Doherty Rotary Tilt Bucket Installation and Operation manual

SERIAL NUMBER: _____

The Doherty Rotary tilt bucket

Release 2 – April 2024, Reference SA466015

IMPORTANT:

The booklet should be always kept with the machine during and after installation. Machine operators must read and fully understand the operations manual before use.

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WARNING SYMBOLS

This symbol indicates important safety or information messages in this manual.

When you see this symbol carefully read the message that follows and be alerted to the possibility of personal injury or death.

PRE-DELIVERY CHECK

Installation completed by:

Company:	
Installer name:	
Date:	
Excavator make and model:	
Bucket Serial #	
End username:	
End user phone number:	
End user address:	
End user email address:	

Tilt circuit pressure checked at:	PSI
Hose routings checked and abrasion free throughout full crowd movement and when tilted:	
All hydraulic connections, clean, tight and leak free:	
Please specify type and brand of tilt control valve fitted.	

This form must be returned to Doherty Couplers upon completion of Installation to validate warranty.

NOTES:

RISK ASSESSMENT

This risk assessment form is supplied as a guide only. It is the responsibility of the owner / operator to ensure that this equipment is operated in a safe manner and complies with all relevant compliance regulations.

Location of risk assessment:	Date:

Typical hazards associated with this equipment	Personnel affected:			
	Indicate in table below:			
Type	**Operator**	**Site personnel**	**Service personnel**	**General public**
Changing Attachments				
Is there a copy of the operations manual in the machine cabin?				
Has the operator been correctly trained for use with this bucket and verified?				
Is the operator aware they should not operate this machine unless they are satisfied that the bucket is in a safe condition?				
Falling objects				
Are all personnel aware that they must not position themselves under attachments or suspended loads?				
Lifting equipment				
Do not attach any lifting equipment to the bucket. The bucket is not to be used for lifting.				
No personal to be lifted in the bucket.				
Warning devices and Decals				
Are all safety and operations decals clearly displayed?				
Equipment malfunction				
Is there a checklist of daily, weekly, monthly inspections?				
Is there a record of all service / repair work?				

Other hazards identified:			
Plant & machinery movement.	Warning devices on plant and equipment.	Noise.	Environment.

Assessed by:	Reported to:
Name Date	Name Date

PRESTART CHECK LIST

Operators Name:	Date:

Daily prestart check list							
Bucket serial number:	**S**	**M**	**T**	**W**	**T**	**F**	**S**
Check all attachment pin retainer bolts and nuts for tightness.							
Check for pin wear.							
Check all hydraulic hoses and fittings for any leaks or wear.							
Clean away any material build up around actuator and end seals.							

Weekly prestart check list	
Thoroughly clean bucket	Week ending:
Check bucket for evidence of fatigue, weld failure or stress. Do not operate with a cracked weldment.	
Repeat daily checks above.	

Operators Name & Signature:	**Managers Name & Signature:**

IMPORTANT SAFETY INFORMATION

Remember that on any job, YOU are the key to safety. Good safe practices not only protect the people around you; they are also your own best protection. Study this section and any relevant manufacturer's operation manuals covering your equipment. Read all warning and caution instructions.

1. This manual must be **READ** and **UNDERSTOOD** before any installation and operation work begins. A copy must be kept in the operator's cabin for ongoing use.

2. Operators should note that the use of a tilt bucket may affect the machine's breakout force and balance and may result in the bucket being able to come into contact with the boom set and or operators' cabin.

3. Operators should note that the weight of the bucket is stamped on the ID Plate, always remove the bucket form a Coupler if lifting.

4. The hydraulic actuators fitted to Doherty Tilt buckets contain no site serviceable parts. Contact Doherty Service department BEFORE carrying out any disassembly work. Failure to do so may void any applicable warranty.

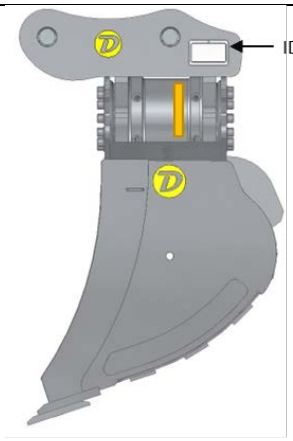
5. All Doherty Rotary tilt buckets must be connected and installed in full compliance with this manual. Any variations may cause the bucket to operate in an unsafe manner and/or void the warranty. Doherty are available to advise on issues as required.

6. All excavator operators should familiarise themselves with the bucket and this manual before use.

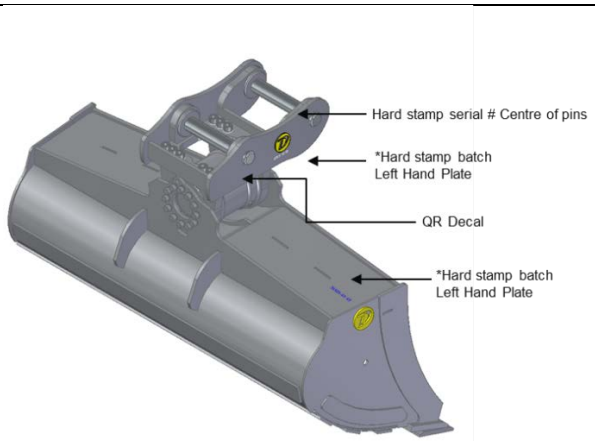
7. Never use the bucket as a prying tool.

