

OPERATION & MAINTENANCE MANUAL



MANUAL RISING ARM BARRIERS



Certificate No. FM 21078
Quality Management
ISO 9001:2008

Certificate No. EMS 45526
Environment Management
ISO 14001:2004

Certificate No. OHS 547679
Occupational Health
& Safety Management
OHSAS 18001:2007





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Introduction

Broxap manual rising arm barriers have been supplied to designs that have been proven over years of development and installation.

The barriers are supplied in base materials of mild steel and aluminium, with sections and grades of material being used to ensure that they are fit for purpose and function for many years to come.

To aid in ensuring the maximum life can be realised with the product, along with minimising the costs for major refurbishment, this manual has been created to assist in the ongoing maintenance requirements along with identifying important points that should be followed at all times.

Broxap are ISO9001 (Quality), ISO14001 (Environmental) and OHSAS18001 (Health and Safety) certified through the BSI.

These 3 standards have been utilised during the design, manufacture, processing and delivery of the product. Our commitment to providing a service of quality that takes into consideration the effects of the environment during its manufacture and life plus the health and safety of the Customers has been fully considered.

Other standards that have also been considered during product design and manufacture are:

- BS EN 13438:2013 (Paints & Varnishes – Powder Organic Coatings for Galvanized Products)
- BS EN ISO 13920:1997 (Welding Tolerances Shapes, Dimensions and Lengths)



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Health & Safety Information

There is a need for certain Health and Safety notes to be considered at all times during the use and ongoing maintenance of manual rising arm barriers.

These being:

- When routine maintenance is being undertaken there is a requirement for the customer to observe the required Health & Safety information for the materials / products being used. Broxap identify that:- **It is the Customer's responsibility to ensure that full care, responsibility, correct operation / use, and training are adhered to at all times.**
- Broxap cannot accept any responsibility for any damage or injury to persons or property as a result of not working in a safe and proper manner.
- Should any structural concerns, product failure, product quality or issues relating to ongoing maintenance and repair of the product be necessary, then it is strongly recommended that in the first instance contact is made directly with Broxap.

Materials & Processes

As the product is designed to utilise various customer requirements, the following is a list of materials and processes that could have been used during its processing:

Materials

- Mild steel – Grade S235
- Aluminium tube
- Tape on aluminium boom
- Fixings in Grade 8.8 or 10.9 in steel or stainless steel
- Ground anchors – sleeve or resin type
- Rubber on seals
- Proprietary locking mechanisms when fitted (by others)

Processes used

- Bending, forming, fabrication and welding.
- Polyester Powder Coating
- Application of tape to boom
- Electroplating of fasteners and fixings

Cleaning, Maintenance & Repair

To maximise life expectancy our barriers should be regularly visually inspected for any signs of damage, vandalism, breakdown of surface finish, and build-up of salt, dirt or atmospheric residue.

During these inspections, should any concerns be noted, then the Customer's attention is brought to the following pages whereby suitable maintenance and repair methods are described for the various materials used.

In the event of serious damage to any main component then Broxap should be contacted immediately for detailed technical advice.

Recommended plan:

Frequency	Type	Done By	Details
Daily	Pre-use safety checks	Barrier operator	Ensure locking mechanism is working correctly and the barrier can be operated in a safe manner. Visual inspection for any signs of damage
3-monthly	Cleaning	Maintenance personnel	General clean down of product using a mild detergent in warm water. The cleaning should be undertaken on all painted surfaces using a soft cloth or sponge. After cleaning the barrier should be rinsed with clean water.
	Visual inspection	Maintenance personnel	Visual inspection to identify: <ul style="list-style-type: none"> • Damage / wear • Breakdown of surface finish • Reduction in performance Lubrication of moving parts

Full records to be kept giving full details (and photographic evidence where possible) of all inspections and maintenance performed on the barrier.

Any physical / impact damage that may affect the safe operation, or integrity of the barrier, must be reported to Broxap immediately so that advice can be given and any necessary remedial work carried out.

Please see Appendices for Daily and 3-month Inspection Logs.

Powder Coating

As the name suggests, this process involves the application of a polyester powder onto the substrate using an electrostatic gun. This is then oven cured to create the hard wearing outer layer that can be seen on the finished product.

