

DRAFT ANNEX B

PAYLOAD CATEGORY – B

TO

PURCHASE DESCRIPTION (PD)

FOR

JOINT LIGHT TACTICAL VEHICLE (JLTV)

VERSION 2.3

15TH APRIL 2010

1 SCOPE.

The release of the Draft Annex B is for informational and planning purposes only. This is only a Draft Annex B. Multiple revision of the Annex B are expected between now and EMD RFP. The intent for releasing this Draft is to provide industry with the forecasted direction of the JLTV program requirements and is not final. This web site will be updated with the latest version of the Draft Annex B as available.

Probability of Change (POC): Each requirement within the FoV and Annexes has been marked as High, Medium or Low for the web release depending on the likelihood of it being modified

- **High:** Requirements marked as High (red) have a high probability of being modified for EMD
- **Medium:** Requirements marked as Medium (orange) might be modified for EMD
- **Low:** Requirements marked as Low (yellow) are not likely to be changed for EMD

ID	POC	JLTV FoV Requirement
PDA-XXXX	H	
PDA-XXXX	M	
PDA-XXXX	L	

Everything that is highlighted in blue text are requirements that have been modified since version 2.0 release.

Australian Requirements: Although Australia is yet to make a formal commitment with regard to joining the US JLTV Program for the EMD Phase, the JLTV Program is seeking industry comment and feedback on a number of requirements that Australia has proposed for inclusion in the JLTV EMD PD. The majority of these Australian proposed requirements relate to Australian regulatory compliance. These proposed Australian requirements are indicated in the EMD PD with the precursor 'AUSTRALIAN'. In particular, the Program is seeking industry comment on whether these Australian proposed requirements are design and/or cost drivers. The level of effort required to comply with these Australian proposed requirements is also sought. Industry feedback will be used by the Program in order to determine whether these Australian proposed requirements can be incorporated at no/minimal impact to the Program or if of significant impact, not incorporated at all. In order to assist industry feedback, a comparative study of Australian Design Rules with selected US Vehicle Standards is included.

1.1 Overview.

This annex defines the Joint Light Tactical Vehicle, Payload Category B (JLTV-B), physical and performance capabilities required to support the Force Application (FA) functional mission roles. The JLTV-B sub-configurations defined herein shall meet all requirements of the JLTV Family of Vehicles Purchase Description (unless otherwise indicated) and all requirements of this annex.

1.2 General Description.

The JLTV-B will serve in mission roles to provide protected, sustained and networked tactical ground mobility for mounted infantry/combat arms forces. The JLTV-B will also be capable of towing lunette trailers. The government envisions the JLTV-B roles will be accomplished by the vehicle sub-configurations shown below.

1.2.1 Sub-Configurations

The JLTV-B sub-configurations are defined as follows:

1.2.1.1 Infantry Carrier (JLTV-B-IC).

When configured in the infantry carrier role, the JLTV-B-IC will carry infantry to attack / assault positions, but are not envisioned as fighting vehicles.

1.2.1.2 Close Combat Weapons/TOW ITAS Carrier (JLTV-B-CCWC).

When configured in the close combat weapons carrier role, the JLTV-B-CCWC will provide capability to serve as a TOW (ITAS) carrier. The Close Combat Weapons Carrier will be configured for employment of TOW (ITAS) to provide standoff for the force by use of its precision long-range missile to destroy enemy armor and materiel beyond the effective range of enemy weapons.

1.2.1.3 Heavy Guns Carrier (JLTV-B-HGC).

When configured in the Heavy Guns carrier role, the JLTV-B-HGC will provide the capability to serve as a heavy guns carrier. The Heavy Guns Carrier will accommodate mounting weapons (machine guns, grenade launchers, etc.) with a gun turret and will be the principal light vehicle employed for overwatch and base of fire during infantry attack, convoy escort, and security (military police).

1.2.1.4 Reconnaissance (JLTV-B-REC).

When configured in the reconnaissance role, the JLTV-B-REC will provide an armored scout/Knight capability in a protected light vehicle; this will allow reconnaissance elements to conduct their mission and survive on the battlefield.

1.2.1.5 Utility (JLTV-B-UTL).

When configured in the light cargo role, the JLTV-B-UTL shall provide for general purpose cargo carrying capability.

1.2.1.6 Ambulance (JLTV-B-AMB).

When configured in the ambulance role, the JLTV-B-AMB will carry 2-litters or 4-Ambulatory casualties or combination thereof, to provide rapid casualty evacuation while providing en-route care with on-board aid from a crew of three medical personnel. This platform ensures casualty evacuation capability can keep pace with other JLTV-FA vehicles and remain readily available to maneuver forces.

