REALCOLD

Sheep Hock Cutter

Model RC25

INSTRUCTION MANUAL

CE

Imported by:

Licensed distributor

Specifications:

Designation:	**Sheep Hock Cutter Heavy Duty**		
Model No:	**RC25**		
Type:	**1212** ☐ Supplied	**1213** ☐ Supplied	**1215** ☐ Supplied
Length:	448mm	498mm	453mm
Height:	210mm	210mm	210mm
Width:	215mm	215	215mm
Blade Opening:	95mm	112mm	95mm
Blade Reach:	102mm	152mm	110mm
Weight:	8.51Kg	8.89Kg	8.43Kg

Hydraulic Circuit: 157Bar/2200Psi
Shell Helix ATF III or equivalent

Pneumatic Circuit: 6.5-7.85Bar/90-110Psi

Serial No: _____

Manufacture Date: _____

Test Date: _____

Manufactured By: Argus Realcold Ltd
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9 Prescott Street, Penrose
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CE

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Issue Date: 14-6-2005 Revision Number: 2.0 Revision Date: 19-6-2006

SAFETY INSTRUCTIONS FOR REALCOLD HAND TOOLS

As a designer, manufacturer, and supplier of plant and equipment Argus Realcold Ltd has provided plant, equipment, and all relevant information to ensure the safe use in accordance with the New Zealand Health and Safety in employment Act 1992.

The “CE” marked machines provided by Argus Realcold Ltd also meet the EC machinery directive 98/37/EC and any other relevant EC directive. It is the responsibility of the owner to ensure that the machine is used safely in accordance with the instructions and for the purpose that the machine was designed for.

The hand tools that we supply, with the exception of the RC33, are designed for two-handed operation and include the following:

RC20	Sheep Light Duty Scissor
RC21	Sheep Hock Cutter (Various blade options available)
RC22	Hydraulic Sheep Hock/Horn/Neck Cutter
RC25	Hydraulic Heavy Duty Sheep/Goat/Deer Hock/Horn Cutter
RC30	Hydraulic Beef Hock/Horn Cutter, Hog Head Cutter (Various blade options available)
RC31	Pneumatic Sheep & Lamb Brisket Opener
RC33	Pneumatic Wool Shear
RC35	Hydraulic Beef Loin/Head Cutter (Various blade options)
RC45	Hydraulic Heavy Duty Beef Horn Cutter
RC50	Air/Oil Intensifier

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NOTICE TO OPERATORS, MAINTENANCE, AND CLEAN-UP PERSONNEL

OPERATORS

Stop using a defective or malfunctioning tool immediately. Report the problem or defect immediately to your supervisor for removal of tool from service.

Do not attempt to make repairs yourself; do not tamper with a defective or malfunctioning tool.

Do not attempt to free a jammed or blocked tool yourself.

Remove power from the tool when the tool is left unattended or is not in use.

Never tie-down, bypass, or alter the triggers or safety switches of the tool.

Wear safety glasses when operating this tool.

Do not activate switches of the tool unless you intend to operate and use the tool.

Do not allow unauthorised individuals to operate the tool.

Never place fingers, hands, or other parts of your body in the cutting path of the tool.

This tool is capable of causing severe injury or death if misused.

CLEAN-UP PERSONNEL

Shut off all power and disconnect all hydraulic and air hoses from the tool before performing clean up.

Take extreme care near sharp blades.

MAINTENANCE PERSONNEL

Shut off all power and disconnect all hydraulic and air hoses from the tool before making repairs, performing maintenance, and before replacing or sharpening blades.

Do not use substitute parts or use other than genuine Argus Realcold brand parts.

Use extreme care when testing or operating the tool.

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RC25 SHEEP HOCK CUTTER
INSTRUCTIONS FOR COMMISSIONING

1. Mount a suitable spring balancer unit with a weight range from 5Kg to 9Kg near the operating station, in an appropriate position to ensure ease of operation for the suspended tool.

2. Attach the balancer cable to the hanger ring at the front of the hand tool.

3. Connect the hydraulic hoses to the couplers supplied at the rear of the hand tool.

4. Connect the air hoses to the airlines on the hand tool, making sure that air pressure is supplied to the RED hoses, and the GREEN hoses are connected to the signal line.

5. Turn on the power pack and operate the tool a few times to purge any air from the hand tool and hydraulic hoses.

6. Tie the hydraulic hoses and airlines together and arrange so that they are out of the way of the operator.

Note: The use of cable ties for this can cause the airlines to pinch preventing the hand tool from operating correctly. We recommend using electrical tape instead.

Your RC25 Hand tool is now ready for service.

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SERVICE SECTION

Before servicing this tool, it is important to understand how this tool operates. While being very simple, understanding the principles of operation and their interaction will assist you to maintain the tool to optimum working efficiency. Fault diagnosis and repair will also be greatly simplified.

PRINCIPLE OF OPERATION:

Cutting Cycle:

Operating valves are depressed supplying a positive air pressure signal to the pilot of the power pack control board.

- The pilot pressure shuttles the control valve allowing main supply air pressure to operate the power pack hydraulic valve.
- The hydraulic valve opens and hydraulic pressure is transmitted to the rear port of the hand tool via the hydraulic hose.
- This hydraulic pressure then acts on the piston rod assembly in the hand tool, and causes the piston rod assembly to move.
- The movement of the piston rod assembly is now transmitted to the blades via cam links and the blades close.
- Hydraulic pressure will build to 150 bar/2200 PSI as soon as cutting pressure is exerted, causing the blades to cut through the animal's appendage.

Opening Cycle:

- Operating valves are released allowing the positive air pressure signal to vent through the valve exhaust port.
- The pilot pressure shuttles the control valve allowing main supply air pressure to operate the power pack hydraulic valve opening side.
- The hydraulic valve opens and hydraulic pressure is transmitted to the front port of the hand tool via the hydraulic hose.
- This hydraulic pressure then acts on the piston rod assembly in the hand tool, and causes the piston rod assembly to be retracted.
- The movement of the piston rod assembly now pulls the blades via the cam links to the open position.
- A timer removes the air pressure signal from the hydraulic valve once the piston is fully retracted allowing the hydraulic valve to return to centre and remove hydraulic pressure from the hydraulic hoses.

The operating cycle is now complete.

