## **EAST WEST ENGINEERING**

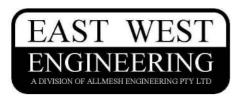
# **INSTRUCTION MANUAL**

# Type TU, JTU & NTU TIP-UP BINS

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### <u>ALL EAST WEST TIP-UP BINS CONFORM TO</u> <u>AS/NZS 1554.1:2000, AS 2359.1 – 1995 & AS 2359.2 – 1985</u>



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#### 1) QUALITY POLICY STATEMENT

**East West Engineering** is an Australian Owned company in the Sydney suburb of Brookvale. We are Australia's leading manufacturer of forklift attachments, storage, waste containers and environmental protection equipment.

**East West Engineering's** products are a result of extensive market research into our customer's needs. From the first concept to engineering certification and finally, CAD/CAM manufacturing, all our designs have been rigorously researched and developed.

#### 2) GENERAL DESCRIPTION OF PRODUCT

The Tip Up Bins manufactured by East West Engineering are designed to tip automatically when the release lever is activated by the seated Forklift driver via a draw rope. Because the bin centre of gravity is forward of the pivot, the bin will always tip forward. The impact of the tipping action on the Forklift mast is eliminated by the use of a heavy-duty shock absorber.

There are three types of Tip Up Bins, the type TU, JTU and NTU Bins. All bins are offered with the following options; Galvanised lids, cast iron, rubber fixed or swivel wheels, drain cock and strainer and crane lugs. The type JTU-18 Bin offers a plastic lid option instead of the galvanised type. The SWL of the Tipping Bin range is 1000kg at a load centre of 1000mm. Standard finish of all East West Engineering Tip Up Bins is Hot Dipped Galvanised.

Forklift attachments are designed in accordance with AS 2359.1 where relevant. The uses of specific forklift attachments should also be in conformance with the statutory regulations that are relevant at the time of design registration.

The use of these attachments are restricted to the purpose for which they are designed. EAST WEST ENGINEERING is not liable if this restriction is breached.

Some attachments are manufactured as "Specials" from this standard product. In this situation, design changes may alter the operating procedures for this Special attachment. If your product type begins with the prefix "J", it will be a special. Please check with East West Engineering for non-standard instructions specific for your attachment.

**Note:** The use of the words 'Forklift' & 'Industrial Truck' throughout these instructions both refer to 'Powered Industrial Truck' as defined in AS 2359.1.

#### **Type Data**

To accurately identify the attachment and when ordering parts, please quote the *Type* and *Serial Number*. This information can be found on the compliance plate situated on the Bin slipper frame. Please refer *Fig. 8.1* and *Table 8.2*, codes "A" and "B" for more information.



WARNING: These Instructions MUST be READ in FULL by the Forklift Operator and all Operational & Safety Procedures and Risk Control Measures complied with before the use of this attachment.

#### 3) METHOD of ATTACHMENT to FORKLIFT

Before installing a fork mounted attachment onto a Forklift, ensure that the fork arms are suited to the attachment and set to the correct width.

To install the Tip Up Bin, engage the Forklift arms into the slippers provided and as shown in *Fig. 3.1* below. Loop the safety chain around the carriage or tower when the fork arm shank (vertical face) is firmly against the back of the attachment. Lock the attachment to the Forklift by re-attaching the snap hoop to the safety chain as shown in *Fig 3.1*.

Unwind the tipping lever draw rope and position it for the driver to safely operate while sitting in the Forklift.

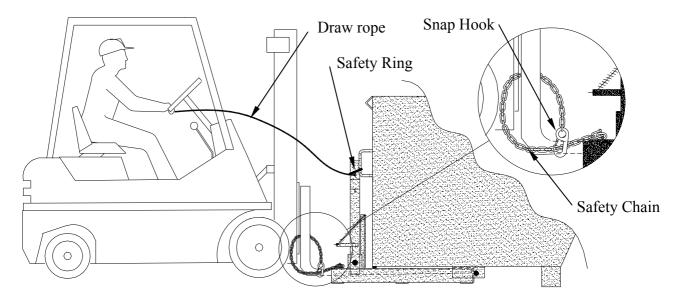


Fig 3.1

#### 4) OPERATIONAL and SAFETY PROCEDURES

#### **Preliminary Safety Checks**

A "Competent Person" shall inspect all components on the Tip Up Bin to ensure they are in safe working order. Do not use the bin if any of the components are damaged or not in safe working condition. A "Competent Person" shall inspect safety chains, safety ring and draw rope daily to ensure that they are in safe working order. The shock absorbers must be in working order to ensure the bin tips in a safe smooth manner.

