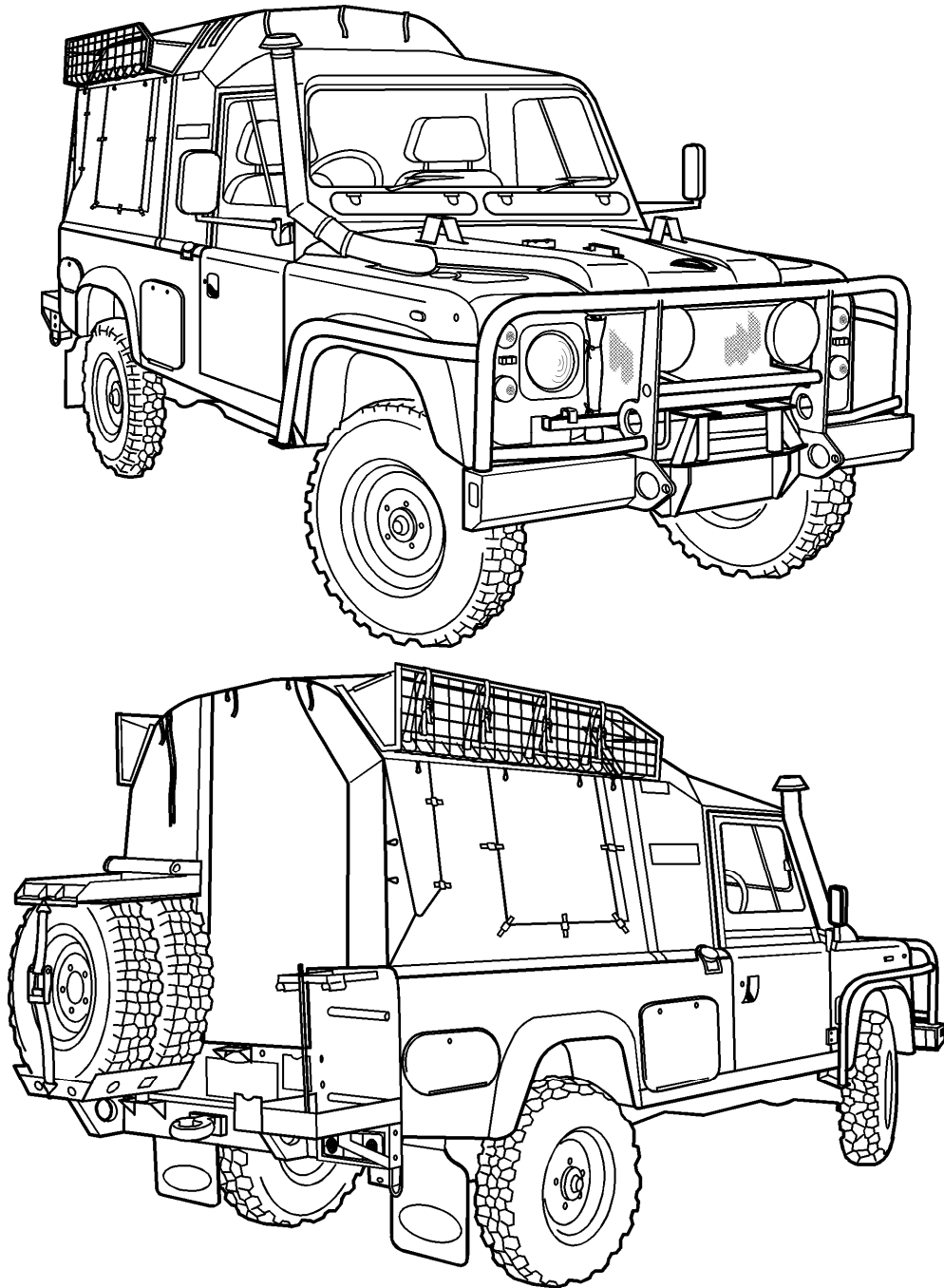


**TRUCK, LIGHTWEIGHT, SURVEILLANCE AND RECONNAISSANCE, WINCH, MC2
– LAND ROVER 110 4X4**

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.



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Figure 1 Truck, Lightweight, Surveillance and Reconnaissance, Winch, MC2 – Land Rover 110 4x4

General

1. This EMEI lists basic data for the Truck, Carryall, Lightweight, Surveillance and Reconnaissance, Winch, MC2 – Land Rover 110 4x4, as shown in Figure 1.

Role

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

Physical Data

3. **Mass**



The vehicle when loaded 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.

