

# ORH

## TRUCK SOLUTIONS



# Isuzu Tipper Operation Manual



Specialising in Mining Equipment

MINING - INDUSTRIAL - CONSTRUCTION - CIVIL - GOVERNMENT

[www.orh.net.au](http://www.orh.net.au)

### VEHICLE IDENTIFICATION

MAKE: .....

MODEL: .....

VIN NUMBER: .....

ENGINE NUMBER: .....

REGISTRATION NUMBER: .....

ORH MODIFICATION PLATE NUMBER: .....

DELIVERY DATE: .....

### HOURS OF TRADE

NEW EQUIPMENT SALES & SPARE PARTS: Monday to Friday 7.00am to 5.00pm

ADMINISTRATION: Monday to Friday 8.00am to 5.00pm

### CONTACT NAMES & NUMBERS

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### OTHER INFORMATION

STREET/POSTAL ADDRESS: 1 Central Avenue  
HAZELMERE WA 6055

SALES OFFICE: (08) 9250 2250

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### SECTION 1 - FOREWORDS

This Operations Manual outlines and explains the operation of the Tipper Module. This manual is designed to provide you with the information required as a guide for the safe and effective operation of this product.

It is important that you take the time to read this manual and familiarise yourself with the safety warnings and notices enclosed. It is your responsibility to ensure that these warnings and notices are adhered to during operation of this product. Failure to do so may result in harm or injury to personnel and/or damage to the product.

This manual covers a broad range of product models; there may be certain aspects of your product which, due to additional options, may not be specifically covered within this manual. Alternatively some options included in this manual may not be fitted to your product.

This manual is to be used in conjunction with other operation manuals specific to components fitted to this product and the vehicle the product is mounted on. These additional operation manuals are referenced where applicable. It is important that all operation manuals supplied with this product are kept together and stored in the vehicle for reference as required.

All information and advice in this manual was current at the time of printing. However, because of ORH Truck Solutions policy of continual product improvement, ORH Truck Solutions reserves the right to make changes without notice. ORH Truck Solutions may void any applicable warranties if any modifications are made to the product without prior approval from ORH Truck Solutions.

If you require any additional information on the safe and effective operation of this product please contact ORH Truck Solutions on (08) 9250 2250.

### SECTION 2 - TIPPER TRUCK OVERVIEW



DRIVER SIDE



PASSENGER SIDE



REAR VIEW

### SECTION 3 - WARNING SYMBOLS & SAFETY PRECAUTIONS



This Warning/Caution symbol is used throughout this manual to alert the user that the associated task or operation may have risks and dangers associated depending on the application. Where shown the symbol will include comments to be used as a guide to reduce operational risk. Each task will have its own unique risks and the user must ensure that these risks are identified and adequate controls implemented to reduce the risk to an acceptable level wherever practicable.



This symbol is used on the module to highlight the risk of suffocation of entering tanks. The interior of the tanks are classed as **CONFINED SPACES** and entering the tank, could lead to serious injury or death. If work must be conducted inside the tank all persons must hold the relevant Confined Spaces certification.



This symbol indicates that correct lifting equipment should be attached to the module if the module is to be lifted from the vehicle. Ensure the correct lifting equipment is used including spreader bars. Failure to use the correct lifting equipment and/or attaching at points other than those designed for the task may result in injury or damage to the module. Consult ORH Truck Solutions if further information is required on the correct lifting method.



This symbol is used on the module to highlight the location of the fitted fire extinguisher.

**SHADED  
BACK-  
GROUND**

Where text is shown with a shaded background it is used to draw to the user's attention special points of interest. These may include tips to assist in the effective and efficient operation of the module or to ensure correct care and maintenance practices are applied to extend the operational life of the module.

#### WARNING



It is the operator's responsibility to ensure the water tank is within road legal limits and does not exceed the manufacturers GVM mass. It is important that the tank is not overfilled for on-highway use. Check legal weight over weigh-bridge and take off TARE weight off GVM to work out the load the truck can legally carry for highway use. Your TARE weight will be stated on the registration form.

