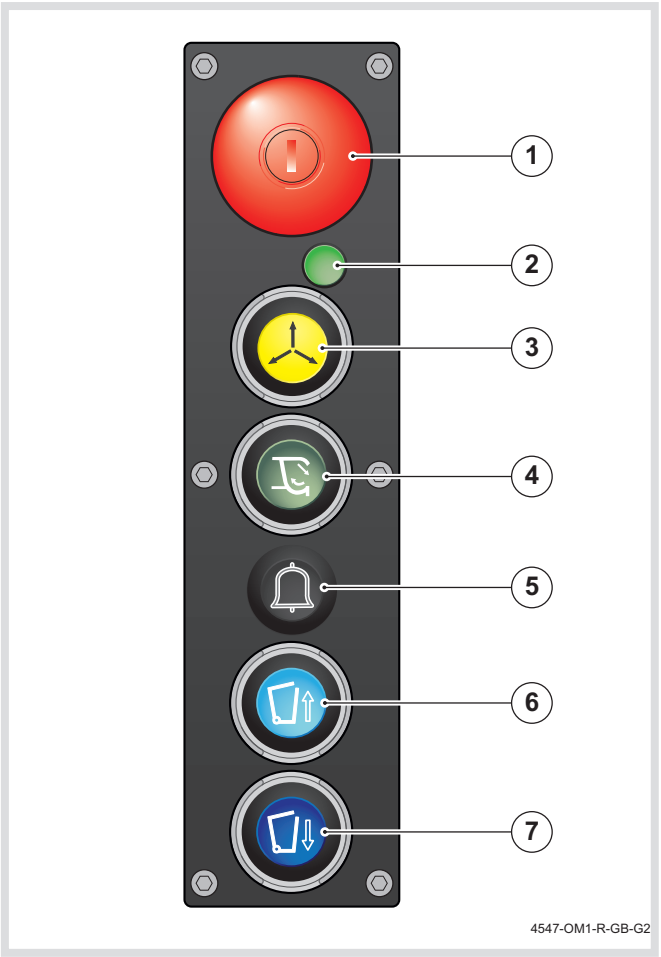


The compaction mechanism control panel is located on the right-hand side of the tailgate (left-hand drive vehicles) or the left-hand side of the tailgate (right-hand drive vehicles).

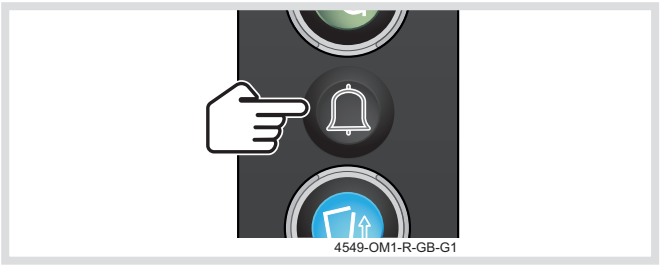
An additional compaction mechanism control panel can be installed as an option so that one is located on each side of the tailgate.

The control panels contain the following controls:

1. Emergency stop push-button (Red) (see '4.6 Emergency stop push-buttons' on page 4-40).
2. Control panel active warning lamp (Green).
3. Rescue push-button (Yellow) (see '4.5.2 Rescue push-button (Yellow)' on page 4-35).
4. Start pack cycle push-button (Green) (see '4.5.3 Start pack cycle push-button (Green)' on page 4-36).
5. Signal push-button (Black) (see '4.5.1 Signal push-button (Black)' on page 4-35).
6. Lifting device up push-button (Light blue) (see '4.5.4 Lifting device up push-button (Light blue)' on page 4-39).
7. Lifting device down push-button (Dark blue) (see '4.5.5 Lifting device down push-button (Dark blue)' on page 4-39).



4.5.1 SIGNAL PUSH-BUTTON (BLACK)

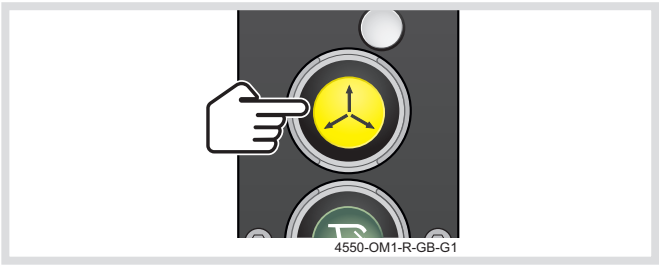


Pressing the 'Signal' push-button against spring action sounds the signal buzzer in the cab. The buzzer will sound while the button is pressed and will stop immediately the button is released.

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 4-11).

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

4.5.2 RESCUE PUSH-BUTTON (YELLOW)



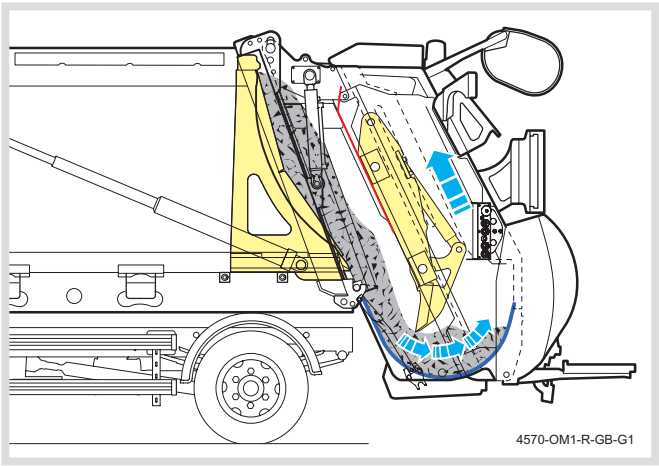
Pressing and holding the 'Rescue' push-button against spring action will:

- 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 will remain in the stopped position until the 'Body main' button has been pressed to disable the body (white in colour). Press the 'Body main' button again to enable the body (green in colour). One of the controls on the mechanism must then be pressed to start mechanism.



4.5.3 START PACK CYCLE PUSH-BUTTON (GREEN)

The 'Start pack cycle' push-button initiates the operation of the compaction mechanism.

The green indicator lamp above the 'Rescue' push-button will illuminate to confirm that the body control system is switched on and the push-button is energised.

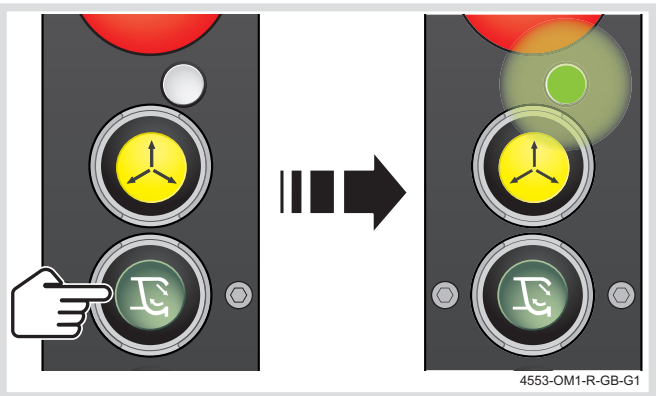
When compaction mechanism control panels are installed on both sides of the tailgate.

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

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

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

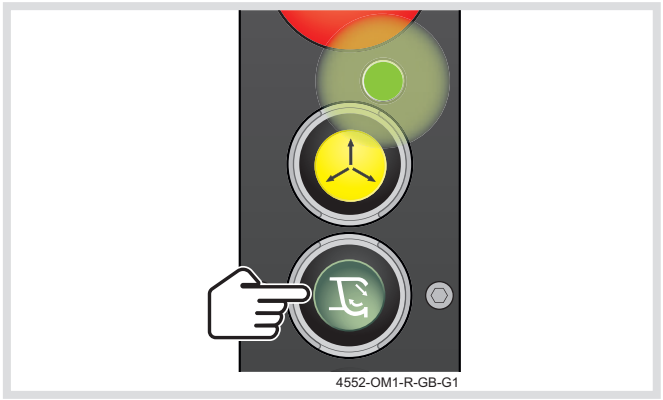
To energise the opposite 'Start pack cycle' push-button, push the de-energised button once. The green indicator lamp above the button will illuminate to confirm that the push-button is now energised.



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

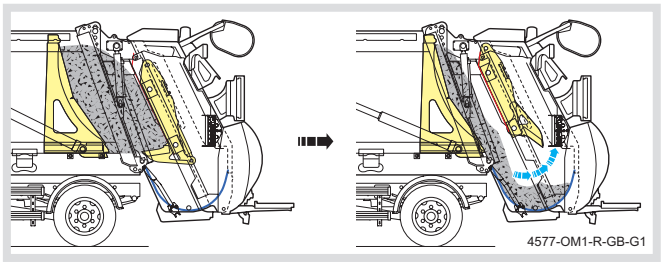
Open system vehicles:

- **Vehicles without a light curtain.**
- **Vehicles with a light curtain and folding rave rail in lower 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.



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

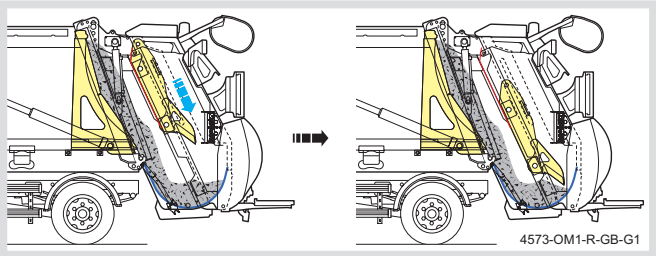
The 'Start pack cycle' push-button must be operated again to complete the compaction cycle.

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.



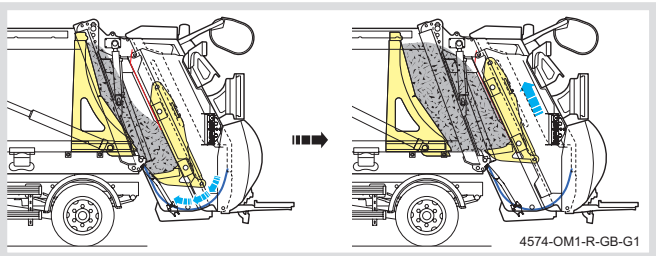
As the carriage plate moves down, the 'Carriage plate moving down' pictogram will display on the screen.

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

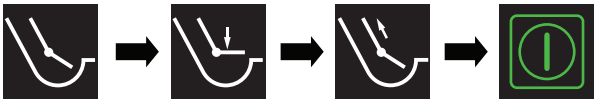
Pressing and holding the push-button causes the following sequence of events:

- 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.

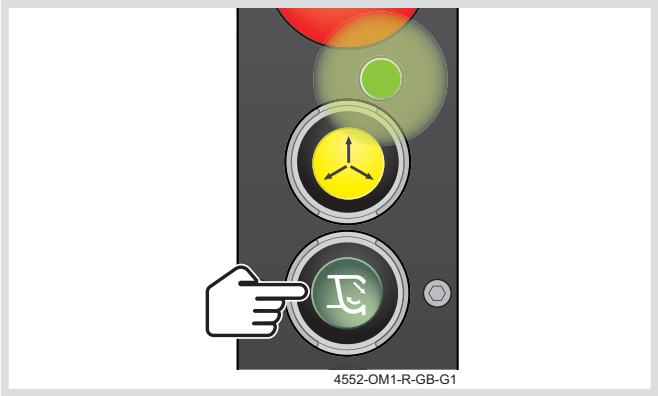


As the packer plate closes and then the carriage plate moves up, the 'Packer plate closing' pictogram and the 'Carriage plate moving up' pictogram will display on the control panel screen.



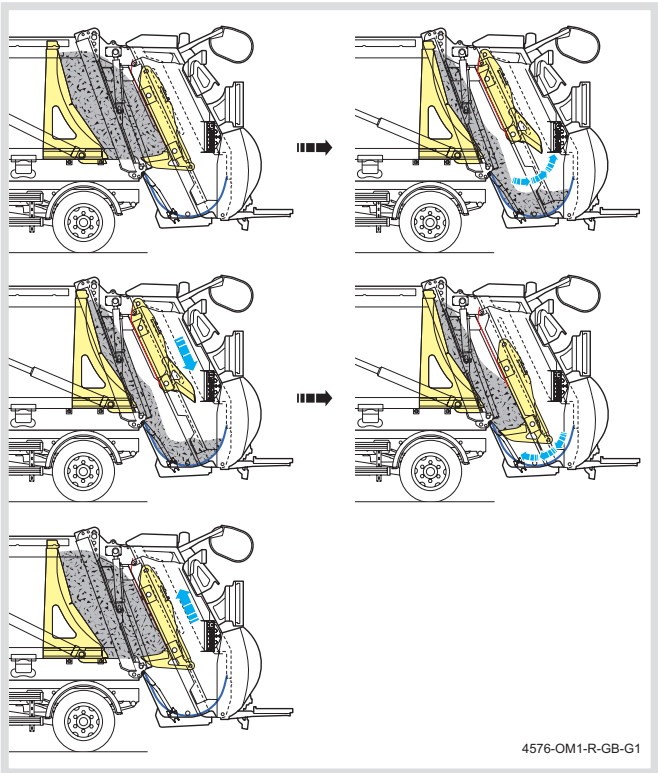
Closed system vehicles:

- **Vehicles with a light curtain and folding rave rail in raised position.**
- **Vehicles with a light curtain and fixed (welded) rave rail.**

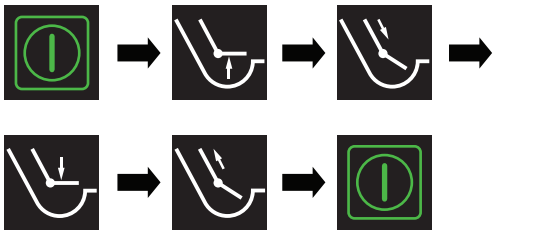


Pressing and releasing the push-button causes the following sequence of events:

- 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 '4.4.6 Select/adjust compaction rate' on page 4-23).
- The engine speed will slow down to idle.



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.



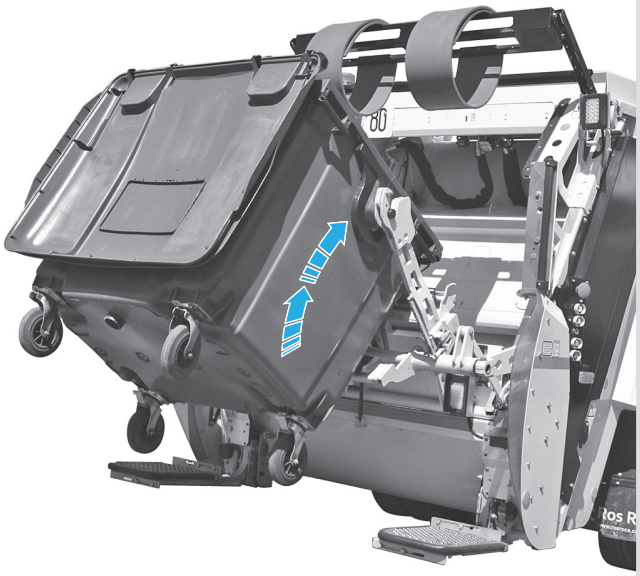
4.5.4 LIFTING DEVICE UP PUSH-BUTTON (LIGHT BLUE)

4561-OM1-R-GB-G1

Caution:
Lower the footboard(s) before operating waste container lifting device.

Push and hold the push-button to raise the lifting device.

If the push-button is released while raising a waste container, the lifting device will stop at the position and remain in that position until either the 'Lifting device up' push-button or the 'Lifting device down' push-button is pressed to move the lifting device again.



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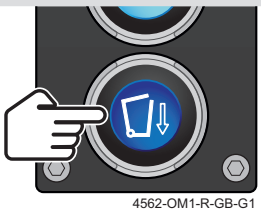
4.5.5 LIFTING DEVICE DOWN PUSH-BUTTON (DARK BLUE)

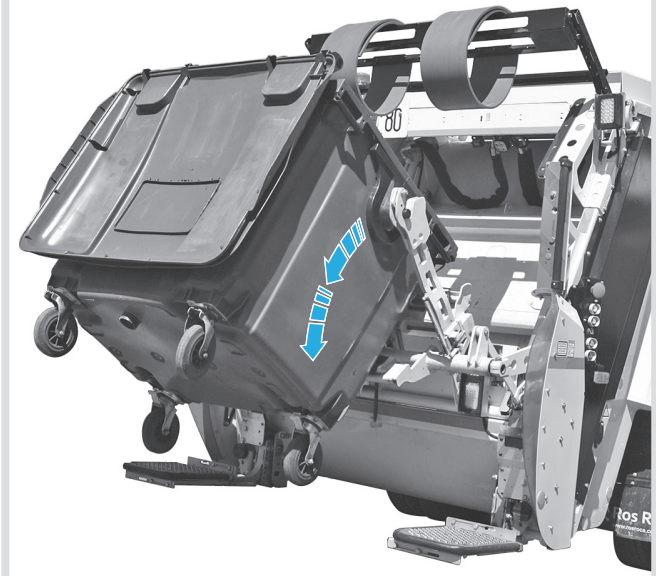


4562-OM1-R-GB-G1

Caution:
Lower the footboard(s) before operating waste container lifting device.

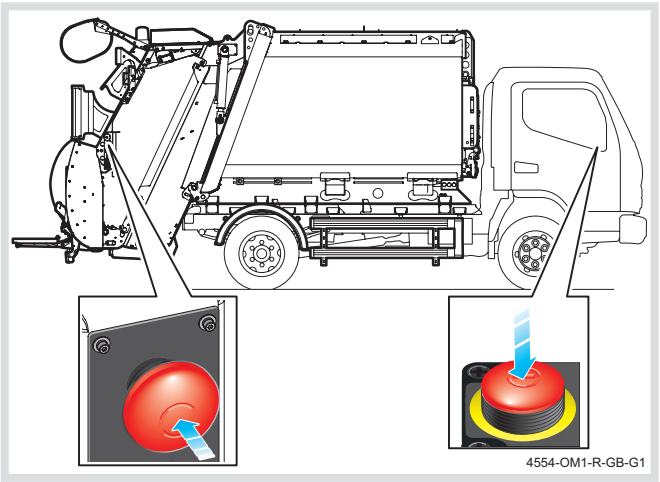
Push and hold the push-button to lower the lifting device.

If the push-button is released while lowering a waste container, the lifting device will stop at the position and remain in that position until either the 'Lifting device down' push-button or the 'Lifting device up' push-button is pressed to move the lifting device again.



4610-OM1-R-GB-G1

4.6 EMERGENCY STOP PUSH-BUTTONS



Emergency stop push-buttons are located:

- On the cab control panel.
- On each compaction mechanism control panel.