SERVICING:

Before any servicing is attempted on this tool disconnect and unplug from air supply. All hydraulic hoses and air supply hoses must be disconnected to render the tool inoperative according to Occupational Safety & Health requirements.

Hand tool Disassembly:

Before starting please make sure that the tool is clean and that you have a suitable work area available. A container will help prevent small parts from being lost or damaged.

1. Mount the tool in a vice; use the flat sides of the pistol grip. Take care to use soft jaws and a rag to prevent damaging the handle.

   Note: Jaws may be easily made up from wood or plastic with a section recessed to capture the pistol grip. This prevents the tool from tipping in the vice and is particularly useful for larger tools.

2. Remove the cam link nuts and the pivot bolt nut and place into the parts container. Remove the cam link bolts taking care that the blades do not swing. Remember that they are sharp!

3. While supporting the blades, remove the pivot bolt and withdraw the blades from the clevis tube. Be sure that the clevis tube slipper plates are recovered and put into the parts container.

4. Using a suitable punch carefully drive the yoke pin from the yoke. Be sure to recover the plastic clevis plug for reuse and put it into the parts container with the yoke pin. Withdraw the pin punch carefully, withdrawing the cam links as you do so. Put into parts container.

5. Cut the zip tie securing the paired airline to the D-handle, taking care not to cut the airline.

6. Loosen the grub screw and push two-way valve out of handle. Carefully remove the airlines from the hose barb fittings. Put these items into the parts container.

   Note: Be careful, these fittings are easily broken.

7. Remove the bolt and handle from the handle assembly and put them into the parts container.

8. Unscrew the hydraulic couplers from their fittings. Put them into the parts container. Remove the hydraulic elbow, leaving the nipple attached.

9. Using a large adjustable spanner over the sides of the clevis, loosen the clevis by levering anti clockwise.

10. Remove the four 6mm cap screws from the underside of the handle cap and remove the handle cap and the cylinder and clevis assembly.

11. Drain remaining oil from the cylinder into a suitable container. Put the cylinder and clevis assembly onto the bench.

12. Find the hole inside the bore of the pistol grip and loosen the 6mm grubscrew. The two-way valve may now be pushed out of the handle and put into the parts container as per step 6.

13. Mount the clevis into the vice using the flat sides. Use soft jaws and a rag to prevent damage.

14. Unscrew the hydraulic cylinder body counter clockwise.

15. Withdraw the piston rod assembly from the clevis. Pull the bearing carrier out and the scraper seal also. Remove the clevis from the vice and put it on bench.

16. Mount the yoke in the vice using the edges of the slot. Using a spanner on the flat machined at the piston end of the piston rod unscrew the yoke from the piston rod assembly.

Your RC25 hand tool is now disassembled ready for inspection and servicing.

Servicing:

1. Clean all parts thoroughly.

2. Visually inspect all parts for any signs of wear or damage.

3. Blades: Look particularly for nicks in cutting edge. These will quickly develop into cracks if left unattended, leading to dangerous failure of the blade.

   The blades may be touched up according to the maintenance instructions in appendix 3.

   If regrinding it is critical that the blade angles are maintained.

   This will ensure that your blades maintain peak cutting efficiency.

   Argus Realcold offers a blade sharpening service. You will find this service to be very cost effective in maintaining your hand tool at peak cutting efficiency.

4. Seals may be easily removed by hooking them from their locating grooves. Take care not to damage the bronze piston.

   The seals should be replaced each time the tool is serviced.

   Use only genuine Argus Realcold seals for replacement.

   These are available in a convenient seal kit:

   Part number: 110-302105-A

5. Cylinder Body: Inspect for damage.

   Small nicks or scratches can be polished out with fine (240 grit or finer) wet and dry sandpaper.

   More severe damage will require replacement.

   Be aware that even insignificant appearing damage will cut and damage the piston seals, causing premature seal failure.

   External damage may also be far from cosmetic. It can cause distortion of the cylinder bore, which will damage seals and/or cause them to leak. It may also damage the bronze piston.

6. Piston Rod Assembly: Inspect for damage. Small nicks and scratches may be polished out with fine (240 grit or finer) wet and dry sandpaper.

   More severe damage will require replacement.

   Be sure to keep the piston rod clean during service.

   Be aware that even insignificant appearing damage will cut and damage the cylinder head seals, causing premature seal failure.

7. Pivot bolts and nuts: Inspect for damage or wear. If the pivot bolts are noticeably grooved from operational wear, they should be replaced.

   The Nylok blade pivot nut should not be reused more than once.

   The nylon locking insert deforms and loses its ability to hold the nut securely with repeated reuse.

8. Cam links: Inspect for damage or wear. If the holes are elongated then replace the cam links.

   Check for wear by inserting a new pivot bolt and yoke pin into the hole.

   They should be a sliding fit with minimal slop. If the hole is loose then replace the cam link.

   Check for straightness with a steel rule. If at all bent, then replace the cam links.

9. Yoke and Yoke Pin: Inspect for damage or wear.

   If the holes are elongated then replace the yoke.

   If the yoke pin is visibly worn or grooved then replace it.

   Check for wear by inserting a new yoke pin into the holes.

   It should be a sliding fit with no slop.

   A little tight is ok.

   If the holes are loose then replace the yoke and pin.

10. Slipper plates: Inspect for damage or wear.

    If the plates are noticeably worn or grooved then replace them.

11. Two Way Valve:

    Unscrew cover.

    Withdraw valve spool and spring.

    Remove O-rings from valve spool.

    Clean all parts thoroughly.

    Install new O-rings onto the valve spool.

    Install spring into valve body.

    Apply a little air tool oil to the O-rings on the valve spool and insert it through the spring and into the valve body.

    Reinstall the cover nut over the valve spool and tighten it onto the valve body.

Reassembly:

Before starting, make sure that all parts are clean and free of oil and grease.

All replacement parts and/or serviced parts should be procured/completed and ready to hand.

1. Install A New Piston Seal.

   A piece of plastic strapping can assist to pull the seal into place over the piston.

   Make sure that the seal is located properly in the groove and is not twisted.

   Apply a suitable lubricant to the seal.

2. Install New Bearing Carrier Seals.

   Use a blunt instrument (not a screwdriver) to push the seal fully into its groove.

   Make sure that the seal is located properly in its groove. It should float a little.

