

# SMARTPACK 100-H FRAMED MURPHY / ELECTRONIC REMOTE BOX



# **Owner & Operator Manual**

Revision: 3

Reviewed: 17/01/2023



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# **MEA Product Registration Form**

THE ATTACHED FORM MUST BE COMPLETED AND **RETURNED WITHIN 30 DAYS OF INSTALLATION WARRANTY WILL BE VOID** 

**ALTERNATIVELY, PLEASE GO ONLINE AND COMPLETE WARRANTY FORM** 

www.mobileenergyaustralia.com.au/warranty-registration









## **MEA Product Warranty Registration Form**

This form must be completed and returned to MEA at the time of Installation. Warranty will be void if this form is not received by MEA within 30 days of installation.

MEA Dealer Info	rmation	
Company Name:		
City:	State:	Country:
MEA Installer In	formation	
Company Name:		
		Country:
Installation Date:	/ / / Year	_
Owner Informati	ion	
Company Name:		
Address:		
City:	State:	Country:
Postcode:	Phone	#:
Product Informa	ition	
MEA Serial Number:		
Model Number:		



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MEA Product Warranty Registration form and partner Product Warranty Registrations must be completed and returned to MEA.



#### 1. COMPRESSOR / COMPRESSED AIR SAFETY

MEA DISCLAIMS ALL LIABILITIES FOR DAMAGE OR LOSS OF EQUIPMENT AND PROPERTY, PERSONAL INJURIES (INCLUDING DEATH), AND CONSEQUENTIAL DAMAGES ARISING OUT OF ANY MEA SYSTEM NOT USED IN ACCORDANCE WITH THE OPERATOR'S MANUAL.

ALL UNITS ARE SHIPPED WITH A DETAILED OPERATOR'S MANUAL. THIS MANUAL CONTAINS VITAL INFORMATION FOR THE SAFE USE AND EFFICIENT OPERATION OF THE UNIT. READ THE OPERATOR'S MANUAL BEFORE STARTING THE UNIT. FAILURE TO ADHERE TO THE INSTRUCTIONS COULD RESULT IN SERIOUS BODILY HARM OR PROPERTY DAMAGE.

Care is required when working with an air compressor or compressed air. Compressed air is one of the many ways energy can be stored. Releasing the stored energy in an uncontrolled manner can result in catastrophic consequences. Death and permanent disability are possibilities that can occur due to misuse. The following are suggested as minimum precautions to be used when operating the SMARTPACK Air Compressor. It is important that each work site shall perform a risk analysis and produce a procedure to eliminate or control the hazardous condition to minimise the risk to personnel and equipment. Health and Safety Regulations necessitate that this is a compulsory process to be carried out on each site. These, together with site specific safety procedures will help to minimize the risk to accidents, personnel injury, and loss of life. It is the responsibility of the employer to ensure that the work site is safe for all employees and that the safety procedures are followed by all employees.

#### SAFETY WHEN OPERATING AN AIR COMPRESSOR

- Do not bypass or disable the oil temperature and pressure sensors unless planning on running to failure (MEA does not recommend the practice).
- Do not expose the tank or compressor to extreme heat.
- Do not perform any service or repairs until the system has been completely relieved of air pressure.
- Maintenance and repairs on the system should only be done by qualified personnel.
- Do not operate the compressor while driving (vehicle mounted systems).
- Do not tamper with the pressure relief valve.
- Follow safe work practice, wear the appropriate personal protective equipment (PPE) when operating air-powered equipment, particularly eye and hearing protection.
- Avoid contact with rotating components, ensure all safety guards are in place.
- Avoid all contact with pressurized air. If it penetrates the skin, it can enter blood stream and cause death.
- Vaporized oil propelled by high pressure is an explosive mixture. To prevent compressor explosion
  or fire, make sure that the air entering the compressor is free of flammable vapours.
- Do not breathe the compressor air, vaporized oil is a respiratory hazard.
- Stay clear of all moving parts when the system is operating.
- Follow safety procedures for service operations as set by the authority.
- Run the system at idle speed and under no load conditions for 2 to 3 minutes before turning the system off to allow system cooling and lubrication to occur.