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

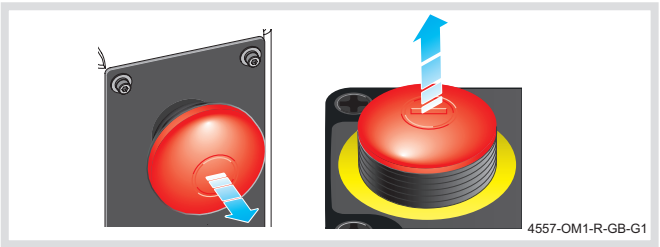
- Stop all refuse operations except the rescue function instantly (including waste container lifting device functions).
- Cause the 'Emergency stop operated' buzzer to sound.
- Cause the 'Emergency stop operated' pictogram to display in the cab control panel screen (see '4.4 Warning pictograms' on page 4-11).

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

4.6.1 RESETTING THE EMERGENCY STOP PUSH-BUTTON

To reset the 'Emergency stop' push-button.

1. Pull the button outwards.



2. Press the 'Body main' button to disable the body (white in colour) and then pressed again to enable the body (green in colour).

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5

CONTENTS

5 OPERATING THE MACHINE

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

5.1 OPERATIONAL SAFETY

WARNINGS:
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.
2. 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 make sure 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 vehicles:

- **Vehicles without a light curtain.**
- **Vehicles with a light curtain and folding rave rail in lower position.**

The operating cycle comprises five operating sequences:

1. Start loading cycle (see ‘5.4.7 Manual loading cycle’ on page 5-11).
2. Emergency stop (see ‘5.4.10 Emergency stop’ on page 5-14).
3. Rescue (see ‘5.4.9 Rescue’ on page 5-13).
4. Cycle short stroke operation (see ‘5.4.11 Cycle short stroke operation’ on page 5-16).

Closed system vehicles:

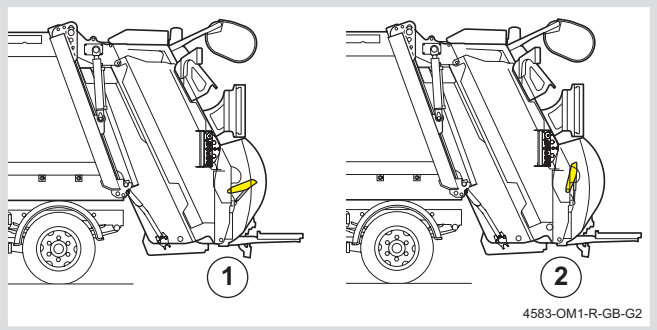
- **Vehicles with a light curtain and folding rave rail in raised position.**
- **Vehicles with a light curtain and fixed (welded) rave rail.**

The operating cycle comprises four operating sequences:

1. Start an automatic loading cycle (see ‘5.4.8 Automatic loading cycle’ on page 5-13).
2. Emergency stop (see ‘5.4.10 Emergency stop’ on page 5-14).
3. Rescue (see ‘5.4.9 Rescue’ on page 5-13).
4. Cycle short stroke operation (see ‘5.4.11 Cycle short stroke operation’ on page 5-16).

Dual mode variants

The waste container lifting device offers 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 (1), the compaction mechanism will operate as an open system. With the guide flap positioned high (2), the compaction mechanism will operate as the closed system.



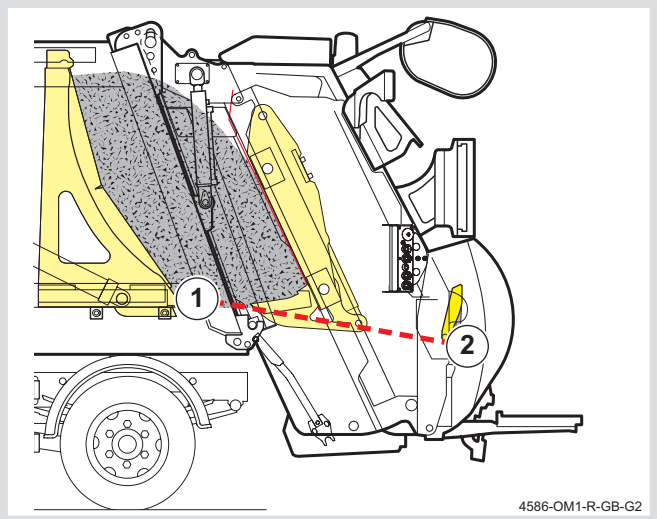
A. Guide flap at low position.

B. Guide flap at high position.

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 (1) and the top of the structural rave rail (2).



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

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 added 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.

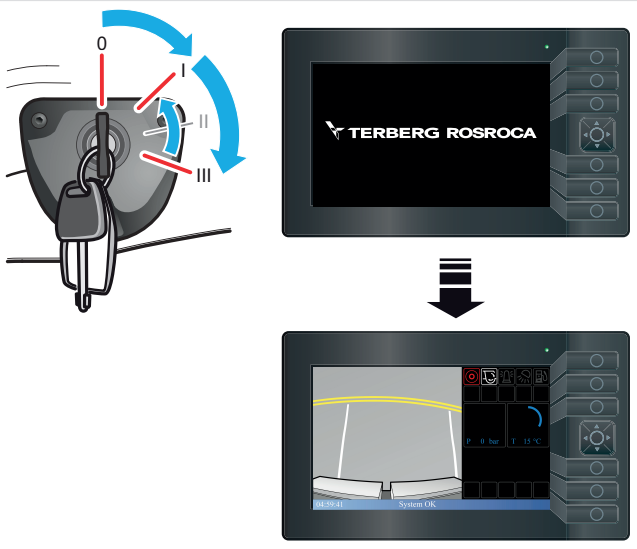
Always make sure the 'Body main' button is turned off (white in colour) when the body control systems are not being used.

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.
2. Engage the PTO (see chassis cab manufacturer's operating instructions).
3. Start and run the engine.
   - The cab control panel will initialise and then display the 'Body system off' mode.



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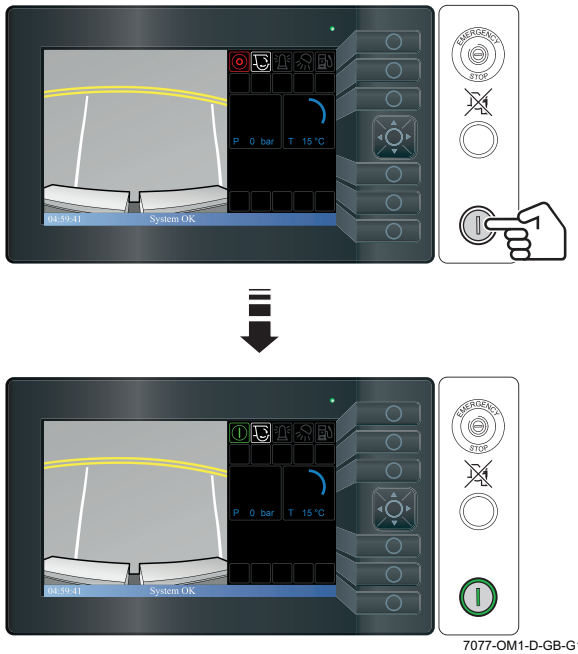
4. Press the body on button to enable the compaction mechanism controls.



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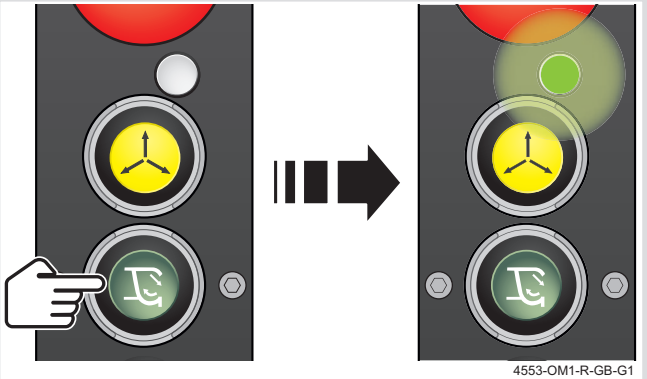
The screen will display the 'Body system run' mode.

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.

5. The compaction mechanism controls are now energised.
6. If necessary, press and release the de-energised 'Start pack cycle' push-button to activate it.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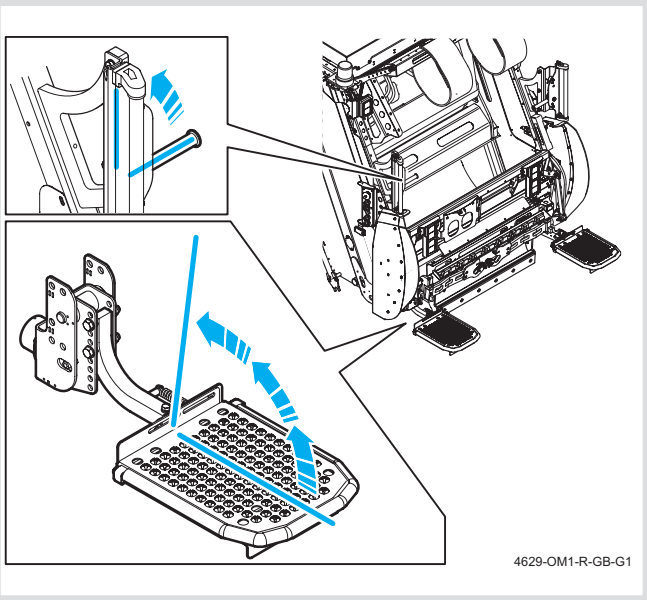
5.4 USING THE FOOTBOARD

WARNING:
THE RESPONSIBILITY FOR SAFE USE OF THE FOOTBOARD IS SHARED BETWEEN THE DRIVER AND OPERATIVE USING THE FOOTBOARD.

Caution:
If a waste container lifting device is installed, lower footboard(s) before operating waste container lifting device.

5.4.1 STOWING THE FOOTBOARD

When the vehicle is travelling long distance or the footboard is not being used the footboard and the horizontal grab handle should be stowed in their upright positions.



5.4.2 RIDING ON THE FOOTBOARD

Lower the footboard to the riding position.

Lower the horizontal grab handle.

Stand squarely in the centre of the footboard and hold onto the vertical and horizontal grab rails with both hands. Do not lean or reach outside the vehicle width.

WARNINGS:
KEEP THE FOOTBOARD SURFACE AND SENSOR FACE CLEAN AND FREE FROM DEBRIS.

ONLY ONE OPERATIVE SHOULD STAND ON EACH FOOTBOARD.

THE OPERATIVE MUST WEAR SUITABLE FOOTWEAR.

WARNINGS:
THE OPERATIVE MUST STAND IN THE CENTRE OF THE FOOTBOARD SURFACE AND HOLD ONTO THE HAND RAIL WITH BOTH HANDS.

NEVER USE THE FOOTBOARDS IF THE SAFETY INTERLOCKS ARE NOT OPERATIONAL.

OPERATIVES MUST NEVER RIDE ON THE FOOTBOARDS WHEN THE INTERLOCK OVERRIDE SWITCH HAS BEEN PRESSED AND THE INTERLOCK OVERRIDE IS ACTIVE.

THE OPERATIVE MUST NOT JUMP ONTO OR OFF THE FOOTBOARD WHILE THE VEHICLE IS MOVING.

THE OPERATIVE MUST NOT DISTRACT THE DRIVER WHILE RIDING ON THE FOOTBOARD.

THE OPERATIVE MUST NOT OPERATE ANY OF THE REFUSE COLLECTION BODY OR WASTE CONTAINER LIFTING DEVICE CONTROLS EXCEPT THE EMERGENCY STOP BUTTONS WHILE RIDING ON THE FOOTBOARD.

WARNINGS:
THE OPERATIVE MUST NOT REACH, LEAN OR ALLOW ANY PART OF THEIR BODY TO PROTRUDE OUTSIDE THE VEHICLE WIDTH WHEN STANDING ON THE FOOTBOARD.

OPERATIVES MUST NEVER RIDE ON ANY OTHER PART OF THE REFUSE COLLECTION BODY OR WASTE CONTAINER LIFTING DEVICE.

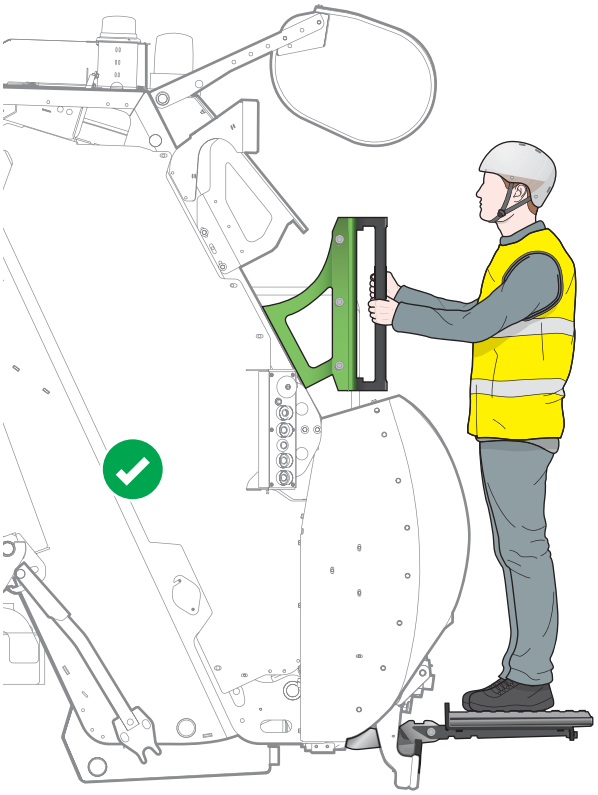
NEVER ATTEMPT TO DRIVE AT SPEEDS EXCEEDING 30 KM/H (OR 25 KM/H IN FRANCE) WITH AN OPERATIVE RIDING ON A FOOTBOARD.

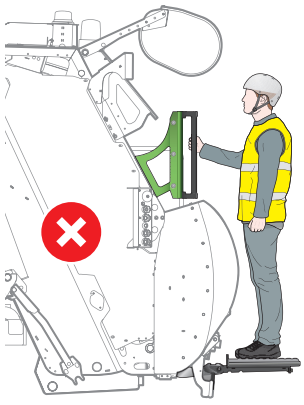
DO NOT DRIVE THE VEHICLE LONG DISTANCES WITH AN OPERATIVE RIDING ON A FOOTBAORD.

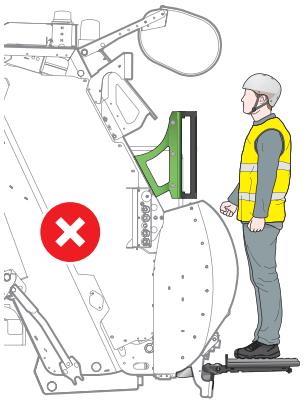
DO NOT DRIVE THE VEHICLE ON HIGH SPEED ROADS (E.G. MOTORWAYS) WHILE THE 30 KM/H (OR 25 KM/H IN FRANCE) INTERLOCK IS OPERATING, WITH AN OPERATIVE RIDING ON A FOOTBOARD.

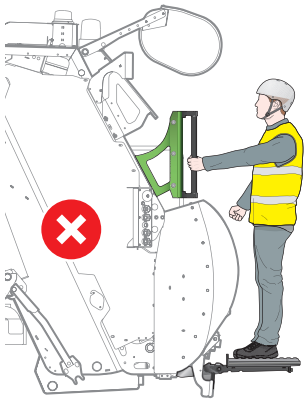
DO NOT USE THE FOOTBOARDS TO CARRY OBJECTS .

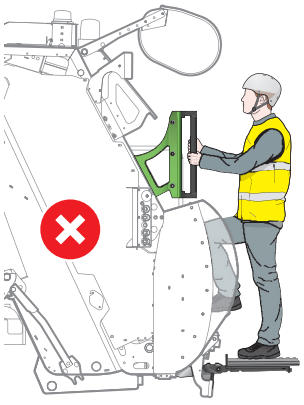
DO NOT USE THE FOOTBOARDS TO LOAD REFUSE INTO THE HOPPER.











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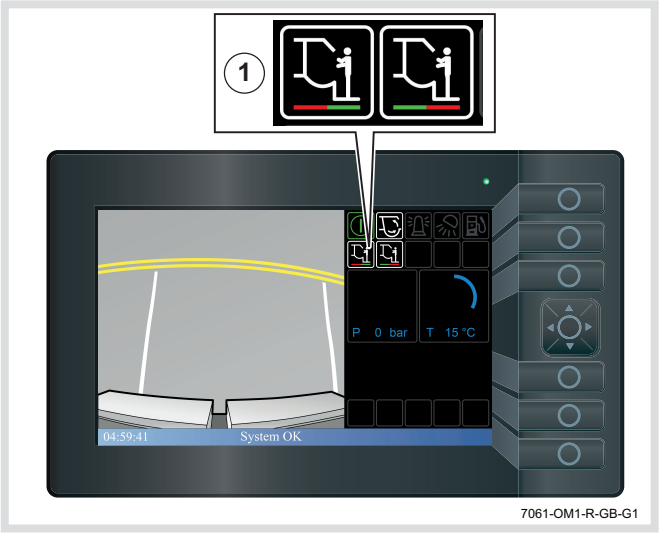
5.4.3 FOOTBOARD WARNING DEVICE AND SAFETY INTERLOCK OPERATION - VEHICLES WITHOUT AUTO-BRAKE FUNCTION

Operative standing on a footboard

When an operative is standing on a footboard, the following warning devices and safety interlocks are activated:



- The ‘Footboard occupied’ pictogram (1) will display on the cab control screen.
- Operation of the compaction mechanism is inhibited (open system vehicles).
- Operation of the waste container lifting device is inhibited.
- Selection of reverse gear is inhibited:

  On vehicles with a transmission reverse gear interlock, reverse gear will not engage when selected.

  On vehicles without a transmission reverse gear interlock, the engine will shut down when reverse gear is selected.
- The vehicle speed limiter will be engaged and will prevent the driver accelerating the vehicle above 30 km/h (25 km/h in France).

WARNINGS:
THE VEHICLE SPEED LIMITER WILL NOT PREVENT THE VEHICLE SPEED EXCEEDING 30 KM/H (OR 25 KM/H IN FRANCE) ON OVERRUN, FOR EXAMPLE WHEN DESCENDING A STEEP HILL.

IF THIS HAPPENS, THE WARNING BUZZER IN THE CAB WILL SOUND TO ALERT THE DRIVER OF THE HAZARD. THE DRIVER SHOULD SLOW THE VEHICLE UNTIL ITS SPEED IS BELOW 30 KM/H (OR 25 KM/H IN FRANCE), AT WHICH POINT THE WARNING BUZZER WILL SILENCE. THE SPEED LIMITER WILL REMAIN ENGAGED DURING SUCH AN EVENT.

Activation of footboard sensors while vehicle travelling at more than 30 km/h (25 km/h in France)

If the system detects that one or both footboards have become occupied whilst the vehicle is already traveling at a speed greater than 30 km/h (25 km/h in France):

- A warning buzzer will sound in the cab.
- The ‘Footboard occupied’ pictogram will display on the cab control screen.
- The vehicle will automatically decelerate until the vehicle speed falls below 30 km/h (25 km/h in France).
- During automatic deceleration whilst above 30 km/h (25 km/h in France) vehicle acceleration via the driver’s accelerator pedal will not be possible.