   Apply a suitable lubricant to the seals.

3. Take the piston and rod assembly with its new seal in place and push it into the bearing carrier with a twisting motion.
   Fit the scraper seal over the front of the piston rod.

4. Mount the yoke into the vice again and apply a small amount of Loctite 243 to the thread. Screw the piston rod assembly onto the yoke and tighten.

5. Take the clevis and push the piston rod assembly with the bearing carrier into the rear of the clevis until the bearing carrier is fully seated.

6. Mount the clevis into the vice by its flat sides again.

   Note: Apply nickel anti-seize to the male thread.
   Important; do not miss this step.

   Screw the hydraulic cylinder body onto it.

   Take the straight male fitting and screw it into the rear port of the cylinder with the dowty seal in place.
   Screw the male hydraulic coupler onto the straight male fitting, again with the dowty seal in place and tighten.

7. Mount the handle in the vice as you did during disassembly, using soft jaws and a rag to prevent damage.

8. Insert the paired air hose into the 9.0mm hole at the back of the pistol grip. Push the red hose onto hose barb marked “IN”. Push the green hose onto the remaining unmarked hose barb.

   Coat the brass valve body with food grade grease and push it into the socket at the front of the handle.

   Push it in until the retaining nut seats against the aluminium handle. Secure with the 6mm grub screw from inside the bore of the handle.

9. Take the cylinder and clevis assembly.

   Install it into the handle, making sure that the front edge of the cylinder body lines up with the front face of the handle and cap.

   Use a steel rule to align the clevis tube slot with the mating face of the handle and cap.

   There are three hydraulic ports at the rear of the clevis to facilitate reorientation of the blades to suit your application. The port to be used is to be facing upward.

   Do not remove the plugs unless changing the port in use.

   When installing the plugs apply Loctite 569 Hydraulic pipe sealer, and allow at least two hours cure time before applying hydraulic pressure.

   Check the cover photo for correct alignment.

10. Install the handle cap making sure that the two dot punch marks line up.

    Insert the four 6mm cap screws from the underside of the handle and tighten.

11. Take the yoke pin and push it into the yoke until it protrudes about one third of the way into the slot.

12. Take the cam links and liberally coat the yoke end with food grade grease. Insert one cam link into the yoke from the right hand side of the tool with the raised side of the fork facing down.

13. Take the second cam link and insert it into the yoke from the left hand side of the tool with the raised side of the fork facing up.

14. Push the yoke pin through the cam links fully until seated.

    Take the plastic plug removed earlier and install it into the hole until it is flush with the outside of the clevis.

15. Take the D–handle and install the bolt through the hole.

    Apply a small amount of blue Loctite 243 to threads.

    Screw the handle to the side of the pistol grip with the socket for the two-way valve facing upward, and tighten.

16. Insert the paired air hose into the 9.0mm hole from the bottom of the D–handle. Push the red hose onto hose barb marked “IN”. Push the green hose onto the remaining unmarked hose barb.

    Coat the brass valve body with food grade grease and push it into the socket at the top of the handle.

    Push it in until the retaining nut seats against the aluminium handle. Secure it with a 6mm grub screw.

17. Lay the paired air hose from the bottom of the D–handle flat against the underside of the handle and secure near the mounting base with a zip tie. Take care not to pinch the air hose.

18. Take the slipper plates and coat both sides with food grade grease. Place them into the front of the clevis, making sure that the holes line up with the pivot holes in the clevis.

19. Take the blades and coat the pivot area of the flat face with food grade grease. Slide the blades into the front of the clevis and push the pivot bolt through the holes to secure.

20. Install the pivot nut and tighten fully until excess food grade grease is expelled from the assembly. Be sure that the head of the pivot bolt is seated properly in its slot.

21. **To achieve correct blade tension this step must be followed strictly.**

    Gradually loosen the pivot nut until the blades start to slide easily against each other. Grasp both blades from outside edge and move together.

    A light resistance should be felt while moving, but no sticking or binding should be felt.

    Note: If the pivot is too tight, the blades may not open properly when the tool is used.

    If the pivot is too loose, animal matter will be trapped between the blades causing damage.

    Also, if too loose the pivot bolt will be overstressed and may break.

22. Take the cam link bolts and coat the shank with food grade grease.

    Install through the cam link and blade.

23. Take the cam link nut and apply a small amount of blue Loctite 243 into the thread. Screw onto the cam link bolts.

    Note: Cam link bolt must float slightly in holes and be able to rotate freely. If tight, the hand tool may not operate correctly.

24. Apply a small amount of Loctite 569 pipe sealer to the hydraulic elbow. Screw it into the front port on the clevis.
    Apply a little pipe sealer to the male thread of the nipple. Screw the female hydraulic coupler to the nipple and tighten.

Check the parts container and bench for any missing parts now.

Your RC25 hand tool is now ready to be returned to service.

Reinstall as per installation instructions at front of the manual and test for correct operation.

Appendix 1

Parts Diagram and Ordering Form

Argus Realcold Ltd, PO Box 12-519, 9 Prescott Street, Penrose, Auckland, New Zealand
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Sheep Hock Cutter, Heavy Duty
RC25-1212

ITEM NO.	QTY.	PART N0.	DESCRIPTION
1	1	110-252102-A	Hydraulic Cylinder Body
2	1	110-252104-B	Piston & Rod Assy
3	1	110-252106-B	Bearing Carrier
4	1	110-302105-A	Hydraulic Cylinder Seal Kit
5	1	120-253001-A	Clevis Tube
6	2	120-223002-A	Slipper Plate S/S
7	1	130-224101-A	Yoke
8	1	130-224102-A	Yoke Pin
9	2	130-224103-A	Cam Link
10	1	140-225101-A	Scissor Blade Standard (Pair)
11	1	150-206104-A	D-Handle
12	1	150-256103-A	Hanger Ring
13	1	150-306102-A	Pistol Grip Only
13.1	4	800-CSM620-304	Cap Screw M6x20 304
14	1	160-227101-A	Pivot Bolt
15	1	160-227102-A	Pivot Bolt Nut
16	2	160-227104-A	Cam Bolt
17	1	180-AA90-0606	Hydraulic Elbow Male
18	1	180-A-C-0606	Male 3-8BSP Adapter
19	1	180-BB06-06	Straight Fitting 3-8BSPP
20	2	180-D-06	Dowty Seal 3-8BSP
21	1	180-DU1x1 1-8x1	DU Bush
22	4	180-KQ2H04-00	Straight Connector 4mm
23	2	180-PP38-304	3/8"BSPP Pressure Plug
24	2	180-QVV-F06	Hydraulic Coupler Female
25	2	180-QVV-M06	Hydraulic Coupler Male
26	2	190-209508-B	Pilot Valve
27	2	800-ANM8-304	M8 Acorn Nut
28	1	800-BHM820-304	M8x20 Button Head Screw 304
29	2	800-GSM66-304	M6x6 Grub Screw
30	2	800-RP4X45-304	Roll Pin M4x45 304
31	1	800-2-MP4	4mm Twinline
32	1	800-HSC9.5	9.5mm Heat Shrink Clear

