

**WIRE ROPE CUTTER
RCV 135**

PRODUCT CODE No. 980-212

**INSTRUCTIONS FOR INSTALLATION,
OPERATION & MAINTENANCE**

Issue 1 - 5th June 2000

1. INSTALLATION

- 1.1** Tapped holes, m12, are provided in the tool body, see Fig. 1, which can be used for any attachment necessary to mount the cutter.
- 1.2** Two hydraulic supplies are required, ported as shown in Figs. 2 & 3. The maximum working pressures are shown in *Table 1* and pressure limiting valves should be fitted into the supply to limit the pressures to these levels.

TABLE 1.

Function	Max. Working Pressure		Swept Volume ml.	Port Tapping
	psi	bar		
Main ram working stroke.	10,000	690	2,900	? " NPT
Main ram return stroke.	10,000*	690*	1,045	? " NPT
Auxiliary cylinder Out-stroke. (To retract anvil)	2,750	190	100 TOTAL	¼" NPT
Auxiliary Cylinder In-stroke. (To reset anvil)	2,750	190	60 TOTAL	¼" NPT

* **N.B.** Actual Pressure Required To Return Ram < 200 P.S.I. (14 bar)

2. CUTTING CAPACITY

The cutter is primarily intended for use on wire rope, having a maximum strength of 1770 N/mm² (180 grade rope) and will cut ropes up to 135mm diameter. It may be used on alternative materials, such as electrical power or communication cables, again up to a maximum of 135mm diameter. Where diameters smaller than 135mm are to be cut, an effort should be made to place the material centrally along the anvil to minimise offset loading.

If it is required to extend the use of the cutter, for instance to cut solid bar members of steel, please refer to the manufacturer with full details of size and tensile strength. Failure to do so may result in damage to the anvil and blade.

3. OPERATION

- 3.1 Prior to use, the auxiliary cylinder outstroke should be operated to withdraw the anvil. This clears access for the cutter to be placed over the wire rope.
- 3.2 Place the cutter over the wire rope. Ensure that the wire rope is as far into the cutter as possible so that the anvil does not foul as it is reset.
- 3.3 Operate the auxiliary in-stroke to position the anvil fully home under the wire rope. Be sure that the auxiliary cylinders are operated to the full extent of their stroke.
- 3.4 Operate the main ram down-stroke to sever the wire rope. When this is done, retract the main ram until it is fully home.
- 3.5 If a further cut is required, the above procedure should be repeated.
N.B. Do not operate the auxiliary cylinders when the main ram is fully extended as this will damage the anvil.

4. AFTER USE

When the tool is retrieved, it should be hosed off with clean water, allowed to drain and sprayed externally with a de-watering fluid. Before storage, inspect the general condition of the tool. Attention should be paid to the anvil and blade in particular. The anvil should be clean and free from any damage or bruising on the outside diameter that would prevent it from retracting properly. The blade edge should be smooth and free from any serration's. Note that a slight ripple to the blade edge is acceptable and will not cause problems. Any minor damage can be smoothed off with an oil stone if necessary.

5. SERVICE

It is unlikely that service would be required on the hydraulic components of the tool under normal circumstances, but a seal spares kit is available if required. The only parts that would need intermittent replacement would be the anvil and blade, this depending on the frequency of use and materials being cut. These parts can be ordered up on the following spares reference numbers, but in addition please quote the tool serial number.

Seal Kit	Part Number	995 288
Anvil	Part Number	SSC 6485
Blade	Part Number	705 047

If required, the tool can be returned to the manufacturer at any time for servicing and testing. If servicing is undertaken by the user, see note on proof testing under SAFETY (Chapter6).

6. SAFETY

Whilst the tool is intended for remote operation sub-sea, there is no reason why it should not be used above surface and be powered by a suitable hand pump.

6.1 In all cases, where an operator is present, the safety aspects must be reviewed before cutting operation is commenced.

6.2

- i.* Ensure that the tool, hoses and pump are in good condition and properly connected.
- ii.* No attempt should be made to cut wire ropes, or other material, that is under tension.
- iii.* Ensure that the operator is shielded from the cutting blade during the cutting operation.
When cutting the very end of a rope, individual cut wires can be expelled from the tool, so ensure that the operator is shielded from these.

6.3 Proof Tests.

If at any time it is necessary to carry out proof tests on the tool, e.g. after service on the hydraulic cylinders, the following applies.