In an emergency, accelerator control can be regained by operating the ‘Footboard interlock override switch’ (see ‘4.2.4 Footboard interlock override switch’ on page 4-6).

- Unrestricted driving can only be resumed after the vehicle speed has slowed to below 5 km/h and the footboards are no longer occupied i.e. ‘Footboard occupied’ pictogram is no longer visible on the cab control screen.

Activation of footboard sensors while vehicle is reversing or coasting backwards when Neutral is selected

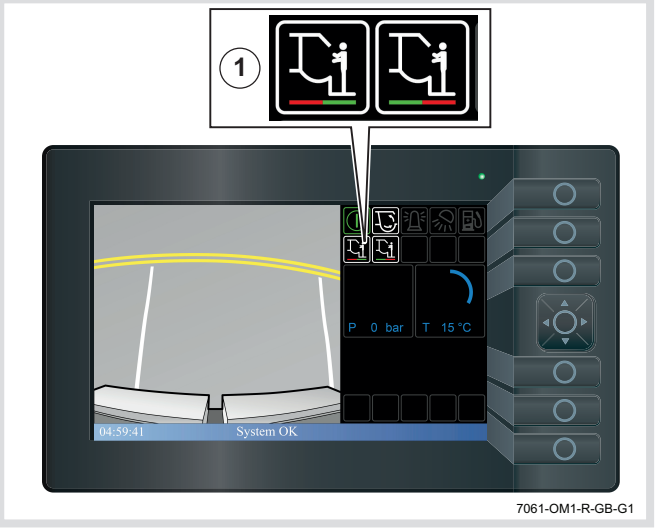
If an operative mounts a footboard while the vehicle is reversing the engine will shut down.

Further reversing of the vehicle can only be achieved when the operative has dismounted the footboard and the driver has restarted the engine.

5.4.4 FOOTBOARD WARNING DEVICE AND SAFETY INTERLOCK OPERATION - VEHICLES WITH AUTO-BRAKE FUNCTION

Operative standing on a footboard

When an operative is standing on a footboard, the following warning devices and safety interlocks are activated:



The ‘Footboard occupied’ pictogram (1) will display on the cab control screen.

- Operation of the compaction mechanism is inhibited (open system vehicles).
- Operation of the waste container lifting device is inhibited.
- Selection of reverse gear is inhibited:

  On vehicles with a transmission reverse gear interlock, reverse gear will not engage when selected.

  On vehicles without a transmission reverse gear interlock, the brakes will apply when reverse gear is selected.
- The vehicle speed limiter will be engaged and will prevent the driver accelerating the vehicle above 30 km/h (25 km/h in France).

WARNINGS:
THE VEHICLE SPEED LIMITER WILL NOT PREVENT THE VEHICLE SPEED EXCEEDING 30 KM/H (OR 25 KM/H IN FRANCE) ON OVERRUN, FOR EXAMPLE WHEN DESCENDING A STEEP HILL.

IF THIS HAPPENS, THE WARNING BUZZER IN THE CAB WILL SOUND TO ALERT THE DRIVER OF THE HAZARD. THE DRIVER SHOULD SLOW THE VEHICLE UNTIL ITS SPEED IS BELOW 30 KM/H (OR 25 KM/H IN FRANCE), AT WHICH POINT THE WARNING BUZZER WILL SILENCE. THE SPEED LIMITER WILL REMAIN ENGAGED DURING SUCH AN EVENT .

Activation of footboard sensors while vehicle travelling at more than 30 km/h (25 km/h in France)

If the system detects that one or both footboards have become occupied whilst the vehicle is already traveling at a speed greater than 30 km/h (25 km/h in France):

- A warning buzzer will sound in the cab.
- The ‘Footboard occupied’ pictogram will display on the cab control screen.
- The vehicle will automatically decelerate until the vehicle speed falls below 30 km/h (25 km/h in France).
- During automatic deceleration whilst above 30 km/h (25 km/h in France) vehicle acceleration via the driver’s accelerator pedal will not be possible.

In an emergency, accelerator control can be regained by operating the ‘Footboard interlock override switch’ (see ‘4.2.4 Footboard interlock override switch’ on page 4-6).

- Unrestricted driving can only be resumed after the vehicle speed has slowed to below 5 km/h and the footboards are no longer occupied i.e. ‘Footboard occupied’ pictogram is no longer visible on the cab control screen.

Activation of footboard sensors while vehicle is reversing or coasting backwards when Neutral is selected

If an operative mounts a footboard while the vehicle is reversing or coasting backwards in neutral, the parking brake will operate instantaneously.

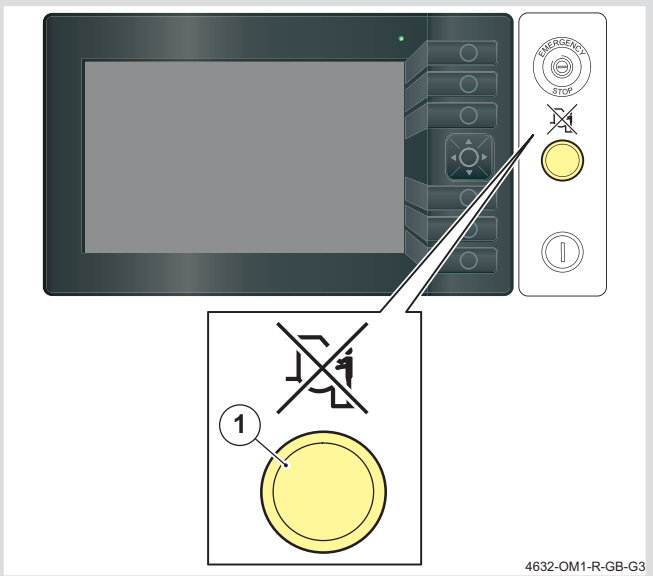
To release the parking brake, either:

- select a forward gear if the footboard is occupied.

or

- select reverse after the operative has dismounted the footboard.

5.4.5 OVERRIDING THE FOOTBOARD INTERLOCK



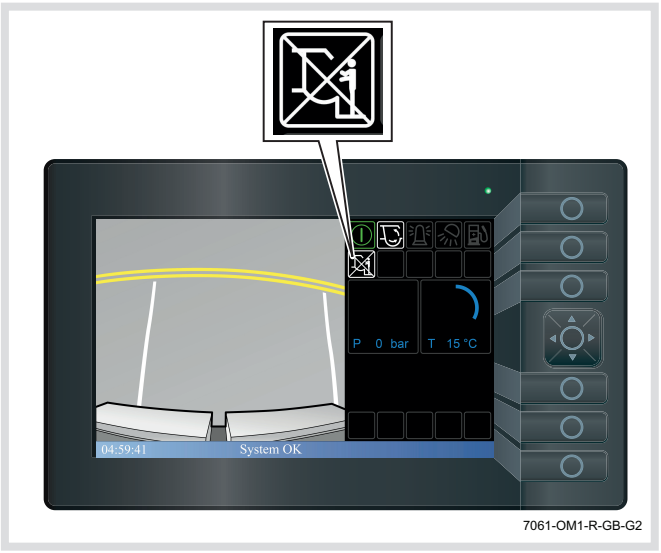
WARNING:
FOR EMERGENCY USE ONLY. FOOTBOARDS SHOULD NOT BE USED BY OPERATIVES WHEN THIS SWITCH IS ACTIVE AND INTERLOCKS HAVE BEEN DISABLED.

In the event of an emergency, the 30 km/h (25 km/h for narrow footboard) speed limiter and the reverse interlock can be overridden by operating the footboard interlock override switch in the following procedure:

1. Stop the vehicle.
2. Select neutral.
3. Press the footboard interlock override switch button (1).

When the footboard interlock override switch is operated:

- The warning buzzer will sound.
- The ‘Footboard interlock override switch operated’ pictogram will display on the screen.



- The 30 km/h (25 km/h in France) speed limit interlock is overridden; i.e. normal vehicle driving is enabled.
- The reverse interlock is overridden; i.e. normal vehicle driving is enabled.
- Operation of the refuse collection body compaction and tip mechanisms will be inhibited.
- Operation of the waste container lifting device will be inhibited.

Resetting the footboard interlock override switch

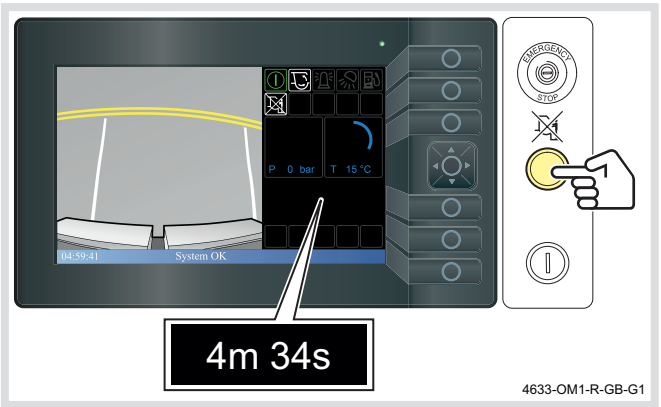
1. Stop the vehicle and apply the parking brake.
2. Press the footboard interlock override switch button (1).

When the footboard interlock override switch has been reset, a delay of at least 5 minutes occurs before operation of the refuse collection vehicle compaction and tip mechanisms and waste container lifting device mechanism is resumed.

During this time the ‘Footboard interlock override switch delay timer’ pictogram will display on the screen.

This delay will not start until the vehicle has stopped with the parking brake applied and the engine running.

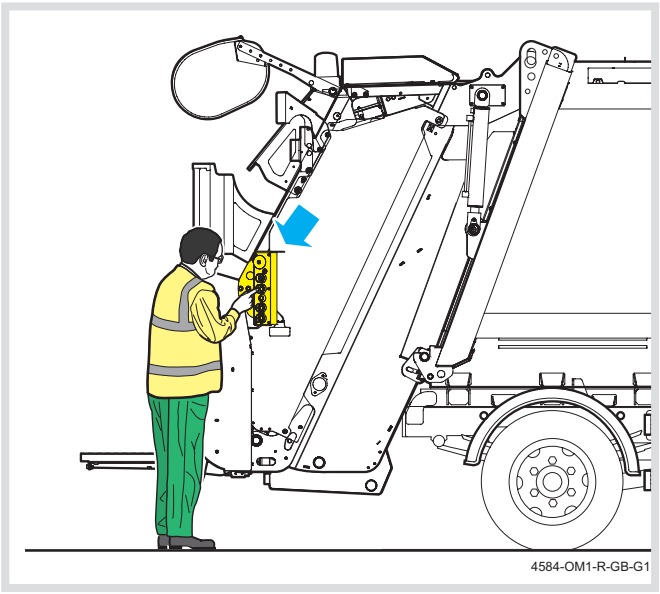
This delay cannot be overriden by cycling the ignition (i.e. switching the vehicle ignition system ‘off’ and then ‘on’ again) or by operating the battery isolator switch.



5.4.6 OPERATING THE COMPACTION MECHANISM CONTROLS

When operating the compaction mechanism controls stand beside the control panel and observe the operation of the compaction mechanism.

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


4584-OM1-R-GB-G1

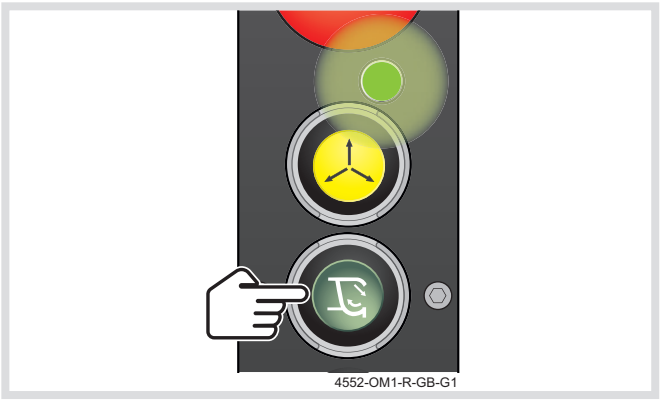
5.4.7 MANUAL LOADING CYCLE

Open system vehicles:

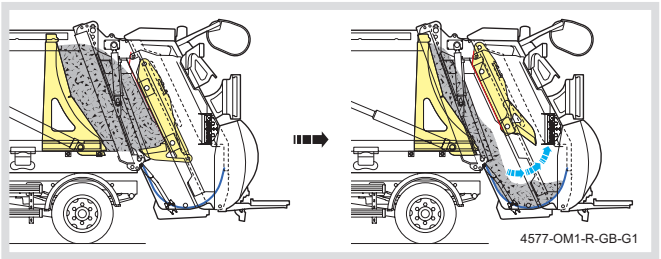
- **Vehicles without a light curtain.**
- **Vehicles with a light curtain and folding rave rail in lower position.**

To start one loading cycle:

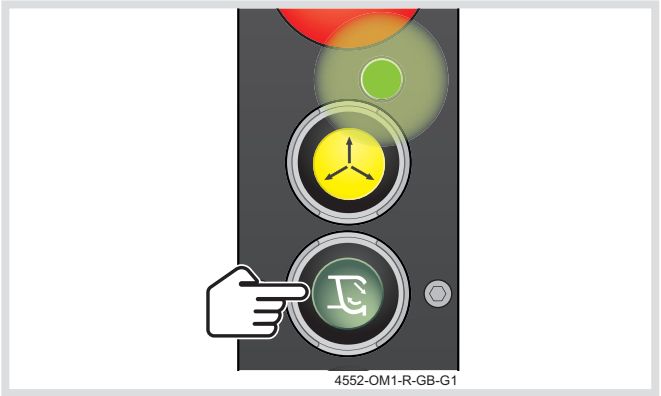
1. Check that the tailgate area is clear.
2. Press and release the ‘Start pack cycle’ push-button on the compaction mechanism control panel.


4552-OM1-R-GB-G1

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

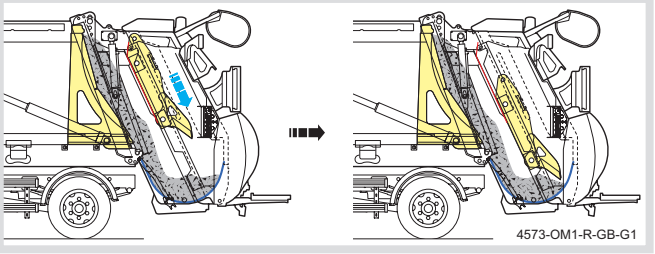

4577-OM1-R-GB-G1

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

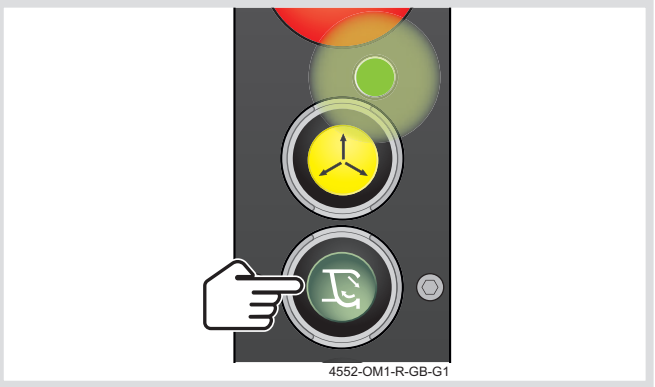

4552-OM1-R-GB-G1

- The engine speed will increase.

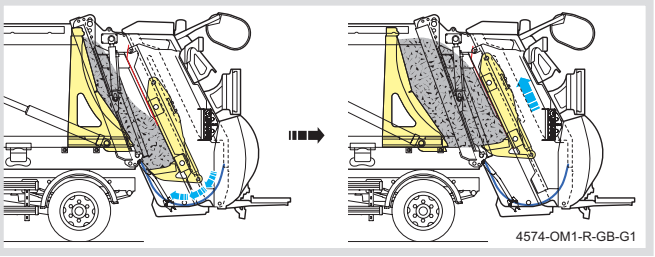
- The carriage plate will move downwards and then stop.



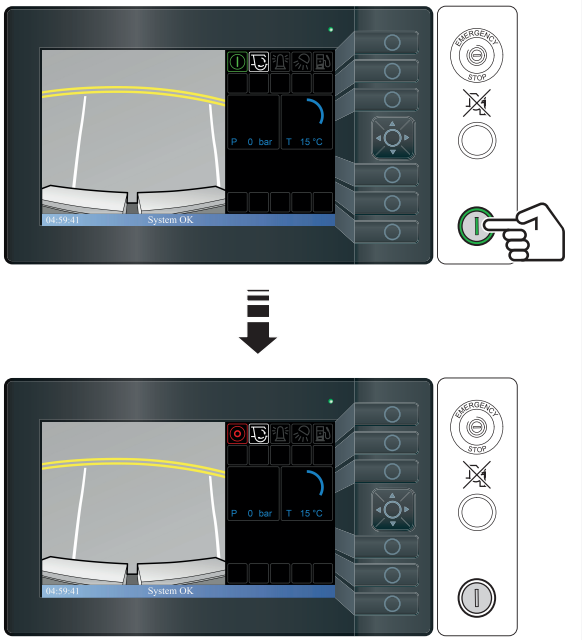
4. Press and hold the ‘Start pack cycle’ push-button.



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, press the ‘Body main’ button to disable the body and return the engine speed to idle.



Alternatively, if the vehicle has a manual gearbox, declutch and apply the brakes.

5.4.8 AUTOMATIC LOADING CYCLE

Closed system vehicles only:

- **Vehicles with a light curtain and folding rave rail in raised position.**
- **Vehicles with a light curtain and fixed (welded) rave rail.**

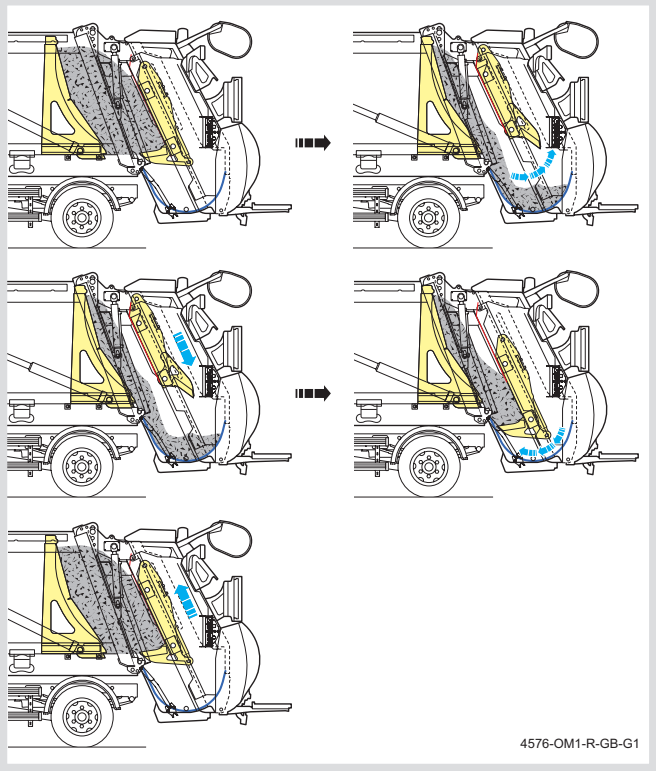
Closed waste container lifting device variants only

To start one loading cycle:

Check that the tailgate area is clear.