PRODUCT IDENTIFICATION AND DECALS

All Doherty rotary tilt buckets are supplied with an ID plate attached as shown below. In addition, a serial # is stamped into the top edge of the left-hand mounting plate. (Note, location of id badge on some models may differ).



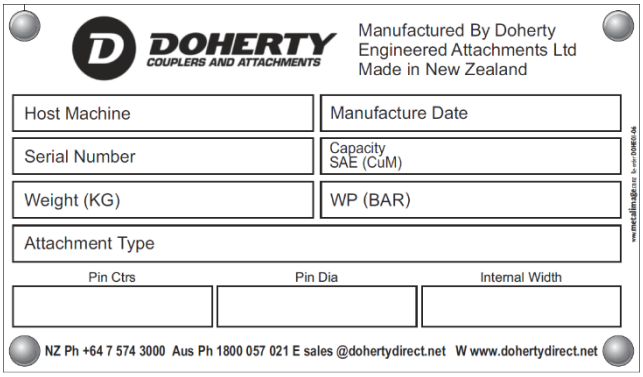
Right hand view



Serial number locations

It is recommended that a copy of these details be kept in the office for future reference.

Host machine:
Manufacture date:
Serial Number:
Capacity SAE (CuM):
Weight:
WP (BAR):
Attachment type:
Pin Ctrs:
Pin Dia:
Internal width:



Always quote these details when contacting Doherty Couplers for Service or Parts.

In addition, your bucket may be fitted with several SAFETY and MAINTENANCE DECALS. These decals must be kept clean, in good condition and be visible from three meters. Replacements for damaged decals may be obtained from Doherty parts department.

QR code for manual

SCAN TO DOWNLOAD BTA MANUAL

INSTALLATION

IMPORTANT INSTALLATION NOTES

- Due to the large number of different Excavator Makes and Models available, it is not possible to provide a rigid set of installation instructions that will cover every situation. Modern Excavator control systems are complex and sophisticated. Auxiliary connections must be carried out with care to ensure the manufacturer's warranty is not voided. It is therefore extremely important that only appropriately qualified and experienced persons carry out the installation. It is **STRONGLY RECCOMENDED** that the excavator dealer be consulted to ensure the auxiliary connections are correctly attached and installed.
- Installation personnel must be competent and experienced in this type of work.
- Best hydraulic practice will be used to ensure that all components remain clean and free of contamination and that all hoses are suitably routed and armoured to prevent, crushing, pinching, or chaffing damage.
- The requirements detailed in this publication must be fully understood and complied with.
- No changes to the host machine's control systems should be made without express agreement by the manufacturer and or distributor.
- All current Health and Safety Regulations pertaining to this installation and subsequent operation must be complied with.
- The Pre-Delivery check sheets (including pressure readings) must be fully completed, signed, and returned to Doherty within the first week of taking ownership.
- Contact Doherty for additional assistance, if required.
- Failure to comply with these guidelines may cause equipment damage and/or void any applicable warranty.

INSTALLATION

CONNECTING THE COUPLER LOCK CIRCUIT

CONNECTING THE COUPLER TILT CIRCUIT

The following pages contain information and schematics which detail the hydraulic requirements for correct operation of the Doherty rotary actuator. It is the installer's responsibility to ensure that these requirements are complied with and that the selected connection method is compatible with the host machine.
Doherty strongly recommend that no changes are made to the machine control system without consulting and obtaining agreement from the Dealer / Manufacturer.

Contact Doherty for additional assistance, if required.

HYDRAULIC PIPING REQUIREMENTS

Take care to ensure tube and hoses are adequately sized to provide the recommended flow rates.

Please ensure all new tubing and hoses are thoroughly cleaned (blown out) before final assembly.

The below chart shows the flow and pressure requirements for the tilt function of the Doherty rotary tilt bucket. Refer to the ID plate to select the correct model.

Model	Tilt angle (Degrees)	Flow rate (L/min)	Minimum tube diameter (inch)	Hose diameter (Inch)
BTA015	100	2	¼	¼
BTA025	100	2	¼	¼
BTA035	100	3	¼	¼
BTA055	100	7	¼	¼
BTA080	100	14	¼	¼
BTA140	100	25	⅜	⅜
BTA180	100	28	⅝	½
BTA240	100	30	⅝	½
BTA290	100	39	¾	½
BTA350	100	35	¾	½
BTA450	100	70	¾	½

Some excavators have factory fitted auxiliary lines. This may be used for tilt bucket connections provided:

