

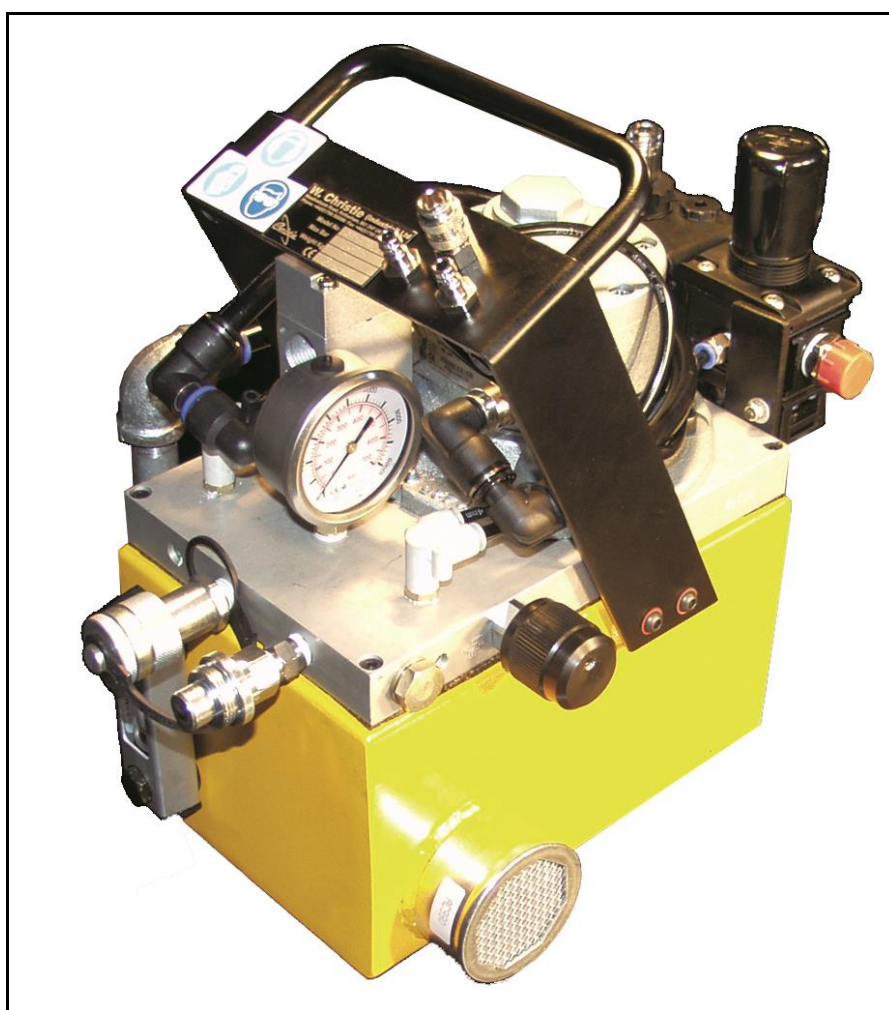
CE



**CHRISTIE**  
TOTAL TORQUE SOLUTIONS

## ADR70MD-LPR POWER PACK (AIR)

### USER GUIDE



## CONTENTS

<u>Page</u>	<u>Description</u>
1	Introduction Specification Accessories Available
2	Power Pack Features
3	Air Filter, Regulator & Lubricator Features
4	Air Filter, Lubricator & Regulator – Pre-Check
5	Power Pack Operating Instructions
6	Safety
7	Power Pack Parts List
8	Hydraulic Hose Parts List
9	Fault Finding
10	E.C. Declaration of Conformity

## **INTRODUCTION**

The ADR70MD-LPR power pack is a portable, air actuated, double acting, micron pump with a low pressure return suitable for desert operation.

The Christie range of power packs are the toughest on the market, combining effortless power with supreme performance.

The unit is fitted with a “quiet air” silencer chamber to reduce noise output and remove the need for hearing protection. The air exhaust layout also acts as a temperature regulator in hot and cold climates.

The power pack is supplied complete with one control pendant / hose assembly and two hydraulic hose assemblies

The unit is operated using the two button control pendant.