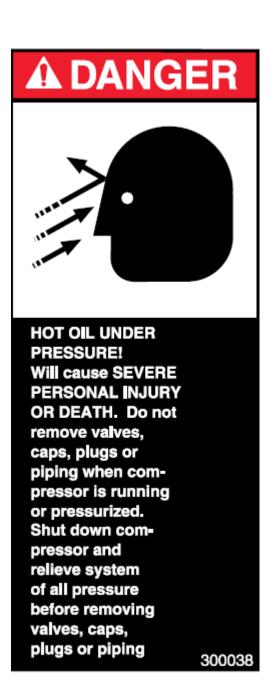


#### **HYDRAULIC SAFETY**

ALL HYDRAULIC EQUIPMENT MUST BE TREATED WITH EXTREME RESPECT AND CARE. AS THE WORKING FLUID IS UNDER EXTREME PRESSURE, UP TO 5000PSI, WITH HIGH FLOW RATES GENERATING HIGH HEAT, ALL APPROPRIATE SAFETY PRECAUTIONS MUST BE TAKEN IN TO ACCOUNT AND SAFETY EQUIPMENT MUST BE WORN IF IN CONTACT WITH THE EQUIPMENT UNDER OPERATION. ALL LEAKS, NO MATTER HOW MINOR, MUST BE RECTIFIED IMMEDIATELY AND ANY WEAR IN THE HOSES MUST BE ADDRESSED AND EQUIPMENT REPLACED. HYDRAULIC INJECTION IS DANGEROUS AND LIFE THREATENING AND EVEN A PINHOLE LEAK WILL BLANKET AN ENTIRE ENCLOSED SPACE VERY QUICKLY WITH HAZARDOUS VAPORISED HYDRAULIC OIL MIST.















#### 2. SPECIFICATIONS

Compressor Model: Packsmart V90

**Compressor Type:** Oil flooded rotary screw compressor

Hydraulic Motor Type: 32cc Gear Motor

**Control:** 24V/12V Electronic Control

Maximum Air Delivery: 100cfm @ 150psi

Oil Flow Requirements: 80 LPM

Oil Pressure (Nominal): 195 Bar

Drive coupling speed: 2500 rpm

Pressure Regulation: Mechanical Inlet control valve modulates flow in response to demand

Safety Features: 200 PSI relief valve in compressor sump

Temperature safety sensor in compressor

Rapid blow-down valve to discharge system pressure on shutdown

**Lubrication:** MEA Certified and Approved Synthetic Oil



#### 3. OPERATING PROCEDURE

#### **WARNING**

# CAREFULLY READ THE OPERATING INSTRUCTIONS BELOW. FAILURE TO ADHERE TO THE FOLLOWING COMPRESSOR OPERATING INSTRUCTION COULD RESULT IN SERIOUS INJURY.

- 1. Check Oil Level
- 2. Check Hoses and fittings for leaks. Make sure the hoses are not loosened or damaged.
- 3. Check and make sure hydraulic supply/return (drain if applicable) are installed correctly.
- Check Air Filter for Blockage.
- 5. Check the Safety circuit switch operation (Reset Switch).
- 6. Switch on the vehicle and activate the vehicle flow control (turn PTO on).
- 7. Turn on the compressor either at the control box or in the cab and ensure it is in the unloaded state (check load/unload switch).
- 8. Turn on the unload/load switch to load and see if the compressor builds pressure to the regulated setting.
- 9. Plug an air tool into the air outlet and operate. Ensure that the compressor works as required.
- 10. When the work is finished, switch the compressor to unload.
- 11. It is good practice to allow the compressor to run under no load for 2-3 minutes.
- 12. Switch off at either the control box or in the Cab and switch off the vehicle.
- 13. It is good practice to check for any visible signs of hydraulic fluid leakage and or compressor fluid leakage after each use.



#### 4. INSTALLATION

The SMARTPACK 100H is designed as an integrated compressor system for connection to an existing hydraulic system. The SMARTPACK 100H only requires connection of a pressure line in, a return line out and a connection of the motor drain line (if applicable) to the tank.

WARNING(!) When setting the compressor unit up, ensure there is a safety mechanism in place to prevent any excessive flow or pressure into the compressor hydraulic circuit. MEA will not warrant any damage caused and will void warranty due to inadequate safety protection of the existing hydraulic system.

- 1. Install SMARTPACK 100H into position on the vehicle using 4 x min. M12 x 1.75 Grade 8.8 Fasteners.
- 2. Install the hydraulic lines (i.e., pressure in, return out and drain line if applicable). The pressure line (hydraulic oil inlet) goes to the fitting with label "P". The return line (hydraulic oil out) goes to the fitting with label "T".
- 3. Connect the electrical harness as per the circuit diagram relevant to your vehicle.
- 4. Check the oil level in the compressor.
- Switch on the vehicle, turn on the compressor at the control box and test the hydraulic solenoid for operation.
- 6. Turn the unload/load switch to load and check the compressor builds pressure to the regulated pressure setting.
- 7. Plug an air tool into the air outlet and operate checking that the compressor works as required, run for 10mins. Stop using air, let the compressor reach full pressure, then leave the vehicle idling for 2 to 3 minutes before switching off.
- 8. Switch off the vehicle and check for any visible signs of hydraulic fluid leakage.
- 9. When the compressor has cooled down (safe to touch), re-check the compressor oil level.

ENSURE THAT A WATER SEPARATOR IS MOUNTED AS FAR FROM THE COMPRESSOR AS POSSIBLE OR THAT IT HAS AT LEAST TWO METRES OF HOSING BETWEEN THE COMPRESSOR DISCHARGE AND SEPARATOR INLET.