1.2.1.7 C20TM (JLTV-B-C20TM).

When configured in the C20TM role, the JLTV-B-C20TM will be very similar to the infantry carrier, with two seats removed to allow for mounting of communications equipment.

2 Applicable Documents

There are no Applicable Documents specific to the JLTV-B. Refer to section 2.0 Applicable Documents of the JLTV FoV Purchase Description.

ID	POC	DRAFT Annex B (JLTV-B) v2.3 Requirements
PDB-14		3 VEHICLE REQUIREMENTS
PDB-540	L	The JLTV is defined as a System of Systems to include the truck chassis, the Companion Trailer, and applicable sub-components listed hereunder. All vehicle variants shall meet the general requirements of section 3 of this specification. Payload Category and Companion Trailer specific requirements are contained in the respective vehicle specific annex for each JLTV sub-configuration. If a conflict arises between Section 3 of this specification and the vehicle specific annex, the callout in the vehicle specific annex shall take precedence. If not otherwise specified, all requirements are threshold values (T). Objective values, which are desired capabilities, are labeled with an (O).
PDB-15		3.1 Physical Requirements.
PDB-480		3.1.1 Weight.
PDB-481	L	The JLTV-B vehicle weights shall be consistent with achieving the performance, transportability and mission capabilities defined in the FoV section of the ATPD and this annex.
PDB-18		3.1.2 Essential Combat Configuration.
PDB-435	L	See Annex K for ECC per sub-configuration.
PDB-19		3.1.3 Payload.
PDB-20	L	The JTLV-B vehicle shall be capable of meeting all performance requirements while carrying loads weighing 4,500 lbs. (T), 5,100 lbs. (O).
PDB-29		3.1.4 Dimensions.
PDB-482	L	Interior and exterior dimensions of the JLTV-B shall be consistent with achieving the performance, transportability and mission capabilities defined in the FoV section of the ATPD and this annex. Dimensional limitations and requirements shall be applicable with vehicle configured with inherent armor and B armor kit installed.
PDB-33		3.1.4.1 Height.
PDB-34	L	The JLTV-B shall have a transportable height of 76 inches.
PDB-37		3.2 Performance Requirements.
PDB-38		3.2.1 MOBILITY.
PDB-39		3.2.1.1 Terrain.
PDB-40	H	The JLTV-B at GVW shall meet the NRMM Prediction Summary and each individual value for Cross Country and Trafficability at the various geographical locations and soil conditions shown in Table B-1.

ID	POC	DRAFT Annex B (JLV-B) v2.3 Requirements				
PDB-531	L	Table B-1 Mobility Rating				
		All values are thresholds unless indicated by (O)		JLV-B		
		NRMM Prediction Summary		Cross Country v50 (mph)	18 (T)/ 22 (O)	
				Trafficability (%XC No Go)	25 (T)/ 19 (O)	
		Geographical Location	Soil Condition	NRMM Attribute	JLV-B	
		Lauterbach, Germany (Map Sheet 5322)	Dry Normal	Cross Country v50 (mph)	≥ 21	
				Trafficability (%XC No Go)	≤ 15%	
			Wet Normal	Cross Country v50 (mph)	≥ 18	
				Trafficability (%XC No Go)	≤ 26%	
			Snow	Cross Country v50 (mph)	≥ 15	
				Trafficability (%XC No Go)	≤ 34%	
		Al Mafraq, Jordan (Map Sheet 3254 IV)	Dry Normal	Cross Country v50 (mph)	≥ 23	
				Trafficability (%XC No Go)	≤ 11%	
			Sand	Cross Country v50 (mph)	≥ 12	
Trafficability (%XC No Go)	≤ 24%					
Cheorweon, Korea (Map Sheet 3222 III)	Dry Normal	Cross Country v50 (mph)	≥ 13			
		Trafficability (%XC No Go)	≤ 38%			
	Wet Normal	Cross Country v50 (mph)	≥ 12			
		Trafficability (%XC No Go)	≤ 40%			
PDB-43		3.2.1.2 Speed				

