

# **MAC**

**INTERNATIONAL**

**DE&S CONTRACT**  
**CONTRACT REF: OIP/0033**

**FOR THE SUPPLY, SERVICING, REPAIR AND  
PROCUREMENT OF HOT MOBILE PRESSURE WASHERS**

**COMMERCIAL & TECHNICAL TENDER SUBMISSION  
UNPRICED**

**DATE: MARCH 2016**

**REACT NORTHERN LTD  
(T/A MAC INTERNATIONAL)**



**Ministry  
of Defence**





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## Ministry of Defence

Tender Ref No. OIP/0033

## Tender Submission Document (Offer)

To the Secretary of State for Defence of the United Kingdom of Great Britain and Northern Ireland (hereafter called "the Authority")

The undersigned Tenderer, having read the ITT Documentation, offers to supply the Contractor Deliverables at the stated price(s), in accordance with any referenced drawings and / or specifications, subject to the Conditions of Tendering. It is agreed that only the Contract Conditions or any amendments issued by the Authority shall apply.

<b>Applicable Law</b>				
I agree that any contract resulting from this competition shall be subject to English Law *Where 'No' is selected, Scots Law will apply.				<b>Yes</b>
<b>Total Value of Tender (excluding VAT)</b>				
£ WORDS:				
<b>UK Value Added Tax</b>				
If registered for Value Added Tax purposes, please insert:				
a. Registration No: <b>422593556</b>				
b. Total amount of Value Added Tax payable on this Tender (at current rate(s))				
<b>Location of work (town / city) where contract will be performed by Prime: DARLINGTON, COUNTY DURHAM</b>				
Where items which are subject of your Tender are not supplied or provided by you, state location in town / city to be performed column (continue on another page if required)				
Tier 1 Sub-contractor Company Name	Town / city to be performed	Contractor Deliverables	Estimated Value	SME Yes / No
<b>Mandatory Declarations</b> (further details are contained in Appendix 1 to DEFFORM 47 Annex A (Offer)):			<b>Tenderer's Declaration</b>	
Is the offer subject to the Authority contracting for all the Contractor Deliverables?			<b>Yes</b>	
Is the offer made subject to a Minimum Order Quantity?			<b>No</b>	
Are the Contractor Deliverables subject to Registered Designs or Patents?			<b>No</b>	
Are the Contractor Deliverables subject to Foreign Export Control and Security Restrictions?			<b>No</b>	
Are the Contractor Deliverables subject to Overseas Expenditure?			<b>No</b>	
Have you complied with all regulations relating to the operation of the collection of custom import duties?			<b>Yes</b>	

Have you completed Form 1686 for sub-contracts?	No
Have you completed the compliance matrix/matrices	Yes
Are you a Small Medium Enterprise (SME)?	Yes
Have you and your sub-contractors registered with the Prompt Payment Code with regards to SMEs?	No
Have you completed and attached Tenderer's Commercially Sensitive Information Form (DEFFORM 539A)	No
If you have not already signed a corporate level DEFFORM 30 have you attached one?	Yes
If you have not previously submitted a Statement Relating to Good Standing, or circumstances have changed have you attached a revised version?	Yes
Do the Contractor Deliverables contain Asbestos, as defined by the control of Asbestos Regulations 2012?	No
Have you completed and attached a DEFFORM 68 – Hazardous Articles, Deliverables materials or substances statement?	Yes
Do the Contractor Deliverables (including Packaging) use Substances that deplete the Ozone Layer, as defined in Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000? <a href="http://ozone.unep.org/new_site/en/montreal_protocol.php">http://ozone.unep.org/new_site/en/montreal_protocol.php</a>	No
Are you able to support the objectives of Reservist and other supplier support to the Armed Forces?	Yes*
Have you attached The Bank/Parent Company Guarantee	Not Required
Have you completed, or are you working towards Cyber Essentials accreditation or equivalent and will have it in place by the Commencement Date of the Contract.	No
If applicable are you working with your proposed supply chain to ensure where relevant they achieve Cyber Essentials accreditation or equivalent prior to the commencement date of each sub contract.	N/A
Have you complied with the requirements of the Military Aviation Authority Regulatory Articles	Not Required
Have you completed the additional Mandatory Requirements?	Yes
*If selecting Yes to any of the above questions, please attach the information detailed in Appendix 1 to DEFFORM 47 Annex A (Offer).	
<b>Tenderer's Declaration of Compliance with Competition Law</b>	
<p>We certify that the offer made is intended to be genuinely competitive. No aspect of the price has been fixed or adjusted by any arrangement with any Third Party. Arrangement in this context includes any transaction, or agreement, private or open, or collusion, formal or informal, and whether or not legally binding. In particular:</p> <ol style="list-style-type: none"> <li>the offered price has not been divulged to any Third Party,</li> <li>no arrangement has been made with any Third Party that they should refrain from tendering,</li> <li>no arrangement with any Third Party has been made to the effect that we will refrain from bidding on a future occasion,</li> <li>no discussion with any Third Party has taken place concerning the details of either's proposed price, and</li> <li>no arrangement has been made with any Third Party otherwise to limit genuine competition.</li> </ol> <p>We understand that any instances of illegal cartels or market sharing arrangements, or other anti-competitive practices, suspected by the Authority will be referred to the Competition and Markets Authority for investigation and may be subject to action under the Competition Act 1998 and the Enterprise Act 2002.</p> <p>We understand that any misrepresentations may also be the subject of criminal investigation or used as</p>	

the basis for civil action.

We agree that the Authority may share the Contractor's information / documentation (submitted to the Authority during this procurement) more widely within Government for the purpose of ensuring effective cross-Government procurement processes, including value for money and related purposes. We certify that we have identified any sensitive material in DEFFORM 539A.

Dated this .....26..... day of ...February..... Year .....2016.....

Signature:

In the capacity of  
MANAGING DIRECTOR

Name: SIMON RUCK  
duly authorised to sign this Tender for and on  
behalf of:  
REACT NORTHERN LIMITED  
(T/A MAC INTERNATIONAL)

Postal Address:  
REACT NORTHERN LIMITED  
KELLAW ROAD, YARM ROAD IND. EST.  
DARLINGTON, CO. DURHAM, DL1 4YA  
  
Telephone No: 0870 24 24 462  
Registered Company Number: 1923158  
Dunn And Bradstreet Number: N/A





Schedule 13 - DEFFORM 30

**THE ELECTRONIC TRANSACTIONS AGREEMENT**

Between

**REACT NORTHERN LIMITED**  
(T/A MAC International)

And

**SECRETARY OF STATE FOR DEFENCE**

**MINISTRY OF DEFENCE**  
**Electronic Transactions Agreement**

THIS AGREEMENT comprises the General Clauses for electronic transactions.

The terms of this Agreement shall govern the conduct and methods of operation between the parties in relation to the electronic exchange of data for the purposes of or associated with the supply of Contractor Deliverables pursuant to those contracts which reference it. Except as otherwise provided in the appended terms, the terms do not apply to the substance of the data transfer. This Agreement shall have the date of and be effective from the date of the last signature hereunder.

**AGREED**

For and on behalf of:

**REACT Northern Limited (T/A MAC International)**

Signature: \_\_\_\_\_

Name: Simon Ruck

Position: Managing Director

Date: 26/02/2016

Whose Registered Office is at:

**Kellaw Road  
Yarm Road Industrial Estate  
Darlington  
County Durham  
DL1 4YA**

Agreement reference  
number:

For and on behalf of:

**Secretary of State for Defence**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Date: \_\_\_\_\_

Whose Address is:



**Schedule 10 - Hazardous Articles, Materials or Substances Supplied under the  
Contract: Data Requirements**

**Hazardous Articles, Materials or Substances  
Statement by the Contractor**

Contract No: OIP/0033

Contract Title: Supply, Servicing, Repair and Procurement of Hot Mobile Pressure Washers

Contractor: REACT Northern Limited (T/A MAC International)

Date of Contract: 26/02/2016

\* To the best of our knowledge there are no hazardous Articles, materials or substances to be supplied. ✓

\* To the best of our knowledge the hazards associated with materials or substances to be supplied under the Contract are identified in the Safety Data Sheets (Qty:0) attached in accordance with the SC3 Core Plus condition "Supply of Hazardous Material or Substance in Contractor Deliverables".

Contractor's Signature:

Name: Simon Ruck

Job Title: Managing Director

Date: 26/02/2016

\* check box () as appropriate

To be completed by the Authority

Domestic Management Code (DMC):

NATO Stock Number:

Contact Name:

Contact Address:

Copy to be forwarded to:

Hazardous Stores Information System (HSIS)  
Defence Safety Authority (DSA)  
Movement Transport Safety Regulator (MTSR)  
Hazel Building Level 1, #H019  
MOD Abbey Wood (North)  
Bristol BS34 8QW



**STAGE 1**

**TABLE 1 - MANDATORY CRITERIA**

COMPLETED IN DEFFORM 47 ANNEX A (OFFER)

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**  
COMPLETED IN DEFFORM 47 ANNEX A (OFFER)

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**  
COMPLETED IN DEFFORM 47 ANNEX A (OFFER)

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**  
SIGNED & COMPLETED DEFFORM 30



**STAGE 1**

**TABLE 1 - MANDATORY CRITERIA**

SIGNED & COMPLETED DEFFORM 68

HAZARDOUS ARTICLES, DELIVERABLES MATERIALS OR SUBSTANCES

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**

STATEMENT REGARDING RESERVISTS

We understand the MOD's wish to have more Reservists employed by reserves supportive employers and would like to confirm that throughout the duration of this contract we will support this requirement and the objectives.

We therefore confirm that we will meet the following Personnel Objectives where possible:

- a. Employment of services leavers
- b. Employment of wounded, injured or sick veterans
- c. Employment of the partners of service personnel
- d. Helping local cadet units
- e. Support to Reservist employees
- f. Encouragement of Reservist service

Should we be successful in this tender we will sign the Corporate Covenant declaring our support for the Armed Forces community and seek guidance on the various ways in which we can demonstrate our support.

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**  
STATEMENT REGARDING CYBER ESSENTIALS

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**

MINIMUM TECHNICAL REQUIREMENTS MET AS PER TABLE 3

Please see Stage 2 – Table 3 – Technical Evaluation on page 18, with the following Contents:

<b>SOR SECTION</b>	<b>DESCRIPTION</b>	<b>PAGE NUMBER</b>
<b>4</b>	<b>REPAIRS</b>	<b>19 - 46</b>
<b>5</b>	<b>SERVICING</b>	<b>47 - 57</b>
<b>6</b>	<b>PURCHASE OF EQUIPMENT &amp; ASSOCIATED ITEMS</b>	<b>58 - 76</b>
<b>7</b>	<b>QUALITY ASSURANCE</b>	<b>77 - 85</b>
<b>8</b>	<b>SAFETY MANAGEMENT</b>	<b>86 - 104</b>
<b>9</b>	<b>MANAGEMENT INFORMATION</b>	<b>105 - 112</b>

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**

AUDITED ACCOUNTS

<b>REACT NORTHERN LTD</b>	Company Registration Number: 1923158
<b>MAC INTERNATIONAL (GECOMAC LIMITED)</b>	Company Registration Number: 7168801

We have provided 2 sets of accounts to support our business operations:

1. REACT Northern Limited, as the principal contract holder
2. MAC International (GECOMAC Ltd), the sister company and wholesale provider.

The two businesses have a common shareholder, Simon Ruck, who is the Managing Director of both businesses. Both businesses operate in the same premises with REACT Northern Ltd providing the operational support from Headquarters and therefore maintaining the contract requirements.

To fully appreciate the range of our products and how the MAC Avant integrates, we would like to provide you with a link to our product range brochure giving you the opportunity to see the MAC Avant and all the other related products in there entirety.

This can also be found in the Supporting Information section.

**<http://www.macinternational.co.uk/fileuploader/download/download/?d=1&file=custom%2Fupload%2FFile-1422353379.pdf>**

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**

AUDITED ACCOUNTS

**REACT NORTHERN LTD**  
**MAC INTERNATIONAL (GECOMAC LTD)**  
**LAST 2 YEARS.**

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**

THE STATEMENT RELATING TO GOOD STANDING

**The Statement Relating To Good Standing****Contract Title:** Supply, Servicing, Repair and Procurement of Mobile Hot Pressure Washers.**Contract Number:** OIP/0033

1. We confirm, to the best of our knowledge and belief, that **REACT Northern Limited** including its directors or any other person who has powers of representation, decision or control of **REACT Northern Limited** has not been convicted of any of the following offences:

(a) conspiracy within the meaning of section 1 or section 1A of the Criminal Law Act 1977 or article 9 or 9A of the Criminal Attempts and Conspiracy (Northern Ireland) Order 1983, or in Scotland the Offence of conspiracy, where that conspiracy relates to participation in a criminal organisation as defined in Article 2 of Council Framework Decision 2008/841/JHA;

(b) involvement in serious organised crime or directing serious organised crime within the meaning of section 28 or 30 of the Criminal Justice and Licensing (Scotland) Act 2010;

(c) corruption within the meaning of section 1 of the Public Bodies Corrupt Practices Act 1889 or section 1 of the Prevention of Corruption Act 1906\*;

(d) the offence of bribery;

(e) bribery within the meaning of section 1, 2 or 6 of the Bribery Act 2010;

(f) bribery or corruption within the meaning of section 68 and 69 of the Criminal Justice (Scotland) Act 2003;

(g) fraud, where the offence relates to fraud affecting the financial interests of the European Communities as defined by Article 1 of the Convention relating to the protection of the financial interests of the European Union\*, within the meaning of:

(i) the offence of cheating the Revenue;

(ii) the offence of conspiracy to defraud;

(iii) fraud or theft within the meaning of the Theft Act 1968\* the Theft Act (Northern Ireland) 1969\*, the Theft Act 1978\* or the Theft (Northern Ireland) Order 1978\*;

(iv) fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006;

(v) in Scotland, the offence of fraud;

(vi) in Scotland, the offence of theft;

(vii) fraudulent trading within the meaning of section 458 of the Companies Act 1985, article 451 of the Companies Act (Northern Ireland) Order 1986 or section 993 of the Companies Act 2006;

(viii) fraudulent evasion within the meaning of section 170 of the Customs and Excise Management Act 1979 or section 72 of the Value Added Tax Act 1994\*;

- (ix) an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993;
- (x) destroying, defacing or concealing of documents or procuring the execution of a valuable security within the meaning of section 20 of the Theft Act 1968\* or section 19 of the Theft Act (Northern Ireland) 1969\* or making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of the Fraud Act 2006;
- (xi) in Scotland the offence of uttering; or
- (xii) in Scotland, the criminal offence of attempting to pervert the course of justice;
- (h) money laundering within the meaning of section 93A, 93B, or 93C of the Criminal Justice Act 1988, section 45, 46 or 47 of the Proceeds of Crime (Northern Ireland) Order 1996 or the Money Laundering Regulations 2003 or money laundering or terrorist financing within the meaning of the Money Laundering Regulations 2007\*;
- (i) terrorist offences or offences linked to terrorist activities, as defined in Articles 1 and 3 of Framework Decision 2002/475/JHA\*;
- (j) an offence in connection with proceeds of drug trafficking within the meaning of section 49, 50 or 51 of the Drug Trafficking Act 1994; or
- (k) in Scotland, the offence of incitement to commit any of the crimes described in Regulation 23(1);
- (l) any other offence within the meaning of Article 39(1) of the Defence and Security Procurement Directive 2009/81/EC as defined by the national law of any member State.

\* including amendments to the legislation

2. **REACT Northern Limited** further confirms to the best of our knowledge and belief that it:

- (a) being an individual, is a person in respect of whom a debt relief order has not been made, is not bankrupt or has not had a receiving order or administration order or bankruptcy restrictions order or debt relief restrictions order made against him or has not made any composition or arrangement with or for the benefit of his creditors or has not made any conveyance or assignment for the benefit of his creditors or does not appear unable to pay or to have no reasonable prospect of being able to pay, a debt within the meaning of section 268 of the Insolvency Act 1986, or article 242 of the Insolvency (Northern Ireland) Order 1989, or in Scotland has not granted a trust deed for creditors or become otherwise apparently insolvent, or is not the subject of a petition presented for sequestration of his estate, or is not the subject of any similar procedure under the law of any other state;
- (b) being a partnership constituted under Scots law, has not granted a trust deed or become otherwise apparently insolvent, or is not the subject of a petition presented for sequestration of its estate;
- (c) being a company or any other entity within the meaning of section 255 of the Enterprise Act 2002 has not passed a resolution or is not the subject of an order by the court for the company's winding up otherwise than for the purpose of bona fide reconstruction or amalgamation, nor had a receiver, manager or administrator on behalf of a creditor appointed in respect of the company's business or any part thereof or is not the subject of similar procedures under the law of any other state?



(d) has not been convicted of a criminal offence relating to the conduct of its business or profession, including, for example, any infringements of any national or foreign law on protecting security of information or the export of defence or security goods;


(e) has not committed an act of grave misconduct in the course of its business or profession, including a breach of obligations regarding security of information or security of supply required by the contracting authority in accordance with Regulation 38 or 39 of the DSPCR during a previous contract;

(f) has not been told by a contracting authority, that the Potential Provider does not to possess the reliability necessary to exclude risks to the security of the United Kingdom\*;

(g) has fulfilled obligations relating to the payment of social security contributions under the law of any part of the United Kingdom or of the member State in which it is established;

has fulfilled obligations relating to the payment of taxes under the law of any part of the United Kingdom or of the member State in which it is established.

\* Please note that under the DSPCR the Authority may, on the basis of any evidence, including protected data sources, not select Potential Providers that do not possess the reliability necessary to exclude risks to the security of the United Kingdom.

<b>Organisation's name:</b>	<b><i>REACT Northern Limited</i></b>
<b>Signed:</b>	<b>Simon Ruck</b>
<b>Position:</b>	<b>Managing Director</b>
<b>Date:</b>	<b>26<sup>th</sup> February 2016</b>
<b>Signature:</b>	

**STAGE 1**  
**TABLE 1 - MANDATORY CRITERIA**  
ISO 9001 CERTIFICATE OF CONFORMITY



# Certificate of Conformity

This is to certify that the Quality Management System of:

## **REACT Northern (also trading as Mac International)**

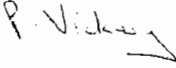
Kellaw Road, Yarm Road Industrial Estate, Darlington, Co Durham, DL1 4YA

applicable to (scope):

The sale, servicing, repair and hire of pressure washer and floor-care equipment  
Provision of bespoke cleaning equipment

Has been assessed and approved by C&A against the provisions of:

## **BS EN ISO 9001:2008**

Signed:   
(on behalf of C&A)

Certificate No: 914QM9001  
Issue Date: 15 September 2014  
Expiry Date: 14 September 2017

This certificate will remain current subject to the company maintaining its quality management system to the above standard. This will be regularly monitored by C&A.



**STAGE 1**  
**TABLE 2 – CONTRACT TERMS & CONDITIONS**

Terms and Conditions	Level of Compliance		Reason for Non Compliance
	FC=Full Compliance	NC=Non Compliance	
Section A – General contract Provisions	FC		
A1 – Interpretation	FC		
A2 – Amendments to Contract	FC		
A3 – Variations to Specification	FC		
A4 – Precedence	FC		
A5 – Severability	FC		
A6 – Assignment of Contract	FC		
A7 – Waiver	FC		
A8 – Third Party Rights	FC		
A9 – Governing Law	FC		
A10 – Entire Agreement	FC		
A11 – Disclosure of Information	FC		
A12 – Publicity and Communications with the Media	FC		
A13 – Protection of Personal Data	FC		
A14 – Transparency	FC		
A15 – Equality	FC		
A16 – Child Labour and Employment Law	FC		
A17 – Subcontracting	FC		
A18 – Change of Control of Contractor	FC		
A19 – Termination for Insolvency or Corrupt Gifts	FC		
A20 – Consequences of Termination	FC		

Terms and Conditions	Level of Compliance FC=Full Compliance NC=Non Compliance	Reason for Non Compliance
A21 – Dispute Resolution	FC	
A22 – Termination for Convenience	FC	
A23 – Contractors Records	FC	
A24 – Duration of Contract	FC	
A25 – Contractors Warranties	FC	
Section B – The Contractor Deliverables	FC	
B1 – Supply of Contractor Deliverables and Quality Assurance	FC	
B2 – Environmental Requirements	FC	
B3 – Disruption	FC	
Section C – Price	FC	
C1 – Contract Price	FC	
Section D – Intellectual Property	FC	
D1 – Third Party Intellectual Property – Rights and Restrictions	FC	
Section E – Facilities and Assets	FC	
E1 – Access to Contractors Premises	FC	
Section F – Delivery	FC	
F1 – Authority’s Remedies for Breach of Contract	FC	
Section G – Payments and Receipts	FC	
G1 – Payment	FC	
G2 – Value Added Tax	FC	
G3 – Debt Factoring	FC	
Contract Administration	FC	
H1 – Progress Monitoring, Meetings and Reports	FC	
H2 – Authority Representatives	FC	
H3 – Notices	FC	

Terms and Conditions	Level of Compliance		Reason for Non Compliance
	FC=Full Compliance	NC=Non Compliance	
J – Project Specific DEFCONS and DEFCON SC	FC		
DEFCON 23(SC3)	FC		
DEFCON 76(SC3)	FC		
DEFCON 127	FC		
DEFCON 532B(SC3)	FC		
DEFCON 601(SC3)	FC		
DEFCON 611(SC3)	FC		
DEFCON 624 (SC3)	FC		
DEFCON 637 (SC3)	FC		
DEFCON 660	FC		
DEFCON 694 (SC3)	FC		
Section K – Special Conditions that apply to the contract	FC		
K1 – Certificate of Conformity	FC		
K2 – Marking of Contractor Deliverables	FC		
K5 – Rejection	FC		
K6 – Delivery/Collection	FC		
K7 – Self to Self Delivery	FC		
K8 – Acceptance	FC		
K9 – Packaging and Labelling	FC		
K13 – Key Performance Indicators and Performance Management	FC		
K15 – Copyright	FC		
K16 - Government Furnished Assets (GFA)	FC		
Section L – Processes that apply to this Contract.	FC		
L1 – Authorisation and Performance of work – Servicing	FC		
L2 – Authorisation and Performance of work – Repairs	FC		
L3 – Termination of Tasks	FC		
L4 – Risk Management Process	FC		
L5 – Key Performance Indicators (KPI's)	FC		
L6 – New Stores Rejects (NSR)	FC		
L7 – Non-Conforming Receipts (NCR)	FC		
Schedules to the contract	FC		
Schedule 1 – Definitions of Contract	FC		
Schedule 2 – Schedule of Requirements for Services	FC		

Terms and Conditions	Level of Compliance FC=Full Compliance NC=Non Compliance	Reason for Non Compliance
Schedule 3- Contract Data Sheet	FC	
Schedule 4 – Contract Change Process	FC	
Schedule 5- Specification for Contract	FC	
Schedule 6 – Contractors Commercially Sensitive Information	FC	
Schedule 7 – Pricing Schedules	FC	
Schedule 8 – Tasking Form	FC	
Schedule 9 – Government Furnished Assets (GFA)	FC	
Schedule 10 – Hazardous Articles, Materials or Substances Supplied under the Contract: Data Requirements	FC	
Schedule 11 – Security Aspects Letter	FC	
Schedule 12 – Form B2 Application for Disposal of BR/BER Equipment	FC	
Schedule 13 – DEFFORM 30	FC	



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**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
INTRODUCTION TO MAC INTERNATIONAL

Dear Sirs,

Firstly many thanks for this opportunity to re-tender for the MOD Supply Contract OIP/0033.

Through this tender we will show, firstly how our current relationship with the DE&S is working, as well as expanding on our commercial and technical tender with the benefit of 12 years of experience, supplying the MOD under the old contracts.

Since 2004 we have supplied over 400 MAC Avant hot mobile pressure washers, via the contract C/WSS/1/4624. This recently expired in November 2015.

During this period we also tendered for and were successful with the Navy Deck Pressure Washer Contract: C/WSS/1/4570, which began in 2009 with the first order of cold engine driven machines being dispatched. This machine was designed and built specifically for the needs and individual requirements that were required to suit this harsh environment.

We are still currently supplying the Navy Deck Pressure Washer machine through a 3<sup>rd</sup> party supplier, despite the contract having expired.

The Repairs of existing high-pressure washers was successfully being carried out until the recent expiry date in November 2015.

We have highlighted our repair activities within this Technical Evaluation.

The above contracts have been an extremely important part of our organisation. Our infrastructure and systems are now geared towards this support operation and we are constantly improving and fine tuning all areas of our business to provide an ever more efficient and cost effective service.

Technically the MAC Avant is little changed. Our technical submission will outline how this machine continues to be as reliable and successful as it has been over the last 12 years.

**SAVING TIME & MONEY**

We have seen a very small number of warranty issues, which have all been dealt with immediately through our national Network of Support Centre's. This has proved to be a great success in providing a rapid response to any warranty or breakdown issues.

We refer to the locations and coverage of our Network of Service Centre's on **Page 22, 23 & 24**. All our MAC Service Centre's work to current MOD requirements and stock all the service and breakdown parts required for the current MAC Avant model.

This has been the backbone to the success of the machine support operation over the last 12 years.

We continually improve this support operation through training and communication with our Service Centre partners.

**HELPDESK**

The development of our helpdesk has been important in establishing a clear and precise warranty and breakdown procedure.

Calls come to ourselves at our head office via the Helpdesk and they are then assessed. Once the correct paperwork is in place a MAC Service Centre is informed immediately. The paperwork and process is clearly understood and adheres to all MOD requirements. Please see **Page 25** for the Booking in Procedure.

The spread of MAC Service Centre's has grown throughout the UK over the past 12 years. We are continually looking at ways to support our Service Centre's with spare parts, information and technical assistance, which all lead to a faster and more efficient service to the MOD.

### **MACHINE RELIABILITY**

We have seen over the length of the contract a steady flow of specialist service kits, designed for easy maintenance by MOD staff, as well as hoses, gun and lance kits.

The service kits have been designed by ourselves with your co-operation and have proved to be massively successful as a basic replacement part, comprising of a number of smaller items. Please see **Page 47** for a full breakdown of the **MAC Avant Basic Service Kit**.

These items are established with part numbers and are being used on a regular basis and we find they are becoming more familiar within WTE.

The failure of machines due to warranty breakdowns has been almost non-existent and any warranty issues on major components have been dealt with immediately.

We have seen however a growing requirement for refurbishments of Pressure Washers either returning from overseas units with repairable faults or machines that have been subject to normal abuse and, once overhauls have taken place, we are able to return them to perfect working order.

A large number of machines have been returned to us from Donnington and refurbished and it was clear that they had come to us from overseas operational environments.

We are extremely experienced in estimating and repairing these machines in the most cost effective and efficient way to the MOD. Please see **Stage 2 – Table 3 – Section 4.10 on Pages 49 – 50** for our supporting information.

### **ARMY EQUIPMENT SUPPORT PUBLICATION (AESP)**

The AESP has been successfully produced for the MAC Avant. There are no technical changes to the MAC Avant and as such the Army Equipment Support Publication (AESP) would not have to be altered.

### **FUTURE SUPPORT**

Should we be successfully re-awarded this contract, our company would not show any signs of complacency in either meeting delivery schedules, technical improvements or supporting the growing number of machines throughout the UK.

The continued growth of the MAC Service Centre network is a key aim of our business, providing for an ever improving and cost effective service.

The winning of this contract would mean further investment from our company into this, with a strengthened support at our Head Office in Darlington, as well as the network of MAC Service Centre's.

The MAC Avant continues to be our best selling machine throughout the UK with the majority of business being from repeat Distributor customers.

MAC International has enjoyed an excellent relationship with all of the support staff at the DE&S, which has proved extremely beneficial to both parties. Hopefully this can continue with the successful implementation of the new contract.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**

**OVERVIEW**

As the previous contractor we already have an established network of suitably qualified experienced personnel who are in a position to undertake regular planned maintenance for in-house hot water mobile pressure washers, as well as continuing to provide repair activity.

We note your reference to associated items as per Annex A and confirm we will provide these 4 items as part of the regular and routine maintenance programme.

We currently provide a schedule of associated items for the MAC Avant Pressure Washer, under the name **AVANT BASIC SERVICE KIT – part number** [REDACTED]

We have included this kit, please see below.

MAC Part Number	Description	Qty
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	2
[REDACTED]	[REDACTED]	2
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	2
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	1

A pressure washer service kit NSN: 4910/99/9580561 would include the above items under the total cost.

The hose, wash gun would also be as above.

The filter pack is covered within the washer service kit pack as above.

We are currently offering maintenance and inspection services complying to the Health and Safety at Work ACT 1974 and COSHH Regulations 2002 and the Electricity at Work Regulations 1989 and the Provision and Use of Work Equipment Regulations 1998.

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4 - REPAIRS**A NETWORK OF DEDICATED MAC SERVICE CENTRES**

As the previous contractor we already have an established network of suitably qualified experienced personnel who are in a position to undertake regular planned maintenance for in-house hot water mobile pressure washers, as well as continuing to provide repair activity.

MAC International currently provides a network of 24 National Service Centres, supporting the current fleet of equipment with regards to service and maintenance.

Each MAC Service Centre will stock and supply the above service kits and associated items, as well as associated parts should they be required.

By currently using MAC International as your reactive service provider for pressure washers and associated repairs/servicing the MOD are already reaping the benefits of an unrivalled Service Network within the UK.

The MAC International Service Network is growing constantly as new service centre's are set up, which match the exact needs of the MOD and increases our ability to provide for the maintenance and repair requirements of the MOD throughout the UK.

All MAC International Service Centre's are aware of the exact parameters in which we expect them to carry out their work. After all it is MAC International's service support, together with first class Pressure Washers, which have allowed us to grow to the business we are today.

Unlike our competitors, MAC International are able to provide a fleet of expert service engineers who cover the whole of the UK. Each Service Centre is comprehensively trained in the family of MAC machines, but most importantly they have first class knowledge of the MOD MAC Avant hot mobile pressure washer and they carry within their service vehicles, at all times, a comprehensive supply of replacement parts and service items.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
 SECTION 4 - REPAIRS

**A NETWORK OF DEDICATED MAC SERVICE CENTRES**

The table below shows the current MAC Service Centre network, which was already setup and in operation for the MOD to support the previous contract number C/WSS/1/4624.

The Service Centre's listed below have all attended MOD sites within the last 2 years and completed repair work. We believe that this level of support and knowledge will be invaluable to the MOD going forward with the new contract.

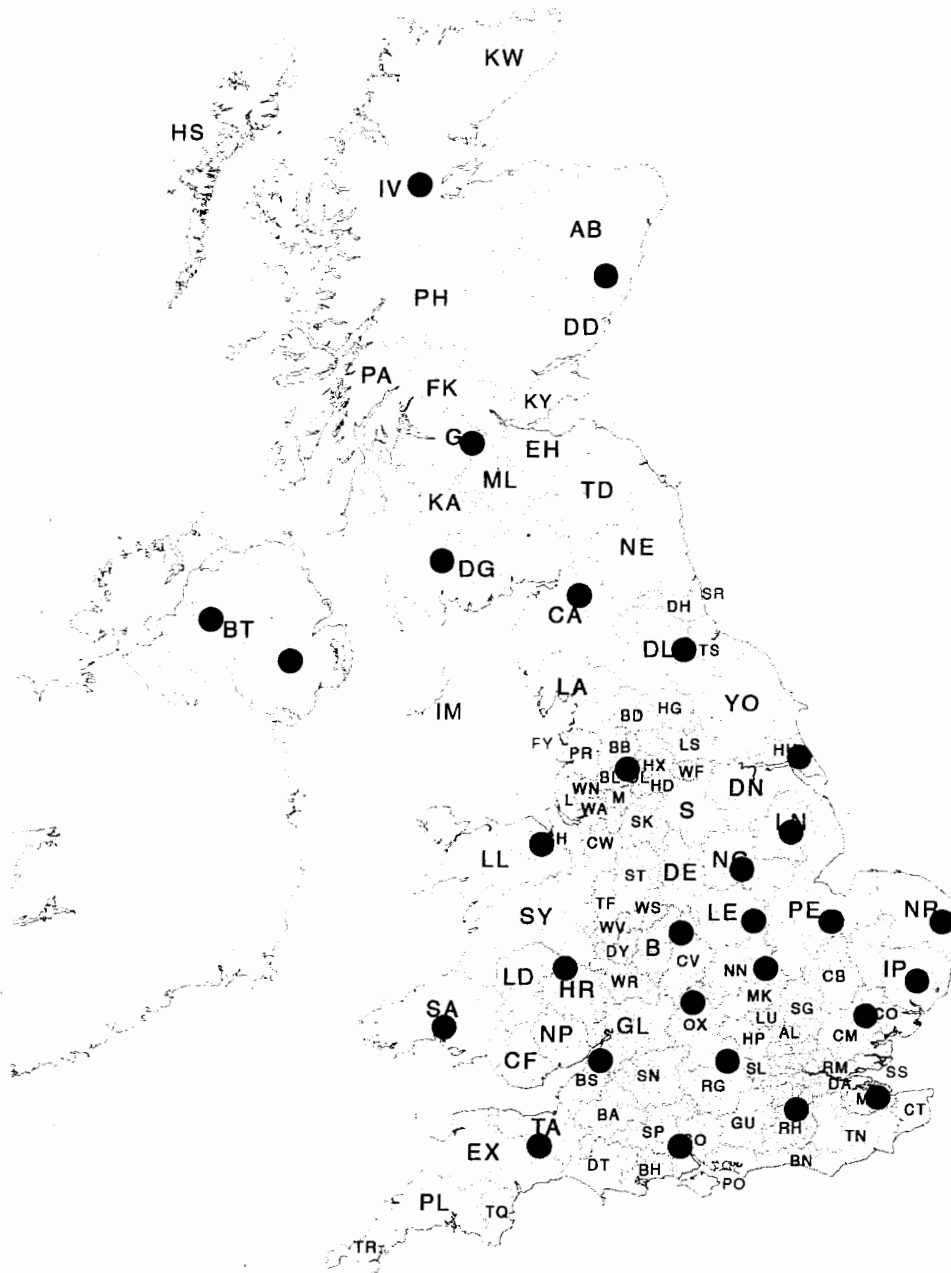
SERVICE CENTRE CODE	LOCATION	AREAS COVERED
██████	LINCOLN	LN
██████	STOWMARKET	IP
██████	COVENTRY	CV, B
██████	CARLISLE	CA
██████	DUMFRIES	DG
██████	GLASGOW	G, PA, KA, ML
██████	HOO	ME, SS, CT, TN, North London
██████	OMAGH	BT
██████	BRISTOL	BS, NP, CF
██████	MANCHESTER	OL, M, BL, WN, WA
██████	HULL	HU, DN
██████	PETERBOROUGH	PE, CB
██████	OXFORD	OX, HP, SN
██████	SUDBURY	CO, CM
██████	SOMERSET	EX, TA
██████	LISBURN, N. IRELAND	BT
██████	NORTHAMPTON	NN, MK
██████	STAMFORD	PE, LE
██████	DUNDEE	AB, DD, KY, EH, FK, IV, PH
██████	CRAWLEY	RH, TN, BN, GU, South London
██████	NOTTINGHAM	NG, DE, LE
██████	DARLINGTON	DL, TS, DH, SR, NE, HG, YO, LS
██████	CHESTER	CH, LL
██████	CARMARTHEN	SA, CF, LD
██████	SOUTHAMPTON	SO, PO, BH, RG, SP

## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 4 - REPAIRS

### A NETWORK OF DEDICATED MAC SERVICE CENTRES

The map below shows our current MAC Service Centre network that is already setup and in operation throughout the UK.