#### **5. SCHEDULE MAINTENANCE**

The maintenance intervals recommended are based on standard operating conditions. The intervals for inspection, lubrication and maintenance given herein are maximum intervals and it should be noted to schedule the maintenance accordingly to sites.

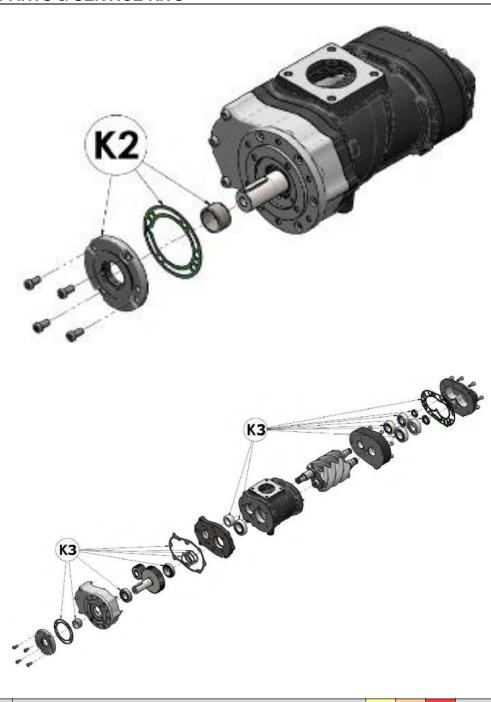
When the unit is being operated in a dusty environment, in high ambient temperatures or in other unusual conditions, an assessment needs to be done for shorter service interval. A planned program of periodic inspection and maintenance will help to avoid premature failure and costly repairs. Daily visual inspections should become routine.

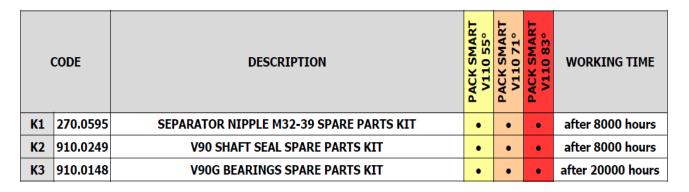
Interval	Compressor		
	ACTION TO BE TAKEN		
Periodically During Operation	Observe all gauge readings. Note any change from the normal readings and determine the cause. Have the necessary repairs made.		
	(Note: "Normal" is the usual gauge reading when operating at similar conditions on a day-to-day basis.)		
	Inspect and replace spin-on coalescing element if necessary.		
Periodically or as required	Inspect and clean oil cooler fins.		
	Check system for oil and/or air leaks.		
	Check the compressor oil level.		
Every 10 Hours or Daily	Check air filter/s and connecting hose and clamps.		
	Check for oil and air system, including hoses, for leaks.		
Every 25 Hours or Monthly	Drain water from tank and check Compressor oil level.		
	Check system for oil and/or air leaks.		
After first 50 hours of operation	Check engine/compressor mounts fastener torque.		
,	Check belt and pulleys for signs of wear - note that belt normally gives off blue particles until it runs in.		
	Check compressor oil level.		
Eveny 100 Hours	Clean air cleaner element.		
Every 100 Hours	Check engine/compressor/generator mounts for excessive wear and fastener torque.		
	Change compressor oil approx. 7L.		
F	Change compressor oil filter.		
Every 400 Hours of operation or 9 months (See Service Kit List)	Change compressor air filter.		
Inomina (See Service Kit List)	Check belt and pulleys for signs of wear.		
	Check valve clearance.		
800 Hours / 18 months	Change compressor coalescing filter.		

IMPORTANT: PLEASE CONTACT MOBILE ENERGY AUSTRALIA FOR MORE INFORMATION IF YOU HAVE ANY QUESTIONS REGARDING THE SETUP AND OPERATION OF PRODUCTS.



