

Superior quality since  
1984

# Owners Manual

## HYDRAULIC BEAD BREAKER

# BORUM

INDUSTRIAL WORKSHOP EQUIPMENT

**INDUSTRIAL  
QUALITY**



### Specifications:

- Safe Working Capacity: 13,000kg
- Rated Pressure: 10,000psi
- Suitable for OTR Earthmover Rim Sizes: 25 - 51" Diameter
- Pressure Connection: 3/8" - 18NPTF
- Used on 5-piece rims 635 to 1,295 mm (25" - 51") with pry bar / bead loosening pockets
- Ram Stroke: 105mm (4-1/4") stroke ram
- Hydraulic Oil Capacity: 500ml
- Weight: 13kg

### About the Borum brand

Our "heavy duty commercial" range of Borum Industrial equipment has been manufactured to exacting standards for the past 34 years. We specify industrial quality components and design to ensure a long and durable working life in **commercial transport, mining, earthmoving and railway** environments. Our Borum Industrial range of equipment is focused on achieving superior professional standards, reliability, quality, and are covered by a **12 month trade use warranty**.

## WARNING INFORMATION



**IMPORTANT: READ ALL INSTRUCTIONS BEFORE USE**

### **WARNING**

The instructions and warnings contained in this manual should be read and understood before using or operating this equipment. Do not allow anyone to use or operate this equipment until they have read this manual and have developed a thorough understanding of how this equipment works. Failure to observe any of the instructions contained in the manual could result in severe personal injury to the user or bystanders, or cause damage to the equipment and property. Keep this manual in a convenient and safe place for future reference.

The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Borum policy of continuous improvement determines the right to make modifications without prior warning.

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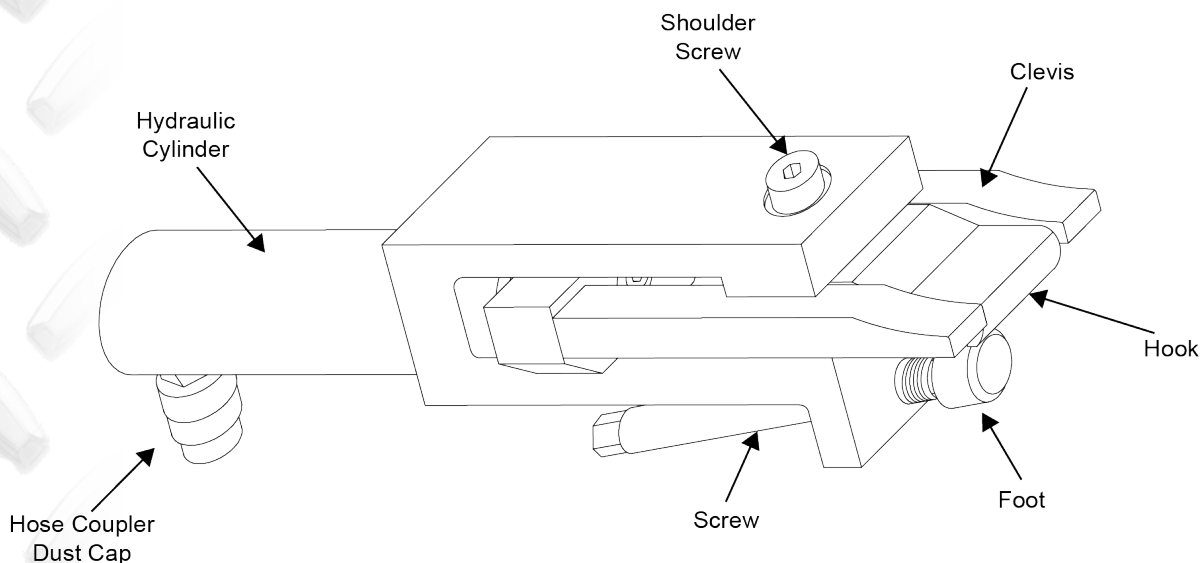
### **Intended Use**

