

KIT!



GPMG

General Purpose Machine Gun
page 31



page 9

Welcome to KiT! 83 Spring 2013

KiT On-Line - On the 'new' Defence Intranet. KiT can now be found on DE&S, Land Equipment home page. The address is:

<http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/DES/Organisations/Orgs/COMLand/LandEqpt/Pages/KITMagazine.aspx>

(For future use, this link will work on the pdf version on-line, to add to your favorites)

However a simple search on the Intranet of 'KiT magazine' will provide the link.

All queries regarding Distribution, Subscription, Back Copies etc. The contacts are opposite. Please note the change of email address.

As usual, if you have something that may be of interest to the wide tri-service readership then please get in touch.

You can call on the work mobile: [REDACTED]

or [REDACTED]

You can email too on MOD network to [REDACTED]

The external address is [REDACTED]

New address is:

DE&S LE KIT,
Elm 3b, #4330, Abbey Wood, Bristol. BS34 8JH



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Technical information in this magazine is for guidance only. Always refer to the relevant AESP, EMER or other authoritative technical document when working on equipment.



Made from 100% recycled material ♻️

Distribution If you wish to be added to the KiT! distribution list or wish to amend the quantities that you already receive, ring **Bicester on** [REDACTED]

Email: [REDACTED]

Recent copies of KiT! can only be obtained from Bicester, request by Issue number at the address above. All issues of KiT! may be accessed at Defence Intranet.

Poster reproductions of KiT pages are available in various sizes (A3, A2 & A1). Contact, Williams Lea with your requirements: **Tel:** [REDACTED] **email:** [REDACTED]



KiT! binders are back! - they are now available on the Banner Stationary Contract, order using P2P Product Code: 0202 600. Title: Kit Binder for filing KiT Magazine - Binder.

KiT! magazine is unclassified and should be distributed to reach the widest possible readership. KiT! may be accessed on the Defence Intranet by running a search on 'kit magazine.' Follow the link, all issues are available grouped by years. Recent copies are also available on ArmyNet. (AKX & CESO).

KiT! magazine is published quarterly on behalf of D Land Equipment. There are no restrictions on the reproduction of articles for Service use; however, if articles are incorporated into other publications, copies of each should be forwarded to the KiT! Editor.



Don't Drive Tyred, Take a Brake!

ROAD SAFETY

WARNING

20% of accidents on Major roads are sleep related
More likely to result in Fatality or Serious Injury
Early Hours & After Lunch are Peak Times for accidents
40% of sleep-related accidents involve commercial vehicles
Men under 30 have the highest risk of falling asleep at the wheel

ROAD SAFETY

CONTRIBUTED BY:

Road Safety

FUELS

Fuel Sampling - Units Be Aware

All sampling of bulk fuels are to be taken using an Any Level Bottom Sampler NSN 6695-99-255-0244.

Note: this sampler has replaced the 'Eagle' type sampler which must NOT be used.



Eagle Type

Any level bottom sampler

Aviation Units

Quality control for aviation fuels and associated additives is of particular importance. The use of copper (or alloys containing more than 4% copper) fittings or components, must be avoided when handling, sampling and transporting fuels and additives.

Copper can adversely affect the performance of treated fuels in some critical tests.

When samples are sent to Intertek for testing: DF&FS FLG Technical Manager must be consulted PRIOR to submission of samples.

All samples of bulk fuel must be taken in accordance with JSP 317.

██████████ or FLGTech 1 on

In silent hours the DF&FS Duty FLG Tech must be contacted on ██████████

AVGAS / ULGAS

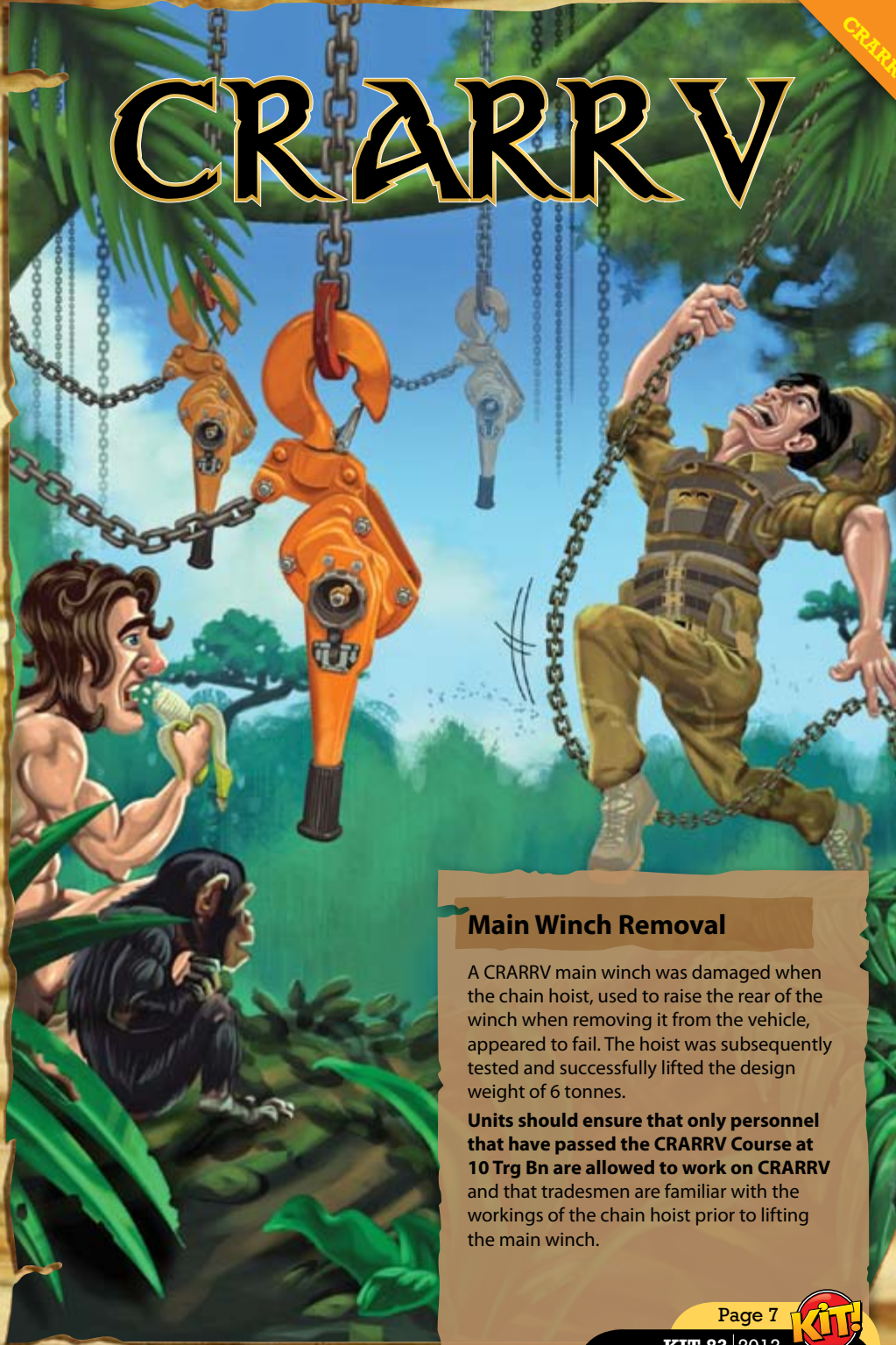
When sampling volatile products such as gasoline, every care must be taken to prevent evaporation losses.



FUEL & Gases Safety Regulator, MOD, Abbey Wood.

