



DEFIANT ABLATION INC

ZULU-IKLWA RECONNAISSANCE CARAPACE BODY KIT

UNDER DEVELOPMENT IN SUMMER OF 2021





The **ZULU-IKLWA** carapace body kit, with its minimal external dimensions and novel model design following testing and approval, will be chassis mounted by the end-user, and will provide for a forceful, dominant, and highly adroit off-road light strike or reconnaissance vehicle, aptly named in the vein of a rapidly striking short spear.

The armor carapace and ROPS system will be field mounted by the end-user, configurable and scalable for various combat and supporting roles with a standard NATO STANAG Level 1 armor, yet obviously limited carapace armor protection when vertical armor and roof protection are reduced by having an open windshield, split doors, or when using a soft top.

The payload capacity of the carapace unit described above when chassis mounted should yield a payload capacity of approximately 4,545 kg (Without optional mounted components or when higher appliqué armor is fitted).

Road/rail/sea & air transportable, both under-slung or within CH47 or air portability within a C-131. Integrated bolted and removable ROPS system, engineered for both a role specific, carrying a 12kN NATO Standard Pallet, or as a tactical armored vehicle when provided with up to STANAG Level 3 appliqué armor for fully enclosed operations.

Our carapace body platform can then be used in various climatic conditions A1 to C2, affording weather protection with four or 5 doors, up to four roof opening hatchways without cover or with soft-top or hard-top composite inserts, or armor inserts. Fully removable door tops/ windows and frames. Hinged drop down front windscreens with upper body frame mounting individual wiper/washing systems. Modular STANAG 4569 L1 KE protection packages for ballistic, side blast, may be field fitted to all variants in addition to the available chassis integrating a STANAG 4569 1a/1b Mine Protection system. Our carapace is engineered to ensure the greatest flexibility of operational deployment.

Suggested chassis Specifications

- Vehicle curb weight: 3,904 kg
- Gross Vehicle Weight Ratio (GVWR): 8,845 kg
- STANAG 4569 1a/1b chassis integrated Mine protection Kit (354 kg)
- Gross Trailer Weight (GTW): 13,499kg
- Number of Seats:
 - Reconnaissance role (D&C + 2 Crew / 1 Gunner)
 - Logistics role (D&C+ 2 Crew) + one crew - Full 12kN NATO Standard Pallet
 - Medical evacuation role (D&C + 4 Stretchered Casualties)
 - Armored weapon carrier role (D&C + 2 interior crew)

Dimensions

- Length (overall basic): 5842 mm (230")
- Width (Max Outer carapace body element): 2418 mm (95")
- Height: Max 2534 mm (96") (Over Folded Weapon station for transport)
- Wheelbase: 3,645 mm (143.5")
- Ground Clearance: (GC) 381 mm @ Clearance to Axle differential

- Angle of approach / Departure: 33° / 37°
- Ramp over angle: 150°
- Transportability: Road, Rail, Sea, Air (Fixed wing C130, C17, A400M)
Rotary Internal CH47, under slung with 5 minutes preparation without special tools.

Vehicle Performance

- Max speed High range / Low range: 140 km/h
- Gradient Capability: > 60% fully laden from Static
- Turning circle curb to curb: 16.2.
- Range on hard level surface: 600 km

Power-train

- Engine type / Model: 6.7 Cummins High Output Turbo Diesel I-6
- Torque lb - ft Performance: (325 hp) @ 2,400 rpm
- Displacement 750 cu @1,500 rpm
- Transmission: AS69RC (Cummins) 6 speed automatic
- 2 or 4 wheel drive selection, with High and Low ratios.
- PTO capability left & right side
- Axle ratio 4.10, 4.44
- Brakes Disc, Anti lock
- Alternator dual 220-amp
- Suspension type: Front coils and shocks, Rear leaf springs and shocks
- Drive-Train Management: Electronic with 2/4 wheel drive selection
- Brakes: Dual circuit Hydraulic Brakes with cable handbrake, ventilated disc type with ABS

- HVAC – Air conditioning: single zone climate control system of approx. 8kw

Note: Environmental (Climatic) Conditions Analysis (A1 to C2 standard) (GR 72 Version 2 Part C - Annex A.