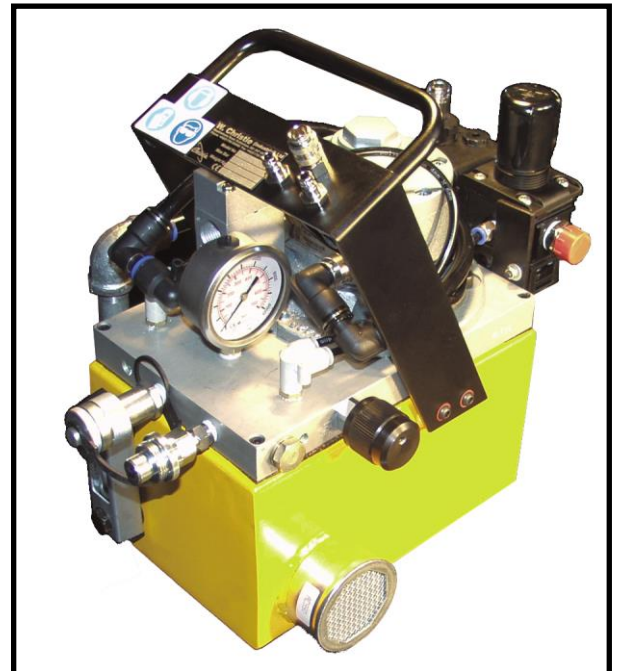
## **SPECIFICATION**

Air Consumption (In):	21-31 litres/second (45-65 cfm)
Maximum Air Pressure (In):	6.2 bar (90 Psi)
Maximum Hydraulic Pressure (Out):	690 bar (10,000 psi)
Pressure Gauge Units:	psi and bar
Flow Stage 1 (Out):	7 litres/minute (0.247 cfm)
Flow Stage 2 (Out):	0.9 litres/minute (0.0318 cfm)
Oil Reservoir Capacity:	4.5 Litres (274.61 in <sup>3</sup> )
Hydraulic Hoses Length:	4m
Total Weight (Excluding Hoses):	~23 Kg (50.71 lb)
Noise:	Less than 85 dB(A)
Hydraulic Port Size:	1/4" NPT

