

**TRUCK, SURVEILLANCE RECONNAISSANCE VEHICLE (SRV-SF), LIGHTWEIGHT, FFR, W/WINCH,  
MC2, LAND ROVER 110, 4X4, ISUZU DIESEL ENGINE**

**DATA SUMMARY**

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with EMEI General A 001.



**Figure 1 Surveillance and Reconnaissance Vehicle, Special Forces – Front View**



**Figure 2 Surveillance and Reconnaissance Vehicle, Special Forces – Rear View**

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**General**

1. This EMEI lists the basic data for the Surveillance and Reconnaissance Vehicle, Special Forces, as shown in Figures 1 and 2.

**Role**

2. The role of the vehicle is to transport up to three personnel (including the driver), their equipment and supplies for three days in an operational environment.

**Detail**

**3. Mass**

a. Unladen:

- (1) Front Axle ..... 1 420 kg
- (2) Rear Axle ..... 1 330 kg
- (3) Total ..... 2 750 kg

b. Maximum Load Rating:

- (1) Front Axle ..... 1 500 kg
- (2) Rear Axle ..... 2 100 kg
- (3) Total ..... 3 600 kg

c. Gross Vehicle Mass (GVM):

- (1) Total (not to exceed) ..... 3 600 kg

**WARNING**

**When loaded, the vehicle is not to exceed the Gross Vehicle Mass (GVM) figure of 3 600 kg. The GVM figure takes into account other aspects of the vehicle design apart from the axle loading limits.**

**4. Wheels and Tyres**

- a. Wheels ..... 6F by 16, 2-piece 5-stud ventilated disc
- b. Tyres and Tyre Pressures.....in accordance with EMEI Vehicle A 291-5

**5. Dimensions**

a. Length:

- (1) Tailgate Deployed ..... 5 200 mm
- (2) Tailgate Stowed.....4 850 mm

b. Overall Width:

- (1) Over Mirrors .....2 370 mm
- (2) Reduced.....1 880 mm
- (3) Over Side Stowage Racks .....2 140 mm

c. Overall Height:

- (1) Laden.....1 900 mm
- (2) Unladen .....1 930 mm

d. Shipping Cubage .....21 m<sup>3</sup>

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<b>e.</b>	Cargo Tray:	
<b>(1)</b>	Length – Internal.....	1 835 mm
<b>(2)</b>	Width – Internal.....	1 440 mm
<b>(3)</b>	Height – Internal.....	1 380 mm
<b>(4)</b>	Height of Body Sides (from tray).....	500 mm
<b>(5)</b>	Height of Cargo Tray from Ground:	
<b>(a)</b>	Laden.....	800 mm
<b>(b)</b>	Unladen.....	830 mm
<b>f.</b>	Wheelbase.....	2 794 mm
<b>g.</b>	Track:	
<b>(1)</b>	Front.....	1 498 mm
<b>(2)</b>	Rear.....	1 498 mm
<b>h.</b>	Ground Clearance:	
<b>(1)</b>	Unladen.....	215 mm
<b>(2)</b>	Limiting Feature.....	rear differential housing
<b>i.</b>	Pintle Hook Height:	
<b>(1)</b>	Unladen.....	600 mm
<b>(2)</b>	Laden.....	570 mm
<b>6.</b>	<b>Bridge Classification</b> .....	4
<b>7.</b>	<b>Engine</b>	
<b>a.</b>	Manufacturer/Type.....	Isuzu 4BD 1 RB-G
<b>b.</b>	No. of Cylinders.....	4 (in-line)
<b>c.</b>	Power (net).....	66 kW at 3 200 rpm
<b>d.</b>	Torque (net).....	245 N.m at 1 900 rpm
<b>e.</b>	Maximum No Load.....	3 200 ± 100 rpm
<b>f.</b>	Firing Order.....	1-3-4-2
<b>g.</b>	Capacity.....	3.856 L
<b>h.</b>	Compression Ratio.....	17:1
<b>i.</b>	Flywheel Thickness.....	38 mm (min 37 mm)
<b>8.</b>	<b>Transmission</b>	
<b>a.</b>	Manufacturer.....	Land Rover
<b>b.</b>	Type.....	model LT95A
<b>c.</b>	Ratios:	
<b>(1)</b>	First Gear.....	4.069:1
<b>(2)</b>	Second Gear.....	2.448:1
<b>(3)</b>	Third Gear.....	1.505:1
<b>(4)</b>	Fourth Gear.....	1.000:1
<b>(5)</b>	Reverse Gear.....	3.664:1

