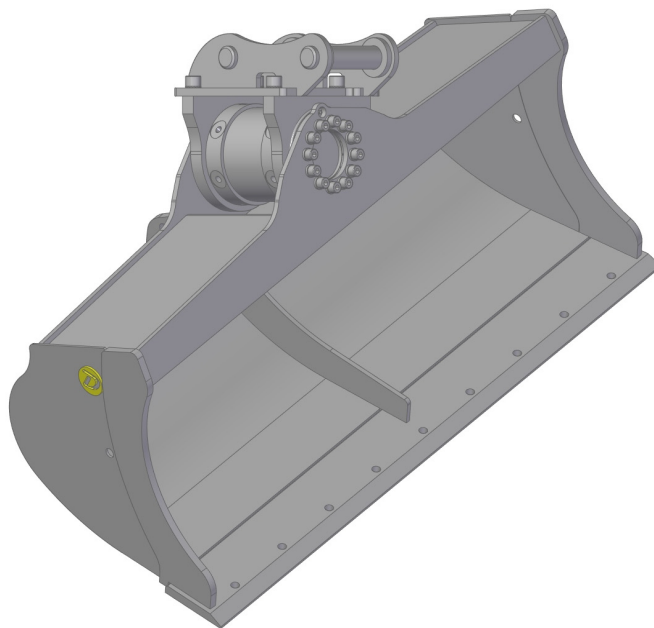


Doherty Rotary Tilt Bucket Installation and Operation manual

SERIAL NUMBER: _____



The Doherty Tilt Bucket

Release 1.2, May 2020

Reference SA466015

IMPORTANT:

The booklet should be kept with the machine at all times during and after quick coupler installation. Machine operators must read and fully understand the operations manual before use.

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PRE-DELIVERY CHECK

Installation completed by:

Company:	
Name:	
Date:	
Excavator make and model:	
Attachment Serial #	
End user name:	
End user phone number:	
End user address:	
End user email address:	

Doherty D-Lock keypad fitted If not please note make and model of type used:	
Lock circuit pressure checked at:	PSI
Unlock circuit pressure checked at:	PSI
Hose routings checked and abrasion free throughout full crowd movement:	
All supplied attachments locked and unlocked from coupler:	
All hydraulic connections, clean, tight and leak free:	
Please specify type and brand of control valve fitted	

This form must be returned to Doherty Engineered 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 particular 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?				
Warning devices and Decals				
Are all safety and operations decals clearly displayed?				
Does the operator check that the equipment warning devices are operational daily?				
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	Name
Date	Date

Daily prestart check list

RISK ASSESSMENT

Operators Name:	Date:
-----------------	-------

Bucket serial number:	S	M	T	W	T	F	S
Check all attachment pin retainer bolts and nuts for tightness							
Check attachments for pin wear							
Check all hydraulic hoses and fittings for any leaks or wear							
Clean away any material build up around actuator 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:

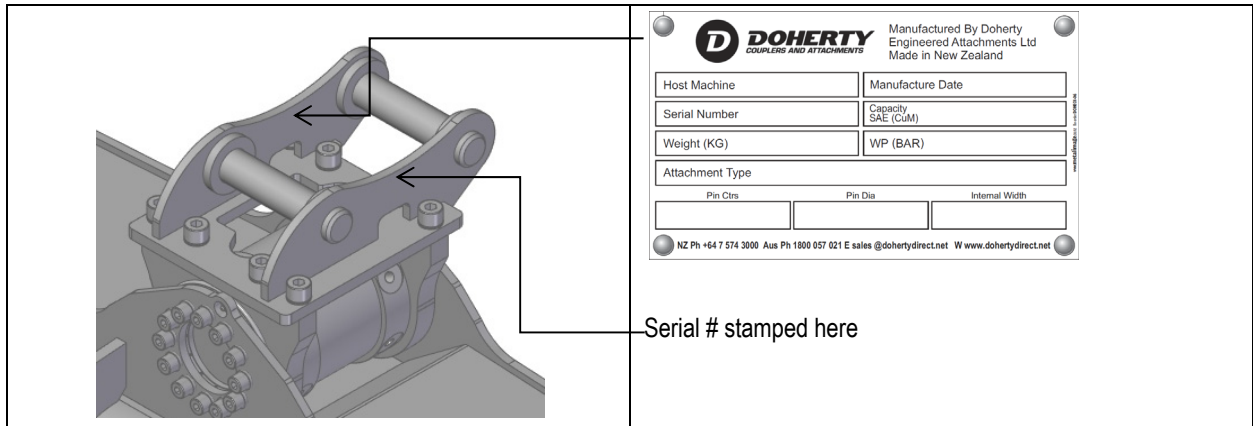
IMPORTANT SAFETY INFORMATION

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.