The Operator shall check that the attachment has been correctly fitted in accordance with these Instructions (refer Section 3), and/or the relevant Industrial Truck Operator's Manual.

Ensure that the area around the receiving bin is clear of items and personnel. Product may spill over the receiving bin while being tipped.

All signage must be strictly adhered to and checked to ensure that the compliance plate is not damaged and is legible.

#### **General Operating and Safety Procedures**

Tip Up Bins fitted with the optional crane lugs must also be considered as a crane attachment. All safety procedures relating to crane operations must be observed when using the bin in this situation.

Forklift attachments can alter load centres and reduce the load capacity. The type of load to be handled in addition to the operating conditions must be considered when determining the actual working capacity for each application. Do not exceed the recommended Forklift or Attachment ratings.

During the tipping operation, the forward rotation of the Tip Up Bin causes a weight transfer forward, increasing the attachment Rated Load Centre (H C of G) from 1000mm to 1500mm. This must be allowed for when reviewing the attachment and Forklift ratings to ensure the Forklift does not overturn during the tipping operation.



**SWL WARNING**: Any SWL noted on the attachment is a structural rating of the attachment only and makes no claim to the suitability of the Forklift. Actual load may be restricted to the suitability of the Forklift. Actual Forklift capacities must be obtained from the Forklift manufacturer

**LOAD CENTRE WARNING:** During the Tipping Operation, the weight transfer increases the Rated Load Centre for the Tip Up Bin attachment of **1000mm** to **1500mm**.

Before the attachment elevates any load, the Operator shall lift it to the required working height to confirm that all systems function correctly.

East West Engineering attachments shall not be modified in any way which affects the operation or performance except with the prior approval of East West Engineering. After any changes have been effected, appropriate alterations shall be made on the relevant nameplate and markings prior to placing the attachment back into service. East West Engineering must be notified of the changes to nameplates and makings with reference to the attachment serial number.

#### **Bin Tipping Procedures**

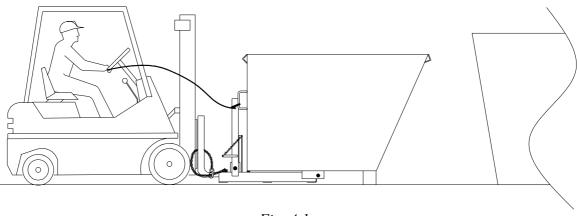


Fig. 4.1

1. Engage the Tipping Bin on the fork tines, attach the safety chain as per directions in Section 3 and unwind the tipping lever draw rope as shown in *Fig. 3.1* and *Fig. 4.1*.

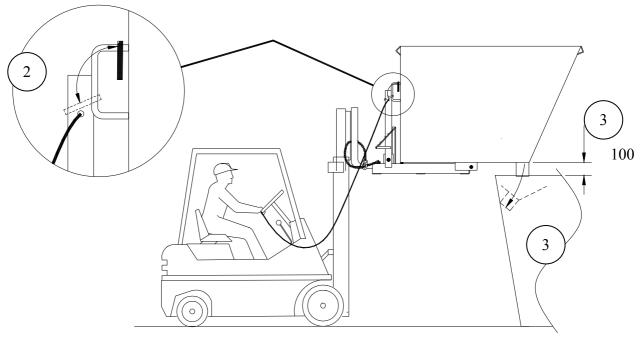


Fig. 4.2

- 2. Lift the safety ring off the tipping handle as shown above in *Fig. 4.2*. Care must be taken as the bin is now ready to tip.
- 3. Ensure that all personnel are well clear of the tipping and receiving bins. Raise the Tip Up Bin 100 mm above the bulk bin as shown in *Fig. 4.2*. When the bin swings to discharge, ensure the foot (or wheel) rests against the inside wall of the bulk bin. This will allow the rate of tipping to be controlled by the lift of the forklift. Because the edge of the bin is supported, the tendency for the bin to tip uncontrollably is greatly reduced.