As you can see from the map the comprehensive coverage of our Service Centre's throughout the UK is completely unmatched and shows that MAC International are already in a position to support your Service and Repair needs going forward from day one of the new contract.



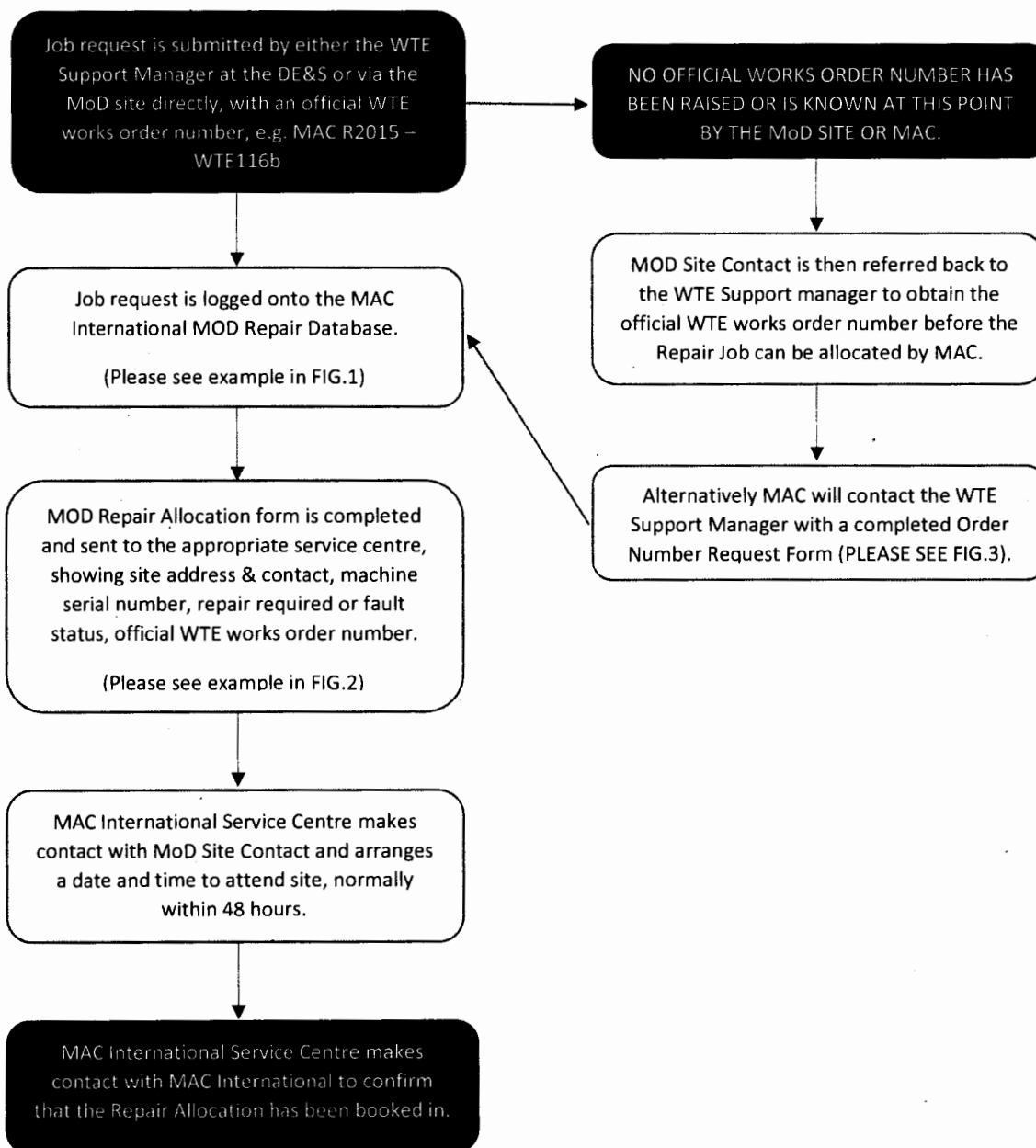
## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 4 - REPAIRS

### BOOKING IN PROCEDURE FOR ON-SITE REPAIRS

Please find a current example of the booking in procedure for all MOD on-site repair work that is carried out, utilising the MAC Service Centre network and controlled by the MOD Team at MAC HQ in Darlington.

This booking in procedure is currently in operation throughout the UK to support the previous pressure washer contract – Contract Number C/WSS/1/4624.

It has proven to be a highly successful system over the last 10 years of operation, helping to reduce downtime of equipment and increase the response time of our MAC Service Centres.

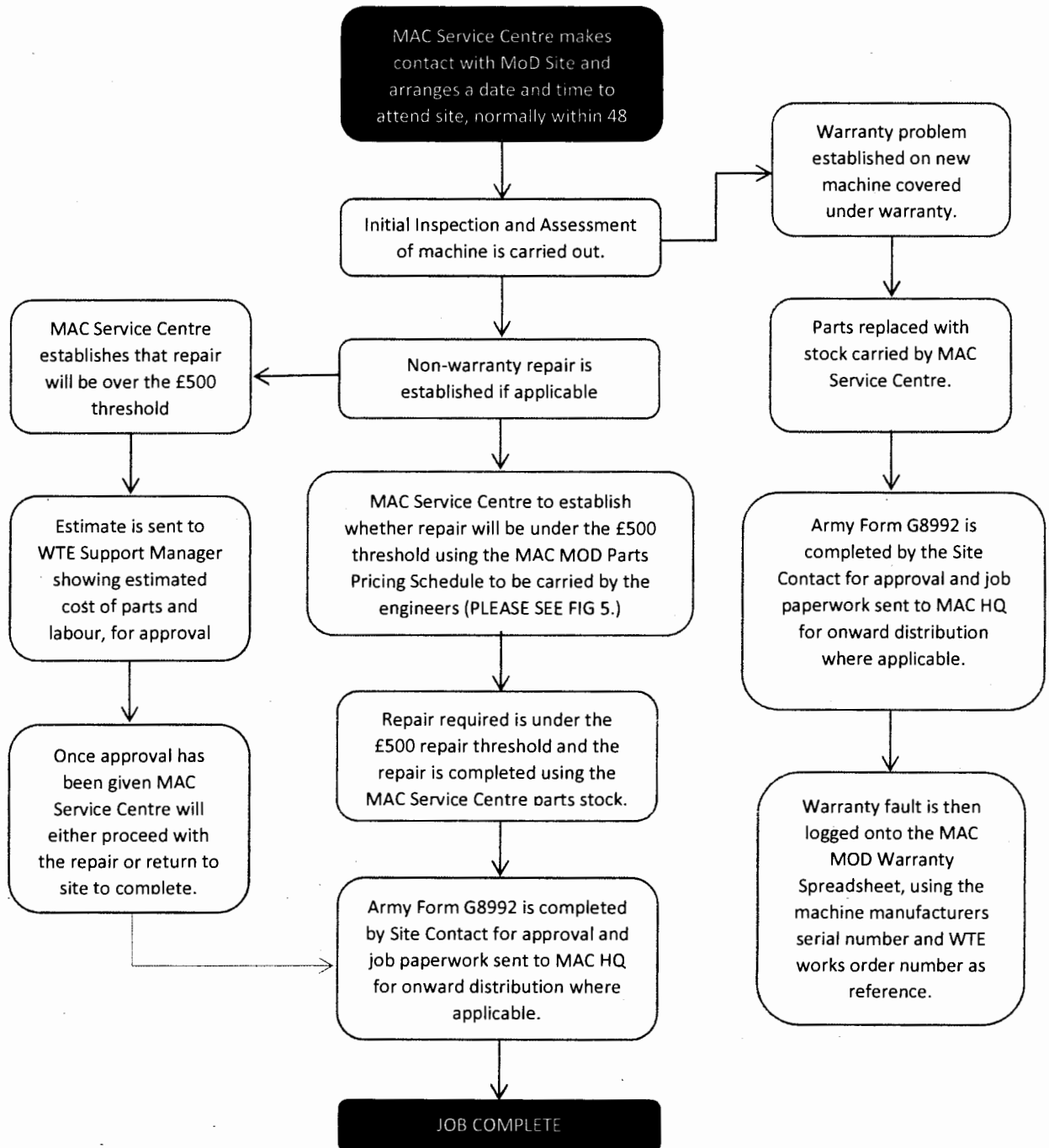


## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 4 - REPAIRS

### REPAIR PROCEDURE FOR ON-SITE REPAIRS

Please find a current example of the repair procedure for all MOD repair work.

This example shows the step-by-step procedure following the Repair Job Allocation and would typically show how a repair job is completed on-site.







**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4 - REPAIRS

**MOD REPAIR ALLOCATION FORM**

We can confirm that an official MAC Repair Allocation Form is completed and submitted sent to each MAC Service Centre once a repair request has been submitted by the WTE Project Manager.

This form is completed and submitted to the MAC Service Centre by MAC HQ.

This job request would normally come in the form of a verbal or emailed AF G8800 request form bearing an OIP Job Number via the WTE Project Manager.

Please see **Page 29 and 30** for an example of the MAC MOD Repair Allocation Form.

**MOD SUPPLY & SERVICE CONTRACT**  
**DS&TE (WSS) IPT**

**MOD REPAIR ALLOCATION FORM**

CONTRACT NO: C/WSS/1/4624

<b>JOB NUMBER</b>	[REDACTED]
-------------------	------------

<b>MACHINE</b>	<b>MAC AVANT</b>
<b>SERIAL NUMBER</b>	<b>072259</b>
<b>DATE</b>	<b>09/12/2015</b>

<b>CONTACT</b>	[REDACTED]
<b>CONTACT NUMBER</b>	[REDACTED]
<b>SITE ADDRESS</b>	<b>158 REGIMENT RLC ARMY RESERVE CENTRE LONDON ROAD PETERBOROUGH PE2 9BY</b>
<b>REPAIR REQUIRED</b>	<b>NO WATER PRESSURE. FULL INSPECTION, REPAIR AND SERVICE REQUIRED.</b>
<b>SERVICE CENTRE ALLOCATION</b>	<b>P G &amp; C NOTTINGHAM</b>

<b>REPORT</b>	
---------------	--

<b>PART REQUIRED</b>	
<i>PART NUMBER</i>	<i>DESCRIPTION</i>

<b>JOB COMPLETION SIGNATURE</b>
Name: ..... Signature: ..... Job Title: ..... Date: .....  <b>PLEASE ENSURE ARMY FORM G8992 IS SIGNED WITH THIS REPAIR ALLOCATION FORM            AND RETURNED TO MAC INTERNATIONAL</b>

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4 - REPAIRS

**ORDER NUMBER REQUEST FORM**

Please find an example below of a completed Order Number Request Form.

This form will be submitted to the WTE Project Manager via email should MAC HQ receive a repair request without an official OIP Job Number.

We would then await further instructions before completing the MOD Repair Allocation Form in Page 29-30, allocating the job to the MAC Service Centre and updating the MAC MOD Repair Allocation Database in FIG.1.

*Fig. 2 – Example of order number request form.*

MACHINE	MAC AVANT
SERIAL NUMBER	[REDACTED]
DATE	09/12/2015

CONTACT	[REDACTED]
CONTACT NUMBER	[REDACTED]
SITE ADDRESS	158 REGIMENT RLC ARMY RESERVE CENTRE LONDON ROAD PETERBOROUGH PE2 9BY
REPAIR REQUIRED	NO WATER PRESSURE. FULL INSPECTION, REPAIR AND SERVICE REQUIRED.
WTE WORKS ORDER NUMBER	.....

↑

To be completed by the WTE Support  
Manager and emailed to MAC for Repair  
Allocation.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.6 – REPAIRS

**CALLOUT RESPONSE TIMES**

The MAC Service Centre network is currently operating to a 48-hour response to callouts.

The ability to complete any repairs within 5 days is dependant upon the Service Centres stock holding and if necessary the stock holding of the complete parts list for the MAC Avant – MAC1, held at MAC HQ.

We can confirm that MAC International will always maintain stock levels to allow any unusual repairs to be carried out and every MAC Service Centre will carry the parts required for normal repairs to meet the 5-day deadline.

We would like to provide you with a definitive list of parts that are held at MAC HQ and we confirm that the MAC Service Centre will carry stock of all normal working parts to complete all repairs and servicing.

Each MAC Service Centre will also carry a full Spare Parts List, Parts Breakdown of the machine, as well as Method Statement and Risk Assessment.

We would not expect under normal circumstances ever to require an extension for a repair past the 5 days requirement.

All repairs of course are carried out in accordance with the OEM specifications and in conjunction with the details within the Army Equipment Support Publication, written for the MAC Avant machines.

Please find a copy of the completed G8992 form in **FIG.3 – Page 33**, which is signed by the MOD On-Site Representative and left on-site. A copy is also sent back to MAC HQ following completion of the repair and sent to the following address:

**Operational Infrastructure Programme**  
**Workshop Tool & Equipment**  
**Spruce 3A 1309**  
**DE&S Abbey Wood**  
**Bristol**  
**BS34 8JH**

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.8 - REPAIRS

FIG.3 - SIGNED COPY OF G8992 ON-SITE MAINTENANCE RECORD

Army Form G 8992  
(Introduced 10/98)  
No 3 Copy

### ON SITE MAINTENANCE RECORD

<b>A Service Agreement/Contract No</b> S/1052/1/4624	<b>B Job/Order No</b> [REDACTED]
<b>C Equipment Location</b> 203 (2) Field Hospital Army Reserve Centre CF14 2HX  Date Received 25-01-2016	<b>D Equipment Details</b> Mac Grant S/n 050763 Year 05-2005  Date Collected 25-01-2016
<b>E Service/Repairs Carried Out</b> <ul style="list-style-type: none"> <li>* 50% Service</li> <li>* Machine out of fuel topped up</li> <li>* changed Tally Hose / done</li> <li>* Worked through w/c / done</li> <li>* Cable saw plug blue Plug removed</li> <li>* inlet changed / Test O2</li> <li>* Castrol 70 Oil with Vaco</li> </ul> Labour - man-hours: 4.5	<b>F Spares and Materials Fitted</b> <ul style="list-style-type: none"> <li>0 meter Hose 1/2" x 1</li> <li>2mm/F x 1</li> <li>Oil Can x 1</li> <li>Self Adhesive Clips x 1</li> <li>jet 1505 x 1</li> <li>W.20 Seal x 1</li> <li>blue Plug Can x 1</li> </ul> [REDACTED]
<b>G Certification by Contractor</b> I certify that: a. Maintenance of the above equipment has been carried out in accordance with the terms and conditions of the Contract Order. b. The equipment is now fully serviceable and safe for use.  25-1-2016 (Date) [REDACTED] Signed for and on behalf of Contractors Name [REDACTED]	<b>H Certification by Responsible Unit Representative</b> I certify that: a. The labour man/hours stated are correct. b. Spares and materials listed have been fitted to the equipment. c. The equipment is now operating satisfactorily.  Signed [REDACTED] Rank/Grade [REDACTED] Appointment [REDACTED] Date [REDACTED] Holding Unit UIN [REDACTED]
<b>J GREEN Copy No 3 - Contractor to submit ABRO Office in support of bill</b>	

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.9 - REPAIRS

For ad-hoc repairs each MAC Service Centre would utilise the proposed parts list for the MAC Avant, which was a definitive parts pricing document as agreed as part of the previous contract – Contract Number: C/WSS/1/4624.

MAC International were utilising Year 7 prices, which was the last year of the previous contract.

Presuming a similar parts pricing policy was employed we would issue all our MAC Service Centres with these prices and therefore we can confirm that the contractor would be able to proceed with the repair under £500.

**\*Please find the full list of MAC Avant Spare Parts in FIG.4 – Pages 35-37**







[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]
[REDACTED]	[REDACTED]	1	[REDACTED]

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.9 – REPAIRS

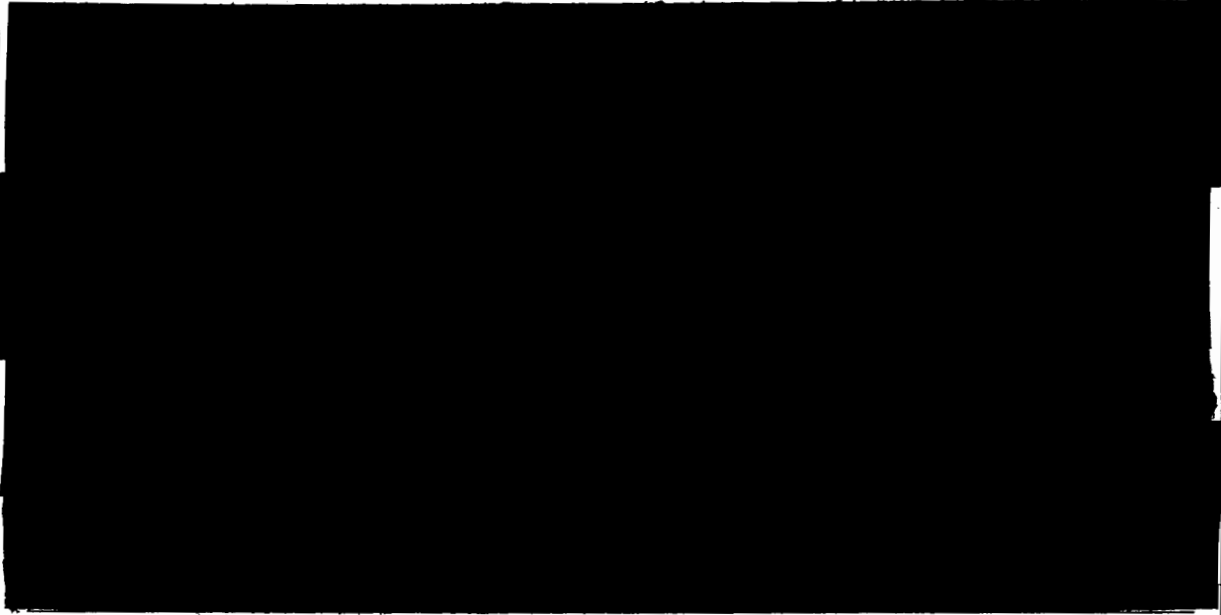
The MAC Spare Parts Pricing List as detailed in **FIG4 – Page 35-37** is further supported by the official MAC MOD Avant Spare Parts Diagrams, please see examples below in **FIG 5, 6, 7 & FIG.8**.

All authorised MAC Service Centres carry these spare parts lists with them at all times.

**FIG.5 – Example of official MAC MOD Avant Spare Parts Diagrams**

SPARE PARTS LIST  
**MAC AVANT**

**TAV 3 - COUPLINGS AND INTERNAL PIPES**



[www.macinternational.co.uk](http://www.macinternational.co.uk)

WASHMASTER | **MAC**  
PRESSURE WASHERS | PRESSURE WASHERS

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.9 – REPAIRS

*FIG.6 – Example of official MAC MOD Avant Spare Parts Diagrams*

SPARE PARTS LIST		<b>MAC AVANT</b>		
<b>TAV 3 - COUPLINGS AND INTERNAL PIPES</b>				
TAV POS.	PART NUMBER	QTY	DESCRIPTION	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18		2		
19				
20				
21				
22				

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.9 – REPAIRS

*FIG.7 – Example of official MAC MOD Avant Spare Parts Diagrams*



**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
 SECTION 4.9 – REPAIRS

*FIG.8 – Example of official MAC MOD Avant Spare Parts Diagrams*

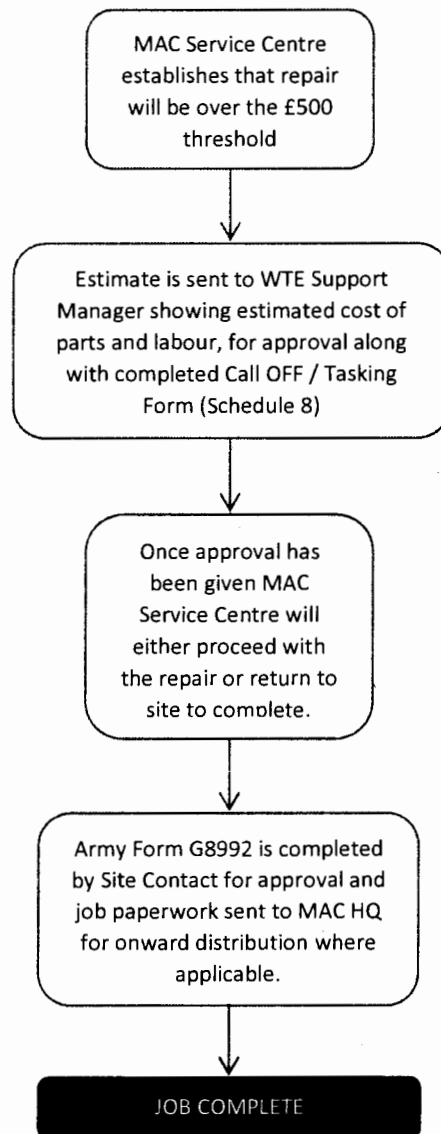
SPARE PARTS LIST <b>MAC AVANT</b>				<b>MAC</b> INTERNATIONAL	
<b>TAV 5 – ELECTRIC PANEL</b>					
TAV POS.	PART NUMBER	QTY	DESCRIPTION	NOTES	
2		1			
3		1			
4		1			
5		1			
6		1			
7		1			
8		1			
9		1			
10		1			
11		1			
12		1			
13		1			
14		1			
15		1			
16		2			
17		1			
18		1			

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.9 - REPAIRS

For repairs over £500 please refer to the flow chart below showing this process.

A full pricing estimate would be provided to the Project Manager, at no cost to the Authority, for authorisation prior to any repair work commencing. Please see **FIG.10 – Page 43** for an example of this Pricing Estimate.

**FIG.9 – Flow chart showing the process for repairs over £500.**





**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
 SECTION 4.9 - REPAIRS

**PRICING ESTIMATE FOR REPAIRS OVER £500.**

Please see below an example of the pricing estimate for repair work over £500.

This estimate would be emailed to the WTE Project Manager along with the completed **Call OFF / Tasking Form (Schedule 8)** to obtain authorisation.

Once we have received the fully endorsed Call OFF / Tasking Form we will go ahead with the repair as per the flow chart listed in **FIG.9 – Page 42**.

*Fig. 10 – Example of pricing estimate for a repair over £500.*

INVOICE TO		MOD - DE&S LAND EQUIPMENT		
OIP JOB NUMBER	[REDACTED]			
MAC JOB NUMBER				
DATE COMPLETED				
MACHINE				
SERIAL NUMBER				
CONTACT				
CONTACT NUMBER				
REPAIRS CARRIED OUT				
QTY	PART NUMBER	DESCRIPTION	NET PRICE £	TOTAL PRICE £
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
			TOTAL	[REDACTED]

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.10 - REPAIRS

**REPAIRS AT THE CONTRACTORS PREMISES**

We confirm our ability, when required to repair hot water pressure washers at our premises in Darlington.

We are able to do this as we will maintain our stock holding with more than adequate parts to provide cost effective estimates to refurbish or batch repair any equipment. We agree that the timeframe for each repair will be in agreement with the WTE Project Manager.

We have previously undertaken a number of estimated refurbishments at our premises in accordance with these requirements and would like to refer you to **FIG.11 below**, showing a comprehensive list of the refurbishment programme of MAC MOD Avant machines to date.

This refurbishment programme has been highly successful allowing us to return a large quantity of repairable, damaged or unused machines back into circulation.

On each occasion these batches of refurbished machines were repackaged and returned to MOD Donnington wrapped and palletised with the appropriate labelling for storage.

**FIG.11 – Shows the complete list of machine refurbishments completed at our premises.**

DIN NUMBER	MAC JOB REF	DATE	MACHINE	MACHINE SERIAL NUMBER	VALUE
		28.11.13	MAC MOD Avant		
		28.11.13	MAC MOD Avant		
		28.11.13	MAC MOD Avant		
		28.11.13	MAC MOD Avant		
		28.11.13	MAC MOD Avant		
		28.11.13	MAC MOD Avant		
		28.11.13	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		25.04.14	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.04.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		
		29.06.15	MAC MOD Avant		

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 4.10 - REPAIRS

**WHAT IS THE COST SAVING TO THE MOD?**

As listed in **FIG.11 – Page 44**, over the last 3 years there have been 33 MAC Avant machines refurbished and placed back into circulation for use.

The average cost of these 33 refurbishments was £ [REDACTED] per machine, which represents an estimated saving of £ [REDACTED] per machine, when compared to the cost of a new MAC Avant pressure washer.

This is real evidence to support the fact that batch refurbishment repairs to machines can be successfully carried out at our premises and also provide a large cost saving to the MOD.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 4.11 - REPAIRS**

We confirm our ability to communicate with the Authority regarding the BER values of the equipment.

We also confirm our full understanding that should the repair costs of the machine exceed 75% of the value, we will immediately notify the WTE Project Manager with our findings and we will submit FORM B2 – APPLICATION FOR DISPOSAL OF BR/BER EQUIPMENT, as listed in *Schedule 12 – Page 87 of 97*.

**SECTION 4.12 - REPAIRS**

We confirm that the MOD will remove any machines considered to be Beyond Economical Repair from individual sites.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 – SERVICING

**INTRODUCTION TO SERVICING**

Our experience in maintaining your equipment leads us to believe that planned maintenance service visits would be beneficial.

We see on a regular basis during repair work, parts being replaced due to excessive use or in some cases misuse.

We therefore believe that you should choose between an annual contract for 1 service visit for normal usage or 2 service visits for heavy usage sites. i.e. 1 service visit every 6 months, to include 1 full AVANT BASIC SERVICE KIT – [REDACTED] – on each visit.

For the sake of clarity we have priced for 1 service visit per machine per annum in **TABLE 5 – NON CORE TASK ASSUMPTIONS, SOW REF: 6.**

We are able to make specific recommendations, in some cases, where we are fully aware of heavy usage and the need to maintain the equipment on a regular basis.

**For Example:** We have been asked to attend DST Leconfield Transport School, Normandy Barracks on a regular basis, between 3-4 times per annum and this is a perfect example of a site with multiple machines that would benefit from planned maintenance every 6 months.

Therefore our service plan will list the location of the equipment, machine name/serial number and NSN of the machine, service frequency required, date of last and date of next service.

We would refer again to our MAC Avant Basic Service Kit – [REDACTED] listed below showing a standard list of parts and wash gun and lance kit:

**FIG.12 – MAC Avant Basic Service Kit – A.AVANT/2209**

MAC Part Number	Description	Qty
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	2
[REDACTED]	[REDACTED]	2
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	1
[REDACTED]	[REDACTED]	2

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 – SERVICING

**SERVICE PLAN RECOMMENDATION**

Therefore we would like to recommend an annual service plan for 1 or 2 service visit's per annum. Please see the table as follows:

SERVICE PLAN RECOMMENDATION	SERVICE FREQUENCY	TO INCLUDE
1 SERVICE VISIT PER YEAR	EVERY 12 MONTHS FOR NORMAL USAGE SITES	<ul style="list-style-type: none"> <li>• FULL SERVICE</li> <li>• SERVICE CHECKS</li> <li>• MAC AVANT BASIC SERVICE KIT AS PER FIG.12</li> </ul>
2 SERVICE VISITS PER YEAR	EVERY 6 MONTHS FOR HEAVY USAGE SITES	<ul style="list-style-type: none"> <li>• FULL SERVICE</li> <li>• SERVICE CHECKS</li> <li>• MAC AVANT BASIC SERVICE KIT AS PER FIG.12</li> </ul>

To support our Service Plan Recommendation we would like to enclose a complete list of repairs that have been completed in the last 2 years.

This will allow us to make informed decisions regarding the service plan and frequency of visits to each site, based on their individual requirements, which we can analyse using this data from the last 2 years – Please see **FIG.13 – Page 49** and **FIG.14 – Page 50**.

The knowledge of each site will allow MAC International to present a comprehensive Service Plan Recommendation to the MOD for their review and approval.

## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 5 - SERVICING

FIG.13 - ON-SITE REPAIRS COMPLETED IN 2015

6	MOD Job Number	Date Allocated	Service Centre Code	Unit Address
7				KIRKBY THIEF VAL BARRACKS, LISBURN
8				221 FIELD SQUADRON, CATFORD
9				202 FIELD SQUADRON, BOXBRIDGE ROAD, SOUTHALL
10				155 LECONFIELD, NORMANDY BARRACKS, LECONFIELD, BEVERLEY
11				155 LECONFIELD, NORMANDY BARRACKS, LECONFIELD, BEVERLEY
12				155 LECONFIELD, NORMANDY BARRACKS, LECONFIELD, BEVERLEY
13				MIT FIANCS, CATHERICK GARRISON
14				243 FIELD HOSPITAL, ASHHEAD ROAD, KEYNSHAM, KS11 1SX
15				MOOTIAN BARRACKS, QMS DEPT, IDWORTH, SP7 7EN
16				MOOTIAN BARRACKS, QMS DEPT, IDWORTH, SP7 7EN
17				152 MEDICAL SQUAD, GLENROTHER
18				INFANTRY BATTLE SCHOOL, DENING LINES, BRECON
19				INFANTRY BATTLE SCHOOL, DENING LINES, BRECON
20				RAF WITTERING, PETERBOROUGH
21				MOD KINGTON, MARLBOROUGH BARRACKS, DOG SECTION, KINGTON
22				MOD KINGTON, MARLBOROUGH BARRACKS, DOG SECTION, KINGTON
23				MOD KINGTON, MARLBOROUGH BARRACKS, DOG SECTION, KINGTON
24				201 FIELD HOSPITAL, FEHNUM BARRACKS, NEWCASTLE, NE2 4NS
25				201 FIELD HOSPITAL, C. DET. AR. CENTRE, NORTON, STOCKTON, YO12 2QW
26				MOD KINGSTANDING, KINGSTANDING ROAD, BIRMINGHAM, B47 7ND
27				B SQUADRON, OLD CHARLTON BARRACKS, LEEDS, LS7 1HE
28				B SQUADRON, LILLICO HOUSE, TAG, MAIN STREET, INVERGOWRIE, DUNDEE
29				B SQUADRON, LILLICO HOUSE, TAG, THE BURN, NEWCASTLE, NE1 1JY
30				B SQUADRON, LILLICO HOUSE, TAG, UPPER CHORLTON ROAD, MANCHESTER, M14 0BH
31				221 SQN RLC, 24 CLYDEMILL DRIVE, CAMAYLE, GLASGOW, G3 7EG
32				104 FSN/124 FD GOV, WESTFIELD HOUSE, COVENTRY
33				ARC, BISHOPS HULL, SOMERSET, TA1 5EJ
34				21 ENGINEERS REGIMENT, CLARO BANKS, WIPON, NORTH YORKSHIRE
35				102 FIELD SQN RE, ANZO BINE, 43 HAWHEAD ROAD, PAISLEY, SK15 1JG
36				158 RLC, QM, HQMS, 158 REGIMENT RLC, ARMY RESERVE CENTRE, LONDON ROAD, PETER LECONFIELD
37				RAF BOSCOMBE DOWN
38				RAF BOSCOMBE DOWN
39				DM KINGTON, MARLBOROUGH BARRACKS, TEMPLE HERDWAYLE, SOLIHULL, WARCS, CV47
40				ROYAL CAVALRY HOUSE, MITCHAM, CROYDON
41				185 GDS SQN, WELBECK CLOSE, EWELL, UXPB, UXPB 21G
42				41 SIG SQN, HONEYCROFT HILL, UXPB, UXPB 19H
43				RAF WITTERING
44				RAF BOSCOMBE DOWN, SALISBURY, SP4 0BF
45				ARMY RESERVE CENTRE, ST ALBANS ROAD, BARNET
46				ARMY RESERVE CENTRE, ST ALBANS ROAD, BARNET
47				155 LECONFIELD, NORMANDY BARRACKS, LECONFIELD, BEVERLEY
48				RENEWING, BARKHILL
49				216 FIELD SQUADRON, RLC, STONECOT HILL, SUTTON
50				TRANSPORT SQN, SHORNCLIFFE, KENT
51				STATHAN, CR22 0WA
52				MIT FIANCS, CATHERICK GARRISON
53				GHQ OF LONDON FIELD HOSPITAL, WALWORTH, LONDON
54				ROYAL ENGINEERS, SHEPHERD HALL, VAUXHALL CAMP, MONMOUTH
55				MARLBOROUGH BARRACKS
56				75 ENGINEERS REGIMENT, WARRINGTON
57				107 FIELD SQUADRON, BIRKENHEAD
58				TA CENTRE, OLDHAM ROAD, MANCHESTER
59				RAF BENSON, WALLINGFORD, OX10 8AA
60				RAF WITTERING
61				INFANTRY BATTLE SCHOOL, BRECON
62				INFANTRY BATTLE SCHOOL, BRECON
63				INFANTRY BATTLE SCHOOL, BRECON
64				INFANTRY BATTLE SCHOOL, BRECON
65				PICTON BARRACKS, PICTON, CARMARTHEN
66				PICTON BARRACKS, PICTON, CARMARTHEN
67				225 FIELD SQUADRON, AR CENTRE, OLDBURY, B48 8DH
68				124 TRF SQN, WABLEY
69				NEWPORT ARMY RESERVE CENTRE, GWENT
70				REGENTS PARK BARRACKS, LONDON, W1W 7AL
71				THE RECOVERY GOV, 104 INTRBAE, CEARE STREET, NORTHAMPTON, NN1 1JG
72				28 SIGNAL REGIMENT, REDDITCH
73				BLANDFORD CAMP, DORSET
74				221 FIELD SQUADRON, HUDSON HOUSE, BROMLEY ROAD, CATFORD, LONDON
75				221 FIELD SQUADRON, HUDSON HOUSE, BROMLEY ROAD, CATFORD, LONDON
76				50 CHQ SQN, ST DENHAM ROAD, CROYDON
77				74 SIGNALS, SHORNCLIFFE, KENT
78				WORKSHIP STREET, LONDON
79				FATHERINDER PLATOON, NAVAL BARRACKS, GOLCHESTER, CO2 7NE
80				KIRKBY THIEF VAL BARRACKS, LISBURN
81				KIRKBY THIEF VAL BARRACKS, LISBURN
82				201 TRANSPORT SQN, RLC, WALKLEY STREET, LONDON, NW11 4AS
83				28 SIGNAL REGIMENT, PROBYN HOUSE, BOXLEY HEATH
84				28 SIGNAL REGIMENT, PROBYN HOUSE, BOXLEY HEATH
85				28 SIGNAL REGIMENT, PROBYN HOUSE, BOXLEY HEATH
86				28 SIGNAL REGIMENT, PROBYN HOUSE, BOXLEY HEATH

## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 5 - SERVICING

FIG.14 - ON-SITE REPAIRS COMPLETED IN 2014

Sl. Number	Date Reported	Service Centre	Job Address
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## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 5 – SERVICING

### WHAT IS COVERED IN OUR SERVICE PLAN DATABASE

As requested and as shown below in **FIG.15**, the Annual Planned Servicing Visits will be arranged and agreed between MAC International and the MOD and we will use the database below to record the Service Plan for each machine and individual site.

