

Manual # 438

Oxy Trolley Two Bottle Craneable.
Machine Type:- 1843

EAST WEST ENGINEERING

INSTRUCTION MANUAL

Type GC-2
GAS CYLINDER CAGE

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ALL EAST WEST CRANE CAGES CONFORM TO
AS 1418.1 - 2002, AS/NZS 1554.1:2000, AS 2550.1 – 2002 &
AS 3990 – 1993



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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 Type GC-2 Gas Cylinder Cage is suitable for one set of "G" type oxygen and acetylene gas cylinders. This unit has provision for all hoses inside the cage and is supplied with strap and load binder to securely fasten both cylinders. The unit may be used for storage, transport by crane, (crane attachment point at the centre) and has two 250mm diameter solid rubber cushion type wheels for manual transport to different locations.

The Type GC-2 Gas Cylinder Cage has a Safe Working Load (SWL) of 250 kg and a weight of 90kg. A painted enamel finish is standard on the Type GC-2 Gas Cylinder Cage.

Design of GC-2 Gas Cylinder Cage attachments¹ are in accordance with AS 2550.1 and AS 1418 where relevant. Use of the Type GC-2 Gas Cylinder Cage is restricted to the purpose for which it is 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 the 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 word 'Crane' throughout these instructions also refers to any 'Hoist' type mechanism which is suitable for hoisting the Type GC-2 Gas Cylinder Cage and cylinders safely.

Type Data

To accurately identify the Crane Cage and when ordering parts, please quote the *Type* and *Serial Number*. This information can be found on the compliance plate situated on the Crane Cage. 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 Operator & all Crane Personnel and all Operational & Safety Procedures and Risk Control Measures complied with before the use of this Cage.

¹ Crane attachments cover the following Crane, Hoists and Winches. Bridge, Gantry and Portal cranes, Tower static and mobile Cranes. Hoists of the Chain, Cylinder, Scaffolding and Wire rope types. Winches of the Creeper, Drum, and Trolley type.

3) METHOD OF ATTACHMENT TO CRANE

A qualified person shall operate the crane and the Type GC-2 Gas Cylinder Cage shall be hoisted in a safe manner.

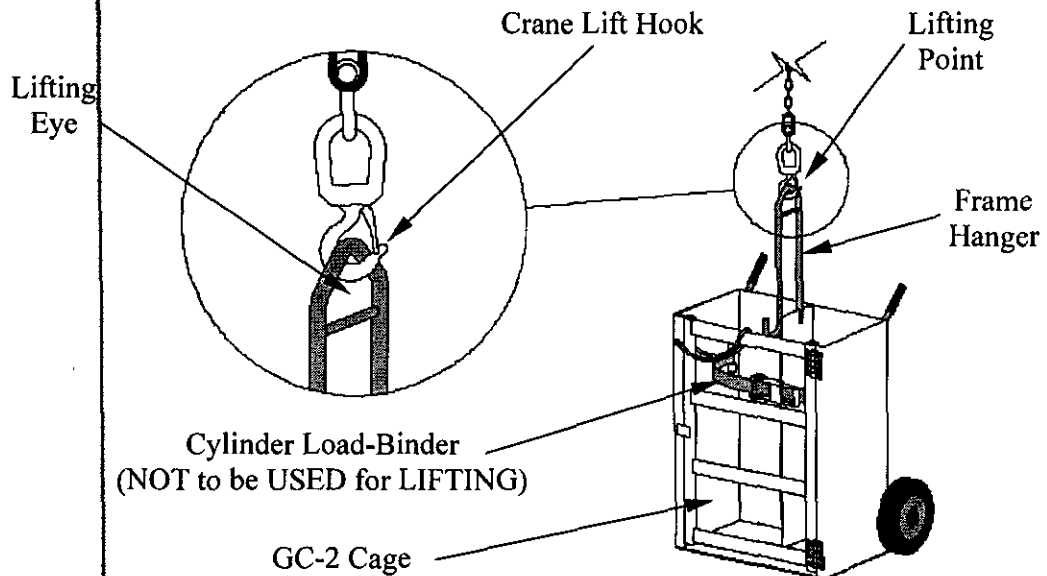


Fig. 3.1

Engage the Crane Lift Hook through the Lifting Eye at the top of the Frame Hanger as shown in *Fig. 3.1* above.