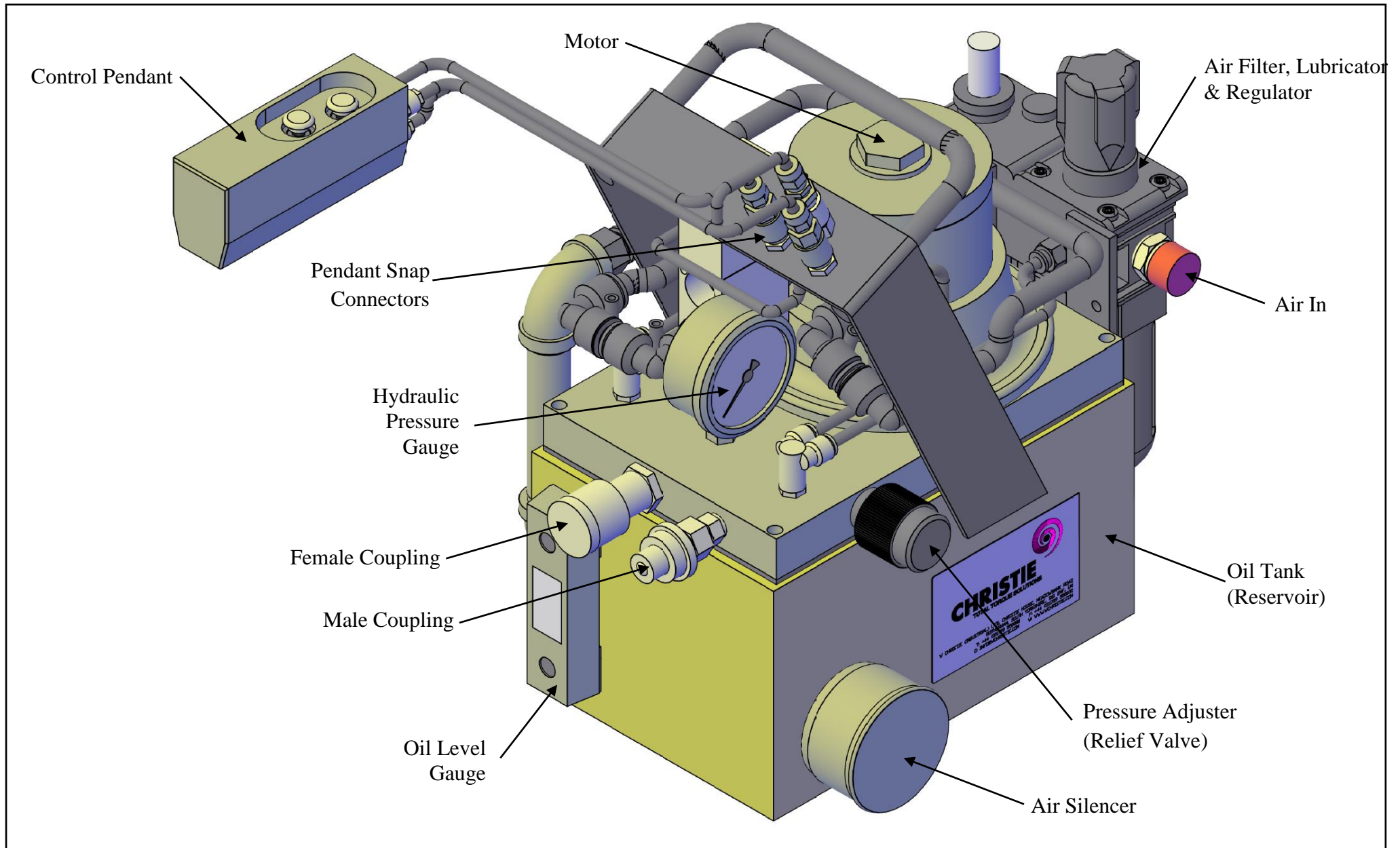
## **ACCESSORIES AVAILABLE**

The following accessories are available upon request and can be custom made to suit requirements. Please contact W. Christie (Industrial) Limited for more information:-

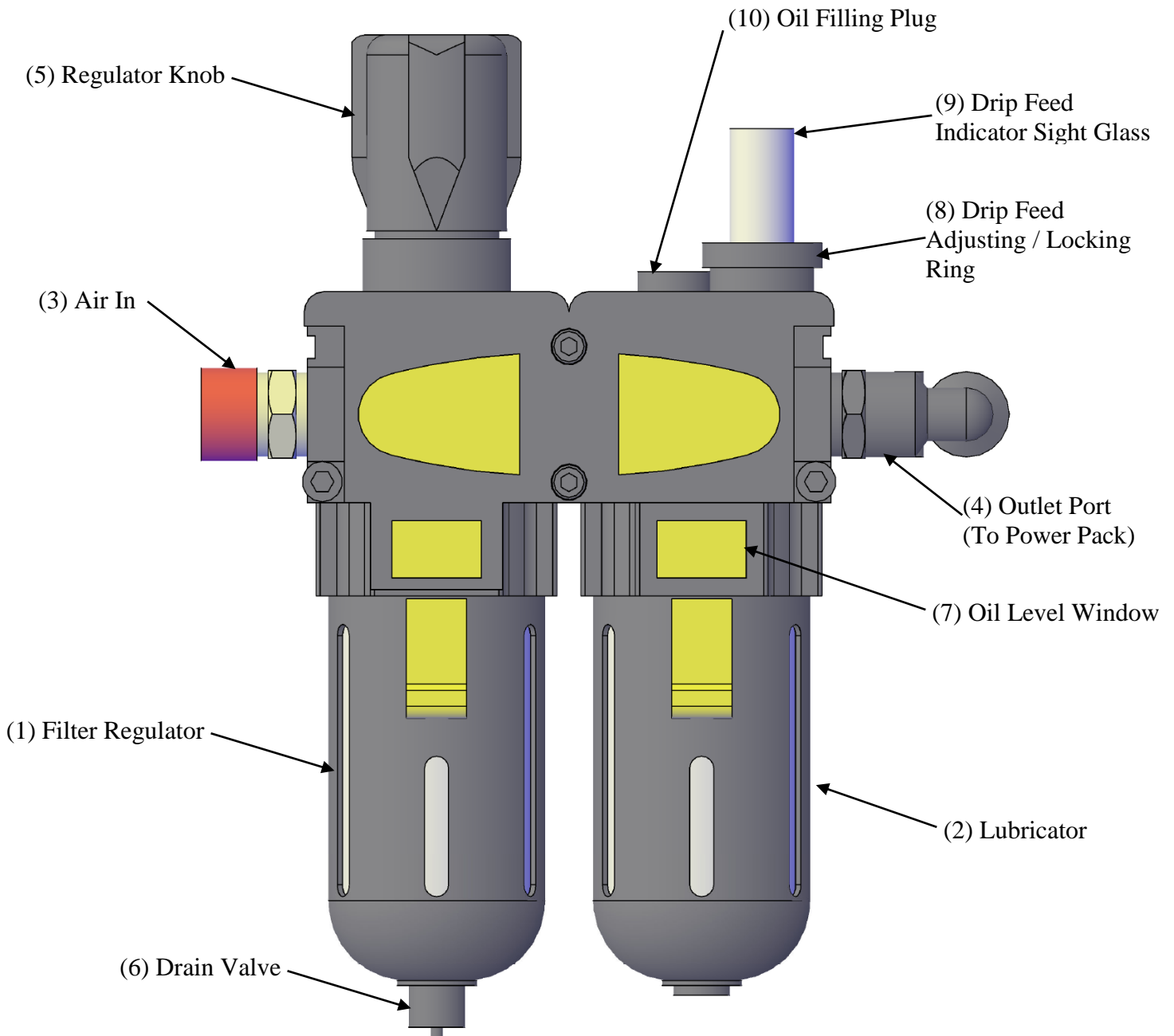
- Extra Length hoses
- Protective storage case
- Portable trolley



