

TRUCK, FORKLIFT, OFF PAVEMENT, TELESCOPIC LOADER, 3 TONNE MERLO P35.9EV STANDARD AND FLAMEPROOF

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.

General

1. This EMEI lists the basic data for the Truck, Forklift, Off Pavement, Telescopic Loader, 3 Tonne, Merlo P35.9EV, Standard (NSN 3930-66-141-5608) and Flameproof (NSN 3930-66-141-5665), as shown in Figure 1.



Figure 1 Merlo P35.9EV

2. **Role.** The role of the Merlo P35.9EV is to lift, transport, and stack loads and load/unload stores into/from a 20 tonne ISO 1C container, in both on-pavement or off-pavement situations.

3. **Description.** The Merlo P35.9EV is a four wheel steer loader with a hydraulically extended triple telescopic boom and forward mounted hydraulically operated stabilising feet. It is fitted with a general purpose carriage. Alternative attachments are an ISO container carriage or mechanical drum clamp.

DETAIL

4. **Dimensions:**

a.	Height	2 690 mm
b.	Length (Boom Retracted, Forks Horizontal and Lowered to the Ground)	6 310 mm
c.	Width	2 220 mm
d.	Reduced Height (Amber Light lowered)	2 440 mm
e.	Reduced Length (Carriage not Fitted)	5 695 mm
f.	Wheelbase.....	2 750 mm

5. Mass:

a.	GVM (without Attachments)	7 940 kg
	(1) Front Axle.....	3 400 kg
	(2) Rear Axle.....	4 540 kg
b.	GVM (with 2 000 mm Carriage)	8 258 kg
	(1) Front Axle.....	3 718 kg
	(2) Rear Axle.....	4 540 kg
c.	GVM (with 1 120 mm Carriage)	8 176 kg
	(1) Front Axle.....	3 636 kg
	(2) Rear Axle.....	4 540 kg

6. Engine:

a.	Type	four cylinder diesel
b.	Make	Perkins
c.	Model	1004-4T
d.	Bore.....	100 mm
e.	Stroke.....	127 mm
f.	Power (DIN 70020)	84 kW
g.	Torque.....	358 Nm @ 1 600 rpm

7. Transmission:

a.	Make.....	Rexroth
b.	Type	hydrostatic, piston pump and motor

8. Hydraulic System:

a.	Pump Type.....	gear
b.	Pump Maximum Flow	80 l/min
c.	Maximum Pressure	210 kPa
d.	Steering Pressure.....	175 kPa

9. Axles:

a.	Make.....	Merlo
b.	Type	conventional differential with reduction hubs

10. Brakes:

a.	Service.....	dry disk, hydraulically actuated, inboard mounted
b.	Parking.....	dry disk, spring applied, hydraulic release, mounted on the rear axle input flange

11. Tyres:

a.	Size.....	16 x 70 – 20/14 Ply MPT-04
b.	Pressure.....	4.8 bar

12. Travel Speeds:

a.	1st (Slow Speed Range)	11 km/h
b.	2nd (High Speed Range)	40 km/h

- 13. Electrical System:**
- a. Voltage24 VDC
 - b. Batteriestwo, 12 V (negative earth)
- 14. Fuels and Lubricants:**
- a. Fuelautomotive diesel fuel
 - b. Cooling SystemNalcool
 - c. Crankcase.....SAE Grade 40
 - d. Transmission and Hydraulics.....Mobil Fluid 424 (NSN 9150-66-141-6284)
 - e. Differentials and Drive HubsOEP-220
 - f. Compressor.....SAE Grade 40
- 15. Capacities:**
- a. Fuel Tank155 l
 - b. Engine Crankcase9 l
 - c. Cooling System.....12 l
 - d. Transmission.....12 l
 - e. Hydraulics95 l
 - f. Differentialstwo, each 5.3 l
 - g. Hubsfour, each 1.3 l
 - h. Compressor Crankcase0.7 l
- 16. General Purpose Carriage:**
- a. MakeBrudi
 - b. Capacity3 000 kg
 - c. Maximum Lift Height:
 - (1) 3 000 kg Load.....4 000 mm
 - (2) 1 250 kg Load.....6 700 mm
 - d. Size2 000 mm wide x 1 200 mm high
 - e. Mass318 kg
- 17. ISO Container Carriage:**
- a. MakeBrudi
 - b. Capacity3 000 kg
 - c. Maximum Lift Height:
 - (1) 3 000 kg Load.....4 000 mm
 - (2) 1 250 kg Load.....6 700 mm
 - d. Size1 120 mm wide x 900 mm high
 - e. Mass236 kg
- 18. Mechanical Drum Clamp:**
- a. Make.....Long Reach Brudi
 - b. Model Drawing No103 315
 - c. Part number.....MDH1 (NSN 3990-66-142-7542)