When hoisting the Type GC-2 Gas Cylinder Cage by a crane, ensure the Crane Lifting Hook is correctly fitted to the Frame Hanger and is free to slide within the Lifting Eye at the top of the Frame Hanger when hoisted.

If a single fall rope is used to hoist the Cage, the hook may spin and create a dangerous situation. Do not allow the crane hook to rest in the Cage. Keep the Cage in an upright position at all times.

4) OPERATIONAL AND SAFETY PROCEDURES

Preliminary Safety Checks

A "Competent Person" shall inspect all components on the Cage and Crane to ensure they are in safe working order. Do not use the Cage if any of the components are damaged or not in safe working condition. A "Competent Person" shall inspect the lifting slings, woven straps and load binder daily to ensure that they are in safe working order. Replace any damaged woven straps before allowing the Cage back into service.

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

The use of the Type GC-2 Gas Cylinder Cage shall be limited to those situations for which it is specifically designed and in accordance with AS 2550.1. All lifting equipment used must meet the relevant Australian Standards including AS 3990.1, AS 3775 and AS 3776.

All operating checks as stated in Section (5) below and as stated in AS 2550.1 are to be carried out at the start of shifts or immediately prior to the lifting of the Cage.

Before the Cage elevates any load, the Operator shall lift it to the required working height to confirm that all systems function correctly. Do not exceed the recommended Crane, or Cage rating.



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

East West Engineering Gas Cylinder Cages 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 Cage back into service. East West Engineering must be notified of the changes to nameplates and markings with reference to the Cage serial number.

5) RISK CONTROL MEASURES – SUMMARY

When handling loads, the Risk Control Measures outlined below in Section (5) are to be observed by the Crane Operator and Crane Personnel to ensure all identified hazards relative to using this equipment are eliminated or controlled – refer Appendix A for a detailed analysis;

- A) The Crane Operator's qualifications must conform to the requirements of the relevant regulatory authority. Where applicable, the Crane Operator shall hold a certificate of competency. To operate a particular Crane, the Operator must be authorised by a responsible representative of the Crane used or hiring contractor. Training in the safe use of the Cage shall be undertaken before usage. The Crane Operator must not work the Crane unless they are physically and mentally capable. This is in accordance with AS 2550.1 clause 6.2.
- B) Authorised personnel must perform the following pre-checks on the Crane in accordance with the operating manual before the Crane is placed into service. Typically, Crane pre-checks as stated in AS 2550.1 Appendix G covers the following;
 - Oil level, fuel levels and lubrication,
 - Condition of ropes, rope terminals, fittings & anchor points, rope drums and sheaves,