## POWER PACK FEATURES



**AIR FILTER, LUBRICATOR & REGULATOR FEATURES**



ITEM NUMBER	DESCRIPTION
1	Filter Regulator
2	Lubricator
3	Inlet Port
4	Outlet Port
5	Regulator Knob
6	Drain Valve
7	Oil Level Window
8	Drip Feed Adjusting / Locking Ring
9	Drip Feed Indicator Sight Glass
10	Oil Filling Plug

## **AIR FILTER, LUBRICATOR & REGULATOR – PRE-CHECK**

### ***Important:-***

This unit is used in a compressed air line. Correct safety precautions must be taken. Before filling or maintaining this assembly all compressed air should be exhausted first.

Before connecting your unit to an air supply first fill the lubricator with oil conforming to Tellus 32 or equivalent.

### ***Oil Filling:-***

Remove the oil plug assembly (10) using a 6mm Allen Key

Pour the specified oil into the lubricator, fill to maximum level as indicated on the oil level window (7), replace plug

### ***Air Hose Connection:-***

Connection of the air hose to the unit are made by a 1/2" BSP female thread, care should be taken when fitting mating pipes that a 22mm spanner is used to hold the fitting at the regulator end.

### ***Setting The Air Pressure:-***

On the ADR70MD-LPR Power pack the pressure has been pre set by W. Christie and should not be modified.

### ***Draining Condensate:-***

Prior to draining the condensate there must be no pressure in the unit. To remove condensate from the filter bowl press drain valve (6).

**Note** – Eye protection should be worn during this operation.

### ***To Adjust Lubrication Flow:-***

Oil flow is adjusted by rotation of the drip feed adjustment ring (8)

Lift the adjusting ring, turn it to adjust oil drop rate to suit the tool requirements. Turn clockwise to decrease flow, turn counter-clockwise to increase flow. Pushing the locking ring (8) down will lock the adjustment.

The flow rate can be viewed through the drip feed indicator sight glass (9)

For Christie tools we recommend 6 drops per minute.