- d. Maximum Capacity680 kg
- e. Drum Diameter Range.....680 - 750 mm
- f. Frame Width620 mm
- g. Weight.....72 kg

19. Tines

- a. MakeEurolift Pty Ltd
- b. Capacity3 000 kg @ 600 mm
- c. Length1 200 mm
- d. Spread546 mm

20. Tine Extensions:

- a. MakeEast West Engineering Pty Ltd
- b. Capacity3 000 kg
- c. Length1 800 mm

21. Air-conditioner:

- a. MakeSigma Industries Pty Ltd
- b. Capacityup to 4.0 kW
- c. Model:
 - (1) CondenserDCF4 B
 - (2) EvaporatorEC1214

22. Air Compressor:

- a. MakeFini (Bologne, Italy)
- b. Capacity.....200 L/min

23. Manufacturer's Details:

Australian Distributer:
Merlo Australia
27 Colin Jamieson Drive
WELSHPOOL WA 6106

24. Point of Contact:

NFM Engineer Vehicles
CSVSP0 (CASG)
Victoria Barracks
256-310 St Kilda Rd
SOUTHBANK VIC 3006

25. Associated Information:

- a. **SIGC:**
 - (1) Standard3930-0015
 - (2) Flameproof3930-0016
- b. **NSN:**
 - (1) Standard3930-66-141-5608
 - (2) Flameproof3930-66-141-5665

- c. RPS:**
 - (1) Standard.....03167
 - (2) Flameproof03168
- d. SCES:**
 - (1) Standard.....12202
 - (2) Flameproof12201
- e. EGI:**
 - (1) Standard.....ACM100
 - (2) FlameproofACM120
- f. ILSI:**
 - (1) ILSI.....ALI MM 15-4
- g. Other EMEI:**
 - (1) Engr Equip T 156.....Authority for Use
 - (2) Engr Equip T 156-1.....Service Manual
 - (3) Engr Equip T 156-2.....Parts Manual
 - (4) Engr Equip T 156-3.....Operator and Maintenance Handbook
 - (5) Engr Equip T 157-1.....Strengthening of Fork Carriage Load Backrest
– Modification Instruction
 - (6) Engr Equip T 157-2.....Fitting of Grab Handle to Compressor Cover Load Backrest
– Modification Instruction
 - (7) Engr Equip T 157-3.....Fitting of Engine Bell Housing Drain Plug Load Backrest
– Modification Instruction
 - (8) Engr Equip T 157-4.....Battery Box Cover Bolt Access Load Backrest
– Modification Instruction
 - (9) Engr Equip T 157-5.....Joystick Removal Load Backrest – Modification Instruction
 - (10) Engr Equip T 157-6.....Fitting of Tyre Pressure Decals Load Backrest
– Modification Instruction
 - (11) Engr Equip T 157-7.....Falling Object Protection Support Mechanism Load Backrest
– Modification Instruction
 - (12) Engr Equip T 157-8.....Boom Safety Device Load Backrest – Modification Instruction
 - (13) Engr Equip T 157-9.....Fitting of Solid Stalk Seat Belts – Modification Instruction.
 - (14) Engr Equip T 159.....Servicing Instruction
 - (15) Engr Equip A 017-1.....Polyurethane Paint (PUP) Warning Label
– Modification Instruction
 - (16) Workshop D 701.....Repair Policy for Equipment Painted in
Polyurethane Paint Series, Repair Manual.
 - (17) Workshop E 652.....Application and Removal of PUP and Solvents

END

Distribution List: **Limited – Code 1** (Maint Level)
(Sponsor: CSVSPO ENGR VEH)
(Job No: EC-001076)