

**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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1. This EMEI lists the basic data for the Surveillance and Reconnaissance Vehicle, Special Forces, as shown in Figures 1 and 2.
2. **Role.** The role of the vehicle is to transport up to three personnel (including driver), their equipment, and supplies for three days in an operational environment.

Detail

3. Mass:

- a. Unladen:
 - (1) Front Axle 1420 kg
 - (2) Rear Axle 1330 kg
 - (3) Total 2750 kg
- b. Maximum Load Rating:
 - (1) Front Axle 1500 kg
 - (2) Rear Axle 2100 kg
 - (3) Total 3600 kg
- c. Gross Vehicle Mass (GVM):
 - (1) Total (not to exceed) 3600 kg



When loaded, the vehicle is not to exceed the GVM figure of 3600 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 x 16, 2- piece, 5-stud ventilated disc
- b. Tyre Size 7.50 R16LT by 10 ply rating Olympic Steeltrek with 105 tread pattern
- c. Tyre Pressures (cold):
 - (1) Highway:
Front 450 kPa
Rear 450 kPa
 - (2) Cross-country:
Front 275 kPa
Rear 275 kPa
 - (3) Sand:
Front 225 kPa
Rear 225 kPa

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5. Dimensions:

- a. Length:
 - (1) Tailgate Deployed..... 5200 mm
 - (2) Tailgate Stowed 4850 mm
- b. Overall Width:
 - (1) Over Mirrors 2370 mm
 - (2) Reduced 1880 mm
 - (3) Over Side Stowage Racks 2140 mm
- c. Overall Height:
 - (1) Laden 1900 mm
 - (2) Unladen..... 1930 mm
- d. Shipping Cubage 21 m³
- e. Cargo Tray:
 - (1) Length - Internal 1835 mm
 - (2) Width - Internal..... 1440 mm
 - (3) Height - Internal..... 1380 mm
 - (4) Height of Body Sides (from tray) 500 mm
 - (5) Height of Cargo Tray from Ground:
 - (a) Laden 800 mm
 - (b) Unladen..... 830 mm
- f. Wheelbase 2794 mm
- g. Track:
 - (1) Front..... 1498 mm
 - (2) Rear..... 1498 mm
- h. Ground Clearance:
 - (1) Unladen..... 215 mm
 - (2) Limiting Feature..... rear differential housing
- i. Pintle Hook Height:
 - (1) Unladen..... 600 mm
 - (2) Laden 570 mm

6. Bridge Classification 4

7. Engine:

- a. Manufacturer/Type..... Isuzu 4BD 1 RB-G
- b. No. of Cylinders 4 (in-line)
- c. Power (net)..... 66 kW at 3200 rpm
- d. Torque (net)..... 245 N.m at 1900 rpm
- e. Maximum No Load 3200 ± 100 rpm
- f. Firing Order..... 1-3-4-2

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- g. Capacity.....3.856 L
- h. Compression Ratio 17:1
- i. Flywheel Thickness 38 mm (min 37 mm)

8. Transmission:

- a. Manufacturer Land Rover
- b. Type..... model LT95A
- c. Ratios:
 - (1) First Gear..... 4.069:1
 - (2) Second Gear 2.448:1
 - (3) Third Gear 1.505:1
 - (4) Fourth Gear 1.000:1
 - (5) Reverse Gear 3.664:1

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..... 1498 mm

11. Rear Axle:

- a. Manufacturer GKN/Salisbury
- b. Type.....heavy duty, Salisbury 8 HA
- c. Ratio 3.54:1
- d. Track..... 1498 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

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- 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 3636 kg
 - (2)** 2nd Layer 3024 kg
 - (3)** 3rd Layer..... 2589 kg
 - (4)** 4th Layer 2263 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 Groundednegative
- 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) OMD 115 8.5 litres
- d.** Axles:
 - (1)** Front Swivel Pin Housing.....EP 00 375 ml
 - (2)** Front DifferentialOEP 220 1.7 litres
 - (3)** Rear DifferentialOEP 220 2.7 litres
- e.** Transmission OMD 115 2.7 litres
- f.** Transfer Case with PTO..... OMD 115 5.8 litres
- g.** Brake and Clutch FluidOX(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.** WinchOEP 220 2.1 litres

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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 1000 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
- 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) 1200 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

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20. **Gun Ring and Cradle Assembly:**

- a. Manufacturer..... W&E Platt Australia
- b. Gun Traverse.....360°
- c. Elevation50°
- d. Depression.....20°

21. **Associated Information:**

- a. SCES 12190
- b. Technical Description:
 - (1) [EMEI Vehicle G 102](#) Truck, Utility, Lightweight, MC2 – Landrover 110, Truck, Utility, Lightweight, W/Winch, MC2 – Landrover 110
 - (2) [EMEI Vehicle G 132](#) Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110
 - (3) EMEI Vehicle G 172Truck, Surveillance Reconnaissance Vehicle (SRV-SF), Lightweight, FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine – to be published
- c. Light Grade Repair:
 - (1) [EMEI Vehicle G 103](#) Truck, Utility, Lightweight, MC2 – Land Rover 110 Truck, Utility, Lightweight, W/Winch, MC2 – Land Rover 110
 - (2) [EMEI Vehicle G 133](#) Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110
 - (3) EMEI Vehicle G 173Truck, Surveillance Reconnaissance Vehicle (SRV-SF), Lightweight, FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine – to be published
- d. Medium Grade Repair:
 - (1) [EMEI Vehicle G 104](#) Truck, Utility, Lightweight, MC2 – Land Rover 110, Truck, Utility, Lightweight, W/Winch, MC2 – Land Rover 110
- e. Heavy Grade Repair:
 - (1) [EMEI Vehicle G 104-1](#) Truck, Utility, Lightweight, MC2 – Land Rover 110, Truck, Utility, Lightweight, Winch, MC2 – Land Rover 110
 - (2) [EMEI Vehicle G 134-1](#) Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110
 - (3) [EMEI Vehicle G 174-1](#) Truck, Surveillance Reconnaissance Vehicle (SRV-SF), Lightweight, FFR, W/Winch, MC2, Land Rover 110, 4x4, Isuzu Diesel Engine – to be published
- f. Miscellaneous Instruction:
 - (1) [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 – to be published
- g. Servicing Instruction:
 - (1) [EMEI Vehicle G 139](#)Truck, Surveillance, Lightweight, Winch, MC2 – Land Rover 110, 4 x 4

22. **Point of Contact:**

ADFLM, Light B Vehicles, LV SPO
Victoria Barracks, St Kilda Road
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END

Distribution List **VEH G 16.9 – Code 1**(Maint Level)
(Sponsor: LV SPO, Light B Veh)

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