The database covers the following information:

- Location of equipment
- Description, including NSN
- Quantity of equipment to be serviced
- Service frequency (6 months or 12 months)
- Date of last service
- Date of next service

**FIG.15 – Example of MAC International Service Plan Database, which will be used.**

MOD OIP/0033							
SERVICE PLAN OF PRESSURE WASHERS 2016							
LOCATION OF EQUIPMENT	DESCRIPTION OF EQUIPMENT	NSN OF EQUIPMENT	QTY TO BE SERVICED	SERVICE FREQUENCY	DATE OF LAST SERVICE	DATE OF NEXT SERVICE	
DST MAINTENANCE SQUADRON, NORMANDY BARRACKS, LECONFIELD, HU17 7LX	MAC AVANT	4940 99 7419584	5	MONTHS	02/02/2016		
RAF WADDINGTON, GENERAL ENGINEERING FLIGHT, LINCOLN, LN5 9NB	MAC AVANT	4940 99 7419584	2	MONTHS	06/02/2016		
254 MEDICAL REGIMENT, CHERRY HINTON ROAD, CAMBRIDGE, CB1 8	MAC AVANT	4940 99 7419584	1	12 MONTHS	07/02/2016		
ARMY RESERVE CENTRE, 225 FIELD SQUADRON, COBBURY, 68 8DH	MAC AVANT	4940 99 7419584	1	12 MONTHS	12/02/2016		
SOMME BARRACKS, CATTERICK GARRISON, CATTERICK, NORTH YORKSHIRE, DL	MAC AVANT	4940 99 7419584	1	6 MONTHS			
PICTON BARRACKS, PICTON, CARMARTHEN	MAC AVANT	4940 99 7419584	1	12 MONTHS			
103 REGIMENT, PRESCOT ROAD, ST HELENS, WA10 3U	MAC AVANT	4940 99 7419584	1	12 MONTHS			
RAGLAN BARRACKS, NEWPORT	MAC AVANT	4940 99 7419584	1	12 MONTHS			

## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 5 – SERVICING

### EXAMPLE OF MAINTENANCE PLAN AGREEMENT



## ANNUAL MAINTENANCE AGREEMENT

A MAC International Annual Maintenance Contract is designed to minimise nuisance failure and maintain maximum working efficiency throughout the machines working life.

On each service visit our engineer will inspect and test your pressure washer, advising you of any worn parts, which may need replacing, to ensure your machine will continue to operate with maximum efficiency.

Any necessary resetting or adjustment of components will be undertaken within the terms of the contract.


Work beyond that defined in the details of the maintenance checklist will be charged at our normal hourly rate.

### AGREEMENT TERMS & CONDITIONS

1. MAC International will visit the machine at the location address stated overleaf the number of times stated on the Maintenance Agreement to carry out the inspection and service on the machine as outlined above.
2. The appropriate number of visits each year will be provided at regular intervals, i.e. every 3/6 months.
3. The MAC International Annual Maintenance Agreement price will cover all travel and 1 hours labour cost per service for the number of visits stated.
  - All replaced parts and service items are chargeable
  - Additional labour may be charged for work carried out over and above one hour on site. This also includes any specific site inductions required.
4. Any additional callouts during the contract period will be charged at our standard labour rates. Should the callout be due to a service related fault there will be no callout charge, with the following exclusions.
  - Should a breakdown be due to operator misuse, negligence or any fault beyond our control this will be charged at our standard callout and labour rates.
5. The company shall not be liable for the maintenance, service or replacement of batteries and charger, if applicable. However the service engineer will carry out routine checks on these items.
6. The term of the contract will be for 12 months unless otherwise stated.
7. Any equipment not previously serviced by MAC International will need to be inspected and brought into good working order before the contract begins. This agreement is only valid for machines being used for a standard working day (up to 8 hours).

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 – SERVICING

**EXAMPLE OF MAINTENANCE PLAN AGREEMENT**



## ANNUAL MAINTENANCE AGREEMENT

<b>Company Name</b>	Army Foundation College
<b>Company Address</b>	Army Foundation College Mildenhall Barracks, Penny Hill Lane Hartsgate North Yorkshire YO3 2SS

The above would like to enter into a 12 month maintenance agreement for the following machines

<b>Number of Machines Covered</b>	2
<b>Machine Name/Description</b>	MAC Steamster Blast Pressure Washer

The above machines will be serviced

**2 times per annum at a cost of £..... + VAT**

This agreement will include all call out and labour charges relating to standard servicing terms and conditions.

We understand that all replaced parts will be paid for by the customer

<b>Agreement to run from</b>	01/01/2015 - 31/12/2015
------------------------------	-------------------------

**CUSTOMER TO COMPLETE THE FOLLOWING:**

<b>Customer Order Number:</b>	
-------------------------------	--

The above order number can be quoted for all consumables used on each service visit

Yes  No

*(Tick above as appropriate)*

<b>Signed by</b>	
<b>Print Signature</b>	
<b>For and on behalf of</b>	

Kellow Road, Karm Road Industrial Estate, Catterton, County Durham, DL7 4SA  
T: 0870 24 24 462 F: 0870 24 24 462 E: sales@macinternational.co.uk W: www.macinternational.co.uk

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 – SERVICING

**SERVICING METHOD STATEMENT**

All work carried out on customers sites will be in accordance with the MOD and MAC Internationals quality and health and safety Requirements.

On arrival at site, the MAC Service Centre engineer will comply with any company requirements e.g. booking in, inductions, Permit to Work, Photo ID if required.

The MAC service technician will then liaise with the customer to determine where the service work can be carried out.

The MAC service engineer will now carry out the necessary work. If it is routine servicing he will utilise the MAC servicing checklist incorporated into the service report to complete his task. If it is a fault repair, the condition and functioning of the machine shall be assessed in order to diagnose the problem. The approach shall be such that the diagnosis is carried out in a systematic way to ensure that all deviations are identified.

The MOD site shall be advised of any findings which constitute a safety hazard and any repairs requiring high cost items or a high labour content, which exceeds the stated £500 value for repair work, then MAC International will submit an estimate of the work to the WTE Support Manager and authorisation will be obtained before proceeding with the work. In this case the MAC Service Centre engineer will need to re-attend site once authorisation has been obtained.

The MAC Service Centre engineer will remove any waste oil/old parts generated either by disposal on site if the MOD agrees or by bringing them back to the Company premises.

All details of work are recorded on both an Army Form G8992 and the engineer's service report, which is completed and signed by the MAC Service Centre engineer. He will obtain a signature from the MOD site contact to accept the work done is satisfactory and leave a copy of the G8992 form with the MOD site.

Prior to leaving site, the MAC Service Centre engineer will comply with any company requirements e.g. booking out, handing in Permit to Work etc.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 - SERVICING

**SERVICING RISK ASSESSMENT**

HAZARD	CONTROL
Awkward Access	Mental risk assessment of posture and work operation when faced with work in these areas.
Electricity	All equipment to be isolated when work is in progress.
Fire Alert	Follow the sites major incident plan.
Flowing Water	Extreme care to be taken where the wash lance is aimed when the machine is being run and tested.
Housekeeping	All areas are to be kept as tidy as possible to prevent more slips, trips and fall hazards. Only necessary equipment is to be in the working area and any additional equipment required is to be stored in an appropriate location.
Interface Operations	Permit to Work system is to be adopted if applicable. Unauthorised entry must be prevented during repair work.
Manual Handling	Follow the instructions in the Companies Safety Policy on the correct method for lifting and moving objects.
Pedestrian Routes	Keep clear of equipment during the repair. General housekeeping rules apply.
Roads/Traffic	When on-site all staff should abide by the site rules and regulations on vehicle movement and parking requirements. Only use the designated access routes and walkways.
Slips, Trips and Falls	Mental risk assessment of the conditions and surfaces (stop, think, consider), care and attention must be taken at all times.
Walkways	Keep to the designated walkways when moving around the site. Walkways are to be kept as clear as possible when working to prevent adding to the slips, trips and falls hazards. General housekeeping rules apply.
Waste Materials	All waste material is to be removed from site on a daily basis at the end of work.

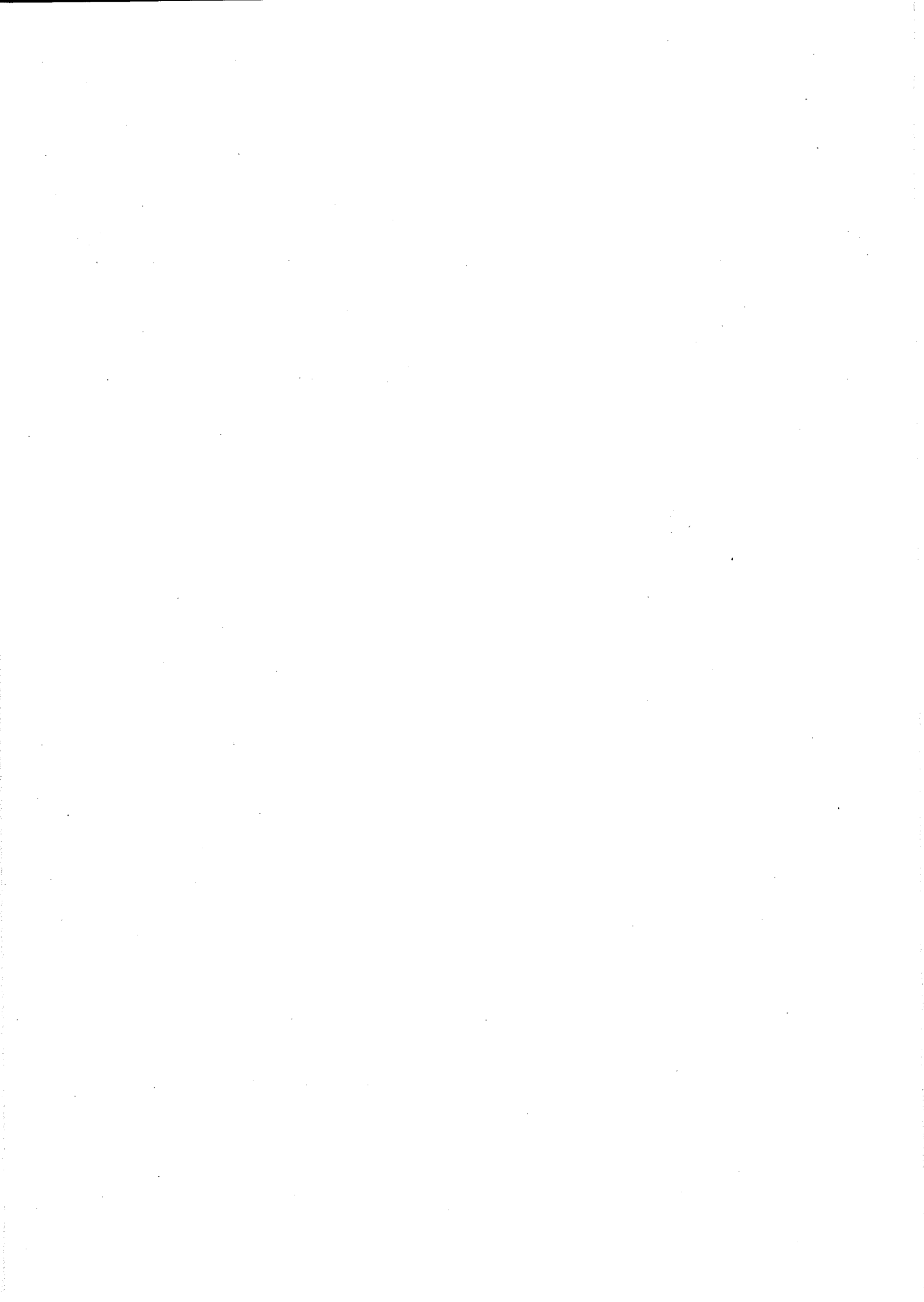
**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 – SERVICING

**ROUTINE SERVICE CHECKS OF EQUIPMENT**

SERVICE CHECKS	CHECKED
General condition of machine	
Condition of High Pressure Hose	
Unloader and safety valve	
Safety and electrical switches	
Pump oil change or inspection	
Water filter cleaned or replaced	
Operation of burner	
De-scaled / de-soot required	
Condition and diesel	
Fuel filter cleaned or replaced	
Burner electrodes cleaned or replaced	
Fuel nozzle cleaned or replaced	
Fuel tank check or drain (if necessary)	
Fuel pump pressure	
Burner air flap adjustment	
Thermostat checked and operational	
Electrical system & mains cable	
Chemical system	

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 5 – SERVICING

SECTION	COMPLIANCE
<p>5.2 – All servicing and electrical safety inspections of Hot Water Mobile Pressure Washers must be carried out in accordance with the Original Equipment Manufacturers (OEM) specifications and BS EN 60335-2-79:2012.</p>	<p><b>COMPLIANT</b></p>
<p>5.3 – All servicing and electrical safety inspections shall be carried out by a Suitably Qualified Experienced Person (SQEP) who must ensure that all equipment is left in a safe, serviceable and legally compliant condition in accordance with current European and UK Legislation. The equipment shall be clearly labelled with the next servicing date.</p>	<p><b>COMPLIANT</b></p>
<p>5.4 – Machine Service Checklists and Service Audit Spreadsheets must be provided by the Contractor for all equipment inspected.</p> <p>*PLEASE SEE PAGE 56 - ROUTINE SERVICE CHECKS OF EQUIPMENT</p>	<p><b>COMPLIANT</b></p>



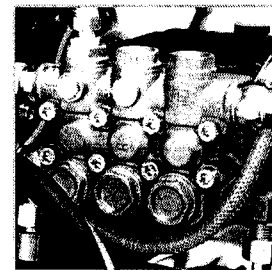
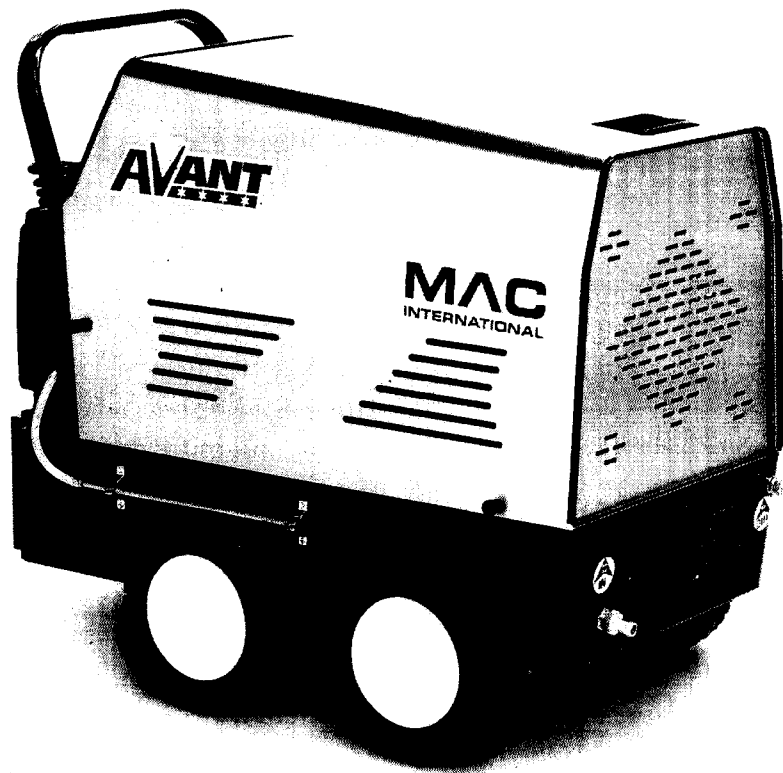


MAC  
INTERNATIONAL



## HOT MOBILE PRESSURE WASHER

Highly professional hot pressure washer  
Perfect for all heavy-duty industrial and agricultural applications  
High flow rate and pressure  
Proven reliability



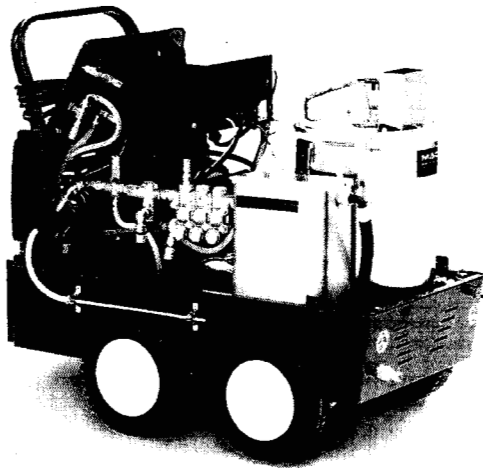
KEY SPECIFICATION



# MAC AVANT

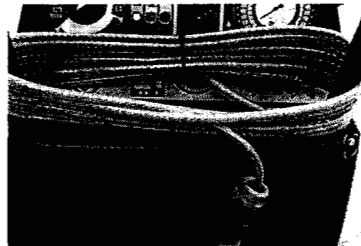
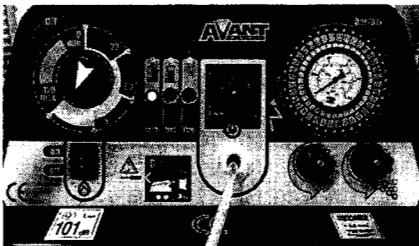


## HOT MOBILE PRESSURE WASHER



### STANDARD FEATURES

- Heavy duty steel chassis
- Stainless steel pump
- 4 large robust wheels for tough terrain
- Large 31 litre easy fill fuel tank with low level sensor
- Efficient M2 boiler system & double spiral coil
- High pressure chemical system
- Steam stage with low pressure steam valve
- ST66 chemical valve for improved calibration
- Professional Interpump with ceramic pistons
- Industrial 1450rpm 4 pole electric Nicolin motor
- Automatic stop/start system
- Bypass valve and safety valve
- Pressure gauge
- Burner control with flow switch and thermostat
- 24v low tension safety controls
- Low level fuel warning lamp with fuel shut off
- Main power on/off
- Including 10m high pressure hose, single lance and RL37 washgun with swivel



### OPTIONAL ACCESSORIES

- Stainless steel manual hose reel
- Stainless steel lance holder
- Frost protection with heater tube
- Flame failure and leak detection system
- 7 med chemical systems
- Remote control options
- Stainless steel break water tank
- Hour counter

Water Flow	12lt per minute	15lt per minute	21lt per minute	9lt per minute
Pressure	100bar, 1500psi	200bar, 3000psi	200bar, 3000psi	100bar, 1500psi
Motor Specification	3hp, 1450rpm	7.5hp, 1450rpm	10hp, 1450rpm	3hp, 1450rpm
Chemical	High Pressure	High Pressure	High Pressure	High Pressure
Shutdown System	Auto Stop/Start	Auto Stop/Start	Auto Stop/Start	Auto Stop/Start
Temperature	0-150°C	0-150°C	0-150°C	0-150°C
Power	240v	415v	415v	110v
Weight	120kg	130kg	140kg	120kg
Dimensions (h x w x d)	85 x 63 x 100cm	85 x 63 x 100cm	85 x 63 x 100cm	85 x 63 x 100cm

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**WASHMASTER**  
PRESSURE WASHERS

**MAC**  
PRESSURE WASHERS

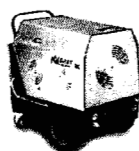
### WASHMASTER RANGE HOT MOBILE PRESSURE WASHERS



MAC AVANT / ZP



MAC AVANT GRP



MAC AVANT XL



MAC LUX



MAC DARTER



MAC DROP  
REVOLUTION



MAC DROP PRO  
& STANDARD



MAC COMPACT

## STAGE 2

### TABLE 3 - TECHNICAL EVALUATION

#### SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

#### INTRODUCTION

With reference to **Annex A to Schedule 5**, I can confirm that MAC International will purchase and maintain all items listed in the above **Annex A**.

These items are only part of a large stock holding of accessories and spare parts, stocked and supplied by MAC International.

I would like to refer back to **FIG.4 – Pages 35-37**, the MAC Avant full Spare Parts List for now and confirm that all of these items are stocked as a normal part of our business.

The process we use is driven by the need to supply a National Supply requirement of MAC products and parts to a network of National Distributors.

These parts are sourced from the OEM, as well as various support businesses to provide the best quality and best prices, whilst maintaining CE certification.

The sale of MAC equipment within our audited accounts is evidence and representative of the machines sold and subsequently supported. The company will supply these parts on a day-to-day basis to approximately 100 national distributors who are reselling the MAC product.

Should you adopt the parts schedule in **FIG.4 – Pages 35-37**, we will guarantee the parts supply for all of these parts and as an example please find below the CE certification for the MAC Avant – MAC1 machine in **FIG.16 – Page 61**, as well as electric motor – MOTOR1 3hp in **FIG.17 – Page 62** and the pump – W140M Pump in **FIG.18 – Page 63**.



**STAGE 2****TABLE 3 - TECHNICAL EVALUATION**

## SECTION 6 – PURCHASE OF EQUIPMENT &amp; ASSOCIATED ITEMS

**SUPPLY CHAIN MANAGEMENT*****Suppliers***

Supplier performance is controlled as part of our ISO; 9001 Quality Management System.

Quality Procedure RQP 07 Purchasing, Receipt and Stock Control details how suppliers are selected, the process for checking goods received and maintaining stock levels.

Spare parts are procured direct from the manufacturers or from established companies within the UK. The current suppliers have been used by the company for many years and have become Approved Suppliers through their ability to provide parts to the required quality level over a prolonged period of time.

If there becomes a requirement to utilise a new supplier, prior to their appointment they will be sent a Supplier Assessment Questionnaire. On receipt of the completed questionnaire, it will be reviewed to determine if the supplier has the required systems and processes in place. If acceptable, an initial order will be placed. The new supplier's performance will be assessed on speed of service and quality of product supplied. If acceptable, further orders may be placed. Continued good performance will result in them being added to the Approved Supplier list.

Supplier performance is constantly monitored. Any non-conformance is documented and goes through a process of identifying and implementing the corrective action and determining the preventive action to be applied to try and ensure the non-conformance does not re-occur. The supplier will be involved in the non-conformance process and asked how they will ensure their non-conformance does not re-occur.

Supplier's performance and any non-conformances raised are reviewed as part of the annual ISO 9001 Management Review process. Any supplier displaying the inability to perform to the required level will be contacted to discuss the situation. In extreme circumstances the supplier may be removed from the Approved Supplier List.

***Spare Parts***

The company holds a comprehensive range of spares to stock levels consistent with being able to meet the requirements of our MAC Service Centre network and MOD requirements. In virtually all cases, other than from the manufacturer, parts not in stock can be obtained overnight if required.

Through provision of these parts for well over 12 years, the company has ascertained usage levels that assist in determining stock levels. This knowledge assists the company in determining the quantities of parts to order from the manufacturer and the frequency of placing orders. This also helps in keeping down shipping costs and environmental impacts.

The MAC Service Centres maintain stock levels consistent with being able to meet their commitments. All Service Centre vehicles carry parts to complete routine service and repair tasks. These are supplemented by additional levels of this routine stock and more obscure stock being held at Service Centre main premises.

**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6.1 – DECLARATION OF CE CONFORMITY**

We declare that the MAC Avant hot mobile pressure washer conforms to the instructions of the 2006/42/CE machine directive and to the other following CE directives:

- Directive 92/42/CE
- Directive 2000/14/CE Acoustic Inputs
- Directive 2002/44/CE Vibrations
- Directive 2004/108/CE ex 89/336/CE Electromagnetic Compatibility
- Directive 2006/95/CE ex 73/23/CE Low Tension

For the verification of the conformity, the following norms have been consulted as described in the machines Instruction Manual provided, for the use and maintenance:

- EN 292-1
- EN 292-2
- EN 60204/1
- EN 60335-2-79
- EN 60335-10

The technical dossier for the machine is officially filed at [REDACTED].

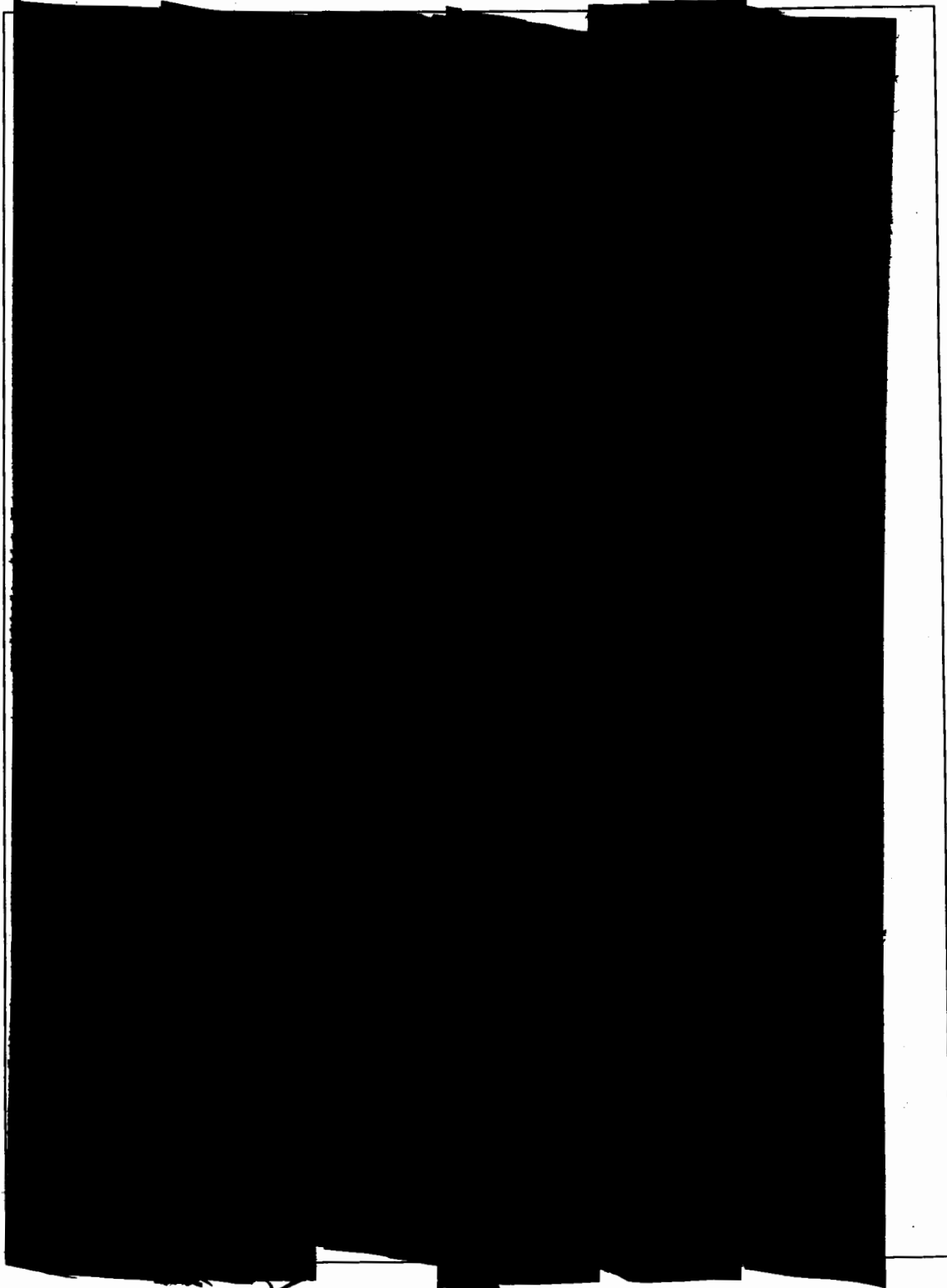
Please see a copy of the original Declaration of Conformity for CE on page 61. This is provided with each machine and officially stamped by [REDACTED].

**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS**

**FIG.16 – CE CERTIFICATION FOR MAC AVANT – MAC1**

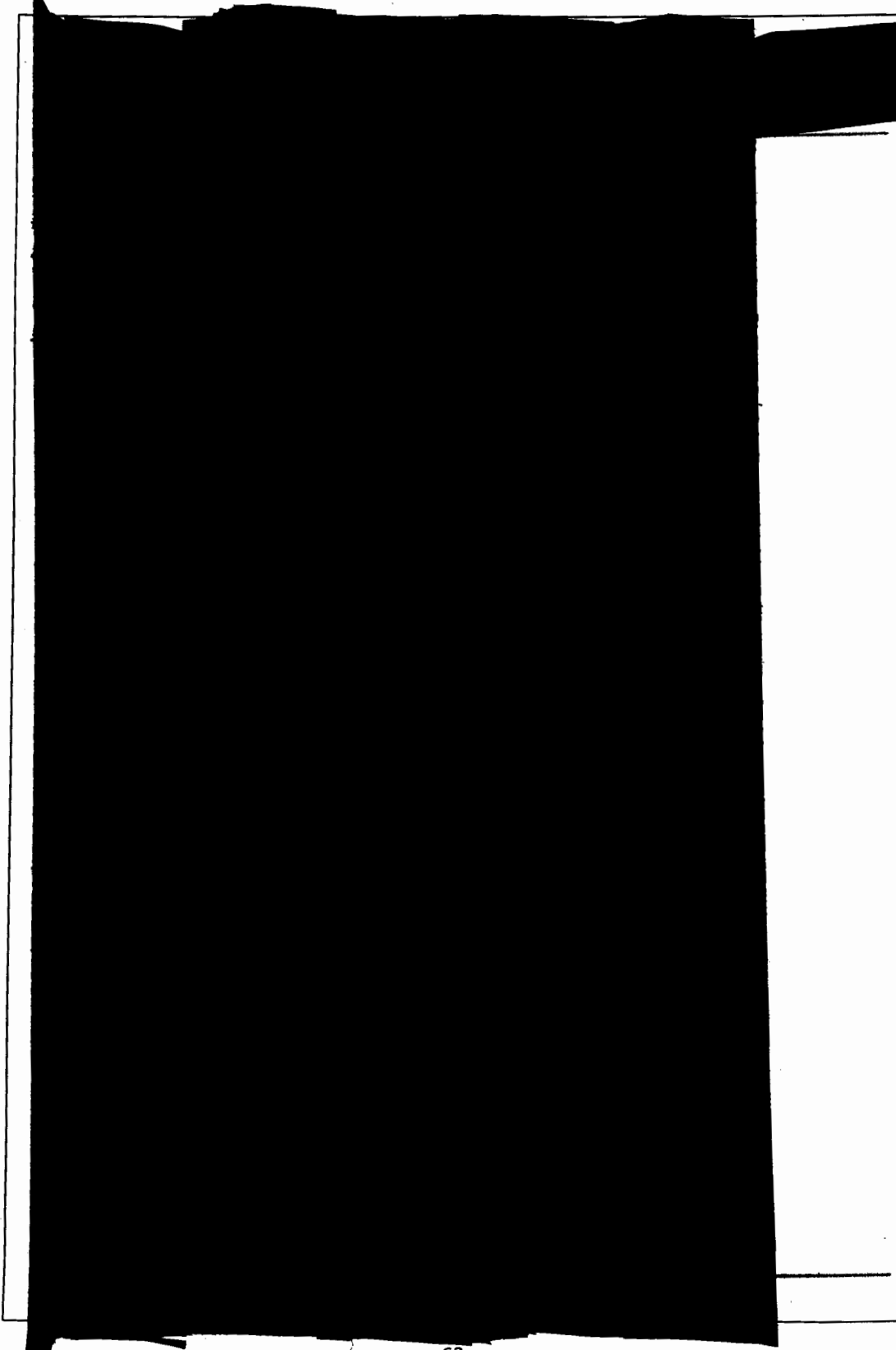


**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6 - PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS**

**FIG.17 - CE CERTIFICATION FOR ELECTRIC MOTOR**



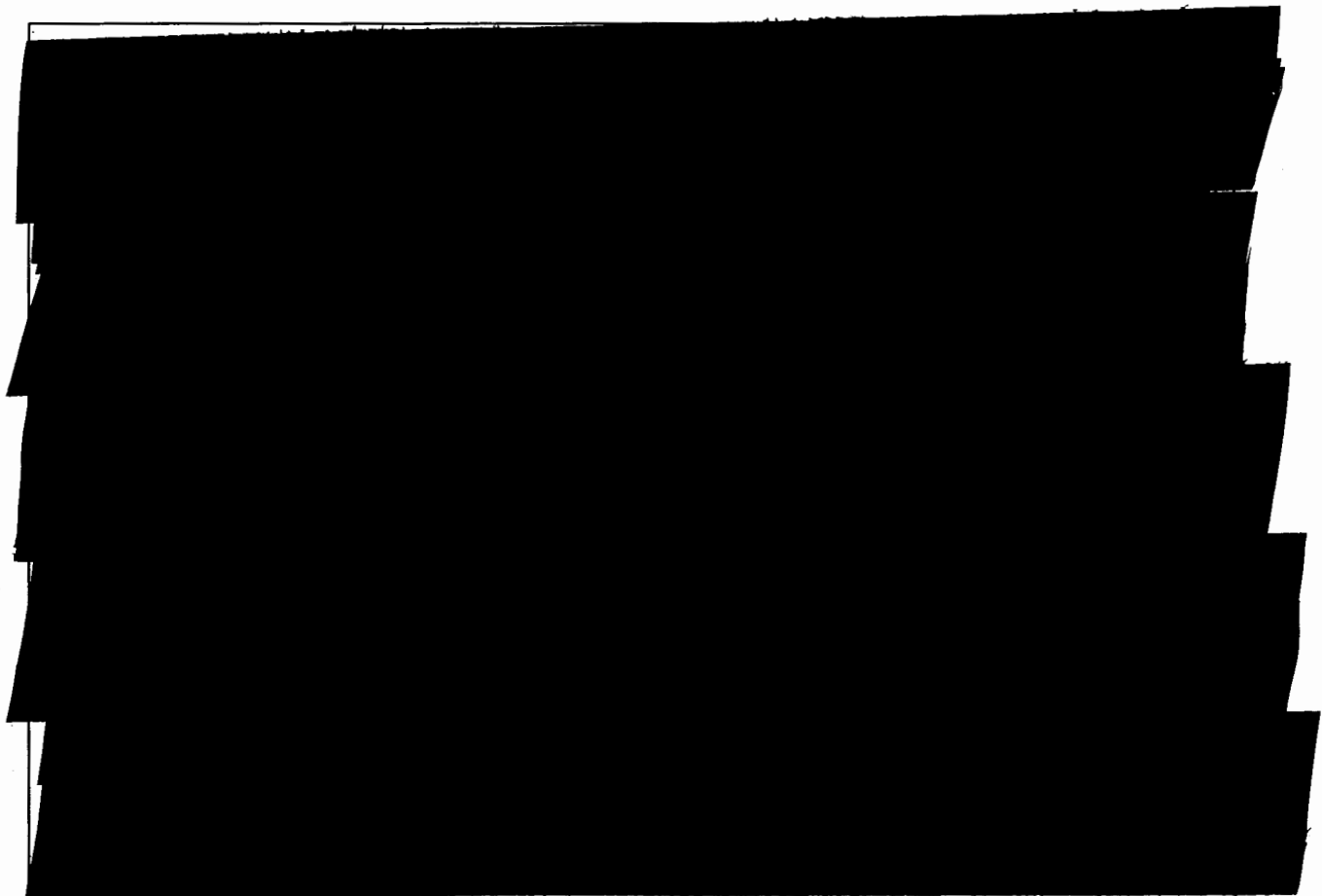


**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS**

**FIG.18 – CE CERTIFICATION FOR PUMP**



## STAGE 2

### TABLE 3 - TECHNICAL EVALUATION

#### SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

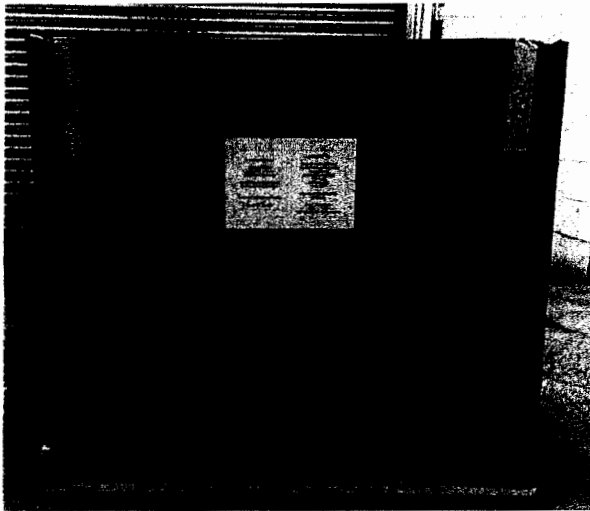
The actual MAC Avant – MAC1 pressure washer is stocked at the MAC HQ with scheduled ordering of the machine 3 months in advance from the OEM.