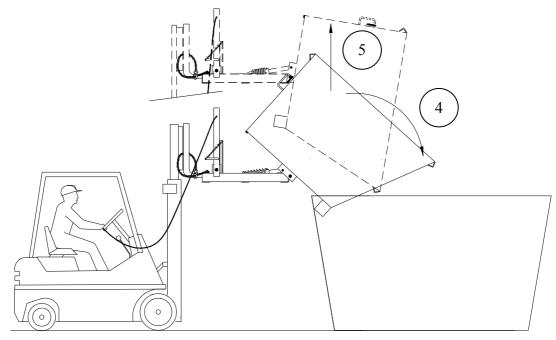


Fig. 4.3

- 4. Tip the bin by pulling on the draw rope as shown in *Fig 4.3*. This will allow the tipping handle to release the bin to tip forward and rest on the inside face of the bulk bin. The shock absorber will also cushion the bin rotation during the tipping action.
- 5. Raise the bin until it is vertical and clear of the bulk bin. Ensure all the contents are emptied before the bin is clear of the bulk bin.

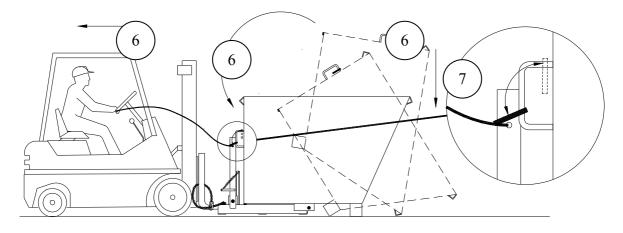


Fig. 4.4

- 6. Lower the Tipping Bin to the ground and drive backward to close the bin as shown in *Fig. 4.4*.
- 7. Re-engage the safety ring; re-wind the tipping lever draw chord. Detach safety chain and remove the Tip Up Bin from the Forklift after use.

#### 5) RISK CONTROL MEASURES – SUMMARY

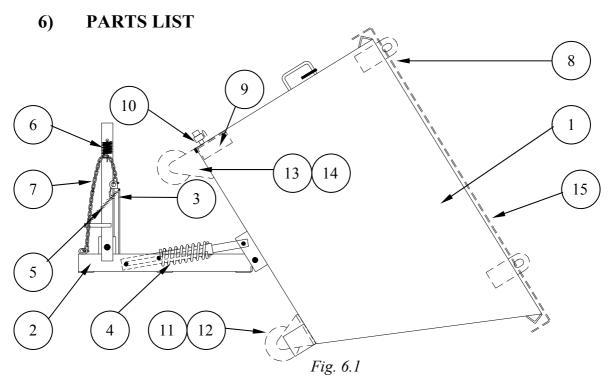
When handling loads, the Risk Control Measures outlined below in Sections 5 are to be observed by the Industrial Truck Operator to ensure all identified hazards relative to using this equipment are eliminated or controlled – **refer Appendix A for a detailed analysis**;

- A) The Industrial Truck Operator requires a suitable Forklift licence to cover both the Industrial Truck being operated and the attachment that has been fitted. Training in the safe use of the attachment and the use of lifting booms, slings and chains for lifting shall be undertaken before usage.
- B) Authorised personnel must perform the following pre-checks immediately prior to the use of the Industrial Truck in accordance with AS 2359.2 Clause 3.1 and 6.4 and corrective action initiated where applicable;
  - Nameplate and markings regarding the Industrial Truck and Attachment capacities are to be read and acknowledged,
  - Condition of lift and tilt systems on the Industrial Truck to be checked,
  - Inspect all tyres for wear, condition and pressure if applicable,
  - Liquid levels of battery cell electrolyte, oils (hydraulic, engine, transmission and brake), cooling water and fuel to be checked,
  - All steering and brake controls, warning devices and lights to be checked for effective operation.