- i.* The proof test pressure is 770 bar for main cylinder cutting stroke and 240 bar for main cylinder return stroke and auxiliary cylinders.
- ii.* The tool should be guarded during the proof test operation.
- iii.* The proof pressure should be applied gradually, by means of a hand-pump, until the maximum pressure is reached.

7. REPLACEMENT OF ANVIL AND BLADE

To withdraw the anvil and/or blade, proceed as follows.

- i.* Disconnect the anvil from the anvil bracket by removing the spring pins. The anvil should be passed through the body and removed.
- ii.* To remove the blade, pump out the main ram until the three ¼" diameter blade retaining pins can be seen. Remove the pins and slide the blade out of the tool.
- iii.* Replacing the blade and/or anvil is the reverse of the above.

NOTE:

The blade may be removed without removing the anvil; operate the auxiliary cylinders out-stroke to full limit, thus allowing the blade to slide out of the tool.

RCV 135 Parts List - Refer To Fig. 2.

<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
728 069	Cylinder	1
764 110	Ram	1
774 032	Bearing ring, main ram	1
SSC 6485	Anvil	1
715 336	Anvil guide bush	1
715 337	Anvil bush	1
765 182	Anvil bracket	1
765 181	Guide plate, blade	2
765 183A	Lever frame leg, handing A	1
765 183B	Lever frame leg, handing B	1
709 047	Sliding block	2
761 233	Pivot pin, auxiliary cylinders	2
761 234	Pivot pin, lever frame	1
035 082	Screw, special, sliding block	2
079 042	Stud, auxiliary cylinder mounting	2
080 956	Washer, sliding block screw	2
080 971	Washer, auxiliary cylinder retaining	2
715 338	Bush, pivot	4
080 978	Washer, lever frame	4
761 235	Spacer pin, lever frame	2
774 033	Shim, cylinder/bearing ring	1
705 047	Blade	1
32-99-1131	Seal, piston head	1*
32-99-1333	Seal, rod	1*
32-60-5725	Seal, 'O' ring, cylinder/ram bearing upper	1*
32-61-5725	AE ring, cylinder/ram bearing, upper	1*
32-60-5727	Seal, 'O' ring, cylinder/ram bearing, lower	1*
32-61-5727	AE ring, cylinder/ram bearing, lower	1*
025 568	Wiper, rod	1*
030 820	Spring pin, anvil	2
030 636	Spring pin, blade	3
035 079	Screw, sock cap, M6 x 25, anvil bushes	10
035 085	Screw, sock cap, M8 x 30, guide plate	16
035 086	Screw, sock cap, M8 x 50, guide plate	4
035 073	Screw, sock set, M6 x 10, lever frame assembly	4
035 080	Screw, sock set, M10 x 12, cylinder blanking	10
035 094	Screw, hex hd, M10 x 20, lever frame/spacer pin	4
33-99-1163	Screw, taper pressure plug, $\frac{3}{8}$ NPTF	1
752 342	Nameplate	1
752 560	Webtool label	1
31-99-2850	Eyebolt, collared , M12	4
766 047	Plug, blanking, $\frac{1}{4}$ " BSP, red polythane	4
766 061	Plug, blanking $\frac{3}{8}$ " BSP, red polythane	2
982 120	Body	1
982 119	Auxiliary cylinder	2

*N.B Parts marked thus * are in seal kits.*

RCV135 - Auxiliary Cylinder Parts List - Refer to Fig. 3.

<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
709 607	Piston block	1
728 070	Lever cylinder	1
SSC 6476	End cap	1
764 099	Piston	1
026 701	Pellet, aluminium, 3 Ø	1
025 311	Seal, 'O' ring, end cap	1*
025 569	Scraper, rod	1*
025 801	Seal, piston	1*
025 802	Seal, rod	1*
035 062	Screw, socket set, M4 x 6, piston block	1
035 063	Screw, sock cap, M4 x 30, end caps	4

*N.B Parts marked thus * are in seal kits.*

MOUNTING HOLES
TAPPED M12 THRO.