Platform Equipment

- Electrical system – Additional Power Generation: Single 12V 200A alternator, Total Output smoothed Nominal At Idle.
- Battery capacity: 1 x 12v 120Ah isolated with vehicle master isolation switch
- Trailer couplings: Chassis integrated Front and Rear towing Pintle to DEF-STAN 23-6 {issue 4, 17} (NATO Hitch), 12pin 24V NATO electrical trailer socket.
- Slave Start / Charge: 12V NATO 100 amp Slave socket and plug (SN-215) mates (SN-216)
- Under slung Lifting provisions: Chassis integrated front and rear recovery provisions to STANAG 4478
- Optional: Under chassis air compressor for manual CTIS at each wheel housing
- Optional: Self-recovery winch: 3,625 kg line pull with safety override and single person pendant, Equipped with 30 mm UHMWP rope, tie-downs to Chassis integrated tie down positions suitable for Rail, Road, Maritime and Air transport configurations. DEF-STAN-23-6 / MIL-STD-J209
- Optional: Upper doors, armored or non-armored (canvas or composite)
- Optional: Roof, Canvas, composite non-armored - or armored
- Optional: Over Folded protected roof Weapon station for transportation

OTHER OPTIONS TO CONSIDER

2. Ballistic Specifications in accordance with NATO AEP-55, Vol 1, table A2

2.1 Opaque Vertical Armor Level: NATO STANAG 4569 level II

The driver and crew compartment vertical opaque armor will be tested to defeat three hits, each one being fired on the apex of an equilateral 4" triangle as specified. The weapon being positioned five meters from the target, the target being placed at a 90-degree angle from the weapon. Using this test method, the opaque armor being used in this quotation will be certified to defeat the following projectiles:

7.62 x 39 mm BZ API (Russian)

7.62 x 39 mm Type 56 (Chinese)

2.2 Opaque Roof Armor Level: NATO STANAG 4569 level II

The roof armor will be tested to defeat three hits, each being fired on the apex of an equilateral 4" triangle as specified. The weapon will positioned five meters from the target, the target being placed at a 90-degree angle from the weapon. Using this test method, the opaque armor being used is this quotation will be certified to defeat the following projectiles:

7.62 x 39 mm BZ API (Russian)

7.62 x 39 mm Type 56 (Chinese)

2.3 Opaque Vertical Engine Compartment Armor Level: NATO STANAG 4569 level II

The combination of frontal, fenders and firewall vertical opaque armor will be tested to defeat three hits, each one being fired on the apex of a 4" equilateral triangle as specified. The weapon will be positioned five meters from the target, the target being placed at a 90-degree angle from the weapon. Using this test method, the opaque armor being used in this quotation will defeat the following projectiles:

7.62 x 39 mm BZ API (Russian)

7.62 x 39 mm Type 56 (Chinese)

2.4 Transparent Armor Level: NATO STANAG 4569 level II

The driver and crew compartment vertical transparent armor will be tested to defeat three hits being fired on the apex of a 4" equilateral triangle as specified. The weapon will be positioned thirty meters from the target, the target being placed at a 90-degree angle from the weapon. Using this test method, the transparent armor being used in this quotation will defeat the following projectiles:

7.62 x 39 mm BZ API (Russian)

7.62 x 39 mm Type 56 (Chinese)

Chassis type suggested for client's purchase

Characteristics		Comment
Engine:	6.7L Cummins High-Output Turbo Diesel I-6	
Torque - lb-ft	325 @ 2,400 rpm	
Displacement - ci	408"	
4x4 or MERITOR 6 X 6	Estimated GVWR values of 24,000 lbs	
Transmission	Cummins	
Type	6-speed Automatic	
PTO	Left and Right Side	
Brakes	Disc front and rear - Anti-Lock	
12 volt system		
Battery	730-amp	
Alternator	380 amp	
Electronic interface	Modules - 50 inputs - outputs	
Tires	Continental 335/80 R	
Dashboard OEM	Original information clusters	
Rims split 2 part		
Beadlock/runflats	DAI Manufactured	
Internal Configuration	As specified by client's drawings	
Wheelbase Front	Zero to	
Rear axle	3683 mm (145")	
Armored Curb Weight	Pending information about requested equipment	
Front Axle Weight	Pending information about requested equipment	
Rear Axle Weight	Pending information about requested equipment	
Armored payload	Pending information about requested equipment	
Fuel tank Capacity	Pending information about requested distance	
Front cabin seats	Two bucket seats	Blast or?
Seating type	Seats #3 or #4 Locations as specified by client	Blast or?
Ground clearance	380 mm (15.25")	
Height	2534 mm (96")	
Width of Carapace	2418 mm (95")	
Overall Length	5842 mm (230")	
Maximum range	600 km estimated	
Maximum speed	135 km	
Angle of approach	33 degrees	
Angle of departure	37 degrees	