- C) Gain assurance from a responsible person that the load may be handled safely with an attachment and that person has provided all information necessary to ensure that risks are eliminated or controlled.
- D) Do not exceed the rated capacity of the Industrial Truck to handle the load.
- E) The Industrial Trucks shall be used on a hard level surface. The area in which the attachment is to be used has been accessed as suitable for the task to be undertaken. There should be suitable clear space to safely use the attachment and a system developed for handling the load.
- F) While lifting in an area subject to passing traffic, barriers or warning signs shall be used to prevent any interference.
- G) Manoeuvre slowly and cautiously when the load is elevated.
- H) Transport the load with the attachment positioned as low as practicable.
- I) The mast, if adjustable shall be set at vertical or back tilted.
- J) Never drag the bin horizontally along the ground except when closing the bin after the tipping operation in accordance with the "Bin Tipping Procedures" outlined in Section 4 above.
- K) The Operator shall check the attachment is securely attached, refer Section 3.
- L) These Bins are not designed or certified to convey Personnel. The Operator to ensure that NO PERSONNEL rides on or in the Bin at any time.
- M) The Operator shall stay with the Industrial Truck controls at all times.
- N) The Operator shall keep hands and feet clear of controls other than controls in use.
- O) The Operator shall keep clear of overhead obstructions and in particular MAINTAIN RELEVENT CLEARANCE OF ELECTRICAL CONDUCTORS.
- P) Before any load is hoisted by the attachment, the Operator shall lift the attachment unladen to the required working height to confirm that all systems are functioning correctly.
- Q) Ensure safety features are provided, visible and working effectively.
- R) Ensure there has been no unauthorised interference or alteration to the equipment that may cause risk.
- S) Ensure regular maintenance, testing and inspections are carried out and recorded in accordance with the relevant Industrial Truck Manuals and these instructions (refer Section 7), and corrective action initiated where applicable.
- T) Ensure the instructions of East West Engineering are followed.
- U) If any of the equipment becomes unsafe, stop all usage until the risk is eliminated or controlled



WARNING: Failure to observe the above Risk Control Measures and those outlined in Appendix A could result in SERIOUS INJURY or DEATH.



			-					
Item	Bin Type	TU 6	TU 9	TU 12	TU 15	TU 18	TU 20	NTU 6
1	Bin Assembly	TU-02A	TU-02B	TU-02C	TU-02D	TU-02E	TU-02F	NTU-02A
2	Carriage Assembly	BSP-15	BSP-16	BSP-16	BSP-16	BSP-16	BSP-16	BSP-15
3	Tilt Catch assembly	BSP-23						
4	Shock Absorber	BSP-05A	BSP-05A	BSP-05B	BSP-05B	BSP-05B	BSP-05B	BSP-05A
5	Spring	SP-0100						
6	Draw Chord	SP-0119						
7	Safety Chain Assembly	SP-0105C						

**Optional Bin Attachments** 

8	Crane Lugs	BSP-03-2	BSP-03-2	BSP-03-2	BSP-03-2	BSP-03-2	BSP-03-2	BSP-03-1
9	Strainer option	BSP-24						
10	Drain Cock Option	DN 20						
11	Cast Iron fixed Wheels	HCI 150/WF						
12	Cast Iron swivel Wheels	HCI 150/WP						
13	Rubber fixed Wheels	HOR 150/WF						
14	Rubber swivel Wheels	HOR 150/WP						
15	Lids	TU-08	TU-08	TU-08	TU-08	TU-08	TU-09	NTU-06

Item	Bin Type	NTU 9	NTU 12	NTU 15	NTU 18	JTU 18	JTU 20	JTU 24
1	Bin Assembly	NTU-02B	NTU-02C	NTU-02D	NTU-02E	JTU-02A	JTU-02B	JTU-02C
2	Carriage Assembly	BSP-16	BSP-16	BSP-16	BSP-16	BSP-19	BSP-19	BSP-19
3	Tilt Catch assembly	BSP-23						
4	Shock Absorber	BSP-05A	BSP-05B	BSP-05B	BSP-05B	BSP-05B	BSP-05B	BSP-05B
5	Spring	SP-0100						
6	Draw Chord	SP-0119						
7	Safety Chain Assembly	SP-0105C						