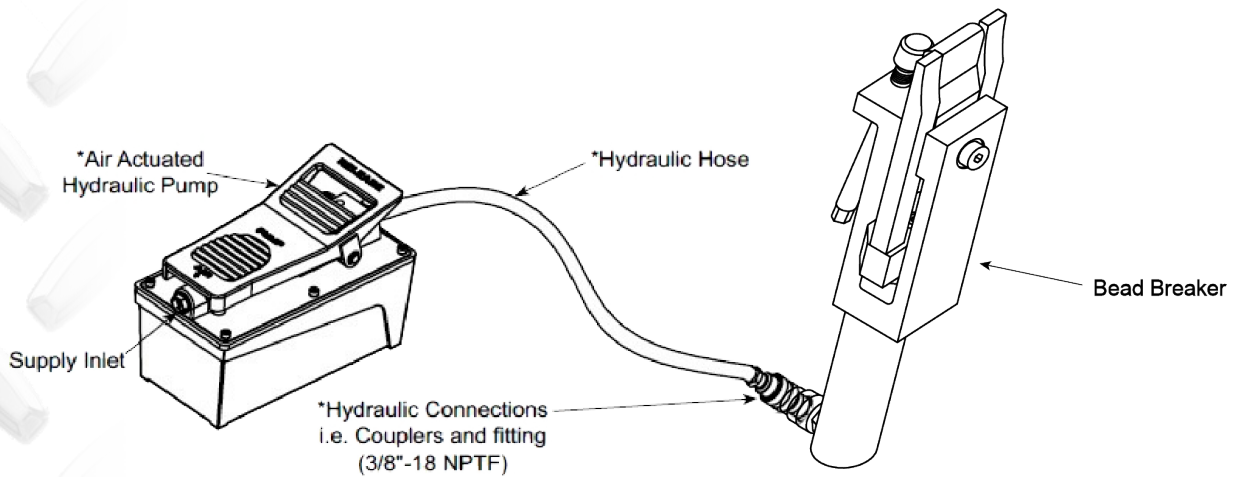
This Hydraulic Bead Breaker is used to dismantle 5-piece rims 635 to 1,295 mm (25" - 51") with pry bar / bead loosening pockets. For use with a separate 10,000psi hydraulic pump to quickly break tyre beads.

## STANDARD OPERATING PROCEDURE

### OPERATIONAL SAFETY INFORMATION

- KEEP work area clean and well lit. Cluttered or dark work areas invite accidents.
- ALWAYS wear suitable personal protective clothing, gloves and eyewear manufactured to the latest Australian Safety Standards.
- ALWAYS ensure that adequate lighting is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.
- ALWAYS secure and fully support vehicle
- DO NOT use this equipment to raise or move any part of a vehicle.
- ALWAYS use according to vehicle's service instructions only. It is beyond the scope of this manual to provide rim/tyre repair guidelines. It is the USERS RESPONSIBILITY to consult a rim/tyre repair technical manual for full instructions for each type of rim or tyre.
- STAY CLEAR of hydraulic ram during operation. Position body as far away as practical when hydraulic ram is under load. Ram can slip suddenly, causing injury.
- NEVER use this bead breaker on split rim / multi-piece wheel assemblies.
- Before use, ALWAYS fully deflate the tyre. NEVER use this device on an inflated tyre.
- REMOVE tyre from vehicle (where possible) and DEFLATE completely before attaching bead breaker to rim.
- Use manometer or any load measuring device to verify the suitable application.
- ALWAYS lock the safety rods on articulated vehicle.
- ENSURE the safety valve is set and sealed by the manufacturer.
- For your safety, DO NOT modify or alter this bead breaker.
- DO NOT allow untrained persons to operate the product.
- NEVER leave this equipment unattended whilst connected to an air/hydraulic pump
- NEVER use brake fluid, alcohol, glycerine, detergent or motor oil. ONLY use high quality Hydraulic Jack Oil.
- When servicing, USE ONLY Borum identical replacement parts. Use of any other parts will void the warranty.
- Use the right product for the job. There are certain applications for which the Bead Breaker was designed. Do not modify the Bead Breaker and do not use the Bead Breaker for a purpose for which it was not intended.