## **POWER PACK - OPERATING INSTRUCTIONS**

**IMPORTANT: DO NOT OPERATE THIS TOOLING BEFORE THE OPERATING AND SAFETY INSTRUCTIONS ARE READ AND UNDERSTOOD.**

**IF BREAKDOWN, MALFUNCTION OR DAMAGE OCCURS DO NOT ATTEMPT TO REPAIR, CONTACT W. CHRISTIE (INDUSTRIAL) LTD IMMEDIATELY.**

**Before using the power pack (air) unit ensure:-**

1. The operating and safety instructions are read and understood.
  2. The relief valve, located on the side of the unit is fully unwound (anti-clockwise)
  3. Tank is filled with oil (Tellus 32 or equivalent).
  4. Ensure all Air Filter, Regulator & Lubricator Pre-Checks have been completed (see page 6)
  5. Ensure air filter is free from water and contaminants.
  6. Air supply in is correct (6.2 bar - 90 Psi maximum).
  7. Couplings are clean and fully engaged.
  8. Secure compressed air hose to unit, thread size 1/2" BSP. To ensure performance is maintained, ideal hose diameter (1/2" or 12.7mm)
  9. Connect hoses to the hydraulic tooling to be operated (see relevant operating instructions).
  10. Secure pendant snap connections, 2 plugs and 1 socket, Ensure these connections are fully engaged before switching on supply.
  11. Turn on the air supply to the unit, if any leaks are detected correct before proceeding.
  12. Depress one of the buttons on the hand pendant, the motor will start.
  13. Slowly rotate the relief valve, cylinder will extend.
- Note:** If cylinder does not extend, depress the other pendant button. Hydraulic pressure will register on the gauge
14. Adjust the hydraulic pressure to the required setting using the relief valve on the outside of the unit.
  15. With pressure set, the power pack is now ready for use.

**Note:** This is a double acting pump unit, depressing the pendant control buttons will extend or retract a cylinder. Which button extends and which button retracts is dependant on hose orientation.

