SEMITRAILER, CARGO, CONTAINER SIDE LOADER

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 Semitrailer, Cargo, Container Side Loader

General

1. This EMEI lists basic data for the Semitrailer, Cargo, Container Side Loader, as shown in Figure 1. The Container Side Loader (CSL) is designated as Material Handling Equipment (MHE) and is subsequently referred to as the MHE-CSL.

2. Role. The role of the MHE-CSL is to lift and transport ISO containers to and from:

- **a.** the ground;
- **b.** truck decks;
- **c.** other trailers;
- **d.** rail wagons; and
- **e.** ground mounted containers when stacked two high.

3. Description. The MHE-CSL lifts the container via two hydraulically operated crane arms. The arms are connected to chains that are fitted with lifting lugs and attached to the container ISO blocks at the bottom corners.

4. The MHE-CSL has two crane lifting modules that comprise the two stabiliser leg assemblies and the two crane arm assemblies. The modules are able to be hydraulically traversed along the length of the chassis, enabling the handling of the following container sizes and container combinations:

a. single 10 foot;

b. single 13 foot;

c. two 13 foot, utilising on-board container joiners;

d. single 20 foot;

e. two 20 foot, utilising on-board container joiners;

f. one 40 foot; and

g. three Tricon, utilising Tricon CES joiners.

5. The MHE-CSL is capable of being towed by both military and civilian prime movers that are fitted with compatible braking and electrical connections, and kingpin couplings. The in-service prime movers that are suitable for towing the MHE-CSL are the Truck, Tractor, Heavy, MC4, International SF2670 W/Integral Sleeper, and the Truck, MC4, Mack, CH Fleetliner.

6. Mechanically operated trailer landing legs are fitted behind the gooseneck of the MHE-CSL. The system is fitted with a two-speed gearbox which allows for rapid deployment and retraction of the landing legs.

WARNING

PUP contains poly-functional isocynates that are toxic in low concentrations and are respiratory system and skin irritants. Personnel, handling, mixing, spraying or repairing PUP must wear suitable protective equipment, use suitable facilities, and adopt appropriate safety procedures.

PUP is most hazardous as a liquid, dry PUP is less hazardous but must be treated as industrial waste. Fine, dry PUP particles generated by sanding or grinding are eye and lung irritants.

7. The MHE-CSL is painted with polyurethane paint (PUP). Should the MHE-CSL require repairs that necessitate the removal of painted surfaces, refer to EMEI Workshop D 701.

Detail

8. Dimensions:

a. Overall Length ..... 13 750 mm

b. Overall Width ..... 2 500 mm

c. Maximum Operating Height ..... 6 350 mm

d. Maximum Folded Height ..... 3 142 mm

e. Cargo Deck Height ..... 1 460 mm

f. Maximum Reach from Trailer Centre Line ..... 4 033 mm

g. Maximum Operating Radius from Trailer Centre Line ..... 4 033 mm

h. Fording Depth ..... 600 mm

9. Mass:

a. Tare Weight ..... 13 260 kg

b. Gross Weight – Legislative (20 000 kg payload) ..... 33 260 kg

c. Gross Weight – Operational (32 000 kg payload) ..... 45 260 kg

d. Landing Legs (Unladen) ..... 5 910 kg

e. Front Axle (Unladen) ..... 3 370 kg

f. Intermediate Axle (Unladen) ..... 2 250 kg

g. Rear Axle (Unladen) ..... 1 730 kg

h. Maximum Trailer Axle Group (Laden) ..... 22 500 kg

10. Performance:

a. Maximum Noise Level ..... 85 dB(A)

b. Maximum Lift ..... 36 000 kg

c. Maximum Lift per Crane Module ..... 18 000 kg

11. Engine:

a. Type ..... Kubota V2403-M-T

b. Number of Cylinders ..... four

c. Number of Strokes ..... four

d. Configuration ..... vertical, in-line

e. Direction of Rotation at Flywheel ..... anticlockwise

f. Firing Order 1, 3, 4, 2

g. Bore ..... 87 mm

h. Stroke ..... 102.4 mm

i. Displacement ..... 2 434 cm^3

j. Combustion Chamber ..... spherical E-TVCS

k. Power ..... 44 kW @ 2 700 rpm

l. Idle Speed ..... 750 rpm

m. Maximum Speed ..... 2 700 rpm

n. Governor ..... mechanical all speed

o. Dry Weight ..... 190 kg

12. Fuel System:

a. Fuel Injection Pump ..... Denso PRF 4M mini pump

b. Fuel Injectors ..... Denso OPD mini nozzle

c. Injection Pressure ..... 13.73 MPa

d. Injection Timing Before Top Dead Centre ..... 8.3°

e. Fuel Filter ..... paper cartridge

13. Electrical:

a. Battery ..... 12 V

b. Starter Motor ..... 12 V – 2.0 kW

c. Alternator ..... 12 V – 480 W

d. Interconnection Front and Rear ..... NATO 12-pin female

14. Axles:

a. Manufacturer ..... York Transport Equipment Pty Ltd

b. Type 2782/1/1850T

c. Hubs ..... cast, 5-spoke spider

15. Wheels And Tyres:

a. Wheel Rim Type ..... steel

b. Wheel Rim Size ..... 8.25DC x 22.5

c. Tyres 11R22.5

16. Brakes:

a. Service Brake:

(1) Type ..... drum

(2) Dimensions ..... 420 mm x 180 mm

(3) Actuation ..... pneumatic

(4) Application ..... S cam

(5) Actuator ..... Bendix T24/30 chamber

(6) Adjustment ..... automatic slack adjuster

b. Parking Brake:

(1) Actuation ..... spring actuator

(2) Primary Release ..... pneumatic

(3) Secondary Release ..... manual override on each wheel

17. Suspension:

a. Manufacturer ..... Hendrickson

b. Type ..... air spring

c. Model ..... HT 230TA15-524

18. Kingpin:

a. Primary Pin ..... 90 mm

b. Primary Pin Manufacturer ..... Georg Fischer

c. Primary Pin D-Rating ..... 152 kN

d. Primary Pin Bolt Torque ..... 180 N.m

e. Secondary Pin ..... 50 mm

f. Secondary Pin Manufacturer ..... Georg Fischer

g. Secondary Pin D-Rating ..... 200 kN

h. Secondary Pin Bolt Torque ..... 180 N.m

19. Rear Tow Coupling:

a. Type ..... Ringfeder 101 AUS

b. Pin Diameter ..... 50 mm

c. D-rating ..... 285 kN

20. Paint:

a. Type ..... polyurethane

b. Colour ..... olive drab

21. Packaging Data:

a. Storage Action, Less Than Six Months ..... Nil

b. Storage Action, Longer Than Six Months ..... refer to UHB

c. Preparation for Transit by Rail, Air or Sea ..... refer to UHB

22. Ancillary Equipment:

a. Hydraulic Pump ..... Kappa Tandem

b. Flow Rate, Low Speed ..... 60 L/min

c. Flow Rate, High Speed ..... 120 L/min

d. Operating Pressure, Low Speed ..... 280 bar @ Danfoss PVG32

e. Operating Pressure, High Speed ..... 140 bar @ HS-LS-U valve

23. Fuels And Lubricants:

a. Fuel ..... automotive diesel oil

b. Cooling System ..... NATO S-1748

c. Crankcase ..... NATO O-1236

d. Hydraulic System ..... NATO H-576

24. Capacities:

a. Fuel ..... 63 L

b. Cooling System ..... 8 L

c. Crankcase ..... 9.5 L

d. Hydraulic Reservoir ..... 125 L

e. Hydraulic System Total ..... 300 L

25. Manufacturer's Details:

a. Manufacturer:

Steelbro New Zealand Limited
1 Treffers Road
SOCKBURN CHRISTCHURCH
NEW ZEALAND

b. Australian Distributor:

Steelbro Australia Pty Ltd
28 Burrows Road
ALEXANDRIA NSW 2015

26. Point of Contact:

NFM Mdm/Hvy B Vehicles
LVSPO, DMO
DPM-7
661 Bourke St
MELBOURNE VIC 3000

27. Intellectual Property (IP):

a. Steelbro Australia Pty Ltd (Ref file E1-203793) have granted IP rights over the technical documents. The following IP rights now apply to all technical documents:

(1) Background ..... Commonwealth

(2) Foreground ..... Commonwealth

(3) Third Party ..... Nil

28. Associated Information:

a. SIGC 2330-0100

b. NSN 2330-66-157-4515

c. RPS 03194

d. SCES 12434

e. EGI ATH900

f. User Handbook 7610-66-157-4388

g. Other EMEI:

(1) Technical Description ..... Vehicle H 522

(2) Light Grade Repair ..... Vehicle H 523

(3) AQIS Decontamination Procedures ..... Vehicle H 523-1

(4) Medium Grade Repair ..... Vehicle H 524-1

(5) Authority for Use ..... Vehicle H 526

(6) Servicing Instruction ..... Vehicle H 529

(7) Painting of Army Equipment ..... Workshop D 701

h. ILSI ..... ALI MM 10-46

END

Distribution List: **VEH H 11.0 – Code 1** (Maint Level)
(Sponsor: LVSPO, Med/Hvy B Vehicles)
(DMO Project No: JP126)