- 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

4. **Wheels and Tyres**

- a. Wheels 6F by 16, 1-piece 5-stud ventilated disc
- b. Tyres and Tyre Pressuresin accordance with EMEI Vehicle A 291-5

5. **Dimensions**

- a. Length 5 200 mm
 - (1) Overall Width
 - (a) Over Mirrors 2 370 mm
 - (b) Reduced 1 880 mm
 - (2) Overall Height
 - With Cradle
 - (a) Laden 2 825 mm
 - (b) Unladen 2 855 mm
 - Without Cradle
 - (c) Laden 2 670 mm
 - (d) Unladen 2 700 mm
- b. Shipping Cubage 14 m3

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c.	Cargo Tray	
(1)	Length – Internal	1 835 mm
(2)	Width – Internal	1 440 mm
(3)	Height – Internal	1 380 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
d.	Wheelbase	2 794 mm
e.	Track	
(1)	Front	1 498 mm
(2)	Rear	1 498 mm
f.	Ground Clearance	
(1)	Unladen	215 mm
g.	Limiting Feature	rear differential housing
h.	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 (Nett)	66 kW at 3 200 rpm
d.	Torque (Nett)	245 Nm at 1 900 rpm
e.	Maximum No Load	3 200 ± 100 rpm
f.	Firing Order	1-3-4-2
g.	Capacity	3.856 L
h.	Compression Ratio	17:1
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. Typetwo-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 kN
- e. Maximum Cable Pull
 - (1) First Drum Layer 3 636 kg
 - (2) Second Layer 3 024 kg
 - (3) Third Layer 2 589 kg
 - (4) Fourth Layer 2 263 kg
- f. Torque Limiter Setting 115 N.m

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- 14. Electrical System (Vehicle)** 12 V
- a.** No. of Batteries two by 12 V
 - b.** Capacity (cold crank current) 560 A
 - c.** Terminal Groundednegative
 - d.** Radio Suppression DEF (AUST) 172, MIL-STD-461A RE05, CE07
- 15. Fuels and Lubricants**
- a.** Fuel:
 - (1)** Type Diesel
 - (2)** Capacity Tank 1 62 L
 - (3)** Capacity Tank 2 50 L
 - (4)** Capacity Total 112 L
 - b.** Cooling System:
 - (1)** Type water (8% Nalcool Maximum Inhibitor)
 - (2)** Capacity 12.5 L
 - c.** Engine (Including Filters):
 - (1)** TypeSAE Grade 40 (OMD-115)
 - (2)** Capacity 8.5 L
 - d.** Axles:
 - (1)** Front Swivel Pin Housing:
 - (a)** Type EP-00
 - (b)** Capacity 375 mL
 - (2)** Front Axle:
 - (a)** Type OEP-220
 - (b)** Capacity 1.7 L
 - (3)** Rear Axle:
 - (a)** Type OEP-220
 - (b)** Capacity 2.3 L
 - e.** Transmission:
 - (1)** TypeSAE Grade 40 (OMD-115)
 - (2)** Capacity 2.7 L
 - f.** Transfer Case (With PTO):
 - (1)** TypeSAE Grade 40 (OMD-115)
 - (2)** Capacity 5.8 L
 - g.** Brake and Clutch Fluid:
 - (1)** Type OX(Aust)-8
 - (2)** Capacity fill to level
 - h.** Steering Box (Including reservoir):
 - (1)** Type OX46
 - (2)** Capacity 1.25 L

- i. Chassis Lubrication:
 - (1) Type XG-291
 - (2) Capacity as required
- j. Wheel Bearings:
 - (1) Type XG-291
 - (2) Capacity as required
- k. Gun Ring Grease Points:
 - (1) Type XG-291
 - (2) Capacity as required
- l. Winch:
 - (1) Type OEP-220
 - (2) Capacity 1.3 L

16. Brakes

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

17. Performance

- a. Fording Depth (prepared)
 - (1) 1 000 mm
- b. Fording Depth (unprepared)
 - (1) 500 mm
- c. Turning Circle (nominal) 13.0 metres
- d. Ramp Break Over Angle
 - (1) Unladen 148°
 - (2) Laden 154°
 - (3) Limiting Feature chassis rail.
- e. Approach Angle
 - (1) Unladen 45°
 - (2) Laden 41°
 - (3) Limiting Feature tie-down points
- f. Departure Angle
 - (1) Unladen 33°
 - (2) Laden 30°
 - (3) Limiting Feature tie-down points
- g. Maximum Gradient 60%
- h. Fuel Consumption Target
 - (1) Highway Laden 12 L per 100 km
 - (2) 2nd Class Laden 15 L per 100 km
- i. Maximum Towed Load (trailer) 1 200 kg

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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 BAeA Australia
- b. Gun Traverse 360°
- c. Elevation 70°
- d. Depression..... 11°

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 – 0156
- b. NSN..... 2320-66-139-4882
- c. RPS 02227
- d. SCES 12190
- e. ILSI ALI MM 10-29
- f. User Handbook 7610-66-140-6654
- g. EMEI Vehicle A 291-5 General Service B Vehicle Tyre Guide
- h. EMEI Vehicle G 103..... Light Grade Repair
- i. EMEI Vehicle G 133..... Light Grade Repair
- j. EMEI Vehicle G 104-1 Medium Grade Repair
- k. EMEI Vehicle G 104-2 Heavy Grade Repair
- l. EMEI Vehicle G 109..... Servicing Instruction

END

Distribution List: **VEH G 16.8 – Code 1** (Maint Level)
(Sponsor: CGSVSPO, Light B Vehicle Section)
(Authority: ECO CGSVSPO 120/10)

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