I can confirm that your requirements for the MAC Avant – MAC1 can be met within the timeframe given i.e. 8 weeks from request. I can also confirm that a log book and CE Certificate is supplied with each machine – please see **FIG.16 – Page 61**, as well as reference to the **Army Equipment Support Publication – 4940-W-205-201**, which has already been prepared.

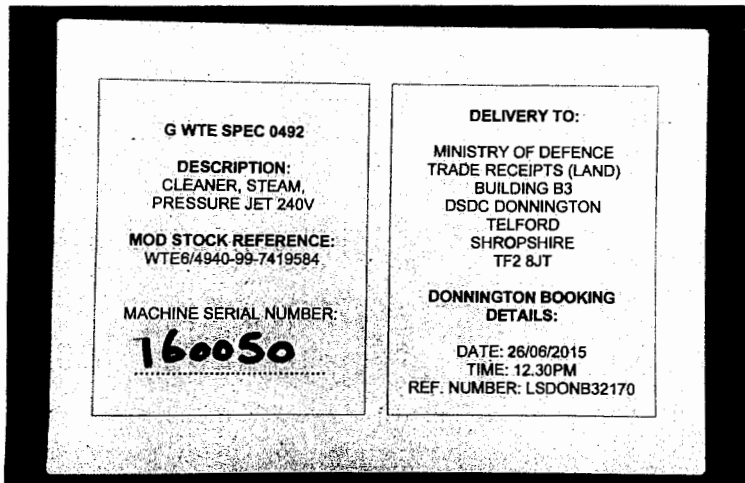
I can also confirm that as the contractor we would arrange and be responsible for the delivery of the Mobile Pressure Washers to any or all UK mainland units listed.

We have carried out this procedure many times and we are familiar with the booking in process at DSDC Donnington and Bicester and I can also confirm that the packing and palletising meets all UK standard and is completely appropriate for overseas transport.

**FIG.19 – Example of Palletised MAC Avant – MAC1 Ready for Shipment to DSDC Donnington.**



**FIG.20 – Example of Labelled MAC Avant – MAC1 Ready for Shipment to DSDC Donnington.**



**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS**

**PACKAGING, DELIVERIES & LABELLING**

We would like to confirm that we will follow all requirements for packaging, deliveries and labelling. Please see **FIG.19 – Page 64** to see an example of a labelled MAC Avant – MAC1 ready to be shipped to DSDC Donnington. This label will accompany the following:

**Distribution of Form 640 will be as follows:**

Red Copy	To Packer with Stores.
Yellow Copy	Retained by Consignor.
Brown Copy	To Packer by post, receipted by Packer and returned to support your claim for payment of stores. For the purposes of this Contract the Packer shall be the "Representative of the Authority" for Brown Form 640 Payment Approval.
Green Copy	To Packer by Post.
Mauve Copy	As specified in Box 6 of DEFCON 111.

In the event of any discrepancy/damage to the stores, the Packer will clearly identify these including quantities involved on the Brown, Green and Red copies.

On return of the receipted Brown MOD Form 640 the Contractor's claim for payment supported by the receipted Brown MOD Form 640 should be sent to the Bill Paying Authority nominated at DEFCON 111 Box 11.

Note: Bar Coding and Spares Price Labelling are not required on items sent for packaging:

- a. Packaging shall be in accordance with DEFCON 129. It is the responsibility of the Contractor to ensure that the packaging operation does not delay delivery. Articles are considered complete only when delivered to the consignee.
- b. The Contractor shall ensure that all items delivered direct to units within the UK have the following details marked on the outside packaging:
  - i. Demand number (which will be advised on the order).
  - ii. This Contract Number.
  - iii. Full delivery address including contact name.

**Direct Delivery to UK Units:**

Following the receipt of any orders for Direct Delivery to units, the Contractor shall liaise with the Unit (detailed on the demand) to confirm that the Unit is available to receive delivery. Deliveries will be to UK MOD Units. The contractor shall have a tracking system whereby a means of locating a delivery of a certain equipment i.e., by serial number, to a delivery address with date of delivery, MOD 640 number, Invoice Number (if required), DS&TE Contract Number and prices. The contractor is not required to track further movements of this equipment from the delivery date onwards.

**In the exceptional circumstances that the item requires delivery in to the depot the following delivery/collection times will apply. The consignee address will be clearly stated on the Defform 300AC.**

**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS**

**PACKAGING, DELIVERIES & LABELLING**

**Deliveries to DSDC Donnington**

Contact must be made to Receipts, Building B5 (FMW) on Telephone No's [REDACTED] or [REDACTED] (Mobile [REDACTED] or [REDACTED]) at least 24 hours before delivery is made. An appointment will be made for delivery/collection within the following normal opening times.

Monday – Thursday: [REDACTED]

Friday: [REDACTED]

It is a condition of this contract that in the event the Contractor does not adhere to the time of delivery notified by the authority, the department will not consider itself responsible for any subsequent claim by the Contractor, nor be held liable to meet any additional charges incurred by the Contractor through failure to deliver on the due date at the appointed time.

The following information must also be supplied at the point of booking:

- a. Name of Haulier/Supplier
- b. Number of packages/pallets/cartons
- c. Specialist MHE requirements: Yes/No
- d. Product number of items (NSN'S)

**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

**EQUIPMENT COMPLIANCE**

SECTION	COMPLIANCE
<p>6.2 – The contractor shall supply Hot Water Mobile Pressure Washers as requested by the Authority to the technical specification as detailed at Annex B to this Schedule and delivered to a location as directed by the Project Manager. The equipment is to be delivered within 8 weeks of the request, or as agreed with the Project Manager if delivery time is known to be over 8 weeks. The Authority must be informed immediately of any changes to delivery times.</p>	<p><b>COMPLIANT</b></p>
<p>6.3 – For each piece of new equipment the Contractor shall supply a Log Book containing a unique serial number for the machine and the due date of the first service. The Contractor shall provide a [REDACTED] warranty with all items of new equipment supplied.</p>	<p><b>COMPLIANT</b></p>
<p>6.4 – The Contractor is responsible for the delivery and transportation of Hot Water Mobile Pressure Washers to all UK Mainland Units including DSDC Bicester for onward transmission to overseas Units in accordance with Defence Instructions and Notices 04-098 (2014DIN04-098).</p>	<p><b>COMPLIANT</b></p>
<p>6.5 – The Contractor shall ensure that the items are appropriately packed to prevent damage while in transit, in accordance with JSP 886, Vol 7, Part 8.02 – Packaging, Handling, Storage and Transportation.</p>	<p><b>COMPLIANT</b></p>

## STAGE 2

### TABLE 3 - TECHNICAL EVALUATION

#### SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

#### INTRODUCTION TO THE MAC AVANT – MAC1

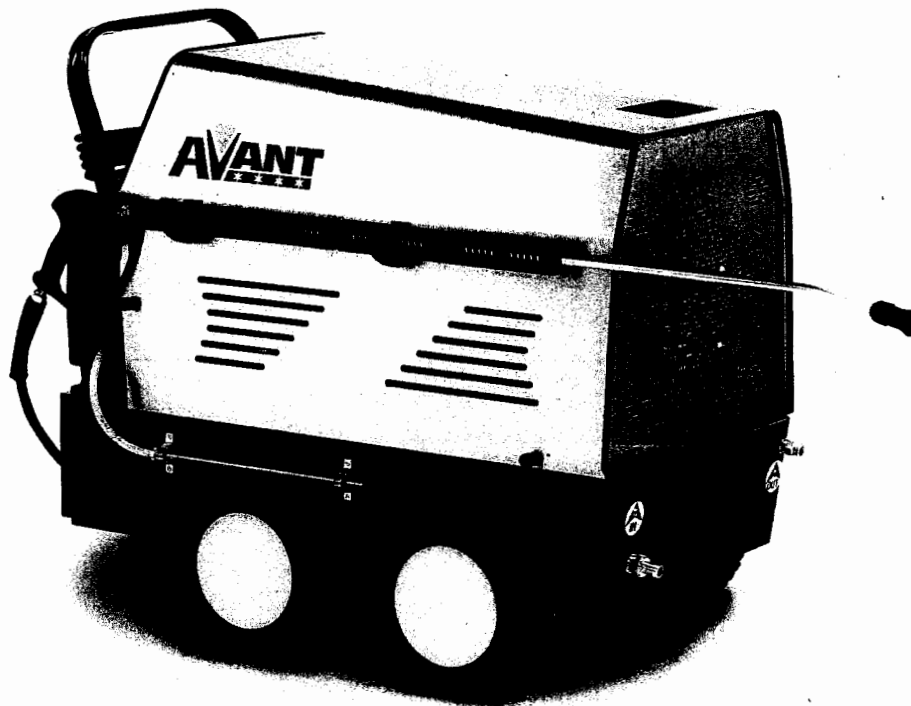
The MAC Avant hot mobile pressure washer is our flagship machine, which is fully compliant to the tender specification.

As you are aware the MAC Avant – MAC1 is the machine you have purchased under your contract number CWSS/1/4624 for the last 12 years.

However we have seen a decline in orders over the last 3 years, which has been balanced by your refurbishment programme.

We have chosen this machine not only for its compliance to your specification, but also due to its robust design and comprehensive range of features, making it unbeatable for heavy-duty use in harsh environments, such as MOD Static and Field workshops.

The MAC Avant has been designed to bring together robust components, with a steel chassis and lockable stainless steel cover and conforms to CE and DIN specifications. This combination of strength, security and reliability make the MAC Avant the perfect choice for this contract.



**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

**ANNEX B TO SCHEDULE 5**

**SPECIFICATION FOR MOBILE PRESSURE WASHER (HOT WATER)**

ITEM	SPECIFICATION	COMPLIANCE
Performance	Minimum pressure not to exceed 40bar	<b>COMPLIANT</b>
Performance	Maximum pressure not to exceed 105bar	<b>COMPLIANT</b>
Performance	Water flow 12lt per minute at maximum pressure	<b>COMPLIANT</b>
Performance	Water output temperature to be controllable from 70°-80°c on maximum pressure	<b>COMPLIANT</b>
Performance	Low pressure steam to temperature of 130°c	<b>COMPLIANT</b>
Electrical – 1a	The equipment is required to operate from a power supply of 240v volts, single phase at 50hz; maximum demand 13amps	<b>COMPLIANT</b>
Electrical – 1b	The electrical supply lead must be at least 5 metres in length and fitted with a plug complying with BS EN 60309, current capacity 16amps	<b>COMPLIANT</b>
Electrical – 1c	The electrical supply lead must conform to BS EN 50525. The lead shall be Steel Braided with a chemical resister outer sheath	<b>COMPLIANT</b>
Electrical – 1d	The equipment must have an electrical overload cut-out device to prevent damage to the electric motor	<b>COMPLIANT</b>
Mechanical – 2a	The equipment must have an externally adjustable detergent injection facility with a detergent quantity indicator	<b>COMPLIANT</b>
Mechanical – 2b	The equipment must have a pressure relief valve fitted to prevent over pressurisation within the equipment	<b>COMPLIANT</b>
Mechanical – 2c	Facia mounted pressure gauge must be fitted to show pressure at lance. The facia and control circuits shall be low voltage	<b>COMPLIANT</b>
Mechanical – 2d	Adjustable pressure regulator must be fitted to enable the output pressure to be adjustable at the control panel and adjustable from the outside	<b>COMPLIANT</b>
Mechanical – 2e	The equipment shall be fitted with a 12mm diameter quick release non-corrodible metallic coupling e.g. Brass/stainless steel for the water inlet hose	<b>COMPLIANT</b>
Mechanical – 2f	The equipment shall conform to BS EN 14453 with a type A air gap. The equipment shall be acceptable to the Water Supply Industry, satisfy the Water Bylaws of the Water Suppliers (the Water Undertakes) and tested and included in the Water Bylaws Scheme "Water Fittings and Materials Directory". A valid Water Bylaws Scheme approval certificate shall be issued with each piece of equipment.	<b>COMPLIANT</b>

Mechanical – 2g	The machine must be mounted on wheels that are suitable for field as well as static workshop use with a minimum ground clearance of 75mm	<b>COMPLIANT</b>
Mechanical – 2h	The lance must be fitted with a deadmans control and be at least 600mm in length	<b>COMPLIANT</b>
Mechanical – 2i	The machine must have at least 10 metres of flexible high pressure hose	<b>COMPLIANT</b>
Mechanical – 2j	One of each of the following inter-changeable nozzles must be supplied: 1) Fan spray 2) Jet spray	<b>COMPLIANT</b>
Mechanical – 2k	The equipment must display clearly the following notice: “THIS EQUIPMENT MUST ONLY BE OPERATED FROM A POWER SUPPLY POINT WHICH IS PROVIDED WITH A RESIDUAL CURRENT CIRCUIT DEVICE (CURRENT OPERATED EARTH LEAKAGE CIRCUIT BREAKER)” <ul style="list-style-type: none"> <li>- The notice should be of black lettering on a yellow background.</li> <li>- The lettering must be at least 15mm in height.</li> <li>- The notice should be manufactured from an engraved rigid plastic laminate or a similarly robust material.</li> </ul>	<b>COMPLIANT</b>
Mechanical – 2l	The fuel tank shall have a minimum capacity of 35lt	<b>COMPLIANT</b>
Equipment Comprises – 3a	Basic machine	<b>COMPLIANT</b>
Equipment Comprises – 3b	Operators manual and illustrated parts list	<b>COMPLIANT</b>
Equipment Comprises – 3c	Accessories; Lance with hose and choice of two nozzles, fan spray and jet spray. (fan spray only for RAF and AAC Units.)	<b>COMPLIANT</b>

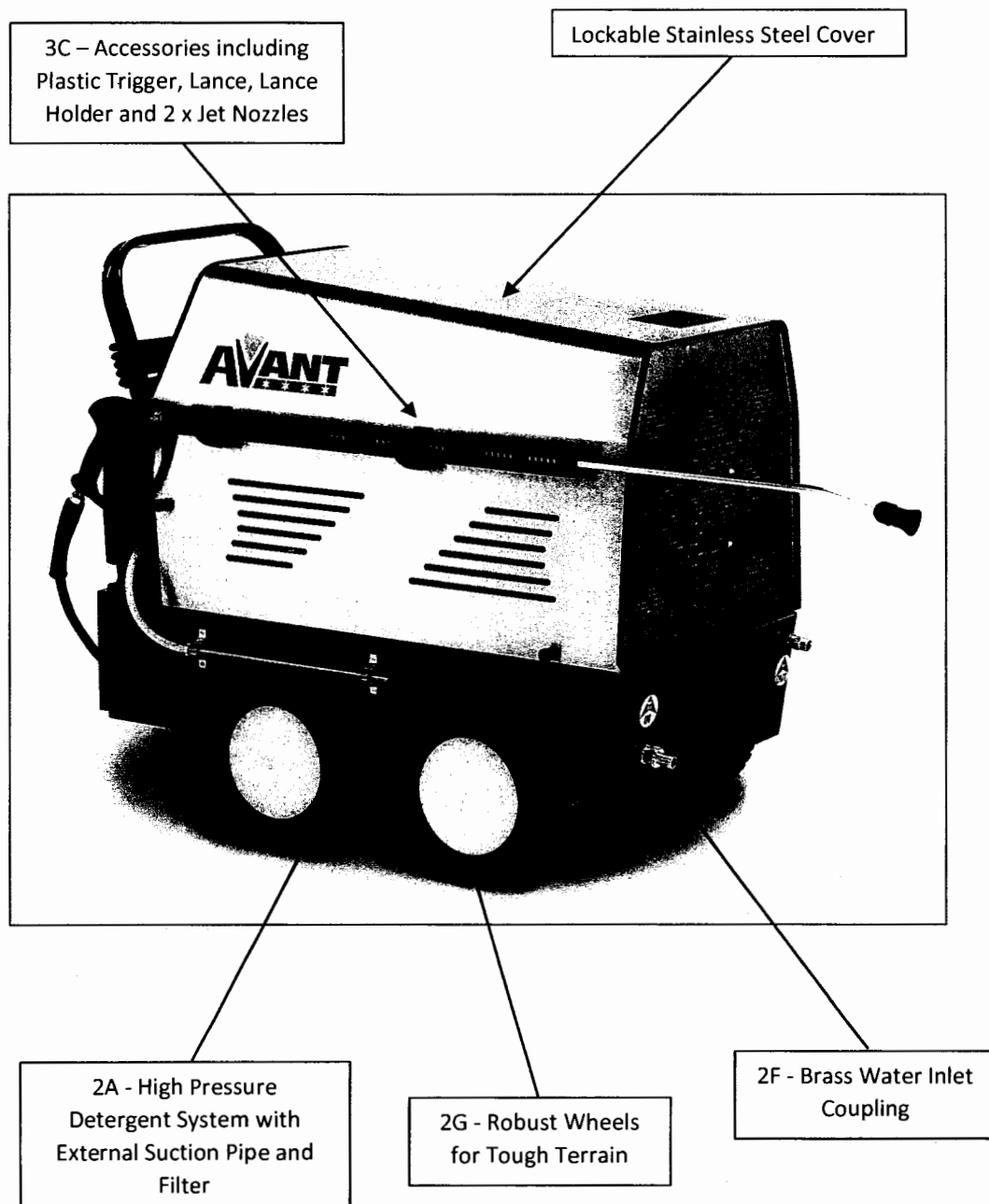


## STAGE 2

### TABLE 3 - TECHNICAL EVALUATION

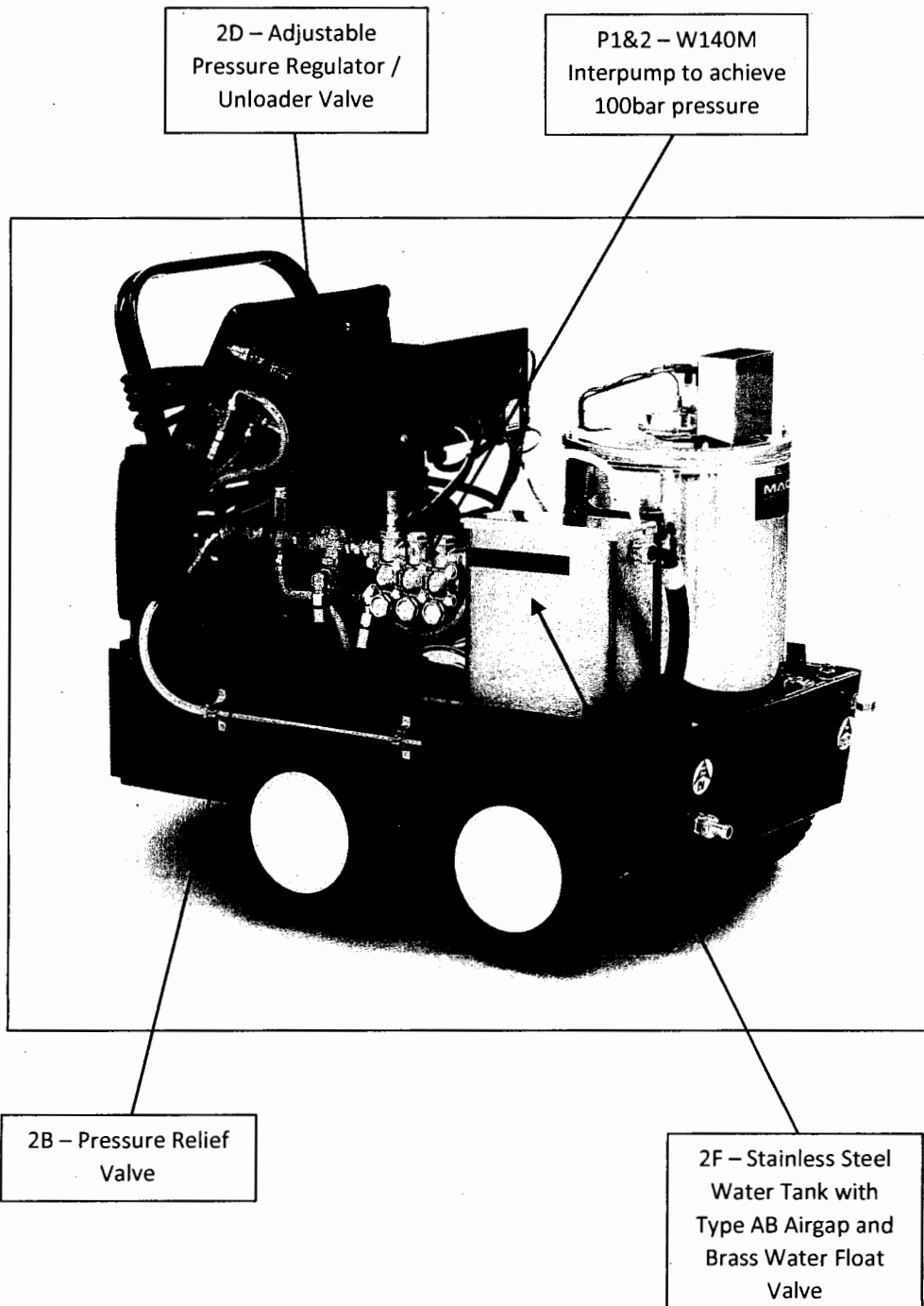
#### SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

#### FEATURES OF THE MAC AVANT



**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

**FEATURES OF THE MAC AVANT**

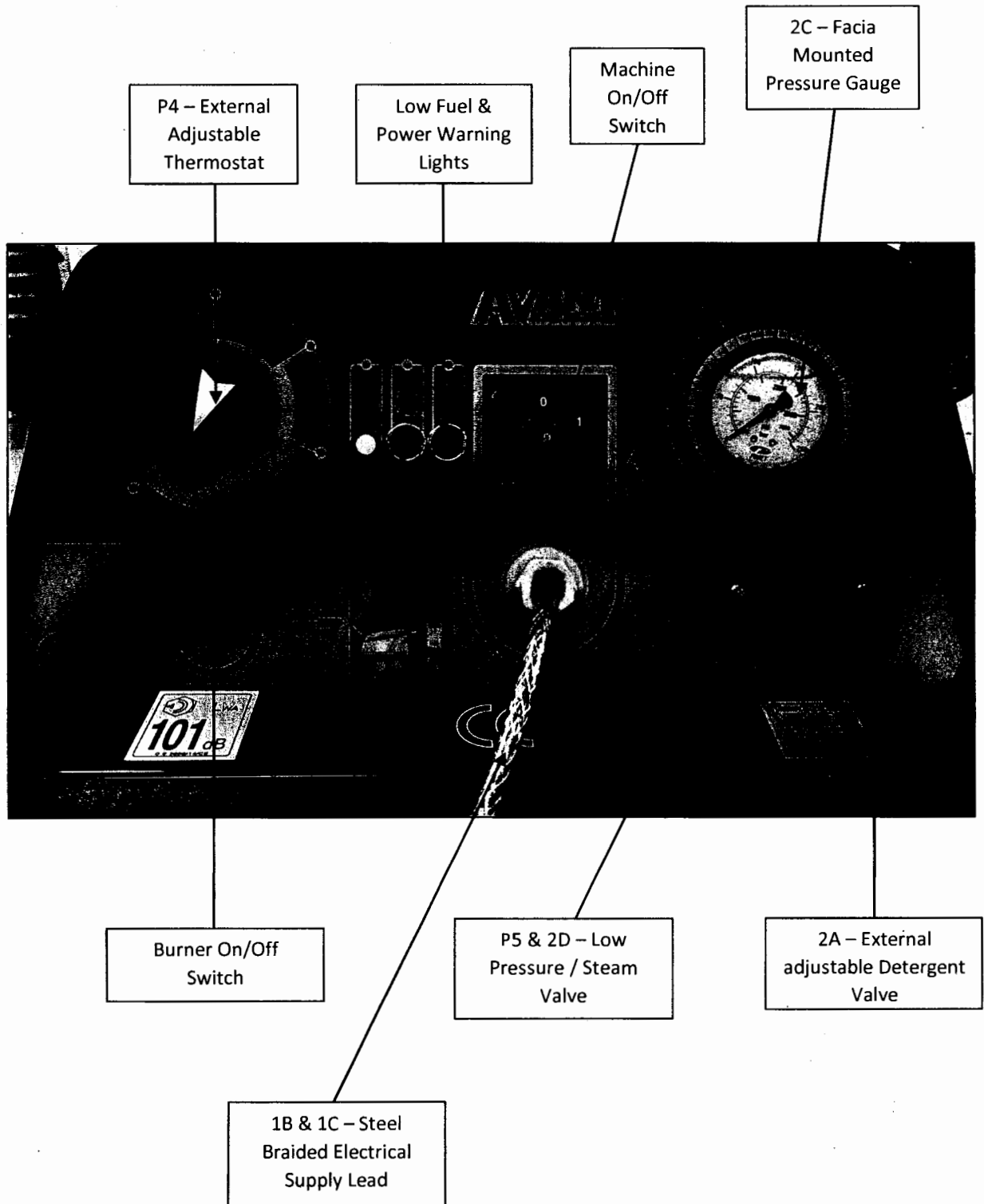


## STAGE 2

### TABLE 3 - TECHNICAL EVALUATION

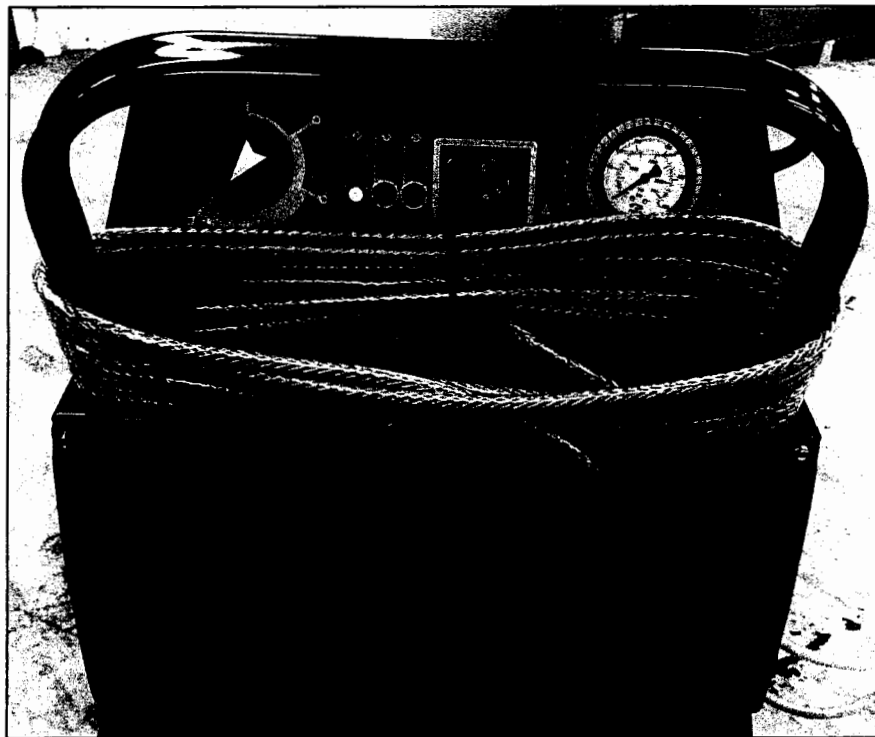
#### SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

#### FEATURES OF THE MAC AVANT



**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS

**FEATURES OF THE MAC AVANT**



1B & 1C – Steel Braided Electrical Supply Lead

1B – 16amp 3 pin Electric Plug



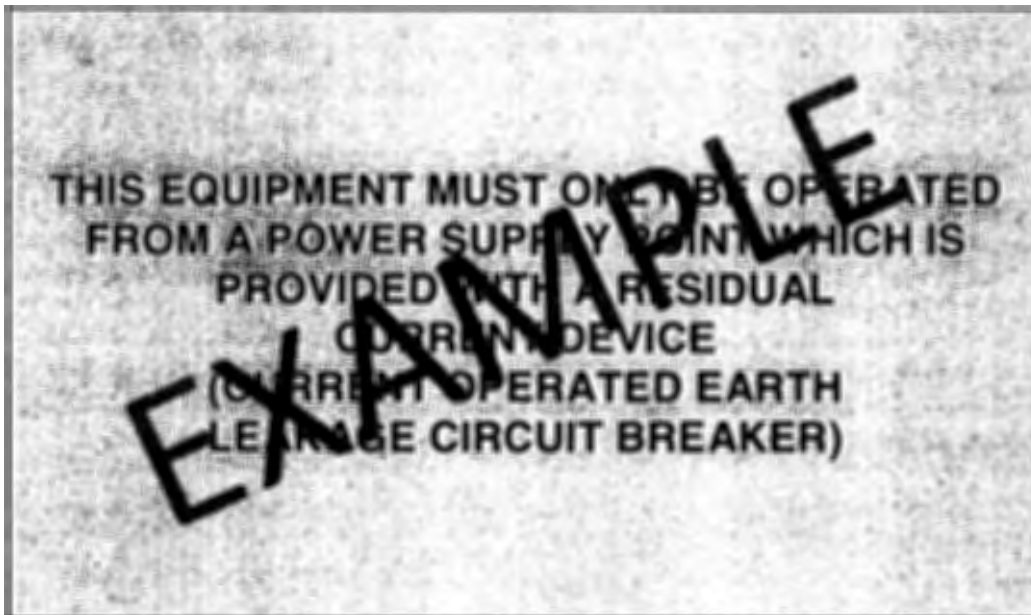
**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

**SECTION 6 – PURCHASE OF EQUIPMENT & ASSOCIATED ITEMS**

**6 – SECTION 3.K – EQUIPMENT SAFETY NOTICE**

As per Annex B to Schedule 5 we would like to confirm that the MAC Avant – MAC1 will be supplied with the following safety notice clearly displayed on the stainless steel cover:



We can confirm that this safety notice will be of the following specification:

- The notice should be of black lettering on a yellow background.
- The lettering must be at least 15mm in height.
- The notice should be manufactured from an engraved rigid plastic laminate or similar robust material.

**STAGE 2****TABLE 3 - TECHNICAL EVALUATION**

## SECTION 6 – PURCHASE OF EQUIPMENT &amp; ASSOCIATED ITEMS

**6.3 – MACHINE WARRANTY**

This product has been constructed to a high specification from quality materials. It is warranted against mechanical or electrical defect in materials and workmanship and in the event of breakdown within the warranty period the warranty procedure will be undertaken; subject to compliance with the following conditions, the defective part will be replaced or exchanged free of charge:

1. The machine shall at all times be installed and operated in accordance with the instruction book and manual.
2. The warranty will not apply to any failure resulting from misuse or negligence on the part of the user.
3. No liability will be accepted under this warranty for damage caused by the fitting or use of other genuine parts or where repair work has been carried out by any person other than a Recommended or Authorised MAC International Service Centre.
4. This warranty does not apply to hoses, cables or wires nor to the replacement of normal service and consumable items.
5. The warranty period shall be [REDACTED] from the date of purchase of the machine. This warranty period is for [REDACTED], provided that general normal working conditions prevail.
6. Liability under the warranty period is limited to the replacement value of the machine or part and liability for any consequential loss suffered or caused is hereby excluded.
7. The warranty shall not be applicable until the machine has been paid for in accordance with the terms of payment agreed at the time of sale.
8. This warranty is applicable only to the original purchaser and is not assignable or transferrable.

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN

Contents:

<b>SECTION</b>	<b>DESCRIPTION</b>
1.	<b>Project Description</b>
2.	<b>Acronyms, Abbreviations and Definitions</b>
3.	<b>Organization and Responsibilities</b>
4.	<b>Resource Management</b>
5.	<b>Quality Management System Activities</b>
6.	<b>Product Realization Activities</b>
7.	<b>Measurement, Analysis and improvement Activities</b>
8.	<b>NATO Additional Requirements</b>
9.	<b>Referenced Documents</b>

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN**1. Project Description**

This quality plan has been produced following the guidelines contained in AQAP 2105 (Edition 2). The quality plan covers the supply, servicing, repair and procurement of hot water mobile pressure washers and associated spares and consumables in accordance with Invitation to Tender Reference No. OIP/0033.

**2. Acronyms, Abbreviations and Definitions**

AQAP - Allied Quality Assurance Publication  
GQA – Government Quality Assurance  
GQAR – Government Quality Assurance Representative  
MOD – Ministry of Defence  
QMS – Quality Management System (of REACT Northern)

**3. Organization and Responsibilities****a) Managing Director**

The Managing Director is responsible for the overall operation of the company. He ensures that the general policy of the company is formulated and implemented including quality, environmental and health and safety policy.

**b) Management Representative**

Reporting to the Managing Director, they have the responsibility and authority to:

- Ensure that processes are established, implemented and maintained
- Report on the performance of the quality management system and this quality plan and the need for improvements
- Promote awareness of customer requirements
- Liaise with external parties such as customer representatives or auditors

**c) Contract Coordinator**

Reporting to the Managing Director, they are responsible for coordinating all aspects of the contract by:

- responding to requests for new equipment or servicing/repair work
- ensuring the relevant activities are carried out
- collation of documentation produced
- submission of all associated paperwork to the MOD

**d) REACT Service Manager / Service Centres**

Reporting to the Contract Coordinator, they are responsible for ensuring allocated service/repair work within their region is completed to the required quality standard and associated paperwork is submitted.

**e) REACT Stores Manager**

Reporting to the Managing Director, they are responsible for ensuring the continual availability of spare parts to meet the service / repair contract commitment.



---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN**f) Internal auditor**

Reporting to the Management Representative, they are responsible for carrying out internal audits of the company's Quality Management System and this contract's requirements to ascertain whether quality performance is being achieved and objectives are being met.

**g) QGAR**

The Managing Director, Management Representative and Contract Coordinator shall make themselves available for communications with the QGAR during normal working hours as required.

**4. Resource Management**

QMS Procedure RQP 08 documents how the company reviews its resource provision.

QMS Procedure RQP 14 documents how the company determines employee competence and training needs.

The Managing Director ensures there are sufficient resources made available. These include human, financial, skills, time, technology, and equipment resources.

On a regular basis the infrastructure of the company is reviewed for suitability and improvement. The facilities provided cover buildings and their contents, utilities, plant, transport and access. The reviews are to ensure measures are in place to continue meeting customer's requirements and maintain business continuity and include disaster recovery, supplier failure, equipment failure, transport failure and manpower failure.

On a regular basis the work environment is reviewed for suitability and improvement of physical factors and human (social and psychological) factors. Physical factors include space, temperature, noise, light, humidity, hazards, cleanliness, pollution, accessibility and physical stress.