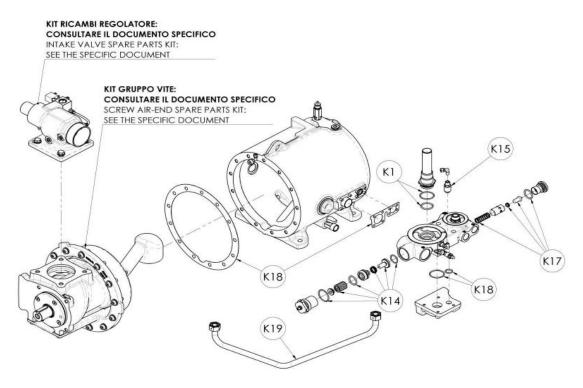
#### 6. SPARE PARTS & SERVICE KITS





#### Document No 7231-D0001-03





К	CIT CODE	DESCRIPTION	PACK SMART	V90CG 55°	PACK SMART	V90CG / L-	PACK SMART V90CG 83°	WORKING TIME
K1	270.0595	SEPARATOR NIPPLE M32-39 SPARE PARTS KIT	•	•	•		•	After 8000 hours
*	910.0249	V90 SHAFT SEAL SPARE PARTS KIT	•	•	•		•	After 8000 hours
*	910.0148	V90 BEARINGS SPARE PARTS KIT	•	•	•		•	After 20000 hours
K14	220.1250	MINIMUM PRESSURE VALVE G35-36 SPARE PARTS KIT	•	•	•		•	After 8000 hours
K15	220.1806	VRO19 OIL RECOVERY VIEWER	•	•	•	Ī	•	Corrective maintenance
	270.1390	VT-VTFT25/27-55° SPARE PARTS KIT	•	•				
K17	270.1380	VT-VTFT25/27-71° SPARE PARTS KIT			•			After 8000 hours
	270.1385	VT-VTFT25/27-83° SPARE PARTS KIT					•	
K18	744.0071	TANK/FLANGE GASKET O-RING PACK SMART V90CG SPARE PARTS KIT	•	•	•		•	Corrective maintenance
K19	744.0051	PACK SMART V90CG INJIECION OIL FITTING SPARE PARTS KIT	•	•	•		•	Corrective maintenance

The maintenance kits of the suction regulators are available by consulting the specific document of the regulator itself, to be requested separately.

Airend maintenance kits are available by consulting the specific document of the airend itself, to be requested separately.



7231-KB0001 SERVICE KIT - 400 HOURS 7231-KB0002 SERVICE KIT - 800 HOURS

#### **SERVICE KIT BREAKDOWN**

ER

10008-P0023 SPIN-ON COALESCING FILTER

10008-P0053 OIL FILTER

10019-K0005 COMPRESSOR OIL 5L (INCL. CONTAINER)

#### ADDITIONAL CRITICAL PARTS

10004-P0055	COUPLING TO SUITV90G/V76G
10012-P0083	UNLOADER VALVE – 12V
10012-P0084	UNLOADER VALVE – 24V
10015-P0002	GAUGE PRESSURE SWITCHED 2" 0-200PSI
10015-P0003	GAUGE TEMPERATURE SWITCHED 2" 4FT CAPILLARY
10015-P0005	GAUGE HOUR METER 2"

\*Contact MEA spare parts sale for information regarding items (such as motor seal and coupling) not covered herein.