## SAFETY

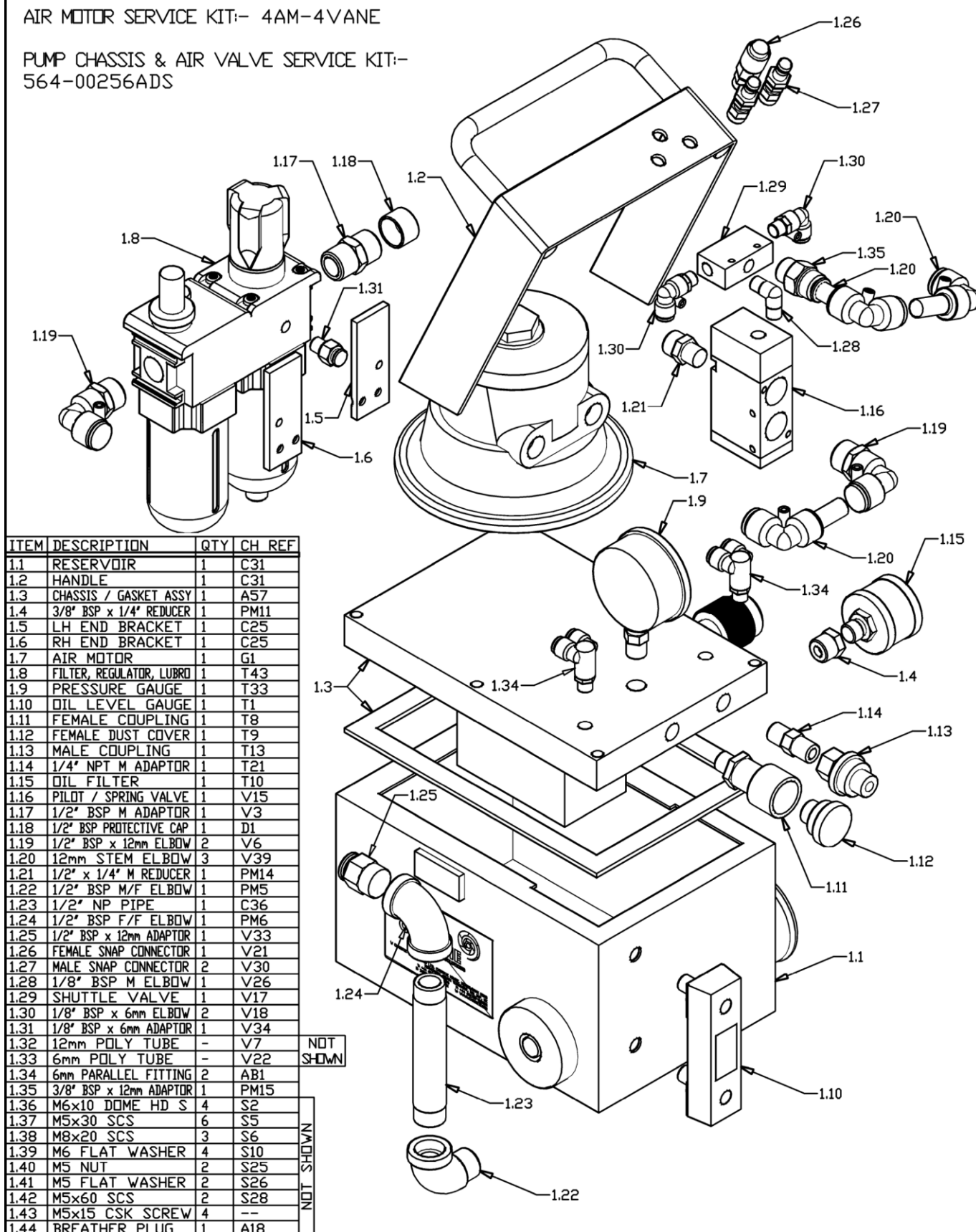
1. The incorrect use of hydraulic equipment is dangerous. Ensure that personnel familiarise themselves with the operating instructions.
2. Operating personnel should be safely and correctly attired i.e. safety glasses, safety boots, industrial gloves and overalls.
3. If more than one engineer is involved in the operation of torque machinery, good communication must be established to prevent accidents or misunderstandings.
4. Do not use air or hydraulic hoses to tow the power pack.
5. **NEVER** exceed the maximum working pressure of hydraulic equipment.
6. Before use check pneumatic and hydraulic hoses are not cut, split, kinked or damaged. If in doubt do not use.
7. Do not hold the hoses when they are pressurised, especially on the swagings. Hose failure may lead to serious injury.
8. If any leaks are detected whilst the pump is in operation, stop using it immediately. Contact W. Christie (Industrial) Ltd for guidance.
9. Take care not to stand on or run over hydraulic hoses or air lines. To minimise danger ensure that these lines are not run across walkways, ladders, roadways and doorways and that people likely to pass through the working area are aware of the danger.
10. Maintenance guidelines should be strictly adhered to, poor equipment may lead to component failure and injury.
11. **NEVER** pressurise a hose or cylinder leaving the coupling at the other end disconnected. If this coupling fails serious or fatal injury may result.
12. The pump unit contains aluminium and magnesium; this makes it unsuitable for use in certain industries i.e. mining and petrochemical. For guidance contact W. Christie (Industrial) Ltd.
13. A power pack should never be used without the motor silencer fitted, noise may cause damage to hearing.
14. No work should be undertaken by personnel unfamiliar with the hydraulic system. In the event of the breakdown, contact W. Christie (Industrial) Ltd.