Press and release the ‘Start pack cycle’ push-button on the compaction mechanism control panel.

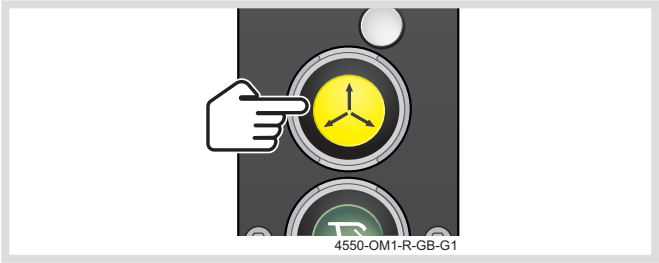
- The engine speed will increase. The compaction mechanism will carry out one or more complete compaction cycles, dependent on which function has been selected on the cab control panel. The engine speed will slow down to idle.



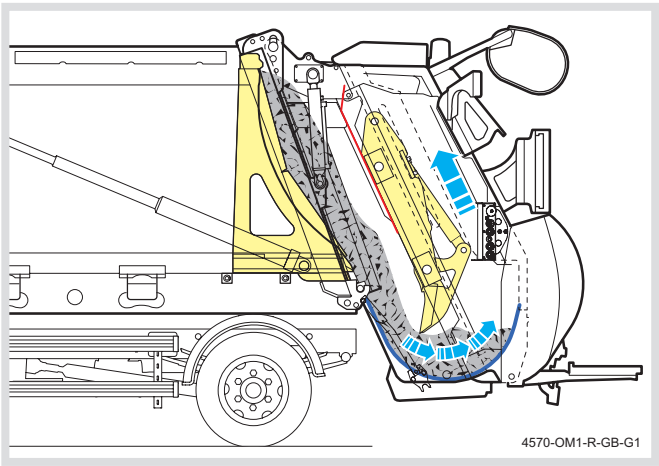
5.4.9 RESCUE

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.

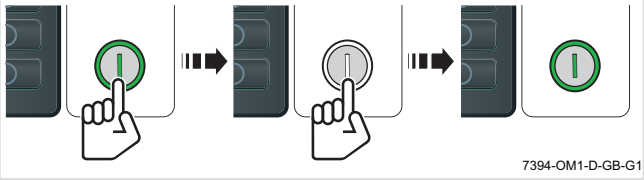


- The ‘Rescue’ warning pictogram will display on the cab control panel screen.

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.

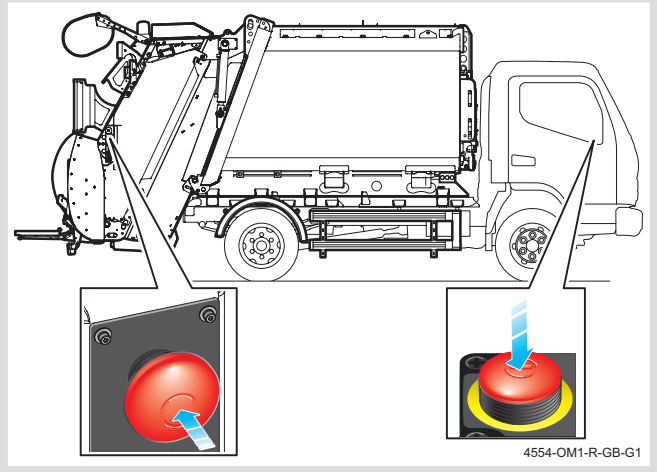
Press the ‘Body main’ button to turn the body off and then press the ‘Body main’ button again to enable the body.



5.4.10 EMERGENCY STOP

To stop the mechanism in an emergency, either:

1. Press any ‘Emergency stop’ push-button.

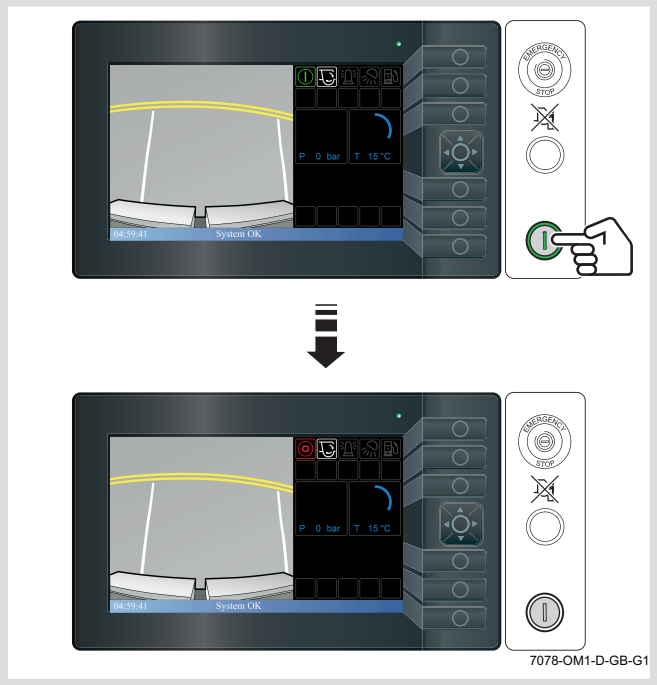


- The ‘Emergency stop’ buzzer to sound.
- The ‘Emergency stop operated’ pictogram will display in the cab control panel screen.

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

or;

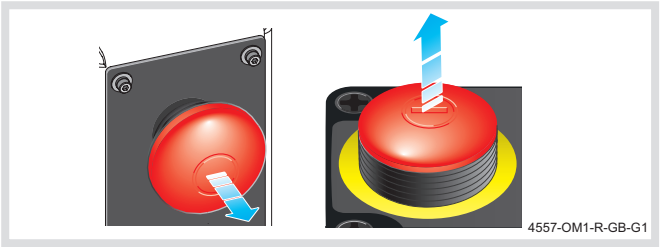
2. Press the ‘Body main’ button to disable the body.



- The screen will display the ‘Body system off’ mode.

To resume the loading cycle, either:

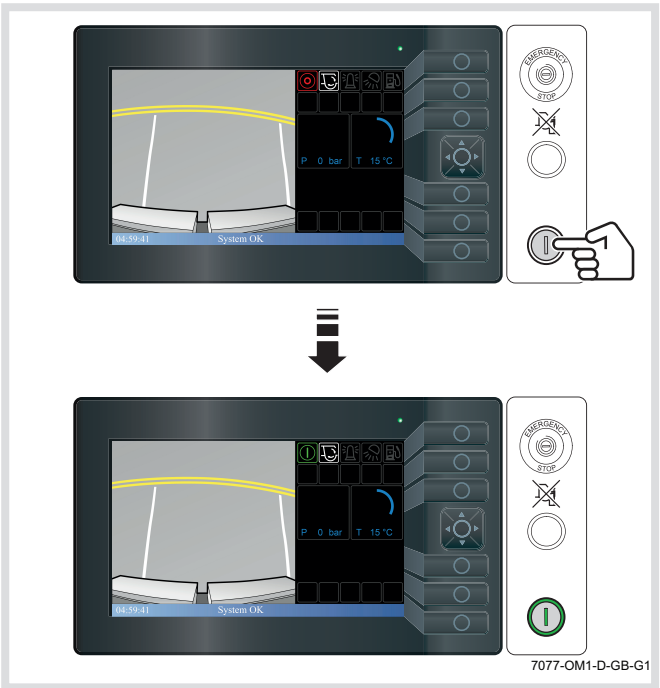
1. Pull out the ‘Emergency stop’ push-button, and then press the ‘Body main’ button to turn the body off. Press the button again to enable the body.



- The ‘System on’ pictogram will display in the cab control panel screen.

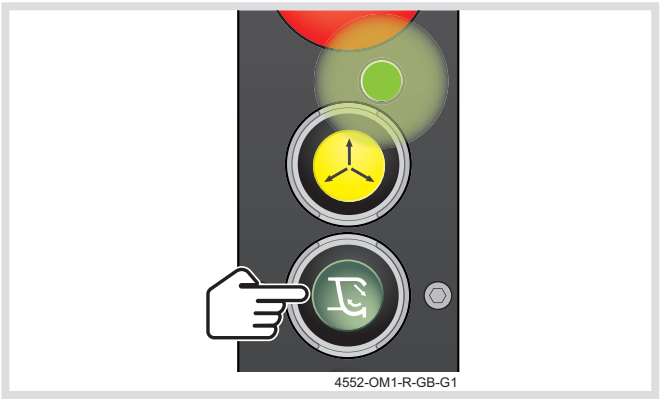
or (if the mechanism has been stopped by turning the ‘Body main’ switch ‘off’);

2. Press the ‘Body main’ button to enable the body.



- The screen will display the ‘Body system run’ mode.

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

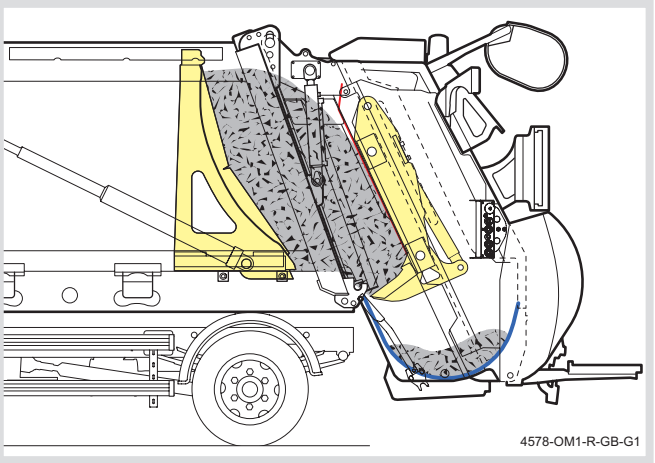


5.4.11 CYCLE SHORT STROKE OPERATION

Closed system vehicles only:

- **Vehicles with a light curtain and folding rave rail in raised position.**
- **Vehicles with a light curtain and fixed (welded) rave rail.**

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



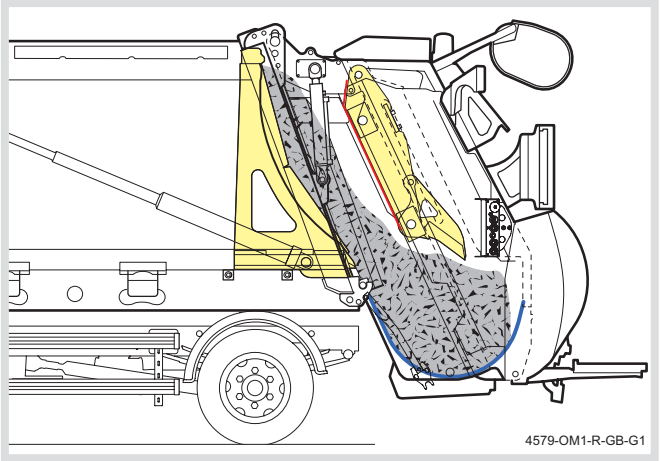
This may result in the packer plate pushing refuse out of the tailgate.

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

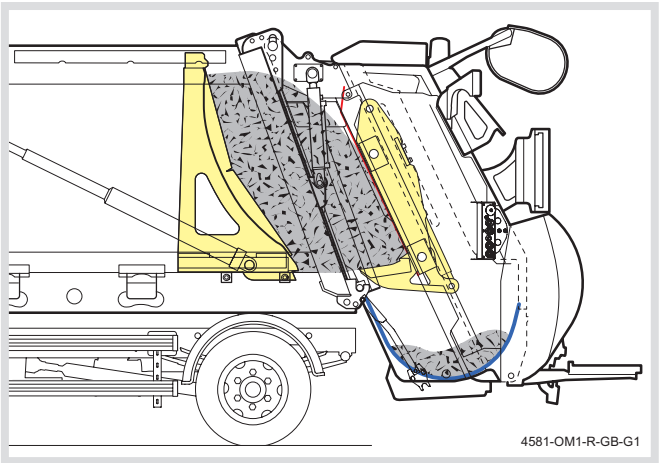
1. Press and release the ‘Start pack cycle’ push-button on the compaction mechanism control panel.

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

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.



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



3. Repeat this operation until the tailgate is clear.

5.5 WASTE CONTAINER LIFTING DEVICE OPERATION

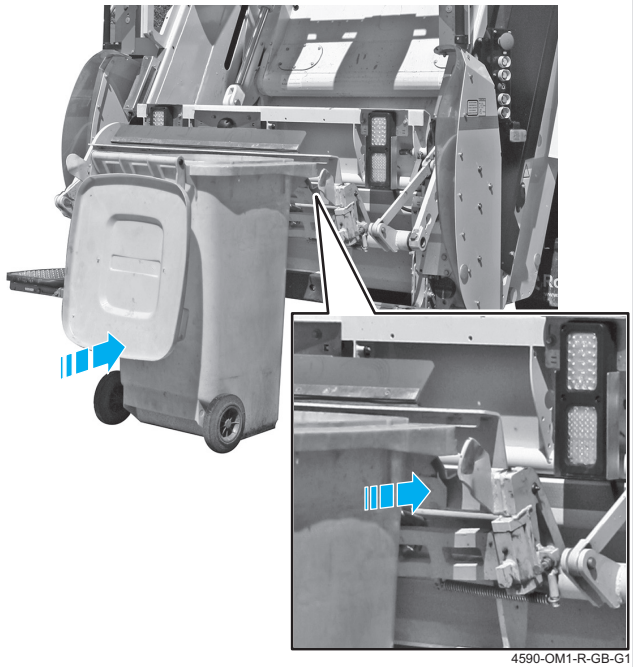
5.5.1 LIPPED WASTE CONTAINER

Cautions:
If the waste container has a hinged lid, open the lid before loading it onto the waste container lifting device.

If the lid is left closed, it may not fully open when the waste container is raised and prevent the contents discharging into the hopper.

If one or more footboards is fitted, lower footboard(s) before operating waste container lifting device.

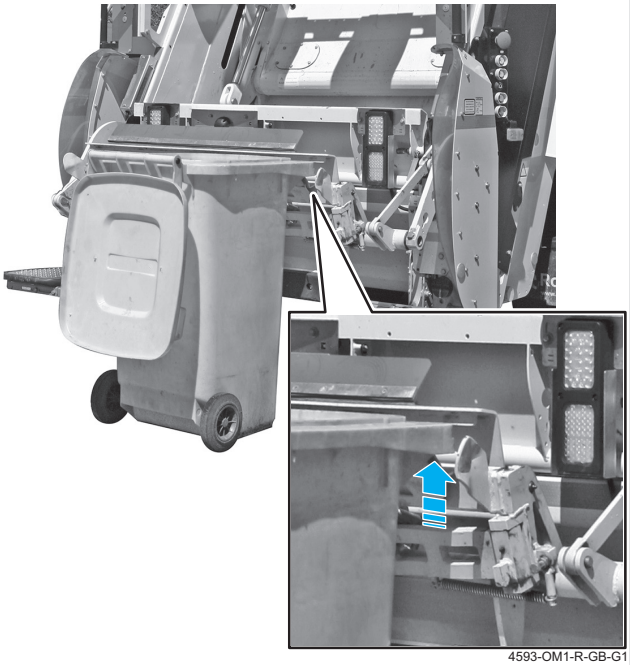
1. If the waste container has a hinged lid, open the lid.
2. If the vehicle has footboards, lower them.
3. Position the waste container with its lip above the lifting device comb.



4590-OM1-R-GB-G1

4. Operate the 'Lifting device up' push-button to raise the lifting device until the teeth of the comb engage the waste container lip.

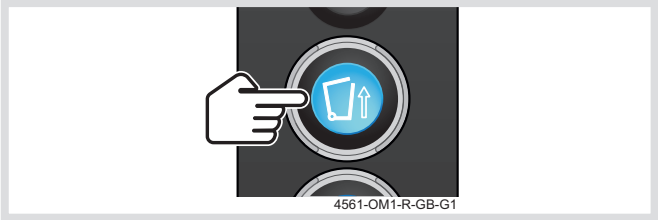
4561-OM1-R-GB-G1



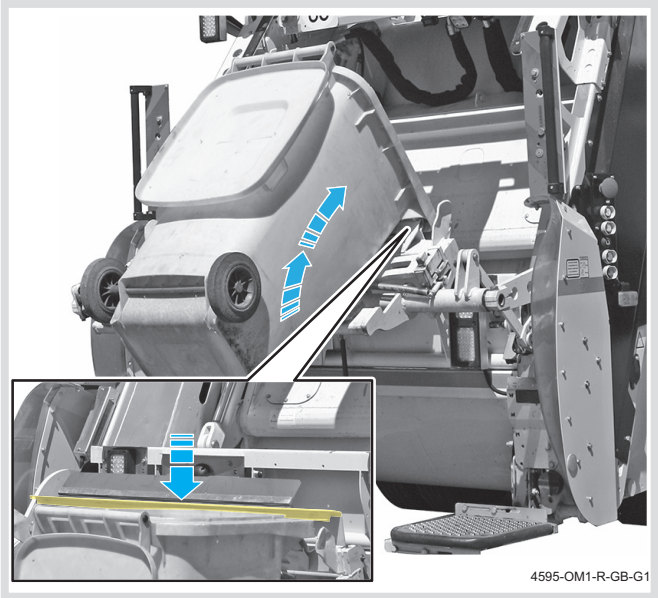
4593-OM1-R-GB-G1

WARNING:
MAKE SURE THAT THE WASTE CONTAINER LIP HAS ENGAGED CORRECTLY ON THE COMB.

5. Operate the ‘Lifting device up’ push-button to raise the lifting device until contents of the waste container have discharged into the hopper.


4561-OM1-R-GB-G1

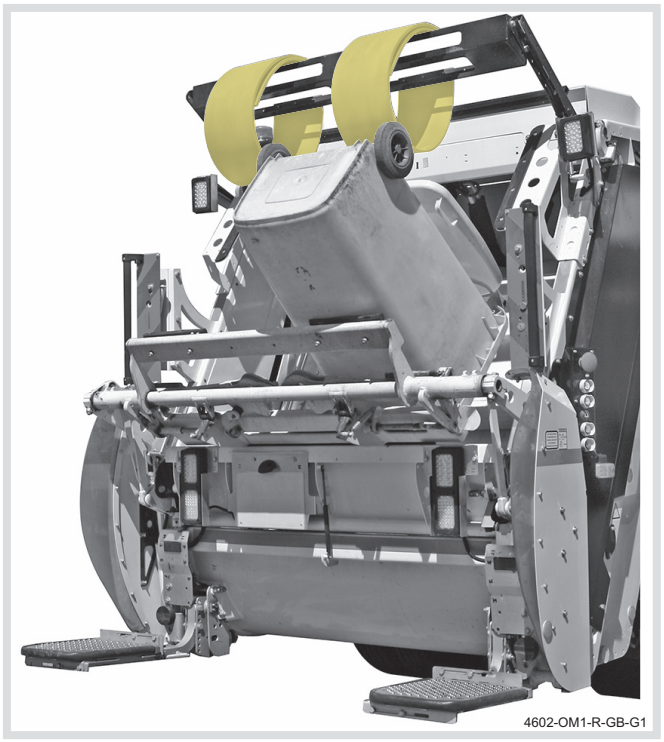
- The lip clamp will automatically clamp at 30° of lift.