**5. Quality Management System Activities**

The company has a QMS which meets the requirements of ISO9001:2008. The QMS is made up of a Quality Manual, 16 Procedures and a number of associated forms and documents. The QMS is used to ensure the company meets and where possible exceeds its quality obligations to its customers. The QMS activities associated with this contract will be covered by this documentation where applicable. Where specific contract processes or documentation are required, these will be produced or obtained and followed accordingly.

QMS Procedure RQP 15 documents how the company produces Objectives and Targets.

Employees are made aware of the QMS requirements during induction training.

Employees associated with the MOD contract will receive training on the requirements prior to becoming involved in any activities.

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN**5.1 Processes (General requirements)**

The QMS includes procedures, which deal with all quality aspects of the business from receiving an enquiry, through purchasing and control of processes (including sales of equipment and provision of servicing/repair activities), to monitoring and measuring performance. These procedures are easily adaptable to meet the requirement of this contract.

The company has also developed procedures applicable specifically to having met the requirements of the current contract for the past 12 years.

**5.2 Documentation requirements**

QMS Procedure RQP 01 documents how the company controls documentation and data associated with the QMS.

QMS procedure RQP 02 documents how the company controls records associated with the QMS including retention periods.

The QMS includes a Document Register which details the documents which make up the QMS, their issue date and revision status. This ensures that only the current documents are in use.

Contact specific documentation, including that issued by the MOD, will be controlled as part of the QMS but retained within its own folders, whether in paper or electronic format.

**6. Product Realization Activities**

Detailed within the following sub-clauses are the activities carried out to meet product realisation.

**6.1 Planning for product realization**

The tender documentation specifies the requirements for the supply of new equipment and the provision of service/repair activities. The company has reviewed this information to ensure it fully understands the requirements. As part of this review it has identified any process and documentation requirements and determined if it has the necessary resources required. It has also identified monitoring and measurement requirements, the need for test and inspection activities and any records to be produced and maintained.

**6.2 Customer related processes**

The company has determined the requirements specified by the customer, including delivery and post delivery activities.

It has identified statutory and regulatory requirements applicable to the product. The company has reviewed the requirements and has the ability to meet the defined requirements.

In practice, the company has been providing these services for the past twelve years as part of the current contract. If successful with this tender, it will determine if the systems in place are still current and implement any changes required.

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN

QMS Procedure RQP 16 documents how the company carries out internal and external communication. With regard to the contract, the company will attend meetings as requested and detailed in Section 10 of the Statement of Requirement. Direct communication can take place at any time between the GQAR and company representatives and can take the form of email or verbal (telephone or meetings).

QMS Procedure RQP 06 documents how the company deals with enquiries, order handling and contracts.

QMS procedure RQP 04 documents how the company deals with customers complaints.

**6.3 Design and development**

The pressure washer to be provided as part of this contract is the same one as supplied to the MOD during the current contract. The pressure washer construction follows traditional build configuration. When negotiations took place some 14 years ago, between the Manufacturer and REACT, the final product specification and build quality was decided upon. The first pressure washers received were put through rigorous tests by REACT until the final product was verified and validated as meeting the requirements of performance and quality build. This design was reviewed and modified to take into consideration MOD requirements. The design has not changed since, although operational changes have been introduced to improve performance and safety features.

Detail of the pressure washer is provided in other sections of the tender submission.

**6.4 Purchasing including control of sub-suppliers**

QMS Procedure RQP 07 documents how the company carries out purchasing activities and controls receipts and stock control.

The company has an excellent working relationship with the manufacturer, visiting their facilities on regular occasions. The manufacturer also has a UK representative who is in regular contact with REACT.

New pressure washers ordered are delivered direct from the manufacturer to REACT premises. On receipt the packaging is inspected. Any signs of damage will result in the packaging being removed and the pressure washer inspected. Damaged pressure washers are quarantined pending non-conformance procedures. The company carry out random sampling on batches of pressure washers received to determine conformity to requirements.

The company uses a selection of suppliers to provide spare parts. They have worked with the company for many years. All of the suppliers have been verified as part of the company QMS as being competent and appear on our Approved Suppliers list. Any new suppliers will be subject to assessment and performance capability prior to becoming approved. Spare parts are inspected on receipt for serviceability with damaged items being quarantined pending non-conformance procedures.

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN

Any damaged products are subject to our QMS non-conformance procedure, RQP 04, with the suppliers being involved in investigative actions. Supplier performance is reviewed at the company's QMS Management Review meeting.

Serviceable equipment and parts are placed in secure storage facilities and stock holding records adjusted accordingly.

**6.5 Product and service provisioning**

QMS Procedure RQP 11 documents how the company controls the sale of equipment.

QMS Procedure RQP 12 documents how the company controls service and repair activities.

All new pressure washers come with a certificate of conformity to applicable EEC directives. All washers have their own unique serial number to provide traceability. These numbers are referenced whenever orders are received and equipment dispatched.

Spare part identification is achieved by using the supplier, company or MOD part number as applicable. Whichever system is used, there is traceability back to the supplier.

Where service and repair of pressure washers is required, the company uses its own engineers or its UK network of service centres to complete the work. The service centres have been carrying out these activities for the full duration of the current contract and are fully conversant with MOD requirements. All completed paperwork is fed back to REACT for review and submission to MOD. Further detail is given within the tender documentation.

All washers and spare parts are stored in controlled conditions to prevent inadvertent or unauthorised use.

**6.6 Control of monitoring and measuring devices**

QMS Procedure RQP 09 documents how the company controls measuring devices.

The company uses electrical test meters and a portable appliance tester as part of its activities.

These are calibrated at pre-defined intervals and controlled by means of a register and individual record sheets. Calibration test sheets are retained with the record sheets.

**7. Measurement, Analysis and improvement Activities****7.1 Customer satisfaction**

Customer satisfaction is measured by repeat business, personal visits by company representatives, verbal and written feedback (both positive and negative) and through the analysis of complaints, returns and credits issued.

With regard to servicing and repair, the customer has the facility to comment on work carried out when completing the job sheet.

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN**7.2 Internal audit**

QMS procedure RQP 03 documents how the company completes internal audits.

Work associated with the MOD contract will be audited as part of this procedure and will look at the whole process from order receipt to delivery of the product or service.

**7.3 Certificate of conformity**

Each pressure washer supplied is accompanied by a certificate of conformity. An example of this certificate can be found within the tender documentation.

**7.4 Control of non-conforming product**

QMS Procedure RQP 04 documents how the company responds to nonconforming products and services.

Whenever a non-conformance is discovered or reported it is recorded on a Corrective Action Note. If the non-conformance refers to a product, it is quarantined to allow for investigation and prevent inadvertent use.

All non-conformances are evaluated and corrective action decided upon and implemented to resolve the non-conformance.

At management meetings non-conformances are evaluated and action to prevent recurrence decided upon.

A corrective action note log is utilised to allocate a unique reference number for each non-conformance and record brief details on each stage of the non-conformance. The reference number is used to identify all documentation pertaining to the non-conformance.

On a regular basis the non-conformances are reviewed to determine effectiveness. This also takes place at the QMS Management Review meeting.

**7.5 Analysis of data**

QMS Procedure RQP 10 documents how the company completes monitoring and measurement of its performance and analyses the data to demonstrate conformity to requirements and continually improve the effectiveness of the QMS.

QMS Procedure RQP 05 documents how the company carries out Management Reviews.

The data is provided through completing inspections and audits, documenting non-conformances and customer satisfaction, completing records, calibrating measuring equipment, measuring if objectives and targets are being met, reviewing supplier performance and completing management reviews.

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**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 7.1 – QUALITY PLAN

**7.6 Improvement**

The effectiveness of the QMS is continually improved through the use of a quality policy and quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

Corrective action and preventive action is taken as described in 7.4 above.

**8. NATO Additional Requirements**

The GQAR and/or acquirer will have access to the company representatives via email or direct contact by telephone. Should they wish to visit the company premises this can be achieved by prior arrangement.

The company will support the GQA activities by adopting MOD methodology and documentation wherever possible.

As described previously all pressure washers and associated parts are subject to inspection to ensure only acceptable products intended for delivery are released to the acquirer.

**9. Referenced Documents**

**9.1 Contractual documents**

The company will refer to other plans or their appropriate sections and quality related contractual documents in the Deliverable Quality plan when and if they become known.

**9.2 Supplier internal quality related documents**

The company has made reference to procedures and documents forming part of its Quality Management System throughout this Quality Plan and will utilise them in meeting the requirements of this contract if successful.

**9.3 Other documents**

Other relevant and contract related documents will be documented here should they become known on being successfully awarded the contract.

**9.4 Order of precedence**

The order of precedence of referenced documents and their relationship to the contract will be specified here when they become known after being successfully awarded the contract.

**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

SECTION 7.2 – QUALITY STANDARDS AND REQUIREMENTS

We would like to confirm that we will adhere to the following Quality Standards and Requirements:

STANDARD/CONDITION	GUIDANCE	COMPLIANCE
AQAP 2120 – Edition 3	NATO Quality Assurance Requirements	<b>COMPLIANT</b>
AQAP 2105 – Edition 2	NATO Requirements for Deliverable Quality Plans	<b>COMPLIANT</b>
DEF STAN 05-61	Quality Assurance Procedural Requirements: Part 1 – Issue 5 – Concessions Part 4, Issue 3 – Contractor Working Parties Amdt 1	<b>COMPLIANT</b>
DEF STAN 05-57 – Issue 6	Configuration Management of Defence Material	<b>COMPLIANT</b>
DEF STAN 05-135 – Issue 1	Avoidance of Counterfeit Material	<b>COMPLIANT</b>
AQAP 2009 – Edition 3	NATO Guidelines on the use of the AQAP 2000 Series	<b>COMPLIANT</b>
AQAP 2070 – Edition 3	NATO Mutual Government Quality Assurance (GQA) Process	<b>COMPLIANT</b>

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 8 - DECLARATION

SECTION 8.1

We can confirm that MAC International will be responsible for monitoring the Health, Safety and Environmental legislation compliance. We will identify and report on any risks which may impact on the current and future safe Through-Life Management of all contracted Hot Water Mobile Pressure Washers.

SECTION 8.2

We can confirm that MAC International will attend and prepare for any Annual Safety Case Meetings when required to do so, upon receiving authorisation from the Project Manager.



**STAGE 2****TABLE 3 - TECHNICAL EVALUATION****SECTION 8.3 – SAFETY & ENVIRONMENTAL MANAGEMENT PLAN****INTRODUCTION**

Under UK health and safety law, the Company has a duty of care to its employees, contractors, the general public and the wider environment. This duty includes an obligation to manage the health and safety risks associated with its operations. In accordance with general guidance provided by the Health and Safety Executive, the Company discharges this duty by ensuring that, in so far as risks are not judged to be unacceptable, they will be reduced to a level which is As Low As Reasonably Practicable (ALARP).

Under UK law, the Company has a duty of care to protect the Environment from pollution.

The Company will continually strive to meet the requirements of UK health and safety and environmental legislation identified as applicable to the company operations.

Safety and environmental matters are considered from the earliest stage in any contract and are used to influence all activities and products.

The Company accepts that Def Stan 00-56 sets requirements that enable the acquisition of systems that are compliant with both safety and environmental legislation and MOD safety and environmental policy and is achieved through the provision of evidence that the system is safe for its intended purpose through its life.

The Company agrees with the Def Stan definition of safe that addresses:

- a) fatality, physical or psychological injury or damage to the health of people, including MOD employees and the general public
- b) the damage to, or loss of products, services and/or systems, environmental damage elements, or the management of environmental issues where risk to life results.

The level of effort expended on safety and environmental management and the detail of the analysis is commensurate with the potential risk posed by meeting the contract (i.e. the risk that would be posed in the absence of mitigation), the complexity of the contract and the unfamiliarity of the circumstances involved, such that the resultant Safety Case is sufficient to demonstrate that the equipment and service provided is safe, so far as is reasonably practicable.

**Related Documents**

- Def Stan 00-56                      Safety Management Requirements for Defence Systems
- JSP 815                                Defence Environment and Safety Management
- White Book                          An Introduction to Safety Management in the MOD
- ISO 9001                                Quality Management System Requirements
- ISO 14001                                Environmental Management System Requirements
- OHSAS 18001                          Health and Safety Management Systems Requirements

**Definitions**

For the purpose of this document the definitions in Def Stan 00-56 Annex A shall apply.

## Abbreviations

- AESP Army Equipment Support Publication
- ALARP As Low As Reasonably Practicable
- Def Stan Defence Standard
- ISO International Organization for Standardization
- MOD Ministry of Defence
- PPE Personal Protective Equipment
- RCD Residual Current Device

## Safety Management System

The Company has established a safety management system based on the HSE publication HSG 65 Managing for Health and Safety.

It has also embraced the requirements of ISO 14001 Environmental Management Systems and OHSAS 18001 Health and Safety Management Systems. Where the requirements of these Standards are replicated within the ISO 9001 Quality Management System, procedures and processes within the latter are utilised. These include:

Document and data control  
Control of records  
Internal audits  
Control of non-conforming products and services  
Management review  
Resource management  
Monitoring and measurement  
Process control  
Communication

## Health and Safety Policy

The Company has implemented a Health and Safety Policy which comprises of four Sections as follows:

- Section 1 Policy Statement
- Section 2 Roles and Responsibilities
- Section 3 Arrangements
- Section 4 Policies

*Section 1* comprises of a single page document stating in general terms how the Company will address its health and safety obligations. The statement is signed by the Managing Director and dated.

*Section 2* details the company roles and responsibilities. It also details employee roles and responsibilities in the form of a chain of responsibility.

*Section 3* details the arrangements the Company has put in place to meet its obligations to protect the health, safety and welfare of its employees, contractors, the general public and others who may be exposed to risks through the Company activities.

*Section 4* details relevant Company policies associated with health and safety.

The Health and Safety Policy is reviewed on an annual basis.

The Company has also produced a single page Environmental Policy Statement signed by the Managing Director and dated.

### **Hazards and Aspects**

The Company has identified the health and safety hazards and risks and environmental aspects and impacts associated with its work activities and the requirements of this contract. Further detail is contained under Risk Management below.

### **Legislation**

The Company has identified all health, safety and environmental legislation applicable to its work activities and the requirements of this contract and holds the information within a legislation register. The requirements of this legislation have been addressed within the arrangements section of the Health and Safety Policy where applicable. The Company carries out monthly checks for new and amended legislation. Where these relate to the legislation identified as being applicable to the company, they are reviewed, any necessary changes are implemented and the information is brought to the attention of relevant individuals. Training requirements may also be identified at this point. The legislation register will also be updated to document the new or amended legislation.

### **Safety audits**

Safety elements associated with the receipt and delivery of equipment will be covered within the ISO 9001 Sales Process Control procedure audits and regular inspections of work activities.

Safety elements associated with servicing and repair carried out by the Company will be covered within the ISO 9001 Service Department Process Control procedure audits and by regular inspections of work activities.

The safety and serviceability of equipment undergoing servicing and repair off site is determined by a final inspection on completion of the work. Job sheets are completed to record this fact and the client is asked to sign the sheet as acceptance of work completed satisfactorily. The Job Sheets are monitored for compliance on detail recorded.

Risk assessments and legislation registers will be audited on an annual basis to determine continued applicability and relevance. This does not detract from them being amended at any time where change requirements are identified.

A Management Review will be carried out on an annual basis to determine quality, performance and safety requirements have been met.

Reports will be produced for all of the above activities.

### **Enforcement Notices**

The Company has received no Enforcement Notices from the Health and Safety Executive in the past 10 years.

### **Company Safety Organisation**

For the purposes of this contract the following roles and responsibilities will apply.

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**Contract Manager**

The Company will nominate a contract manager who has the authority to act on behalf of the Company. The contract manager will be the primary point of contact between the Company and the Duty Holder and will be responsible for meeting the requirements of Def Stan 00-56.

**Contract Safety Manager**

The Company will appoint a contract safety manager who has the authority to manage safety on the contract on behalf of the contract manager. The contract safety manager shall be the primary point of contact for safety issues.

**Risk Management**

The following is based on the assumption that the pressure washer is only used to carry out tasks for which it was designed and is only operated on level surfaces.

The Company has identified the hazards associated with its work activities. These have been documented on a hazards matrix under headings of equipment based, activity based, area based and general.

The identified hazards have been analysed using a 5 x 5 matrix of likelihood and severity of injury to provide a risk rating and determine those, which are significant. The significant hazards (those scoring 12 or more) are addressed by producing risk assessments.

The risk assessments detail the potential hazards, the harm they could cause and to whom, and the control measures to be implemented. There is also risk-rating tables showing the risk rating score before and after controls are implemented.

The control measures are a combination of mitigation strategies designed to reduce risk and enable risk acceptance to take place. Mitigation strategies are selected according to the following precedence:

- a. Eliminate the hazard.
- b. Reduce the risk associated with the hazard by implementing engineered mitigation strategies.
- c. Reduce the risk associated with the hazard by implementing mitigation strategies based on human factors.

Company employees are consulted on the content of the risk assessments. Once the content is agreed, they are brought to the attention of all employees associated with the work activities they are applicable to. Safety audits will determine if the risk assessment requirements are being implemented and adhered to.

## **Safety Case**

This Safety Case covers the Supply, Servicing, Repair and Procurement of Mobile Hot Pressure Washers.

If successful with this tender, the MAC Avant pressure washer to be supplied is the same one provided over the past 12 years under the current contract.

AESP 4940-W-205-201, Cleaner, Steam, Pressure Jet Operating Information was produced in December 2006 to cover the current pressure washer being supplied and is relevant to the new contract requirements.

There is no intention to modify the pressure washer with regard to its design or component parts during the duration of the new contract.

With regard to service and repair, the Service Centre network currently in place will continue to maintain the equipment throughout the UK. The Servicing and Repair sections of this tender submission give in depth information on how these activities are currently carried out and controlled or will be as part of the new contract.

The current pressure washer has proved itself to be very reliable and safe in use while meeting the specification requirements on performance and quality build. There is no change in the specification for the new contract to the current contract.

The Risk Management process has been completed as detailed above. It was applicable to the current pressure washer and will remain to be applicable.

As a result of the Risk Management process the following risks were identified as being significant to the pressure washer and therefore relevant to this tender:

- a) Electric shock
- b) Fire / explosion / risk of burns
- c) Fumes
- d) Personal injury
- e) Presence of COSHH materials
- f) Pressure systems

The AESP contains many warnings and cautions applicable to the operation of the equipment and users must adhere to them at all times.

As a result of the identified risks, the following measures are incorporated into the pressure washer, its operation and associated documentation:

### **Electric shock**

There is always a risk of electric shock where electricity and water are in close proximity to each other or an individual could come into contact with electrical equipment.

- The pressure washer is supplied with 240v single phase braided electrical supply cable and 16A plug as required by the specification and it is recommended in the AESP that it is connected to a RCD or other suitable protective device.
- The 240v single-phase electrical supply cable passes through a step down transformer reducing it to 24v to operate components within the pressure washer, as required by the specification.
- The AESP states that the pressure washer should not be operated with its cover removed and water should never be directed at the pressure washer when it is in operation.

- The AESP states that the pressure washer power supply is disconnected when not in use, when carrying out maintenance tasks or replenishing the diesel fuel tank.
- The AESP states that no attempt is to be made to carry out a temporary repair to the pressure washer.

### **Fire / explosion / risk of burns**

In addition to the risk of fire from the points mentioned under electric shock, the burner unit exhaust vent becomes hot during operation.

- The AESP states that personnel must remain clear of the exhaust at all times and maintenance should not be carried out on the pressure washer until sufficient time has been allowed for the heated components to cool.
- The AESP states that the pressure washer must not be operated in potentially flammable or explosive conditions.
- The AESP states that the burner unit exhaust vent must remain free from obstructions at all times

### **Fumes**

Fumes can be emitted from the burner unit exhaust vent on start-up or during operation, especially when regular maintenance is not taking place.

- The AESP states that the pressure washer must be operated in well-ventilated areas only.

### **Personal injury**

- The AESP states that the lance handgrip must be held firmly when operating the trigger due to the recoil action of the lance.
- The AESP states that personnel must remain clear of the water jet at all times whilst in operation.
- The AESP states that the handgrip trigger safety catch must be applied when not in use to prevent accidental operation of the jet.
- The AESP states that personnel must wear appropriate PPE when operating the pressure washer and carrying out maintenance activities.

### **Presence of COSHH materials**

The pressure washer is supplied without diesel fuel or chemical being present. Pump oil is contained within the pump assembly.

- The AESP states that PPE is to be worn when carrying out maintenance activities involving diesel fuel oil and chemical detergents.
- Product data sheets should be referred to before coming into contact with COSHH materials.
- There are no hazardous materials contained within the pressure washer and its components

## Pressure systems

- The boiler unit is fitted with a stainless steel coil. This coil is designed to give improved resistance to corrosion. Corrosion can lead to the coil splitting or developing pinholes which would allow the water to be released under pressure inside the pressure washer.
- The pressure washer is fitted with a number of safety devices. These devices are designed to prevent damage to or failure of the pressure system components. The safety devices are:
  - **Flow switch** – this switch is designed to protect the boiler coil by shutting down the pressure washer if it detects no water flow within the pressure washer.
  - **Safety valve** – used to control the maximum pressure the pressure washer will operate at. If this is exceeded the valve will operate and release the excess pressure. Used in conjunction with the unloader valve.
  - **Unloader valve** – an adjustable valve used to set the maximum pressure the pressure washer will operate at. If this is exceeded the valve will operate and release the excess pressure.
  - **Pressure gauge and Pressure reduction valve** – The pressure gauge indicates the water pressure after it has left the pump and the pressure reduction valve allows for adjustment of this pressure.
- The pressure washer pump has a sight-glass and dipstick fitted to check and maintain the correct oil level within the pump. This should ensure the pump does not seize up and overheat during use.
- The AESP states that system pressure must be dissipated before any maintenance activity is carried out or when not in use.

## Waste

Waste materials associated with the supply of equipment are limited to cardboard packaging and wooden pallets, both designed to protect the equipment during transit. Both of these materials are readily recyclable.

Any waste materials generated through the service and repair of equipment will be removed from site and recycled through the company or Service Centre facilities.

## End of life

When the pressure washer reaches the end of its life with regard being able to perform the tasks it was built for, it may be scrapped through normal waste disposal channels. The fuel tank will need emptying prior to disposal.

## Conclusion

The Company believes that the Safety Case provides a compelling, comprehensible and valid case that the product is safe for a given application in a given environment provided that the above is adhered to.

## DEF STAN 00-56 REQUIREMENTS

**The following are extracts from Def Stan 00-56 and are declarations by the Company that it will meet all clause requirements, where they are applicable to the contract.**

## **6. Safety Management System**

The Company will operate a Safety Management System that defines the framework for the Company's organisation to direct, control and monitor its safety management activities.

### **1. Safety Management Plan**

The Company will define and implement a coherent approach to management of all safety-relevant activities, throughout the life of the Contract and document their approach in a Safety Management Plan.

The Company will identify civil, open or other standards, or good practice, where they are used in full or partial fulfilment of the requirements of this Standard, and document the means by which any differences to this Standard will be resolved.

### **2. Agreement**

The Company will agree the Safety Management Plan with the MOD.

### **3. Review and Update**

The Company will review and update the Safety Management Plan to reflect changes throughout the life of the Contract.

### **4. Progress Reports**

The Company will report progress against the Safety Management Plan to all stakeholders as identified in the Safety Management Plan, and shall report on any necessary actions to correct deviations from the Safety Management Plan.

## **7. General Requirements**

The general requirements deal with the broad legislative and contractual context for the core safety management and safety engineering activities covered in Def Stan 00-56.

Detail of compliance is contained within the remainder of this document or will be added as the contract progresses.

### **1. Deviation from Requirements**

Any deviations from the requirements of Def Stan 00-56 shall be formally agreed between the MOD and the Company prior to their implementation, and documented in the Safety Management Plan.

### **2. Legislation, Regulations, Standards and Policy**

- The Company has identified and documented all relevant safety legislation, regulations and standards applicable to this tender.
- The Company will work with the MOD to identify and agree relevant MOD policy appropriate to this tender.
- The Company will agree with the MOD, all legislation, regulations and standards applicable to this tender

### **3. Sub-Contracting**



Where work is sub-contracted, the Company will ensure and provide assurance that the relevant requirements of this Standard are met throughout the supply chain.

#### **4. Multiple Deliverables**

Where there are multiple deliverable products, services and/or systems, the Company will apply the clauses of Def Stan 00-56 relevant to each element, grouping common elements where appropriate, and document the approach adopted in the Safety Management Plan.

#### **5. Information Management**

- The Company will provide the MOD with visibility of the safety engineering, support and safety management activities throughout the life of the Contract.
- The Company will define and agree with MOD an information set which is sufficient to enable all safety relevant design and safety analysis activities to be reviewed and repeated.
- The Company will ensure that the information set is kept up to date as the design and analysis evolves, and that it is managed in a suitable configuration management framework.
- The Company will maintain consistency between the information set and the configuration of deliverable products, services and / or systems.
- The Company will preserve the information set for the period or periods specified in the Contract.
- The Company will ensure that the information set remains accessible as techniques, methodologies and tools change, through the life of the Contract.
- The Company will pass information to the MOD, Regulators and any other organisations identified in the Contract, where that information is necessary for other parties to be able to fulfil their safety responsibilities with regard to the deliverable, or interfacing or interacting products, services and / or systems.

#### **6. Documentary Deliverables**

The Company will produce documentary deliverables relevant to safety, including interim versions, as Contracted.

The Company will agree with the MOD the format and content for all Contracted safety-related deliverables in the scope of supply and document this information in this Plan.

#### **7. Agreement of Deliverables**

The Company will agree with the MOD, the products, services and / or systems and safety-related documentation to be delivered and record this information in the Safety Management Plan.

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## **8. Roles and Responsibilities**

### **1. Safety Organisation**

The Company will define the roles and responsibilities of those individuals responsible for safety within the scope of contract and document them in the Safety Management Plan.

The Company will identify the normal point of contact for safety matters within the safety organisation.

The Company will demonstrate how responsibility is delegated to ensure safety is treated with appropriate authority within the organisation and on the Contract.

### **2. Safety Committee**

- The Company will contribute to Safety Committees and other liaison activities to ensure effective coordination of safety with the MOD and other stakeholders.
- The Company will provide visibility of the information set to the Safety Committee to enable it to oversee safety management, safety engineering and safety-related support activities.
- The Company will support the Safety Committee in recommending, endorsing or providing guidance on issues with a potential safety impact and in assuring the results of work, within the scope of analysis, either directly or through subsidiary committees.
- The Company will support the Safety Committee in any additional roles/tasks as agreed with the MOD and recorded in the Safety Management Plan.

### **3. Company Safety Audit Independence**

The Company will ensure that its Safety Auditors are independent from those areas within the Company organisation, or any Sub-Contractors, that are subject to Company safety audit.

### **4. Competencies**

The Company will ensure that all safety-relevant tasks within their scope of contract are carried out and managed by individuals, teams or organisations that are competent to perform those tasks.

## **8. Interfaces**

### **1. Organisational Interfaces**

The Company will cooperate, and coordinate safety activities, with all relevant organisations identified as part of this contract.

## **2. Technical Interfaces**

When applicable:

- a) the Company will record, as part of the information set, all assumptions and information necessary to enable safe integration or interoperation with other products, services and/or systems, including in a system of systems.
- b) the Company will identify and record, as part of the information set, their assumptions about any known interfacing or interacting products, services and/or systems, whether extant or planned, to enable them to carry out safety-related activities within the scope of contract.
- c) the Company will record, as part of the information set, assumptions which other organisations are entitled to make about their deliverable products, services and/or systems.

## **3. External Interacting Interfaces**

When applicable:

- a) The Contractor shall assess information provided by the MOD or other Contractors for interacting products, services and / or systems and
- b) take steps to resolve any inconsistencies in the assumptions made at interfaces, in discussion with the MOD if necessary.

## **9. Safety Audits**

### **1. Audits and Reports**

The Company will carry out safety audits as specified in the Safety Management Plan, to assure the implementation of the Safety Management Plan.

A Safety Audit Report shall be produced, following each safety audit, which fully describes the findings of the safety audit.

### **2. Independent Safety Audit**

The Company will allow an Independent Safety Auditor, if one is appointed, reasonable access to the information set.

### **3. Remedial Action**

The Company will identify and implement timely remedial actions to rectify any agreed non-conformities or other issues found in safety audits.

## 10. Safety Requirements, Hazard and Risk Analysis

### 1. Safety Requirements

The Company will clearly identify, record and track Safety Requirements throughout the Contract.

The Company will document the process for identifying, recording and tracking Safety Requirements in the Safety Management Plan.

The Company will identify and record Derived Safety Requirements resulting from MOD policy, regulations and standards appropriate to the scope of supply and scope of analysis, addressing the domain and the technology used, relevant to the Contract.

The Company will identify and record all Derived Safety Requirements arising from safety engineering and safety analysis activities.

The Company will identify and record Safety Requirements to ensure Design Integrity.

### 2. Safety Requirements Management

The Company will maintain records to show traceability between each Safety Requirement, the source of the requirements including safety analysis and mitigation for hazards or potential accidents.

### 3. Hazards and Accidents

The Company will identify all hazards and associated potential accidents, from all credible causes, within the scope of analysis.

### 4. Hazard Tracking

The Company will ensure that the status of the control of all hazards is visible throughout the Contract. The Contractor will implement a Hazard Log. The Company will ensure that Hazard Log Reports are delivered as defined in the Safety Management Plan.

### 5. Design for Safety

The Company will undertake the design of the products and services to meet all Safety Requirements.

- The Company will identify mitigation strategies to minimise safety risk and meet Safety Requirements.
- The Company will select and implement a combination of mitigation strategies for hazards or failure modes that contribute to a hazard, according to the following precedence:
  - a) Elimination.
  - b) Reduce the Risk to Life by engineering means.
  - c) Reduce the Risk to Life by means based on human factors, incorporating requirements from Defence Standards, as appropriate.

- The Company will demonstrate the effectiveness of the process for identifying and selecting mitigation strategies, and shall record the rationale, including the application of the ALARP principle, for the selection of each mitigation strategy in the information set.
- The Company will manage identified mitigation strategies through Derived Safety Requirements, taking into account design decisions and any potential shortfalls in meeting Top Level Safety Requirements.

## **6. Safety Analysis**

The Company will carry out, using processes as defined in the Safety Management Plan, safety analysis to identify how failures or defects in the design might contribute to hazards or accidents.

The Company will ensure that safety analysis covers all technologies, applicable to the products and services, and is carried out through the design decomposition to a sufficient level of detail to address all credible causes of hazards, accidents or failure modes that contribute to a hazard or accident

## **7. Failure Modes**

The Company will identify potential failure modes, from all credible causes, which might contribute to a hazard in the product or service, or in any known interfacing or interacting product, service or system, whether extant or planned.

The Company will ensure that the status of control of all identified failure modes that contribute to a hazard is visible throughout the Contract.

The Company will include, in the information set, information about the identified failure modes.

The Company will include in the information set safety summary, information on the status of identified failure modes.

The Company will estimate the likelihood of occurrence and opportunities for mitigation for all identified failure modes that contribute to a hazard and record the results in the information set.

## **8. Risk Estimation**

The Company will carry out risk estimation to determine systematically the severity of the harm and the likelihood of occurrence for all identified hazards and accidents, utilising the results of the hazard analysis and safety analysis and record the results in the Hazard Log.

## **9. Risk and Compliance Evaluation**

The Company will evaluate Risk to Life, for all identified hazards and accidents, and compliance with relevant legislation, standards, regulations and requirements derived from MOD Policy, as defined in the Safety Management Plan and record the results in the information set.

## **10. Satisfaction of Requirements**

The Company will carry out safety and systems engineering activities, including but not limited to test, to provide evidence that all Safety Requirements, including Derived Safety Requirements, have been met.

The Company will undertake systems engineering activities, which are capable of detecting counter-evidence.

## **12. Health Monitoring and Reporting System**

There is no requirement to implement a health monitoring and reporting system as part of this contract.

## **13. Safety Reporting**

### **1. Information Set Safety Summary**

No system is being supplied under this contract; this clause is therefore not applicable.

### **2. Safety Case**

The Company will produce a Safety Case for the product and services as defined in the Safety Management Plan.

The Company has ensured that the Safety Case consists of a structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that the product and services is safe for a given application in a given environment.

The Company will ensure that the evidence for the Safety Case is drawn from the information set.

The Company has addressed the life of the product as defined in the Safety Management Plan.

The Company will ensure that the Safety Case identifies how to address any residual shortfalls in meeting Safety Requirements.

The Company will provide evidence to demonstrate the competence of individuals and organisations responsible for tasks that have a bearing on safety.

The Company will develop, maintain and refine the Safety Case as defined in the Safety Management Plan and in developing the Safety Case, the Contractor shall address the full lifecycle of the product.

### **3. Safety Case Reports**

If requested, the Company will produce a Safety Case Report or Reports and Command Summaries.

The Company will produce Safety Case Reports that incorporate the key elements of the safety argument and references to evidence so that, in principle, it would be possible to access the complete Safety Case, starting from the Report, or counter-evidence where it has been identified.

Where there are shortfalls in the evidence, the Company will ensure that the Safety Case Report provides the rationale for operating the product and service, and the ways of mitigating the residual risk.

The Contractor will ensure that the Safety Case Report contains information on assumptions and limitations regarding the safe use of the product.

The Company will produce Command Summaries, as defined in the Safety Management Plan, documenting the assumptions and limitations for safe in-service use of the product.

## **14. Supply and Change Management**

### **1. Build State Definition**

The Company will produce records which show the build state definition (configuration) of each product element supplied.

The Company will ensure that all stakeholders identified in the Safety Management Plan as needing to be kept up to date regarding the build state to ensure or preserve safety are provided with the build state definition.

### **2. Change Control**

The Company will define in the Safety Management Plan, a change control system so that the safety impact of any planned or unplanned change can be identified and assessed.

### **3. Planning for Change**

Where changes are anticipated, e.g. for managing obsolescence, the Company will develop and implement plans for proactively identifying and addressing those changes to ensure the continued safety of the product.

### **4. Safety of Changes**

The Company will manage all changes under their control so as to preserve safety as in the original design intent or to improve the safety of the deliverable product.

The Company will review and update the information set to ensure that it remains valid.

The Company will review and update the Safety Case and Safety Case Report, as defined in the Safety Management Plan, to ensure that they remain valid.

## **5. Safe Update**

The Company will supply updated product and associated information, as defined in the Safety Management Plan, to enable safety to be preserved.

The Company will supply appropriate installation instructions to enable changes to be made safely to the in-service product.

The Company will update the build state definition for each modified product, so that it reflects the modified build state and provide an audit trail of those modifications.

## **6. Monitoring Change**

The Company will monitor changes to in-service product that are visible to them, including using the results of normal reporting, to identify cases where the changes may have undesired safety impacts.

Where undesired safety impacts are identified, the Company will notify the relevant stakeholders and, where practicable, recommend mitigation to control Risk to Life.

## **7. Incorporating Change**

The Company will incorporate any new or modified product into the in-service system, as defined in the Safety Management Plan, so as to maintain or improve safety.

The Company will provide information to other relevant stakeholders, including the MOD in all cases, to enable them to assess the impact of changes made to the in-service system.