**GVM - TARE = LOAD WEIGHT.**  
**1000L = 1 metric TONNE**

The following safety precautions should be used as a general guide whilst operating the ORH Tipping Module. These are basic safety precautions remembering that each situation may have its own unique safety precautions to be adhered too. Ensure all hazards are first identified, and the appropriate control measures are adopted before use.

Before operating the Tipper Module, the truck should be parked on stable even ground with the park brake applied and the area is to be clear of people, machinery and power lines.

- Do not wear loose or torn clothing while operating the tipper module.
- All equipment should be maintained in good working order at all times.
- Always operate in a well ventilated area.
- Keep the tipper module in a clean and tidy state at all times.
- Eye protection must always be worn when operating the tipper module.
- Ensure hands and body parts are kept clear of pinch points.
- Load tipper module evenly as too much load to one side may cause rollover when driving around bends.
- Loads other than earth or sand should be fasten securely to the tipper module with ropes or other fastening devices.
- Never drive the tipper with the tray in an upright position.
- Make sure the tailgates are closed and locked into position before driving off.
- When rear tailgate is open ensure it is locked into position to prevent any damage to tipper tray or gate. Do not leave tipper parked with tray in an upright position.

Never enter under the lifted up dump body.

The dump body gradually comes down from the lifted up position, especially when it is loaded. Never leave the truck with the dump body lifted up and never enter under the dump body. It may lead to accidents of being crushed by the vessel.

It is dangerous to leave the dump body in the middle of lifting up. Lift up till the end and put safety bars, or lower down completely.

When entering under the dump body which is lifted up for cleaning and greasing, observe the following items. Park on flat ground and fully apply the parking brake, empty the vessel, lock the dump lever in 'up' position, apply the buffer stops, prevent the dump body from coming down using the safety bar and props.

\*Please use safety props with sufficient strength, made of hard wood which width is more than 10cm, or equivalent\*

Never fail to apply the safety bar and safety props when inspecting the truck with the dump body lifted up. It is dangerous not to use those stoppers, since the body comes down abruptly if the dump lever is put in 'down' position.

### SECTION 4 - VEHICLE ROLL OVER PROTECTIVE STRUCTURE

This vehicle is fitted with a Roll Over Protective Structure (ROPS).

The ROPS is a certified structure designed to protect the occupants of the vehicle in the event of a vehicle roll over.

**⚠ DO NOT** modify the ROPS in any way. This includes but is not limited to drilling, welding, cutting or grinding. Doing so may affect the integral structure of the ROPS and may result in harm or injury to personnel in the event of an accident.

In the event of accidental damage, the ROPS must be structurally inspected by a certified engineer.

**⚠** Each ROPS have their own identification tag. The ID tag is located on the drivers side of the ROPS.



### SECTION 5 - ACCESS LADDER

The module is fitted with two access ladders which are positioned on the left and right hand side of the vehicle as shown. The ladders are used to safely access the top of the module to check tray condition. The top of the module should only be accessed using the ladders. The ladders should be stored in the upright position.

**⚠ DO NOT** operate the vehicle with the ladders in the down position as this may result in damage to the ladders or module.

To access the vehicle using the ladder:

Remove the ladder from its stowed position by pulling it outwards from the bottom, then slowly lower the ladder to its lowest position.

**⚠** Whilst lowering the ladder use the correct lifting technique keeping your back straight and bending your knees.

**⚠** Ensure hands and body parts are kept clear of pinch points.





### SECTION 6 - WORK INSPECTION LIGHTS

The module is fitted with work/inspection lights. The mountings can be positioned so to provide adequate work area lighting whilst the vehicle is stationary. The lights are turned on and off with rocker switches located in the operator's cabin of the vehicle.

 Ensure the lights are positioned in the storage position when vehicle is operational.

 **DO NOT** operate (drive) the vehicle with the lights on, this will interfere with the vision of other drivers which may lead to an accident.

Adjust the work lights to ensure your workspace is well lit whilst the vehicle is stationary.

Work Lights  
Mounted to  
ROPS



Work Lights  
Mounted to  
ROPS

### SECTION 7 - FIRE EXTINGUISHER

The water cart module is fitted with a dry chemical type fire extinguisher located at the left hand front of the module.