4595-OM1-R-GB-G1

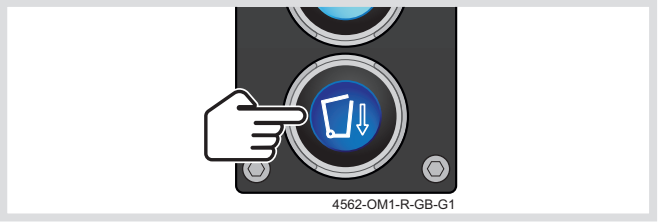
WARNINGS:
MAKE SURE THAT THE LIP CLAMP HAS OPERATED AND THE WASTE CONTAINER IS SECURELY HELD BEFORE THE LIFTING DEVICE ROTATES.
IF IN DOUBT, LOWER THE LIFTING DEVICE AND REPOSITION THE WASTE CONTAINER.

KEEP CLEAR OF THE MOVING MECHANISM.

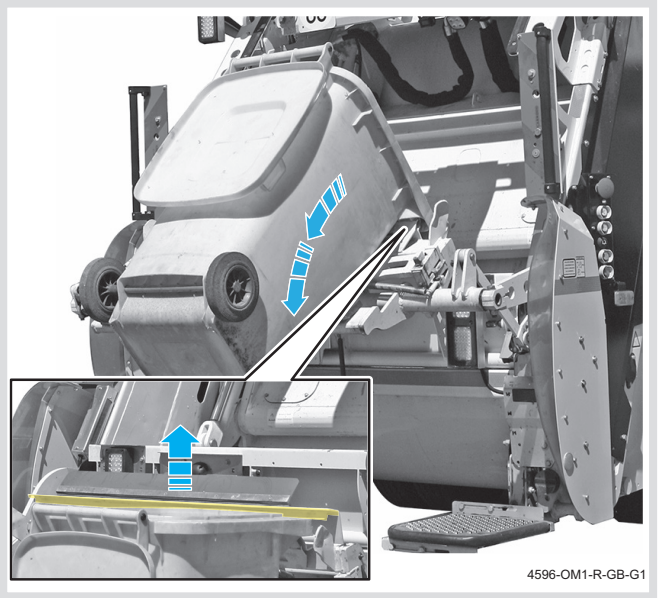
- As the waste container reaches the top of its cycle, the side of the waste container will impact on the bump bar to dislodge any contents remaining in the waste container.


4602-OM1-R-GB-G1

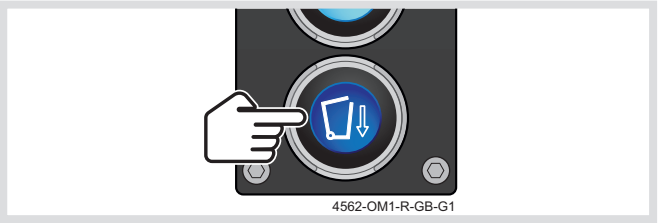
6. Operate the ‘Lifting device down’ push-button to lower the lifting device until the waste container reaches the ground and the lip of the waste container is released from the lifting device comb.



- The lip clamp will automatically unclamp as the waste container descends to 30° from the vertical.



7. Remove the waste container.
8. Operate the ‘Lifting device down’ push-button to lower the lifting device fully down before driving the vehicle to the next collection point.



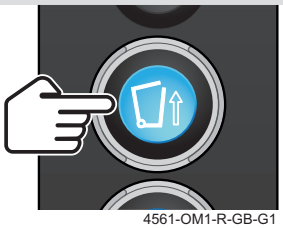
5.5.2 WASTE CONTAINERS WITH DIN TRUNNIONS

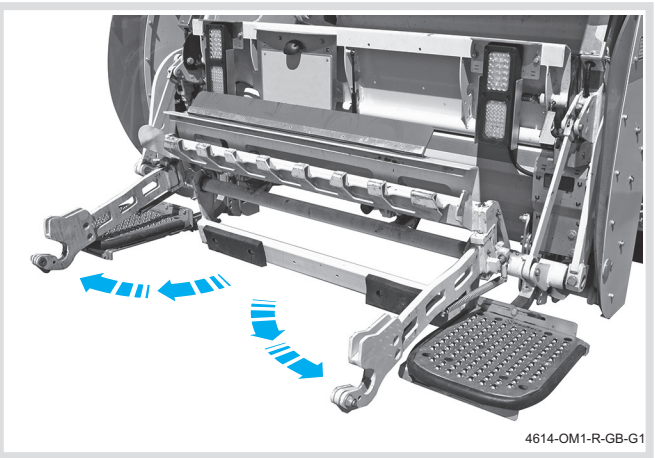
Cautions:
If waste container has a hinged lid, open the lid before loading it onto the waste container lifting device.

If the lid is left closed, it may not fully open when the waste container is raised and prevent the contents discharging into the hopper.

Lower the footboard(s) before operating waste container lifting device.

1. Lower the footboards (option).
2. Operate the 'Lifting device up' push-button to raise the lifting device carriage to height where DIN arms are just below the trunnions on the waste container and open the DIN arms.


4561-OM1-R-GB-G1


4614-OM1-R-GB-G1

3. Open the waste container lid.
4. Position the waste container between the DIN arms so that the trunnions on the side of the waste container align with the hooks in the arms.


4623-OM1-R-GB-G1

5. Operate the 'Lifting device up' push-button to raise the lifting device until the trunnions on the side of the waste container engage the hooks in the arms.


4561-OM1-R-GB-G1

WARNING:
MAKE SURE THAT THE WASTE CONTAINER TRUNNIONS ARE ENGAGED CORRECTLY IN THE DIN ARMS.

6. Operate the 'Lifting device up' push-button to raise the lifting device until contents of the waste container have discharged into the hopper.

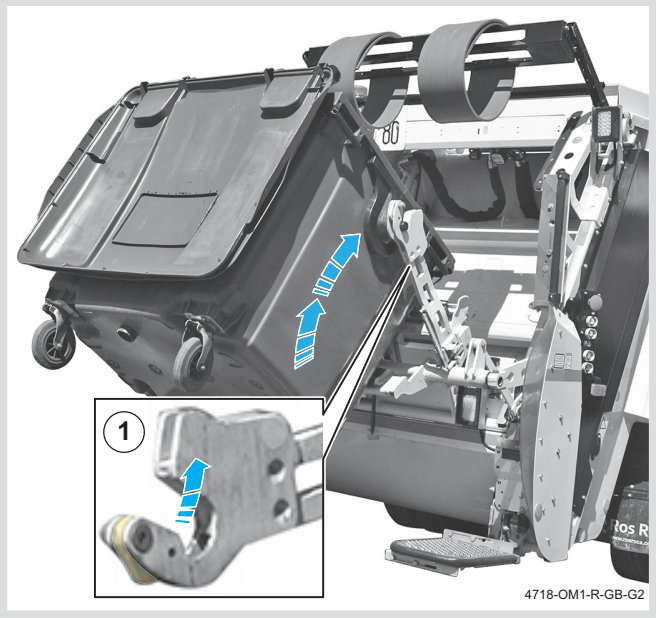

4561-OM1-R-GB-G1

WARNINGS:
KEEP CLEAR OF THE MOVING MECHANISM.

MAKE SURE THAT THE WASTE CONTAINER IS SECURELY LOCKED IN THE DIN ARMS AS THE LIFTING DEVICE RISES.

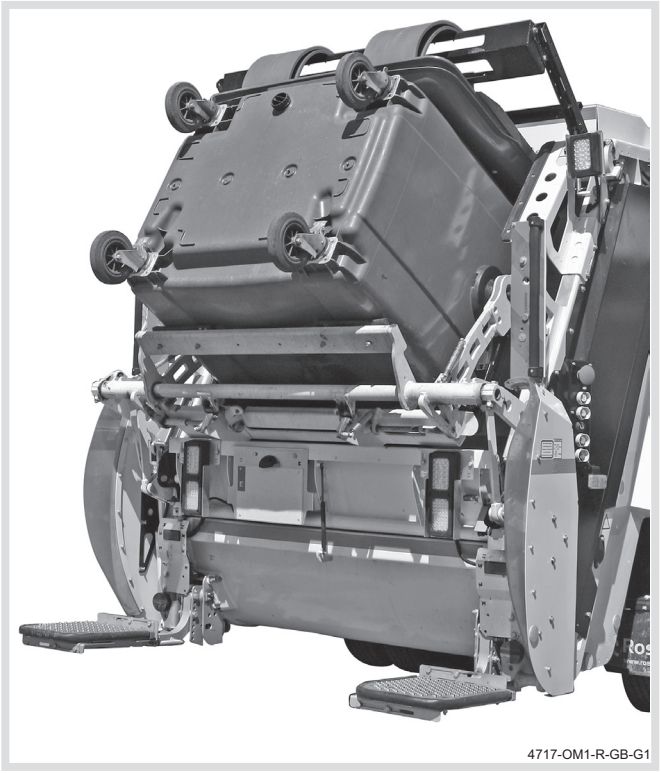
IF IN DOUBT, LOWER THE LIFTING DEVICE AND REPOSITION THE WASTE CONTAINER.

- As the waste container starts to rotate, locking plates in the DIN arm hooks rotate under gravity to lock the trunnions in the hooks (1).

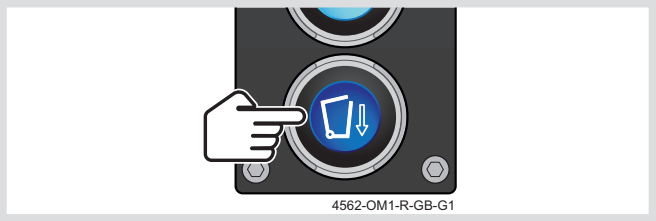


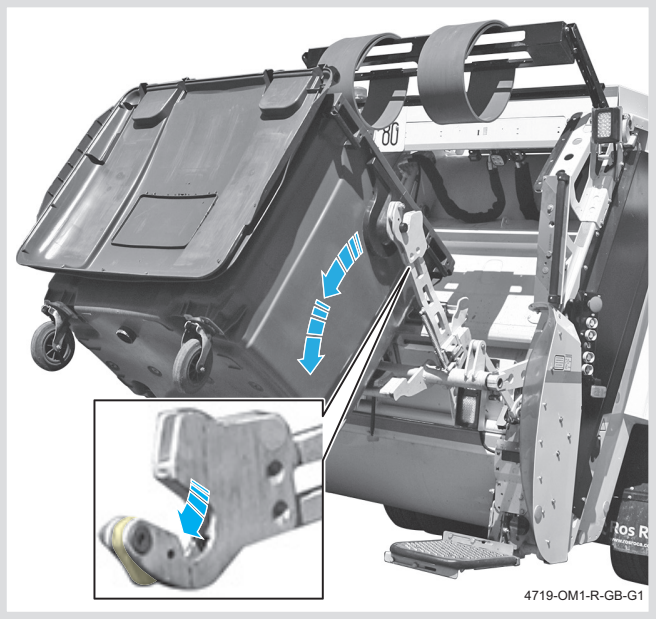
4718-OM1-R-GB-G2

- The side of the waste container will impact on the bump bar as the waste container reaches the top of its cycle to dislodge any contents remaining in the waste container.


4717-OM1-R-GB-G1

7. Operate the ‘Lifting device down’ push-button to lower the lifting device until the waste container reaches the ground and the trunnions of the waste container disengage from the DIN arms.
   - As the waste container lowers, the locking plates in the DIN arm hooks rotate under gravity away from the waste container trunnions.


4562-OM1-R-GB-G1


4719-OM1-R-GB-G1

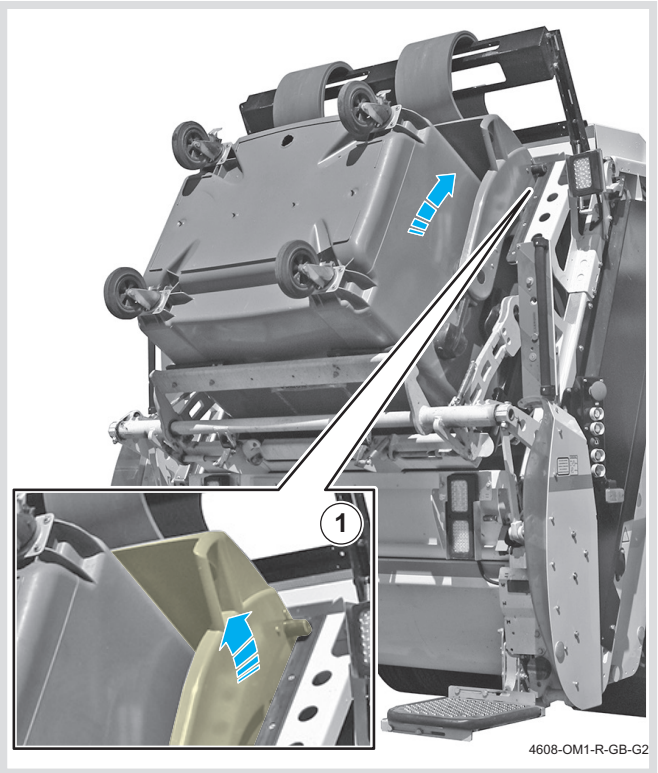
   - The trunnions on the side of the waste container will automatically disengage from the DIN arms as the waste container lands on the ground.


4624-OM1-R-GB-G1

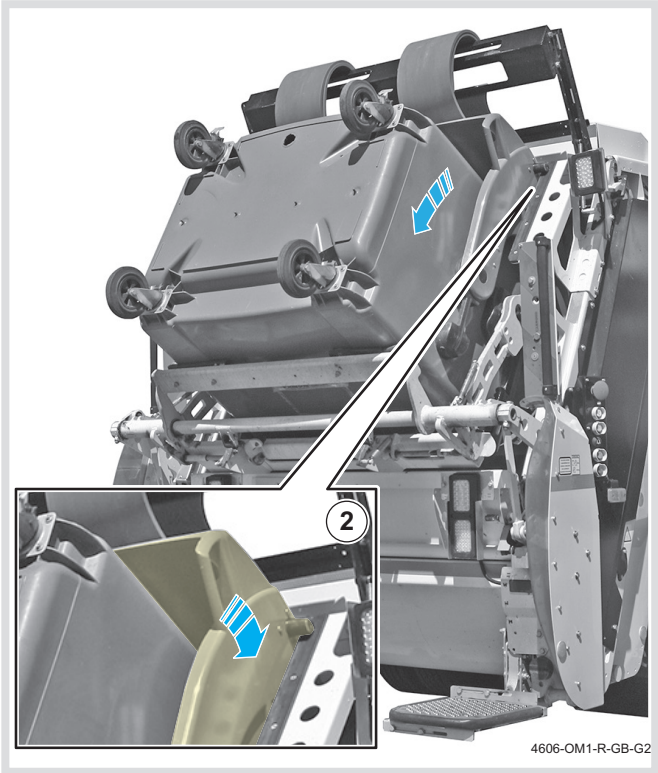
8. Remove the waste container and close its lid.
9. Stow the DIN arms.
10. Operate the ‘Lifting device down’ push-button to lower the lifting device fully down before driving the vehicle to the next collection point.

5.5.3 ROLL-TOP WASTE CONTAINERS

Roll-top waste containers have spring loaded lids which do not open under gravity when the waste container is emptied by the lifting device.



- As the waste container reaches the top of its cycle, the spigot on each side of the waste container lid will engage on the lid opener and automatically open the lid (1), and the side of the waste container will impact on the bump bar to dislodge any contents remaining in the waste container.



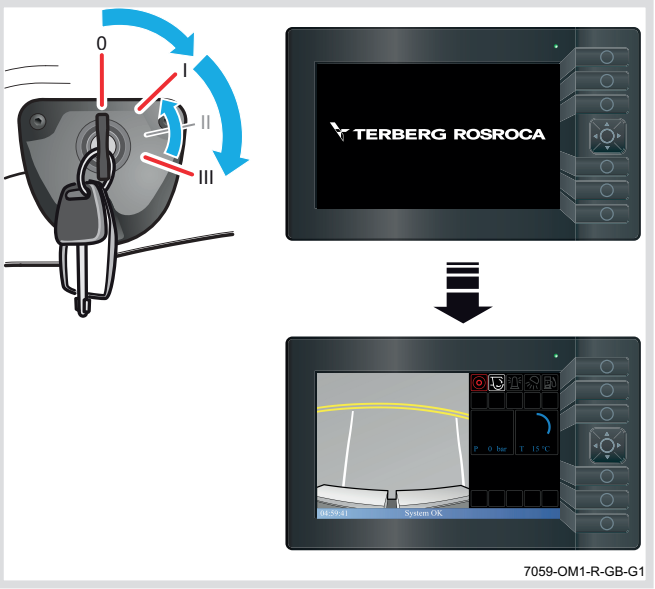
- As the waste container lowers, the spigots on the waste container lid disengage the lid opener allowing the springs to close the lid (2).

5.6 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.

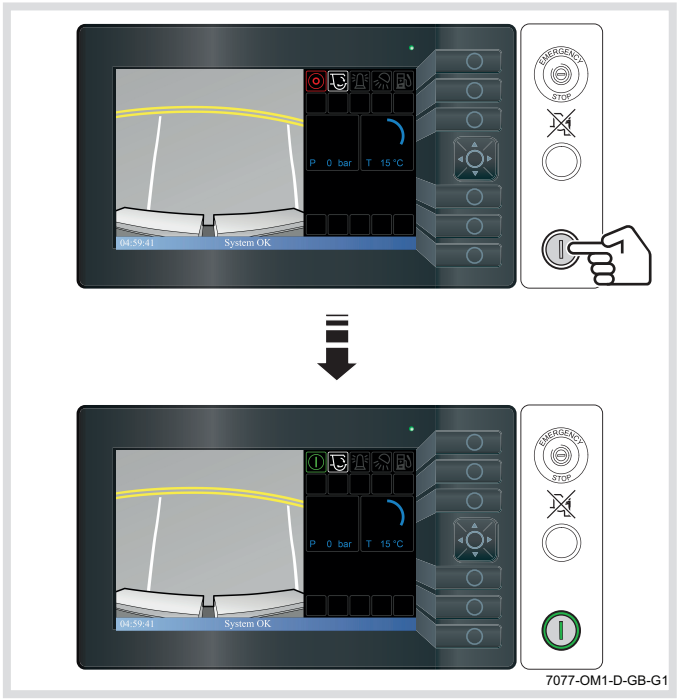
5.6.1 DISCHARGING REFUSE USING IN-CAB CONTROLS

1. Make sure the vehicle is suitably positioned on stable ground and the rear of the vehicle is clear.
2. Switch the ignition on.
3. Engage the PTO (see chassis cab manufacturer's operating instructions).
4. Start and run the engine.
   - The cab control panel will initialise and then display the 'Body system off' mode.



