TRUCK, LIGHT, INFANTRY & MORTAR CARRIERS, FFR, WINCH, MC2 & TRUCK, LIGHT, ASSAULT PIONEER, WINCH, MC2 & TRUCK, LIGHT, DIRECT FIRE WEAPONS, FFR, WINCH, MC2 – LAND ROVER 110 6X6

TRUCK, LIGHT, DIRECT FIRE WEAPONS, FFR, WINCH, MC2 – LAND ROVER 6X6

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.

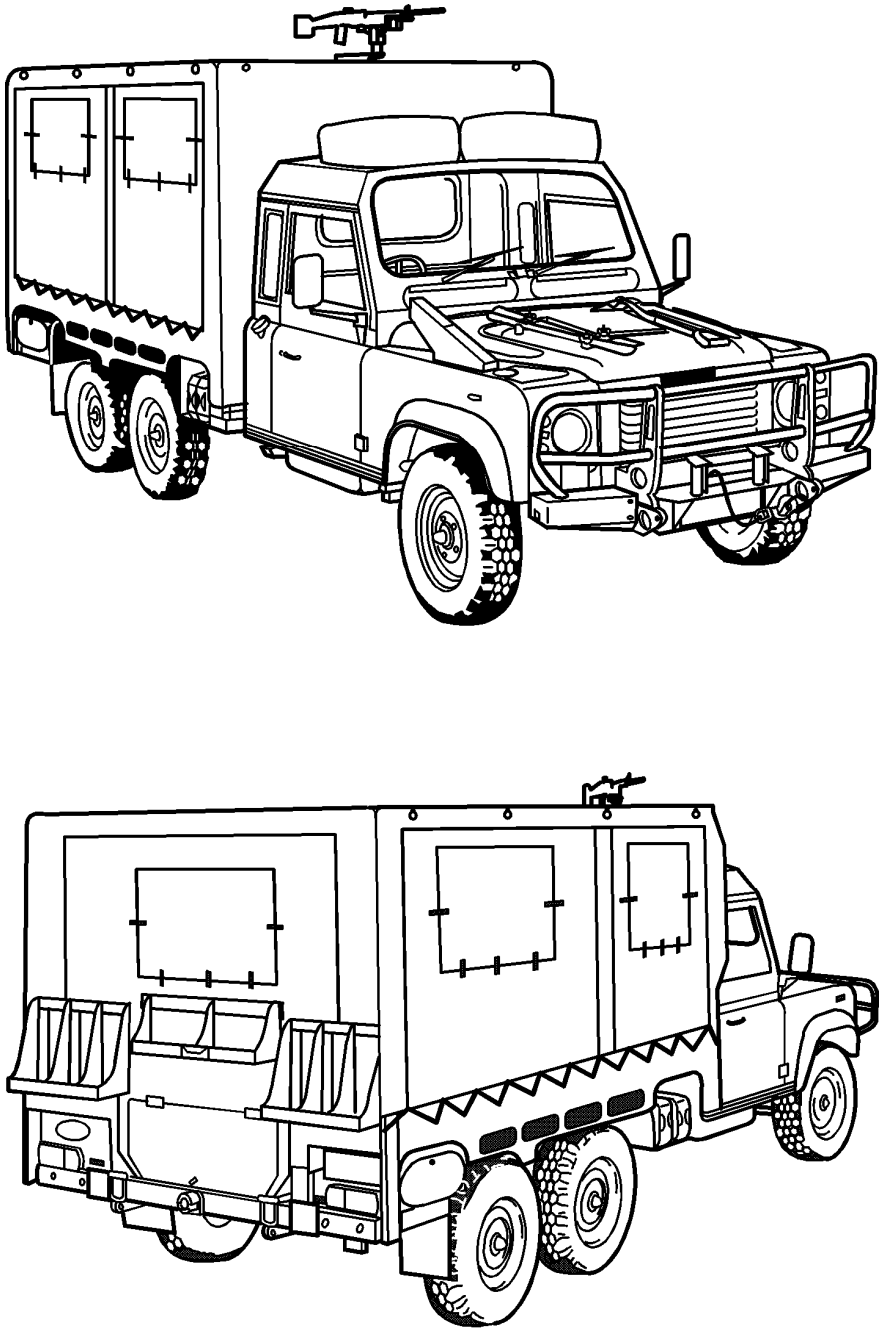

Figure 1 Truck, Light, Direct Fire Weapons, FFR, Winch, MC2 – Land Rover 6X6

Role

1. The Truck, Light, Direct Fire Weapons, FFR, Winch, MC2 – Land Rover 6X6 (as shown in Figure 1) is designed to provide protective fire to troops in contact with a hostile force and for vehicles during convoy movements. It carries sufficient supplies for three days away from base and has seating for four personnel, including the driver.

Physical Data

2. Mass

CAUTION

The vehicle when loaded is not to exceed the Gross Vehicle Mass (GVM) figure of 5 600 kg. The GVM figure takes into account other aspects of the vehicle design apart from the axle loading limits.

a. Unladen

(1) Front Axle ..... 1 750 kg

(2) Intermediate Axle ..... 1 190 kg

(3) Rear Axle ..... 1 230 kg

(4) Total ..... 4 170 kg

b. Maximum Loading

(1) Front Axle ..... 1 900 kg

(2) Intermediate Axle ..... 2 050 kg

(3) Rear Axle ..... 2 050 kg

(4) Total ..... 5 600 kg

c. Gross Vehicle Mass (GVM)