### SECTION 8 - WARNING LIGHT/BEACON

The Tipper is fitted with an LED revolving amber warning light/beacon located at the top of the ROPS. The warning light / beacon is turned on and off with the rocker switch located on the main dash panel in cab.

 **DO NOT** operate the warning light/beacon when travelling on public roads.



### SECTION 9 - BATTERY ISOLATOR SWITCH

The vehicle is fitted with a battery isolation switch and a starter isolation switch to prevent accidental starting of the vehicle during maintenance and pre-start inspections. The switches are located on the right hand side of the truck behind the cab near the battery carrier. Twist the handle clockwise to switch isolator "ON". This then energizes system. The Starter Isolator isolates power to the starter solenoid, allowing the truck to be powered for testing/diagnosis, but not started.

**⚠ DO NOT** conduct electric arc welding and/or repairs on the vehicle whilst the battery isolation switch is in the "ON" position. Damage to the vehicle will result.

In the "OFF" position the switch can be mechanically locked using an isolation hasp or padlock.



### SECTION 10 - MODULE HYDRAULIC SYSTEM

The module utilizes a hydraulic system to operate the tipper lifting ram. Hydraulic oil for the system is stored in the hydraulic oil tank located on the passenger side next to the fuel tank. The hydraulic oil level can be checked using the sight level gauge mounted on the tank.

**⚠ DO NOT** operate the module hydraulics if the hydraulic oil level is below the minimum level as indicated on the sight level gauge.

Hydraulic system components should only be serviced or disassembled by trained, competent and qualified personnel.

**⚠** The hydraulic system oil may be pressurized and hot. Use extreme caution when working near hydraulic components.

**⚠** The module hydraulic system which operates the flow and pressures are set by the manufacturer.

**⚠ DO NOT** adjust, alter or modify the system flows or pressures without consulting ORH Truck Solutions Pty Ltd.




 Ensure the hydraulic system is serviced regularly to prevent premature wear. The oil and filter should be replaced every 1000 service hours.

The hydraulic oil tank breather and filler cap are located at the top of the hydraulic oil tank.

 Ensure the breather is cleaned using a non flammable solvent every 1000 hours. (Dusty conditions may require a more frequent cleaning interval).

 Ensure the area around the filler cap is clean prior to removal of the filler cap to prevent dirt and foreign material entering the hydraulic system.

 **DO NOT** remove the hydraulic oil filler cap whilst the hydraulic system is hot; Ensure the engine is off . Allow the oil to cool. Slowly loosen the cap to relieve the pressure before removing.

 To prevent harm or injury use an external access platform or steps to access the hydraulic oil filter, cap and breather.

 Only use clean 68W mineral based hydraulic oil in the hydraulic system.

## SECTION 11 - TIPPER OPERATION

### **ENGAGING THE HYDRAULIC DRIVE.**

The module utilizes a pressurized hydraulic system to operate the tipper hydraulic ram. This is run via a PTO pump. To engage the hydraulic pump drive Power Take Off (PTO); With the vehicle engine running, ensure the engine is at low idle (minimum engine RPM). Position the PTO rocker switch, located behind park brake lever, to the "ON" position. The switch on indicator light (red) should illuminate.

Oil flow is now able to the lifting ram hydraulics.



The hydraulic ram is operated and tray position selected via a float level lever located in the drivers cab center.



With the PTO engaged move the lever to the up position (away from drivers seat), the rear tray will automatically start lifting. The tray can be held in float (semi raised position) by moving control lever back to centre position. To lower the tray, move control lever to position closest to drivers seat (opposite to raising position)

**NB:** Lift speed is governed by the engines RPM. Never operate/raise the tray at high RPM's when close to the trays lifting limit, or while lowering tray. This could cause serious damage to the machine and possibly personal injury.

#### **OPERATING THE LIFTING RAM/TIPPING BODY**

The module has several different options for tipping off the load. in regards to the rear door. The door can be manually opened and locked back in place or the automatic option can be utilized. To open manually and lock open, unlock latch at tipper door top right corner (pictured left, swing door open manually and lock in place using pin.



REAR DOOR LATCH

#### **TO UTILIZE AUTOMATIC DOOR OPTION**

With vehicle stopped and park brake engaged, manually remove lock in pin at tray left hand rear. This can be left out during daily use as option if being used regularly.