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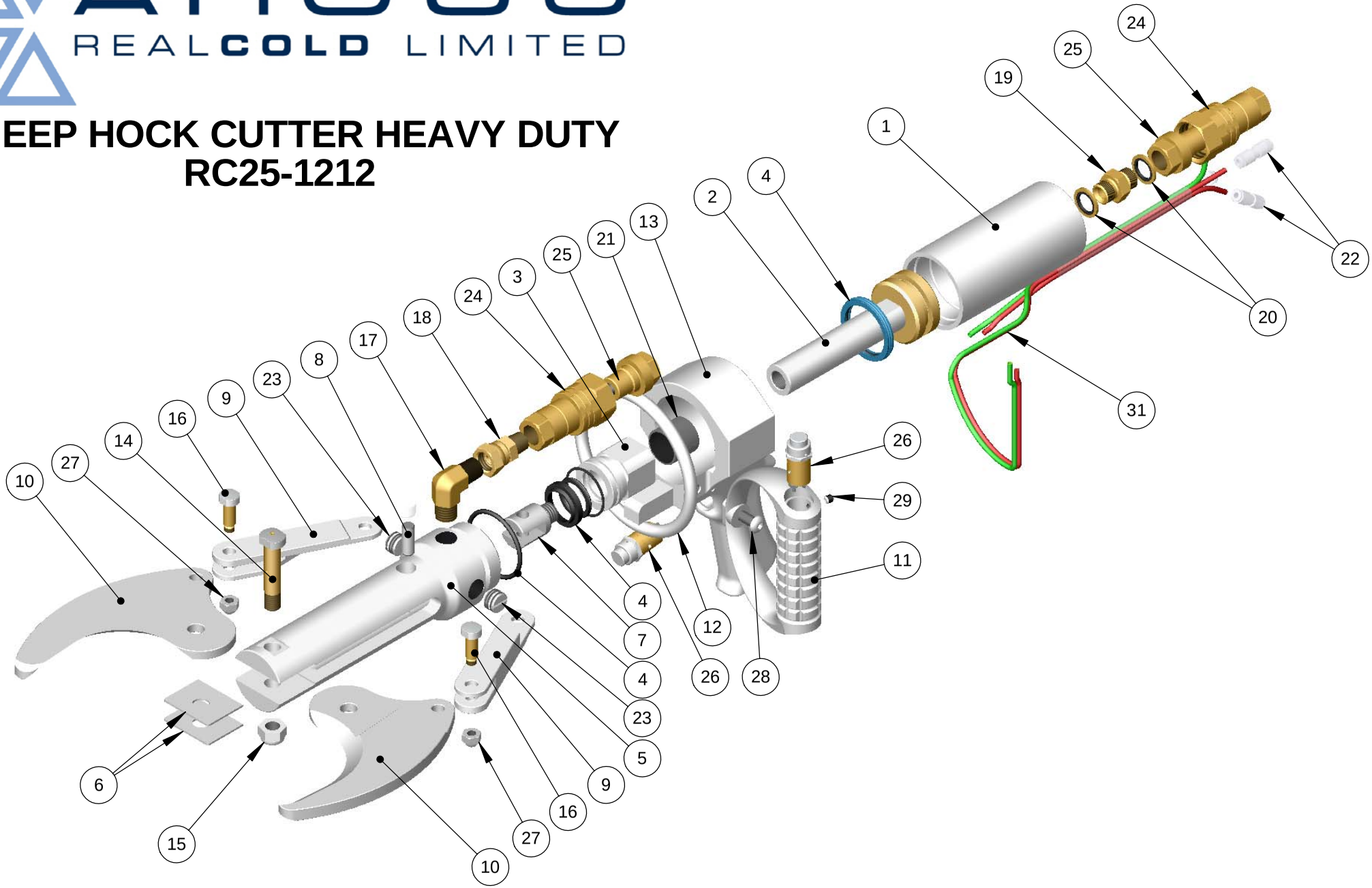
SHEEP HOCK CUTTER HEAVY DUTY
RC25-1212



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Sheep Hock Cutter, Heavy Duty
RC25-1213

ITEM NO.	QTY.	PART N0.	DESCRIPTION
1	1	110-252102-A	Hydraulic Cylinder Body
2	1	110-252104-B	Piston & Rod Assy
3	1	110-252106-B	Bearing Carrier
4	1	110-302105-A	Hydraulic Cylinder Seal Kit
5	1	120-253001-A	Clevis Tube
6	2	120-223002-A	Slipper Plate S/S
7	1	130-224101-A	Yoke
8	1	130-224102-A	Yoke Pin
9	2	130-224103-A	Cam Link
10	1	140-225103-A	Scissor Blade Long (Pair)
11	1	150-206104-A	D-Handle
12	1	150-256103-A	Hanger Ring
13	1	150-306102-A	Pistol Grip Only
13.1	4	800-CSM620-304	Cap Screw M6x20 304
14	1	160-227101-A	Pivot Bolt
15	1	160-227102-A	Pivot Bolt Nut
16	2	160-227104-A	Cam Bolt
17	1	180-AA90-0606	Hydraulic Elbow Male
18	1	180-A-C-0606	Male 3-8BSP Adapter
19	1	180-BB06-06	Straight Fitting 3-8BSPP
20	2	180-D-06	Dowty Seal 3-8BSP
21	1	180-DU1x1 1-8x1	DU Bush
22	4	180-KQ2H04-00	Straight Connector 4mm
23	2	180-PP38-304	3/8"BSPP Pressure Plug
24	2	180-QVV-F06	Hydraulic Coupler Female
25	2	180-QVV-M06	Hydraulic Coupler Male
26	2	190-209508-B	Pilot Valve
27	2	800-ANM8-304	M8 Acorn Nut
28	1	800-BHM820-304	M8x20 Button Head Screw 304
29	2	800-GSM66-304	M6x6 Grub Screw
30	2	800-RP4X45-304	Roll Pin M4x45 304
31	1	800-2-MP4	4mm Twinline
32	1	800-HSC9.5	9.5mm Heat Shrink Clear