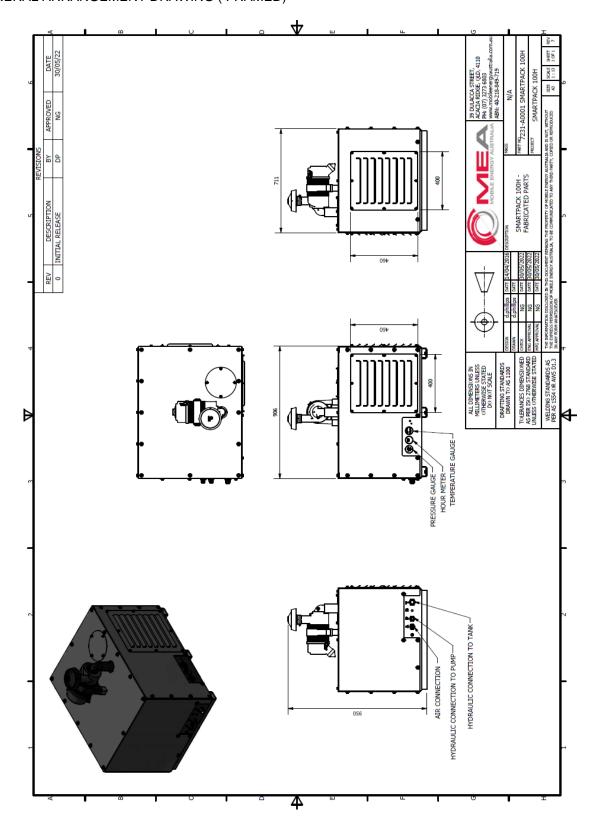
#### 7. TROUBLESHOOTING

SYMPTOMS	PROBABLE CAUSE	CORRECTIVE ACTION		
STWI TOME		1-Check the valve. If necessary, replace the		
	1-The intake valve remains closed.	damaged parts with the spare parts kit.		
The compressor does not	2-The solenoid valve does not work	2-Check the solenoid valve. If necessary,		
load.	accurately	replace it.		
	3-Losses on the pressure line.	3-Check pipes and cables. If necessary, replace them.		
During idling phase, the	1-The solenoid valve does not work	1-Check the solenoid valve. If necessary,		
compressor does not	accurately.	replace it.		
discharge pressure from separator tank	2-The calibrated nozzle is clogged.	2-Remove the calibrated nozzle. Clean or replace it.		
Compressor capacity or	1-The air filter is clogged.	1-Remove the air filter. Clean or replace it.		
pressure lower than usual	2-The intake valve does not open.	2-Check the valve. If necessary, replace the damaged parts with the spare parts kit.		
standard.	3-Air loss from safety valve.	3-Replace the valve.		
Compressor keeps on	1-The solenoid valve does not work	1-Check the solenoid valve. If necessary,		
loading over working	accurately.	replace it.		
pressure: safety valve opens	2-Clogged separator filter.	2-Replace the separator filter.		
	1-Insufficient cooling.	1-Check the cooling system. Check coolant level on tank.		
	2-Dirty oil	2-Replace it with new oil.		
	3-Oil level is too low.	3-Check coolant level on tank and if necessary, add oil.		
Compressor overheating.	4-Clogged-up cooler or pipe connection	4-Clean cooler and pipes.		
	5-The thermostatic valve does not work correctly.	5-Check the thermostatic valve. If necessary, replace the damaged parts with K17 spare parts kit (Contact MEA for parts required)		
	6-Clogged oil filter	6-Replaced oil filter		
During unloading phase, pressure increases up to	1-The intake valve remains open.	1-Check the valve. If necessary, replace the damaged parts with spare parts kit.		
safety valve opening	2-The calibrated nozzle is clogged.	2-Remove the calibrated nozzle. Clean or replace it.		
Oil leakage from intake valve only when the	1-The intake valve does not work properly (does not close)	1-Check the valve. If necessary, replace the damaged parts with K9 spare parts kit.		
machine is switched off: oil soaked-up air filter	2-The no-return valve of intake valve does not work correctly.	2-Check it and clean it.		
	1-Too high level of oil in the tank	1-Check oil level on separator tank.		
Oil soaked-up air filter	2- Clogged separator filter	2- Replace the separator filter.		
during	3-The recovery oil viewer is dirty or	3 -Clean it or if necessary, replace the		
unloading phase	does not work	damaged parts with K15 spare parts kit.		
	appropriately.	If separator filter is clogged up, replace it.		
The compressor remains under loading phase.	1-The intake valve does not work properly (does not close)	1-Check the valve. If necessary, replace the damaged parts with spare parts kit.		
5	1-Unknown particles inside.	1-Call MEA technical support.		
Rotor seizure	2-Insufficient lubrication.	2-Call MEA technical support.		
	1-Separator filter damaged.	1-Replace the separator filter.		
Presence of oil in the	2-Oil recovery viewer obstructed.	2-Clean the oil recovery viewer.		
outlet of minimum pressure valve	3-Separator nipple with O-rings damaged.	3-Replace K1 spare parts kit.		

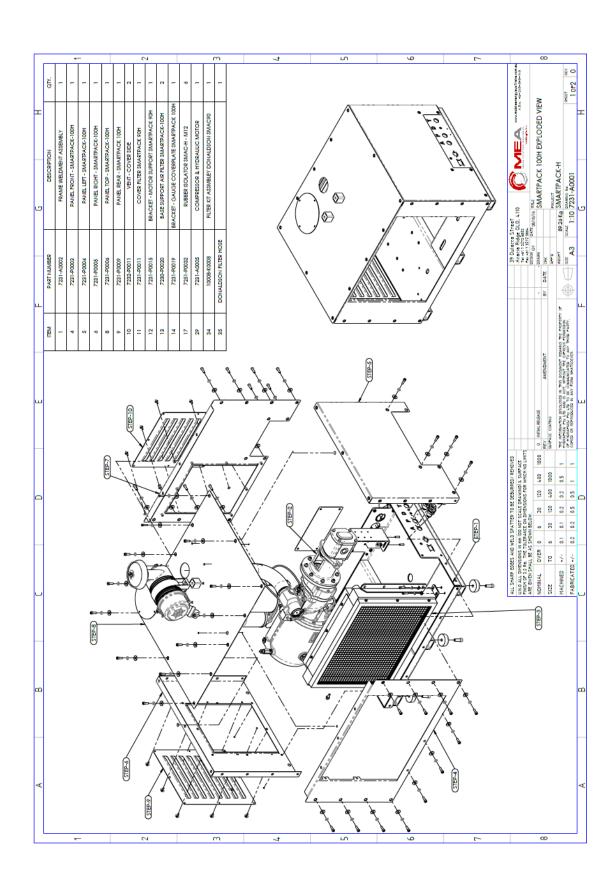


## 8. DRAWINGS & ILLUSTRATIONS

GENERAL ARRANGEMENT DRAWING (FRAMED)