CONTRIBUTED BY:

CRARRV



CONTRIBUTED BY:

CTG, Systems Team, DE&S Abbey Wood.

Main Winch Removal

A CRARRV main winch was damaged when the chain hoist, used to raise the rear of the winch when removing it from the vehicle, appeared to fail. The hoist was subsequently tested and successfully lifted the design weight of 6 tonnes.

Units should ensure that only personnel that have passed the CRARRV Course at 10 Trg Bn are allowed to work on CRARRV and that tradesmen are familiar with the workings of the chain hoist prior to lifting the main winch.

TN15 Identification

The CVRT TN15 transmissions have been colour coded for ease of identification.

The TN15 is the basic transmission, which is gradually being replaced by the modified and updated TN15E. The TN15E+ transmission is only used with the EM 235 hp variants:



TN15D

9CVT 2520-99-255-5015
Fitted to the Standard 190 bhp diesel CVRT

- Details in AESP 2350-T-220-XXX

Samson Winch Hand Throttle

The Samson Hand Throttle Control allows the engine speed to be set to 1900 rpm from the operator's position. The control cable fork end is attached to the quadrant with a pin, which is secured with two split pins. This arrangement allows the fork end to move freely in relation to the quadrant during normal vehicle operation, when the engine speed, is controlled by the accelerator pedal.

A recent incident occurred because the pin had been replaced with a nut and bolt - the accelerator pedal stuck at high engine speed because the quadrant was prevented from moving independently of the fork end due to the clamping force imparted by the nut and bolt.



TN15E+

9CVTEM 2520-99-741-9603
Fitted to the 235bhp EM Variants for PDT and OP HERRICK

- The information for this assembly can be found in the 2350-R-113-211 (Aide Memoir)
- The TN15E+ has a physically larger clutch (Stormer type) with a modified cooling fan belt pulley. The TN15E+ also has the modifications fitted to the TN15E.



TN15E

9CVT 2520-99-509-7439
Currently being issued to BATUS

- The TN15E has up-rated internal components, a Gearbox Usage Monitor (GUM) and an additional strainer filter. This assembly has a different servicing schedule and requires an additional special tool to change the strainer filter. This information can be found in the TN15D AESPs and also 2350-R-113-211 (Aide Memoir).

Units are reminded that any deviation from the build standard, as detailed in the AESPs, can have unforeseen and catastrophic consequences.

AESP 2350-N-120-711 Chapter 2-14-2-6 lists the parts, including the pin, for the Winch Hand Throttle Control.

FORM 10

WHAT'S IT TO YOU?



You should already be using Form 10's to raise all issues concerning amendments/changes to AESP's & EMER. **There is now a pdf Form 10 available on JAMES Portal - Please use it.**

The use of the emailed digital Form 10 is recommended, it's quick, greatly improves efficiency and it's easier for You. As with all systems - it's only as good as the information that you input.

TIPS

- AESP/EMER Number – show full document number e.g. AESP 1256-L-400-711.
- Is this Safety Related? – show Yes or No as appropriate.
- **Originator Details:**
 - Full address Inc Post Code or BFPO No.
 - Originator email address
 - Senders Reference - that must be unique.

● AESP Details:

- The Full Title of AESP/EMER should not include the AESP/EMER Number
- Enter details in all other mandatory fields marked*.
- Additional information relating to the Comments (AESP copies, additional text details or photographs) should be attached to the Email at the same time.
- Originator - hit the 'Submit Button' to email the Form (a copy will be in your sent items)

ANY PROBLEMS

Get in touch

FORM 10 CONTACTS

Email: [Redacted]
Mil: [Redacted]

ARMY EQUIPMENT AND SUPPORT PUBLICATION (AESP) AND ELECTRIC MECHANICAL ENGINEERING REGULATIONS (EMER) - FORM 10

Submit Form

AESP/EMER NUMBER: [] IS THIS SAFETY RELATED? Yes No

Send Form 10 via the Email or Post address. However email is preferred. Tel: 030 679 71141 or 9679 71141

Email: DESLEPPS-P@na: Email:form10@med.uk Post to: Form 10 Cell FRACAS BFPO 794

ORIGINATOR'S DETAILS

Name	
Rank / Grade	
Phone	
Senders Reference	
Date Raised	
Eqpt Asset Code (if applicable)	

EMER DETAILS

Title of AESP/EMER (use AESP/EMER Number)						
*Amendment	*Chapter	*Paragraph	*Page	Figure	Instruction	Other

Notes: If additional information is to be supplied, please e-mail with the Form 10 as separate attachments.

FORM 10 CELL USE

*Date Received	
*Date Sent to PT / SME	



14.5 mm Field Artillery Trainer (FAT) AFC 351 Reporting Procedure

Due to a recent safety failure of the 14.5mm FAT, a copy of the six monthly AFC 351 inspection carried out on the trainer, is to be submitted to the Light Gun PT for entry onto the Gun database. Units holding the equipment are to ensure that the report is an **Original, Signed and Dated by the inspector.**

Inspections are to be sent to:
Towed Artillery, Artillery Systems Project Team, DE&S, NH1 Spruce 0a, #1003, MoD Abbey Wood, Bristol. B534 8JH.

AESP References;
1005-W-100-111 Equipment Support Policy Directive

1005-W-100-532 Inspection Procedures

AESP 1005-W-100 is currently being re-written to reflect these changes.

1000-A-003-013 Policy & Procedures for Armourers

Light Gun Wash Down Problems

More care is to be taken by users while using high-pressure wash hoses to clean the Light gun. Although robust the INU, LDCU and cabling situated around the gun are susceptible to water ingress if a high pressure water system is used.

105 mm Light Gun Cover, NSN 1015-99-963-6795

The Cover, Gun for 105mm Light Gun is now in stock, if required by units. The cover is to be demanded through the normal chain.

AESP References; 1015-K-100-741 (Chap 2-1-1, Page 3, Item 1)

Battery Powered Management System BPMS, NSN 6130-99-871-6277

Users are reminded to unplug the BPMS while not in use. This simple action will increase the life of the batteries housed within the system and enable continued use of the guns pointing and navigational systems.

BADNAMS Generator Set, BD22LG, JAMES entry



The BADNAMS Generator set used in conjunction with the 105 mm Light Gun is to be recorded on JAMES. This should include servicing and all other inspections etc related to Generator equipment.

The equipment has already been created on JAMES and Units will need to record the serial numbers if required.

AESP References; 1015-G-100-601 Maintenance Schedule

Equipment Failure Reporting

All demands placed for components requiring an EFR must have the EFR Reference attached to the demand paperwork. All items subject to mandatory EFRs can be found within:

1015-K-100-111 (Chap 3, Annex B, Pages 1&2)

Special Reporting for the APS

With the new LDCU Mk 2 expected soon it is important to maintain a record of usage and reliability of the existing equipment for comparison. The special reporting procedure laid down in 1015-K-100-111 is to be used in case of a failure.

AESP References; 1015-K-100-111 (Chap 11, Annex A & B)



CONTRIBUTED BY:

Arty Sys Team, DE&S Abbey Wood.

Challenger Chat



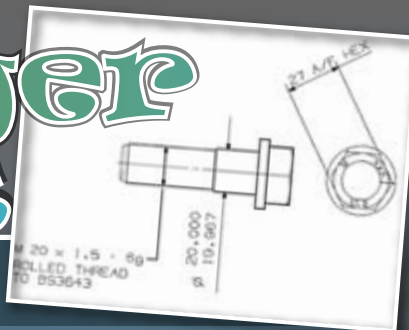
Heavy Platform Track

The sprockets fitted to CR2, CRARRV and T2 were originally secured to the sprocket carrier with bolts using a 30 mm socket. The introduction of the T2 sprocket bolt, recognisable by having an integral washer with the bolt head, meant that a 27 mm impact socket had to be added to the vehicle CES.