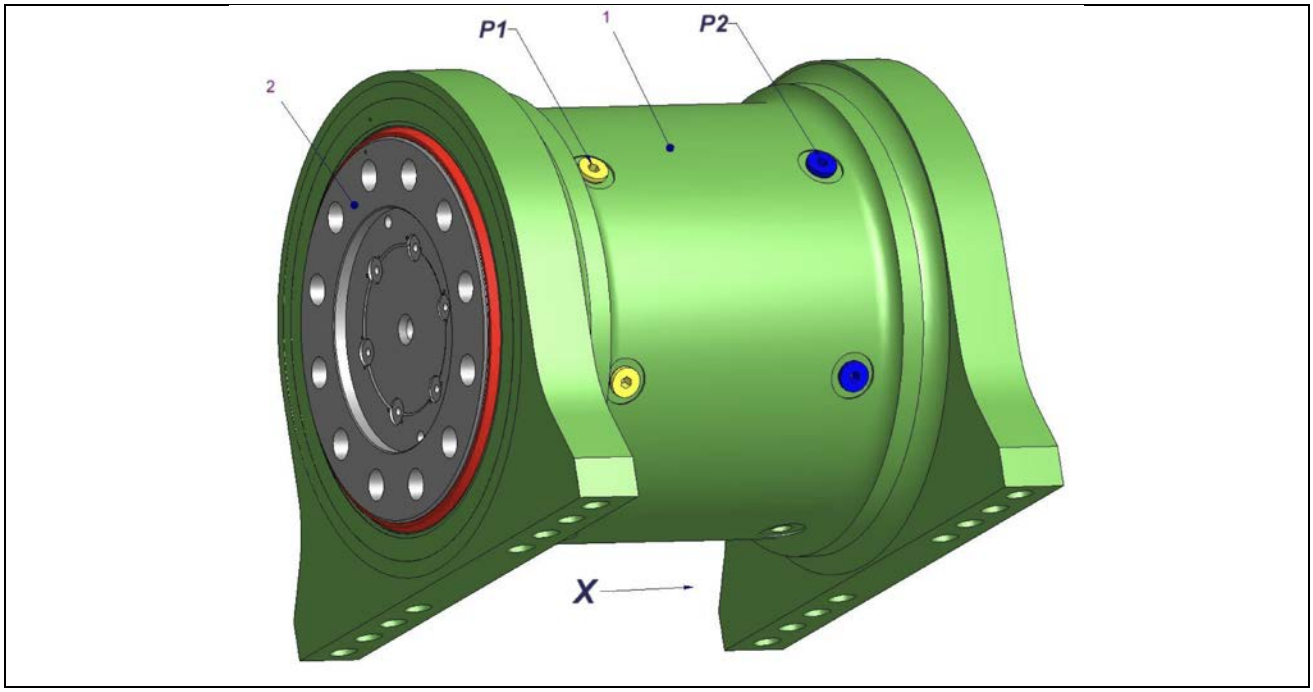
1. The nominated operating pressure and flow rates can be maintained.
2. A directional control valve is connected.
3. Some auxiliary line circuits employ an open centre valve spool which vents to tank when in the open position and this can cause the tilt action to be “soft” or “spongey”.
4. Excessive oil volume in larger auxiliary lines can cause some actuator movement due to oil compression, especially on long boom sets.

Conditions 3 and 4 above may require the installation of a port checked cross line relief valve, lock valve, or counterbalance valve, close to the coupler, to ensure correct operation.

INSTALLATION

CONNECTING THE TILT COUPLER HYDRAULICS

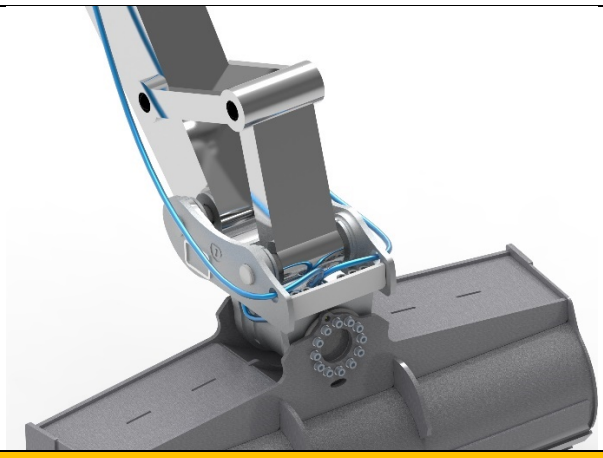
Use any P1 or P2 port at either end to connect the hoses for clockwise and anticlockwise rotation.



The recommended hose routing is shown below.

The recommended hose routing is shown on the sketch below. Unlike many other tilt buckets, the hose connections on the Doherty Rotary Tilt do not move during tilting so there is no need to allow extra length. Each end of the actuator has multiple ports. Use any one port at either end to connect the hoses for clockwise and anticlockwise rotation.

To establish the correct control hose lengths, fully crowd and retract the bucket cylinder to determine the position in which actuator is furthest from the dipper arm. Take care when crowding back to ensure excess hose does not foul on anything. The use of kevlar sleeves or “spaghetti” armouring is strongly recommended.



Recommended hose routing.

INSTALLATION

FLOW REGULATION

Model	Tilt angle (Degrees)	Flow rate (L/min)
BTA015	100	1.5
BTA025	100	1.5
BTA035	100	2.4
BTA 055	100	5
BTA 080	100	9.8
BTA 140	100	12.2
BTA180	100	20
BTA 240	100	22
BTA 290	100	28
BTA 350	100	35
BTA 450	100	70

Suitable flow rate can be verified by timing the tilt from extreme left to extreme right and comparing to the desired pivoting times below.