**Optional Bin Attachments** 

8	Crane Lugs	BSP-03-1	BSP-03-1	BSP-03-1	BSP-03-1	BSP-03-2	BSP-03-2	BSP-03-2
9	Strainer option	BSP-24						
10	Drain Cock Option	DN 20						
11	Cast Iron fixed Wheels	HCI 150/WF						
12	Cast Iron swivel Wheels	HCI 150/WP						
13	Rubber fixed Wheels	HOR 150/WF						
14	Rubber swivel Wheels	HOR 150/WP						
15	Lids	NTU-06	NTU-06	NTU-06	NTU-06	E 807	JTU-07	JTU-08

#### 7) MAINTENANCE

Regular maintenance including Testing, Inspection and Cleaning should be carried out on the Tip-Up Bin to reduce the risk of potential hazards arising. The Tip-Up Bin should be cleaned and visually inspected by a "Competent Person" under adequate lighting conditions, before each shift, to ensure all components are functioning correctly and are free from any noticeable wear or damage, particularly at any load bearing or highly stressed points. If components are considered worn or damaged, or if safety charts or labels are damaged or illegible, the Tip-Up Bin should be taken out of service and East West Engineering or an "Authorised Person" contacted for advice. Periodic testing may be required if any damage is noted as this could be an indication of abuse or overloading. Regular cleaning makes identification of damage easier. Keep maintenance records to ensure safety checks are carried out.

#### **Maintenance Schedule**

	Maintenance Period						
Description	Daily or 8 Hrs	Weekly or 40 Hrs	Monthly or 160 Hrs	3 Months or 500 Hrs	Annually or 2000 Hrs	Other	
Tilt Catch Assembly	CI						
Shock Absorber Ass'y	CI		GS				
Handle Return Spring		CI					
Draw Chord	CI						
Safety Chain Assembly	CI						

*Table 7.1 (refer Fig. 6.1& Table 6.2)* 

Maintenance to be carried out						
Maintenance Codes Lubricant to be used						
<b>GS</b> = Grease smear	$\mathbf{D} = Drain$	<b>G</b> = Grease, Shell Alvania R2 or equivalent				
<b>GN</b> = Grease at nipple	$\mathbf{R} = \text{Replace}$	H = Hydraulic Oil Shell Tellus				
CI = Clean and inspect	T = Tighten	Ot = Oil, Shell 20W/40W or equivalent				
C = Check & fill oil to level	N = Note below	Oa = Oil, Shell Turbo T32 or equivalent				

Table 7.2

#### 8) COMPLIANCE PLATE INFORMATION

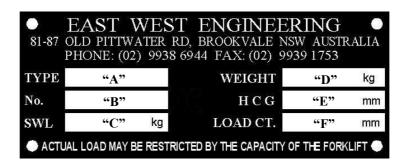


Fig. 8.1

A	Product Type	Refer "A", Table 8.2
В	Serial Number	Individually stamped
$\mathbf{C}$	Safe Working Load	Refer "C", Table 8.2
D	Dry Weight of the unit	Refer "D", Table 8.2
$\mathbf{E}$	Horizontal C of G	Refer "E", Table 8.2
F	Load Centre	Not Applicable

	COMPLIANCE PLATE MARKING								
Bin Type	"A"	"B"	"C"	"D"	"E"	"F"			
TU 6	TU 6	SERIAL No	1000	185	1000	XXXX			
TU 9	TU 9	SERIAL No	1000	200	1000	XXXX			
TU 12	TU 12	SERIAL No	1000	215	1000	XXXX			
TU 15	TU 15	SERIAL No	1000	240	1000	XXXX			
TU 18	TU 18	SERIAL No	1000	260	1000	XXXX			
TU 20	TU 20	SERIAL No	1000	280	1000	XXXX			
NTU 6	NTU 6	SERIAL No	1000	190	1000	XXXX			
NTU 9	NTU 9	SERIAL No	1000	210	1000	XXXX			
NTU 12	NTU 12	SERIAL No	1000	225	1000	XXXX			
NTU 15	NTU 15	SERIAL No	1000	255	1000	XXXX			
NTU 18	NTU 18	SERIAL No	1000	280	1000	XXXX			
JTU 18	JTU 18	SERIAL No	1000	270	1000	XXXX			
JTU 20	JTU 20	SERIAL No	1000	290	1000	XXXX			
JTU 24	JTU 24	SERIAL No	1000	310	1000	XXXX			