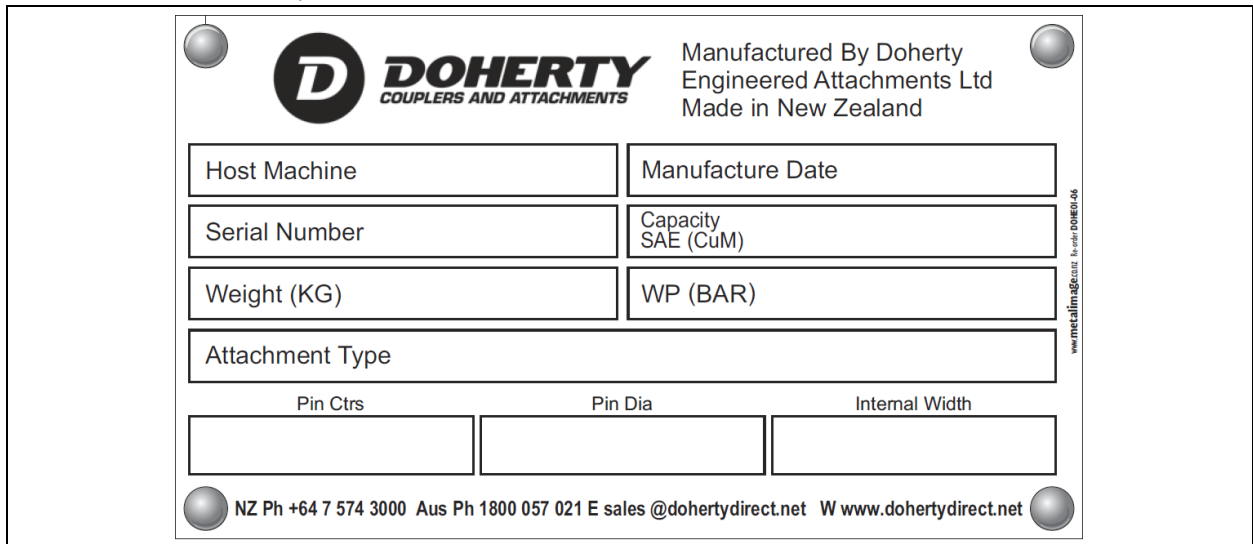
1. This manual must be **READ** and **UNDERSTOOD** before any installation and operation work begins. A copy must be kept in the operator's cabin for ongoing use.
2. Operators should note that the use of a tilt bucket may affect the machine's breakout force and balance and may result in attachments being 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 and this must be taken into account when calculating the machine's lifting capacity.
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 DEA buckets must be connected and installed in full compliance with this manual.

PRODUCT IDENTIFICATION AND DECALS

All Doherty 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).



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



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

In addition, your Doherty Engineered Attachments may be fitted with a number of SAFETY and MAINTENANCE DECALS. These decals must be kept clean, in good condition and be visible from a distance of three meters. Replacements for damaged decals may be obtained from the DEA parts department.

INSTALLATION

IMPORTANT INSTALLATION NOTES

- Due to the large number of 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 made.
- 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.
- Contact Doherty for additional assistance, if required.
- Failure to comply with these guidelines may cause equipment damage and/or void any applicable warranty.



CONNECTING THE BUCKET 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.

INSTALLATION

HYDRAULIC PIPING REQUIREMENTS

This chart shows the flow and pressure requirements for the tilt function of the Doherty Tilt coupler. Refer to the ID plate to select the correct model.

Coupler	Tilt (°)	Flow rate (L/min)	Minimum Tube Diameter (in)	Hose Diameter (in)
BTA015	100	2	1/4	1/4
BTA025	100	2	1/4	1/4
BTA035	100	3	1/4	1/4
BTA055	100	7	1/4	1/4
BTA080	100	14	1/4	1/4
BTA140	100	25	3/8	3/8
BTA180	100	28	5/8	1/2
BTA240	100	30	5/8	1/2
BTA290	100	39	3/4	1/2
BTA350	100	35	3/4	1/2
BTA450	100	70	3/4	1/2

NOTE

Some excavators have factory fitted breaker piping. This may be used for tilt bucket connections (if no breaker is to be fitted) provided:

1. The nominated operating pressure and flow rates can be maintained.
2. A directional control valve is connected.
3. Some breaker 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 “spongy”.
4. Excessive oil volume in larger breaker lines can cause some actuator movement due to oil compression, especially on long boom sets.