Tilt (°)	Time (s)
100	7

Actuator flow rates must be calculated on the basis of the displacements and the desired pivoting time.

Example: BVC260 140-degree model	Displacement (Consult Doherty) = 4.61L / 140 degree
Pivoting time 7 seconds	4.61/7*60 s/min = 39.5L/min

Faster tilt speeds will cause excessive shock loadings which may result in damage to coupler and machine and will also VOID the WARRANTY.

PRESSURE SETTING

To ensure the tilt operating pressure is correctly set, a pressure gauge should be fitted into the connections on the actuator. The maximum operating pressure of the hydraulic actuators used in Doherty rotary tilt buckets ranges from 190 - 240 bar.

 **ALWAYS** check rating plate on actuator to confirm its type and the maximum operating pressure.

Actuator model	Max Pressure (BAR)	Actuator model	Max Pressure (BAR)
BVC85		BVC240	190
BVC100	190	BVC250	190
BVC115	190	BVC260	190
BVC130	210	BVC270	190
BVC160	210	BVC300	190
BVC180	190	BVC350	190
BVC225	190	BVC420	190

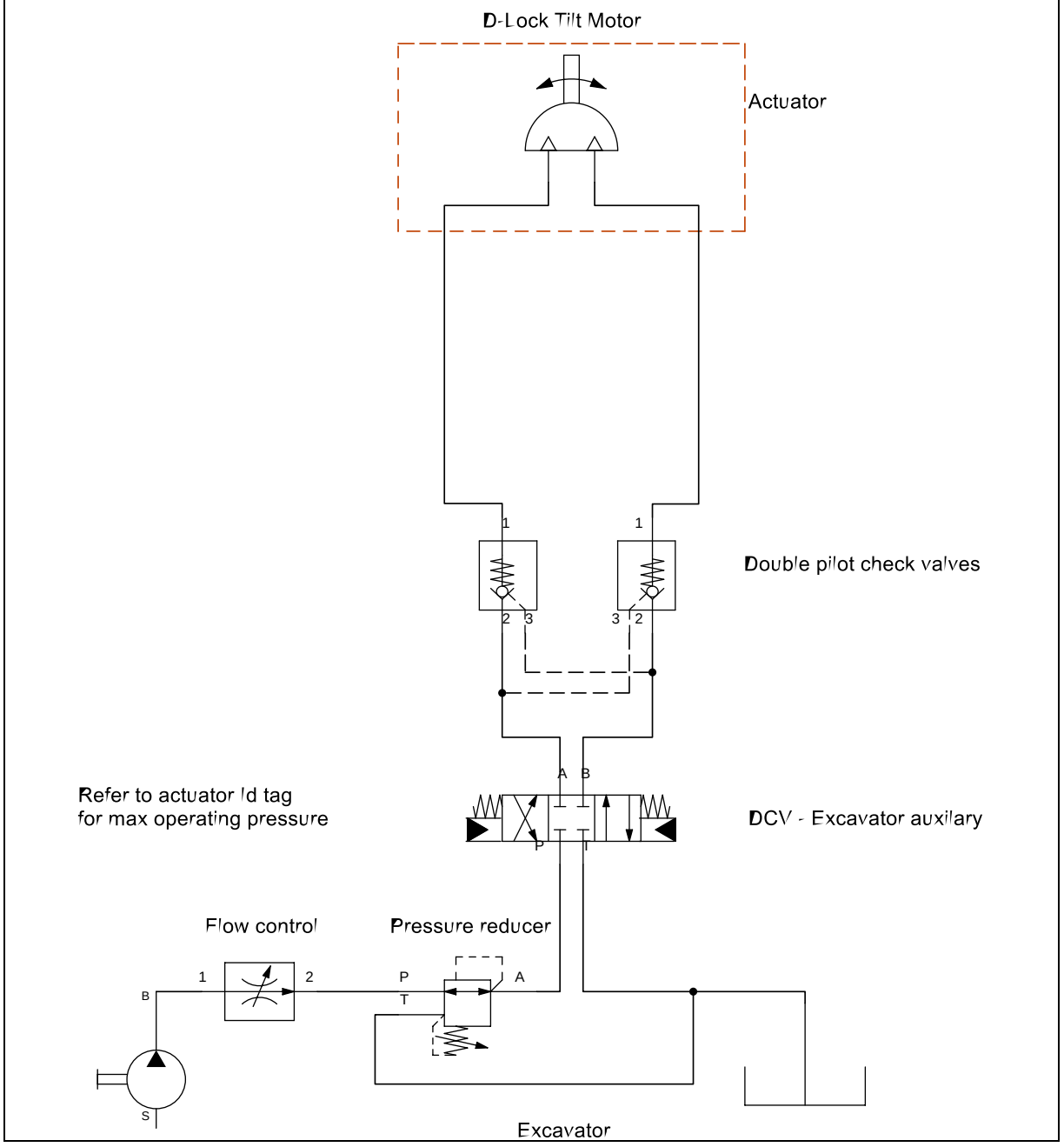
INSTALLATION

HYDRAULIC CONTROLS

The Doherty recommended control schematic is shown in the following figure.

