

Armoured Vehicle Mid-Life Refurbishment & End of Life Destruction

WORKSHOP 18th June 2019



INTRODUCTION

JANKEL

Carl Kenyon – Through Life Support Manager – Jankel Armouring Limited

Rowan Carpenter – Senior Sales Lead – Jankel Armouring Limited

- To help fleet managers identify when they could refurbish a vehicle and when they should destroy it.
- Considerations when undertaking either of these including meeting the latest international standards
- Discussion and open forum on local issues and resolutions

MID-LIFE REFURBISHMENT



Cost effective life extension of the armoured vehicle fleet is essential in order to:

- Maintain equipment that protects personnel.
- Maximise budgets.
- Simplify fleet management.

and thereby aid Fleet Managers achieve their Sustainable Development Goals.

SUSTAINABLE DEVELOPMENT GOALS



- Establishes armoured vehicle with common upgraded components:
 - Brakes
 - Suspension
 - Glass
 - Batteries
 - Tools
 - Fire suppression system
 - Tyres
 - Alternator?
- and thereby simplify fleet management burden.
- Documented upgrades and service advice.
- Meet current safety standards
- Swift turnaround to minimise period vehicle is unavailable for use.
- Warranty: All repairs, upgrades and service work is provided with warranty.
- Ongoing technical support.
- Core spares stock support / stock flexibility / current LTA spares supplier.
- Dependable monetary & labour resources.
- All vehicles fully serviced prior to return to customer. Service regime restored.

Step 1

Understand fleet requirement – Enlarge, reduce or maintain?

Considerations:

- Budget
- Current Threat Level – does the vehicle still meet this?
- Upgrades in equipment required – e.g. communications equipment?
- Can the vehicle be moved? - In country refurbishment possible?
- Latest safety standards e.g. for automotive upgrades – PAS301?
- Security

Step 2

Conduct paper assessment based on:

- Basic information on the AV Fleet
- Agreed “Dispose or Extend” policy from Fleet Manager. **Example:** Ultimate disposal point **150,000 km** or **10 years**.
- Provide “Dispose or Extend” recommendation with potential to extend over 3-4 years.

Vehicle Type	Chassis NO	Engine Type	Months In Service	Current KMs	Average KMs Per Year	In Service Age	To 150,000 KM	Life Potential Yrs	Dispose or Extend
Toyota LC 76	JTGEB73J	1HZ	78	91,795	14,122	6.5	58,241	4	Extend
Toyota LC 105	JTECB01J	1HZ	96	92,640	11,580	8	57,360	4	Extend
Toyota LC 105	JTECB01J	1HZ	123	117,059	11,420	10.3	32,941	2	Disposal
Toyota LC 105	JTECB01J	1HZ	94	83,974	10,720	7.8	66,026	5	Extend
Toyota LC 105	JTECB01J	1HZ	93	99,794	12,877	7.8	50,206	3	Disposal
Toyota LC 105	JTECB01J	1HZ	123	62,046	6,053	10.3	87,954	6	Disposal
Toyota LC 76	JTGEB73J	1HZ	80	119,274	17,891	6.7	30,726	2	Disposal
Toyota LC 105	JTECB01J	1HZ	99	127,022	15,397	8.3	22,978	2	Disposal

Step 3

Selecting the supply partner

- Someone who is ideally placed to support an armoured vehicle life extension programme:
- Vast experience of protected Toyota Land Cruiser platforms.
- Enduring supply chain partnerships with Toyota and OEM equipment providers.
- Contracted under Long Term Agreements that can accommodate ancillary services.
- Warranties parts and labour.
- Proven track record in vehicle upgrade, refurbishment & repair.
- Can work to the latest and known standards.



Step 4

Ask the selected supplier to Survey and Quote per vehicle designated to extend (subject to contract)

\$ - This will cost, but reduces risk in the long run. If this is not done then the vehicle sent for refurbishment could have underlying terminal issues

- Individual vehicle reports provided complete with quotation for recommend repairs, upgrades and consolidation of vehicle systems.
- Quote to include identified upgrades e.g. suspension meeting proven requirements (PAS301), communications fit, electrical power upgrades.



Step 5a – Logistics (Subject to Contract)

Vehicles progressively shipped to the facility

- Repair & upgrade performed.
- Quality assured.