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**9. Transfer Case**

- a. Manufacturer ..... Land Rover
- b. Type.....two-speed
- c. Ratios:
  - (1) High Range ..... 1.123:1
  - (2) Low Range ..... 3.321:1

**10. Front Axle**

- a. Manufacturer ..... Land Rover
- b. Type.....spiral bevel
- c. Ratio ..... 3.54:1
- d. Track..... 1 498 mm

**11. Rear Axle**

- a. Manufacturer ..... GKN/Salisbury
- b. Type..... heavy-duty, Salisbury 8 HA
- c. Ratio ..... 3.54:1
- d. Track..... 1 498 mm

**12. Steering**

- a. Manufacturer ..... Adwest
- b. Type..... power assisted variable ratio worm and roller, utilising a gear driven pump mounted on the engine and a remote hydraulic reservoir
- c. Ratio ..... 17.5:1
- d. Lock to Lock ..... 3.5 turns

**13. Winch**

- a. Manufacturer ..... Power Auto
- b. Type..... Thomas T8000M
- c. Reduction Ratio ..... 50:1
- d. Winch Rope:
  - (1) Length ..... 45 m
  - (2) Diameter..... 10 mm
  - (3) Min. Breaking Force ..... 63.1 k.N
- e. Maximum Cable Pull:
  - (1) 1st Drum Layer ..... 3 636 kg
  - (2) 2nd Layer ..... 3 024 kg
  - (3) 3rd Layer ..... 2 589 kg
  - (4) 4th Layer ..... 2 263 kg
- f. Torque Limiter Setting ..... 150 N.m
- g. Electrical System (vehicle)..... 12 V
- h. No. of Batteries..... 2 x 12 V
- i. Capacity (cold crank current) ..... 560 A
- j. Terminal Grounded ..... negative

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- k. Radio Suppression..... DEF(AUST) 172, MIL-STD-461A RE05, CE07

**14. Fuels and Lubricants**

- a. Fuel ..... Diesel
  - (1) Tank 1 ..... 62 litres
  - (2) Tank 2 ..... 50 litres
  - (3) Total..... 112 litres
- b. Cooling system..... 12.8 litres – Variable water/inhibitor (Maxitreat 3777) ratios
  - (1) -17°C to 122°C ..... 1 Part Maxitreat 3777:1 Part Water
  - (2) -27°C to 125°C ..... 2 Parts Maxitreat 3777:1 Part Water
  - (3) -37°C to 129°C ..... 1 Part Maxitreat 3777:0 Parts Water
- c. Engine (with filters) ..... SAE Grade 40 (OMD 115) 8.5 litres
- d. Axles:
  - (1) Front Swivel Pin Housing ..... EP 00 375 mL
  - (2) Front Differential ..... OEP 220 1.7 litres
  - (3) Rear Differential ..... OEP 220 2.7 litres
- e. Transmission ..... SAE Grade 40 (OMD 115) 2.7 litres
- f. Transfer Case with Power Take-off (PTO) ..... SAE Grade 40 (OMD 115) 5.8 litres
- g. Brake and Clutch Fluid ..... OX(Aust)8 fill to level
- h. Steering Box (including reservoir) ..... OX 46 1.25 litres
- i. Chassis Lubrication ..... XG 291 as required
- j. Wheel Bearings ..... XG 291 as required
- k. Gun Ring Grease Points ..... XG 291 as required
- l. Winch ..... OEP 220 2.1 litres

**15. Brakes**

- a. Parking Brake..... cable operated, transmission drum brake
- b. Foot Brake ..... servo -assisted hydraulic dual system with front and rear disc brakes