7059-OM1-R-GB-G1

5. Press the 'Body main' button to enable the body.

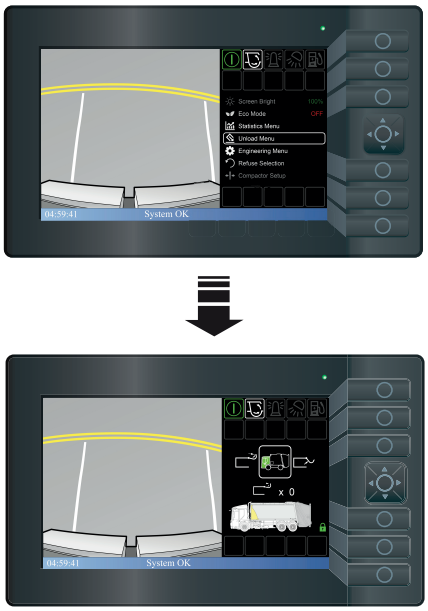


7077-OM1-D-GB-G1

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

Check that the 'System on' pictogram displays on the screen.

6. Use the up and down arrow on the cursor to highlight the ‘Unload Menu’ option. When the ‘Unload Menu’ is highlighted press the button in the middle of the cursor to select the ‘Unload Menu’.

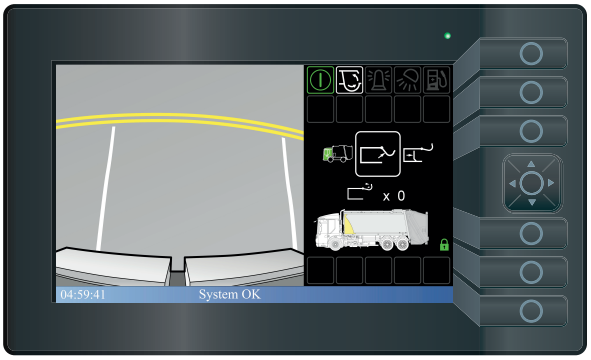


7103-OL1-D-GB-G1

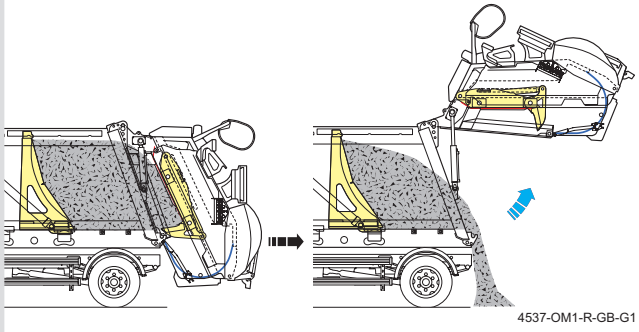
7. Use the cursor left and right arrows to highlight the in-cab discharge controls. The in-cab controls are selected when the cab is shown in green.

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

8. Use the the left and right arrows on the cursor to highlight the ‘Tailgate raise’ icon. When the ‘Tailgate raise’ icon is highlighted, press and hold the button in the middle of the cursor to raise the tailgate. When the tailgate is fully raised release the button.



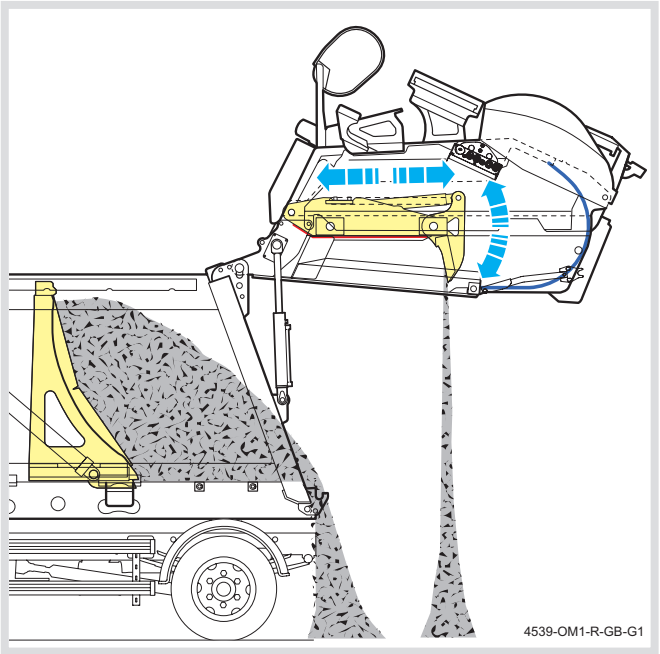
7104-OL1-D-GB-G1



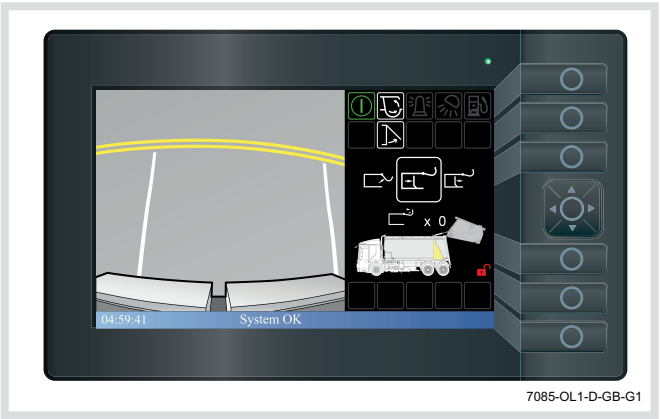
4537-OM1-R-GB-G1

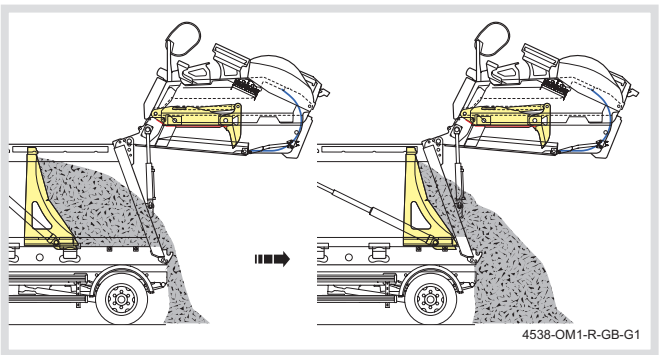
- The ‘Vehicle reversing’ audible warning device will sound when the tailgate rises.
- When the tailgate is fully raised, the ‘Tailgate raised’ pictogram will display on the cab control panel screen.

- 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.



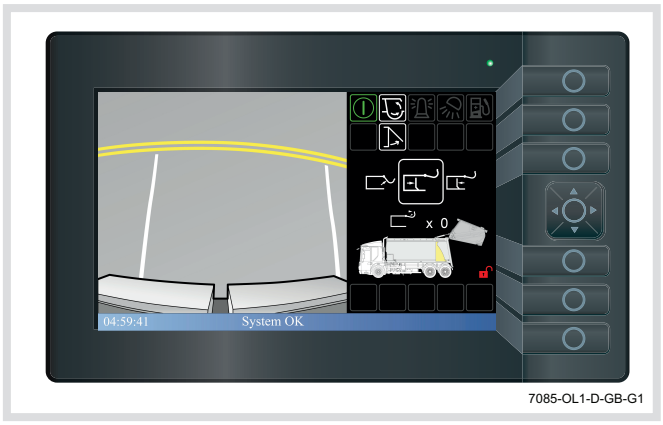
9. When the in-cab controls have been selected, use the left and right cursor arrows to highlight the ‘Ejector plate eject’ icon. When the ‘Ejector plate eject’ icon is highlighted, hold down the button in the middle of the cursor to eject the ejector plate.

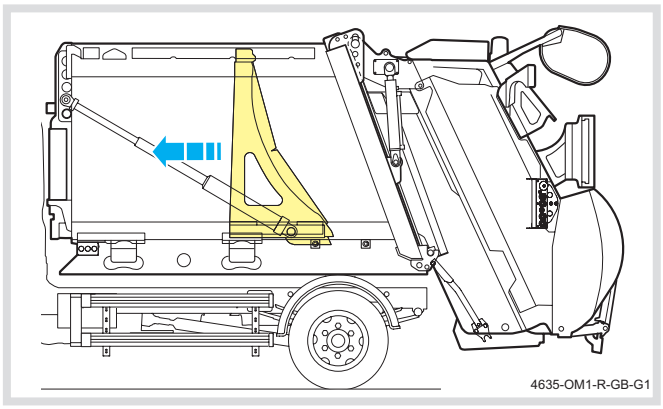




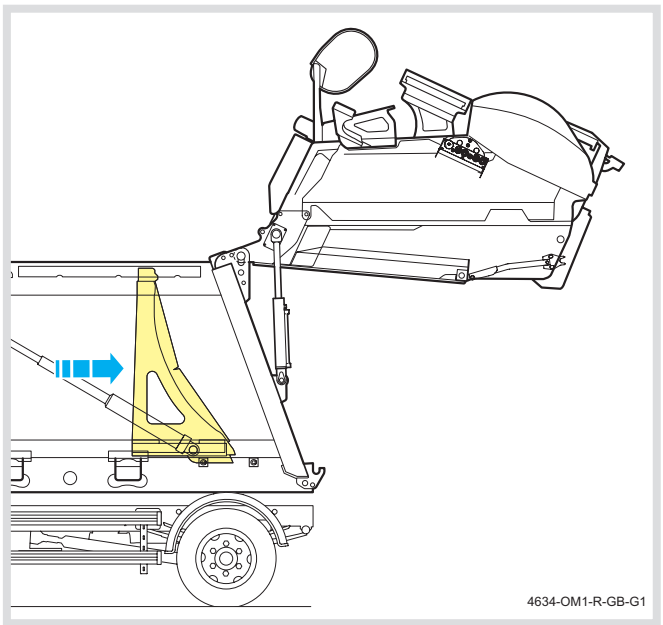
Leave the ejector plate at rear of body ready for next collection.

10. 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.





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



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 RAISED.

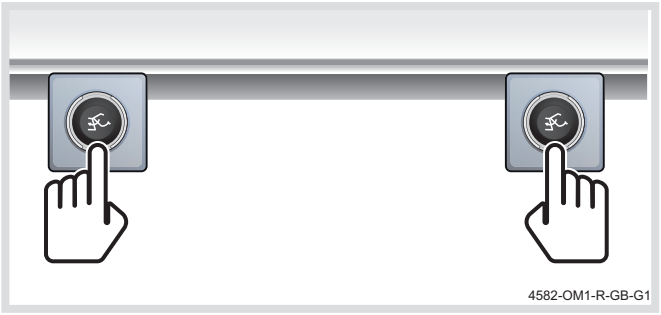
11. Move the vehicle to a safe area.

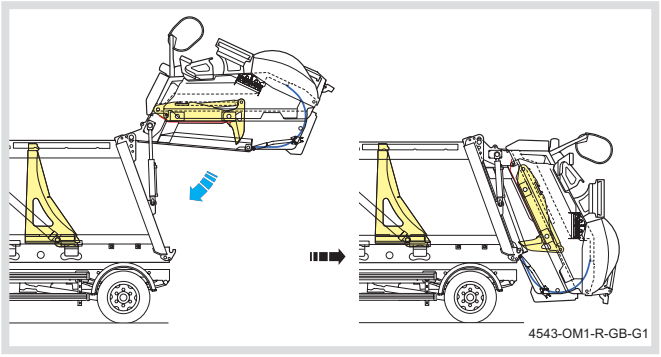
WARNINGS:
MAKE SURE THAT THE TAILGATE AREA AND BODY/TAILGATE SEAL IS CLEAR OF DEBRIS BEFORE LOWERING TAILGATE.

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

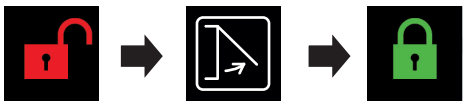
THE TAILGATE SEAL SHOULD BE KEPT IN GOOD CONDITION AND REPLACED IF DAMAGED.

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


4582-OM1-R-GB-G1

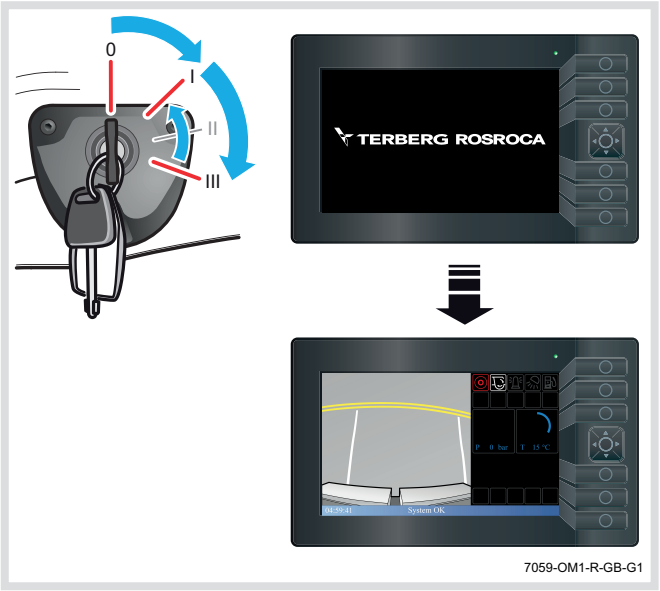

4543-OM1-R-GB-G1

- The engine speed will increase.
- 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.


2805-OM1-D-GB-G1

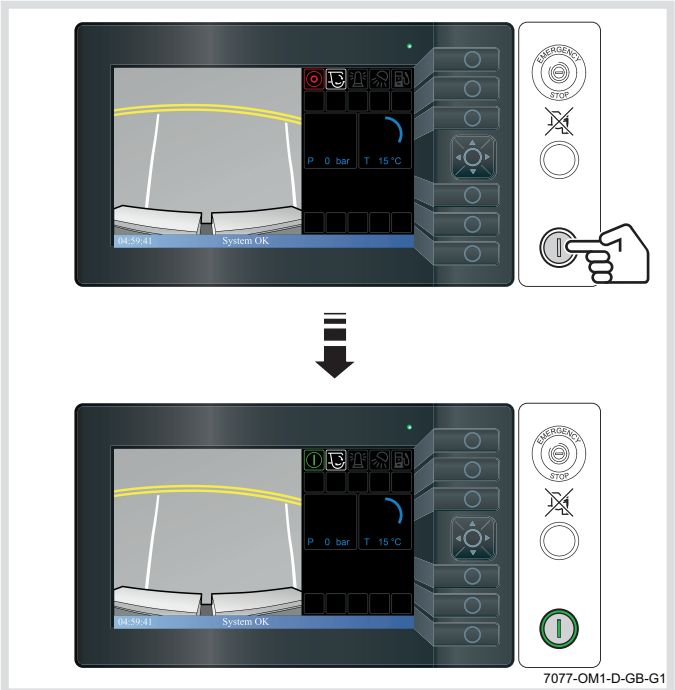
5.6.2 DISCHARGING REFUSE USING EXTERNAL CONTROLS

1. Make sure the vehicle is suitably positioned on stable ground and the rear of the vehicle is clear.
2. Switch the ignition ‘on’.
3. Engage the PTO (see chassis cab manufacturer’s operating instructions).
4. Start and run the engine.
   - The cab control panel will initialise and then display the ‘Body system off’ mode.



7059-OM1-R-GB-G1

5. Press the ‘Body main’ button to enable the body.

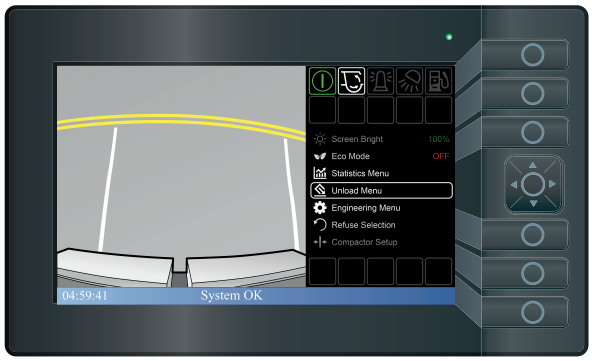


7077-OM1-D-GB-G1

The screen will display the ‘Body system run’ mode

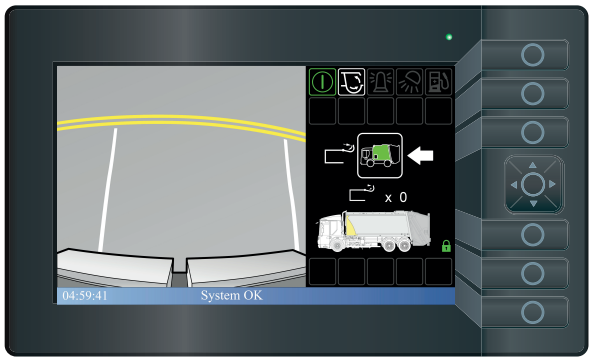
Check that the ‘System on’ pictogram displays on the screen.

6. Use the up and down arrows on the cursor to highlight the ‘Unload Menu’. When the ‘Unload Menu’ is highlighted press the middle button on the cursor to select the ‘Unload Menu’.



7079-OL1-D-GB-G1

7. Press the button in the middle of the cursor to select the external body controls. When the body is displayed in green the external controls will now function.

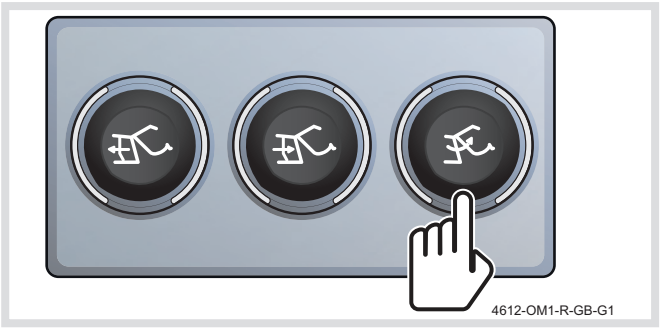


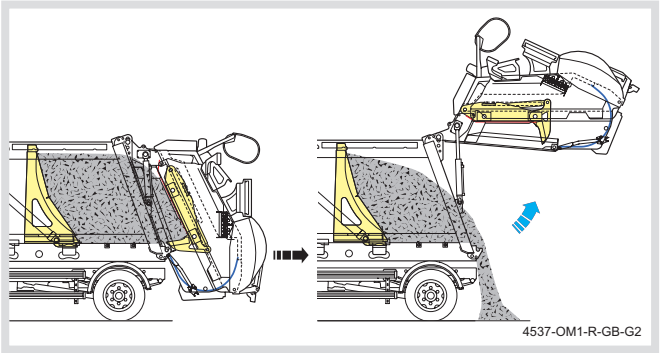
7063-OL1-D-GB-G1

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 RAISED.