All CR2, CRARRV and T2 must be fitted with the T2 pattern sprocket bolt from 01 April 2013.

The NSN for the 27 mm socket is: 5120-99-978-1219

The NSN for the adaptor to allow the outer sprocket bolts to be checked when the track is fitted is: 5120-99-968-4450



Catastrophic track failure

A recent CR2 catastrophic track failure was possibly caused by the end and centre connector bolts working loose. The sequence of events would have been:

- Centre connector bolt works loose - centre connector detached from track
- Increased strain placed on the end connectors - this is acceptable provided that the missing centre connector is replaced during the next after use track inspection
- The end connectors are subjected to a greater cyclical load
- The end connector bolts work loose and eventually one bolt unscrews completely
- The top hat is no longer retained in the end connector and the connector detaches from the track
- The track is held together by the remaining end connector which immediately fails - see photo 1.

Evidence to support this theory can be seen in photo 2 - the discolouration in the bottom threads indicates that the bolt was not screwed fully into the connector.

Photo 1



Photo 2



The maintenance requirements in AESP 2350-P-102-201 Chapter 1-9-3 and AESP 2350-P-102-601 are designed to identify track faults at an early stage so that they can be rectified before there is a serious failure.

Table 3 of AESP 2350-P-102-601 (After use maintenance) includes a roll back check to identify any track faults. Any unusual or recurring faults should be reported and investigated further.

OH YES, THIS SHOULD DO THE JOB NICELY!

CR2 and T2 Double and Single Top Roller Bracket Bolt



The bolts securing the top roller brackets to the hull on CR2 and T2 are prone to failing, usually as a result of excessive track tension, enthusiastic driving and metal fatigue.

New bolts have been introduced that are longer and made from higher tensile steel. This allows the bolts to be tightened to 700 Nm and removes the requirement to secure the bolts with thread lock.

The original bolts and the new bolts cannot be mixed on a vehicle as the maintenance requirements are different and will cause confusion.

A modification instruction will be issued shortly - the new bolts can be demanded using G1B 5305-99-744-1772. The main points are as follows:

The AESPs have already been amended - the 711 lists the correct bolt. The CR2 522 has an incorrect procedure in Amendment 22, dated Oct 11
- **the new bolts should NOT be loctited.**

1. Remove the existing top roller bracket bolts and clean the threads in the hull with Loctite 7200 - 6850-99-225-6907
2. Refit the bracket using the longer bolts, smearing the threads lightly with grease XG279. The bolts should be tightened evenly to 200 Nm to ensure that the bracket is correctly located on the mounting pads. The bolts are then tightened to 700 Nm and the heads of the bolts painted yellow to aid identification.
3. Inform the crew that the maintenance schedule (601) has altered and that there is now a requirement to check that the bolts are tightened to 700 Nm during mission maintenance - Tables 4A and 4B.
4. Record the modification on JAMES, ensuring that the vehicle mileage is included so that usage is known. Any failures of the longer bolts should be reported on an EFR and should state how many kilometres have been driven since the bolts have been fitted.

WARRIOR

WARNINGS

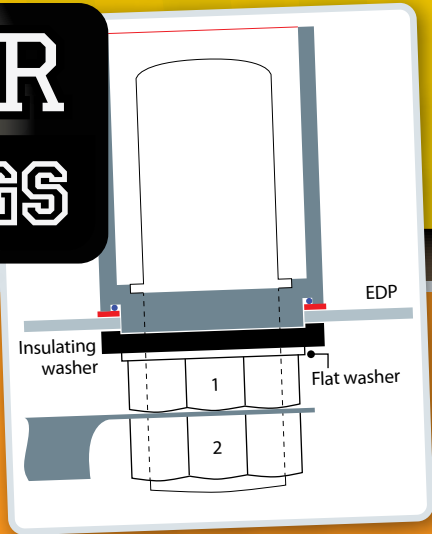
SOTAX CONNECTORS

The Sotax quick release connectors are used to facilitate removal and replacement of the power pack. There have been many instances of catastrophic failure, caused by one or more of the following faults:

- Poor contact between the conducting surfaces. Caused by wear.
- Failure of the locking mechanism - Caused by wear.
- The harness securing nut (2) working loose through vibration.
- The connector securing nut (1) working loose.
- Physical damage to the connector - Caused by impact.
- High electrical resistance causing the connector to overheat and ignite.
- Incorrect assembly.

There are various checks that should be carried out to ensure that the connector is serviceable:

- The connector is securely attached to the Engine Disconnection Plate (EDP).
- The silver plated securing nut (1) should be tight; do not attempt to hold the connector with pliers etc to prevent rotation as the plastic shield may be damaged. An additional steel washer (G1C 5310-99-946-7018), coloured red in the diagram can be fitted between the EDP and the connector (if the connector remains loose with the nut tightened).



Electrical resistance - the generator positive connections share the load, which can be 500 amps. It is critical that the resistance across the connection, when made is a maximum of 0.05 Ω.

This applies to all six of the connectors (Gen Pos x 2, Gen Neg, Starter Neg, upper starter Pos and lower starter Pos).

A resistance of 0.1 Ω at a load of 50 amps will cause a volt drop of 5 V (which is compensated for by the generator control unit) but will cause a build up of heat and an increased load on the generator or batteries.

The connector is secure when made and cannot be disconnected inadvertently.

- The washer is 1 mm high and only this washer should be used.
- The **insulating washer** should be in good condition, the recess in the washer should engage with the bottom of the connector plastic shield when fitted to the EDP.
- The silver plated **flat washer** should be fitted between the nut (1) and the insulating washer.
- The eyelet in the harness should be in good condition.
- The harness securing nut (2) should be tightened against the connector securing nut (1), which should be held with a spanner to prevent damage to the connector.



Are You Operating within the Capabilities of Your Platform?

Recent incidents have highlighted an issue of overloading of Protect Mobility Platforms either by over manning or with additional equipment/ supplies above the authorised loading list. This has a detrimental effect on the platform ability to be operated in a fit and safe manner, **putting the crew and asset at an unacceptable risk.**

Vehicle Commanders should ensure that no additional occupants should be carried, other than those that can **occupy a seat with a seat belt fitted.**

This also means that any additional occupant **Must Not** occupy the Gunners seat if he is manning the weapon, in the event of hostile action and/or platform roll over, the Gunner **needs his seat to drop in to** and to rest when appropriate.

Adverse effects on the platform can be;

- Reduced stability and mobility on all terrains, even tarmac
- Poor braking efficiency
- Increased fuel consumption and lower performance
- Higher Centre of Gravity leading to premature roll over
- Premature failure of suspension and transmission components.





ENGINEER'S CORNER THE PRINCIPAL ENGINEER FOR LAND EQUIPMENT

- HOME
- UPDATES
- OTHER QUERIES
- HELP
- CONTACT

THE PRINCIPAL ENGINEER FOR LAND EQUIPMENT'S REGULAR UPDATE ON VARIOUS ITEMS OF INTEREST RELATING TO EQUIPMENT, SUPPORT, SAFETY AND ENGINEERING.

FANTASTIC PLASTIC



Glock 17 Gen 4

L9A1 Browning

One of the more enjoyable parts of my job is getting an overview of the huge variety of projects that are delivered and supported by the Land Equipment Operating Centre.

Despite the increased pressure on the defence budget, there are still plenty of UORs and core projects being delivered. But I wonder how many readers realise the degree of engineering rigour that goes into even the simplest of our projects?