- Condition and pressure of tyres where applicable,
 - Drain all water from air reservoirs,
 - Structural checks for loose, damaged or cracked components that may be indicated by rust marks, flaking or marked paint,
 - Check the security and application of counter weights,
 - Load moment system, where fitted is correctly set,
 - Indicator appropriate to the boom or fly-jib length is correctly fitted,
 - Cleanliness of cabin – is it free from grease, oil, rags, tools etc.,
 - Pneumatic and hydraulic systems and their safety devices operate correctly,
 - Operation of the Crane through all motions with particular attention to brakes,
 - Operation of all limit switches, cut out and safety devices,
 - Communications equipment is working correctly and clearly loud enough to be heard,
 - All fire extinguishers are placed in the correct position and are suitable for the particular application and are in working order.
- C) In conformance with AS 2550.1 clause 6.1, the operator shall review the logbook where applicable and be satisfied about the presence of unauthorised personnel on the crane, safe working condition of the crane and safe operation of each of the crane movements. Authorised personnel must carry out any adjustments or alteration needed for safe operation.
- D) Any stabilisers shall be engaged prior to lifting.
- E) Gain assurance from a responsible person that the Cage may be handled safely and that person has provided all information necessary to ensure that risks are eliminated or controlled.
- F) Do not exceed the rated working Load of the Crane.
- G) **This Cage is not designed or certified to convey Personnel.** The Operator to ensure that **NO PERSONNEL rides on or in the Cage at any time.**
- H) The Operator shall check the Cage is securely attached, refer Section (3).
- I) Only the Lifting Eye provided on the Cage is to be used for lifting, refer Section (3).
- J) The Operator to ensure any cylinders within the Cage have been firmly secured by the strap/load binder before manoeuvring the Cage.
- K) Unless a dangerous situation occurs, follow directions and signals given by an authorised person. Cease any Crane movement if a dangerous situation occurs.
- L) Ensure that all movements of the Crane are carried out under power.
- M) **Do NOT** move the Crane or Cage unless the safety of persons in the vicinity of the Crane is assured. Be alert to the possibility of trapping or injuring persons in the vicinity of the Crane when handling loads or moving the Crane.
- N) When lifting in an area subject to passing traffic, barriers or warning signs shall be used to prevent any interference.
- O) The Operator shall hoist the Cage vertically and in a smooth manner at slow speeds with minimum acceleration and deceleration.
- P) Sudden stops, jerky or other movements that may cause the Cage to swing unduly must be avoided. Ensure minimum impact when Crane engages 'end stops'.
- Q) Movement of hook/cage when out of sight is only permissible when directed by an authorised person such as a dogman, crane chase, spotter or rigger.
- R) The hook/cage must be raised sufficiently to avoid collision during horizontal movement. Only when the load is freely suspended is horizontal movement permissible.
- S) The Operator shall stay with the Crane controls at all times.
- T) When landing the Cage, avoid developing rope slack.

- U) The Operator shall keep clear of overhead obstructions and in particular **MAINTAIN RELEVANT CLEARANCE OF ELECTRICAL CONDUCTORS.**
- V) Before items are elevated in the Cage, the Operator shall lift the cage unladen to the required working height to confirm that all systems are functioning correctly.
- W) The Operator must know the location of the main isolation switch and fire fighting equipment.
- AA) Sufficient Personnel to be trained in the use of the fire fighting equipment on site or at the workplace to cover any emergency.
- AB) Ensure there has been no unauthorised interference or alteration to the equipment that may cause risk.
- AC) Ensure regular maintenance, testing and inspections are carried out and recorded in accordance with the relevant Crane Manuals and these Instructions [refer Section (7)], and corrective action initiated where applicable.
- AD) Ensure the instructions of East West Engineering are followed.
- AE) 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.**