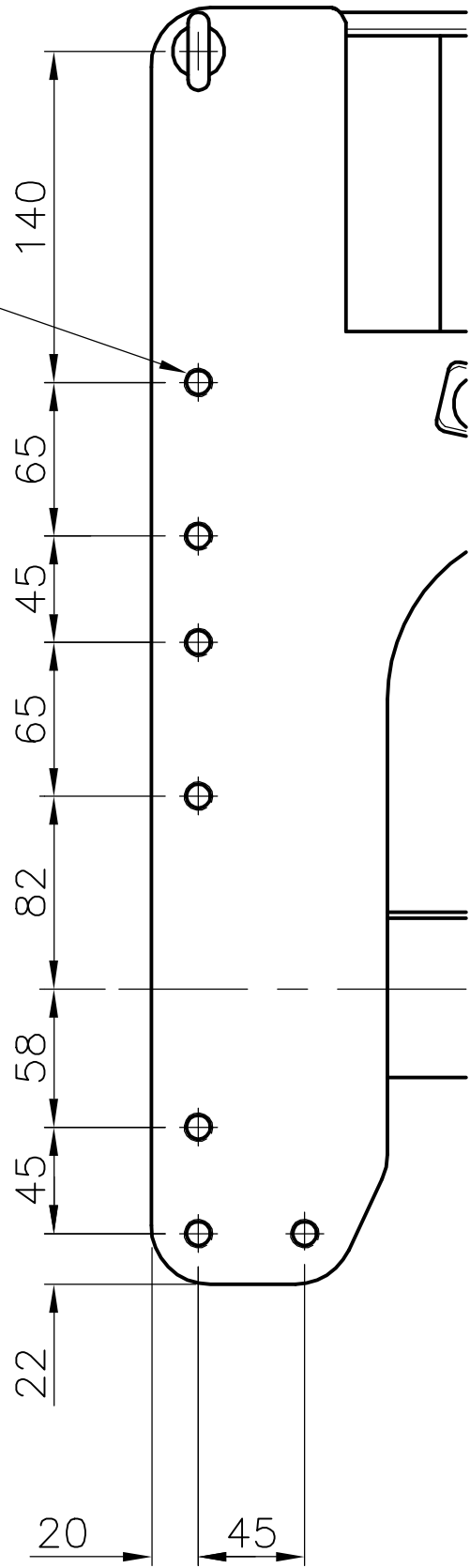
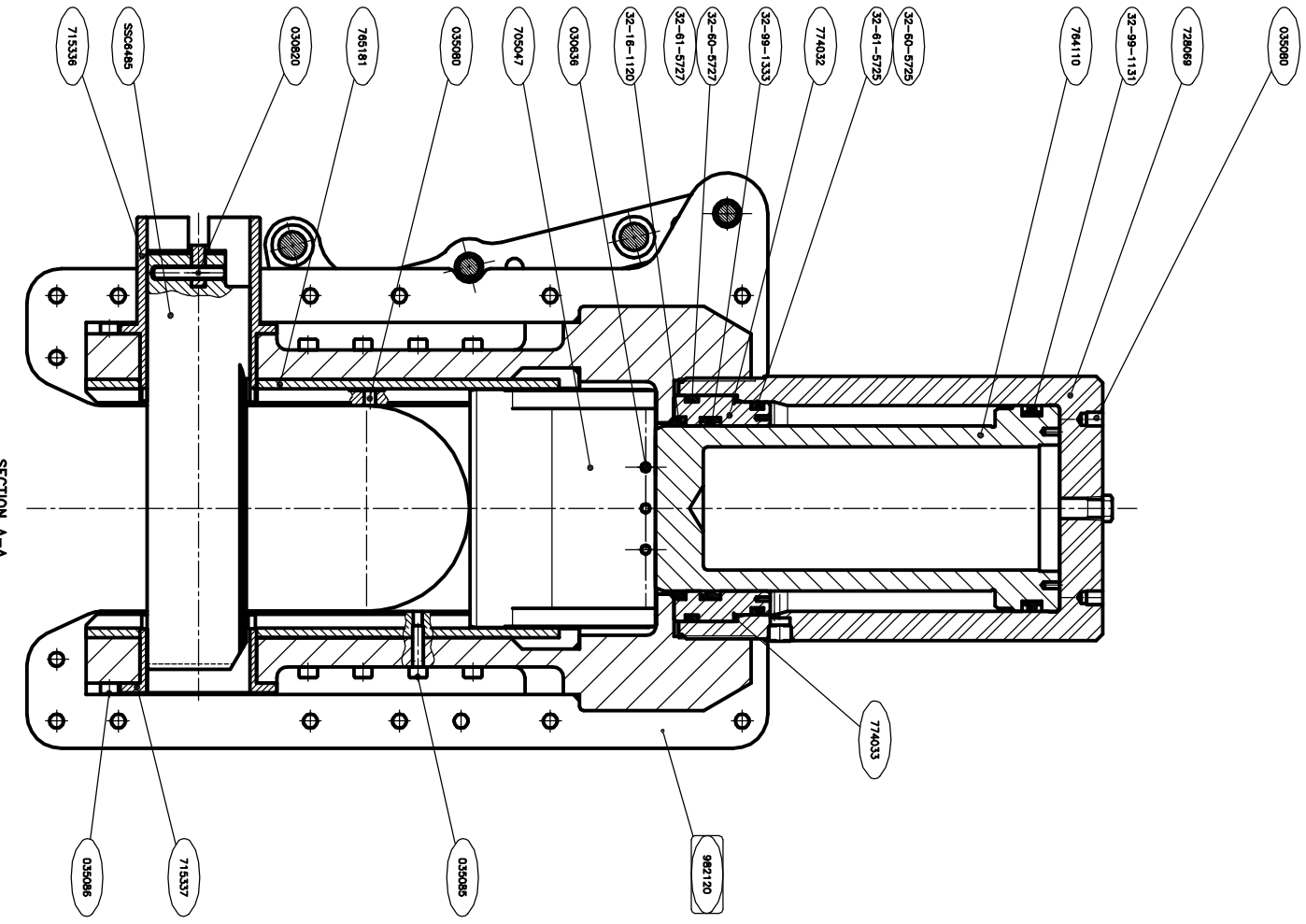