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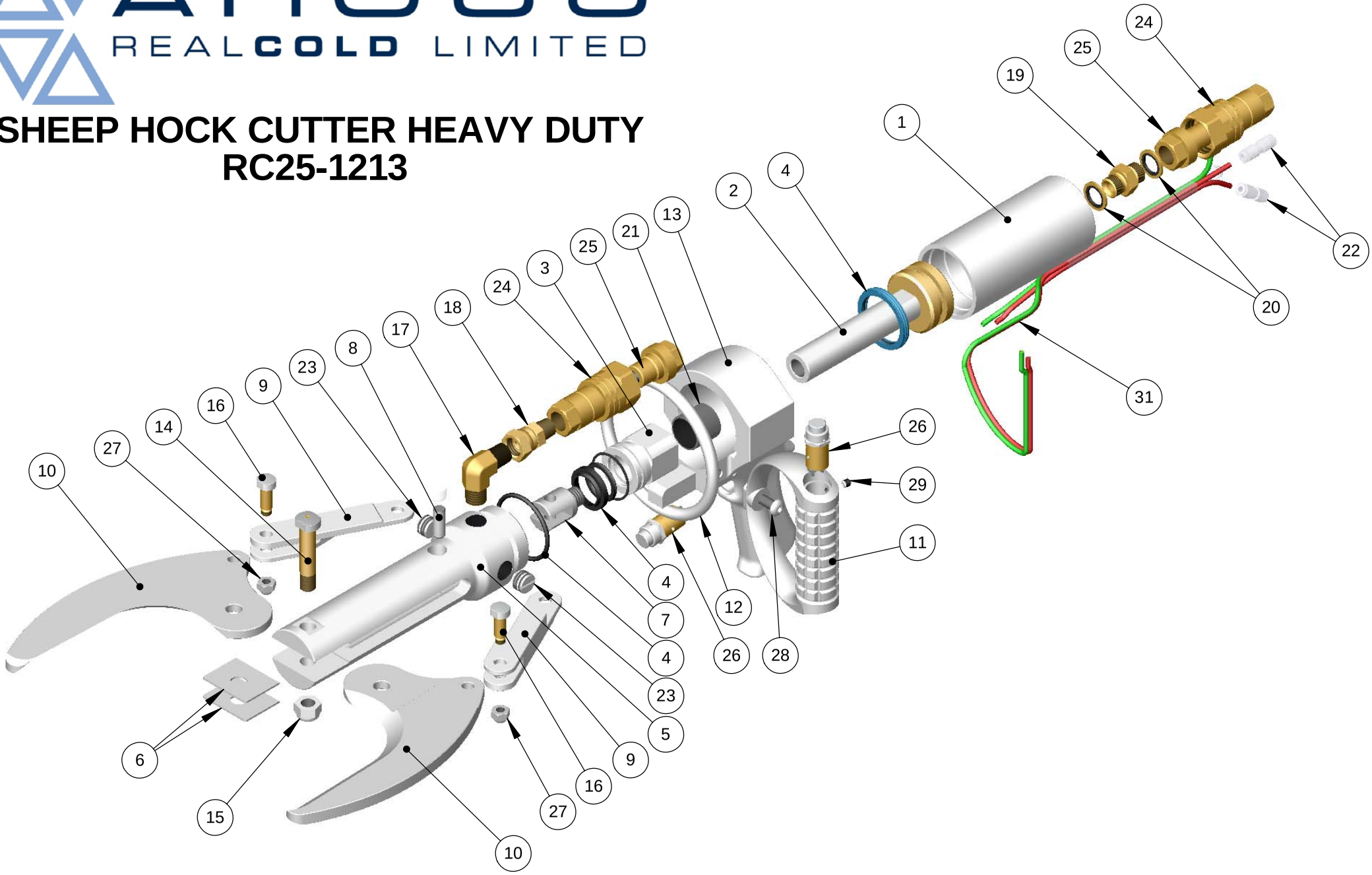
SHEEP HOCK CUTTER HEAVY DUTY
RC25-1213



ARGUS
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Sheep Hock Cutter, Heavy Duty
RC25-1215