Take the current project to replace the venerable L9A1 Browning pistol. Despite being designed in the 1930s, the Browning has served our country well, being first used by UK forces in World War II and as our main service pistol since the 1960s. However the pistols are now a bit long in the tooth and are becoming increasingly expensive to support and repair. Technologies have also moved on over the decades and modern pistols can take advantage of lightweight polymers, CNC machining techniques and high-tech abrasion/corrosion resistant coatings.

The procurement strategy was for a full competition so that we could take the best pistol that the market had to offer. The SIG P226 (L105A2), bought as a UOR for Op HERRICK, was an interim solution until the competition could be started. It also became one of the contenders in the trials.

In equipment terms, the new pistol project is small beer, only a minor 'Category D' project. Even so, you would be impressed at the degree of care that has gone into the plan. Before the new pistol goes into service, the Soldier System Programme Lethality Team and the Infantry Trials & Development Unit will have considered, tested and eliminated seven different pistols.

During the project they have fired around a quarter of a million 9mm rounds, testing for reliability and durability in temperate, arctic, desert and tropical conditions and in completing the 'safety and suitability for service' trials.

The safety and suitability trials on their own have included drop tests, blocked barrel tests, tests for driving rain, freezing rain, dynamic sand and dust, salt water immersion, salt water corrosion, mud tests, sand drag tests and many others. All of this evidence will have supported the development of a full safety case. In addition, the team will have organised a full package of spares, tools and training for the REME Armourers. They will also have supported HQ Army in a 'Capability Integration Working Group', making sure that all the other Defence Lines of Development are in place, including a proper training package and a full set of Army Equipment Support Publications.

It's now official; the Glock 17 Generation 4 will be the new General Service Pistol and will replace the L9A1 Browning from this summer. You can rest assured that if you ever have to draw your weapon and press the trigger, you will be holding the very best pistol that we could give you.

URBAN MYTH - THE 'BULLET PROOF' HELMET



I was concerned to read in a recent post operational tour debrief report that some soldiers believe that the Mk7 Helmet will stop high velocity rifle bullets. The Mk7 has world-class levels of protection against fragments, blast and blunt impacts, but it is not designed to stop rifle bullets. Happily, there have been many occasions when helmets have successfully deflected bullets; but this is not something that can be counted upon to work every time.

The advice from Capability Director Combat is very clear; Users should be aware of the correct levels of performance of their Personal Protective Equipment. Users should also follow their fieldcraft training with respect to camouflage and concealment. The 'black bag' issued for Op HERRICK now contains a simple camouflage kit of Multi Terrain Pattern strips with every fabric helmet cover.

See Infantry Briefing Note 13/11, 'Helmet Camouflage and Concealment' for further information.

WATCH OUT FOR SNEEVES!

No - It's not a character from the imagination of Dr Seuss, but the new system for sending out Safety Notices via E-mail (SNvE).

Previously, when we have wanted to inform Users of urgent safety issues on equipment, we have alerted you with a Safety Notice Signal on the MOD's High Grade Messaging system. However, this system has recently been discontinued for many front line units, prompting us to introduce a new system based on E-mails, distributed over MOD's protected networks.

Working with the Front Line Commands, we have worked out a cascade system, whereby SNvE will be sent to focal points for rapid onward distribution throughout the Chain of Command.

Using E-mails also allows us to do much more than the old Signals, for example including photographs and graphics.

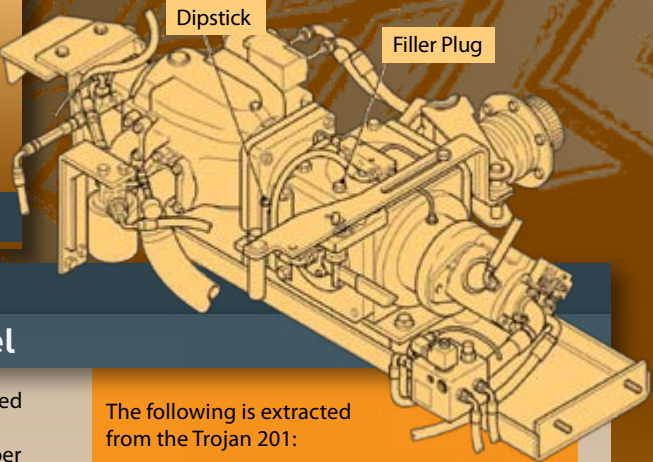
If you receive an E-mail, which includes the words 'URGENT - SAFETY NOTICE' in the header; Please give it the immediate attention that it deserves.



CONTRIBUTED BY:

LE Principal Engineer, DE&S, Abbey Wood.





Trojan Bevel Gearbox Oil Level

The Trojan bevel gearbox oil level is checked during mission maintenance (IAW AESP 2350-F-101-601). There have been a number of failures of the gearbox and experience from Bovington suggests that, as the oil heats up during use, the lack of a breather allows the pressure within the gearbox to increase and blow the oil seals.

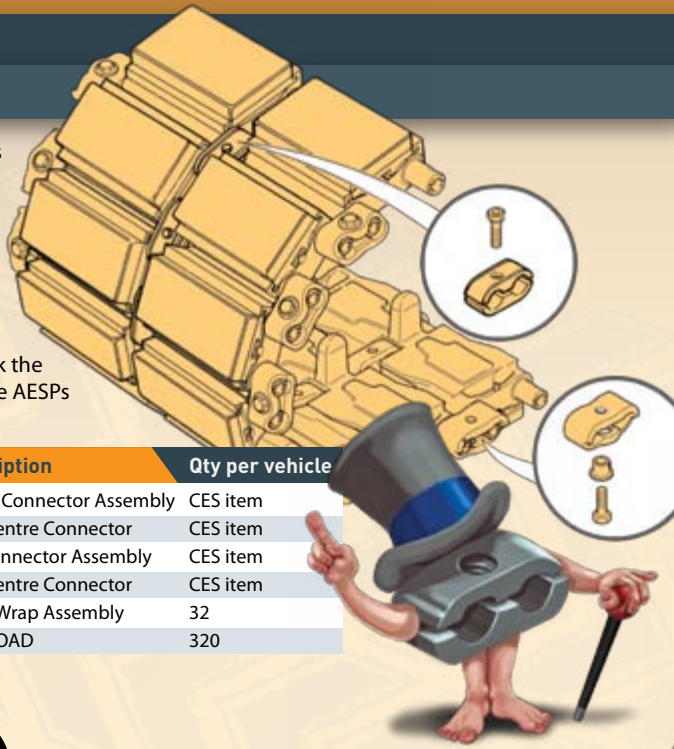
Work is in hand to fit a breather to the gearbox and as an interim measure it is recommended that the bevel gearbox oil level is checked as part of before use maintenance when the oil is cold. Any bevel gearboxes that require regular topping up should be reported to REME for investigation.

- The following is extracted from the Trojan 201:
- **PERSONAL INJURY - pressure build up in the bevel gearbox may cause hot oil to be released when the dipstick is removed.**
 - If the bevel gearbox is hot, slowly loosen the filler plug to relieve the pressure build up.
 - If oil is observed coming out of the top of the dipstick tube at any time, slowly loosen the filler plug.

100% EFR reporting is required for the bevel gearbox.

Trojan & Titan Track Spares

The table shows which track spares are available, listed in either the 711 or 741 (CES). All other parts, such as the single link and the top hat bush, are not stocked and any demands received will be cancelled. Units requiring single links or top hat bushes should demand a wrap of 5 links and break the wrap into the constituent parts. The AESPs will be amended.