If a relief valve is not fitted within the actuator, we recommend fitting a 5-port cross line relief valve as close to the actuator as possible.

BVE Actuator Hydraulic Schematic



INSTALLATION

VENTILATION

Air within the hydraulic system can prevent the actuator from maintaining a tilted position or cause imprecise actuation and/or lateral movement.

To properly vent the actuator:

1. Release any attachments from the coupler.
2. **Depressurise the system.**
3. Open the spare ports by no more than one turn of the screws.
4. **With pressure not exceeding 8 bar,** fully tilt the actuator one way and then the other.
5. Continue tilting actuator until air is no longer leaking through the loose port holes.
6. Tighten all ports.

Failure to depressurise system will create hydraulic hazard. Venting the actuator should only be done by competent persons.

FINAL CHECK

1	Verify all fittings and fasteners are tight and secure.	
2	Check the entire system for leaks.	
3	Move the bucket through its entire motion slowly checking for: Hose chaffing. Proper hose lengths. Any type of mechanical interference.	
4	Complete Pre-delivery form and return to Doherty Engineered Attachments to activate warranty.	
5	Ensure this manual (or a copy) is kept in the operator's cab. Additional copies of this manual are available in hard copy or electronic form from Doherty.	

MAINTENANCE

INSPECTION SAFETY NOTES

Report necessary repairs. If your daily check uncovers any item that needs attention, repair, replacement or adjustment, REPORT IT IMMEDIATELY! The most minor defects could result in more serious trouble. If the machine is operated, only perform the work you are authorised to do. Do not attempt repairs you do not understand.

Check for broken, defective or missing parts and replace them. Keep equipment clean and free of dirt and oil so you can spot loose or defective parts.

Any damage to the bucket should be reported immediately to either your site manager or directly to Doherty.

IMPORTANT CAUTION – WELDING

Do not weld directly to the bucket without Doherty approval.

Do not weld any attachment while it is connected to the coupler. This may result in internal arc damage to the actuator and void any applicable warranty.

Always disconnect machine battery before any welding work is started.

CAUTION

Never allow a hydraulic line or component to become contaminated. This could cause severe system damage. Contact an authorised machine distributor to obtain proper caps and plugs to be used on this machine.

MAINTENANCE SAFETY NOTES

Improper operation and maintenance of this equipment could result in serious injury or death. Read the operator's manual and this book thoroughly before operating and/or maintaining this equipment.

Maintenance should only be performed by experienced and qualified personnel.

Always wear protective clothing when performing maintenance.

Avoid oil spills. Use containers, rags, and/or absorbent towels to contain any oil leakage. Dispose of all waste oils, fluids, lubricants, and other hazardous waste property

Do not operate the machine with a defective bucket. Inspect the bucket and all components before starting operation. Perform any necessary repairs before operating the Doherty rotary tilt bucket.

Make sure the bucket is resting on the ground and property supported before performing any work.

Unauthorised modification to the bucket may impair function, affect performance and/or affect the life of the bucket and the excavator. Unauthorised modification may impair personnel safety. Unauthorised modification will void your warranty.

Under normal conditions, all machine hydraulic circuits are under extreme pressure. When inspecting for leaks, use a small piece of cardboard, wood or metal to locate leakages. Small (pinhole) leaks can be dangerous if contact with skin or eyes is made. Wear approved safety glasses and/or face shield, gloves, hard hat, safety shoes, and work clothes during all inspection and maintenance procedures.

Always relieve hydraulic pressure before removing hydraulic fittings.

Always ensure bucket is fully supported before removing hydraulic lines / fittings or plugs to prevent sudden movement.

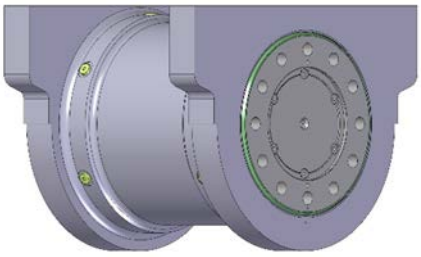
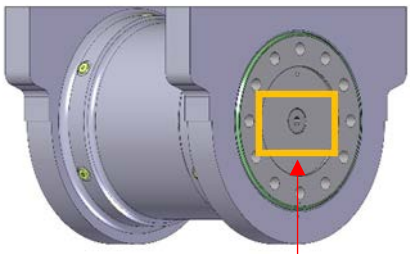
MAINTENANCE

TO REMOVE THE ACTUATOR

1. Vent pressure in hydraulic lines. Disconnect at the actuator and plug all open ports and fittings.
2. Ensure coupler is supported on a horizontal level.
3. Remove bolts from both ends of the actuator.
4. Lift actuator from coupler frame, **ensure you lift evenly and do not damage seals.**

To refit follow these steps in reverse.

BTA055 and larger models which are fitted with an internal relief valve to be remounted with the actuator so that the relief valve faces the operator.