Step 5b – Supplier Procurement

Repair & upgrade material scheduled

- Material availability scheduled to match receipt of vehicles.
- Repair & upgrade commences upon receipt of vehicles.



Step 6 (Subject to contract)

Vehicle upgrade and repair

- Upgrade and repair performed.
- Upgrades documented (format to be agreed) and recommended spares list compiled.

Step 7

Vehicle prepared for return to customer

- Pre Delivery Inspection (PDI) performed.
- Vehicle shipped.



Step 8 (Option)

Vehicle handover upon return to user

- FSR introduces user / maintainer community to refurbished vehicle and provides familiarisation training.
- Particularly useful if vehicle has been upgraded
- Warranty on parts & labour commences



END OF LIFE DESTRUCTION



Whether end of life or surplus to operational requirements, an armoured vehicle should be disposed of by the correct means.

DPKO Surface Transport Management in the Field Manual Paragraph 354 states

“Disposal of UNOE armoured vehicles presents special circumstances. Very often the purchase of such vehicles includes the provision of an End-User Certificate to the government of the country of origin, in which the UN attests that the vehicles are for the sole use of the UN and will not be given, sold or loaned to any third party. This is very important, as the UN is not a trader in equipment that could be used for military purposes.”

If a vehicle is to be disposed of, similar to the Mid Life Refurbishment the following will need to be considered

- Budget
- Security issues
- Environmental obligations
- Can the vehicle be moved?
- Security obligations

The contracted supplier will ideally need to demonstrate the following;

- Value for money
- Local partnerships with secure service providers (approved repairers)
- Meeting environmental and health and safety rules as required by UN policies (there are exceptions if performed in theatre of operation)
- Contracted under Long Term Agreements that can accommodate ancillary services.
- Proven track record in vehicle disposal
- Can work to the latest and known standards
- Can record and prove destruction with certified records

A typical disposal process is performed as follows:

- Unique identifying marking plates (VIN, ARN, OEM armour tag, etc.) photographed in complete form.
- Vehicle enters into the decontamination process. Oils, antifreeze, brake fluid, etc., drained.
- Major units removed (engine, transmission, axles, suspension, etc.).
- As required these items can be destroyed, stored or returned to the customer.



- All vehicle soft body panels and interior removed and disposed of.
- All transparent armour removed, destroyed and disposed of.
- Armoured doors and bolted on armoured panels removed.
- Armoured doors, panels and shell cut into sections and disposed of.
- Vehicle chassis cut into sections and disposed of.
- Unique identifying marking plates gathered from components as removed from the vehicle.



Vehicle identifying marking plates supplied to customer complete with a report and vehicle destruction certificate.



PROTECTION IS EVERYTHING

Certificate of Destruction

This is to certify that the vehicle/item detailed below has been destroyed by Jankel Armouring Limited or one of their approved contractors at the location shown.

Vehicle Type/Item - Toyota Land Cruiser HZJ105

V.I.N - JTECB01J101019175

Location of Destruction - No-Lemon Kabul

Date of Destruction - 14/05/2015

Signature

Position - Through Life Support Manager

Jankel Armouring Ltd, Hamn Court Farm, Hamn Court, Weybridge, Surrey, KT138NR, 01932 857786

TL TEMPLATE 007

Version 1



PROTECTION IS EVERYTHING

Certificate of Destruction

This is to certify that the vehicle/item detailed below has been destroyed by Jankel Armouring Limited or one of their approved contractors at the location shown.



TL TEMPLATE 007

Version 1



REPLACE



Latest standards

Protection –

- Ballistics - VPAM BRV2009 level VR7 (7.62 x 51mm & 5.56 x 45 ss109 live fire tested)
- Blast – VPAM ERV 2010 – 15kg TNT equivalent @ 2m distance from the side
- Blast – VPAM ERV 2010 – 1 x DM31 underfloor anti personnel mine
- Blast – VPAM ERV 2010 – 2 x DM51 hand grenades detonated on the roof

Automotive testing –

- Vehicle Handling at the GVW
- Vehicle Braking at the GVW

Independent testing –

- PAS301:2017 - Civilian armoured vehicles. Automotive test methods