NSN	DMC	Description	Qty per vehicle
2530-99-492-9020	C4CR2A	Centre Connector Assembly	CES item
5306-99-264-5553	C4CR2A	Bolt, Centre Connector	CES item
2530-99-853-3576	C4CR2A	End Connector Assembly	CES item
5306-99-666-4054	C4CR2A	Bolt, Centre Connector	CES item
2590-99-480-7963	C4CR2A	5 Link Wrap Assembly	32
2590-99-741-4081	C4CR2A	PAD, ROAD	320

Platforms BV206 Tracked Vehicle

BV206d Notice - please check, monitor and report incidents on the supporting track arm fitted on both sides of each car on BV206 tracks for signs of sheared or rusted in bolts.

Screw NSN: 5305-01-166-2140

EFRs have been received and CTG PT Littoral Manoeuvre needs to understand the extent of the issue - How many platforms are affected.



All notifications and reports should be returned to: BV206 Project Manager, [REDACTED]
email: [REDACTED]

Combat Track Group OX 90

A recent letter from Army HQ: Eqpt Dir ADSE/03/52 dated 03 Oct 12 REPLACEMENT (OMD 90) ENGINE OIL may have caused confusion as the content of the directive conflicted with the AESPs. Units were instructed to use OX 90 in place of OMD 90.

The following is extracted from Def Stan 01-5 (Fuels, Lubricants and Associated Products):

Any queries should be directed to the IPT responsible for the equipment.

Contact numbers for Combat Track Group are:

Mil dialling code:	Civ dialling code:
CR2	CVRT
CRARRV	Warrior
T2	Viking
Bulldog	BRV

OX 90 - LUBRICATING OIL, ENGINE:
Severe duty, diesel, extended service, SAE 10W-40

Restricted use as a multigrade heavy duty crankcase oil for use in EURO IV compliant compression ignition engines of ground equipment operated at all ambient temperatures above minus 20°C.

Warning: The use of this lubricant is restricted to designated vehicles only as this oil may not be suitable for all MOD vehicles/equipment.

All units are reminded that the authoritative publications that detail which oils should be used and the frequency of renewal is the relevant AESP, Cat 601, for the equipment.

All AESPs should be accessed from TDOL to ensure that the latest version is available.



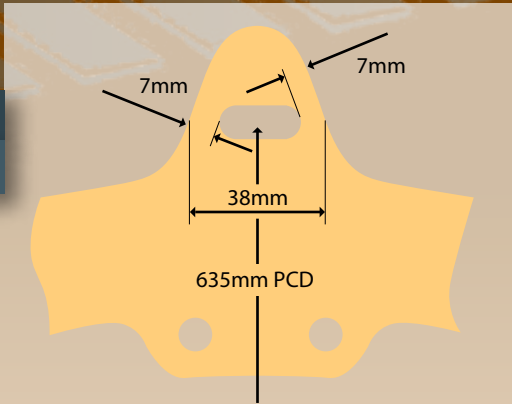
Bulldog

Wear Indicators

The sprockets are changed when the tooth profile contacts the wear indicator, which is machined into one tooth.

The indicator was introduced in 2005 when the sprocket drawing was uplifted to Issue 1. There are older versions of the sprocket in stock that do not have the wear indicator; these sprockets are at Issue M.

The earlier sprockets are identical to the Issue 1 sprockets, except for the wear indicator and **can still be used.**



The drawing shows the positioning of the indicator so that the tooth wear can be measured. An EFR is NOT required to report sprockets that don't have the indicator.

Turrets & Weapons

Rardon Cannon, CVR(T)

A recent incident during a firing exercise has resulted in the near destruction of a Rarden cannon. After a full investigation from the SEFIT team it was found that the buffer retaining ring, used to secure the buffer to the lower ordnance casing, had come off due to a missing securing roll pin, effectively leaving the breech with no buffer when it was fired.

The associated spacer and securing pin were nowhere to be found.

The buffer not being secured to the lower ordnance casing was thrown backwards when the breech recoiled, breaking internal brackets

and slamming into the rear door. With no buffer acting on the breech, the recoil wasn't sufficiently slowed and the breech impacted hard against the round rammer. The recuperator was also forced into the rear door, deforming and cracking the recuperator cap and bending the rear door open until it was off of its hinge. Fortunately the door did manage to prevent the recuperator from leaving the constraints of the Rarden ordnance body and injuring the crew.

For all Rarden users, please ensure that the buffer is correctly secured to the ordnance casing before any firing exercise is begun.

The project team are currently working to make the AESPs clearer on the subject of pre-firing checks and other areas, to include checking the buffer is correctly secured.



C Vehicles

SPPT team name change

From 1st April 2013, the C Vehicle team will have a new name and correspondence address.

This will be:

C Vehicle Team, Operational Support Programme, Spruce 3, #1309, DE&S, Abbey Wood, Bristol. BS34 8JH

There will be no change to the service you receive from the dedicated C Vehicle Team which remains to fulfill your C vehicle needs.

Spares

There have been a lot of repairable carcasses reported missing or not returned to us by our supply chain manager. If your unit has any returnable items associated with C Vehicles please return them via the usual means ASAP.

These repairable stores are essential for maintaining stock levels to allow continued support to **YOU** the user.

RTCH

Any demands for RTCH in support of exercise, training or general use need to be highlighted at the earliest opportunity to the CMC Demand team. There are a limited number of RTCH equipments and a longer planning view greatly increases the chance of the demand being met.

Any spares for repair to RTCH equipment need to be confirmed as VERSION 2 spares. Not many spares sit in this category as there is a lot of crossover, but it is expensive to rectify any fitted version 1 items where version 2 items should exist.

Contacts

- C-Vehicle Helpdesk: [Redacted]
- CMC Manager: [Redacted]
- CMC Service: [Redacted]
- CMC Demand: [Redacted]

Equipment Failure Report (EFR)

All EFRs relevant to C Vehicle equipment, should continue to be sent to FRACAS as normal, however there is a requirement to CC [Redacted] (don't forget the 'Release-authorized:' phrase in the subject line)

If there are any doubts on how to fill in EFRs please refer to KiT Magazine Issue 80.



Bowman

VHF Radio Connectors

Trend analysis by the Original Equipment Manufacturer (OEM) identified there is a growing trend of, P1 connector failures on the VHF UKPRC355 and UKPRC358 radios. The majority of the P1 interface connector failures on the VHF radio chassis are due to the pins being damaged, bent or sheared. All VHF UKPRC355 and UKPRC358 radio users are to ensure that the protective dust cap is in place when the connector is not in use.

BATCIS are in the process of codifying the cap and will communicate once this is available for demand.



Damaged P1 connectors can be replaced at Level 3 following instructions in the IETP.

Equipment > Radios > UKPRC355/UKPRC358 > P1 (System) Connector - Change (remove and install)

RTS SMU Calibration

Level 3 maintainers are to ensure that RTS SMUs are returned for calibration as soon as they are due. The due date is the earliest date on the "Calibration due dates" splash screen.

The SMU must be returned with an IR annotated with 'Requiring Calibration'. The unit then use this IR number as the authority to demand a replacement SMU.

Bowman Printers

Printers have been returned for repair with the ink cartridges still in the printer. Be advised that the ink cartridges must be removed before the printers are back loaded for repair to GDSSC Bicester.