Powder coating can last many years, but its life expectancy depends on a variety of factors, including site location, atmospheric conditions and cleaning regime. The recommended cleaning frequency is detailed at the start of this section.

The cleaning of powder coated surfaces should be undertaken using either:

1. Warm mild soapy water and soft brush, sponge or natural bristle brush. Rinsed with clean water.
2. A proprietary car wash and wax system. Rinsed with clean water.

At no time during the cleaning process is it advisable for any abrasive cleaners, solvents, or other chemicals, to be used:

To enhance the appearance of the powder coating, an annual treatment with car wax would be acceptable, but not considered mandatory.

Where Graffiti is present, then it is recommended that no solvent cleaners are used in an attempt to remove it. The method of removal should be with the use of either a car 'T-Cutting' compound or through a specialist cleaner. This should be tested on a small, inconspicuous area first to assess its efficiency.

Where small repairs to the powder coat surface are required, then the following should be adhered to as a minimum:

- For light scratches / chips where the base metal is exposed then a suitable zinc-rich primer should be carefully applied to the defect, followed by a topcoat finish of a matching acrylic based paint or touch up (obtained from Broxap).
- Where scratches / chips have only exposed the substrate surface, then the above must be followed with the exception of the Zinc Rich primer being applied.

For larger areas of damage, vandalism or coating breakdown, then Broxap should be contacted for technical advice.



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Wet Painting

As the name suggests, this process involves the application of a wet paint onto the base substrate. This then cures to create the hard wearing outer layer that the customer will see.

Wet paint can last many years, but its life expectancy depends on a variety of factors, including site location, atmospheric conditions and cleaning regime. The recommended cleaning frequency is detailed at the start of this section.

The cleaning of wet painted surfaces should be undertaken using either:

1. Warm mild soapy water and soft brush, sponge or natural bristle brush. Rinsed with clean water.
2. A proprietary car wash and wax system. Rinsed with clean water.
3. A low pressure water wash eg hosepipe.

At no time during the cleaning process is it advisable for any abrasive cleaners, solvents, or other chemicals, to be used.

Where small repairs to the painted surface are required, then the following should be adhered to as a minimum:

- For light scratches / chips where the base material is exposed then a suitable filler should be carefully applied to the defect, followed by a topcoat finish of a matching acrylic based paint or touch up (obtained from Broxap).
- If required, the damaged area can be filled to bring it back up to the same level as the remaining painted surface. A proprietary car filler system would be suitable for this operation and can easily be sanded back to the finish and level needed.
- For larger areas of damage or vandalism, the areas should be sanded by the minimum amount to feather in the broken edges. As per the above, the area can be filled if required and a primer and then topcoat either brushed or sprayed onto the area.

Information relating to the original paint system can be obtained by contacting Broxap.



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Additional Information

Additional information on maintenance can be found on the Broxap website:

www.broxap.com/maintenance



Appendix A

Daily Inspection Log Template:

DATE	TASK	OK	NOK	COMMENTS	SIGNATURE
	Visually inspect locking barrel / pin for obvious signs of damage & wear				
	Visually inspect barrier for obvious signs of damage (eg. Vehicle impact)				
	Check barrier can be fully opened and closed, and moves freely				

Any physical damage that may affect the safe operation, or integrity of the barrier, must be reported to Broxap immediately so that advise can be given and any necessary remedial work can be undertaken.

Appendix B

3-Monthly Inspection / Maintenance Log Template:

DATE	TASK	OK	NOK	COMMENTS	SIGNATURE
	General clean down of barrier and components				
	Thoroughly inspect all components of barrier for obvious signs of physical / impact damage & wear				
	Visually inspect all paintwork for damage				
	<u>Check barrier operation:</u> Can be fully opened Can be fully closed Can be locked in open position Can be locked in closed position No sign of wear to locking mechanism Moves freely				
	Details of any maintenance carried out (eg. Paint repairs, lubrication):				

Where possible, photographic evidence of any damage should be attached.

Any physical damage that may affect the safe operation, or integrity of the barrier, must be reported to Broxap immediately so that advise can be given and any necessary remedial work can be undertaken.