**16. Performance**

- a. Fording Depth:
  - (1) Prepared ..... 1 000 mm
  - (2) Unprepared..... 500 mm
- b. Turning Circle (nominal) ..... 13 m
- c. Ramp Breakover Angle:
  - (1) Unladen ..... 148°
  - (2) Laden ..... 154°
  - (3) Limiting Feature..... chassis rail
- d. Approach Angle:
  - (1) Unladen ..... 45°
  - (2) Laden ..... 41°
  - (3) Limiting Feature..... tie-down points

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- e. Departure Angle:
  - (1) Unladen ..... 33°
  - (2) Laden ..... 30°
  - (3) Limiting Feature ..... tie-down points
- f. Maximum Gradient ..... 60% (31° slope)
- g. Fuel Consumption Target:
  - (1) Highway Laden ..... 12 litres per 100 km
  - (2) 2nd Class Laden ..... 15 litres per 100 km
- h. Maximum Towed Load (trailer) ..... 1 200 kg

**17. Air Compressor**

- a. Manufacturer ..... ARB
- b. Type ..... sealed electrical with pressure tank

**18. Trailer Facilities**

- a. Socket Type ..... NATO 12-pin
- b. Pintle Hook ..... fully rotating
- c. Brakes ..... no facility

**19. Power Take-off (PTO)**

- a. Manufacturer ..... Land Rover
- b. Type ..... variable-speed, chain-driven, integral with the transfer case and incorporates a torque limiter

**20. Gun Ring and Cradle Assembly**

- a. Manufacturer ..... W&E Platt Australia
- b. Gun Traverse ..... 360°
- c. Elevation ..... 50°
- d. Depression ..... 20°

**21. Point of Contact**

National Fleet Manager (NFM)  
Lt B Vehicles, CGSVSPO  
DPM 7, Defence Plaza Melbourne  
661 Bourke Street  
MELBOURNE VIC 3000  
Tel: (03) 9282 7391

**22. Associated Information**

- a. SIGC ..... 2320-0213
- b. NSN ..... 2320-66-152-1648
- c. RPS ..... 02256
- d. SCES ..... 12190
- e. EMEI Vehicle G 102 ..... Truck, Utility Lightweight, MC2 – Land Rover 110, Truck, Utility, Lightweight, W/Winch, MC 2 – Land Rover 110 – Technical Description
- f. EMEI Vehicle G 132 ..... Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110 – Technical Description
- g. EMEI Vehicle G 172 ..... Truck, Surveillance Reconnaissance Vehicle (SRV-SF), Lightweight, FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine – Technical Description

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- h.** EMEI Vehicle G 103.....Truck, Utility, Lightweight, MC2 – Land Rover 110  
Truck, Utility, Lightweight, W/Winch, MC2 – Land Rover 110 – Light Grade Repair
- i.** EMEI Vehicle G 133.....Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110  
– Light Grade Repair
- j.** EMEI Vehicle G 173.....Truck, Surveillance Reconnaissance Vehicle (SRV-SF), Lightweight,  
FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine – Light Grade Repair
- k.** EMEI Vehicle G 104-1 .....Truck, Utility, Lightweight, MC2 – Land Rover 110,  
Truck, Utility, Lightweight, W/Winch, MC2 – Land Rover 110 – Medium Grade Repair
- l.** EMEI Vehicle G 134-1Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110 – Medium  
Grade Repair
- m.** EMEI Vehicle G 174-1 .....Truck, Surveillance Reconnaissance Vehicle (SRV-SF), Lightweight,  
FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine – Medium Grade Repair
- n.** EMEI Vehicle G 104-2 .....Truck, Utility, Lightweight, MC2 – Land Rover 110,  
Truck, Utility, Lightweight, Winch, MC2 – Land Rover 110 – Heavy Grade Repair
- o.** EMEI Vehicle G 179-1 .....Truck, Surveillance Reconnaissance Vehicle  
(SRV-SF), Lightweight, FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine,  
–Lower ROPS Inspection and Repair – General Instruction
- p.** EMEI Vehicle G 139.....Truck, Surveillance, Lightweight, Winch, MC2  
– Land Rover 110, 4 x 4 – Servicing Instruction

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**END**

Distribution List **VEH G 16.9 – Code 1**(Maint Level)  
(Sponsor: CGSVSPO, Light B Vehicle Section)  
(Authority: ECO CGSVSPO 120/10)