Next operate rear door rocker switch (pictured left) to "ON" position. Red light will illuminate. Note: The sound of air leaking can be heard when rocker switch is operated, this is normal as the switch is pneumatic.

This opens the lock in tabs at tray rear. The rear door will then automatically open as tub is lifted. Once load has been cleared and tub lowered switch rocker to "Off" position to lock door back closed ready for new load.



REAR DOOR SWITCH



CLOSED



OPEN

### SECTION 12 - SPARE TYRE CARRIER

The vehicle is fitted with a spare tyre located at the front left side of Tipper body. To operate tyre carrier unlock center locking bolt and lower the tyre using the electric winch. Reverse this process to refit spare tyre to carrier.



### SECTION 13 - WARRANTY INFORMATION

#### **WARRANTY**

ORH Truck Solutions warrants their parts against defects in material or workmanship for a period of 12 months.

This warranty is limited to the repair or replacement of defective items. To receive warranty consideration all defective parts must be returned to ORH Truck Solutions for inspection. In the event that a warranty claim is rejected a purchase order will be required.

ORH Truck Solutions reserves the right to inspect all defective items prior to any warranty considerations being issued. This warranty will not cover failures due to neglect, improper use, improper maintenance, accidental damage or operator abuse. Hydraulic pumps, PTO's, compressors and special equipment manufactured by others, is covered by the warranty of these manufacturers.

Individual truck chassis' are covered by their manufacturers warranty. Please refer to your truck manual for details. ORH Truck Solutions will facilitate repairs through the relevant dealership if required.

ORH Truck Solutions will not be held liable for special, commercial, consequential or any damages, expenses or legal fees with respect to the sale of the said equipment, or its use, or operation.

#### **PROCEDURE TO CLAIM**

Please contact: ORH Truck Solutions immediately if you find you have a faulty issue

Phone: (08) 9250 2250 or email [glandrum@orh.net.au](mailto:glandrum@orh.net.au)

Please provide: Parts details, Vin # of trucks, date of purchase & complete the Warranty Claim form

### WARRANTY CLAIM/RETURN FORM CLAIM NUMBER –

DATE: \_\_\_\_\_

**CUSTOMER DETAILS:**

CUSTOMER PO # \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_ EMAIL ADDRESS: \_\_\_\_\_

**TRUCK DETAILS**

MAKE: \_\_\_\_\_ MODEL: \_\_\_\_\_ VIN # \_\_\_\_\_

**PLEASE SUPPLY FAULT DETAILS & ANY CORRECTIVE ACTION TAKEN TO RECTIFY THE ISSUE**

**RETURN INSTRUCTIONS**

1. Complete form and email to [glandrum@orh.net.au](mailto:glandrum@orh.net.au)
2. PO for replacement part required prior to despatch.
3. Goods will be assessed upon receipt and outcome advised.
4. If the item is deemed not to be warranty, you as the customer accept that the invoice for the replacement part is due and payable.

**RETURN ITEMS TO:**

**ORH TRUCK SOLUTIONS PTY LTD  
ATTN: GRAHAM LANDRUM  
1 CENTRAL AVENUE  
HAZELMERE WA 6055**

**CLEARLY MARK PACKAGES WITH THE CLAIM #**

**CUSTOMER DECLARATION:**

I declare the above information is true and correct and accept ORH Truck Solutions Terms &amp; Conditions

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

PLEASE PRINT NAME CLEARLY

**PLEASE ENSURE THAT ALL INFORMATION IS COMPLETED IN FULL SO AS NOT TO HOLD UP THE WARRANTY PROCESS –  
FAILURE TO PROVIDE ALL RELEVANT INFORMATION MAY RESULT IN THE VOIDING OF THE CLAIM**

**ORH OFFICE USE ONLY**

**PARTS RETURNED** YES NO      **SUPPLIERS RETURN AUTHORITY #** \_\_\_\_\_  
**SUPPLIER REPORT RECEIVED** YES NO      **CLAIM APPROVED** YES NO

**REASON FOR REJECTION** \_\_\_\_\_

**DATE CLAIM CLOSED** \_\_\_\_\_

# ORH

## TRUCK SOLUTIONS



### HAZELMERE

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