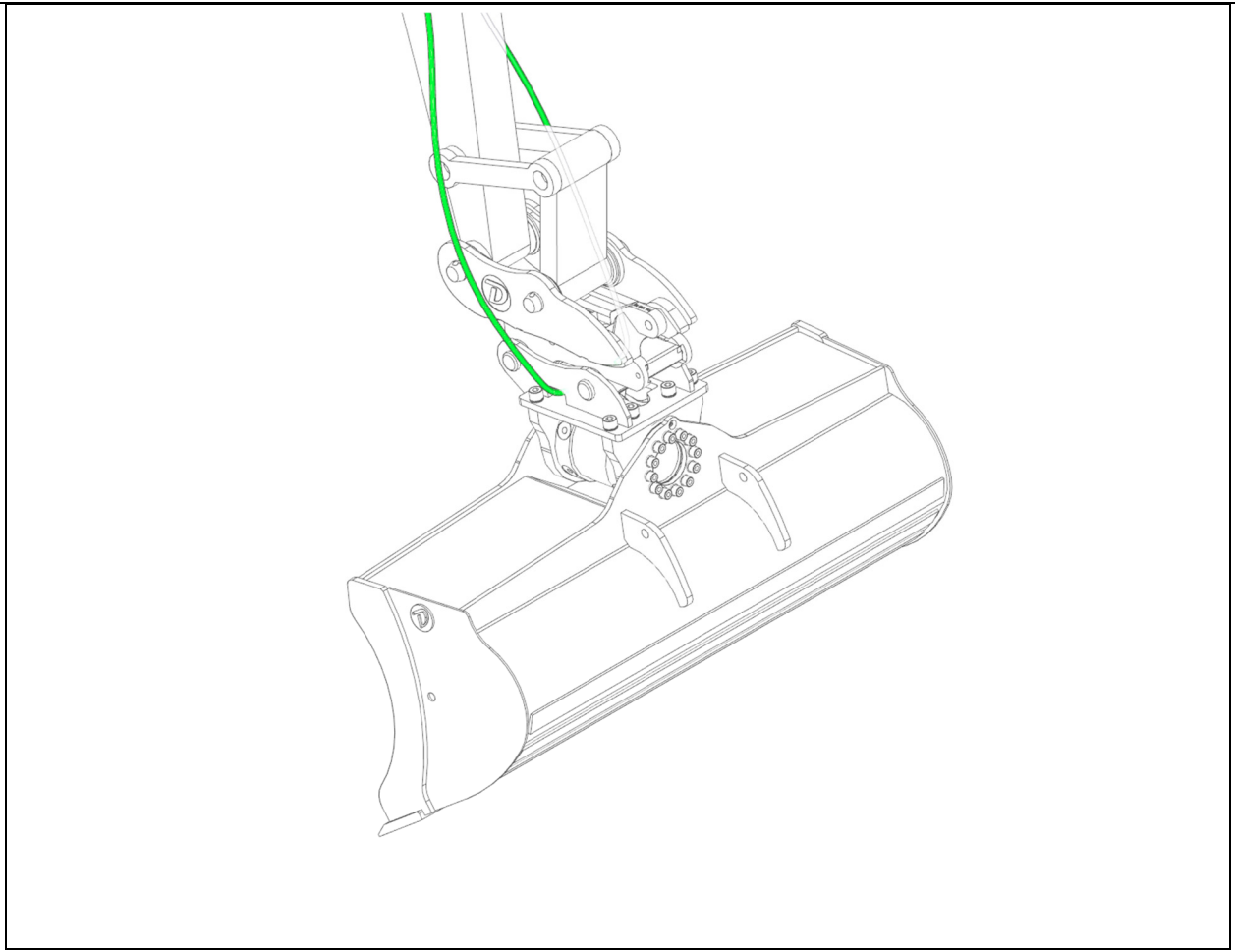
Conditions 3 and 4 above may require the installation of a port checked cross line relief valve, lock valve, or counterbalance valve, close to the bucket, to ensure correct operation.