ID	POC	DRAFT Annex B (JLTV-B) v2.3 Requirements																										
PDB-44		3.2.1.2.1 Speed on Grade.																										
PDB-45	L	The JLTV-B shall be capable of continuously ascending a 5-percent grade at 45 MPH at GVW (T), 60 MPH at GVW (O).																										
PDB-546		3.2.1.2.3 0-30 mph Acceleration Dash Speed.																										
PDB-547	L	The JLTV-B at GVW shall be capable of accelerating on dry, level hard terrain from 0 to 30 mph (48.3 kph) within 9.4 seconds (T)/7 seconds (O)																										
PDB-51		3.2.1.3 Turning Radius.																										
PDB-52	M	The turning radius of the JLTV and companion trailer combination at GCVW shall not exceed 25 ft (T), 16 ft (O) curb to curb.																										
PDB-59		3.2.1.4 Obstacle Removal.																										
PDB-60	L	The JLTV-B shall be capable of pushing passenger cars (at 6,000 lbs GVW) from lanes of maneuver (disabled cars, damaged vehicles, etc.) without damage to the JLTV-B.																										
PDB-63		3.2.1.5 Towing.																										
PDB-64	L	The JLTV-B shall be capable of towing the JLTV Trailer as defined in Annex D.																										
PDB-474		3.2.1.5.1 Backward Compatibility.																										
PDB-541	L	The JLTV-B shall be able to tow the legacy trailers shown in Table B-2 in a degraded manner, which is defined as towing that legacy trailer at the safe operating limit of the legacy trailer. The legacy trailers shall not be loaded to exceed the towing capacity of the JLTV.																										
PDB-528	L	Table B-2 Legacy Trailers Required for JLTV-B																										
PDB-530	L	<table border="1"> <thead> <tr> <th>Legacy Trailer</th> <th>Threshold</th> <th>Objective</th> </tr> </thead> <tbody> <tr> <td>M101A3</td> <td>X</td> <td></td> </tr> <tr> <td>M105A2</td> <td>X</td> <td></td> </tr> <tr> <td>M1101 (LTT-L)</td> <td>X</td> <td></td> </tr> <tr> <td>M353</td> <td>X</td> <td></td> </tr> <tr> <td>M1102 (LTT-H)</td> <td>X</td> <td></td> </tr> <tr> <td>M1116A2</td> <td>X</td> <td></td> </tr> <tr> <td>M149A2</td> <td></td> <td>X</td> </tr> </tbody> </table>			Legacy Trailer	Threshold	Objective	M101A3	X		M105A2	X		M1101 (LTT-L)	X		M353	X		M1102 (LTT-H)	X		M1116A2	X		M149A2		X
Legacy Trailer	Threshold	Objective																										
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M353	X																											
M1102 (LTT-H)	X																											
M1116A2	X																											
M149A2		X																										
PDB-65		3.2.2 SURVIVABILITY.																										
PDB-66	L	The JLTV-B shall provide ballistic and blast protection as required in Annex E.																										
PDB-74		3.2.3 TRANSPORTABILITY.																										
PDB-75		3.2.3.1 Fixed Wing Transport.																										
PDB-76	L	One JLTV-B at GVW shall be air transportable by a C-130E/H aircraft (T) and larger military aircraft, 2 vehicles at GVW (O).																										
PDB-548		3.2.3.1.1 Low Velocity Aerial Delivery (LVAD).																										
PDB-549	L	The JLTV- B at GVW (excluding GPK) and companion trailers at GVW shall be individually capable of LVAD from C-130, C-17 and C-5 aircraft (T). The JLTV-A at GVW (excluding GPK) and companion trailers at GVW shall be capable of LVAD simultaneously (on the same platform) from C-130, C-17 and C-5 aircraft (O).																										