(\* ) Items not included with unit

#### **Pump and Hose Safety Instructions:**

- When using this Bead Breaker with Air/Hydraulic Equipment, ALWAYS study, understand, and follow all instructions provided with the air hydraulic pump prior to operation. Failure to follow these warnings may result in loss of load, damage to the pump, or failure resulting in property damage, personal, or fatal injury.
- Before operating the pump, tighten all hose connections. Do not over-tighten; connections need only be secure and leak free. Over-tightening may cause premature thread failure or high-pressure fittings to fail at pressures lower than rated capacity.
- Do not drop heavy objects on to the hose. Do not twist or stretch the hose. Always keep the hose clean to avoid damage to the hose or connectors.
- Should a hydraulic hose ever rupture, burst, or need to be disconnected, immediately shut the pump OFF, and open the control valve to release all pressure. Never grasp a leaking, pressurised hose with your hands; the force of escaping hydraulic fluid could cause serious injury.
- Do not subject the hose to any potential hazard such as fire, extreme cold or heat, sharp surfaces, or heavy impact. Do not allow the hose to kink, twist, curl, or bend so tightly that the fluid flow within the hose is blocked or reduced. Do not use the hose to move attached equipment. Periodically inspect the hose for wear, because any of these conditions can damage the hose and result in personal injury.
- Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses must not come in contact with corrosive materials.
- Do not exceed the maximum capacity of the pump or tamper with the internal high-pressure relief valve. Creating pressure beyond the rated capacity can result in property damage and/or personal injury.
- When coupler valves are disconnected, always cover with the dust cap to keep the hydraulic system clean.

# ASSEMBLY, OPERATION, PREVENTITIVE MAINTENANCE

## 1. FEATURES

The Borum Industrial Hydraulic OTR EarthmoverBead Breaker is designed to work on most 5-piece rims 635 to 1,295 mm (25" - 51") with pry bar / bead loosening pockets. It is expressly intended to be used as an aid in breaking bead seal between a tyre and rim for the purpose of resealing bead seal, replacement of tyre or wheel, replacing tyre valve, tyre tube etc. This bead breaker is operated with a 10,000 PSI hydraulic pump (supplied separately) to quickly break the bead of the tyre and will not damage the tyre or rim if used correctly.

## 2. ASSEMBLY

**Unpacking:** after removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. The packaging materials (Polyethylene bags, polystyrene etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

Connect the hydraulic pump (manual or air) to the bead breaker through the quick-couplers. If you use the air/hydraulic pump, you must connect it to a source of compressed air of 100-120 PSI.

Test the bead breaker before you attach it to the rim. Release all air from the tyre and remove the cap and valve, as well as the valve extension included. Be sure to verify that the tyre is completely deflated!

## 3. BEFORE USE

Conduct a thorough visual inspection checking for leaks and any abnormal conditions, such as cracked welds, leaks, and damaged, loose, or missing parts.

Test the bead breaker before you attach it to the rim. Release all air from the tyre and remove the cap and valve, as well as the valve extension if included. ALWAYS be sure to verify that the tyre is completely deflated!

**WARNING!!! NEVER use this Bead Breaker on inflated tyres**

Test the bead breaker before you attach it to the rim. Release all air from the tyre and remove the cap and valve, as well as the valve extension if included. ALWAYS be sure to verify that the tyre is completely deflated!

Lubricate Moving Components

A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent corrosion.

## 4. OPERATION

Prior to each use always conduct a visual inspection checking for and any abnormal conditions, such as cracked welds, and damaged, loose, or missing parts.

1. Chock the wheels opposite to the jack on a flat suitable work surface.
2. Jack up the vehicle and secure on safety stands or blocking devices immediately. DO NOT work under a unsecured load!
3. *Fully deflate the tyre, remove valve core.*

**NOTE:** Deflate both tyres if you have a dual mounting. Always deflate tyres before removing a wheel, a rim, or part of a rim clamp or nut. If you do not deflate the tyre, the tyre could explode, causing serious injury or death.