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>No valve end</td><td>Relief valve end</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Remove bolts from both ends.</td><td>Ensure the relief valve is at the end of the coupler nearest the cab of the excavator.</td></tr>
</table>

SERVICE / MAINTENANCE SCHEDULE

Always refer to safety notes before completing any maintenance.

			Whichever occurs first	
Maintenance required	Daily	Weekly	6 monthly, or every 1000 hours	Yearly or every 2000 hours
Check all attachment pin retainer bolts and nuts for tightness.	✓			
Check all hydraulic hoses and fittings for any leaks or wear.	✓			
Thoroughly clean bucket. Do not water blast end seals.		✓		
Check bucket for evidence of fatigue, weld failure, cracks, or stress. Do not operate with a cracked weldment.		✓		
Visually check all bolts for tightness, remedy if required.		✓		
Grease the actuator end seals if fitted.		✓		
Flush actuator oil, remove one lower bleed, fully tilt in one direction and pump oil until clean, replace plug & repeat operation at opposite end of actuator tilted in opposite direction. Fully tilt coupler in either direction. Remove one lower bleed plug and pump approx. 1 litre of oil into a suitable waste container. Replace plug and repeat operation at the opposite end of the actuator while tilting in the opposite direction. This will ensure any internal contamination within the actuator is flushed out.			✓	
Check, retorque and remark top mounting bolts in line with torque specifications on page 41.				✓

Top mounting bolts at both ends.

Example of bolt marking.

STOP WORK IMMEDIATELY if any actuator mounting bolts are loose or mounting feet has any cracks, failure to do so will void warranty.

MAINTENANCE & REPAIR RECORD

Please ensure this maintenance record is completed for any work completed on quick coupler.

Hour reading	Maintenance / Repair	Completed By	Date

TORQUE SETTINGS AND PORT SIZES

All bolts to be used with Nordlock washers & anti cease lubricant.

GF= Ratio of yield point. When tightening according to guidelines and with no deviation, this is the pre-stress achieved expressed as % of yield point. **μth**= Thread friction coefficient. **μh**= Under head friction coefficient

RECOMMENDED BOLT TORQUE		
	GF=71%, μth= 0.15, μh= 0.13	GF= 75%, μth= 0.15, μh= 0.19
Thread Size	**Cap Screw (Gr 12.9)**	**Bolt (Gr 8.8)**
	Nm (ft-lb)	**Nm (ft-lb)**
M6	17.4 (13)	13 (9.6)
M8	42 (31)	32 (24)
M10	82 (60)	62 (46)
M12	142 (105)	107 (79)
M14	226 (167)	170 (125)
M16	345 (254)	260 (192)
M20	676 (499)	510 (376)
M24	1165 (859)	878 (648)
M27	1700 (1253)	1284 (947)
M30	2316 (1708)	1750 (1290)

PORT SIZES OF HYDRAULIC ACTUATOR	
Actuator Model	**Port Size**
BVC85	G 1/8
BVC 100	M12 x 1.5
BVC 115 to BVC 130	M16 x 1.5
BVC 140 to BVC 350	M18 x 1.5
BVC 420	G 3/4

PARTS LIST AND TERMINOLOGY

If fitted:

Valve type	Weight Class	Manufacturer	Part number
Actuator relief valve	055 and larger	Sterling Hydraulics	A04J2M

Always quote bucket serial number when ordering parts, this is a reference guide only.

Reference #	Description	Quantity	Reference #	Description	Quantity
1	Base Bucket	1	5	Top Mount	1
2	Actuator Bolts	Set	6	Top Mount Bolts	Set
3	Actuator Washers	Set	7	Top Mount Washers	Set
4	Hydraulic Actuator	1			

TROUBLESHOOTING

Troubleshooting – Rotary Actuator

Functional fault	Cause	Remedial measures
Rotary actuator does not hold position.	Excessive down pressure applied by the excavator will activate the crossline relief valve. Control valve leaking oil. Faulty cross line relief. Seals leaking	This is as designed; the crossline relief is designed to protect the actuator from excessive pressures. Test, repair or replace as needed. Remove the integral cross line relief valve if fitted and visually inspect for damage or debris. Check pressure setting of the crossline relief valve which can be found in this manual on page 19. Test and replace required seals.
Rotary actuator tilts in only one direction.	Single directional control valve been used. Cross line relief valve damaged. Both lines connected to either both P1 or P2 ports on rotary actuator.	Replace with bi0directional control valve. Inspect, test, and replace as required. Change connection to rotary actuator.
Rotary actuator has spongy feel when tilting.	Air in the rotary actuator or hydraulic circuit. Hydraulic pipes / hoses too large.	Bleed air from circuit. Install new pipes / hose as per recommendations shown on page 17. Install pilot operated check valve in lines as close as possible to the rotary actuator.
Side to side bucket movement.	Some movement is normal due to the clearance required on the internal of the rotary actuator. Loose connection of the top mount to the dipper and link arm.	Acceptable movement is between 1 and 1.5 degrees. If greater consult Doherty. Shim up to ensure no excessive gap.