# **15. Supporting Systems In-Service**

## **1. Management of Safety-Related In-Service Data**

The Company will coordinate the management of safety-related in-service data where the deliverable product interface or interact with other products, services or systems.

## **2. Monitoring and Reporting**

The Company will define and operate a process for recording and analysing relevant data from operation of the product (including accident and incident reporting data), to control in-service Risk to Life and to inform the stakeholders responsible for support activities.

The Company will review the Safety Case, in the light of the recorded data to identify areas where operations vary from predictions or assumptions, e.g. the actual Risk to Life is significantly higher than the estimated Risk to Life, or a product is operated outside declared limitations.

The Company will sentence the results of analysis of the data and the review of the Safety Case to determine situations, which indicate the need for remedial action and, once agreed with the MOD, shall implement those actions within their sphere of responsibility.



The Company will inform all relevant stakeholders where they have identified the need for remedial action, and provide those stakeholders with sufficient information to enable them to take appropriate action.

### **3. In-Service Data Analysis**

The Company will define and operate a process, agreed with the MOD, for sentencing and prioritising reported data from the in-service use of the product to identify remedial action to preserve or improve safety.

### **4. Remedial Action**

The Company will implement remedial actions to preserve or improve safety, agreed with the MOD and prioritized accordingly.

## **16. Service Provision**

### **1. Safety Case Report**

If required, the Company will produce a Safety Case Report and Command Summary and deliver them to the MOD for approval before commencement of services.

The Company will maintain the Safety Case, Safety Case Report and Command Summary so they are accurate representations of the service.

### **2. Service Provision Planning**

The Company will produce plans for management of service operations, covering all reasonably foreseeable situations including abnormal and emergency situations.

### **3. Risk Management**

The Company will support the MOD in managing predicted or emergent Risk to Life arising from hazards and accidents associated with the service, according to the ALARP principle, throughout the Contract life, and as defined in the Safety Case Report.

The Company will cooperate with the duty holders for interfacing or interacting services or operations to enable effective management of Risk to Life.

Where necessary and with the duty holder agreement, the Company will implement immediate action to manage Risks to Life until a longer-term resolution is identified.

**STAGE 2**

**TABLE 3 - TECHNICAL EVALUATION**

SECTION 8.3 – SAFETY & ENVIRONMENTAL MANAGEMENT PLAN

**STATEMENT REGARDING SAFETY CASE**

With regards to the Safety Case for the MAC Avant hot mobile pressure washer.

It is our understanding that a Safety Case has been produced and is currently in use by the MOD for the previous contract C/WSS/1/4624.

However in the event that this Safety Case is not in existence we have obtained an official quotation from TMS Support Solutions Ltd, who are an official contractor to the MOD, to produce a new Safety Case in the required MOD format.

The steps are fully in place to have this Safety Case produced should we be successful with this Tender.

**The price for this safety case has been included in Table 5 – Non Core Task Assumptions.**

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 9 – RISK & ISSUE MANAGEMENT**RISK & ISSUE MANAGEMENT**

It is not possible to know when or how the next accident will happen, instead it is important to try to recognise where there are dangers, understand them and control them. Risk management needs vigilance to keep looking for new threats and an open-minded attitude to accept that our current understanding can be improved.

Risk is concerned with exposure to possible loss and because it depends on unpredictable events, measures of risk should only be treated as forecasts with a degree of uncertainty. These risk forecasts should be used to focus management effort and resources on the most significant risks to have the greatest influence on safety.

Safety risks have to be recognised, understood and managed throughout a product's lifecycle. During the early stages of a lifecycle the risk management activities are mostly pro-active, they are concerned with identifying hazards, determining how the hazards may arise, assessing the consequences and establishing how often they are likely to be realised, then deciding on how best to control their risks.

During the later stages, when a product is in operational use, there is a significant emphasis on re-active management of risk as well as continuing pro-active effort. During the in-service stage there will be real operational evidence in the form of incidents, surveillance records and anecdotal experience from users and maintainers. All of this valuable information should be used to identify the current most significant risks that require attention. The "theoretical" forecasts of risk from early stages of the lifecycle should be updated with real information so that they support the ongoing risk management process.

Throughout the safety risk management process, it is important that there is traceable information on how hazards and risks have been managed and why they are considered to be currently tolerable.

There are various reasons for managing risk, but they can be summarised in four main groups:

**1. Ethical and moral considerations**

Most people would agree that, whatever risks they choose to take themselves, it is unacceptable to put other people at risk, particularly when this is done without their knowledge or consent. Employers, managers and senior personnel have an ethical and moral duty when making decisions to make sure the risks people will be exposed to are not unacceptable.

**2. Legal requirements**

Health and safety legislation places a number of duties on employers and managers and failure to carry out those duties can result in fines and/or imprisonment.

**3. Financial matters**

Accident costs are made up of direct (usually insurable) costs and indirect (usually uninsurable) costs. Accident costs lead to a continuing, often unquantified drain on a company's resources. When the true cost of accidents is taken into account it makes good business sense to minimise risk.

**4. More general business considerations**

These involve the company's image and the effect a poor health and safety record can have on a range of people and organisations including employees, customers, shareholders, banks and insurance companies.

## **RISK MANAGEMENT MODEL**

The risk management model adopted by the Company is based on the Plan-Do-Check-Act sequence, which also forms the basis of our ISO 9001 Quality Management System.

### Plan

Having identified the hazards and risks associated with a product or service, the purpose of planning is to decide on appropriate risk control measures.

### Do

This part of the sequence consists of implementing and maintaining the risk control measures decided on during planning.

### Check

This can include:

- monitoring that the risk control measures decided on during planning continue to be implemented and maintained in the ways intended.
- Monitoring of incidents, including accidents.
- Monitoring of side effects and spin offs. Side effects are detrimental effects of risk control measures e.g. reduced productivity or discomfort from wearing goggles. Spin offs are beneficial effects of the risk control measures other than reducing risk e.g. increased productivity or more accurate working where wearing goggles allows for closer inspection.

### Act

This involves taking some action to improve the processes used to control or manage risk. It ensures the continual improvement element required by management systems.

Risk management relies on judgement. Decisions are supported by using qualitative and quantitative methods. The effort in producing risk assessments should be proportionate to the risk involved.

Risk management activities have no effect on risk until the process of risk reduction is actually implemented. Risks are controlled using the following hierarchy:

1. Elimination of the hazard
2. Substitution of the hazard
3. Hazard control using engineering measures
4. Provision of safety procedures, training, Personal protective equipment, etc.

## **CURRENT POSITION**

The following is based on the assumption that the pressure washer to be supplied is only used to carry out tasks for which it was designed and is only operated on level surfaces.

The Company has identified the hazards associated with its work activities and those relevant to this contract's requirements. These have been documented on a hazards matrix under headings of equipment based, activity based, area based and general.

The identified hazards have been analysed using a 5 x 5 matrix of likelihood and severity of injury to provide a risk rating and determine those, which are significant. The significant hazards (those scoring 12 or more) are addressed by producing risk assessments.

The risk assessments detail the potential hazards, the harm they could cause and to whom, and the control measures to be implemented. There is also risk rating tables showing the risk rating score before and after controls are implemented.

The control measures are a combination of mitigation strategies designed to reduce risk and enable risk acceptance to take place. Mitigation strategies are selected according to the following precedence:

1. Eliminate the hazard.
2. Reduce the risk associated with the hazard by implementing engineered mitigation strategies.
3. Reduce the risk associated with the hazard by implementing mitigation strategies based on human factors.

Company employees are consulted on the content of the risk assessments. Once the content is agreed, they are brought to the attention of all employees associated with the work activities they are applicable to.

A summary risk assessment covering the servicing of pressure washers has been produced and can be found in Section 5 of this tender document.

Safety audits are carried out to determine if the risk assessment requirements are being implemented and adhered to.

Accidents and incidents are investigated to determine the root cause and the possible need to amend and /or improve working practices and documentation. Any changes identified are discussed with those associated with the work activity, a decision made and changes implemented as required. This may also identify further training needs.

## **PROPOSED ON-GOING RISK & ISSUE MANAGEMENT**

For the purposes of this contract, the Company will utilise a Hazard Log as described within the MOD publication "White Book Issue 3 - An Introduction to System Safety Management in the MOD" and to meet the requirements of Def Stan 00-56.

The Log will be used to identify health and safety issues arising during its lifecycle. The Log will contain information to show how safety issues will be dealt with and resolved. The Log will contain the following parts:

1. Safety data and safety requirements
2. Hazard data
3. Accident data
4. Statement of system safety
5. Journal.

The journal will contain detail consistent with the tender requirement to produce a monthly report containing the information detailed on Page 63 of the Terms and Conditions document. This information has been replicated and included within the Section 9 submission.

The Company will work closely with the various MOD departments involved to obtain feedback on issues arising from operational use. This feedback will be included into the journal if required.

The Company will advise and instruct its Service Centres of the requirement to provide this information as soon as any issues arise and to provide an update after they have completed their own investigation. When required, the Company will assist in the investigation process.

The hazard log will be used to provide traceability of how safety issues have been dealt with during the project. The Log will be regularly reviewed to make sure safety related actions are completed and risks driven down to a level which can be agreed as tolerable and As Low As Reasonably Practicable (ALARP).

The hazard log will contain detail of all identified hazards and accidents associated with the system, not only those that have happened or are considered likely. This will include those signed off as closed and those considered as not credible. The Log will show that the not credible hazards have been considered and provide the audit trail of reasons why they were closed. Should circumstances change then the safety argument can be re-examined.

The hazard log can be used as evidence when reviewing the safety case.

---

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 9 – RISK & ISSUE MANAGEMENT**RESPONSE TO URGENT REQUESTS****Spares**

The company holds a comprehensive range of spares to stock levels consistent with being able to meet the requirements of our Service Centre network and MOD requirements. In virtually all cases, other than from the manufacturer, parts not in stock can be obtained overnight if required.

Through provision of these parts for well over 12 years, the Company has ascertained usage levels that assist in determining stock levels. This knowledge assists the company in determining the quantities of parts to order from the manufacturer and the frequency of placing orders. This also helps in keeping down shipping costs and environmental impacts.

The Service Centres maintain stock levels consistent with being able to meet their commitments. All Service Centre vehicles carry parts to complete routine service and repair tasks. These are supplemented by additional levels of this routine stock and more obscure stock being held at Service Centre main premises.

When the Company receives an urgent request for spares, stock levels will be checked and if available the spares will be dispatched immediately using methods agreed with the customer.

Where the spares are not in stock, they will be requested from the suppliers using the quickest means available. Once received, they will be forwarded to the customer. In extreme circumstances the spares can be despatched direct from the suppliers.

In addition to the above, the Company has the opportunity of contacting its Service Centres when a spare is not readily available. The spares could then be dispatched directly from the Service Centre to the customer.

The customer will be kept informed of progress throughout the process.

**Repairs**

Our network of Service Centres located throughout the UK is detailed in Section 4 of the tender submission. Having this level of cover means that requests for repair work are routinely responded to within 24 - 48 hours.

When the Company receives an urgent request for repair work during working hours, the nearest Service Centre will be immediately contacted by telephone and a Service Engineer dispatched or diverted. The customer will be contacted and notified of when the Engineer will arrive.

When a request is received out of working hours, the level of urgency will be determined. If the request can be actioned on the next working day, the nearest Service Centre will be notified of the request by email and a follow up telephone call will be made to them first thing on the next working day. If the request cannot wait until the next working day, the nearest Service Centre will be contacted by telephone and measures agreed to react to the request. The customer will be kept informed of progress throughout the process.

**STAGE 2****TABLE 3 - TECHNICAL EVALUATION**

## SECTION 9.1 – MANAGEMENT INFORMATION

**MANAGEMENT INFORMATION DATABASE**

As requested we have created a Management Information Database for all Service/Repair work carried out.

MAC International will maintain this information during each month, when the Service/Repairs have been completed.

This information will be inputted onto our in-house CRM system in the form of a Database and will be available to send to the Authority Project and Commercial Manager within 5 business days at the end of each month in the form of an Excel Spreadsheet.

As requested this Management Information Database will include the following information and can be seen in **FIG.21 – Page 110**.

- Official MOD Job Number.
- Location of repair/service visit.
- Machine on which the repair/service was undertaken (serial number, model, NSN, machine name).
- Description of service/repair issue.
- Costs to MOD.
- Time allocated for service/repair.
- Total number of repairs undertaken in that particular month and from the beginning of the contract.
- The cost of repair per job and the total for the period.
- Total number of servicing visits in that particular month and from the beginning of the contract.
- Total number of turnaround times met in that particular month and from the beginning of the contract.
- Total number of turnaround times missed in that particular month (and the reason why) and from the beginning of the contract.
- General comments, e.g. was the Authority's paperwork completed correctly to enable the Contractor to perform the task requested.

## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 9.1 – MANAGEMENT INFORMATION

**FIG.21 – Example of Service/Repair job being inputted onto the Management Information System.**

<b>MOD Job Number *</b>	R2014-WTE-128
<b>Location of Repair/Service Visit*</b>	102 FIELD SQUADRON ANZIO LINES 63 HAWKHEAD ROAD PAISLEY
<b>Machine Model*</b>	MAC AVANT
<b>Machine NSN*</b>	4940-99-7419584
<b>Machine Serial Number</b>	41745
<b>Description of Service/Repair Fault*</b>	FULL SERVICE REQUIRED. ALSO CABLE GLAND SNAPPED OFF ON MAINS CABLE. CARRIED OUT FULL SERVICE AND REPLACED HIGH PRESSURE HOSE. LANCE AND TRIGGER.
<b>Cost to MOD *</b>	[REDACTED]
<b>Turnaround Time Met*</b>	Yes
<b>Reason if Turnaround Time Not Met</b>	
<b>Additional Comments</b>	

**FIG.22 – Shows the ability to add notes and documents (such as Inspection Records, Maintenance Checks and completed Army Form G8992) to the Management Information.**

<b>Turnaround Time Met*</b>	Yes
<b>Reason if Turnaround Time Not Met</b>	
<b>Additional Comments</b>	
Above form submitted.	
<a href="#">Amend above form</a>	
<b>Notes for this form</b>	
Add note	
<small>Date added</small>	<small>Added By</small> <small>Note</small> <small>Delete</small>
No records to display.	
<b>Documents for this form</b>	
Attach document	
<small>Date added</small>	<small>Added By</small> <small>File name</small> <small>Delete</small>
No records to display.	
<b>Print out this form</b>	
You can print out a custom version of this form if, for example, you need to send a quote to a client based on the contents in the form. To print out this form based on a template, simply select the file below to be used as the template for the print out. New or changed templates can be uploaded to the template manager within the HTML editor on the create email campaign page.	
<a href="#">Select a template to print</a>	
<a href="#">Delete above form</a>	



## STAGE 2 TABLE 3 - TECHNICAL EVALUATION SECTION 9.1 – MANAGEMENT INFORMATION

### MONTHLY REPORTS

Please see **FIG.23** below which confirms our ability to provide a monthly report on the Management Information.

We are able to filter each piece of required information detailed in **FIG.21 – Page 110** to provide an accurate monthly report for all Service/Repair carried out.

The final monthly report can be exported into an Excel format and issued to the Project and Commercial Manager.

**FIG.23 – Example of monthly Management Information report.**

MOD Job Number	Location of Repair/Service Visit	Machine Model	Machine NSN	Machine Serial Number	Description of Service/Repair Fault	Cost to MOD	Turnarou
R2014-WTE-129	158 REGIMENT RLC ARMY RESERVE CENTRE LONDON ROAD PETERBOROUGH PE2 9BY	MAC AVANT	4940-99- 7419584		NO WATER PRESSURE. UNLOADER VALVE WAS JAMMED CAUSING PRESSURE FAULT. WATER FITTING ON OUTLET CRACKED AND REPLACED.		Yes
R2014-WTE-124	104 FSN/126 FD COY WESTFIELD HOUSE COVENTRY CV6 3BP	MAC AVANT	4940-99- 7419584		BURNER NOT WORKING AND LEAK FROM WATER SEALS IN PUMP. REPLACEMENT UNLOADER REQUIRED AND ALSO REPLACE LEAKING LANCE AND COMPLETED SERVICE ON BURNER.		Yes
R2014-WTE-127	21 ENGINEERS REGIMENT CLARO BANKS RIPON NORTH YORKSHIRE HG4 2RD	MAC AVANT	4940-99- 7419584		FULL SERVICE REQUIRED AND REPLACE CORRODED FUEL PIPE. FULL SERVICE AND REPLACED LANCE AND GUN. DESCALED MACHINE TESTED AND SET TO CORRECT PRESSURE.		Yes
R2014-WTE-118	MOD KINGSTANDING KINGSTANDING ROAD BIRMINGHAM B44 8LD	MAC AVANT	4940-99- 7419584		FULL SERVICE AND PAT TEST REQUIRED. FULL SERVICE COMPLETED AND ALSO FIXED LOW PRESSURE ISSUES. REPLACED PUMP SEAL KIT.		Yes
R2014-WTE-128	102 FIELD SQUADRON ANZIO LINES 63 HAWKHEAD ROAD PAISLEY PA1 3NE	MAC AVANT	4940-99- 7419584		FULL SERVICE REQUIRED. ALSO CABLE GLAND SNAPPED OFF ON MAINS CABLE. CARRIED OUT FULL SERVICE AND REPLACED HIGH PRESSURE HOSE. LANCE AND TRIGGER.		Yes

**STAGE 2**  
**TABLE 3 - TECHNICAL EVALUATION**  
SECTION 9 - DECLARATION

SECTION 9.2

We confirm that we will use the MOD Joint Asset Management and Engineering Solutions (JAMES) system to provide and record information for return to work repairs when requested by the MOD.

SECTION 9.3

We confirm that we will maintain a joint risk register, which is to be issued to the MOD 10 business days prior to the quarterly review meetings.

**STAGE 2**  
**TABLE 5 – NON-CORE TASKS ASSUMPTIONS**

*Table 5 - Non Core Tasks Assumptions (50% of Tender Evaluation)*

Description	SOW Ref	Tendered Price per Call off (£)	Number of Call Offs PA	Total Annual Cost per Task
		(a)	(b)	(a)x (b)
Procurement of Pressure Washers	6			
Procurement of Associated Items - Washer Service Kit	6			
Procurement of Associated Items - Hose	6			
Procurement of Associated Items - Wash Gun	6			
Procurement of Associated Items - Filter Pack	6			
Servicing of Pressure Washers	6			
Creation of Servicing plan.	5			
Maintenance of Quality Plan	7			
Maintenance of Safety and Environmental Plan	8			
Updates to JAMES	9			
Maintenance of Joint Risk Register	9			

Production of Monthly Management report	9				
Attendance at Scheduled Meetings	10				
Attendance at Ad-hoc Meetings	10				
Labour Rate UK(number of repairs per year, assumed 1 hour per repair)	4				
<b>Used for Evaluation</b>					

In the event of two or more Tenders being awarded the same total the Authority shall choose the Tender with the Lowest price.



Table 3 – Inspection and Servicing

SERIAL NO.	Description	NSN	SOR Section	FIRM PRICE (£ EX VAT)			
				YEAR 1 XX-XX	YEAR 2 XX-XX	YEAR 3 XX-XX	YEAR 4 XX-XX
1	Inspection/Servicing of In-Service and new Pressure Washers	In-Service 4940 99 7419584  New To be confirmed	5				

Table 4 – Ad-Hoc Tasks

Description	SOR Section	FIRM RATE (£ EX VAT)			
		YEAR 1 XX-XX	YEAR 2 XX-XX	YEAR 3 XX-XX	YEAR 4 XX-XX
Creation of Servicing plan	5				
Creation and Maintenance of Quality Plan	7				
Creation and Maintenance of Safety and Environmental Plan	8				
Safety Cases for New equipment	8				
Updates to JAMES	9				
Maintenance of Joint Risk Register	9				
Creation and issue of Monthly Management reports	9				
Attendance at Scheduled Meetings	10				
Attendance at Ad-hoc Meetings	10				

Table 5 – Repair Rate

Description	SOR Section	FIRM RATE (£ EX VAT)			
		YEAR 1 XX-XX	YEAR 2 XX-XX	YEAR 3 XX-XX	YEAR 4 XX-XX
Labour - Repair Hourly Rate	4				

Table 6 – Travel and Subsistence

DESCRIPTION	FIRM RATE (£ EX VAT)			
	YEAR 1 XX-XX	YEAR 2 XX-XX	YEAR 3 XX-XX	YEAR 4 XX-XX
Mileage (per mile)				
Daily Allowance				
Evening Meal Allowance				
Overnight Hotel Allowance				
Flights/Ferries	All Air, Sea and Rail travel shall be at standard rates unless specifically authorised by the Authority's Commercial Officer prior to placing of the task.  Actuals may be claimed on production of receipts.			





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**CLEANER, STEAM, PRESSURE JET  
WTE6/4940-99-741-9584**

**OPERATING INFORMATION**

This publication contains information covering the requirements of categories 1-1, 2-0, 3, 5-1, 5-2, 6, 7-2 and 7-4 at information level 1

**BY COMMAND OF THE DEFENCE COUNCIL**

Ministry of Defence

Issued by

**DEFENCE LOGISTICS ORGANISATION**  
Workshop Services Support/Workshop Tools  
and Equipment Integrated Project Team



**AMENDMENT RECORD**

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- 5 User maintenance
- 6 Commercial parts list
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**PREFACE**

**Sponsor: WSS (WTE) IPT DE&S**  
**Publication Authority: TES-TIG (Andover)**

**INTRODUCTION**

1 Service users should forward any comments on this Publication through the channels prescribed in AESP 0100-P-011-013. An AESP Form 10 is provided at the end of this publication; it should be photocopied and used for forwarding comments on this AESP.

2 AESPs are issued under Defence Council authority and where AESPs specify action to be taken, the AESP will of itself be sufficient authority for such action and also for the demanding of the necessary stores, subject to the provisions of Para 3 below.

3 The subject matter of this publication may be affected by Defence Instructions and Notices (DINs), Standard Operating Procedures (SOPs) or by Local Regulations. When any such instruction, Order or Regulation contradicts any portion of this publication it is to be taken as the overriding authority.

**RELATED AND ASSOCIATED PUBLICATIONS**

**Related publications**

4 The Octad for the subject equipment consists of the publications shown below. All references are prefixed with the first eight digits of this publication. The availability of the publications can be checked by reference to the relevant Group Index (refer to AESP 0100-A-001-013).

Category/Sub-category			Information Level			
			1 User/ Operator	2 Unit Maintenance	3 Field Maintenance	4 Base Maintenance
1	0	Purpose and Planning Information	*	*	*	*
	1	Equipment Support Policy Directives	201	*	*	*
2	0	Operating Information	201	*	*	*
	1	Aide Memoire	*	*	*	*
	2	Training Aids	*	*	*	*
3		Technical Description	201	*	*	*
4	1	Installation Instructions	*	*	*	*
	2	Preparation for Special Environments	*	*	*	*
5	1	Failure Diagnosis	201	*	*	*
	2	Maintenance Instructions	201	*	*	*
	3	Inspection Standards	*	*	*	*
	4	Calibration Procedures	*	*	*	*
6		Maintenance Schedules	201	*	*	*
7	1	Illustrated Parts Catalogues	*	*	*	*
	2	Commercial Parts Lists	201	*	*	*
	3	Complete Equipment Schedule, Production	*	*	*	*
	4	Complete Equipment Schedule, Service Edition (Simple Equipment)	201	*	*	*
	5	Complete Equipment Schedule, Service Edition (Complex Equipment)	*	*	*	*
8	1	Modification Instructions	*	*	*	*
	2	General Instructions, Special Technical Instructions and Servicing Instructions	*	*	*	*
	3	Service Engineered Modification Instructions (RAF only)	*	*	*	*

\*Category/Sub-category not published

**Associated publications**

5 The following publications should be read in conjunction with this publication:

Reference	Title
JSP 375	MoD Safety Handbook

equipment identity

6 This publication covers the following:

6.1	Contract number:	CWSS/1/2209
6.2	Equipment title:	Cleaner, Steam, Pressure Jet
6.3	NATO stock number:	WTE6/490-99-741-9584
6.4	Asset code:	L5696

**LIST OF ABBREVIATIONS**

7 The following abbreviations are used in this publication.

A	Ampere
(A)	(Army)
AC	Alternating Current
AESP	Army Equipment Support Publication
Amdt	Amendment
BS	British Standard
CES	Complete Equipment Schedule
Chap	Chapter
CTS-TD	Corporate Technical Services - Technical Documentation
D of Q	Denomination of Quantity
DIN	Defence Instructions and Notices
DMC	Domestic Management Code
EA	Each
EFR	Equipment Failure Report
ESPD	Equipment Support Policy Directive
ESM	Equipment Support Manager
F	Fahrenheit
Fig	Figure



ARMY EQUIPMENT  
SUPPORT PUBLICATION

4940-W-205-201

gal	gallon
h	height
hp	horse power
Hz	Hertz
IPT	Integrated Project Team
JSP	Joint Services Publication
kg	kilogramme
kw	kilowatt
lt	litre
max	maximum
min	minimum
mm	millimetres
MPN	Manufacturers Part Number
NATO	North Atlantic Treaty Organisation
NSCM	NATO Supply Code for Manufacturer
NIV	Not In Vocabulary
No	Number
NSN	NATO Stock Number
Para	Paragraph
PPE	Personal Protective Equipment
Psi	Pounds per square inch
PTFE	Polytetrafluoroethane
RCD	Residual Current Device
rev/min	revolutions per minute
RLC	Royal Logistics Corps
SOPs	Standard Operating Procedures
TES-TIG	Technical Enabling Services - Technical Information Group
UK	United Kingdom
V	Volts
WSS	Workshop Support Services
WTE	Workshop Tools and Equipment

**WARNINGS AND CAUTIONS**

8 The following WARNINGS and CAUTIONS apply to the operation of the equipment and must be adhered to at all times.

**WARNINGS**

- (1) FIRE EXPLOSION HAZARD. THE PRESSURE CLEANER MUST NOT BE OPERATED IN POTENTIALLY FLAMMABLE OR EXPLOSIVE CONDITIONS.
- (2) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE OPERATED ON LEVEL SURFACES.
- (3) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST BE ISOLATED FROM THE ELECTRICAL SUPPLY WHEN REPLENISHING THE DIESEL FUEL TANK.
- (4) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE BURNER UNIT EXHAUST VENT MUST REMAIN FREE FROM OBSTRUCTIONS AT ALL TIMES.
- (5) PERSONNEL INJURY. THE PRESSURE CLEANER MUST BE OPERATED IN WELL-VENTILATED AREAS ONLY.
- (6) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE CONNECTED TO A 240V SINGLE PHASE ELECTRICAL SUPPLY PROTECTED BY A RESIDUAL CURRENT DEVICE.
- (7) PERSONNEL INJURY. PERSONNEL MUST HOLD THE LANCE HANDGRIP FIRMLY WHEN OPERATING THE HANDGRIP TRIGGER DUE TO THE RECOIL ACTION OF THE LANCE.
- (8) PERSONNEL INJURY. PERSONNEL MUST REMAIN CLEAR OF THE WATER JET AT ALL TIMES WHILST IN OPERATION.
- (9) PERSONNEL INJURY. THE HANDGRIP TRIGGER SAFETY CATCH MUST BE APPLIED WHEN THE PRESSURE CLEANER IS NOT IN USE TO PREVENT ACCIDENTAL OPERATION OF THE JET.

(10) PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.

(11) PERSONNEL INJURY. THE BURNER UNIT EXHAUST VENT EMITS HOT VAPOURS. PERSONNEL MUST REMAIN CLEAR OF THE EXHAUST AT ALL TIMES.

(12) PERSONNEL INJURY. MAINTENANCE ON THE PRESSURE CLEANER IS NOT TO BE CARRIED OUT UNTIL SUFFICIENT TIME HAS BEEN ALLOWED FOR THE HEATED COMPONENTS TO COOL NATURALLY OR THE PRESSURE CLEANER HAS BEEN OPERATED COLD FOR A MINIMUM PERIOD OF 2 MINUTES.

(13) PERSONNEL INJURY. PERSONNEL MUST WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) WHEN OPERATING THE PRESSURE CLEANER.

(14) PERSONNEL INJURY/EQUIPMENT DAMAGE. NEVER USE THE CLEANER TO CARRY OUT A TASK FOR WHICH IT IS NOT DESIGNED.

(15) PERSONNEL INJURY. ENSURE THE CLEANER IS POSITIONED SUCH THAT THE HIGH PRESSURE OUTLET IS POINTING IN A SAFE DIRECTION DURING THE CLEANER BLEEDING MAINTENANCE ACTIVITY.

(16) PERSONNEL INJURY/EQUIPMENT DAMAGE. ALWAYS ENSURE THAT THE CLEANERS POWER SUPPLY IS DISCONNECTED WHEN NOT IN USE AND WHEN CARRYING OUT MAINTENANCE TASKS.

(17) PERSONNEL INJURY. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) IS TO BE WORN BY ALL PERSONNEL CARRYING OUT MAINTENANCE ACTIVITIES INVOLVING DIESEL FUEL OIL AND CHEMICAL DETERGENTS.

**(18) PERSONNEL INJURY. SYSTEM PRESSURE MUST BE DISSIPATED BEFORE ANY MAINTENANCE ACTIVITY IS CARRIED OUT OR WHEN NOT IN USE.**

**(19) PERSONNEL INJURY. NEVER OPERATE THE CLEANER WITH THE COVER REMOVED.**

**(20) PERSONNEL INJURY/EQUIPMENT DAMAGE. PRIOR TO USING CHEMICAL DETERGENTS, REFER TO THE RELEVANT CHEMICAL DATA SHEET.**

#### **CAUTIONS**

**(1) EQUIPMENT DAMAGE. The inlet water supply pressure must be 2 bar minimum. Insufficient pressure will cause damage to the pump by overheating and vibration.**

**(2) EQUIPMENT DAMAGE. Damage to the pump and pipe work may result if the cleaner is used in temperatures below 0°C (32°F).**

**(3) EQUIPMENT DAMAGE. Damage to the pump will occur if the pressure cleaner is operated without a water supply connected.**

**(4) EQUIPMENT DAMAGE. The cleaner is to be protected from frost and adverse weather conditions where practicable at all times. The cleaner must not be operated when frozen.**

**(5) EQUIPMENT DAMAGE/ENVIRONMENTAL DAMAGE. Personnel are to carry out maintenance activities involving diesel fuel, chemical detergents and oil with extreme care to prevent damage to the cleaner components and the environment.**

**(6) EQUIPMENT DAMAGE. Prior to the cleaning operation, direct the jet spray in a safe direction away from the equipment to be cleaned to allow for the setting of the required working pressure.**

**(7) EQUIPMENT DAMAGE. Antifreeze is highly corrosive; when using antifreeze care must be taken not to spill it on any part of the cleaner. All spills must be cleaned up immediately.**

**CHAPTER 1**  
**EQUIPMENT SUPPORT POLICY DIRECTIVE**

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1	Introduction
2	Description
	Management information
3	Equipment support management
4	Planned role/deployment history
5	Planned life
6	Deployment
7	Manpower
	Maintenance
8	Responsibilities
9	Supply
10	Publications
11	Training
	Reliability
12	Warranty
13	Equipment failure reporting
14	Disposal

**INTRODUCTION**

1 This Equipment Support Policy Directive (ESPD) provides the maintenance policy to support the Cleaner, Steam, Pressure Jet in-service.

**Description**

2 A technical description of the Cleaner, Steam, Pressure Jet is detailed in Chap 2.

## **MANAGEMENT INFORMATION**

### **Equipment support management**

3 The equipment will be managed by the Workshop Support Services, (Workshop Tools and Equipment) IPT.

### **Planned role/deployment history**

4 This equipment will be deployed in support of the Tri-services to assist in the maintenance and repair of military equipment and in support of field projects.

### **Planned life**

5 The estimated planned life of this equipment is five years of normal usage.

### **Deployment**

6 The deployment of this equipment is global.

### **Manpower**

7 No increase in manpower is required to support this equipment.

## **MAINTENANCE**

### **Responsibilities**

8 Maintenance responsibilities for this equipment are as follows:

8.1 Level 1 Maintenance - User servicing is to be carried out in accordance with Chap 5 of this publication. Repair and maintenance must be carried out by a competent tradesman. It is limited to the failure diagnosis, removal and replacement in accordance with Chap 5 and manufacturer's information.

### **SUPPLY**

9 Users are to demand replacement items using current supply procedures quoting NSN or MPN. A copy of an Equipment Failure Report **MUST** accompany any failed cleaner returned under the manufacturer's warranty period.

### **PUBLICATIONS**

10 All operating information, technical description, failure diagnosis, repair and maintenance information, spares information and the Complete Equipment Schedule (CES) are included in this AESP.

### **TRAINING**

11 Only competent personnel are authorised to use this equipment.

### **RELIABILITY**

#### **Warranty**

12 The manufacturer's warranty is for a period of one year from issue.

#### **Equipment failure reporting**

13 Equipment Failure Reporting (EFR) in accordance with single service regulations is required for any failed cleaner returned under the manufacturer's warranty period.

### **DISPOSAL**

14 Disposal of equipment is to be carried out as detailed by the Equipment Support Manager (ESM), the disposal authority.







**CHAPTER 2**  
**TECHNICAL DESCRIPTION AND DATA**  
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7	Control panel	
8	Technical data	
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2	Cleaner, steam, pressure jet technical data .....	7/8
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1	Cleaner, steam, pressure jet .....	3
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**DESCRIPTION**

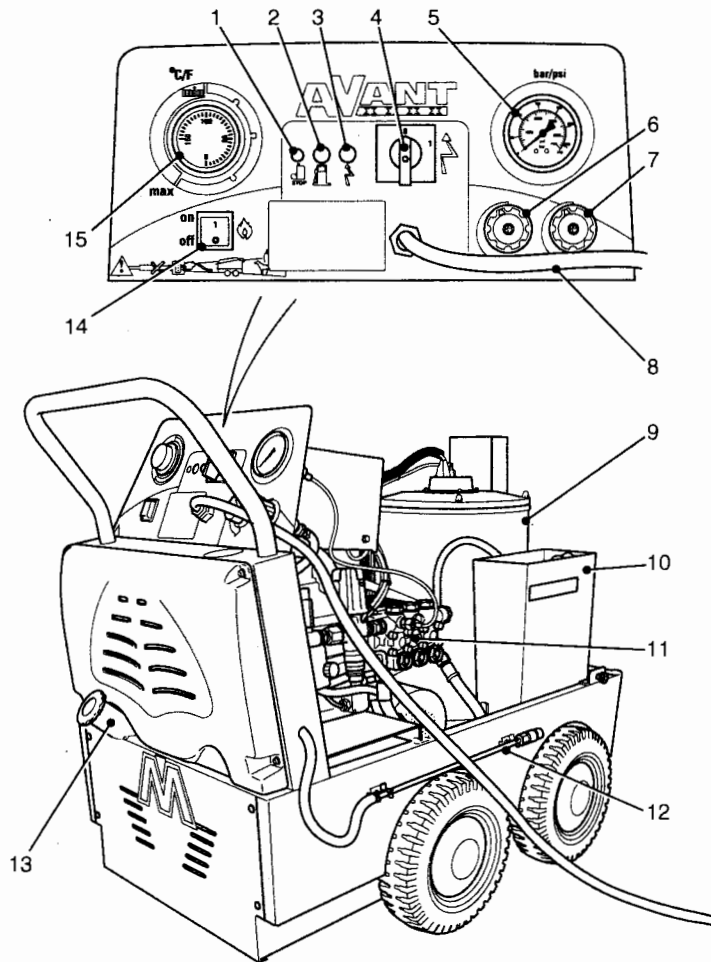
**General**

1 The Cleaner, Steam, Pressure Jet (Fig 1) is a manually operated thermostatically controlled, mobile high-pressure cleaning system. The 240V Single Phase 50 Hz power input is supplied using a chemical resistant, armoured, power input cable (Fig 1 (7)) and is terminated using a straight plug to BS 4343 with a current rating of 16A. The 240V supply is stepped-down to provide 24V to the electrical components within the cleaner.

