

76mm MAIN GUN

TECHNICAL BRIEFING

Repaircraft PLC

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CVR(T) SUPPLY, SUPPORT, REPAIR, REFURBISH AND UPGRADE

SCORPION 76mm L23A1 GUN SUPPORT

PLEASE NOTE: "X" value information may be supplied upon written request.

1 DATA



ROYAL ORDNANCE L23A1 76 mm MAIN GUN

- Calibre: 76 mm
- Recoil Force: 16,500 kg
- Effective Range: Direct: 2,200 m Indirect: 6,000 m
- Length: 2,156 mm
- Muzzle Velocity: 534 m/s
- Mass (Total): 220 kg
- Rifling: 8°55'
- Projectile: Spin Stabilised

2 LIFED ITEMS

If maintained correctly the 76mm Main Gun will give many decades of reliable and safe operation.

However, incorrect maintenance or the use of surplus untraceable parts or out of life components could lead to catastrophic accidents.

The following components are safety critical "Lifed Items":

Barrel L1A1	"X" EFC
Barrel L1A2	"X" EFC
Barrel L1A3	"X" EFC
Breech Ring (FL 17483) – 0.050 in. (1.27 mm) radii	"X" EFC
Breech Ring (FL 17483) – 0.075 in. (1.905 mm) radii	"X" EFC
Buffer Piston Rod (FV 745271)	"X" EFC
Bobbin (FV 813678)	"X" EFC
Yoke (FV 839471)	"X" EFC
Yoke (FV 839764)	"X" EFC

Yoke (FV 745252) – inspected every "X" EFC up to "X" EFC. Thereafter every "X" EFC until cracking / distortion is detected.

NOTE:

- 2.1 Gun Logs should always be checked. If there is any doubt as to the provenance or accuracy of the Gun Logs the relevant items MUST be condemned and scrapped.
- 2.2 The condition of the Mantlet, Turret (Sill Plate, Trunnion Mountings) and Recoil System are also safety critical.

3 SPARE PARTS

Repaircraft PLC can supply all spare parts for the Gun, including Barrels, Breech Rings, Buffer Piston Rod, Bobbin and Yoke.

4 TECHNICAL ADVICE

Repaircraft PLC can provide the following services; Survey, Training, Consultancy, Spare Parts and Ammunition.

5 MODIFICATION UPGRADES THAT SHOULD BE INCORPORATED

MOD NO	APPROVAL NO	DESCRIPTION
"X"	"X"	MANTLET SEAL (Details "X")
"X"	"X"	LOADERS SAFETY SWITCH (Details "X")
"X"	"X"	SELECTOR BOX KNOB (Details "X")
"X"	"X"	ANTI-ROTATION KEY NIPPLE (Details "X")
"X"	"X"	BUFFER SPRING PIN (Details "X")
"X"	"X"	RECOIL INDICATOR – GUN GUARD (Details "X")
"X"	"X"	MANTLET SPLASH SCREEN – TOP FIXING (Details "X")
"X"	"X"	QFC NO.16 IMPROVED CLAMPING (Details "X")
"X"	"X"	TRAVERSE INDICATOR (Details "X")
"X"	"X"	GUN GUARD IMPROVEMENTS (Details "X")
"X"	"X"	SHIMS ADDED BETWEEN RECUP BODY AND SIGHT TUBE (Details "X")
"X"	"X"	STRONGER YOKE (Details "X")
"X"	"X"	IMPROVED AR BLOCK BEARING STRIPS (Details "X")
"X"	"X"	A/R BLOCK BEARING STRIP ATTACHMENT (Details "X")
"X"	"X"	RECUPERATOR SIGHT TUBE (Details "X")
"X"	"X"	RECUPERATOR END CAP (Details "X")
"X"	"X"	REC. SIGHT TUBE FOULING SA BRKT (Details "X")
"X"	"X"	IMPROVED FITTED BOLT ON YOKE (Details "X")
"X"	"X"	SA CAM PLUNGER (Details "X")

6 AMMUNITION SUPPLY



76mm HESH PERFORMANCE



AMMUNITION

HESH-T

General purpose anti-personnel and anti-materiel round.

- Weight: 7.4 kg (nominal)
- Length: 542 mm
- Filling: Comp. A3
- Fuse: BD/Graze
- Tracer: M13 type, >3 sec
- Muzzle Velocity: 534 m/s (nominal at 21°)
- Range: Direct: 2,400 m Indirect: 6,000 m
- Precision: 1.22 mils
- Target: Up to 80 mm RHA

HESH-TP-T

Practice round to provide cost effective marksmanship and live fire training of gun crews.

- Weight: 7.4 kg (nominal)
- Length: 542 mm
- Filling: Inert
- Tracer: M13 type, >3 sec
- Muzzle Velocity: 534 m/s (nominal at 21°)
- Range: Direct: 2,400 m Indirect: 6,000 m
- Precision: 1.22 mils

HE-T

Effective round for anti-personnel and provides fire support to infantry.

- Weight: 7.35 kg (nominal)
- Length: 527 mm
- Filling: Comp.B
- Fuse: PD M557
- Tracer: M13 type, >3 sec
- Muzzle Velocity: 514 m/s (nominal at 21°)
- Range: Direct: 2,400 m Indirect: 6,000 m
- Precision: 1.22 mils
- Number of fragments: ± 800
- Lethal radius: 6.5 m

CANISTER

A thin-walled cylindrical body is filled with steel pellets. The pellets spread out after leaving the gun muzzle and are highly lethal to a range of about 100 metres.

- Weight: 6.69 kg
- Length: 399 mm
- Muzzle Velocity: 500 m/s

SMOKE

Base ejection of 3 smoke canisters, controlled by time fuse setting, results in dense white smoke emission for minimum time period of 50 seconds providing wide area coverage.

- Weight: 10.20 kg
- Length: 588 mm
- Muzzle Velocity: 290 m/s

ILLUMINATING

350,000 candelas for a minimum of 30 seconds duration. Ejection of the flare is controlled by a time fuse.

- Weight: 9.69 kg
- Length: 588 mm
- Muzzle Velocity: 297 m/s

6 UPGRADE OPTIONS



90 mm MAIN GUN UPGRADE IN STANDARD SCORPION TURRET