ITEM NO.	QTY.	PART N0.	DESCRIPTION
1	1	110-252102-A	Hydraulic Cylinder Body
2	1	110-252104-B	Piston & Rod Assy
3	1	110-252106-B	Bearing Carrier
4	1	110-302105-A	Hydraulic Cylinder Seal Kit
5	1	120-253001-A	Clevis Tube
6	2	120-223002-A	Slipper Plate S/S
7	1	130-224101-A	Yoke
8	1	130-224102-A	Yoke Pin
9	2	130-224103-A	Cam Link
10	1	140-225105-A	Scissor Blade Special (Pair)
11	1	150-206104-A	D-Handle
12	1	150-256103-A	Hanger Ring
13	1	150-306102-A	Pistol Grip Only
13.1	4	800-CSM620-304	Cap Screw M6x20 304
14	1	160-227101-A	Pivot Bolt
15	1	160-227102-A	Pivot Bolt Nut
16	2	160-227104-A	Cam Bolt
17	1	180-AA90-0606	Hydraulic Elbow Male
18	1	180-A-C-0606	Male 3-8BSP Adapter
19	1	180-BB06-06	Straight Fitting 3-8BSPP
20	2	180-D-06	Dowty Seal 3-8BSP
21	1	180-DU1x1 1-8x1	DU Bush
22	4	180-KQ2H04-00	Straight Connector 4mm
23	2	180-PP38-304	3/8"BSPP Pressure Plug
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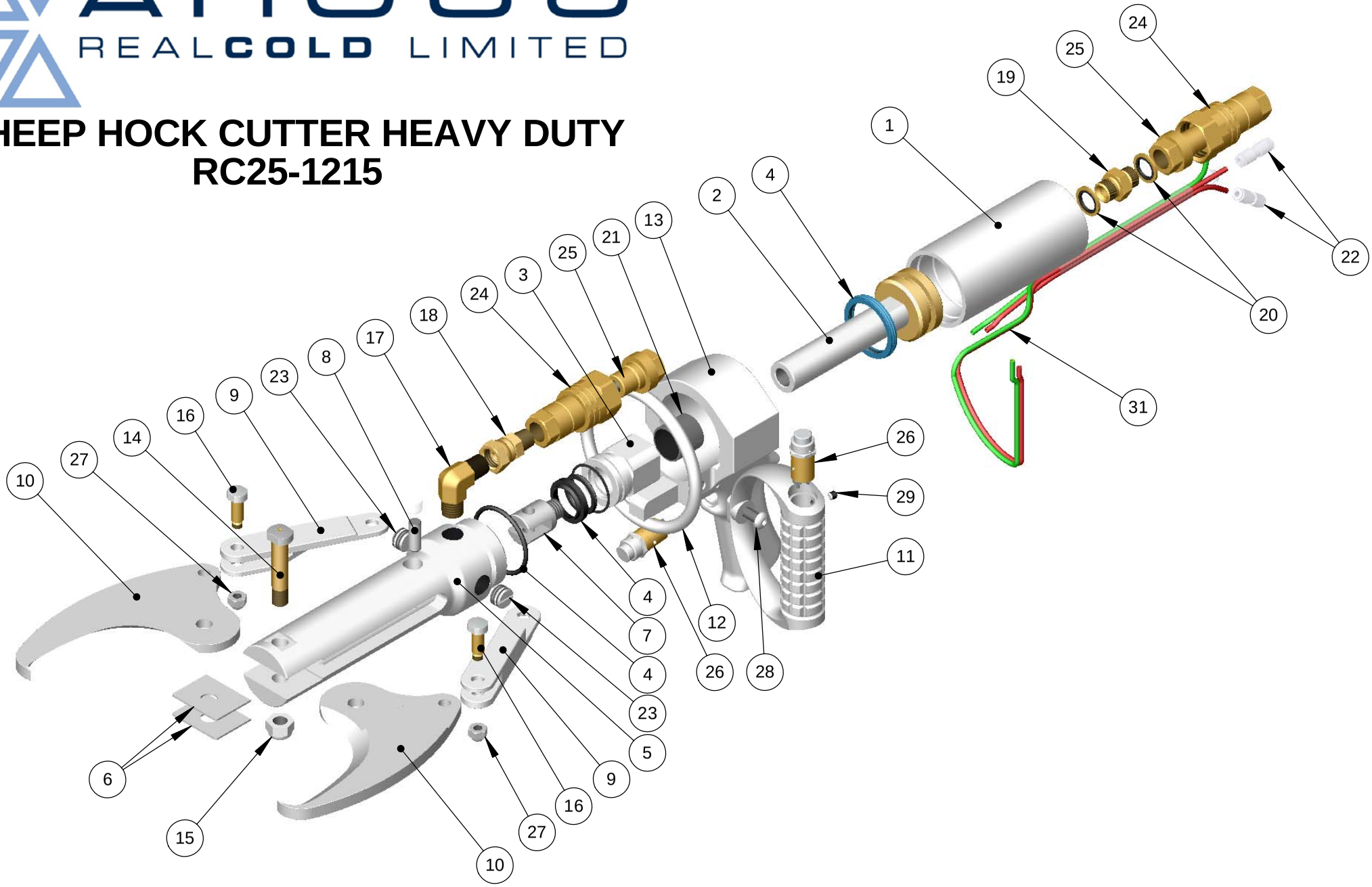
SHEEP HOCK CUTTER HEAVY DUTY
RC25-1215



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9 Prescott Street
PO Box 12-519
Penrose, Auckland
New Zealand

Ph 09 526 5757
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argord@realcold.co.nz

Order Number _____
Date _____
Tool _____
Serial Number _____

Customer Order Form

Name _____
Address _____
_____
_____
_____

Phone _____
Contact Person _____

Qty	Part Number	Description

Shipping Instructions:

Ship to Address _____
_____
_____
_____
_____

Attention _____

Level of Urgency Normal ☐ Urgent ☐

Appendix 2

Maintenance

Argus Realcold Ltd, PO Box 12-519, 9 Prescott Street, Penrose, Auckland, New Zealand
Phone +64-9-526 5757, Fax +64-9-526 5755, Email : argord@realcold.co.nz , www.argus.co.nz

Maintenance

Please read this section thoroughly and make sure that these maintenance checks are carried out routinely as specified.

Adherence to this maintenance schedule will ensure that you enjoy long and trouble free service from your hand tool.

Before any servicing is attempted on this tool, disconnect and unplug from air supply. All hydraulic hoses and air supply hoses must be disconnected to render the tool inoperative according to Occupational Safety & Health requirement.

Check Daily:

1. Clean the hand tool thoroughly before inspecting.

2. Visually inspect the hand tool for any obvious damage to components, and for loose components.
   Anything that you find at this stage must be remedied immediately.
   The hand tool may need to be removed from service to affect remedy.

3. Check pivot bolt tension as per step 21 in the reassembly instructions.
   One of the cam bolts will need to be removed to facilitate this.
   Remove the other once the pivot bolt has been properly adjusted and apply grease to the blades around the cam bolt holes and to the shank of the cam bolts before reinstalling.

4. Apply food grade grease to lubrication points.
   Use a small hand held grease gun to apply grease to the pivot bolt. Apply until grease is expelled from between the blades.

5. Use a spray grease to apply grease to the yoke and yoke pin area.

6. Wipe off excess grease before returning the hand tool to service.

7. Reconnect the hand tool and check that all couplers and fittings are tight.

8. Reconnect the air supply and test for correct operation.

These checks are to be performed on a daily basis, or prior to the start of each shift where more than one shift operates each day.

Check Weekly:

This maintenance is best performed in the workshop.

1. Remove the blades and cam links from the hand tool as per the instructions for disassembly.

2. Thoroughly clean the clevis, cam links, blades, and wear plates.
   The grease used for lubrication becomes dry and hard, building up a layer of dried grease after repeated exposure to heat from the sterilising process.