CONNECTING THE TILT BUCKET HYDRAULICS

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.

INSTALLATION




TILT CIRCUIT NOTES

FLOW REGULATION. Refer to the chart on page 10 for recommend maximum flow rates. Suitable flow rate can be verified by timing the tilt from extreme left to extreme right. For all Doherty tilt buckets full tilt should be achieved in five (5) seconds. Faster tilt speeds will cause excessive shock loadings which may result in damage to bucket and machine and will also VOID the WARRANTY.

INSTALLATION

PRESSURE SETTING

To ensure the tilt operating pressure is correctly set, a pressuregauge should be fitted into the connections at the dipper arm manifold. The maximum operating pressure of the hydraulic actuators used in Doherty tilt hitches ranges from 190 - 215 bar. BTA055 and all larger tilt buckets using BVC actuators have internal relief valves. See rating plate on actuator to confirm its type and the maximum operating pressure for your bucket.

HKS Rating Plate		
 <div style="background-color: black; color: white; padding: 5px;"> HKS Dreh-Antriebe GmbH® Leipziger Straße 55 · 63607 Wächtersbach / Germany T +49 6053 6163-0 · info@hks-partner.com www.hks-partner.com · Made in Germany </div>		
● Typ: ●		
Bezeichnung:		
Art.Nr.:		
SN.Nr. / Komm.Nr.:		
Gewicht [kg]:	Bj:	P _{max} [bar]:
Designation	Definition	
Typ	Product type	
Bezeichnung	Product group	
Art.Nr	Item number	
SN.Nr. / Komm.Nr	Serial number or commission number	
Gewicht	Overall weight	
Bj	Year of construction	
Pmax	Maximum operating pressure in bar	

HYDRAULIC CONTROLS

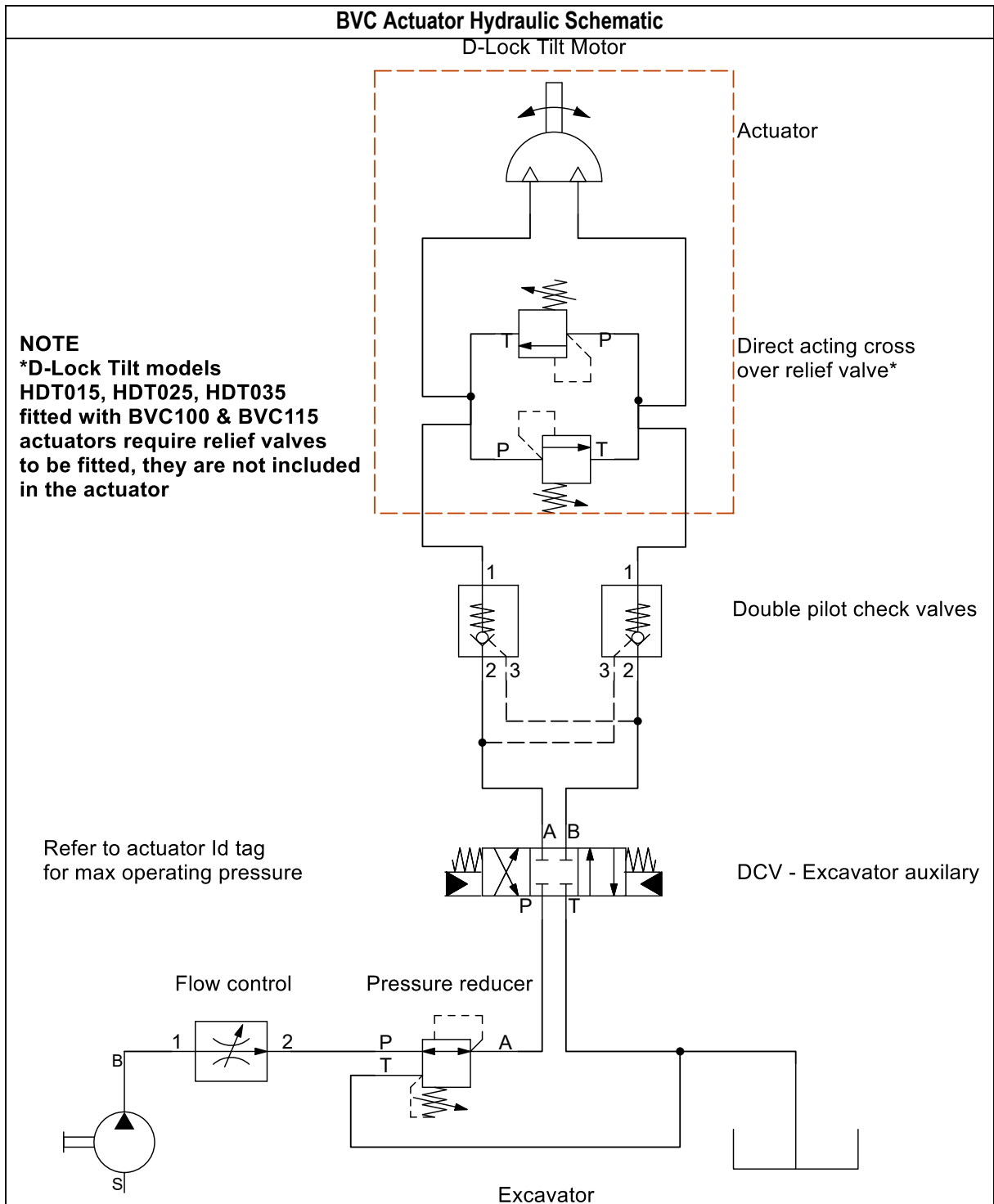
The Doherty recommended control schematic is shown in the following figure.