## POWER PACK PARTS LIST

AIR MOTOR SERVICE KIT:- 4AM-4VANE

PUMP CHASSIS & AIR VALVE SERVICE KIT:-  
564-00256ADS

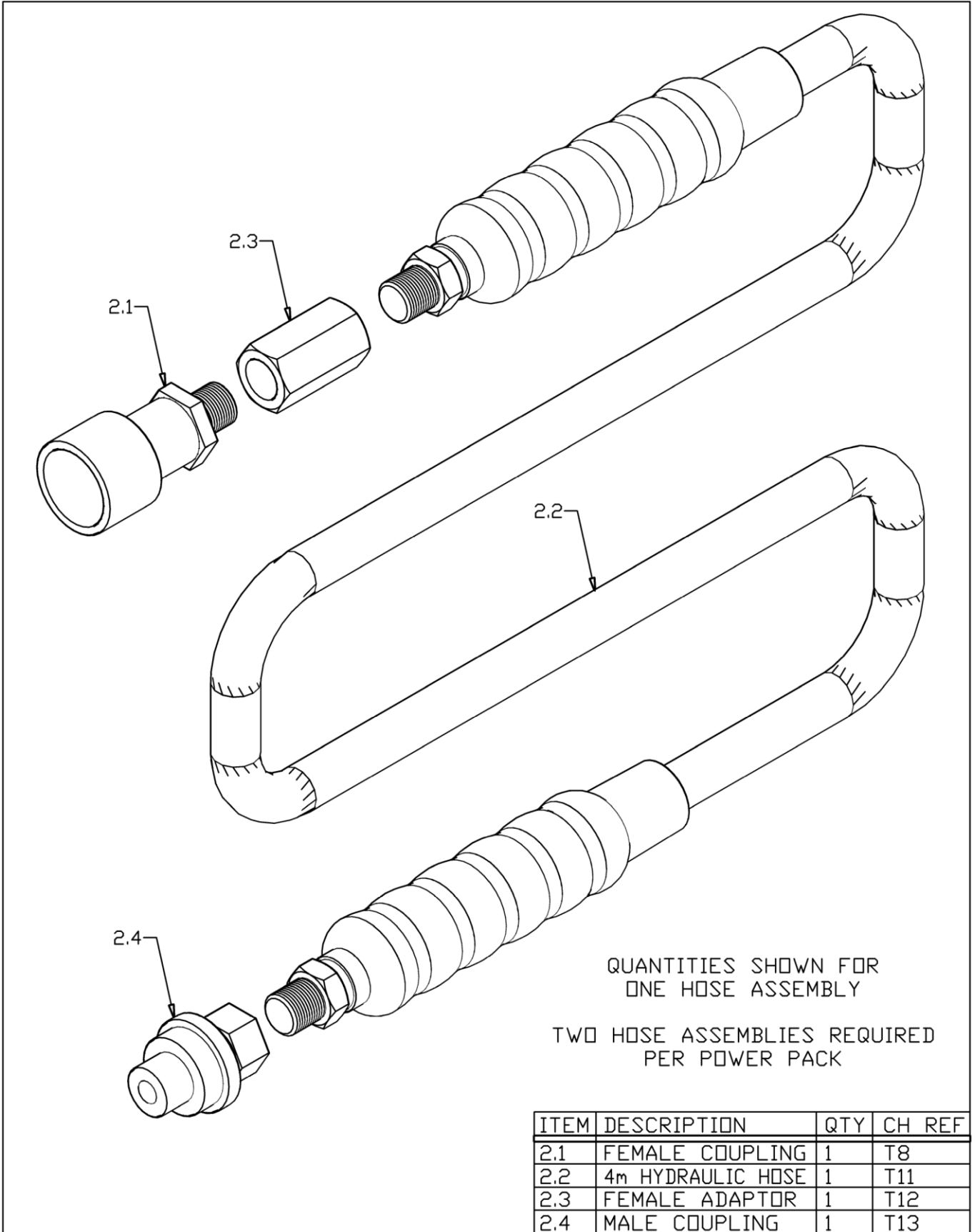


ITEM	DESCRIPTION	QTY	CH REF
1.1	RESERVOIR	1	C31
1.2	HANDLE	1	C31
1.3	CHASSIS / GASKET ASSY	1	A57
1.4	3/8" BSP x 1/4" REDUCER	1	PM11
1.5	LH END BRACKET	1	C25
1.6	RH END BRACKET	1	C25
1.7	AIR MOTOR	1	G1
1.8	FILTER, REGULATOR, LUBRO	1	T43
1.9	PRESSURE GAUGE	1	T33
1.10	OIL LEVEL GAUGE	1	T1
1.11	FEMALE COUPLING	1	T8
1.12	FEMALE DUST COVER	1	T9
1.13	MALE COUPLING	1	T13
1.14	1/4" NPT M ADAPTOR	1	T21
1.15	OIL FILTER	1	T10
1.16	PILOT / SPRING VALVE	1	V15
1.17	1/2" BSP M ADAPTOR	1	V3
1.18	1/2" BSP PROTECTIVE CAP	1	D1
1.19	1/2" BSP x 12mm ELBOW	2	V6
1.20	12mm STEM ELBOW	3	V39
1.21	1/2" x 1/4" M REDUCER	1	PM14
1.22	1/2" BSP M/F ELBOW	1	PM5
1.23	1/2" NP PIPE	1	C36
1.24	1/2" BSP F/F ELBOW	1	PM6
1.25	1/2" BSP x 12mm ADAPTOR	1	V33
1.26	FEMALE SNAP CONNECTOR	1	V21
1.27	MALE SNAP CONNECTOR	2	V30
1.28	1/8" BSP M ELBOW	1	V26
1.29	SHUTTLE VALVE	1	V17
1.30	1/8" BSP x 6mm ELBOW	2	V18
1.31	1/8" BSP x 6mm ADAPTOR	1	V34
1.32	12mm POLY TUBE	-	V7
1.33	6mm POLY TUBE	-	V22
1.34	6mm PARALLEL FITTING	2	AB1
1.35	3/8" BSP x 12mm ADAPTOR	1	PM15
1.36	M6x10 DOME HD S	4	S2
1.37	M5x30 SCS	6	S5
1.38	M8x20 SCS	3	S6
1.39	M6 FLAT WASHER	4	S10
1.40	M5 NUT	2	S25
1.41	M5 FLAT WASHER	2	S26
1.42	M5x60 SCS	2	S28
1.43	M5x15 CSK SCREW	4	--
1.44	BREATHER PLUG	1	A18