If you are breaking the tyre bead with the wheel on the vehicle:  
Proceed to "Positioning the Bead Breaker."

If you are breaking the tyre bead with the wheel off the vehicle: Remove the tyre/rim assembly from the vehicle and place it flat on the ground with the gutter side up.



### **Positioning the Bead Breaker**

1. Place the bead breaker into the continuous pry bar pocket, with the hook under the lip of the bead seat band.
2. Position the bead breaker so that it is about 30°, or at least 300mm to one side of the flange butt weld.
3. Adjust the ram adjusting screw, by hand, so that the bead breaker is less than perpendicular (90°) to the wheel.
4. Stand to one side of the bead breaker. Hold the bead breaker with one hand.
5. Always stand to one side of the rim when using the bead breaker. Standing to one side of the bead breaker allows you to maintain control of the bead breaker.

**WARNING!** If it is not seated properly and flies off the rim, the bead breaker could cause serious injury or death.

### **Activating the Bead Breaker**

The bead breaker uses a long stroke and high force. Be careful not to damage or bend rim parts, such as the flange butt weld, when using the bead breaker.

1. Turn on the hydraulic pump to activate the bead breaker.
2. Apply enough hydraulic pressure to the bead breaker to push the flange approx. 13-19 mm from the lip of the bead seat band.
3. If the bead breaker moves and is no longer vertical, re-adjust the ram adjusting screw.
4. You must release pressure before adjusting the screw.
5. Continue applying hydraulic pressure until the flange is about 19-25 mm from the lip of the bead seat band.
6. Place a nut or similar object between the flange and the lip of the bead seat band. To prevent personal injury, lay the nut on the flange and slide it into position with two screwdrivers. Do not put your fingers under the bead seat band.
7. Release hydraulic pressure.

### **Continuing to Break the Tyre Bead**

1. Move the bead breaker away from the flange butt weld, 500-900mm from its present position.
2. Follow the steps in "Activating the Bead Breaker" above.
3. Continue advancing the bead breaker around the rim, 500-900mm at a time, breaking the tyre bead.
4. Stop breaking the tyre bead when you have moved the bead breaker about  $\frac{3}{4}$  of the way around the rim.
5. To prevent damage to the rim, do not use the bead breaker within 300mm of the flange butt weld.
6. Apply enough pressure to the bead breaker to completely break the tyre bead.
7. Release the hydraulic pressure.

**NOTE:** If you have gone all the way around the tyre and the tyre bead does not break: Repeat the steps in "Activating the Bead Breaker" and "Continuing to Break the Tyre Bead" above, with more hydraulic pressure.

If you use an air/hydraulic pump ensure it is connected to a source of compressed air of 100-120psi.

### **Recommended Pump: TradeQuip Air Actuated Hydraulic Pump - Code: 2054**

**Important:** Repeated changing of hoses may cause loss of oil and air to enter the hydraulic ram. This will cause the pushrod to perform poorly; seals will not be under sufficient pressure to operate effectively and additional hydraulic oil may leak. In this circumstance refer to the Hydraulic Pump Owners Manual, "Bleeding Air from System" and "Adding Oil" to restore normal operation.

## **5. STORAGE**

When not in use, always store this Bead Breaker with the pushrod fully retracted to protect from dirt, dust and corrosion. Use dust cover to seal hose coupler fittings. If this hydraulic Bead Breaker is not regularly cleaned and maintained correctly the components will become clogged, corroded and will not perform at its best. Always disconnect the pump hose from the Bead Breaker, fit the dust cover to seal hose coupler fitting, then wipe the external surfaces with a clean, dry cloth. Application of a coating of light lubricating oil to pivot points and hinges will help to prevent rust and assure that assemblies move freely. Store in a secure dry location.

## **6. MAINTENANCE**

### **Inspection:**

Inspect the Bead Breaker for damage, wear, broken or missing parts and that all components function before each use.