(1) Total (not to exceed) ..... 5 600 kg

3. Wheels and Tyres

a. Wheels ..... 6F by 16, 1 piece 5-stud ventilated disc

b. Tyres and Tyre Pressures ..... in accordance with EMEI Vehicle A 291-5

4. Dimensions

a. Length ..... 6 300 mm

b. Overall Width

(1) Over Mirrors ..... 2 500 mm

(2) Reduced ..... 2 165 mm

c. Overall Height

(1) With Cradle

(a) Laden ..... 2 825 mm

(b) Unladen ..... 2 855 mm

(2) Without Cradle

(a) Laden ..... 2 670 mm

(b) Unladen ..... 2 700 mm

d. Reducible Height (normal weight)

(1) With Cradle ..... 2 670 mm

(2) Without Cradle ..... 2 700 mm

e. Shipping Cubage ..... 37 m^3

f. Body

(1) Length – Internal ..... 3 100 mm

(2) Width – Internal ..... 2 085 mm

(3) Height – Internal ..... 1 800 mm

(4) Belly Height from Ground ..... 770 mm

(5) Body Height from Belly ..... 300 mm

g. Wheelbase

(1) Front Axle to Intermediate Axle ..... 3 040 mm

(2) Front Axle to Rear Axle ..... 3 940 mm

h. Track

(1) Front ..... 1 698 mm

(2) Rear ..... 1 698 mm

i. Ground Clearance

(1) Unladen ..... 215 mm

(2) Limiting Feature ..... rear differential housings

j. Pintle Hook Height

(1) Unladen ..... 680 mm

(2) Laden ..... 650 mm

5. Bridge Classification 6

6. Engine

a. Manufacturer/Type ..... Isuzu 4BD 1 TRB-G series

b. No. of Cylinders ..... 4 (in-line)