6) PARTS LIST

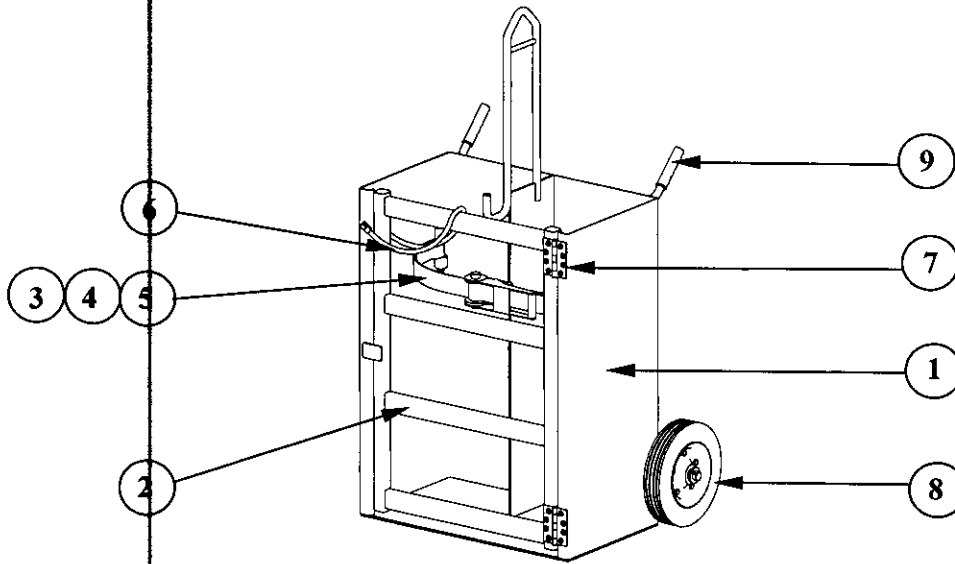


Fig. 6.1

Item	Description	GC-2 Gas Cylinder Cage
1	Cage Weld Assembly	GC-2-02
2	Gate Assembly	GC-2-04
3	Woven Strap 50mm (single fold)	1000mm Long
4	Hand Ratchet (2500 kg)	AG4-LC
5	Woven Strap 50mm (fold each end)	350mm Long
6	Gate Latch	"Downee" CAC 22
7	Butt Hinge (100x75mm)	BLHP-75C
8	Solid Rubber Cushion Tyred Wheels	"Fallshaw" R280/70R-SRBB10
9	Hand Grip 19mm	SFC 024
10		

Table 6.2

7) MAINTENANCE

Regular maintenance including Testing, Inspection and Cleaning should be carried out on the Cage to reduce the risk of potential hazards arising. The Cage 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 Cage 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

Description	Maintenance Period					
	Daily or 8 Hrs	Weekly or 40 Hrs	Monthly or 160 Hrs	3 Months or 500 Hrs	Annually or 2000 Hrs	Other
Cage Frame	CI					
Gate – Hinge & Catch	CI	GS		T		
Load Binder	CI					

Table 7.1

Maintenance to be carried out		
Maintenance Codes	Lubricant to be used	
GS = Grease smear	D = Drain	G = Grease, Shell Alvania R2 or equivalent
GN = Grease at nipple	R = 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

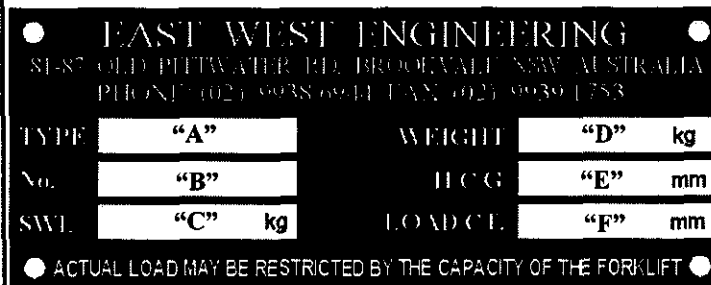


Fig. 8.1

- | | | |
|---|------------------------|----------------------|
| A | Product Type | Refer "A", Table 8.2 |
| B | Serial Number | Individually stamped |
| C | Safe Working Load | Refer "C", Table 8.2 |
| D | Dry Weight of the unit | Refer "D", Table 8.2 |
| E | Horizontal C of G | Not Applicable |
| F | Load Centre | Not Applicable |

COMPLIANCE PLATE MARKING						
Type	"A"	"B"	"C"	"D"	"E"	"F"
GC-2	GC-2	SERIAL No	250	90	XXXX	XXXX

Table 8.2

9) CERTIFICATION INFORMATION

Certificate

Type GC-2 Gas Cylinder Cage

We certify that the type GC-2 Gas Cylinder Cage is rated to 250kg Safe Working Load (SWL) and is designed and fabricated strictly in accordance with relevant Australian Standards including those listed below –

AS 1418.1 – 2002	Cranes – General Requirements
AS/NZS 1554.1: 2000	Structural Steel Welding – Welding of Steel Structures
AS 2550.1 – 2002	Cranes – Safe Use, General Requirements
AS 3990 – 1993	Mechanical Equipment – Steelwork
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 non-conformities 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 25th 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 price without notification**