Repair Changes

Following a review of some Bowman items, the following items are to be returned for repair direct to Bicester through the normal supply chain:

5995-99-273-7925
CABLE - BNAU CNR/ETH CONNECTOR PANEL

5995-99-147-8591
CABLE - BNAU VIDS/BUCD CONNECTOR PANEL

5995-99-147-7772
CABLE - DC POWER VEHICLE/BPDU-C

5965-99-798-8185
VEHICLE LOUDSPEAKER

5915-01-503-4025
VHF BAND PASS FILTER

7010-01-508-0205
BUDT/VUDT MOUNT

Reminder to maintainers that O-Rings should be fitted to CRS

When Level 3 maintenance is being conducted on the radio control set, maintainers must;

- Check that an O-Ring is fitted. If not, fit an O-Ring.
- If an O-Ring is fitted then check for damage, if damaged replace the O-Ring

Level 3 units - RTS Returns

When Level 3 units return an SMU for repair, they are to retain the side rails. **The replacement SMU will not have any rails fitted.**

Note that the front and rear covers must also be fitted and the correct transport case used.

*The SMU is an extremely sensitive piece of kit, and it is vital that these are well packaged when preparing for transport. You will receive the covers and case back with the replacement item. **The case is to be carried horizontally only.** More information can be found in the IETP.*

VUDT Carry Case

Any VUDTs that need transporting - a VUDT Carry System is available and can be found in the IETP in the following location:

Equipment > Ancillaries > L4 Data Terminal Equipment > L4-Q1 VUDT Kit



MJDI

When demanding Bowman items on MJDI, the form needs to be filled in correctly to ensure the IR information is populated when demands reach GDUK.

BATCIS Contacts

All Bowman Technical Support queries should be raised with the 15 Sig Regt (IS) helpdesk in the first instance. They can be contacted on [REDACTED]

If you need to contact BATCIS for any reason, here are the following key contacts for advice:

Name	Role	Email	Tel
[REDACTED]	ILS, Technical Support 1	[REDACTED]	[REDACTED]
[REDACTED]	ILS, Technical Support 2	[REDACTED]	[REDACTED]
[REDACTED]	ILS, Technical Support 3	[REDACTED]	[REDACTED]
[REDACTED]	ILS, Technical Support 4	[REDACTED]	[REDACTED]
[REDACTED]	ASM	[REDACTED]	[REDACTED]
[REDACTED]	Level 3 Repair Manager	[REDACTED]	[REDACTED]
[REDACTED]	In Service Support, Incident Manager	[REDACTED]	[REDACTED]
[REDACTED]	In Service Support, Release Manager	[REDACTED]	[REDACTED]

Bowman Supply Queries

All Bowman demand queries are to be addressed to the Designated Office: [REDACTED]

Contact details
[REDACTED] or
alternatively [REDACTED]

UDT Feet - error

The technical difficulties have been sorted and the UDT Feet are now available for demand:

ITEM	NSN
Mounting Foot	5340-01-520-6241
Screw	5305-99-299-0938

There are 3 fields causing confusion and they are to be completed as follows:

1. Customers Reference - **Contains information applicable to your unit**
2. Special Instructions - **This contains your IR reference**
3. Remarks - **Unit information**

If you do not put the IR number in the Special Instruction box, this information will not be populated when the demand reaches GDUK causing delays and possible rejection of your demand.

SSA

SSA HDDs Release 1b (NSN 7025-99-862-3414) and Release 2b (7025-99-498-9432) are no longer in use. Any units holding these HDDs are to return them to GD Bicester with an E-Purge certificate.

STANO

FIST THERMAL SIGHT

SPARES

There are increasing instances of FTS being returned to the OEM for a repair when the only faults relate to components which could have been repaired at 1st Line



BROKEN/BENT TERMINALS

(Overtightening Battery Cover Locking Screw)



LOCKING SCREW THREAD STRIPPED

(Overtightening Battery Cover Locking Screw)

Users are reminded that the following consumables can be demanded to enable repairs:

(AESP 5855-C-117-201 Chap 4 – DMC is FIST)

ITEM	NSN	DESCRIPTION	DofQ	REMARKS
Battery door locking screw	5340-99-352-5492	BOLT ASSEMBLY, CLAMP	EA	Kit includes the battery door locking screw and the attaching spirol pin
Battery compartment door assy	6160-99-707-5402	COVER, BATTERY BOX	EA	Kit includes the battery door complete with contacts, hinge and circlip
Battery compartment seal	5330-99-843-0862	SEAL, NONMETALLIC STRIP	EA	
Eyepiece assy	1240-99-899-6062	EYEPIECE ASSEMBLY, OPTICAL INSTRUMENT	EA	Kit includes the rubber eye-piece/ attachment ring and the x3 grub screws
Mounting bracket assy	5340-99-407-2450	BRACKET MOUNTING	EA	Kit includes the complete bracket assembly and x3 attachment bolts
Rotary mode switch assy	5855-99-324-4755	MODE SWITCH	EA	Kit includes the knob and set screw
Brightness switch assy	5355-99-490-8083	KNOB	EA	Kit includes the knob and set screw
I/O port cover (front and rear)	5935-99-690-7672	COVER ELECTRICAL CONNECTOR	EA	Kit includes cap, and tether. Cap is identical for front and rear.

OPERATION

There have been a number of "No Fault Found" returns that could have been avoided by reference to the FTS Troubleshooting guide:

Table 12 at Chap 2 of AESP 5855-C-117-201) and inspection standard (Chap 3.

These have included:

- Brightness switch set too low (user reported no image seen through eyepiece when switched on)
- Auto NUC enabled (screen continually refreshes when changing targets or firing the weapon - they should select Manual NUC).
- Reticle is turned off (user sees no reticle when viewing through the sight).
- User is viewing through a transparent obstruction (e.g. a window) (a target's thermal signature cannot be viewed through window glass and so no image is seen).
- Low battery power conditions (FTS apparently continually shutting down - more noticeable with Alkaline batteries - much shorter useful life).

Procedures for replacement are detailed at Chap 3 to AESP 5855-C-117-201

CLOSE QUARTER BATTLE-SIGHT (1240-99-555-2800)

The CQB, FIST 1240-99-555-2800 is now a C class item and is to be disposed of as per local disposal regulations.



If the CQB is damaged it is to be removed from the parent assembly, disposed of and a new CQB demanded. The parent assembly is **NOT** to be sent back to the OEM if serviceable.