- Tighten connections as needed. Use pipe thread sealing compound when servicing connections.
- Only use a good grade hydraulic oil. Do not mix different liquids and NEVER USE brake fluid, turbine oil, transmission fluid, motor oil or glycerine. Improper fluid can cause premature failure of the ram and the potential for sudden and immediate loss of load.
- Check the oil level by placing the pump in an upright position.

### **Cleaning:**

Periodically check the pushrod, claws, feet and shovel for signs of rust or corrosion. Clean as needed and wipe with an oily cloth. Never use sandpaper or abrasive material on these surfaces.

### **Lubrication:**

Application of a coating of light lubricating oil to pivot points and hinges will help to prevent rust and assure that pump assemblies move freely.

## 7. SERVICE & REPAIR

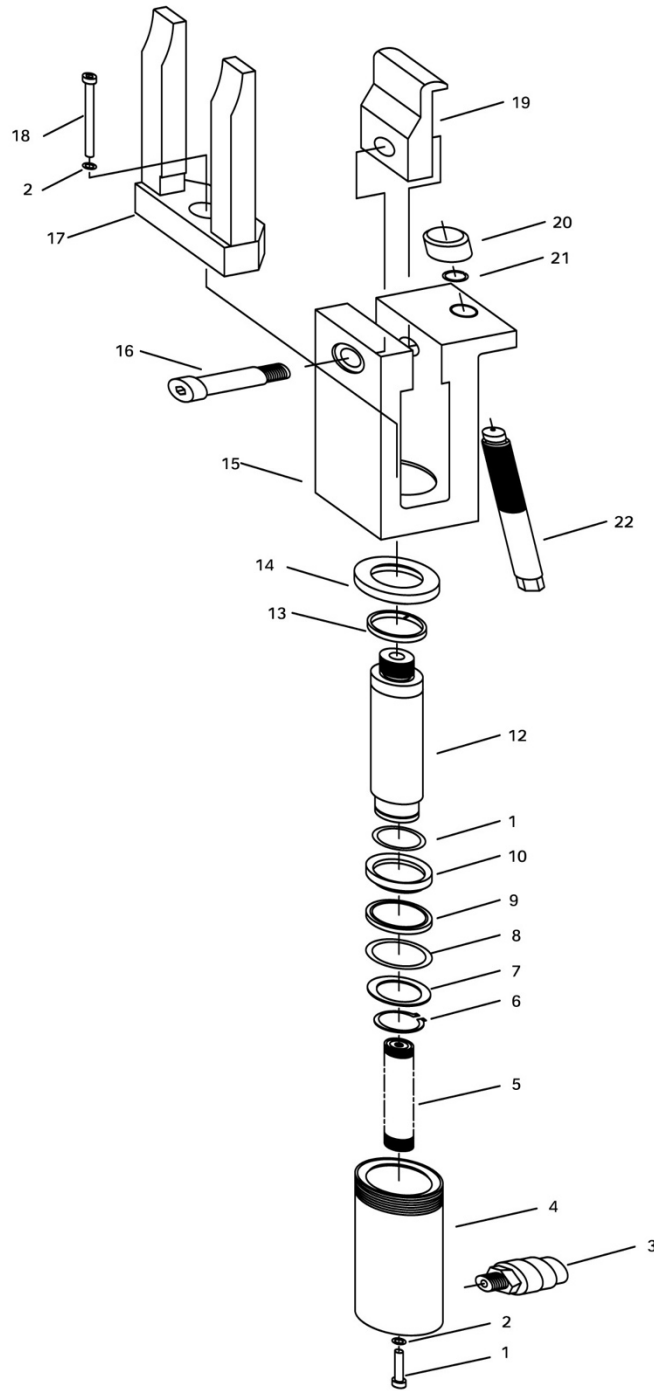
Any Hydraulic Bead Breaker found damaged in any way, or found to be worn or operates abnormally should be removed from service until repaired by an authorised service agent. Owners and / or operators should be aware that repair of this product may require specialised equipment and knowledge. Only authorised parts, labels, decals shall be used on this equipment. Annual inspection of the Hydraulic Porta Power Kit is recommended and can be made by an authorised repair facility to ensure that your equipment is in optimum condition and that the equipment has the correct decals and safety labels specified by the manufacturer.