BVC 100, BVC 115 and all BVE type actuators require a 5-port cross line relief valve to be fitted as close to the actuator as possible.

If fitting a clamp, fit a 6-port diverter valve.

INSTALLATION



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	Ensure that all product and cab decals are correctly fitted and visible.	
6	Complete Pre-delivery form and return to Doherty Engineered Attachments to activate warranty.	
6	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 Engineered Attachments.	

HANDY TIPS

1. If your machine is to remain inactive for an extended period, we suggest that the attachment be released to eliminate the possibility of seizing.
2. Keep your bucket clean. Build-up of material on the actuator may damage the end seals.
3. The operator may experience slow or unexpected movement of functions when operating with cold hydraulic oil. Likewise, damage to the hydraulic components may result due to cold oil. Make sure to warm up hydraulic system to no more than 70°C before operation.

MAINTENANCE



DAILY PRESTART CHECK

1. Check any attachment pin retainer bolts and nuts for tightness.
2. Check for pin wear
3. Check all hydraulic hoses and fittings for any leaks or wear.
4. Clean away any material build up around the actuator end seals



WEEKLY

1. Thoroughly clean bucket
 - DO NOT water blast, this may damage the actuator end seals.
 - Aggressive cleaning agents may damage actuator end seals.
2. Check bucket for evidence of fatigue, weld failure, cracks or stress. Do not operate with a cracked weldment.
3. Ensure oil is up to operating temperature. Fully tilt bucket and hold on relief for 5 seconds. Repeat in opposite direction. This will ensure that the actuator is flushed with clean oil. It is also an ideal time to check for leaks.
4. Repeat daily checks above.



MONTHLY

1. **Check all bolt torques against the values on page 20.**
2. 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.



ANNUALLY OR 2000 HRS (WHICHEVER OCCURS FIRST)

1. Remove actuator from bucket and replace end seals. End seals are not covered by warranty and are the operator's responsibility.
2. Replace mounting bolts and lock washers. Use only Class 12.9 cap screws and torque adequately (see page 20)
3. Check all pin contact surfaces for wear. Build up and machine as required.
4. Remove Jaw and Check Condition of Safety Pawls. Any sign of deformation or wear indicates the need for **REPLACEMENT**.
5. Replace the Pawl springs/rubbers annually.



INSPECTION SAFETY NOTES

Report necessary repairs. If your daily check uncovers any item that needs attention, repair, replacement or adjustment; REPORT IT NOW! 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.

MAINTENANCE

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 Engineered Attachments Ltd.



IMPORTANT CAUTION – WELDING

Do not weld directly to the bucket without Doherty Engineered approval.

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 properly

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

Make sure the tilt bucket and any attachments connected are resting on the ground and properly supported before performing any work on the tilt bucket.