c. Power (Nett) ..... 90 kW at 3 000 rpm

d. Torque (Nett) ..... 314 N.m at 2 200 rpm

e. Maximum no Load ..... 3 600 ± 100 rpm

f. Firing Order 1-3-4-2

g. Capacity ..... 3.856 L

h. Compression Ratio 17:1

i. Turbocharger ..... water-cooled, Garret, model ATD-T25

7. 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

8. Transfer Case

a. Manufacturer ..... Land Rover

b. Type ..... two-speed

c. Ratios

(1) High Range 0.966:1

(2) Low Range 3.321:1

9. Front Axle

a. Manufacturer ..... Rover Australia

b. Type ..... heavy-duty, spiral bevel

c. Ratio 4.70:1

d. Track ..... 1 698 mm

10. Intermediate Axle

a. Manufacturer ..... GKN/Salisbury

b. Type ..... heavy-duty, Salisbury 8 HA

c. Ratio 4.70:1

d. Track ..... 1 698 mm

11. Rear Axle

a. Manufacturer ..... GKN/Salisbury

b. Type ..... heavy-duty, Salisbury 8 HA

c. Ratio 4.70:1

d. Track ..... 1 698 mm

12. Steering

a. Manufacturer ..... Adwest

b. Type ..... integral power-assisted worm and roller

c. Ratio 17.50:1

d. Lock to Lock 3.5

e. Power Steering Pump ..... Isuzu gear-driven

13. Winch

a. Manufacturer ..... Winch Industries

b. Type ..... Thomas T9000M

c. Reduction Ratio 45:1

d. Winch Rope

(1) Length ..... 45 m

(2) Diameter ..... 11 mm

e. Maximum Cable Pull

(1) First Drum Layer ..... 4 077 kg

(2) Second Layer ..... 3 488 kg

(3) Third Layer ..... 3 048 kg

(4) Fourth Layer ..... 2 707 kg

(5) Fifth Layer (Partial) ..... 2 434 kg

f. Torque Limiter Setting ..... 155 N.m

14. Electrical System (Vehicle) ..... 12 V

a. No. of Batteries ..... one 12 V

b. Capacity (cold crank performance) ..... 410 A

c. Terminal Grounded ..... negative

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

15. Electrical System (FFR) ..... 24 V

a. No. of Batteries ..... Two 12 V, 93 Ah deep cycle

b. Generator ..... ADI 28 V 100 Amp

16. Fuels and Lubricants

a. Fuel:

(1) Type ..... Diesel

(2) Capacity ..... two 65 L tanks

b. Cooling System:

(1) Type ..... water (8% Nalcool Maximum Inhibitor)

(2) Capacity ..... 12.8 L

c. Engine (Including Filters):

(1) Type ..... SAE 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) Intermediate Axle:

(a) Type OEP-220

(b) Capacity ..... 2.3 L

(4) Rear Axle:

(a) Type OEP-220

(b) Capacity ..... 2.6 L

e. Transmission:

(1) Type ..... SAE Grade 40 (OMD-115)

(2) Capacity ..... 2.7 L

f. Transfer Case (With Power Take-off):

(1) Type ..... SAE 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 ..... 2.1 L

17. Brakes

a. Parking Brake ..... cable-operated, transmission drum brake

b. Foot Brake ..... servo-assisted hydraulic dual system, with front and rear disc brakes

18. Performance

a. Fording Depth

(1) Prepared ..... N/A

(2) Unprepared ..... 1 000 mm

b. Turning Circle (nominal) ..... 17.0 metres

c. Ramp Break Over Angle

(1) Unladen ..... 148°

(2) Laden ..... 152°

(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%

g. Fuel Consumption Target

(1) Highway Laden ..... 22 L per 100 km

(2) 2nd Class Laden ..... 27 L per 100 km

h. Maximum Towed Load (trailer) ..... 2 000 kg

19. Trailer Facilities

a. Socket Type ..... NATO 12-pin

b. Pintle Hook ..... fully-rotating

c. Brakes ..... No facility

20. Power Take-off (PTO)

a. Manufacturer ..... Land Rover

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

c. Torque Limiter Setting ..... 155 N.m

21. Gun Ring Assembly

a. Manufacturer ..... BAeA Australia

b. Gun Azimuth Arc ..... 360 degrees

c. Elevation ..... 60 degrees

d. Depression ..... 3 degrees

22. 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

23. Associated Information

a. SIGC ..... 2320 – 0177

b. NSN 2320-66-145-6291

c. RPS ..... 02232 and 02228

d. SCES 12193

e. ILSI ..... ALI MM 10-29

f. EMEI Vehicle A 291-5 ..... General Service B Vehicle Tyre Guide

g. EMEI Vehicle G 203 ..... Light Grade Repair

h. EMEI Vehicle G 204-1 ..... Medium Grade Repair

i. EMEI Vehicle G 204-2 ..... Heavy Grade Repair

j. EMEI Vehicle G 209 ..... Servicing Instruction

END

Distribution List: **VEH G 21.1 – Code 1** (Maint Level)
(Sponsor: CGSVSPO, Light B Vehicle Section)
(Authority: ECO CGSVSPO 120/10)