*Table 8.2* 

#### 9) CERTIFICATION INFORMATION

# <u>Certificate</u>

### Type TU, JTU & NTU TIP-UP BINS

We certify that the Type TU, JTU & NTU Tip Up Bins are rated to 1000kg Safe Working Load (SWL) and are designed and fabricated strictly in accordance with relevant Australian Standards including those listed below –

AS/NZS 1554.1: 2000 Structural Steel Welding – Welding of Steel Structures

AS 2359.1 – 1995 Powered Industrial Trucks – General Requirements

AS 2359.2 – 1985 SAA Industrial Truck Code – Operation

AS 3990 – 1993 Mechanical Equipment – Steelwork

AS/NZS 4680: 1999 Hot Dip Galvanised (Zinc) Coatings on Fabricated

Ferrous Articles

AS 4991 – 2004 Lifting Devices

Signed on behalf of EAST WEST ENGINEERING,

Ron King
MANAGING DIRECTOR

# 10) TERMS of TRADE, CONDITIONS of SALE and WARRANTY STATEMENT

- 1. East West Engineering (EWE) products are to be used only as indicated. Misuse or misapplication may cause failure resulting in possible property damage or bodily injury.
- 2. It is the obligation of the user to ensure EWE products are used in accordance with appropriate Codes and System requirements.
- 3. All liability for EWE products performance is disclaimed and the warranty will be voided if any of the following conditions exist:
  - 3.1) The product is used beyond the published or stated rate load limit. Note: ALL ratings are for static
    - conditions and do not account for dynamic loading such as wind, water or seismic loads.
  - 3.2) The product is not properly installed per published or stated instructions
  - 3.3) The loading to the product is not vertical
  - 3.4) The product is deformed or stressed in any way during fitting or installation.
  - 3.5) The product is used in a corrosive environment.
- 4. All safety regulations required by the user must be observed.
- 5. EWE products at the time of dispatch are warranted to be free of defects in material or workmanship. NO OTHER WARRANTY EXPRESSED OR IMPLIED SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF EWE PRODUCTS. Claims for errors, shortages, defects or nonconformities ascertainable upon inspection must be made in writing within 15 days after buyer's receipt of products. All other claims must be made to EWE within 12 months of the date of shipment for products hydraulically operated and within 12 months for products without hydraulics. Products claimed nonconforming or defective must upon EWE's request promptly be returned for inspection. Claims not made as provided above and within the applicable time period will be barred. EWE shall in no event be responsible if the products have not been used in accordance with the specifications and/or recommended procedures. EWE will, at its option either repair or replace nonconforming or defective products for which it is responsible or return to buyer their purchase price. The foregoing states buyer's exclusive remedy for any breach of EWE warranty and for any claim, whether sounding in contracts, tort or negligence for loss or injury caused by the sale or use of any product. Without limiting the generality of the foregoing EWE shall in no way be responsible for any loss of business or profits, downtime or delay, labour, repair or material cost or any similar or dissimilar consequential loss or damage incurred by the Buyer.
- 6. Examine goods immediately upon receipt and advise any damage or shortage to carriers and ourselves within 15 days, otherwise no claim whatever will be considered. Provided advice is given within the prescribed time, we will make good any shortage and will repair or replace free of charge goods damaged in transit where we are responsible for delivery of the goods.
- 7. If goods are not received within 14 days from receipt of invoice please advise us in writing.
- 8. If any error is discovered in this invoicing please notify supplying branch at once for correction.
- 9. **Property and Payment:** By acceptance of delivery and retention of the goods it is acknowledged that the property of the goods remains with EWE and that legal title thereto will not pass until payment is made but that nevertheless the goods are at your risk after delivery. In the event that payment is not made within 30 days of delivery, or other agreed terms, full licence and authority is given to EWE to enter any premises where the goods are stored and to recover possession of them. In the event of the sale of the goods prior to payment, the proceeds of sale belong to EWE.
- 10. **Terms of Payment:** Unless credit has been arranged strictly net cash; if credit has been arranged payment must be made by the 25<sup>th</sup> day of the month, following the month appearing in the date on the front of this invoice.
- 11. East West Engineering reserves the right to alter specifications, designs and prices without notification.