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

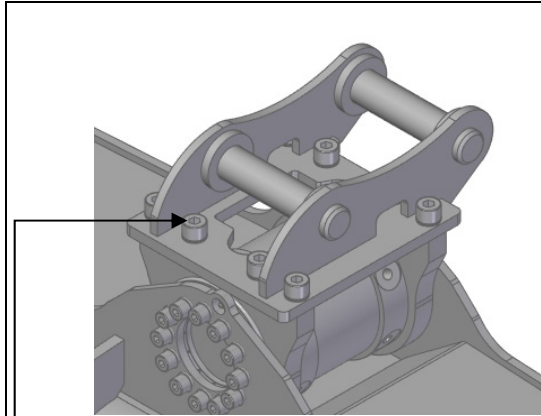
Under normal conditions, all machine hydraulic circuits are under extreme pressure. When inspecting for leaks, use a small piece of cardboard, wood or metal to locate leakages. Small (pinhole) leaks can be dangerous if contact with skin or eyes is made. Wear approved safety glasses and/or face shield,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

Always relieve hydraulic pressure before removing hydraulic fittings.

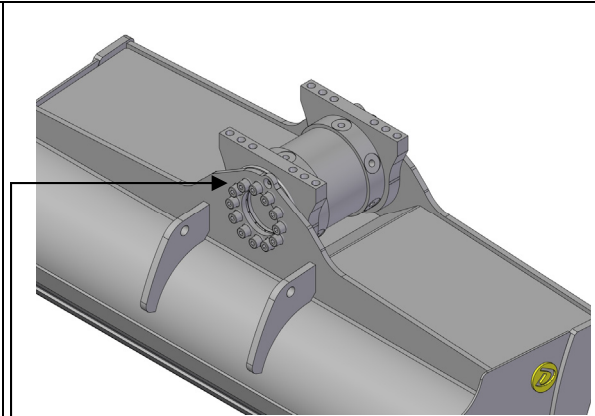
MAINTENANCE

TO REMOVE THE ACTUATOR

Vent pressure in hydraulic lines. Disconnect at the actuator and plug all open ports and fittings.



Unbolt and remove top weldment

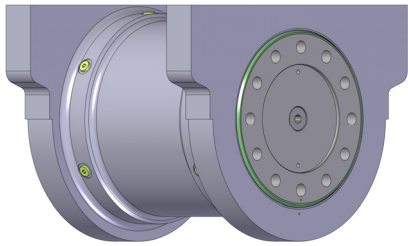


Ensure the actuator is supported before removing bolts from both ends

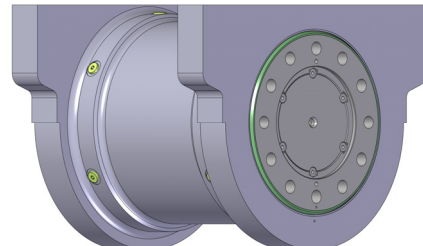
To refit follow these steps in reverse.



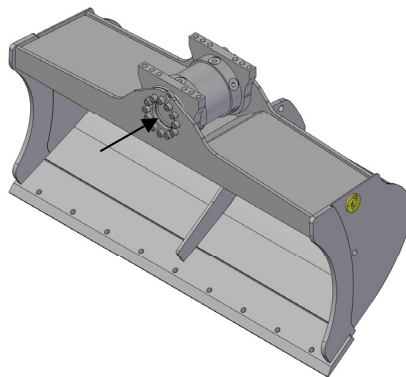
HDT055 and larger models feature actuators with internal relief valves. Although these actuators work perfectly in either orientation, it is best practice to mount the actuator so that the relief valve faces the operator.



Relief valve end



No valve end



Ensure the relief valve is facing the cab of the excavator.

MAINTENANCE

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

Service record	Hour reading	Maintenance / Repair	Completed By	Date

TORQUE SETTINGS

RECOMMENDED BOLT TORQUE

Thread Size	Cap Screw (Gr 12.9)	Bolt (Gr 8.8)
	Nm (ft-lb)	Nm (ft-lb)
M6	18 (13)	12.1 (8.9)
M8	43 (32)	29 (21)
M10	85 (63)	57 (42)
M12	146 (108)	98 (72)
M14	233 (172)	157 (116)
M16	355 (262)	240 (177)
M20	696 (513)	470 (347)
M24	1199 (884)	809 (597)
M27	1749 (1290)	1183 (872)
M30	2385 (1759)	1613 (1190)