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 1 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
1. Crane Operational Safety Pre-Checks.	a) Unsafe use of Crane resulting in Cage and/or items shifting & falling from height and striking Personnel and/or objects.	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - The Crane has been duly commissioned & all lifting apparatus appropriately marked in accordance with AS 1418. - Pre-operational inspections (in accordance with AS 2550.1), to be carried out before each shift <ul style="list-style-type: none"> – Crane taken out of service if any risks or malfunctions are found. These MUST be reported & recorded for assessment by a competent person. - Operator to review logbook, be satisfied about presence of unauthorised personnel on the Crane & the safe working conditions of the Crane. - Operator to ensure the rated working load of the Crane & any lifting apparatus is not exceeded. - (continued on sheet 2 of 11). 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards



Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 2 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
1. Crane Operational Safety Pre-Checks (continued).	a) Unsafe use of Crane resulting in Cage and/or items shifting & falling from height and striking Personnel and/or objects. (continued)	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - Any stabilisers to be engaged prior to lifting. - All Crane movements to be carried out under power. - The operational areas to be assessed for hazards prior to and during work shifts. - The Crane must be left in safe condition after each shift. - Inspections, maintenance and repairs to be carried out in accordance with the relative Crane Instruction Manuals and AS 2550.1. 	

Assessment carried out by: Allan WALKER East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards



Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage Sheet: 3 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
1. Crane Operational Safety Pre-Checks (continued).	b) Electric Shock	<ul style="list-style-type: none"> • Serious Risk to Operator. • Serious Risk to Personnel. 	<ul style="list-style-type: none"> - All Risk Control Measures outlined in 1(a) above are to be in place. - The Power Supply is to be compatible with the Crane. - Operator to keep clear of overhead obstructions and in particular MAINTAIN RELEVANT CLEARANCES of ELECTRICAL Conductors. - A Spotter shall be used whenever operating near aerial conductors in accordance with AS 2550.1. - Ensure an Electrical isolation procedure developed for the Crane is in place – Operator must know location of main isolation switch & fire fighting equipment. 	<p>If more than 25 persons employed at workplace/site, a Certified First Aider to be at Workplace or on Site.</p>

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards



Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 4 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
2. Cage Operational Safety Pre-Checks.	a) Unsafe use of Cage resulting in Cage and/or items shifting & falling from height and striking Personnel and/or objects.	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - Inspections, maintenance and repairs to be carried out in accordance with Instruction Manual. - All Pre-Checks listed in the Instruction Manual are to be carried out before each shift. - The Cage is to be fitted securely to the crane lifting apparatus according to the Instruction Manual. Only the Lifting Eye provided to be used for lifting. - Any Cylinders within the Cage to be firmly secured by the strap/load binder before use. - All instructions for the use of the Cage as laid out in the Instruction manual are to be followed. - The Operator to lift the Cage to <u>required working height</u> to confirm all systems are functioning correctly. (continued on sheet 5 of 11). 	

Assessment carried out by: Allan WALKER East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: Type GC-2 Gas Cylinder Cage Sheet: 5 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
2. Cage Operational Safety Pre-Checks (continued).	a) Unsafe use of Cage resulting in Cage and/or items shifting & falling from height and striking Personnel and/or objects (continued)..	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - The Operator to ensure there has been no unauthorised interference or alteration to the equipment that may cause risk. - The hoist used to lift the Cage is not to be twisted or tangled before lifting. - If any equipment becomes unsafe, stop all usage until risk has been eliminated or controlled. - The use of the Cage is limited to those situations for which it is specifically designed and/or in accordance with AS 2550.1. 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards



Equipment Type & Description: Type GC-2 Gas Cylinder Cage Sheet: 6 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
<p>3. Lifting, lowering or manoeuvring Cage/Load with Crane.</p>	<p>a) Unsafe/incompetent Operator.</p> <p>b) Items falling from height.</p>	<ul style="list-style-type: none"> • Serious Risk to Operator. • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - Only certified & fully trained Operators are to use the Crane. - Operators must not work the Crane unless they are physically & mentally capable. - All Risk Control Measures outlined above are to be in place. - Operator to ensure the Cage is fitted securely to the crane lifting apparatus and prevented from swinging. - Any Cylinders within the Cage to be firmly secured by the strap/load binder before lifting. - Barriers/warning signs in areas subject to passing traffic to be installed. - NO PERSONNEL to ride on or in Cage at any time 	<ul style="list-style-type: none"> - The Cage is to be raised no higher than necessary. - (continued on sheet 7 of 11).