Road lights	OEM type or military convoy (advise)	
Signal lights	OEM type or military convoy (advise)	
Control indicators	Engine oil pressure indicator Engine coolant temperature indicator Fuel gauge High and low beam indicator Brake hazard indicator Overheating hazard lamp	
Air conditioning	Factory Air conditioning in dashboard	
Front springs	Upgraded wire coils	
Rear Springs	Multi-leaf springs	
Exterior colour	As selected by client	(Mat finish)
Interior colour	As selected by client	Painted or Vinyl
Hooks	Two towing hooks mounted in front One towing hook mounted to rear	
Mirrors	Door mounted	Advise
Mirrors	Two front fender Side Mirrors	Advise
Suspension	Modified with steering Dampers and steering hydraulics	
Wiring	Pre-wiring for radio equipment	
Fuel	Fuel tank lock cap	
Handles	Exterior encased grab handles at doorways	
Hatches	Opening Roof hatches with structural reinforcement	RWM advise
Door - driver	front	
Door - passenger	front	
Doors - L/R	From "B" pillar	
Door - crew	Rear of seats	
Door Locks	Secured door locks with draw handles	One key fits all
Step	Rear exit door non slip grip grate	
Step	driver entry/exit door non slip grip grate	
Step	Passenger entry/exit door non slip grip grate	
Handrail	Steel roof mounted handrails above rear door	
Lights	Ceiling light, clear , in front compartment with separate switch	
Lights	Ceiling light, red , in front compartment with separate switch	
Lights	Ceiling lights, clear in rear compartment with separate switch	
Lights	Ceiling lights, red in rear compartment with separate switch	
Lights	Rear brake lights, indicators and backup lights	
Lights	Fender mounted amber turn signals to front and sides	
Lights	Rear license plate bracket and light	
Gun ports	Located at positions specified by the	Type? HH-steel

	client:	
Fuel tank protection	Armored protection fixed with rear step	
Radiator	Protection with louvers and vents	
Cabin air exchanger.	Exchanges air that fouls due to weapons discharged inside the cabin. Cabin CO&CO2 Level System in place that will pull weapon fumes out of the vehicle, in accordance with CO & CO2 levels within North American Industrial Standards	
Driver floor - tunnel	Cavity-3mm below, 3 mm above	
Crew Floor	Cavity- 3 mm BHN 450 steel under floor frame, 3mm BHN steel above floor frame	Fibre type flooring
Floor cavity	2" HOLLOW-Cavity insulation	Micro-filled
Wall cavity	2" HOLLOW-Cavity insulation	Micro-filled
Ceiling Cavity	2" HOLLOW-Cavity insulation	Foam-filled
Hood Opaque armor	Air ram, removable with rings	
Inner fenders	Opaque armor bolted to carapace	
Front bumper	Heavy duty integrated with chassis frame	
Front louvre	Opaque armor with M-S fascia	
Rear bumper	Heavy duty rear bumper stops	
Wheel wells to rear	.5" Rubber sheet interior and exterior	
Rocker panel	.5" Rubber coated	
Ballistic glass frames	Steel, Powder coated, affixed with high security screws	
Ballistic glass	Flat 60 mm transparent windshield with blackout band according to approved drawings. Embedded DOT approval sticker with DAI logo with item serial number.	Tinted and installed according to client's specifications
Ballistic glass x 3	Flat 60mm transparent armor door glass with blackout band according to approved drawings. Embedded D.O.T approval sticker with DAI logo with item serial number. Mounted in each crew cab door.	Tinted and installed according to client's specifications
Ballistic glass Rear door wall	Flat 60mm transparent armor sidewall windows with blackout band according to approved drawings. Embedded D.O.T approval sticker with DAI logo with item serial number. Rear side walls	Tinted and mounted according to client's location specifications
Fire extinguisher	four (4) wheel wells	
Fire Extinguisher	Within engine compartment	
Driver's tool kit	In tool chest	
Cargo Area	Tubular frames as drawn in 3D drawing	
Cargo Area	Doors 3D drawings	