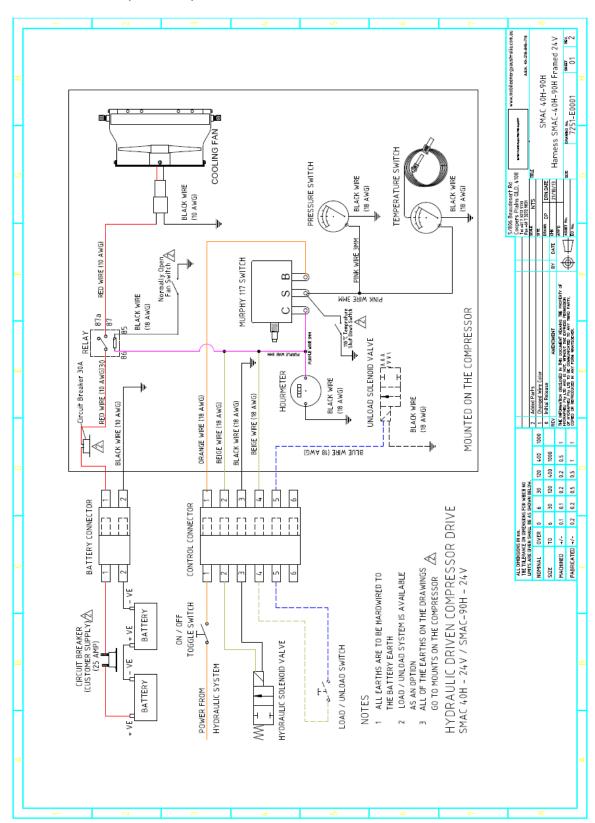






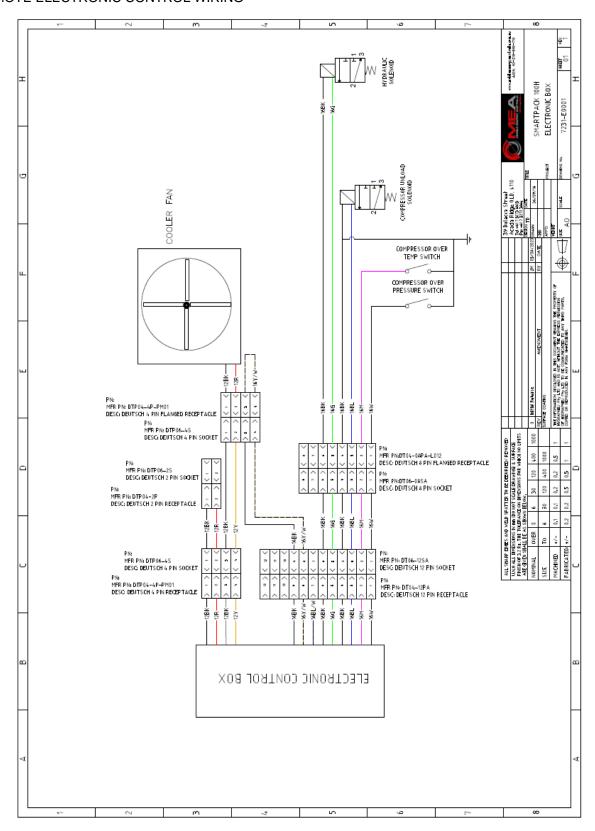


#### **ELECTRICAL DIAGRAM (FRAMED)**



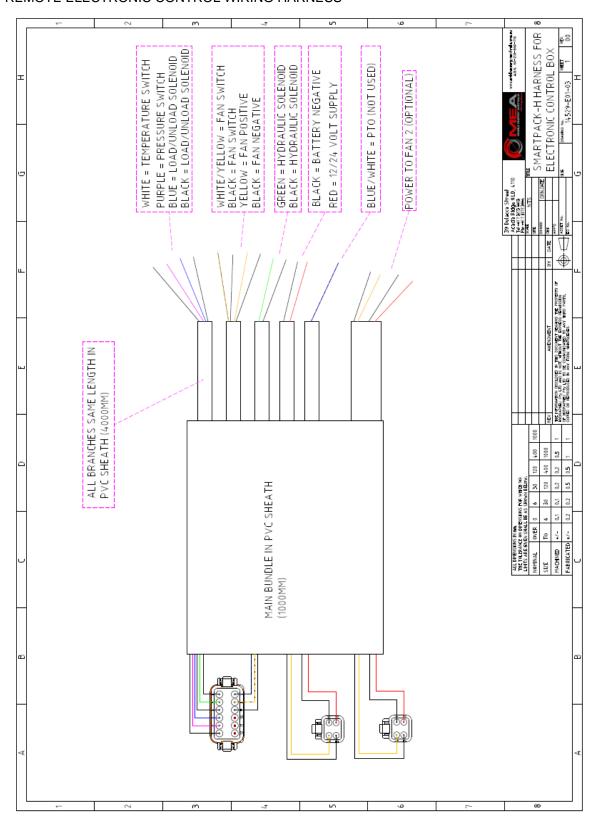


#### REMOTE ELECTRONIC CONTROL WIRING



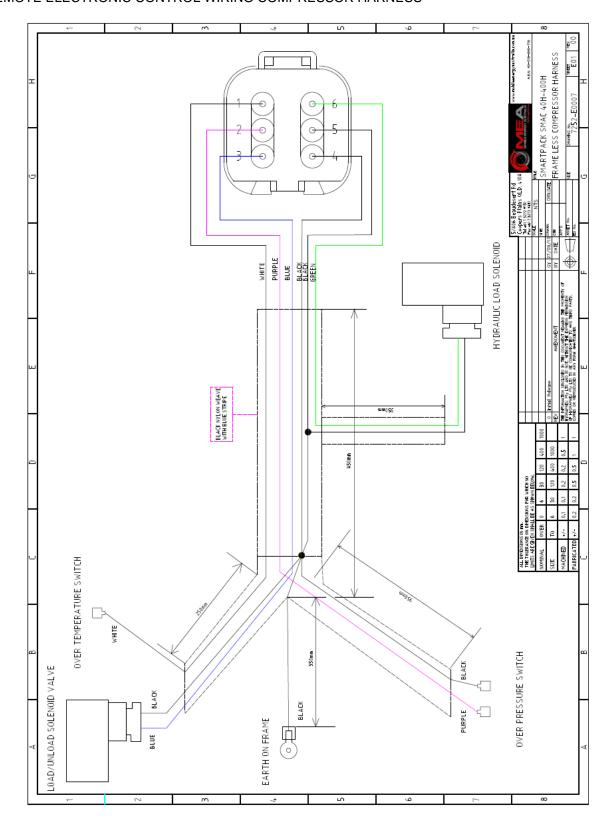


#### REMOTE ELECTRONIC CONTROL WIRING HARNESS



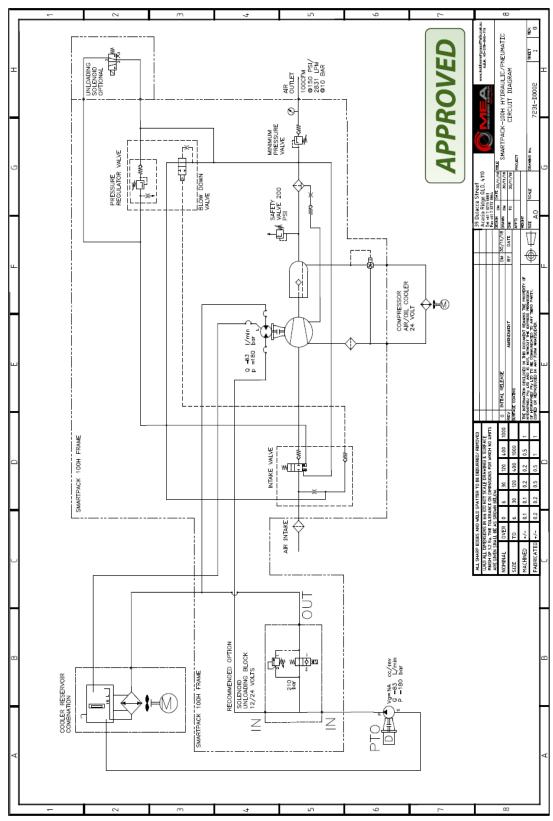


#### REMOTE ELECTRONIC CONTROL WIRING COMPRESSOR HARNESS



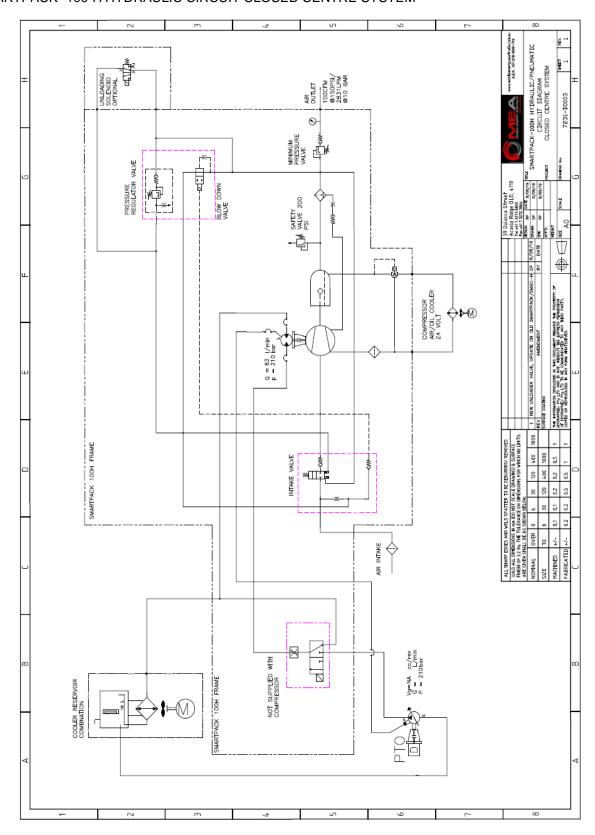


#### SMARTPACK -100-H HYDRAULIC CIRCUIT OPEN CENTRE SYSTEM





#### SMARTPACK -100-H HYDRAULIC CIRCUIT CLOSED CENTRE SYSTEM





#### 9. WARRANTY

#### 1 GENERAL PROVISIONS AND LIMITATIONS

1.1 Mobile Energy Australia (hereafter "MEA") warrants to each original retail purchaser (hereafter "Buyer") that such product(s) are, at the time of delivery to the buyer, free of manufacture ring defects in material and workmanship.