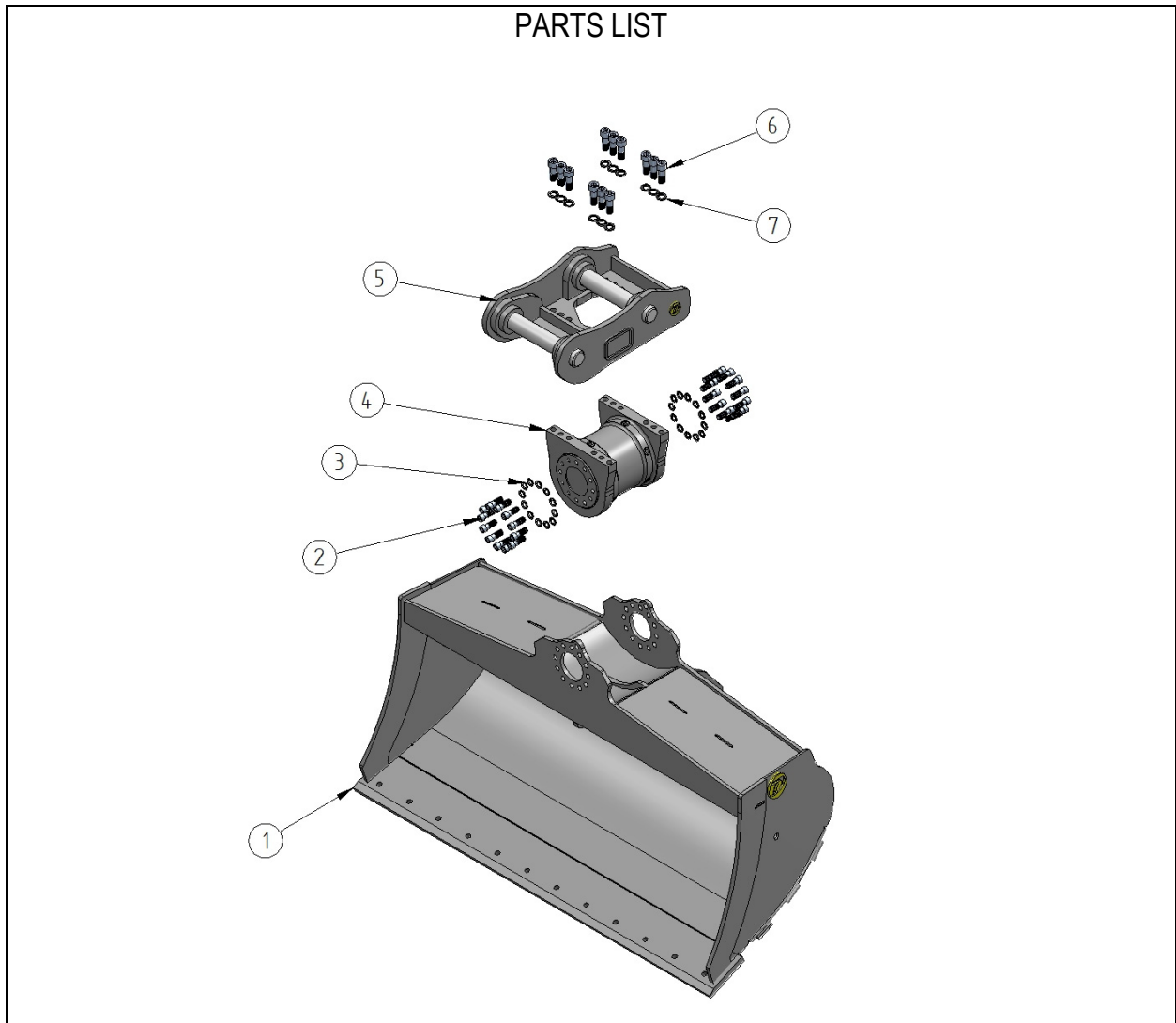


Note: Using copper/graphite thread lubricant and Nordlock Washer

PORT SIZES OF HYDRAULIC ACTUATOR

Actuator Model	Port Size
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



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			

Some BVC actuators utilise internal relief valves:

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



Always quote make and model of excavator and serial number of bucket when ordering parts, this is a reference guide only.

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 an 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.

WARRANTY POLICY

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

WARRANTY POLICY

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 ASESMENT 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

PRODUCT ISSUE ASESMENT FORM

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.

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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 <i>(ERP produced)</i>	