Functional fault	Cause	Remedial measures
Rotary actuator is leaking.	Seals defective. Connections not tight.	Replace seals. Check and tighten to correct specification.
Rotary actuator wont tilt.	Hydraulic schematic not followed correctly. Defective hydraulic lines. Coupler upright contact surface against rotary actuator deformed.	Refer to schematic. Check and replace. Contact Doherty.
Top mount is not securely fastened to the actuator.	Bolts loose. Cracks in the rotary actuator mounting feet.	Replace bolts and nordlock washer and tighten to correct specification. Contact Doherty.

 STOP WORK IMMEDIATELY if bolts are loose or foot has cracks, failure to do so will void warranty.

WARRANTY POLICY

Standard Limited Warranty Policy

Warranty Period

Doherty Engineered Attachments Limited ("Doherty") standard warranty is for a **period of twenty-four (24) months from date of sale or three thousand (3000) machine hours, whichever occurs first** from date of commissioning but not longer than thirty (30) months from the date of purchase.

Any repair or replacement shall not result in an extension of the original warranty period. Doherty's sole and exclusive liability for defects in materials and workmanship shall be limited to repair or replacement of the unit. Replacement will be like for like unless decided by Doherty's to replace with new product. Doherty's shall not be liable for incidental, contingent or consequential damages.

If examination by DOHERTY or its Contracting Partner results in a determination that the Product is defective in workmanship or material, subject to the warranty scope and limitations, the Product will be repaired or replaced (or credited) at no charge. If the Product upon such examination is found to not be defective in workmanship or material (for example, if the Product is not functioning properly due to abnormal use, improper service, or alteration, modification or parts usage), then such repair or replacement, if any, will be performed by DOHERTY or a Contracting Partner at normal servicing charges to the purchaser plus shipping costs.

Warranty Inclusions

This warranty covers defects in material and workmanship and is subject to receipt of supporting evidence and/or inspection by Doherty and confirmation that said attachment or part was installed and operated in accordance with Doherty's currently published instructions. Upon acceptance, Doherty shall repair or arrange for the repair and/or full or partial replacement of such attachment.

Any attachment or part repaired or replaced under the terms of this warranty policy shall retain the warranty period pertaining to the product's original date of purchase.

Transport

The cost and risk of transporting the allegedly defective Product to DOHERTY or its Contracting Partner will be borne by the purchaser, and the cost of transporting the corrected Product back to the purchaser will be borne by DOHERTY or the Contracting Partner. (If the allegedly defective Product that purchaser sends to DOHERTY or a Contracting Partner is not defective, the purchaser will also bear the cost of the transport of the product back to the purchaser.)

Warranty Exclusions

This policy does not cover machinery, parts or accessories that are warranted directly to the end user by third party manufacturers, for example hydraulic cylinders, hoses, valves, or any other portions of hydraulic kits used in Doherty products but not manufactured directly by it. Failure to follow Doherty's or the third-party manufacturer's recommendations for oil pressure and flow ratings on hydraulic components will invalidate all warranty claims relating to both the attachment and the hydraulic components of the attachment.

Doherty shall not be responsible for any problems associated with hose fittings, damage, or malfunction after installation regardless of cause. If in doubt, contact Doherty for assistance and advice. The tightening of loose fittings or hoses is to be considered a maintenance issue, therefore any hydraulic leaks due to loose fittings is not covered under warranty.

This policy does not apply to parts which have been repaired by the owner or a third party without prior formal written authorisation from Doherty.

This policy does not apply to parts which in Doherty's opinion, have been subjected to or adversely affected by operator misuse, accident, negligence, improper installation, maintenance, or storage.

Normal wear parts and parts requiring regular lubrication are not covered by this warranty.

This policy is restricted to the direct repair and/or replacement cost of the said part. It does not apply to any incidental or consequential costs such as travel, injury, accident downtime, consumables and any other indirect expenses.

Doherty accepts no responsibility whatsoever for the suitability or otherwise of the carrier machine or other equipment to which a Doherty attachment may be mounted upon or fitted to.

Doherty shall not be held liable for injury or damage caused to any persons, place or machine by reason of the installation, use or mechanical failure of any Doherty attachment.

Doherty shall be under no liability in respect of any defect in the goods arising from any drawing, design or specification supplied by the buyer.

In relation to the supply of buckets by the seller the above warranty shall only apply to cracking and bending of the buckets during correct and normal usage and shall not extend to the breakage of or failure of bucket teeth, cutting edges, bucket sides or base or to any other failure in performance due to a bucket being used in applications outside of its intended specified applications, including for example where a general purpose bucket or heavy duty bucket is used for rock and concrete excavations.

Doherty shall be under no liability under the above warranty (or any other warranty, condition or guarantee) if;

A. The total price of the goods has not been paid by the due date for payment.

B. The warranty or repaired part expires at the same time as the original warranty of the supplied equipment.

C. Excessive diagnostic costs are involved in determining the validity of the warranty. This includes Labour, Travel and mileage.

D. Deteriorated or failed components such as: Electrical wiring and connections, Hydraulic hoses, fittings, seals and cylinders where the cause has originated from chemicals, falling objects, dirt, salt and sand, rust, corrosion, moisture or extreme environmental temperatures and/or conditions.