NOT SHOWN

NOT SHOWN

## HYDRAULIC HOSE PARTS LIST



## FAULT FINDING

FAULT	POSSIBLE CAUSE	SOLUTION
Motor will not run.	<ul style="list-style-type: none"> <li>• No air supply to the Air Filter, Lubricator &amp; Regulator</li> <li>• Motor / air fault</li> </ul>	<ul style="list-style-type: none"> <li>• Check air supply</li> <li>• Contact W.Christie (Industrial) Ltd</li> </ul>
Motor runs but no pressure visible on gauge.	<ul style="list-style-type: none"> <li>• Low oil level</li> <li>• Relief valve backed off</li> <li>• Piston block defective</li> <li>• Filter blocked</li> <li>• Pump defective</li> </ul>	<ul style="list-style-type: none"> <li>• Top up</li> <li>• Adjust</li> <li>• Replace</li> <li>• Replace</li> <li>• Replace</li> </ul>
Motor runs but slow to reach pressure.	<ul style="list-style-type: none"> <li>• Relief valve defective / backed off</li> <li>• Piston block defective</li> <li>• Pump defective</li> </ul>	<ul style="list-style-type: none"> <li>• Clean / replace / adjust</li> <li>• Replace</li> <li>• Replace</li> </ul>
Pump runs but attached tool slow or no movement.	<ul style="list-style-type: none"> <li>• Relief valve backed off / defective</li> <li>• Couplings not fully tightened</li> <li>• Defective coupling</li> <li>• Defective tool</li> </ul>	<ul style="list-style-type: none"> <li>• Clean / replace / adjust</li> <li>• Tighten Correctly</li> <li>• Replace</li> <li>• Check tooling</li> </ul>
Pump will only operate in one direction	<ul style="list-style-type: none"> <li>• Couplings not tightened fully / defective</li> <li>• Solenoid / air fault</li> <li>• Solenoid valve defective</li> </ul>	<ul style="list-style-type: none"> <li>• Tighten / replace</li> <li>• Investigate</li> <li>• Replace</li> </ul>



## E.C. DECLARATION OF CONFORMITY

**MODEL COVERED:** ADR70MD-LPR

**DESCRIPTION:** Portable, Air Actuated, Double Acting  
Micron Power Pack

We hereby declare that the following machinery complies with the essential health and safety requirements of the European Machinery Directive 2006/42/EC published on the 9<sup>th</sup> June 2006

W Christie (Industrial) Ltd, Meadowbank Road, Rotherham S61 2NF, United Kingdom.

This machinery has been designed and manufactured in accordance with the following transposed harmonised European Standard:-

BS EN ISO 12100-2:2003 Safety of Machinery – Technical Principles

**SIGNED:** 

**NAME:** R. G. Askham

**POSITION:** Senior Applications Engineer

On behalf of W Christie (Industrial) Ltd





**W. CHRISTIE (INDUSTRIAL) LTD**  
Christie House, Meadowbank Road,  
Rotherham, South Yorkshire, S61 2NF  
**t:** +44(0)1709 550088  
**e:** info@wchristie.com  
**f:** +44(0)1709 550030  
**w:** www.wchristie.com



**CHRISTIE**  
TOTAL TORQUE SOLUTIONS