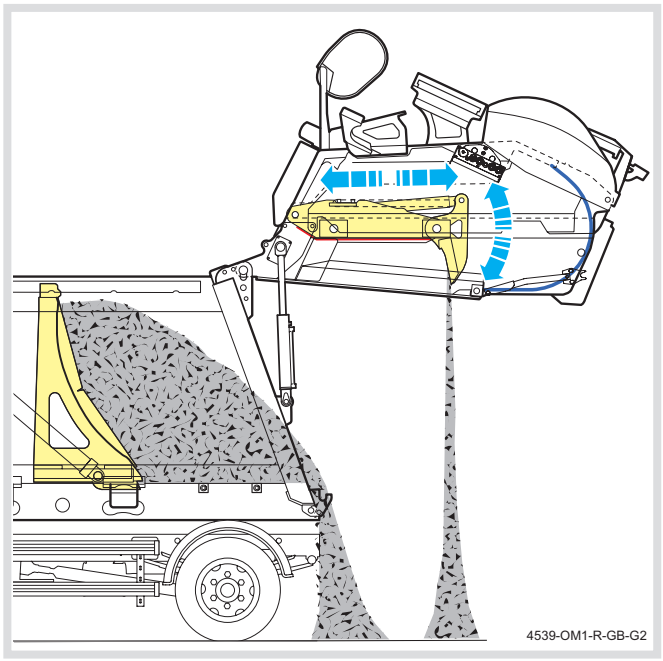
8. Press the ‘Tailgate raise’ push-button on the ‘External discharge’ control panel until the tailgate is fully raised and then release the push-button.



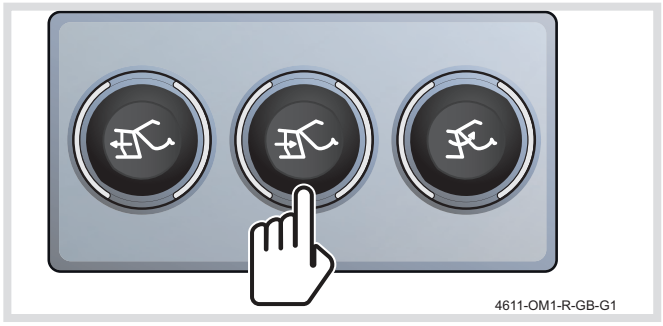


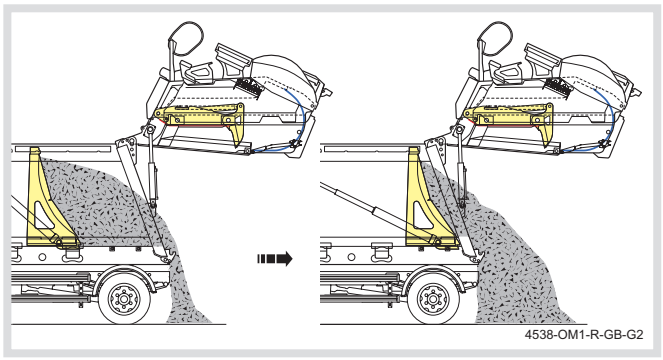
- The ‘Vehicle reversing’ audible warning device will sound when the tailgate rises.
- When the tailgate is fully raised, the ‘Tailgate raised’ pictogram will display on the cab control panel screen.

- 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.



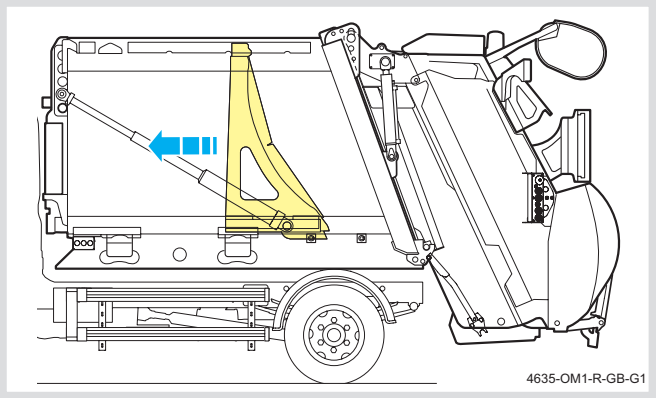
9. Press the ‘Ejector plate eject’ push-button on the ‘External discharge’ control panel to discharge contents of body and then release the push-button.



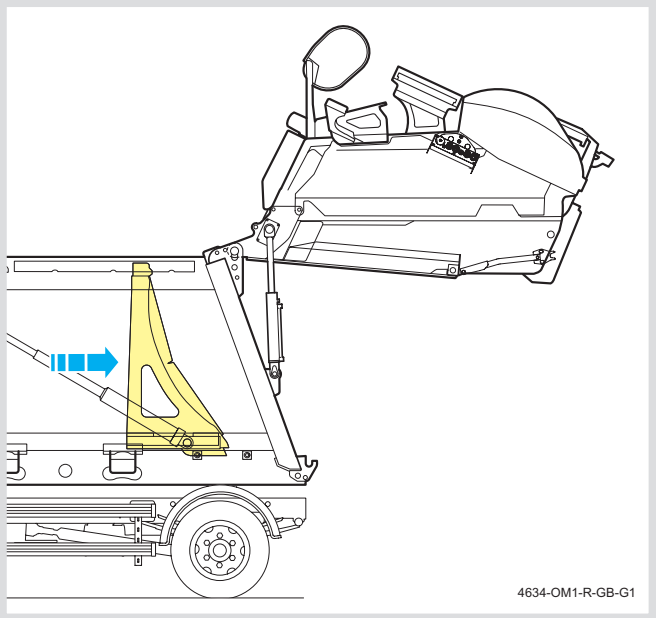


Leave barrier at rear of body ready for next collection.

10. 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.



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 RAISED.

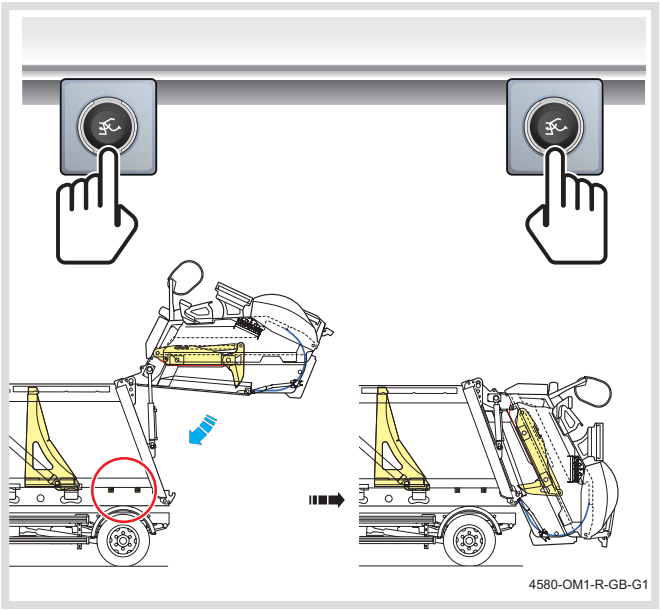
11. Move vehicle to a safe area.

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.

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



- The engine speed will increase.
  - If ejection plate is still in eject position, it will move forwards before tailgate starts to lower.
- 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.

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

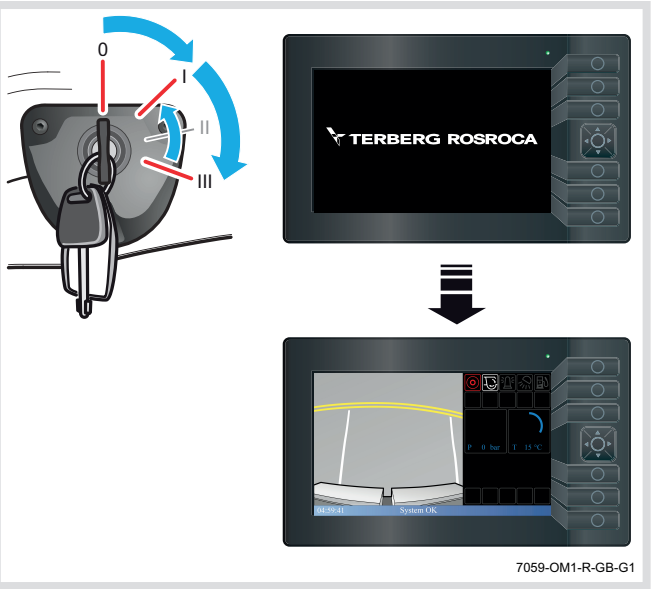
Bodies are normally supplied with one prop; two props are available as a customer option.

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'.

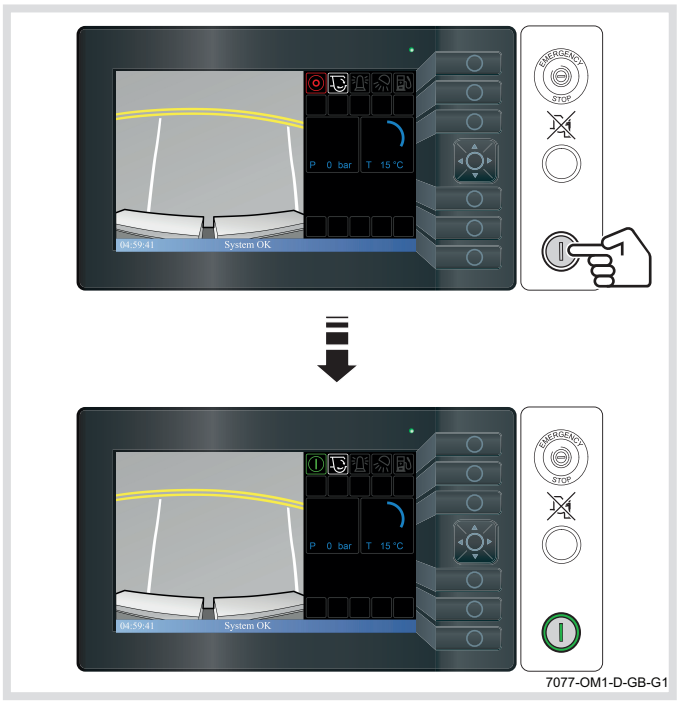
WARNING:
MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE RAISED.

4. Switch the ignition 'on'.
5. Engage the PTO (see chassis cab manufacturer's operating instructions).
6. Start and run the engine.



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

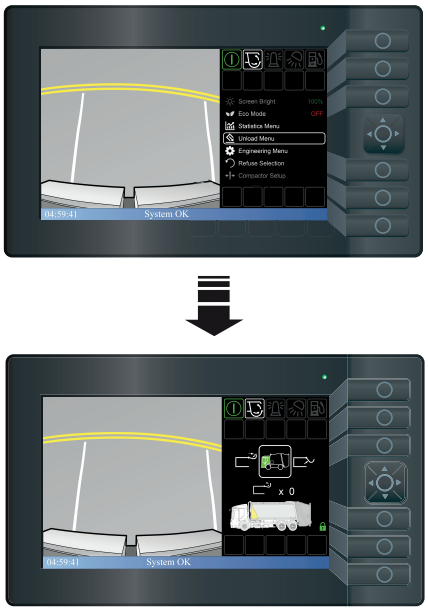
7. Press the 'Body main' button to enable the body.



The screen will display the 'Body system run' mode

Check that the 'System on' pictogram displays on the screen.

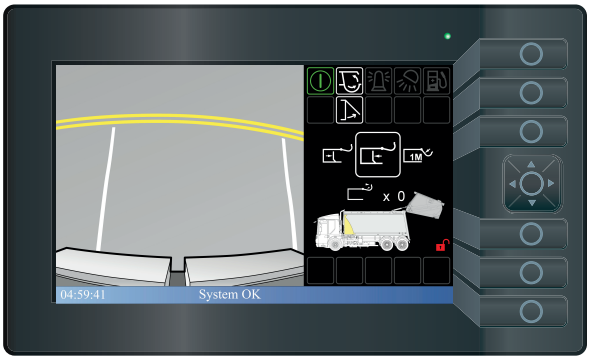
8. Use the up and down arrow on the cursor to highlight the ‘Unload Menu’ option. When the ‘Unload Menu’ is highlighted press the button in the middle of the cursor to select the ‘Unload Menu’.
9. Use the left and right arrows on the cursor to highlight the in-cab controls. the in-cab discharge controls option is selected when the cab is shown in green.



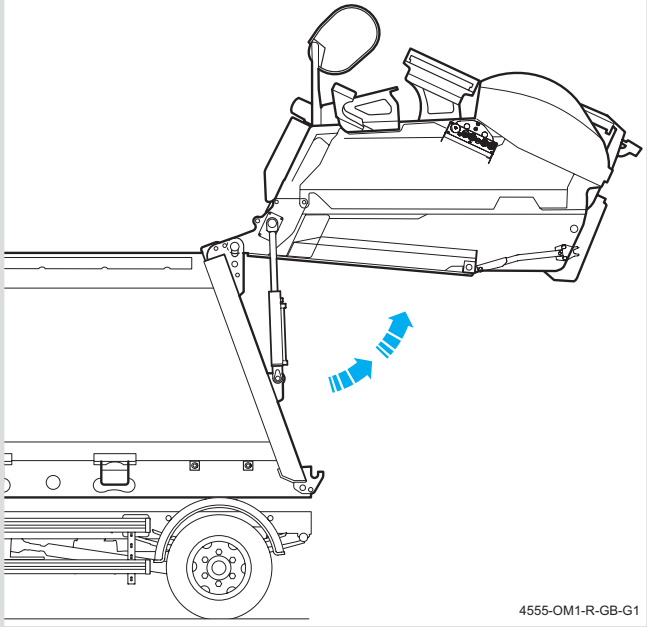
7103-OL1-D-GB-G1

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

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



7087-OL1-D-GB-G1

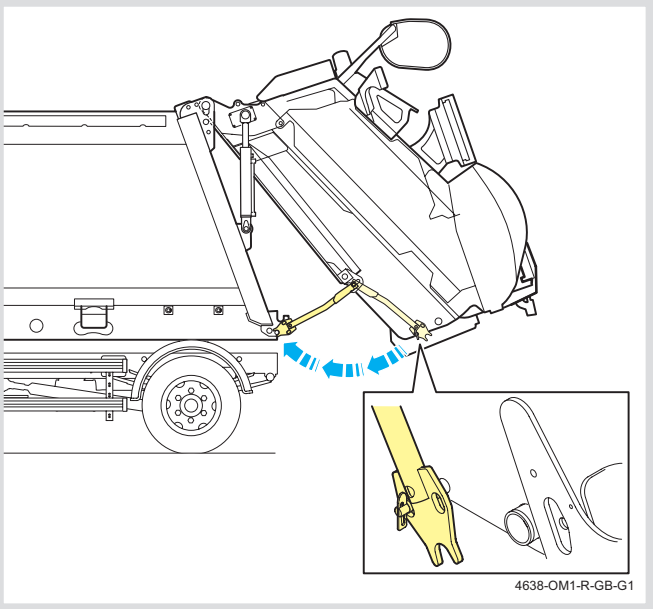


4555-OM1-R-GB-G1

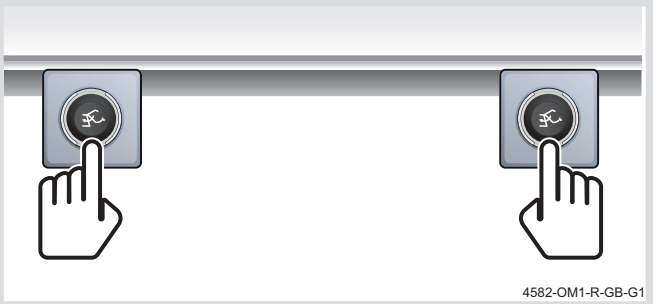
- The ‘Vehicle reversing’ audible warning device will sound when the tailgate rises.
- When the tailgate is raised, the ‘Tailgate out-of-locks’ pictogram will display on the cab control panel screen.

2806-OM1-D-GB-G1

11. 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.


4638-OM1-R-GB-G1

12. 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.


4582-OM1-R-GB-G1

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

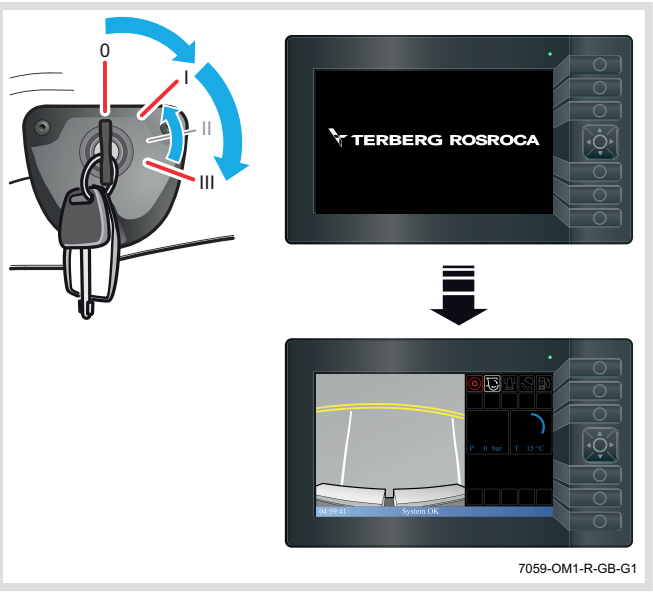
13. Stop the engine.

5.7.2 TO UNPROP THE TAILGATE

1. Engage the parking brakes.
2. Select Neutral ‘N’.

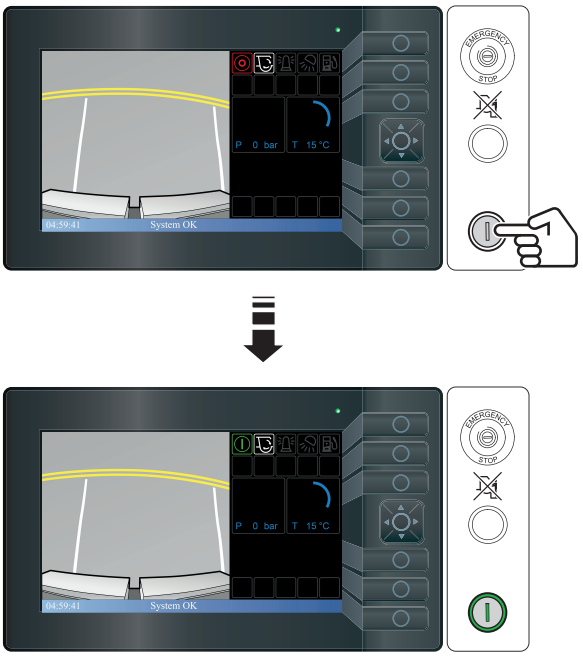
WARNING:
MAKE SURE THAT YOU KNOW THE HEIGHT OF YOUR VEHICLE WITH THE TAILGATE AND WASTE CONTAINER LIFTING DEVICE RAISED.

3. Switch the ignition ‘on’.
4. Engage the PTO (see chassis cab manufacturer’s operating instructions).
5. Start and run the engine.
   - The cab control panel will initialise and then display the ‘Body system off’ mode.