2 The main components of the cleaner are mounted on a metal powder coated chassis and protected by a stainless steel cover which is attached to the chassis by four knurled screws. Four solid rubber tyres and a handle allow for ease of movement between areas of operations.

3 Water is supplied to the cleaner via an inlet hose (Fig 2 (2)) fitted with a quick release connector. The hose feeds the water via the inlet connection on the lower forward panel, through 2 inlet water filters into a stainless steel water tank (Fig 1 (9)) containing a ballcock assembly. The water is then fed into a brass-headed 3-piston pump (10) driven by a 240V heavy-duty motor. The oil level within the pump can be determined by a sight glass indicator located on the forward facing edge and by means of a yellow, plastic dipstick situated and secured in the upper surface of the pump.

4 The pump pressurises and feeds the water via a pressure gauge (4) located on the control panel through a coil into the burner unit (8). The burner unit, manufactured from stainless steel, is mounted at the front of the cleaner with fume exhaust via an aperture in the machine cover. Diesel fuel is supplied to the burner unit from a diesel fuel tank (12) through a fuel filter and fuel pump and is ignited by electrodes located at the top of the burner unit. Operation of the burner unit is initiated by selection of the Burner ON/OFF switch (13), located on the control panel, when selected to 'ON'.



- |                       |                            |                         |
|-----------------------|----------------------------|-------------------------|
| 1 Stop lamp           | 6 Chemical pressure valve  | 11 3-piston pump        |
| 2 Low fuel lamp       | 7 Pressure reduction valve | 12 Detergent tube       |
| 3 Power on lamp       | 8 Power input cable        | 13 Fuel tank            |
| 4 Power ON/OFF switch | 9 Burner unit              | 14 Burner ON/OFF switch |
| 5 Pressure gauge      | 10 Water tank              | 15 Thermostat control   |

Fig 1 Cleaner, steam, pressure jet

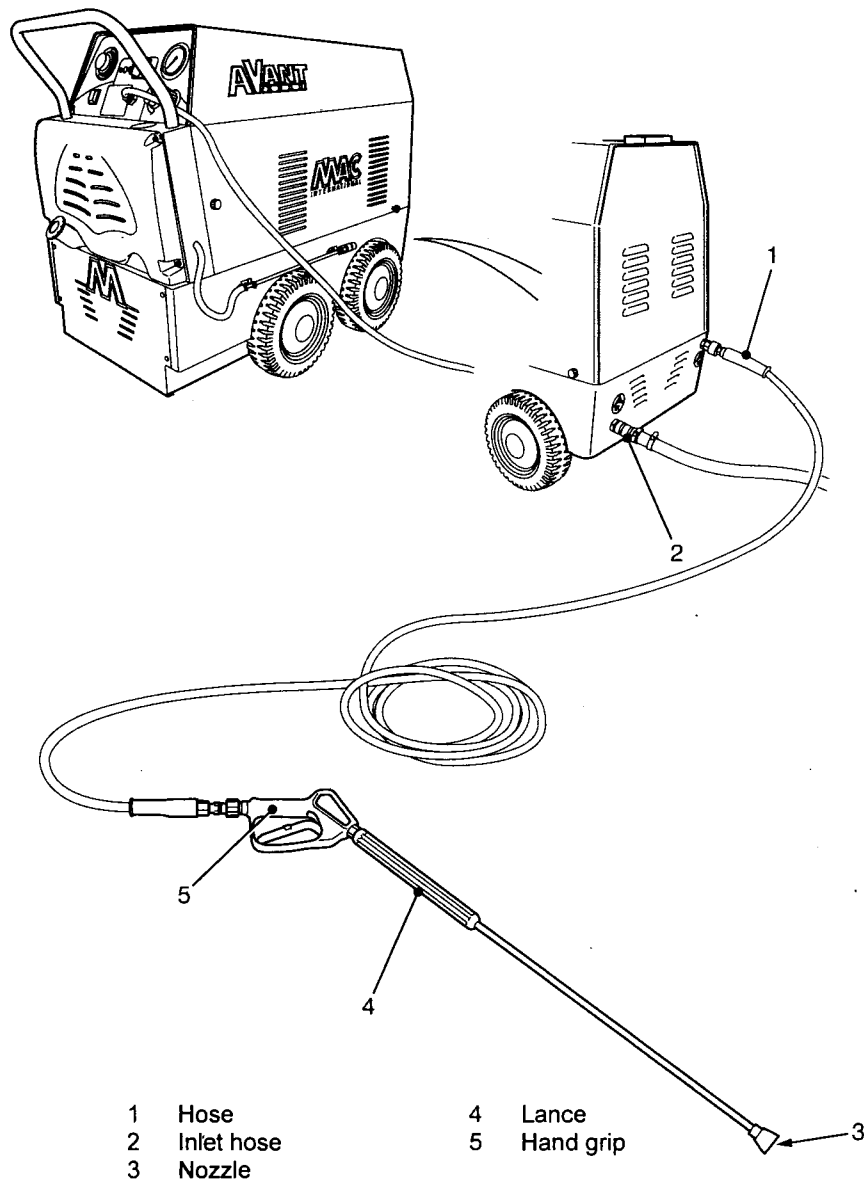


Fig 2 Forward panel connections

5 The heated pressurised water is released from the cleaner via a hose (Fig 2 (1)), lance (4) and nozzle (3) by operation of the lance handgrip trigger (5). The handgrip is a dead man's handle design and houses a handgrip trigger safety catch to prevent inadvertent operation when not in use. Water is supplied on demand; however the pump shuts down following no demand for water for a period in excess of 30 seconds. Instant pressure is available on subsequent operation of the trigger.

6 Chemical detergents used to assist the cleaning operation are added through a filtered stainless steel detergent tube (Fig 1 (11)), a non return valve and plastic hose assembly and is secured externally to the body of the cleaner on the right hand side by two clips. The concentration of detergent is varied by adjustment of the Chemical Pressure Valve (5) located on the control panel.

**Control panel**

7 The control panel is mounted at the rear of the cleaner and consists of switches and controls as detailed in Table 1.

**TABLE 1 CONTROL PANEL DESCRIPTION**

Serial (1)	Item (2)	Details (3)
1	Power ON/OFF Switch (3)	A plastic, 2 position rotary switch providing 240V single-phase electrical supply to the cleaner
2	Burner ON/OFF Switch (13)	A protected, two position rocker switch. When selected to 'ON' activates the burner unit and fuel supply to provide heated pressurised water
3	Thermostat Control (14)	A plastic rotary knob enabling selection of required water temperature. Temperature is annotated in white on control fascia in °C/°F. A white scale is marked on the control panel indicating min/max range

(continued)

TABLE 1 CONTROL PANEL DESCRIPTION (continued)

Serial (1)	Item (2)	Details (3)
4	Low Fuel Lamp (1)	A red lamp which illuminates when there is insufficient fuel in the system to operate the burner unit
5	Power On Lamp (2)	A green lamp which illuminates to indicate electrical supply to cleaner
6	Pressure Gauge (4)	A glycerine filled pressure gauge indicating operating pressure of system. The glycerine provides protection of the gauge from vibration and shock
7	Pressure Reduction Valve (6)	A black rotary control varying the working pressure of the system
8	Chemical Pressure Valve (5)	A red rotary control varying the concentration of the detergent within the system





**CHAPTER 3**  
**OPERATING INSTRUCTIONS**  
**CONTENTS**

Para

- 1 Introduction (WARNINGS) (CAUTIONS)
- 2 Pre-start checks and tests
- 4 Assembly and preparation for use (WARNINGS) (CAUTIONS)  
Switching on/switching off procedures
- 5     Switching on
- 6     Switching off
- 7 Cleaning operation (WARNINGS) (CAUTION)
- 8     Preparation for transit/storage

Fig

Page

- 1 Cleaner, steam, pressure jet..... 6

**INTRODUCTION**

1 Prior to operation of the Cleaner, Steam, Pressure Jet it is essential that the cleaner is correctly assembled and prepared for use. The operator is to carry out the pre-start checks and tests as detailed in Chap 5 and is to be fully conversant with the operating procedures detailed in this chapter before the machine is operated.

**WARNINGS**

- (1) **FIRE EXPLOSION HAZARD. THE PRESSURE CLEANER MUST NOT BE OPERATED IN POTENTIALLY FLAMMABLE OR EXPLOSIVE CONDITIONS.**
- (2) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE OPERATED ON LEVEL SURFACES.**

- (3) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE BURNER UNIT EXHAUST VENT MUST REMAIN FREE FROM OBSTRUCTIONS AT ALL TIMES.
- (4) PERSONNEL INJURY. THE PRESSURE CLEANER MUST BE OPERATED IN WELL-VENTILATED AREAS ONLY.
- (5) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE CONNECTED TO 240V SINGLE PHASE ELECTRICAL SUPPLY PROTECTED BY A RESIDUAL CURRENT DEVICE.
- (6) PERSONNEL INJURY. PERSONNEL MUST HOLD THE LANCE HANDGRIP FIRMLY WHEN OPERATING THE HANDGRIP TRIGGER DUE TO THE RECOIL ACTION OF THE LANCE.
- (7) PERSONNEL INJURY. PERSONNEL MUST REMAIN CLEAR OF THE WATER JET AT ALL TIMES WHILST IN OPERATION.
- (8) PERSONNEL INJURY. THE HANDGRIP TRIGGER SAFETY CATCH MUST BE APPLIED WHEN THE PRESSURE CLEANER IS NOT IN USE TO PREVENT ACCIDENTAL OPERATION OF THE JET.
- (9) PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.
- (10) PERSONNEL INJURY. THE BURNER UNIT EXHAUST VENT EMITS HOT VAPOURS. PERSONNEL MUST REMAIN CLEAR OF THE EXHAUST AT ALL TIMES.
- (11) PERSONNEL INJURY. PERSONNEL MUST WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) WHEN OPERATING THE PRESSURE CLEANER.
- (12) PERSONNEL INJURY. THE CONTROL PANEL PRESSURE GAUGE CONTAINS GLYCERINE. REFER TO THE RELEVANT HAZARD DATA SHEET FOR ACTIONS TO BE TAKEN IN THE EVENT OF DAMAGE TO THE GAUGE AND EXPOSURE TO THE LIQUID.

**(13) PERSONNEL INJURY/EQUIPMENT DAMAGE. NEVER USE THE CLEANER TO CARRY OUT A TASK FOR WHICH IT IS NOT DESIGNED.**

**(14) PERSONNEL INJURY. NEVER OPERATE THE CLEANER WITH THE COVER REMOVED.**

**(15) PERSONNEL INJURY/EQUIPMENT DAMAGE. PRIOR TO USING CHEMICAL DETERGENTS, REFER TO THE RELEVANT CHEMICAL DATA SHEET.**

#### **CAUTIONS**

**(1) EQUIPMENT DAMAGE.** The inlet water supply pressure must be 2 bar minimum. Insufficient pressure will cause damage to the pump by overheating and vibration.

**(2) EQUIPMENT DAMAGE.** Damage to the pump and pipe work may result if the cleaner is not used for prolonged periods in temperatures below 0°C (32°F).

**(3) EQUIPMENT DAMAGE.** Damage to the pump will occur if the pressure cleaner is operated without a water supply connected.

**(4) EQUIPMENT DAMAGE.** The cleaner is to be protected from frost and adverse weather conditions where practicable at all times. The cleaner must not be operated when frozen.

**(5) EQUIPMENT DAMAGE/ENVIRONMENTAL DAMAGE.** Personnel are to carry out maintenance activities involving diesel fuel, chemicals detergent and oil with extreme care to prevent damage to the cleaner components and the environment.

**(6) EQUIPMENT DAMAGE.** Prior to the cleaning operation, direct the jet spray in a safe direction away from the equipment to be cleaned to allow for the setting of the required working pressure.

**(7) EQUIPMENT DAMAGE.** Antifreeze is highly corrosive; when using antifreeze care must be taken not to spill it on any part of the cleaner. All spills must be cleaned up immediately.

### **PRE-START CHECKS AND TESTS**

- 2 On initial receipt of the equipment, carry out the actions detailed in Chap 5, Table 1.
- 3 Before operating the machine, carry out the actions detailed in Chap 5, Table 3 (A).

### **ASSEMBLY AND PREPARATION FOR USE**

#### **WARNINGS**

- (1) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE CONNECTED TO 240V SINGLE PHASE ELECTRICAL SUPPLY PROTECTED BY A RESIDUAL CURRENT DEVICE.**
- (2) **PERSONNEL INJURY. THE HANDGRIP TRIGGER SAFETY CATCH MUST BE APPLIED WHEN THE PRESSURE CLEANER IS NOT IN USE TO PREVENT ACCIDENTAL OPERATION OF THE JET.**
- (3) **PERSONNEL INJURY. THE CONTROL PANEL PRESSURE GAUGE CONTAINS GLYCERINE. REFER TO THE RELEVANT HAZARD DATA SHEET FOR ACTIONS TO BE TAKEN IN THE EVENT OF DAMAGE TO THE GAUGE AND EXPOSURE TO THE LIQUID.**

#### **CAUTIONS**

- (1) **EQUIPMENT DAMAGE. The inlet water supply pressure must be 2 bar minimum. Insufficient pressure will cause damage to the pump by overheating and vibration.**
  - (2) **EQUIPMENT DAMAGE. Damage to the pump will occur if the pressure cleaner is operated without a water supply connected.**
- 4 To assemble and prepare the cleaner for use, proceed as follows:
    - 4.1 Position the cleaner on a level surface.
    - 4.2 Ensure the nozzle is fitted to the lance and is secure.

- 4.3 Ensure the lance is fitted to the handgrip and is secure.
- 4.4 Connect lance hose to the cleaner outlet connector (Fig 1 (7)). Ensure secure.
- 4.5 Ensure handgrip trigger safety catch is applied.
- 4.6 Connect the external water inlet hose (8) (2 bar min pressure) to the cleaner inlet connection (9).
- 4.7 Connect the input cable (11) to a 240V single-phase supply.

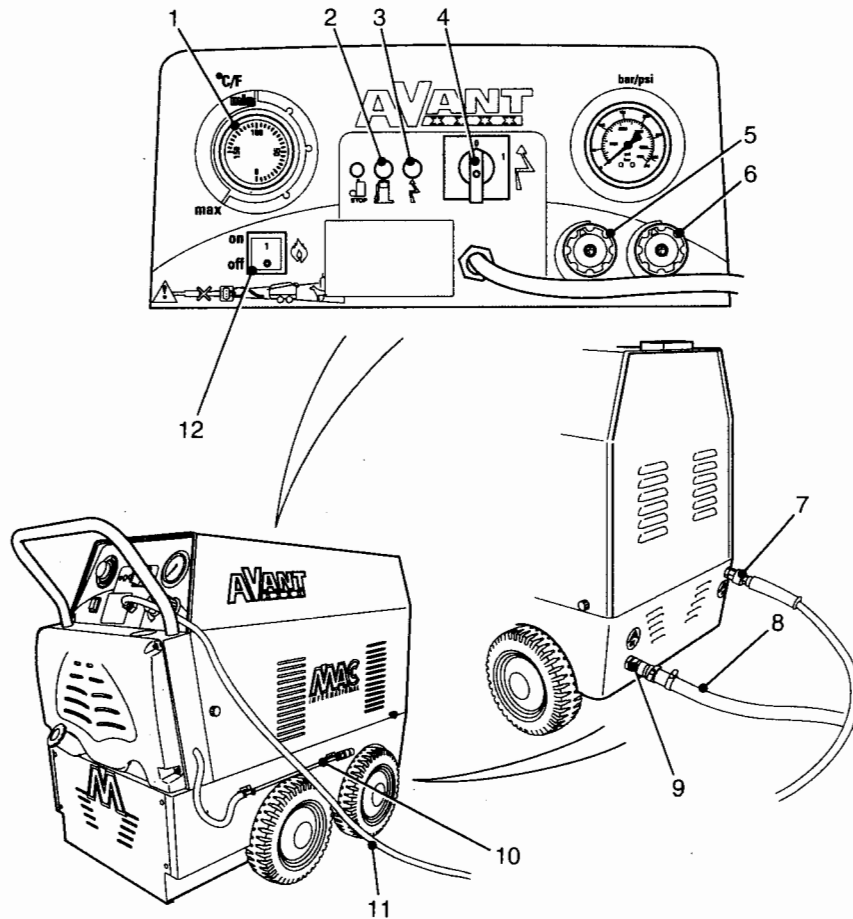
NOTE

Paras 4.9 and 4.10 only apply if a chemical detergent is to be used.

**WARNING**

**PERSONNEL INJURY/EQUIPMENT DAMAGE. PRIOR TO USING CHEMICAL DETERGENTS, REFER TO THE RELEVANT CHEMICAL DATA SHEET.**

- 4.8 Place an approved detergent container adjacent to the cleaner detergent tube (10).
- 4.9 Remove the detergent tube from the stowed position and place in the detergent container. Ensure the detergent tube filter is submerged in the detergent.



- |   |                          |    |                      |
|---|--------------------------|----|----------------------|
| 1 | Thermostat control       | 7  | Outlet connector     |
| 2 | Low fuel lamp            | 8  | Inlet hose           |
| 3 | Power on lamp            | 9  | Inlet connection     |
| 4 | Power ON/OFF switch      | 10 | Detergent tube       |
| 5 | Pressure reduction valve | 11 | Power input cable    |
| 6 | Chemical pressure valve  | 12 | Burner ON/OFF switch |

Fig 1 Cleaner, steam, pressure jet

## SWITCHING ON/SWITCHING OFF PROCEDURES

### Switching on

- 5 To switch the cleaner on, proceed as follows:
  - 5.1 Assemble and prepare the cleaner for use as detailed in Para 4.
  - 5.2 Ensure the power ON/OFF switch (Fig 1 (4)) is set to '0'.
  - 5.3 Ensure the burner ON/OFF switch (12) is set to OFF.
  - 5.4 Ensure the thermostat control (1) is set fully anti-clockwise.
  - 5.5 Switch on the external water supply to the cleaner.
  - 5.6 Switch on the external 240V single-phase power supply.
  - 5.7 Set the power ON/OFF switch to '1' and ensure the power on lamp (3) is illuminated.

### Switching off

- 6 To switch the cleaner OFF, proceed as follows:
  - 6.1 Release the handgrip trigger.

#### NOTE

If the cleaner has been operated with hot water then proceed from Para 6.2. If the cleaner has been operated with cold water only, then proceed to Para 6.4.

- 6.2 Set the thermostat control fully anti-clockwise and operate the cleaner for a minimum of 2 minutes.
- 6.3 Release the handgrip trigger.

- 6.4 Set the power ON/OFF switch to '0' and ensure the power on lamp is extinguished.
- 6.5 Switch OFF the external water supply.
- 6.6 Switch off the external 240V single-phase power supply.
- 6.7 Operate the handgrip trigger to release the system pressure.
- 6.8 Apply the trigger safety catch.

#### **CLEANING OPERATION**

#### **WARNINGS**

- (1) FIRE EXPLOSION HAZARD. THE PRESSURE CLEANER MUST NOT BE OPERATED IN POTENTIALLY FLAMMABLE OR EXPLOSIVE CONDITIONS.**
- (2) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE BURNER UNIT EXHAUST VENT MUST REMAIN FREE FROM OBSTRUCTIONS AT ALL TIMES.**
- (3) PERSONNEL INJURY. THE PRESSURE CLEANER MUST BE OPERATED IN WELL-VENTILATED AREAS ONLY.**
- (4) PERSONNEL INJURY. PERSONNEL MUST HOLD THE LANCE HANDGRIP FIRMLY WHEN OPERATING THE HANDGRIP TRIGGER DUE TO THE RECOIL ACTION OF THE LANCE.**
- (5) PERSONNEL INJURY. PERSONNEL MUST REMAIN CLEAR OF THE WATER JET AT ALL TIMES WHILST IN OPERATION.**
- (6) PERSONNEL INJURY. THE HANDGRIP TRIGGER SAFETY CATCH MUST BE APPLIED WHEN THE PRESSURE CLEANER IS NOT IN USE TO PREVENT ACCIDENTAL OPERATION OF THE JET.**
- (7) PERSONNEL INJURY. THE BURNER UNIT EXHAUST VENT EMITS HOT VAPOURS. PERSONNEL MUST REMAIN CLEAR OF THE EXHAUST AT ALL TIMES.**



**(8) PERSONNEL INJURY. PERSONNEL MUST WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) WHEN OPERATING THE PRESSURE CLEANER.**

**(9) PERSONNEL INJURY. NEVER OPERATE THE CLEANER WITH THE COVER REMOVED.**

**CAUTION**

**EQUIPMENT DAMAGE.** Prior to the cleaning operation, direct the jet spray in a safe direction away from the equipment to be cleaned to allow for the setting of the required working pressure.

7 To carry out a cleaning operation, proceed as follows:

7.1 Assemble and prepare the cleaner for use and switch ON.

7.2 Ensure the low fuel lamp (2) is extinguished.

**NOTE**

Para 7.3 applies only if the fuel low level lamp is illuminated and hot water is required for the operation. The burner unit will not operate when the fuel low lamp is illuminated.

7.3 Refuel the cleaner as detailed in Chap 5.

7.4 Hold the handgrip firmly and release the trigger safety catch.

7.5 Direct the lance away from the area of operation and operate the trigger for approximately 2 minutes.

**NOTE**

This allows the pump to operate and eliminates any possible residues which may block the nozzle.

7.6 Adjust the pressure reduction valve (5) to achieve the required operating pressure.

7.7 Adjust the chemical pressure valve (6) to achieve to required operating concentration of detergent (if required).

**NOTE**

Para 7.8 is only applicable if hot water is required.

7.8 Set the burner ON/OFF switch (12) to 'ON' and adjust the thermostat control (1) to the required operating temperature.

7.9 Release the trigger and redirect the spray at the equipment to be cleaned and operate as required.

**Preparation for transit/storage**

8 To avoid damage to the cleaner during transit, appropriate methods are to be applied to prevent damage resulting from shock, vibration and humidity. The wheels of the cleaner are to be anchored securely to the relevant mode of transport and the lance and power supply cable is to be packaged and secured accordingly. No residual pressure is to be present in the system and the handgrip trigger safety catch is to be applied.

9 The cleaner is to be cleaned and residual pressure dissipated in preparation for storage. For periods of long term storage the cleaner is to be drained of water.

**CHAPTER 4**  
**FAILURE DIAGNOSIS**  
**CONTENTS**

Para

- 1 Introduction (WARNING)
- 5 Disposal instructions

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Page

- |   |                        |   |
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|---|------------------------|---|

**WARNING**

**PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.**

**INTRODUCTION**

1 This chapter details the failure diagnosis procedures for the Steam Cleaner, Pressure Jet to be carried out at Level 1.

2 Before attempting to fault find on the equipment, it is essential to have a sound knowledge of the equipment and its various components. Construction and operation details are contained in Chaps 2 and 3 of this publication.

3 To maintain product safety and reliability, repairs must be carried out by an authorised tradesman. Report faults in accordance with current service regulations.

4 Refer to Table 1 for failure diagnosis.

TABLE 1 FAILURE DIAGNOSIS

Serial (1)	Symptom (2)	Possible Cause (3)	Action (4)
1	Cleaner will not run	No electrical supply	1 Check supply is available 2 Check plug is fitted correctly 3 Check supply switch is on
		Electrical supply incorrect	Check suitability of supply
		Mains power cable is damaged	1 Check cable 2 If damaged, report to Equipment Support Manager (ESM) for repair instructions
2	Cleaner is 'live'	Damaged mains cable and plug	Report to ESM for repair instructions
		Damp electrical wires/connections	Dry out
3	Water fails to flow from lance	Empty water tank	Check supply
		Water filter blocked	Clean or replace as required
		Lance nozzle blocked	Clean or replace as required
4	Pressure too low	Dirty water filters	Clean or replace as required
		Pressure reduction valve open	Close valve
		Detergent valve open	Close valve
		Lance nozzle, missing/worn	Replace

(continued)

**TABLE 1 FAILURE DIAGNOSIS (continued)**

Serial (1)	Symptom (2)	Possible Cause (3)	Action (4)
5	Pressure is too high	Lance nozzle is restricted	Clean or replace as required
6	Water drips from under the body of the cleaner	Leak from water tank	Refer to ESM for repair instructions
7	Cleaner not sucking detergent	Detergent filter blocked	Clean or replace as required
8	Burner will not ignite	Valve closed Fuel tank empty	Open valve 1 Confirm low fuel lamp illuminated 2 Refill fuel tank
9	Machine re-starts when trigger is closed	Fuel filter blocked Thermostat control set too low Trigger/high pressure hose leaking	Replace Adjust Refer to ESM for repair instructions

**DISPOSAL INSTRUCTIONS**

5 Once a cleaner has been inspected by an appropriately qualified person and deemed unserviceable, the disposal procedure is to be carried out as directed by the Equipment Support Manager.



**CHAPTER 5**  
**USER MAINTENANCE**  
**CONTENTS**

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5	Warnings
6	Maintenance intervals and areas of responsibility (WARNINGS) (CAUTIONS)
10	Maintenance/repair procedures
11	Scope of maintenance repairs
12	Sealants, adhesives and lubricants
	Maintenance/repair procedures
13	Water system bleeding (WARNINGS) (CAUTIONS)
14	Water filters removal/refitting (WARNINGS)
15	Fine mesh filter removal
16	Fine mesh filter fitting
17	Y-filter removal
18	Y-filter fitting
	Fuel filter removal/fitting (WARNINGS) (CAUTION)
19	Removal
20	Fitting
	Nozzle removal/refitting (WARNINGS)
21	Removal
22	Fitting
	Detergent tube filter removal/fitting (WARNINGS)
23	Removal
24	Fitting
25	Fuel tank replenishment (WARNINGS) (CAUTION)
26	Oil pump level check and replenishment (WARNINGS) (CAUTION)

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2	Oil check, fuel filter and nozzle replacement.....	15

**INTRODUCTION**

1 This chapter is the authority for carrying out all scheduled maintenance tasks on the subject equipment and takes precedence over any other conflicting publication.

2 The person in a unit or formation with delegated responsibility for the specified equipment, who is also competent and experienced in that role, is responsible for ensuring that the operations detailed in this chapter are properly carried out. The operations are only to be carried out by personnel who, through either professional trade training or an equipment specific formal training course are appropriately qualified. The aforementioned responsible person may also order any operation to be carried out more frequently than specified, if conditions under which the equipment operated render it necessary.

3 Scheduled Maintenance is to be recorded in the appropriate document in accordance with single service regulations.

**DEFINITIONS**

4 As far as this document is concerned, the following definitions apply:

4.1 **Examine.** Carry out a survey of the condition of an item without dismantling, **unless** specifically instructed to do so in the relevant task requirement. The condition of an item may be impaired by the following:

4.1.1 Insecurity of attachment.



- 4.1.2 Cracks or fractures.
- 4.1.3 Corrosion, contamination or deterioration.
- 4.1.4 Distortion.
- 4.1.5 Loose or missing fasteners.
- 4.1.6 Chafing, fraying, scoring or wear.
- 4.1.7 Faulty or broken locking devices.
- 4.1.8 Loose clips or packing, obstruction of, or leakage from pipelines.
- 4.1.9 Discolouration due to overheating or leakage of fluids.
- 4.1.10 Damage due to external sources.

4.2 Check. Make a comparison of measurement of time, pressure, temperature, resistance, dimension or other quantity, with a known figure.

4.3 Operate. As far as possible, ascertain that a component or system functions correctly without the use of test equipment or reference to measurement.

#### **WARNINGS**

5 Before any maintenance task is carried out, the WARNINGS preceding the appropriate table must be read and understood.

#### **MAINTENANCE INTERVALS AND AREAS OF RESPONSIBILITY**

#### **NOTE**

The information contained in the tables is equipment specific and should reflect the manufacturer's recommendations and equipment usage.

6 Table 2 - Action on Receipt. The maintenance detailed in Table 2 covers the action taken when the equipment arrives on a unit. These operations will normally be of a once only nature, eg the recording of electrical equipment with the appropriate test authority, actions that are necessary to be undertaken before the equipment is put into service or actions that are only required during the running in period. The maintenance detailed in Table 2 maintenance must be carried out by appropriately trained personnel, as detailed in Para 2.

7 Table 3 - User/Operator Maintenance. The maintenance tasks detailed in Table 3 Maintenance intervals A, B and C are to be carried out by appropriately trained personnel, as detailed in Para 2, as follows:

- 7.1 A - Daily before use (only on days used).
- 7.2 B - Daily in use (while the equipment is being operated).
- 7.3 C - Daily after use (after the equipment has been operated).

8 Table 4 - Time/Usage Maintenance. The maintenance detailed in Table 4 must be carried out by appropriately trained personnel, as detailed in Para 2, and details recorded in the appropriate document.

#### **TABLE 1 FUELS, LUBRICANTS AND ASSOCIATED PRODUCTS**

##### **NOTES**

- (1) The products listed below are to be used on this equipment. Alternative products must not be used without the approval of an appropriate Equipment Support Manager.
- (2) Oil changes at the -15 deg C point shall only be made on the advice of the responsible person detailed at Para 2.
- (3) The capacities listed are to be used as a guide only. A physical check is to be carried out to ensure that all fluid levels are correct. This check should be carried out with the equipment unladen and standing on level ground whenever possible.

<b>Serial (1)</b>	<b>Assembly (2)</b>	<b>Product (3)</b>	<b>Capacity (4)</b>
1	Fuel system	DIESO UK	A/R
2	Lubrication system	Interpump X-99 special pump oil	0.55lt

**TABLE 2 ACTION ON RECEIPT**

<b>Serial (1)</b>	<b>Action (2)</b>
1	Check equipment for damage
2	Check tools and equipment against CES
3	Record relevant details in appropriate document in accordance with single service regulations

9 The following WARNINGS and CAUTIONS must be read and understood before commencing the tasks detailed in Table 3.

**WARNINGS**

(1) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST BE ISOLATED FROM THE ELECTRICAL SUPPLY WHEN REPLENISHING THE DIESEL FUEL TANK.**

(2) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE BURNER UNIT EXHAUST VENT MUST REMAIN FREE FROM OBSTRUCTIONS AT ALL TIMES.**

(3) **PERSONNEL INJURY. THE HANDGRIP TRIGGER SAFETY CATCH MUST BE APPLIED WHEN THE PRESSURE CLEANER IS NOT IN USE TO PREVENT ACCIDENTAL OPERATION OF THE JET.**

(4) **PERSONNEL INJURY. MAINTENANCE ON THE PRESSURE CLEANER IS NOT TO BE CARRIED OUT UNTIL SUFFICIENT TIME HAS BEEN ALLOWED FOR THE HEATED COMPONENTS TO COOL NATURALLY OR THE PRESSURE CLEANER HAS BEEN OPERATED COLD FOR A MINIMUM PERIOD OF 2 MINUTES.**

#### CAUTIONS

(1) **EQUIPMENT DAMAGE.** The cleaner is to be protected from frost and adverse weather conditions where practicable at all times. The cleaner must not be operated when frozen.

(2) **EQUIPMENT DAMAGE/ENVIRONMENTAL DAMAGE.** Personnel are to carry out maintenance activities involving diesel fuel, chemicals detergent and oil with extreme care to prevent damage to the cleaner components and the environment.

**TABLE 3 USER/OPERATOR MAINTENANCE**

Serial (1)	Task (2)	Maintenance Interval (3)		
		A	B	C
1	Check that the power supply for the cleaner is correct	X		
2	Examine the power lead and electrical connector	X		
3	Examine the cleaner body and wheels	X		
4	Examine the lance	X		
5	Examine the nozzle (replace if required)	X		X
6	Examine the control panel	X		

(continued)

**TABLE 3 USER/OPERATOR MAINTENANCE**

Serial (1)	Task (2)	Maintenance Interval (3)		
		A	B	C
7	Operate handgrip trigger and ensure freedom of movement over full range. Ensure trigger returns to neutral position on release	X		
8	Apply handgrip trigger safety catch. Ensure unable to operate handgrip trigger	X		X
9	Examine chemical detergent tube and filter. Clean or replace filter as required	X		
10	Ensure the burner unit exhaust vent is free from obstruction and foreign bodies	X	X	
11	Ensure fuel cap fitted	X		X
12	Replenish fuel tank level as required	X		

**TABLE 4 TIME/USAGE MAINTENANCE**

Serial (1)	Task (2)	Maintenance Interval (3)	Maintenance Procedure (4)
1	Bleed the water system	On initial use On receipt from long term storage	Para 13
2	Replace the fuel filter	3 monthly	Para 19
3	Examine water filters, replace as required	3 monthly	Paras 14 to 18
4	Check oil pump level, replenish as required	3 monthly	Para 26

**MAINTENANCE/REPAIR PROCEDURES**

10 The following paragraphs detail the maintenance and repair procedures for the cleaner at Unit level.

**Scope of maintenance repairs**

11 Maintenance/repairs at Unit level for the cleaner comprise the following:

- 11.1 Water system bleeding.
- 11.2 Water filters removal and replacement.
- 11.3 Fuel filter removal and replacement.
- 11.4 Nozzle removal and replacement.
- 11.5 Detergent tube filter removal and replacement.
- 11.6 Fuel tank replenishment.
- 11.7 Oil pump level check and replenishment.

**Sealants, adhesives and lubricants**

12 The sealants, adhesives and lubricants required to carry out the tasks detailed in this chapter are listed in Table 5.

**TABLE 5 SEALANTS, ADHESIVES AND LUBRICANTS**

<b>Serial (1)</b>	<b>Part No. (2)</b>	<b>Designation (3)</b>
1	MAC-OIL	Interpump X-99 special pump oil

**MAINTENANCE/REPAIR PROCEDURES**

**Water system bleeding**

**WARNINGS**

- (1) **FIRE EXPLOSION HAZARD. THE PRESSURE CLEANER MUST NOT BE OPERATED IN POTENTIALLY FLAMMABLE OR EXPLOSIVE CONDITIONS.**
- (2) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE OPERATED ON LEVEL SURFACES.**
- (3) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE BURNER UNIT EXHAUST VENT MUST REMAIN FREE FROM OBSTRUCTIONS AT ALL TIMES.**
- (4) **PERSONNEL INJURY. THE PRESSURE CLEANER MUST BE OPERATED IN WELL-VENTILATED AREAS ONLY.**
- (5) **PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST ONLY BE CONNECTED TO 240V SINGLE PHASE ELECTRICAL SUPPLY PROTECTED BY A RESIDUAL CURRENT DEVICE.**
- (6) **PERSONNEL INJURY. THE BURNER UNIT EXHAUST VENT EMITS HOT VAPOURS. PERSONNEL MUST REMAIN CLEAR OF THE EXHAUST AT ALL TIMES.**
- (7) **PERSONNEL INJURY. ENSURE THE CLEANER IS POSITIONED SUCH THAT THE HIGH PRESSURE OUTLET IS POINTING IN A SAFE DIRECTION DURING THE CLEANER BLEEDING MAINTENANCE ACTIVITY.**

**CAUTIONS**

**(1) EQUIPMENT DAMAGE.** The inlet water supply pressure must be 2 bar minimum. Insufficient pressure will cause damage to the pump by overheating and vibration.