3. Visually inspect the hand tool for any obvious damage to components, and for loose components.
   Check all fasteners for tightness.
   Anything that you find at this stage must be remedied immediately.

4. Check the yoke pin, cam links, and cam bolts for wear as per the instructions for servicing.
   If they are loose or obviously worn then replace them now.

5. Check the blades for sharpness or edge damage.
   Should they be dull or damaged then sharpen them as per the sharpening instructions in appendix 3.
   Sharpen both blades evenly.

6. Apply grease to the cam links and reassemble them to the tool as per the instructions for reassembly.

7. Apply grease to the pivot faces of the blades and wear plates.
   Reassemble them to the tool as per the instructions for reassembly.
   Make sure to tension the pivot bolt correctly.

8. Wipe off excess grease before returning the hand tool to service.

9. Reconnect the hand tool and check that all couplers and fittings are tight.

10. Reconnect the air supply and test for correct operation.

These checks are to be performed on a weekly basis, or approximately every 40 hours of service where more than one shift operates each day.

Routine Maintenance:

Except where daily or weekly checks require replacement of wear items, the hand tool should be fully stripped and serviced once every six months.

Wear items that should be replaced at this six month service are:

- 110-302105-A Seal kit
- 130-224103-A Cam link
- 130-224102-A Yoke pin
- 160-227104-A Cam bolt
- 160-227101-A Pivot bolt
- 160-227102-A Pivot nut
- 800-ANM8-304 M8 Acorn nut

All other components should be assessed for serviceability at this time and replaced as necessary, as per the servicing instructions in the service section of this manual.

Other factors which may necessitate a full service prior to this six month interval include but are not limited to:

- Power pack oil found to be dirty
- Power pack oil found to be water contaminated
- Blades damaged (i.e., accidental cutting onto the gambol)
- Other damage caused by dropping or striking of the tool

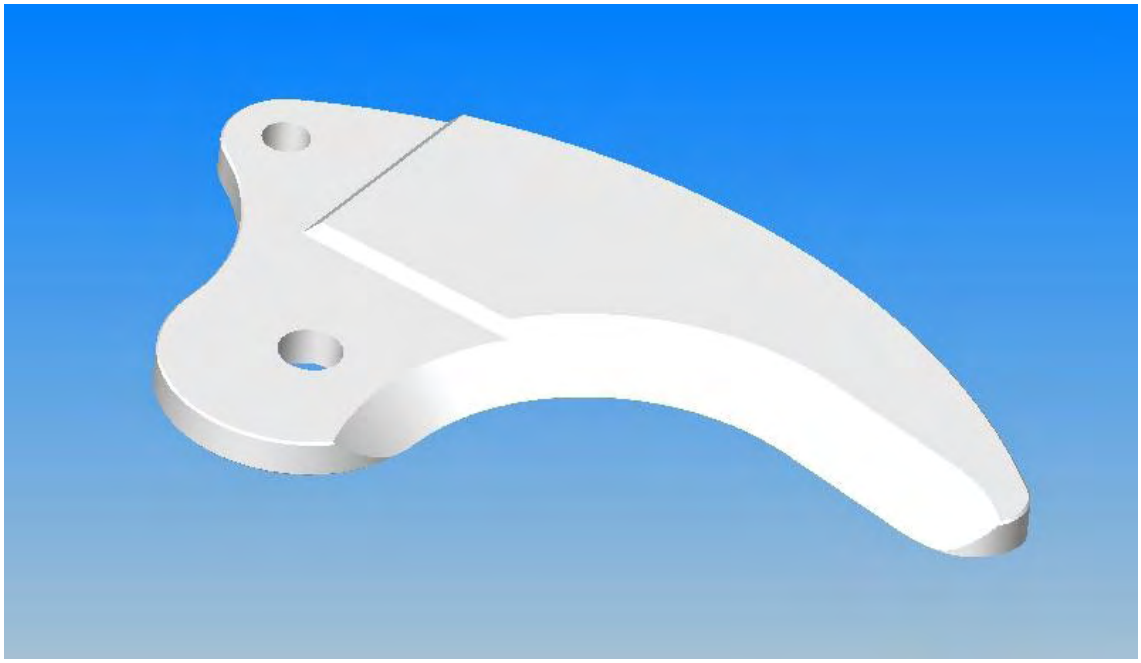
Following the discovery of any of these occurrences the hand tool must be removed from service, stripped, and thoroughly assessed for damage.

Appendix 3

Blade Sharpening

Argus Realcold Ltd, PO Box 12-519, 9 Prescott Street, Penrose, Auckland, New Zealand
Phone +64-9-526 5757, Fax +64-9-526 5755, Email : argord@realcold.co.nz , www.argus.co.nz

Blade Sharpening



Use a linisher with a belt of about 240grit.

Linish gently along the full length of the cutting edge primary angle.

Take care to maintain the angle of the edge (40°), and also the profile.

Use only light pressure as heat may rapidly build up and affect the hardness of the blade.

It is recommended that the polished finish be restored to retain the hygiene qualities of the blade.

Use a stone to apply a witness to the cutting edge and remove the burr created by linishing.

If a linisher is not available then a sanding drum attached to a die-grinder may be used.

Under no circumstance should an angle grinder or disc sander be used.

Failure to follow these sharpening instructions will void the manufacturer's warranty.

Argus Realcold Ltd offer a blade reconditioning service that will restore your blades to the original condition, which you will find to be very cost effective in maintaining your blades at peak efficiency.

ARGUS
REALCOLD LIMITED

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Appendix 4

Recommended Spare Parts

Argus Realcold Ltd, PO Box 12-519, 9 Prescott Street, Penrose, Auckland, New Zealand
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Recommended Spare Parts

The following is a list of spare parts that we recommend your engineering department to keep in stock at all times.

Having these parts on hand will assist you to maintain your tool in good working order, and ensure that you avoid down time while waiting for parts delivery should your hand tool require repair.

This list is a minimum recommendation for parts to support one unit in the field.

Where more than one tool is in service, quantities held in stock should be adjusted accordingly.