#### 2 NO WARRANTIES IS MADE WITH RESPECT TO

- 2.1 Any product(s) which in the judgment of MEA has been subject to negligence, accident, improper storage, improper installation, improper application, improper operation, or maintenance or has been repaired or altered by others without the written authority of MEA.
- 2.2 Components or accessories manufactured, warranted, and serviced by others.
- 2.3 Damages caused by the lack of normal maintenance, service, and repairs such as the replacement and service of filters and seals.
- 2.4 Damages caused by the lack of normal minimum action, such as adjustments and inspections, replacement of items, such as service filters, seals, and service kits.
- 2.5 Consequential damages caused by product(s) failure.
- 2.6 Any product(s) if other than MEA's genuine components are used in the product(s).
- 2.7 Normal wear and tear of product(s).

#### 3 WARRANTY PERIOD

- 3.1 The warranty period will commence upon installation of the product(s). The returned registration form marks the date of installation. If the registration form is not received, the warranty period will be deemed to commence 30 days from date of shipment from MEA.
- 3.2 The Product(s) is warranted against manufacturer defects in materials and workmanship for a period of 12 months.
- 3.3 The compressor air end is warranted to be free from defects in material and workmanship for a period of two (2) years from the date of installation.
- 3.4 Components supplied under warranty shall be warranted for the remainder of the original warranty period.
- 3.5 MEA factory rebuilt components shall be warranted for a period of 6 months from date of shipment.

#### 4 MEA OBLIGATIONS

- 4.1 The obligation of MEA is limited to repairing or replacing parts, during normal business hours, at an authorized service facility, any component, that in the judgment of MEA are defective.
- 4.2 The obligation of MEA is limited to replacement of faulty parts. No liability is accepted for any freight costs, consequential damages, injuries, or expenses directly or indirectly related to the Product(s) failure.



#### 5 BUYER OBLIGATIONS

- 5.1 Buyer shall notify MEA of the alleged defect within 10 days of initial discovery and return the allegedly defective component(s) within 30 days of initial discovery.
- 5.2 The Buyer must prepay all costs associated with the warranty.
- 5.3 The Buyer must return components claimed under this warranty to a facility designated by MEA for evaluation, to establish a claim under this warranty.
- 5.4 Buyer shall maintain and service MEA Product(s) in accordance with the MEA Product(s) Owner's

#### 6 WARRANTY REGISTRATION VALIDATION

A registration form is provided to the Buyer with the product(s). The form must be fully completed by the Buyer and returned to MEA upon completion of the installation of the product(s) in order to validate the warranty. No warranty claims will be processed unless MEA has received a fully completed warranty registration form.

#### 7 DISCLAIMER AND WARRANTY SERVICE

- 7.1 Any labour costs claimed in excess of MEA's set rate and/or times are not provided by this warranty. If applicable, any labour costs in excess of MEA rate schedules caused by, but not limited to, location or inaccessibility of the equipment, travel time or labour provided by unauthorized service personnel are not provided by this warranty.
- 7.2 This warranty is in lieu of all other warranties or obligations expressed or implied. MEA expressly disclaims all implied warranties of merchantability or fitness for a purpose.
- 7.3 Warranty claims must be pre-authorized by MEA, and the components returned via prepaid freight using the designated "Returned Merchandise Authorization" number and form.

# WARNING!!!

Failure to return PRODUCT WARRANTY REGISTRATION FORMS detailed above may result in the delayed processing of warranty claims.



#### 10. MOBILE ENERGY AUSTRALIA - CONTACTS

**Sales** 

Office: 07 3273 6803

Email: sales@mobileenergyaustralia.com.au

**Spare Parts** 

Office: 07 3273 6803

Email: sales@mobileenergyaustralia.com.au

Service

Office: 07 3273 6803

Email: workshop@mobileenergyaustralia.com.au



### 11. APPENDIX A - DESIGN REGISTRATION



www.mobileenergyaustralia.com.au

TRHC Pty Ltd ATF for the ThoroughClean Trust ABN 98 674 578 946

07 November 2022

To whom it may concern

Smartpack 100H Design Registration

The Smartpack 100H design has been assessed against the requirements of the Work Health & Safety Act 2011 and Australian Standard 4343:2014. The Smartpack 100H has been found to comply with the requirements of AS4343:2014 Hazard Level E and as such does not require design registration.

Regards

Nicholas Groothoff Engineering Manager Mobile Energy Australia

39 Dulacca St, Acacia Ridge QLD 4110

Ph: +61 7 3273 6803

www.mobileenergyaustralia.com.au



## 12. APPENDIX B - FLUIDS & MATERIAL SAFETY DATA SHEETS

FLUID TYPE	DESCRIPTION	PART NUMBER
Compressor Oil	Semi Synthetic Compressor Oil 68	10019-P0002

Please use QR code to link you to relevant MSDS