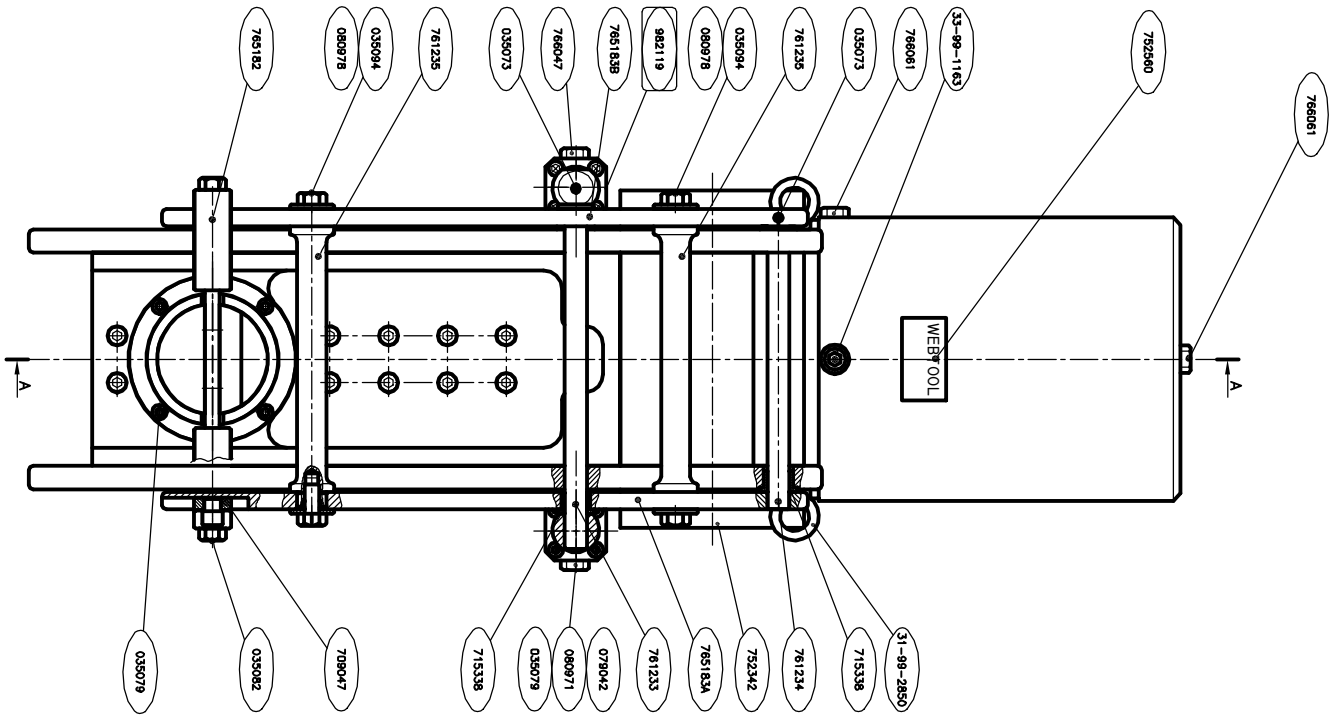


Fig.1.



SECTION A-A

Fig.2.