Qty	Part Number	Description
2	110-302105-A	HYDRAULIC CYLINDER SEAL KIT
2	120-223002-A	SLIPPER PLATE S/S
2	130-224103-A	CAM LINK
1	130-224101-A	YOKE
2	130-224102-A	YOKE PIN
2	140-225101-A	SCISSOR BLADE STANDARD
4	160-227104-A	CAM BOLT
2	160-227101-A	PIVOT BOLT
4	160-227102-A	PIVOT NUT
10	180-3X1.5-N70	VALVE O RING
4	180-D-06	DOWTY SEAL
4	180-KQ2H04-00	PNEUMATIC STRAIGHT
2	180-QVV-F06	COUPLING SCREW TYPE FEMALE
2	180-QVV-M06	COUPLING SCREW TYPE MALE
2	190-209508-B	PILOT VALVE
4	190-209602-A	PILOT VALVE COVER NUT
4	190-209603-A	VALVE SPRING
5m	800-2-MP-4	HOSE
4	800-ANM8-304	CAM NUT

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Appendix 5

Circuit Diagram

Argus Realcold Ltd, PO Box 12-519, 9 Prescott Street, Penrose, Auckland, New Zealand
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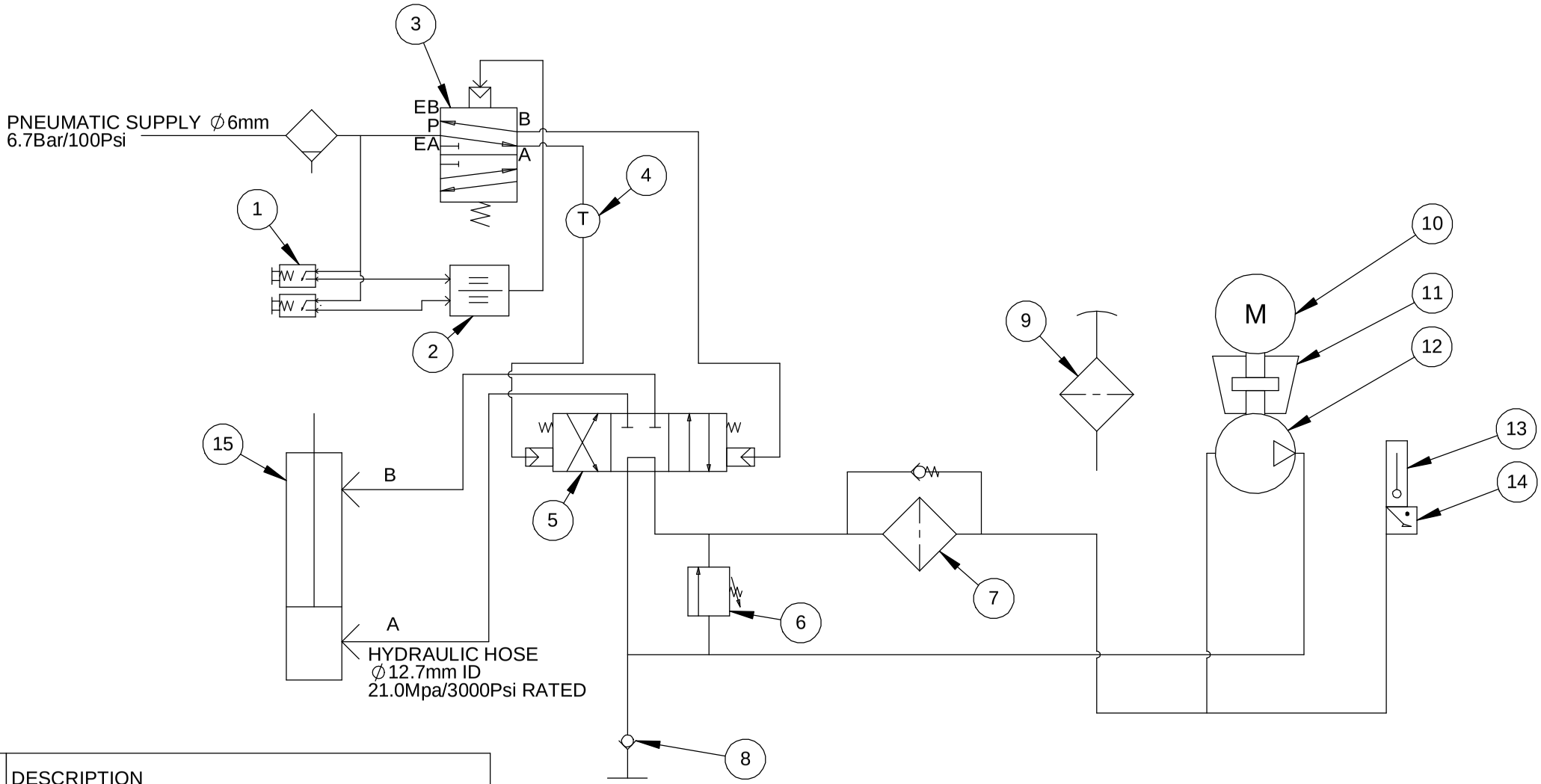

ITEM	DESCRIPTION
1	OPERATING SWITCHES, 3/2 N/NP SPRING RETURN
2	LOGIC VALVE, "AND" FUNCTION 0.3sec
3	OPERATING VALVE 5/2 SPRING RETURN
4	PNEUMATIC TIMER
5	HYDRAULIC VALVE 5/2 OPEN CENTRE
6	PRESSURE RELIEF VALVE
7	RETURN FILTER
8	TEST POINT
9	FILLER/STRAINER/BREATHER
10	ELECTRIC MOTOR
11	DRIVE COUPLING
12	HYDRAULIC PUMP
13	SIGHT LEVEL/TEMP GUAGE
14	OVER TEMP SWITCH
15	HAND TOOL CYLINDER D/A HYDRAULIC

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
LINEAR:
ANGULAR:

FINISH:

DEBUR AND BREAK SHARP EDGES

DO NOT SCALE DRAWING | REVISION A

	NAME	SIGNATURE	DATE	PART NO OLD
DRAWN	B EAST		16-2-2005	
CHK'D	M ROBINS		16-2-2005	
APPV'D				
MFG				
Q.A				

MATERIAL:

ARGUS REALCOLD LIMITED

TITLE:

CIRCUIT DIAGRAM
RC22, RC30, RC35, RC45

PART NO. RC22-CIRC

A3

SCALE:1:1

SHEET 1 OF 1