### TROUBLESHOOTING

Symptom	Possible Cause	Corrective Action
Bead breaker not responding to pressurised fluid	<ul style="list-style-type: none"> <li>• Loose connections</li> <li>• Faulty connections/couplers</li> <li>• Loose connections/couplers</li> <li>• Oil level in pump is low</li> <li>• Pump not operating</li> </ul>	<ul style="list-style-type: none"> <li>• Tighten connections</li> <li>• Replace connections/couplers</li> <li>• Tighten connections/couplers</li> <li>• Depressurise and fill the pump</li> <li>• Check pump's operating instructions</li> </ul>
Bead breaker cannot close or hook extends only partially	<ul style="list-style-type: none"> <li>• Oil level in pump is low</li> <li>• Sticking or binding components</li> </ul>	<ul style="list-style-type: none"> <li>• Depressurise and fill the pump</li> <li>• Contact service centre</li> </ul>
Bead breaker responds to pressurised fluid, but does not maintain pressure	<ul style="list-style-type: none"> <li>• Pump or valve malfunctioning</li> <li>• Seals leaking</li> </ul>	<ul style="list-style-type: none"> <li>• Check pump's operating instructions</li> <li>• Contact service centre</li> </ul>
Oil leaks	<ul style="list-style-type: none"> <li>• Worn or damaged seals</li> </ul>	<ul style="list-style-type: none"> <li>• Contact service centre</li> </ul>
Bead breaker will not open; Hook will not retract or retracts slower than normal	<ul style="list-style-type: none"> <li>• Malfunctioning coupler</li> <li>• Pump reservoir overfilled</li> <li>• Damaged internally</li> <li>• Linkage binding</li> </ul>	<ul style="list-style-type: none"> <li>• Depressurise pump and hose, remove bead breaker and replace coupler</li> <li>• Depressurise pump and hose, remove bead breaker, drain fluid to proper level</li> <li>• Contact service centre</li> <li>• Clean and lubricate moving parts</li> </ul>
Hook will not fully extend	<ul style="list-style-type: none"> <li>• Oil level in pump is low</li> </ul>	<ul style="list-style-type: none"> <li>• Depressurise pump and hose, remove bead breaker, add fluid to proper level</li> </ul>
Erratic action	<ul style="list-style-type: none"> <li>• External leakage</li> <li>• Sticking or binding components</li> </ul>	<ul style="list-style-type: none"> <li>• Contact service centre</li> </ul>



**PARTS LIST & DIAGRAM**



Part	Description	Qty
1	Screw M6x35	1
2	Washer	2
3	Tie-in Assembly 3/8" - 18	1
4	Cylinder	1
5	Return Spring Assembly	1
6	Snap Ring 32	1
7	Washer	1
8	O-Ring 39x4.6	1
9	Sealing Washer	1
10	Piston Ring	1
11	O-Ring 31.5x3.55	1

Part	Description	Qty
12	Ram Piston	1
13	Pilot Ring	1
14	Bound Ring	1
15	Clevis Housing	1
16	Table Pin	1
17	Clevis	1
18	Screw M6x90	1
19	Hook	1
20	Foot	1
21	Snap Ring	1
22	Screw	1

## WARRANTY

BORUM Industrial products have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. Should this piece of equipment develop any fault, please return the complete tool to your nearest authorised warranty repair agent or contact TQB Brands Pty Ltd Warranty team – [warranty@tqbbrands.com.au](mailto:warranty@tqbbrands.com.au).

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any personnel other than the authorised TQB Brands Pty Ltd repair agent. This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your TQB Brands Pty Ltd guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12month period.

### Consumer Guarantee

Our goods come with a guarantee that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.



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