**(2) EQUIPMENT DAMAGE.** Damage to the pump will occur if the pressure cleaner is operated without a water supply connected.

- 13 To bleed the cleaner water system, proceed as follows:
- 13.1 Position the cleaner on a level surface.
  - 13.2 Connect the external water supply hose (Fig 1 (5)) (2 bar min pressure) to the cleaner inlet (7).
  - 13.3 Connect power supply input cable to 240V single-phase supply.
  - 13.4 Ensure the lance is NOT connected to the cleaner.
  - 13.5 Ensure the power ON/OFF switch is set to '0'.
  - 13.6 Ensure the burner switch is set to 'OFF'.
  - 13.7 Ensure the thermostat control is set fully anti-clockwise.
  - 13.8 Ensure the pressure reduction valve is set fully anti-clockwise (min pressure).
  - 13.9 Ensure the chemical reduction valve is set fully anti-clockwise (min pressure).
  - 13.10 Switch on the external water supply to the cleaner.
  - 13.11 Switch on the external 240V single-phase power supply.
  - 13.12 Set the power ON/OFF switch to '1' and ensure the power on lamp is illuminated.



13.13 Operate the cleaner until an 'air free' water flow is observed from the cleaner outlet.

13.14 Set the power ON/OFF switch to '0' and ensure the power on lamp is extinguished.

13.15 Switch off the external water supply.

13.16 Switch off the external 240V single-phase power supply.

#### **Water filters removal/refitting**

#### **WARNINGS**

**(1) PERSONNEL INJURY. MAINTENANCE ON THE PRESSURE CLEANER IS NOT TO BE CARRIED OUT UNTIL SUFFICIENT TIME HAS BEEN ALLOWED FOR THE HEATED COMPONENTS TO COOL NATURALLY OR THE PRESSURE CLEANER HAS BEEN OPERATED COLD FOR A MINIMUM PERIOD OF 2 MINUTES.**

**(2) PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.**

**(3) PERSONNEL INJURY/EQUIPMENT DAMAGE. ALWAYS ENSURE THAT THE CLEANERS POWER SUPPLY IS DISCONNECTED WHEN NOT IN USE AND WHEN CARRYING OUT MAINTENANCE TASKS.**

**(4) PERSONNEL INJURY. SYSTEM PRESSURE MUST BE DISSIPATED BEFORE ANY MAINTENANCE ACTIVITY IS CARRIED OUT OR WHEN NOT IN USE.**

14 The procedures below detail the removal and fitting of the two water filters located on the inlet water supply to the cleaner. The filters are to be cleaned periodically and replaced as required.

ARMY EQUIPMENT  
SUPPORT PUBLICATION

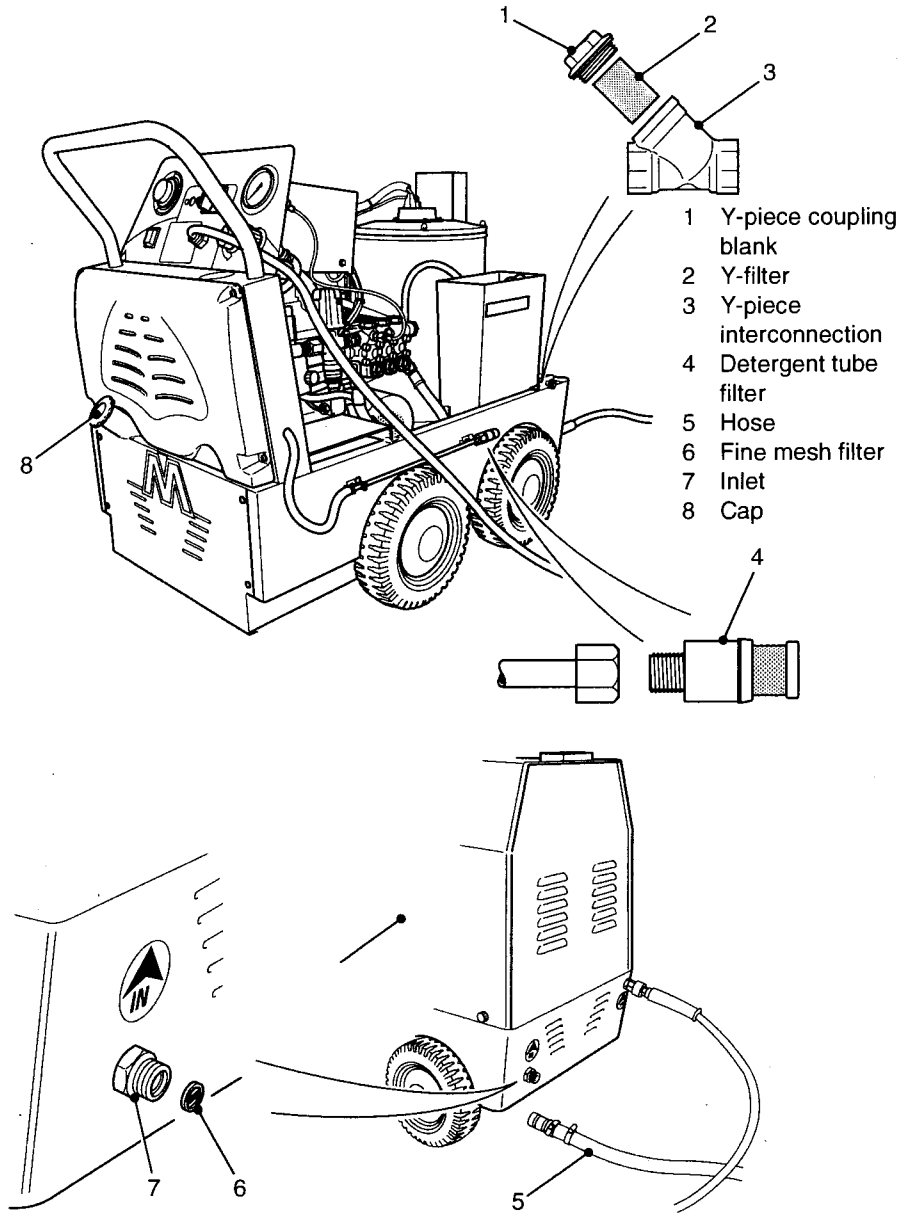


Fig 1 Filter replacement and fuel replenishment

Fine mesh Filter removal

- 15 To remove the fine mesh filter, proceed as follows:
  - 15.1 Ensure the external water supply is switched off and disconnect the water inlet hose from the cleaner inlet connection.
  - 15.2 Remove the fine mesh filter (6).

Fine mesh filter fitting

- 16 To fit the fine mesh filter, proceed as follows:
  - 16.1 Examine the filter.
  - 16.2 Ensure the cleaner inlet connection is free from foreign objects.
  - 16.3 Carefully locate the filter in the inlet connection housing.
  - 16.4 Using finger pressure only, press the filter until flush with the inlet housing.
  - 16.5 Connect inlet water supply (if required).

Y-filter removal

- 17 To remove the Y-filter, proceed as follows:
  - 17.1 Unscrew the fasteners (4 off) securing the cleaner cover to the chassis.
  - 17.2 Remove the cover.
  - 17.3 Remove the Y-piece coupling blank (1), complete with 'O' ring seal from Y-piece inlet connection (3).
  - 17.4 Remove the Y-filter (2).

Y-filter fitting

- 18 To fit the Y-filter, proceed as follows:
  - 18.1 Examine the filter.
  - 18.2 Ensure the Y-piece coupling inlet connection is free from foreign objects.
  - 18.3 Carefully locate the filter in the inlet connection housing.
  - 18.4 Examine the Y-piece coupling blank 'O' ring seal for damage.
  - 18.5 Fit the Y-piece coupling blank, complete with 'O' ring seal, to the Y-piece inlet connection. Do not overtighten.

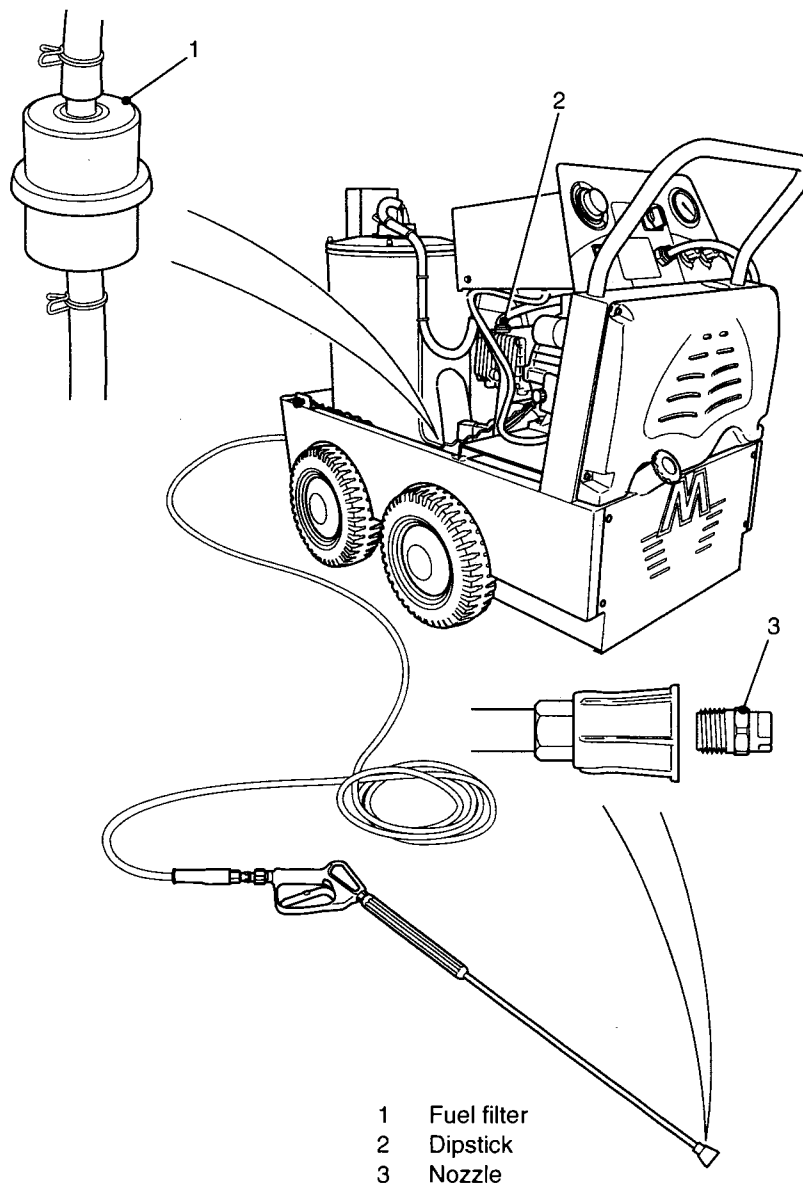


Fig 2 Oil check, fuel filter and nozzle replacement

**Fuel filter removal/fitting**

**WARNINGS**

(1) **PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.**

(2) **PERSONNEL INJURY. MAINTENANCE ON THE PRESSURE CLEANER IS NOT TO BE CARRIED OUT UNTIL SUFFICIENT TIME HAS BEEN ALLOWED FOR THE HEATED COMPONENTS TO COOL NATURALLY OR THE PRESSURE CLEANER HAS BEEN OPERATED COLD FOR A MINIMUM PERIOD OF 2 MINUTES.**

(3) **PERSONNEL INJURY/EQUIPMENT DAMAGE. ALWAYS ENSURE THAT THE CLEANERS POWER SUPPLY IS DISCONNECTED WHEN NOT IN USE AND WHEN CARRYING OUT MAINTENANCE TASKS.**

(4) **PERSONNEL INJURY. SYSTEM PRESSURE MUST BE DISSIPATED BEFORE ANY MAINTENANCE ACTIVITY IS CARRIED OUT OR WHEN NOT IN USE.**

(5) **PERSONNEL INJURY. APPROPRIATE PPE IS TO BE WORN BY ALL PERSONNEL CARRYING OUT MAINTENANCE ACTIVITIES INVOLVING DIESEL FUEL, OIL AND CHEMICAL DETERGENTS.**

**CAUTION**

**EQUIPMENT DAMAGE/ENVIRONMENTAL DAMAGE. Personnel are to carry out maintenance activities involving diesel fuel, chemicals detergent and oil with extreme care to prevent damage to the cleaner components and the environment.**

Removal

19 To remove the fuel filter, proceed as follows:

19.1 Unscrew the fasteners (4 off) securing the cleaner cover to the chassis.

19.2 Remove the cover.

19.3 Locate and carefully withdraw the fuel filter (Fig 2 (1)) from the cleaner.

19.4 Position the fuel filter over a suitable container.

19.5 Release the securing clips (2 off) securing the fuel hoses to the filter and remove the fuel filter.

19.6 Remove the securing clips from the fuel filter hoses.

19.7 Position the hoses to minimise the loss of fuel from the system.

19.8 Using a cloth wipe any excess fuel from affected parts.

19.9 Dispose of excess fuel in accordance with current service regulations.

Fitting

20 To fit the fuel filter, proceed as follows:

20.1 Ensure the fuel filter and fuel filter hoses are free from obstructions.

20.2 Position the fuel filter hoses over a suitable container.

20.3 Fit securing clip (1 off) to the fuel filter hose (1 off) and compress.

20.4 Fit the fuel hose to the fuel filter and release the securing clip.

- 20.5 Ensure the securing clip is positioned towards the main body of the fuel filter but not at the extremity of the hose and is secure.
- 20.6 Repeat Paras 20.3 to 20.5 for remaining fuel filter connection.
- 20.7 Carefully re-position the fuel filter in the body of the cleaner.
- 20.8 Fit the cleaner cover and secure it to the chassis using the fasteners (4 off).

**Nozzle removal/refitting**

**WARNINGS**

- (1) **PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.**
- (2) **PERSONNEL INJURY/EQUIPMENT DAMAGE. ALWAYS ENSURE THAT THE CLEANERS POWER SUPPLY IS DISCONNECTED WHEN NOT IN USE AND WHEN CARRYING OUT MAINTENANCE TASKS.**
- (3) **PERSONNEL INJURY. SYSTEM PRESSURE MUST BE DISSIPATED BEFORE ANY MAINTENANCE ACTIVITY IS CARRIED OUT OR WHEN NOT IN USE.**

Removal

- 21 To remove the nozzle, proceed as follows:
  - 21.1 Position the lance on a suitable work surface.
  - 21.2 Remove the nozzle (Fig 2 (3)) from the lance.



Fitting

22 To fit the nozzle, proceed as follows:

22.1 Position the lance on a suitable work surface.

22.2 Examine the lance and nozzle.

22.3 Apply PTFE tape to the threaded portion of the nozzle and fit it to the lance.

**Detergent tube filter removal/fitting**

**WARNINGS**

(1) **PERSONNEL INJURY/EQUIPMENT DAMAGE. NO ATTEMPT IS TO BE MADE TO CARRY OUT A TEMPORARY REPAIR TO THE PRESSURE CLEANER. REPAIRS ARE ONLY TO BE CARRIED OUT BY AUTHORISED PERSONNEL IN ACCORDANCE WITH CURRENT SERVICE REGULATIONS.**

(2) **PERSONNEL INJURY/EQUIPMENT DAMAGE. ALWAYS ENSURE THAT THE CLEANERS POWER SUPPLY IS DISCONNECTED WHEN NOT IN USE AND WHEN CARRYING OUT MAINTENANCE TASKS.**

(3) **PERSONNEL INJURY. SYSTEM PRESSURE MUST BE DISSIPATED BEFORE ANY MAINTENANCE ACTIVITY IS CARRIED OUT OR WHEN NOT IN USE.**

(4) **PERSONNEL INJURY. APPROPRIATE PPE IS TO BE WORN BY ALL PERSONNEL CARRYING OUT MAINTENANCE ACTIVITIES INVOLVING DIESEL FUEL, OIL AND CHEMICAL DETERGENTS.**

(5) **PERSONNEL INJURY/EQUIPMENT DAMAGE. PRIOR TO USING CHEMICAL DETERGENTS, REFER TO THE RELEVANT CHEMICAL DATA SHEET.**

Removal

23 To remove the detergent tube filter, proceed as follows:

23.1 Ensure the detergent tube is removed from the stowage point/detergent container.

23.2 Using a clean cloth, wipe any excess detergent from the detergent tube and filter.

23.3 Holding the detergent tube securely, remove the detergent tube filter (Fig 1 (4)).

Fitting

24 To fit the detergent tube filter, proceed as follows:

24.1 Examine the detergent tube and detergent filter.

24.2 Apply PTFE tape to the threaded portion of the detergent filter.

24.3 Hold the detergent tube securely and fit the filter to the detergent tube.

24.4 Secure the detergent tube in the cleaner stowage point.

**Fuel tank replenishment**

**WARNINGS**

**(1) PERSONNEL INJURY/EQUIPMENT DAMAGE. THE PRESSURE CLEANER MUST BE ISOLATED FROM THE ELECTRICAL SUPPLY WHEN REPLENISHING THE DIESEL OIL TANK.**

**(2) PERSONNEL INJURY. APPROPRIATE PPE IS TO BE WORN BY ALL PERSONNEL CARRYING OUT MAINTENANCE ACTIVITIES INVOLVING DIESEL FUEL, OIL AND CHEMICAL DETERGENTS.**

**CAUTION**

**EQUIPMENT DAMAGE/ENVIRONMENTAL DAMAGE.** Personnel are to carry out maintenance activities involving diesel fuel, chemicals detergent and oil with extreme care to prevent damage to the cleaner components and the environment.

- 25 To replenish the fuel tank, proceed as follows:
- 25.1 Ensure the cleaner is switched off and disconnected from the power supply.
  - 25.2 Remove and retain the fuel tank protective cap (Fig 1 (8)).
  - 25.3 Place a suitable container under the replenishment point.
  - 25.4 Carefully fill the fuel tank using approved fuel (Table 1, Serial 1).
  - 25.5 Using a clean cloth, wipe any excess fuel from around the fuel replenishment point.
  - 25.6 Dispose of any fuel spillages in accordance with current service regulations.
  - 25.7 Refit the fuel tank protective cap.

**Oil pump level check and replenishment**

**WARNINGS**

(1) **PERSONNEL INJURY. MAINTENANCE ON THE PRESSURE CLEANER IS NOT TO BE CARRIED OUT UNTIL SUFFICIENT TIME HAS BEEN ALLOWED FOR THE HEATED COMPONENTS TO COOL NATURALLY OR THE PRESSURE CLEANER HAS BEEN OPERATED COLD FOR A MINIMUM PERIOD OF 2 MINUTES.**

(2) **PERSONNEL INJURY/EQUIPMENT DAMAGE. ALWAYS ENSURE THAT THE CLEANERS POWER SUPPLY IS DISCONNECTED WHEN NOT IN USE AND WHEN CARRYING OUT MAINTENANCE TASKS.**

**(3) PERSONNEL INJURY. SYSTEM PRESSURE MUST BE DISSIPATED BEFORE ANY MAINTENANCE ACTIVITY IS CARRIED OUT OR WHEN NOT IN USE.**

**(4) PERSONNEL INJURY. APPROPRIATE PPE IS TO BE WORN BY ALL PERSONNEL CARRYING OUT MAINTENANCE ACTIVITIES INVOLVING DIESEL FUEL, OIL AND CHEMICAL DETERGENTS.**

**CAUTION**

**EQUIPMENT DAMAGE/ENVIRONMENTAL DAMAGE.** Personnel are to carry out maintenance activities involving diesel fuel, chemicals detergent and oil with extreme care to prevent damage to the cleaner components and the environment.

- 26 To check and replenish the oil pump, proceed as follows:
- 26.1 Ensure the cleaner is positioned on a level surface.
  - 26.2 Allow sufficient time to allow the pump oil to settle.
  - 26.3 Unscrew the fasteners (4 off) securing the cleaner cover to the chassis.
  - 26.4 Remove the cover.
  - 26.5 Unscrew and withdraw the oil pump dipstick (Fig 2 (2)) from the oil pump.
  - 26.6 Using a clean lint free cloth, remove the oil from the dipstick.
  - 26.7 Re-insert the dipstick into the oil pump, hold momentarily, then withdraw and determine oil level.

**NOTE**

If the oil level is within the max and min marks, proceed from Para 26.9.

- 26.8 Using current in-service approved oil (Table 5, Serial 1), carefully fill the oil pump until a satisfactory level is achieved via the dipstick hole.

26.9 Using a clean cloth remove any excess oil from around the oil pump.

26.10 Refit the dipstick.

26.11 Fit the cleaner cover and secure it to the chassis using the fasteners (4 off).



**CHAPTER 6**  
**COMMERCIAL PARTS LIST**  
**CONTENTS**

Para

1	Introduction
3	Quantities
4	Demands
5	Annotations
6	Indentations

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2	Cleaner, steam, pressure jet - fuel filter and nozzle .....	6

**INTRODUCTION**

1 The Commercial Parts List is designed as an aid to the identification of components parts or assemblies of parts of the equipment, and to provide the information necessary for the demanding of spares. The parts list should not be used as a dismantling, maintenance, repair, storage, transportation or operational guide.

2 This chapter may list some or all of the parts comprising the equipment concerned, but only those parts given a NATO Stock Number or Service Catalogue or Referencing Number will normally be available as spares. Should there be a requirement for an item not assigned a number, demands may be submitted quoting the AESP number, Item Number, Figure Reference and Item Name. Where a manufacturer's reference is known, this should also be quoted.

**Quantities**

3 The figure in the "Number off" column specifies the quantity required for the unit (or assembly, sub-assembly, etc) concerned; it does not indicate the quantity to be demanded.

4

**Demands**

- 5 When demanding Spare Parts, the following particulars must be quoted:
  - 5.1 Domestic Management Code (DMC).
  - 5.2 NATO Stock Number (NSN)
  - 5.3 Item Name.
  - 5.4 Name of Equipment for which the part is required.
  - 5.5 Manufacturer's reference, if known.

**Annotations**

- 6 The following notations are used in this publication:
  - 6.1 AR - When appearing in the "Number off" column indicates that the quantity is "as required".
  - 6.2 NI - When appearing in the "Fig Item" column indicates that the item is not illustrated.
  - 6.3 NP - When appearing in the NATO Stock Number column indicates that the item may be illustrated, but is not available from stock as a replacement item, i.e. it is a Non-Provisioned item.
  - 6.4 Ref - In the "Number off" column indicates that the item is listed for reference purposes only.



**Indentations**

7 Items are listed in a logical assembly/disassembly order and are indented by the 'Dot System' in which each 'dot' depicts the relationship of the item to the main assembly.

**MAIN ASSEMBLY**

Attaching parts for main assembly

. FIRST LEVEL OF BREAKDOWN (Sub-assembly or detail part of main assembly)

. Attaching parts for first level

. . SECOND LEVEL OF BREAKDOWN (Sub-sub-assembly or detail part of Sub-assembly)

. . Attaching parts for second level

. . . THIRD LEVEL OF BREAKDOWN (Sub-sub-sub-assembly or detail part of Sub-sub-assembly)

. . . Attaching parts for second level

. . . . FOURTH LEVEL OF BREAKDOWN (Sub-sub-sub-sub assembly or detail part of Sub-sub-sub-assembly)

. . . . Attaching parts for second level

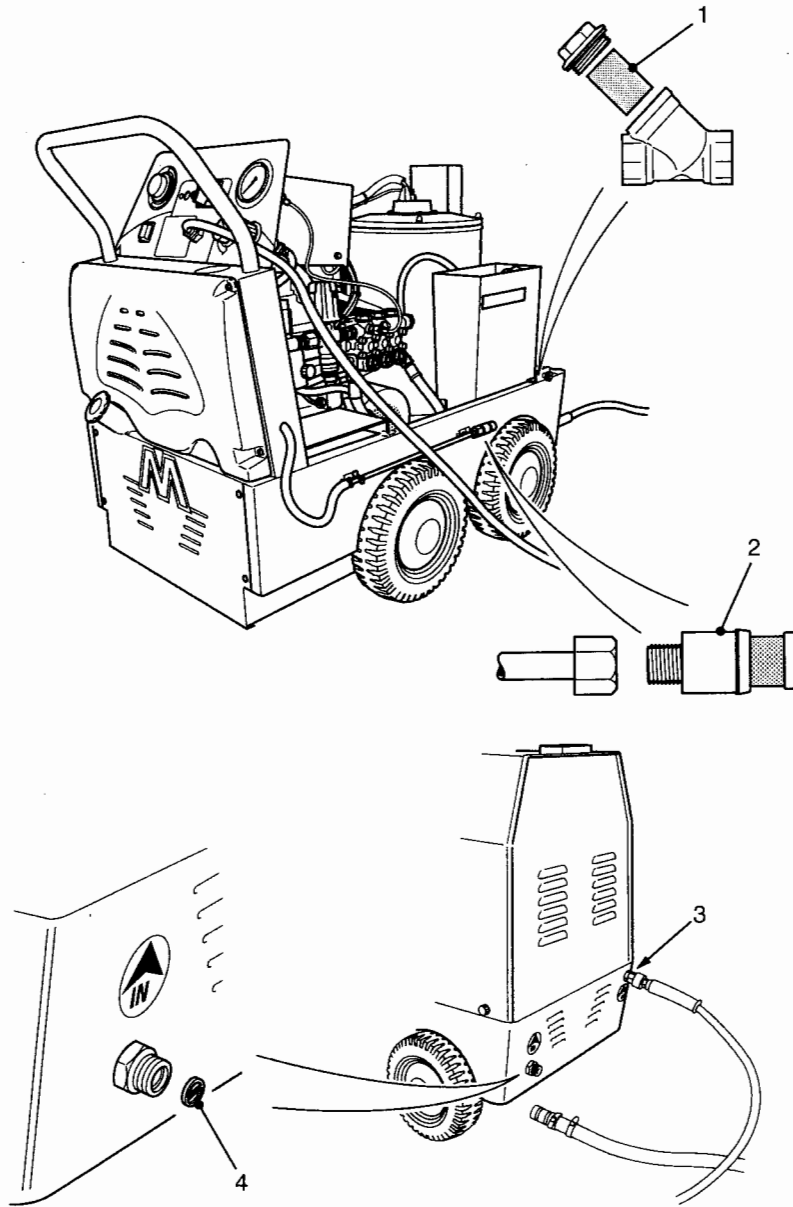



Fig 1 Cleaner, steam, pressure jet - filters

COMMERCIAL PARTS LIST

Fig 1 Item (1)	DMC (2)	NSN (3)	Item Name and Description (4)	MPN (5)	No. Off (6)	Remarks (7)
0	WTE6	4940-99-741-9584	Cleaner, steam pressure jet			
1			Y-filter		1	
2			Detergent filter		1	
4			Fine mesh filter		1	
NI 5	WTE6	4910-99-958-0561	Service kit		1	
NI 6			Interpump X-99 special pump oil (1 ltr)		1	
NI 7			Water inlet Y filter & body 1/2"		1	
NI 8			Seal inlet coupling 3/4"		1	
NI 9			Double electrode		1	
NI 10			Delevan fuel nozzle 1.35 x 60B (solid)		1	
NI 11			Inline fuel filter		1	
NI 12			HT ignition caps/protector		2	
NI 13			HT ignition leads		2	
NI 14			High pressure S/S 1505 nozzle 1/4 MEG		1	
NI 15			Rubber O-ring inlet coupling 3/4"		1	
NI 16			Vinton O-ring seal for M22 coupling		2	

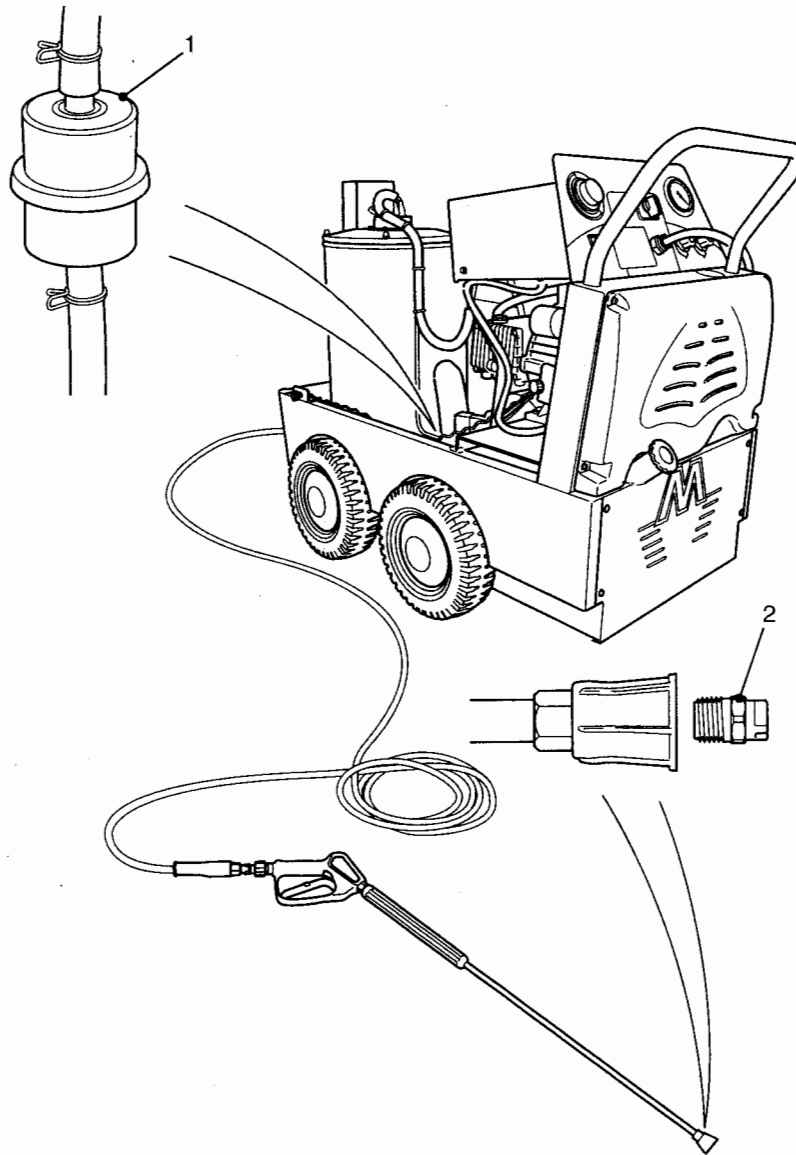



Fig 2 Cleaner, steam pressure jet - fuel filter and nozzle

COMMERCIAL PARTS LIST

Fig 2 Item (1)	DMC (2)	NSN (3)	Item Name and Description (4)	MPN (5)	No. Off (6)	Remarks (7)
0	WTE6	4940-99-741-9584	Cleaner, steam, pressure jet			
1			. Fuel filter		1	
2			. Nozzle		1	



**CHAPTER 7**  
**COMPLETE EQUIPMENT SCHEDULE**  
**CONTENTS**

Para

- Introduction
- 1 Instructions for use by units
- 2 General notes
- 3 Indentations
- 4 Description
- 5 Applicability details

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Fig.

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| 1 | Complete equipment schedule ..... | 3 |
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**INTRODUCTION**

**Instructions for use by units**

1 Detailed instructions for use by units are given in Material Regulations for Army Volume 1 Pamphlet 1.

**General notes**

2 Certain items may be annotated as follows:

2.1 (E) - Expendable stores, consumable stores and material, NON LEDGER spare parts of minor value.

2.2 (X) - ESSENTIAL ITEMS without which the RLC will not issue the equipment.

2.3 (\*) - This asterisk indicated the accountability classification of the item.

2.4 (NI) (Not illustrated) - when appearing with a number in the Fig item column indicates that the item is not illustrated.

2.5 (NIV) (Not in Vocabulary) - indicates that the item is not available within the stores system.

### Indentations

3 Items are listed in a logical assembly/disassembly order and are identified by the dot system in which each Dot depicts the relationship of the item to the assembly.

#### MAIN ASSEMBLY

Attaching parts for main assembly.

. FIRST LEVEL OF BREAKDOWN (Sub-assembly or part of main assembly). Attaching parts for the first level.

. . SECOND LEVEL OF BREAKDOWN (Sub-sub-assembly or detail part of sub-assembly). Attaching parts for second level.

### Description

4 The item description column provides additional information to the CES user.

### APPLICABILITY DETAILS

5 The CES listed in Table 1 relates to the following equipment:

5.1	NSN	ASSET CODE	CONTRACT
	WTE6/490-99-741-9584	L5696	C/WSS/1/2209



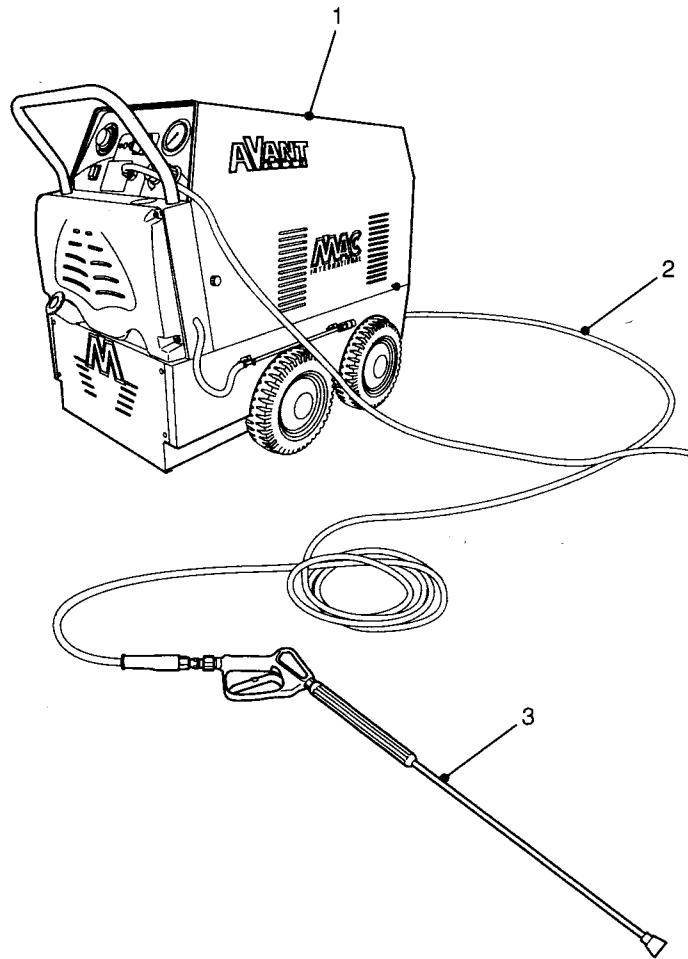


Fig 1 Complete equipment schedule

TABLE 1 COMPLETE EQUIPMENT SCHEDULE

Fig 1 Item No*	Army		Item Description and Annotations	No. Off D of Q	Quantity on Issue
	DMC NSCM	NSN Part number			
1		WTE6/490-99-741- 9584	Cleaner, steam pressure jet	1 EA	
2			. Hose	1 EA	
3			. Lance	1 EA	

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Sender's Reference	BIN Number	Date
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If you require more space please use a separate piece of paper <b>Comment(s):</b>		

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ARMY EQUIPMENT  
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