7059-OM1-R-GB-G1

6. Press the ‘Body main’ button to enable the body.

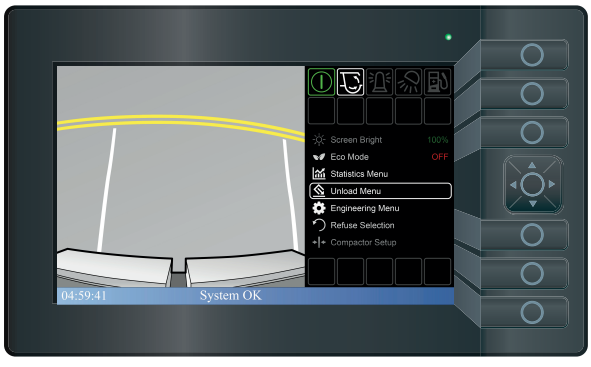


7077-OM1-D-GB-G1

The screen will display the ‘Body system run’ mode

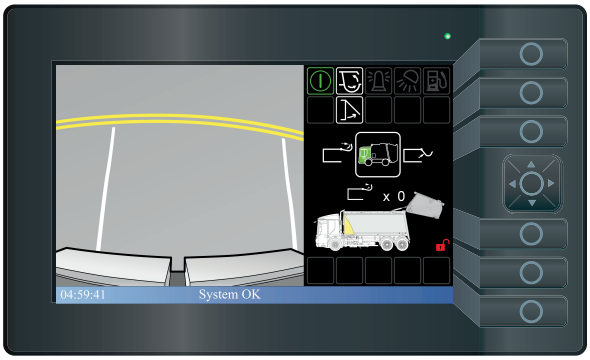
Check that the ‘Tailgate out-of-locks’ pictogram displays in the message area of the screen.

7. Use the up and down arrow on the cursor to highlight the ‘Unload Menu’ option. When the ‘Unload Menu’ is highlighted press the button in the middle of the cursor to select the ‘Unload Menu’.



7079-OL1-D-GB-G1

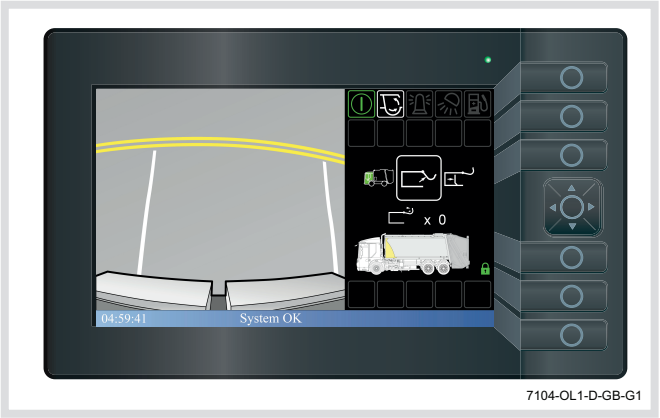
8. Use the left and right arrows on the cursor to highlight the in-cab controls. The in-cab controls option is selected when the cab is shown in green.



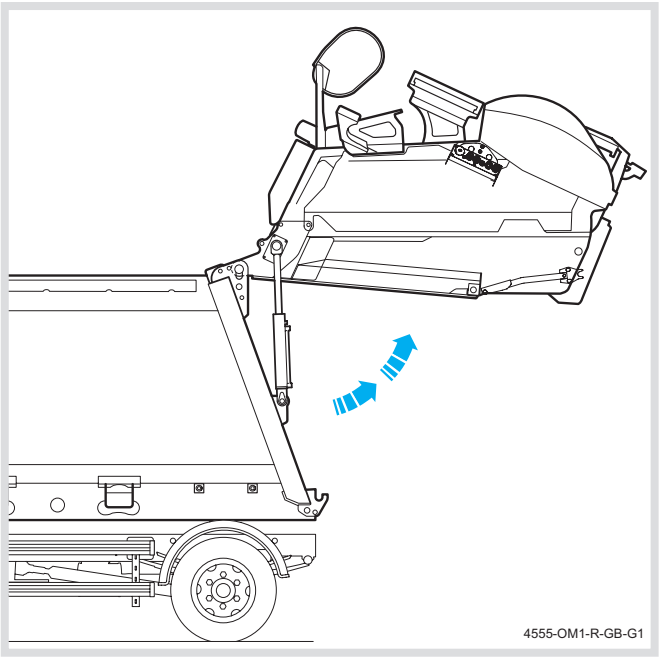
7088-OL1-D-GB-G1

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

9. Use the left and right arrows on the cursor to highlight the ‘Raise tailgate’ icon and then press and hold the button in the middle of the cursor to raise the tailgate approximately 1 metre to take the weight off the prop and then release the button.

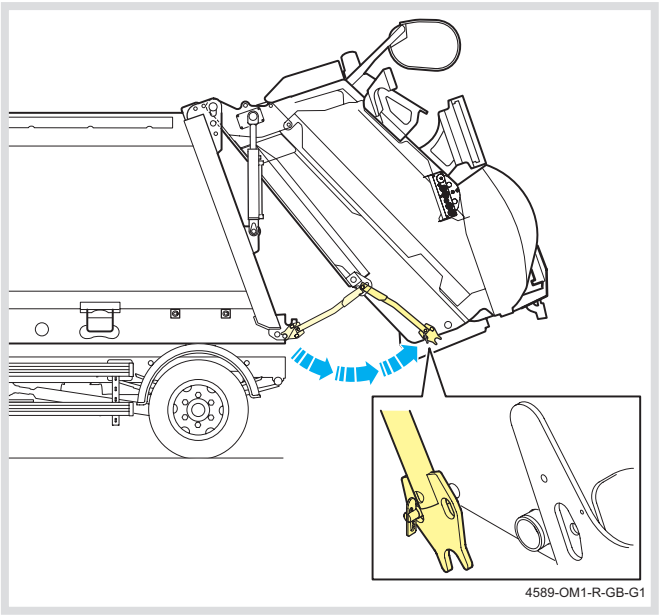


7104-OL1-D-GB-G1

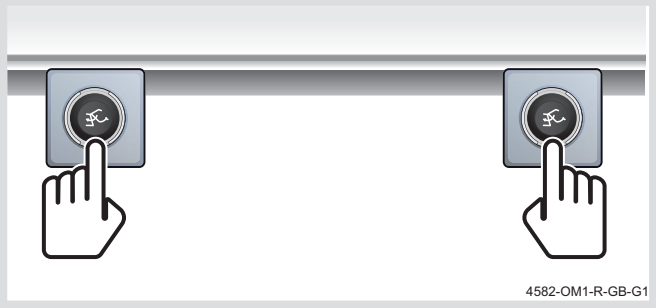

4555-OM1-R-GB-G1

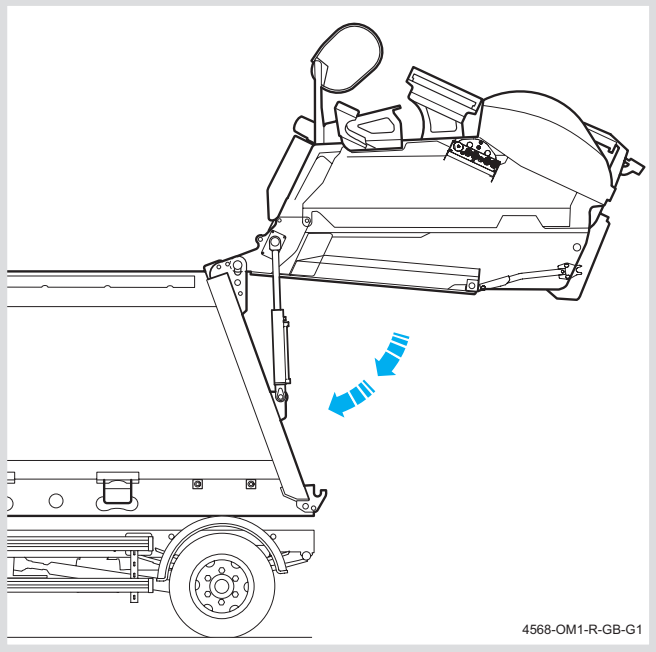
- The ‘Vehicle reversing’ audible warning device will sound when the tailgate rises.
- The ‘Tailgate out-of-locks’ pictogram will display on the cab control panel screen.

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


4589-OM1-R-GB-G1

10. 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.





- The engine speed will increase.
- 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.

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

5.8 SYSTEM WARNINGS

5.8.1 HYDRAULIC OIL TEMPERATURE WARNING

The hydraulic system has a temperature-sensing 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. Press the ‘Body main’ button to disable the body (white in colour), 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:
DO NOT ENTER THE BODY UNTIL THE VEHICLE IS FULLY POWERED DOWN AND THE BODY HAS BEEN DISABLED AND IGNITION KEYS HAVE BEEN REMOVED FROM THE VEHICLE.

To clear a compaction mechanism jam, follow the steps below:

1. Press the ‘Body main’ button to turn the body off.
2. Stop the engine and remove the ignition key.
3. Lock the cab door and remove the key.
4. Keep the ignition key and the cab door key in your possession until the jam is cleared.
5. Clear the jam.
6. Make sure all personal have exited the body of the vehicle and all access doors are closed and secured.
7. Restart the vehicle and operate the compaction system to run normally.
8. The warning light should extinguish after 2 - 3 minutes.
9. 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. Press the ‘Body main’ button to disable the body (white in colour).
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.
4. 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.

CONTENTS

6

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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 the continuous packing cycle to be used.

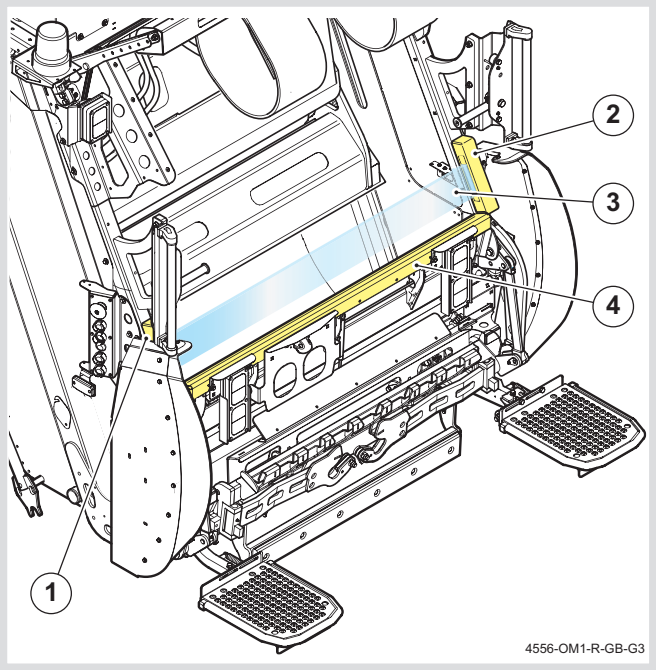


Fig. 6-1 Safety light curtain

1. Transmitter.
2. Receiver.
3. Light curtain.
4. Rave rail.

6.1.2 DESCRIPTION

A transmitter and a receiver (see Fig. 6-1, 1, & 2), 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 transmitter and receiver are energised whenever the compaction mechanism control panels are energised and create a narrow vertical light curtain (see Fig. 6-1, 3) 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.

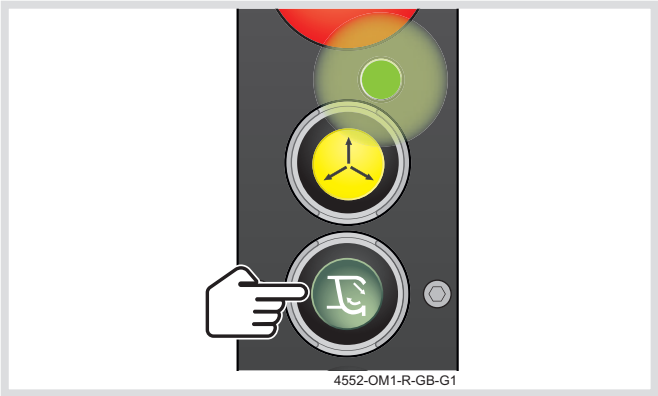
Operation of the light curtain is inhibited when the waste container lifting device is fully raised.

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.

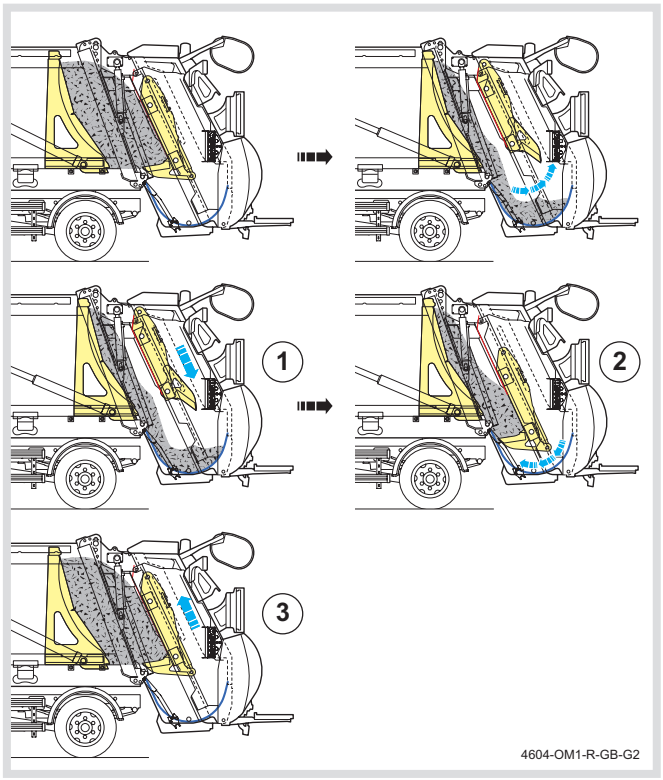
6.1.3 OPERATION

1. Energise the control panels.
2. Check that the tailgate area is clear.
3. Press and release the ‘Start pack cycle’ push-button.



- The compaction mechanism will cycle continuously.

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 (1), the compaction mechanism will stop immediately and will restart automatically when the waste container lifting device has lowered clear of the safety light curtain.
   - If the waste container lifting device interrupts the light curtain when the packer plate is closing (2), and carriage plate is moving upwards (3), the compaction mechanism continues to operate normally.



6.2 HYDRAULIC OIL HEATER

6.2.1 INTRODUCTION

If the refuse collection vehicle is to be used in low temperature environments an optional electrically operated thermostatically controlled oil heater (1) can be installed to heat the hydraulic oil in the tank while the vehicle is parked.

WARNINGS:
DANGER OF ELECTROCUTION.

MAKE SURE ELECTRICAL CONNECTIONS ARE DRY WHEN CONNECTING AND DISCONNECTING OIL HEATER PLUG.

MAKE SURE ELECTRICAL CABLE IS NOT DAMAGED BEFORE CONNECTING OIL HEATER PLUG.

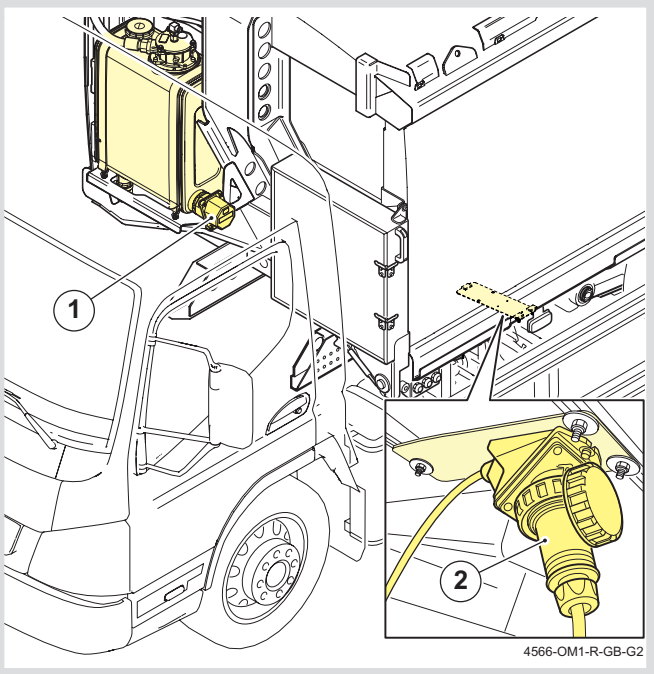
DISCONNECT OIL HEATER CABLE BEFORE DRIVING AWAY.

6.2.2 OPERATION - TO CONNECT OIL HEATER

1. Park the refuse collection vehicle, switch off ignition an remove ignition key.
2. Make sure electrical supply is switched off.
3. Connect electrical supply to plug (2) at left-hand side of body.
4. Switch on electrical supply.

6.2.3 OPERATION - TO DISCONNECT OIL HEATER

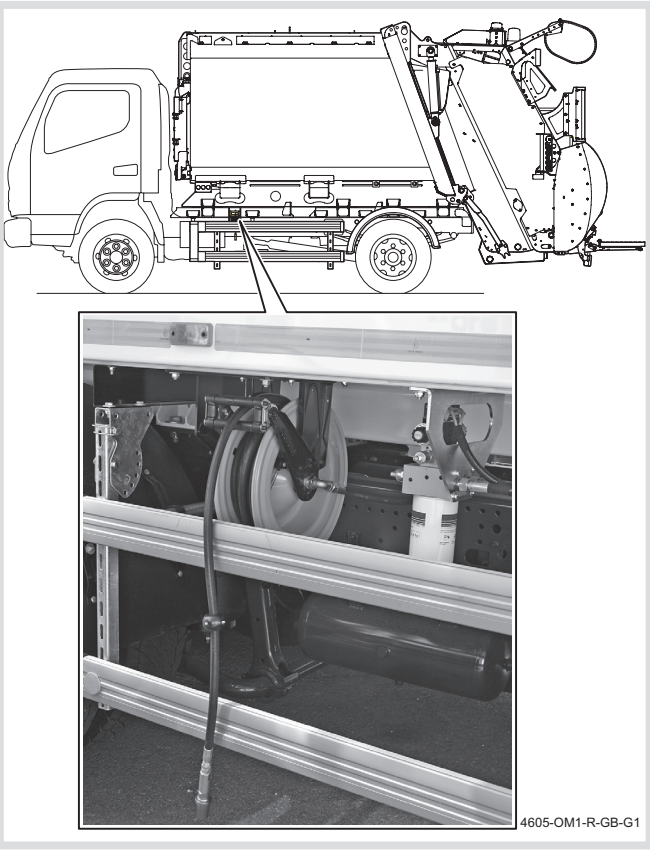
1. Switch off electrical supply.
2. Disconnect electrical supply from plug at side of body.



6.3 KIT FOR UNDERGROUND CONTAINER

6.3.1 INTRODUCTION

A optional proprietary hydraulic hose (1) and switch may be installed to raise and lower underground containers.



6.3.2 OPERATION

See manufacturer's operating instructions.

CONTENTS

7 SUPPLEMENTARY INFORMATION

Supplementary information/owners comments

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