Doherty Obligations

At its option, Doherty will repair or replace the said part. Any repair work may be carried out at Doherty's own premises, at the workshop of an authorized Service Agent/Dealer, on the site at which the part or attachment is being used, or at any other location that Doherty considers appropriate under the circumstances.

Under the terms of this warranty, Doherty's obligations are limited to the repair or full or partial replacement of the defective item(s) and do not include any costs, direct or indirect, associated with the removal or reinstallation of the attachment or part on the carry machine. This is the responsibility of the Customer.

Doherty warrants that any repair work carried out by it directly shall be conducted in a timely and professional manner. Where a third party is engaged to carry out repair work in connection with a Doherty warranty claim, Doherty's obligation and liability shall be limited to a refund of the authorized reimbursable costs charged in connection with the provision of such work.

Customer Obligations

The Customer is responsible for the correct and proper installation of the part or attachment as detailed in the Operation and Maintenance documentation supplied by Doherty, including hydraulic and electrical connections.

The Customer is responsible for the completion of the formal Pre-delivery check and the Warranty Registration forms (which form part of the above documentation) and their return to Doherty within seven days of initial commissioning.

The Customer is responsible for ensuring that the part or attachment, including any hydraulic components and fittings, is operated and maintained using best industry practice and in accordance with the Operation and Maintenance documentation supplied by Doherty. (a copy of which is available on request.)

The Customer is also responsible for notifying Doherty as soon as it identifies a defect or problem that may potentially be subject to a claim under this policy and for following Doherty's published Warranty Claim Procedure.

Schedule of Rates

Unless a separate schedule of warranty rates is agreed prior, the rates below will be applicable to claims where the warranty procedure has been adhered to completely:

Parts	Free issue
Labour	$75.00 per hour flat rate. Penal rates will not be covered
Travel	$1.00/ km. To a maximum of 300 km AND a maximum travel time of four (4) hours per warranty claim
Freight	Use of Doherty freight account by negotiation

WARRANTY PROCEDURE

Warranty Claim Procedures
To ensure your warranty claim is processed in the fastest possible manner, please ensure the following procedures are followed:

1. Upon identification of problem/failure immediately report/notify Doherty before any work is completed on the attachment or component.

2. Complete the Doherty product issue assessment form and provide all information requested and email to Doherty before any work is carried out. If the product issue assessment form cannot be completed, Doherty is to be provided with the end-user details to obtain the required information.

3. Upon receipt of the product issue assessment form Doherty will assess the claim, in some cases Doherty may require the parts to complete assessment. Doherty will then provide in writing what action is to be taken and issue a warranty claim number if deemed warranty.

4. Any repair work may be carried out at Doherty's own premises, at the workshop of an authorized Service Agent/Dealer, on the site at which the part or attachment is being used, or at any other location that Doherty considers appropriate under the circumstances.

5. An estimate of costs must be provided in writing before any repair work commences by a third party who is not an authorised service agent/dealer and an order number MUST be provided by Doherty before any work commences.

6. If Product issue form has not been provided, Doherty will require a Purchase Order for any parts before dispatch. Once all information is received and warranty approved Doherty will invoice out at $0.00

7. Where Doherty has opted to replace a product in part or in full, the defective components to be replaced will be dispatched as quickly as possible. Please ensure part numbers are quoted from parts manual if applicable.

8. It is the responsibility of the Customer to arrange for the delivery of the failed components.

All warranty claims are subject to Doherty's standard warranty policy.
Any repair work carried out by a third party prior to a warranty claim number and or purchase order number been issued by Doherty will invalidate the claim. All Invoices for repair work completed by a third party must include warranty claim & purchase order number, component serial number, description of work completed, and date work completed.
Contacts:
New Zealand: Phone +64 7 574 3000, email nzsupport@dohertydirect.net and cc your local Doherty contact.
Australia: Phone 1800 057 021, email support@dohertydirect.net and cc your local Doherty contact.

PRODUCT ISSUE ASSESSMENT FORM

Date	**PIR # (Internal use)**

Contact Information

Company	Contact	Phone
	Email	Mobile

Site address & delivery details

Provide full details

Product details

Serial number	Model	Description	Purchase date & PO #
Excavator Make	Excavator Model	Hour Metre reading	Failure Date

Reported Issue

Description of problem, please provide all details, photo's, video and any other information to support claim, add additional pages if required.	
Action Required	Date Required

Estimated repair costs

Only required if work is getting carried out by a third party which is not an authorised service agent/dealer. Please ensure estimated hours and rate is shown.

Important Notes: Please ensure photos are of complete item, if a component please supply photo of both component and complete product, if zoomed in for a shot, please ensure overall shot is also supplied. In regard to a Quick hitch coupler failure, please also supply photos of the implements it is used with. Photo required of metre reading and serial plate of product.

Doherty Internal use only

Problem Code:	Warranty Approved
Warranty Confirmation Number *(ERP produced)*	

REVISION LOG

Revision	Date	Notes
R2	9-4-2024	Comple update.
		⊕ Symbol will be used to highlight all important updates in future revisions.

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