Roof	Hatches 3D drawings	
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Any optional items for client to consider may be selected at market cost plus labour with 25% overhead charge:

No	Single item unless specified otherwise	Cost in EURO
1	Rotating 14" turret (Rigel MK1) with hatch cover	
2	Rotating 14" turret (Rigel MK1) with hatch cover (powered)	
3	Slewing rotational ring for roof hatch	
4	Lighting, emergency kill switch on console	
5	Supply and Install camera back-up system, camera and monitor	
6	GOUM - SWAMP READY TRACKS. Mounting for two (2) front wheels, with anti-spin device	
7	GOUM - SWAMP READY TRACKS. Mounting for two (2) rear wheels with anti-spin device (or 6 X 6 configuration)	
8	M - C.T.I.S (Manual - Central Tire Inflation System)	
9	Triple 12 volt holders (fits in console)	
10	Headlight flashing module	
11	GO search light, curb, front of roof, black, with dash mounted controls	
12	GO search light, street side, front of roof, black, with Dash mounted controls	
13	Rear back up sensor device	
14	Weapon storage (Depending on seating arrangement)	
15	Steel mesh on glass	
16	Rubberized non slip roof surface	
17	Shovel and Pick	
18	Optima Batteries	
19	Extra Wheel rim	
20	Bead-lock	
21	Spare Continental MTP 81 Tire	
22	FLIR PathFinder- IR night vision camera system	
23	FLIR PathFinder- IR installation	
24	Anti-theft module mounted on consol	
25	Access storage bins interior or exterior	
26	A rear mounted camera system with dash mounted LED	
27	First Aid Kit	
28	Two (2) Fire extinguishers	
29	Emergency Warning Triangle	
30	Antenna mounting bracket	
31	Antenna with conduit	
32	Map light on drivers console or Dashboard	
33	Driver's floor console between the seats - electrical assessorly controls	
34	Headlight flashing module	
35	Lighting, emergency kill switch on console	
35	Steel mesh covering the lights	

36	Intercom inside to outside	
35	AC/DC Power inverter 1800 Watt battery charge	
36	AC/DC Power inverter 3600 Watt battery charge	
37	Rear mounted camera system	
38	Electromagnet door hold open device	
39	Gunner blast seats x 2	?
40	Scott or similar SCBA AIRPACK closed mounted system 2+6 person, with 30 minutes minimum air supply per person, self contained with air bottles secured under seating and all piping and valve transfer systems (Note: minus face masks)	
41	AREA RAE Radiation and explosive gas detection system, portable or modified for use on 12 volt DC system in Motor Vehicles....includes mode radiation digital monitor, 6' cable, 44-2 gamma scintillation probe and clip.	
42	Electrical winch 20,000lbs	
43	Wall interior safety padding- <i>Cordura</i> - fire rated, diamond shaped quilt	
44	100 watt siren system with PA, select wail and speaker	
45	IED jammer or similar	
46	Cameras with recording system	
47	Wiring and cabling for electronics	
48	Tactical seats (aluminium) with seat belt restraints	
49	Tactical seats (against blast) with seat belt restraints	
50	Smoke and gas measures	
51	Blackout lights	
52	Convoy IR lights	
53	Crew intercom to radio system	
54	Retractable mast	
55	Remote Weapon Station (client to supply 3D drawings)	
56	Hydraulic Lowering System for Remote Weapon Station	
57	Roof and front hood, fenders, tie down points	
58	Medical stretcher	
59	Appliqué armor	
60	Weapon rack with key	
61	Smoke grenade projector purchased and installed by client in Provide mounting instructions to DAI	
62	12.7 mm GPMG purchased and installed by clients in Provide 3D drawings and mounting instructions to DAI	
63	Intercom between driver, gunner and commander purchased and installed by client in Provide mounting instructions (drawings) to DAI	
64	Combat door locks	
65	Client to confirm by pending drawings that APC will fit inside a C130 aircraft	
66	Tubular frames as drawn in 3D drawing in cargo area Instructions on mounting provided to client for installation	

67	Windshield Visor	
68	Rotating slewing ring for RWS	
69	Controller with Emergency light & siren control module	