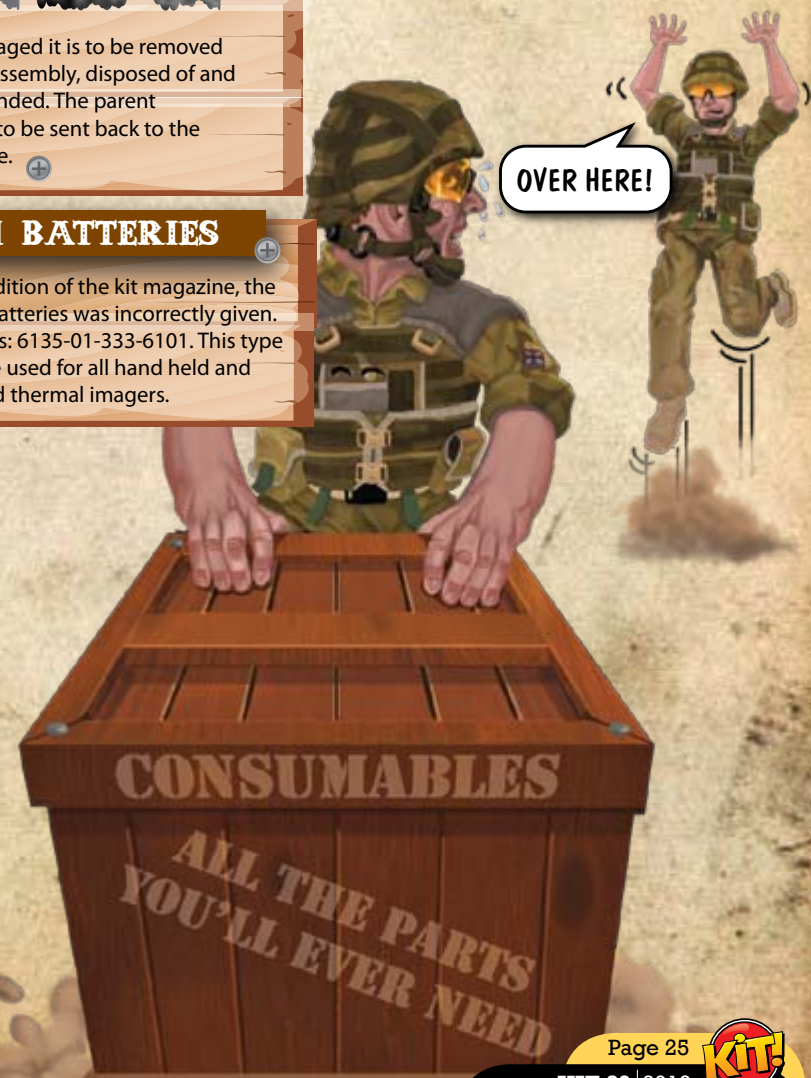
LITHIUM BATTERIES

In the previous edition of the kit magazine, the NSN for lithium batteries was incorrectly given. The correct NSN is: 6135-01-333-6101. This type of battery is to be used for all hand held and weapon mounted thermal imagers.

LUCIE FACE MASK RETURNS

The LUCIE Face Mask is no longer part of the CES. Units who have them may return them on a manual AF G8883 (UIN CB453H) to:

Qioptiq Ltd
 Glascoed Road
 St Aspah
 Denbighshire
 LL17 0LL



This Issue's Special Offer

There are 34 Drive Sprocket Assys 3020-99-160-4044 in store with zero usage. If you need to replace both sprockets just order the entire thing and save yourself all that tedious work unbolting the old ones and then bolting the new ones on!

Previous Issue's Special Offer

There are still loads of brand new suspension units and hubs left. See KIT 81 for details! We have also just located some left and right hand suspensions in the same box. For a limited time only contact the Joint Project Team if you need both LH and RH suspension units and we will sort you out with the special number you need to get these 'never seen before or after' special edition items!

Mudguards

Until recently the rear mudguard assembly was costing us £17K per year in spare parts, let alone the cost of all the man-hours spent repairing them! The Joint Project team has managed to significantly reduce this cost by changing suppliers and negotiating better prices for some of the parts but now it's your turn to help!

Going off-road? Hook your flaps up!

Correct hooking is vital - don't get your flaps in a twist!



To repair or not to repair, that is the cost saving!

Please try not to return LRUs into the supply chain for repair just because you cannot get a battery or other simple part that is out of stock! This costs literally thousands of pounds and we don't mean in total – the recent shortage of DRU batteries cost thousands of pounds EACH getting DRUs 'repaired'. All of which could have been avoided if someone had let us know what the problem was so that we could then chase up the relevant supply team.

Please contact the Project Team if lack of a minor part is causing you to order a higher assembly and we will try to help. We can't guarantee it - but in this case we managed to get stock available again within a couple of days!

Oil Coolers

Nearly all oil coolers put in for repair are No Fault Found at a cost of over £1000 each. The Project Team is considering a re-write of the fault diagnosis but in the mean time please consider the temperature and pressure regulator 4820-01-343-4659, or other sources of fluid cross contamination, unless there is clear evidence that the cooler is faulty.

Previous editions can be found in the T-bar mixed in with all those old copies of Jumpin', Huntin' 'n' Shootin' the boss brings in and no-one dares to throw out or online.

Scrap Metal

THAT WAS EASY!!

WHAT'S THE HOLD UP??

THIS IS HARD WORK

cool for cats!

Vehicle Shut Down Procedure

Panther crews are reminded that, as part of the Shutdown procedure specified in the Crew Handbook 2320-P-350-211, they must pull CB9 on the Power Control Unit. This will stop the Health and Usage Monitoring System (HUMS) from discharging the mission batteries.



When the mission batteries become excessively discharged they become unserviceable and must be replaced.

Seat Belt Cutters

The following equipment, as used across the Combat Tracks Group vehicle fleet, should be utilised and installed with immediate effect:

5110-99-490-4802 Kit, Cutter & Pouch, comprising

5110-99-667-6266 Seat Belt Cutter

5140-99-813-2190 Cutter Pouch, Velcro

In accordance with Appendix 2 to Annex A in the DESLE (PPS)/Safety LE Risks/CAT A&B document, dated 29/07/10.

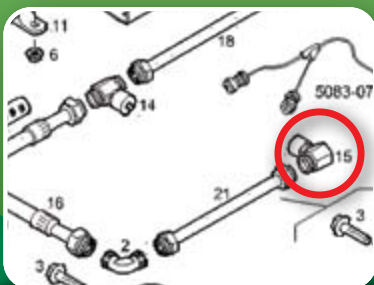
Fuel Tank Rubbing on the Chassis Cross Member

Units are requested to check for the fuel tank rubbing on the cross member and rear anti-roll bar. (as the photographs below) any instances should be reported to the Availability Manager.



Fire Detection and Suppression System Nozzle Orientation

The Panther Project Team advise that the driver's side extinguisher nozzle in the engine compartment (Item 15, Spray Final) can become loose and hang down pointing to the ground. Units are asked to check the orientation and security of the nozzle.

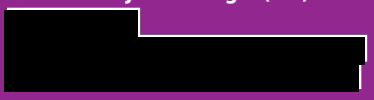


Panther Project Team Contact Details

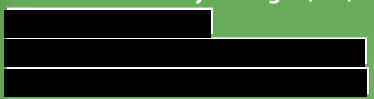
There have been a few Changes:

CTG Platforms, Panther Team, HQ DE&S, Spruce 0A, Abbey Wood, BRISTOL, BS34 8JH

Panther Project Manager (PM)



Panther Availability Manager (AM)



Panther Capability Manager (CM)



BAE Systems Support Engineer



Useful NSNs

Crew Hatch Bump Stops

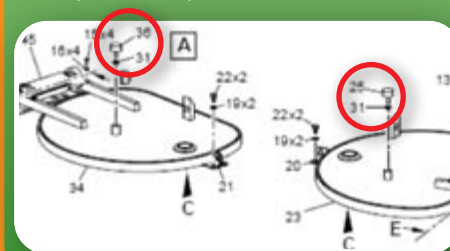
Chap 2-1, Page 43 & 45

Item - 25 & 36

DMC - 9CLVNS

NSN - 2510-99-997-8366

Description - Bumper



Air Conditioning O Rings

Chap 2-23, Page 15/16

NSN: 5331-15-189-1630

Description: O Ring, 14mm dia

NSN: 5331-15-193-1862

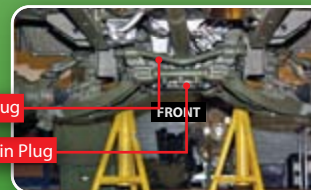
Description: O Ring 7.65mm dia

NSN: 5330-15-193-1855

Description: O Ring 10.12mm dia

Confusion Over Front Differential and Engine Drain Plugs Locations

A number of instances of Level 1 Maintainers draining the front differential oil instead of the engine oil and subsequently overfilling the engine by mistake have occurred during routine maintenance. Maintainers are to ensure that they are aware of the location of both the engine and differential drain plugs.