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: Type GC-2 Gas Cylinder Cage Sheet: 7 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
3. Lifting, lowering & manoeuvring Cage/Load with Crane (continued).	b) Items falling from height (continued). d) Cage and/or load uncontrolled and/or having unexpected movements.	<ul style="list-style-type: none"> • Serious Risk to Personnel • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - Operator to hoist Cage vertically in a smooth manner slowly with minimum acceleration & deceleration. - All Risk Control Measures outlined above are to be in place. - Operator to gain assurance from a responsible person that the Cage and any load may be handled safely. - Use a 'tagline' if necessary - Operator to avoid sudden stops, jerky movements. - Operator to stay with controls at all times. - Cage not to be moved unless the safety of persons in the vicinity of the Crane is assured - Cage/hook not to be moved when out of sight unless directed to by an authorised person. - continued on sheet 8 of 11) 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 8 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
3. Lifting, lowering & manoeuvring Cage/Load with Crane (continued).	d) Cage and/or load uncontrolled and/or having unexpected movements (continued).	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - Operator to follow directions & signals given by an authorised person unless a dangerous situation occurs in which case all Cage movements to cease. - When landing the Cage, rope slack must be avoided. 	
	e) Cage and/or load too heavy and/or unbalanced.	<ul style="list-style-type: none"> • Serious Risk to Personnel • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - All Risk Control Measures outlined in 3(a), 3(b) & 3(d) above are to be in place. - The Operator to be aware of the weight of Cage & load - The rated working load of the Crane is NOT to be exceeded. - The Cage is to be raised unladen to working height to confirm all systems are functioning. 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 9 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
3. Lifting, lowering & manoeuvring Cage/Load with Crane (continued).	f) Cage striking Personnel and/or objects.	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - All Risk Control Measures outlined above are to be in place. - A suitable clear space between barriers to be left to safely use the Cage. - Lifting & lowering areas to be assessed & the Crane Operator and/or Controller made aware of any objects within the path of normal Crane movements. - Cage/hook to be raised sufficiently to avoid collision during horizontal movements - The Crane/Cage is NOT to be moved unless the safety of Personnel is assured. - Cage MUST to be visible to Personnel controlling the Crane movements at all times whilst suspended. 	
			<ul style="list-style-type: none"> - The Crane to keep clear of any overhead obstructions, and in particular ELECTRICAL conductors. 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 10 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
3. Lifting, lowering & manoeuvring Cage/Load with Crane (continued).	g) Entanglement with lifting ropes, chains, slings, beams, fallropes & taglines.	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. 	<ul style="list-style-type: none"> - All Risk Control Measures outlined above are to be in place. - Spotters, Dogmen, Riggers are to be well clear of any lifting apparatus before any Crane movements take place. - All lifting ropes, chains, slings and/or lifting beams are to be prevented from swinging and/or becoming slack. 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004

Appendix A – to form Part of the Instruction Manual

Risk Control Measures & Risk Assessment for Identified Hazards

Equipment Type & Description: _____ Type GC-2 Gas Cylinder Cage _____ Sheet: 11 of 11

Operation	Hazards Identified	Risk Assessment	Risk Control Measures in Place	Risk Control In Place (Date)
4. Storage of Cage.	<p>a) Cage becoming damaged.</p> <p>b) Cage in the way of normal Workplace/Site operations.</p>	<ul style="list-style-type: none"> • Serious Risk to Personnel. • Moderate Risk to Operator. <p>Moderate Risk to Personnel.</p>	<ul style="list-style-type: none"> - Regular maintenance, inspection and testing according to the Instruction Manual to be carried out. - Cage to be stored in dry areas and away from any corrosive chemicals. - Cage to be stored in areas which will not interfere with the normal running of the Workplace/Site. 	

Assessment carried out by: Allan WALKER, East West Engineering Date of Assessment: 6th May 2004