ID	POC	DRAFT Annex B (JLTV-B) v2.3 Requirements
PDB-78		3.2.3.2 Rotary Wing Transport.
PDB-432		3.2.3.2.1 Tactical Transport.
PDB-79	L	The JLTV-B shall be transported in the following configurations:
PDB-80	L	1) One JLTV-B at GVW external to a CH-53K (T);
PDB-416	L	2) One JLTV-B at ECC external to a CH-53E (T), at GVW (O);
PDB-83	M	3) One JLTV-B at ECC external to a CH-47F (T). For the JLTV-B the lift capacity of the CH-47F shall be limited to 18,098 pounds.
PDB-82	L	4) Two JLTV-B at ECC external to a CH-53K (O).
PDB-86		3.2.3.3 Sealift Transport.
PDB-87	L	The JLTV-B at GVW and GCVW shall be capable of being loaded into all deck spaces of the prepositioning and force projection naval ships where current HMMWVs are loaded, including height restricted deck spaces (decks A and G) of the AMSEA class ships.
PDB-483		3.2.4 VEHICLE COMMAND, CONTROL, COMMUNICATIONS AND COMPUTERS & INTELLIGENCE
PDB-484	L	The JLTV-B shall be able to integrate C4I equipment as defined in Annex K.
PDB-89		3.2.5 SUPPORTABILITY
PDB-90		3.2.5.1 Reliability, Availability and Maintainability (RAM)
PDB-91		3.2.5.1.1 Reliability
PDB-92		3.2.5.1.1.1 Mean Miles Between Hardware Mission Failure.
PDB-93	L	The JLTV-B shall demonstrate at a minimum, a point estimate of 4,500 (T), 25,000 (O) Mean Miles Between Hardware Mission Failure (MMBHMf). For full rate production, the JLTV-B shall demonstrate at a minimum, a point estimate of 7,600 (T) Mean Miles Between Hardware Mission Failure (MMBHMf).
PDB-94		3.2.5.1.2 Maintainability
PDB-95		3.2.5.1.2.1 Maintenance Ratio (Field Level).
PDB-96	H	The JLTV-B shall demonstrate a Field Level Maintenance Ratio of 0.006 (T); 0.003 (O) maintenance man-hours per operating mile (MMH/OM).
PDB-97		3.2.5.1.2.2 Maintenance Ratio (Sustainment Level).
PDB-98	H	The JLTV-B shall have a Sustainment Level Maintenance Ratio of 0.0017 (T), 0.0009 (O) maintenance man-hours per operating mile (MMH/OM).
PDB-542		3.2.5.1.3 Fuel Efficiency.
PDB-543	H	The JLTV-B shall meet a fuel efficiency of 60(T), 90(O), ton-miles per gallon based on maximum GVW, including armor. Fuel efficiency will be measured over the Munson Standard Fuel Consumption course per TOP 2.2.603.
PDB-99		3.2.6 JLTV-B SUB-CONFIGURATION REQUIREMENTS:
PDB-100		3.2.6.1 Infantry Carrier Requirements (JLTV-B-IC).
PDB-102		3.2.6.1.1 Occupants.
PDB-103	L	The JLTV-B-IC shall provide the capability to accommodate and transport a total of six (6) occupants (T), seven (7) occupants (O) (including the driver) and their gear.
PDB-451		3.2.6.1.1.1 Temporary Troop Seat.
PDB-452	H	Designated cargo space (if present) shall be able to be converted by the crew into one additional temporary troop seat without the use of

ID	POC	DRAFT Annex B (JLV-B) v2.3 Requirements
		special tools within 20 minutes (T), 5 minutes (O).
PDB-453		3.2.6.1.1.1.1
PDB-454	H	The seat shall have a personal restraint system, but is not subject to rollover protection requirements.
PDB-512		3.2.6.4.1.2 Knight System
PDB-188	L	The JLV-B-REC-Knight shall integrate the Knight System IAW the Knight ICD.
PDB-513		3.2.6.4.1.2.1
PDB-514	L	The Knight Integration shall receive all power from the vehicle power management/distribution system.
PDB-515		3.2.6.4.1.2.2
PDB-516	L	The Knight Integration shall transmit all intra-vehicle data through the C4I/EW Data Bus.
PDB-517		3.2.6.4.1.2.3
PDB-518	L	The JLV-B-REC-Knight design shall be capable of mounting a weapon, as defined in the FoV Weapons Provisions section, and a Knight at the same time.
PDB-519		3.2.6.4.1.2.4
PDB-520	L	The Knight views shall be accessible to the vehicle commander via the Display and Control Subsystem.
PDB-521		3.2.6.4.1.2.5
PDB-522	L	All error messages for the Knight Integration shall be visible through Display and Control Subsystem.
PDB-523		3.2.6.4.2 JLV-B-REC Scout.
PDB-524		3.2.6.4.2.1 Occupants.
PDB-525	H	The JLV-B-REC-Scout shall provide the capability to accommodate and transport a total of six (6) occupants (including the driver) and their gear.
PDB-326		3.2.6.7 C2OTM Requirements (JLV-B-C2OTM).
PDB-526		3.2.6.7.1 Occupants
PDB-485	L	The JLV-B-C2OTM shall provide the capability to accommodate and transport a total of four (4) occupants (including the driver) and their gear.
PDB-327		3.2.6.7.2 DC Power Source/On-board electrical power requirement.
PDB-328	L	The JLV-B-C2OTM shall be capable of providing 20kW(T), and 30kW (O) sustained electrical power to on-board vehicle subsystems, with engine at tactical idle (T); idle (O) speed and/or while the vehicle is moving.
PDB-440		3.2.6.7.3
PDB-441	L	The JLV-B-C2OTM shall be capable of executing a controlled shutdown when primary power is lost. The controlled shutdown shall prevent loss or corruption of system data or configurations.
PDB-446		3.2.6.7.4
PDB-447	L	JLV-B-C2OTM shall provide for a C2 workstation environment that facilitates efficient operator use while the vehicle is underway, minimizing workstation induced dizziness and motion sickness.
PDB-552		3.2.6.7.5
PDB-553	L	JLV B-C2OTM shall not be outfitted with a weapons mount or GPK.