60 Monthly (35,000 km) Checks

The next IETP update will incorporate a complete removal of the 60 Monthly (35,000 km) Checks as per 2320-P-350-211 (Crew Handbook). Any items listed within the 60 monthly checks currently on demand are to have the demands cancelled unless definitely required by the unit.

PANTHER CLV

Serial	Maintenance Task	Remarks
1	Carry out 12 monthly checks	
2	ENGINE COMPARTMENT	
	2.1 Remove and replace serpentine belt (alternator)	REME Task
	2.2 Remove and replace poly-'v' belt (air compressor)	REME Task
	2.3 Remove and replace hose clips on air intake	REME Task
	2.4 Remove and replace cooling system hoses/pipes	REME Task

Handbrake Lever Gaitor

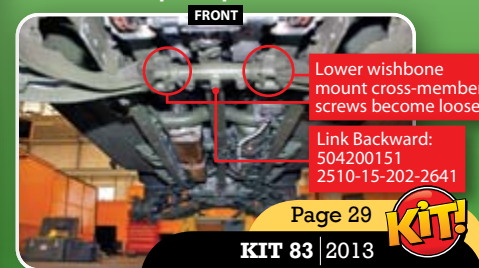
Chap 2-9, Page 19 Item 3A

NSN: 2590-15-205-2447

Description: HANDBRAKE LEVER GAITOR

Wishbone Cross Member Screws

There have been several instances where the lower wishbone screws have been found to be loose. On annual inspection Level 2 Maintainers are to inspect these screws for security. **Loctite 222 should be used and the screw should be torqued up to 87Nm.**



KIT! BITZ

81MM Mortar

Users of the 81mm Mortar system may notice a slight colour variation in the 81mm HE Mortars. This is due to a new surface treatment and painting process that has been implemented to provide a more robust surface protection for large calibre Shells and Mortars. This is not a defect on the Mortars so please do not report the colour variation as a MID. The picture shows the variation in shade and gloss level that may be experienced due to the new process.



NEW GLOSS

Any questions please contact:
[Redacted]

JACKAL / COYOTE

High Mobility Truck Variant (HMTV)

In May 2012 the original publications for the Jackal /Coyote fleet (AESP 2320-D-106-***) were superseded by a new set of core publications.

Correction - in issue 82 we gave you the wrong AESP number (correct below)

The new AESP number is 2320-D-104-***. The publications can be found on TDOL by searching the AESP number or by searching HMTV.

Any problems with the new publications should be reported on a **FORM 10** as usual, or contact; Protected Mobility team, [Redacted]



LR WMIK

It appears some units are still using the Land Rover W. OLF AESP 2320-D-128 OCTAD for Land Rover (LR) based WMIK platform information, especially spares. The LR WMIK fleet (RWMIK & RWMIK+) is now supported by AESP 2320-D-133 OCTAD first published in Nov 2011, which is bespoke to these fleets. All users must obtain the latest information from TDOL by searching the AESP number or WMIK. Any issues found with these publications must be reported using the normal FORM 10 process or contact the Protected Mobility Team, [Redacted]

FORM 10 CONTACTS
Email: [Redacted]

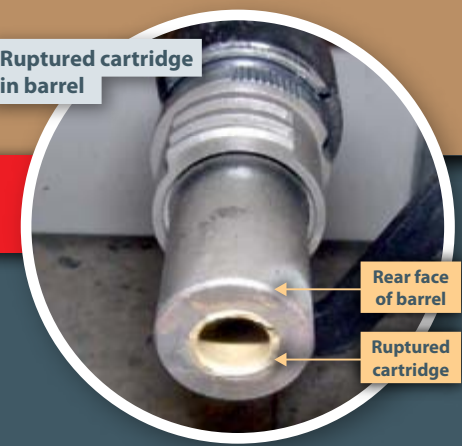
Additionally units are reminded any RWMIK+ equipment failures require 100% reporting via the normal EFR process.

GPMG

General Purpose Machine Gun

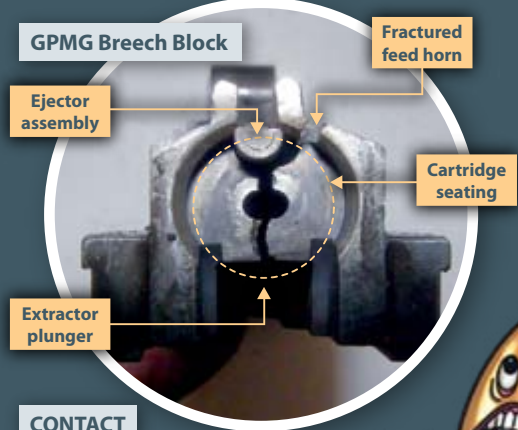


Ruptured cartridge in barrel



The Importance of Correct Cartridge Head Space (CHS)

A reminder to all maintainers and users:
There has been a recent increase in reported GPMG breech explosions. Subsequent SEFIT inspection reports have identified a trend of fitted incorrectly matched barrels.



Correct CHS is critical to the safe functioning of the GPMG weapon system and preventing possible injury to the user or catastrophic equipment failure.

Follow the Basics:

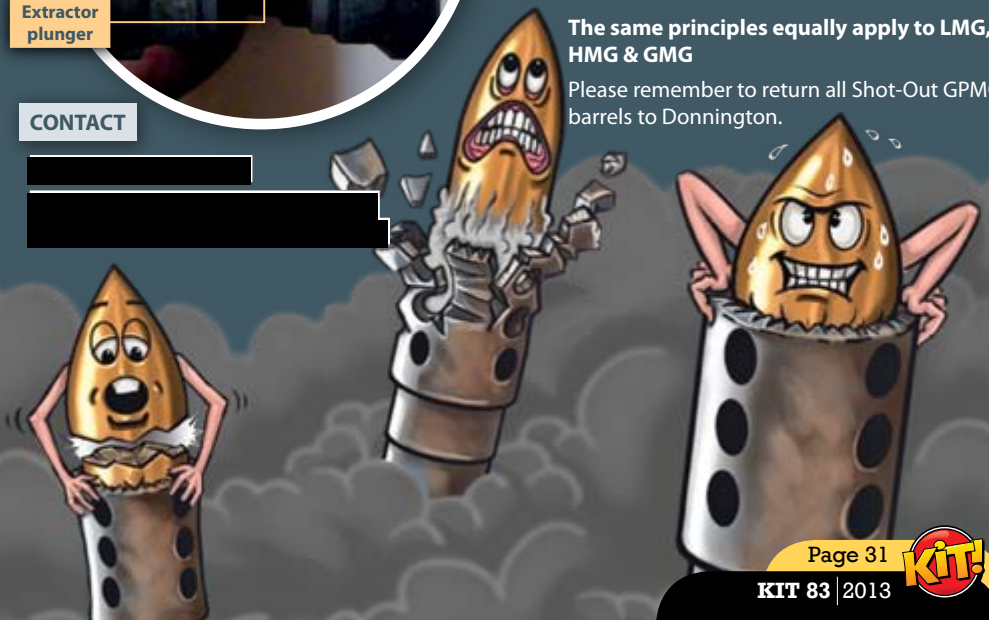
- Check serial numbers - barrels to weapons.
- Ensure pre-use firing checks are carried out on all weapon systems prior to firing.
- If in doubt do not use.

The same principles equally apply to LMG, HMG & GMG

Please remember to return all Shot-Out GPMG barrels to Donnington.

CONTACT

[Redacted]



FINAL DESTINATION

USE YOUR HEAD, USE YOUR CASH



Over the last 12 months, a quarter of all fatal road traffic accidents involving service personnel were off duty pedestrians, walking home after enjoying a night out

STAY SAFE, TAKE A TAXI