Service Manual

Service Manual - Groundhog 4x4

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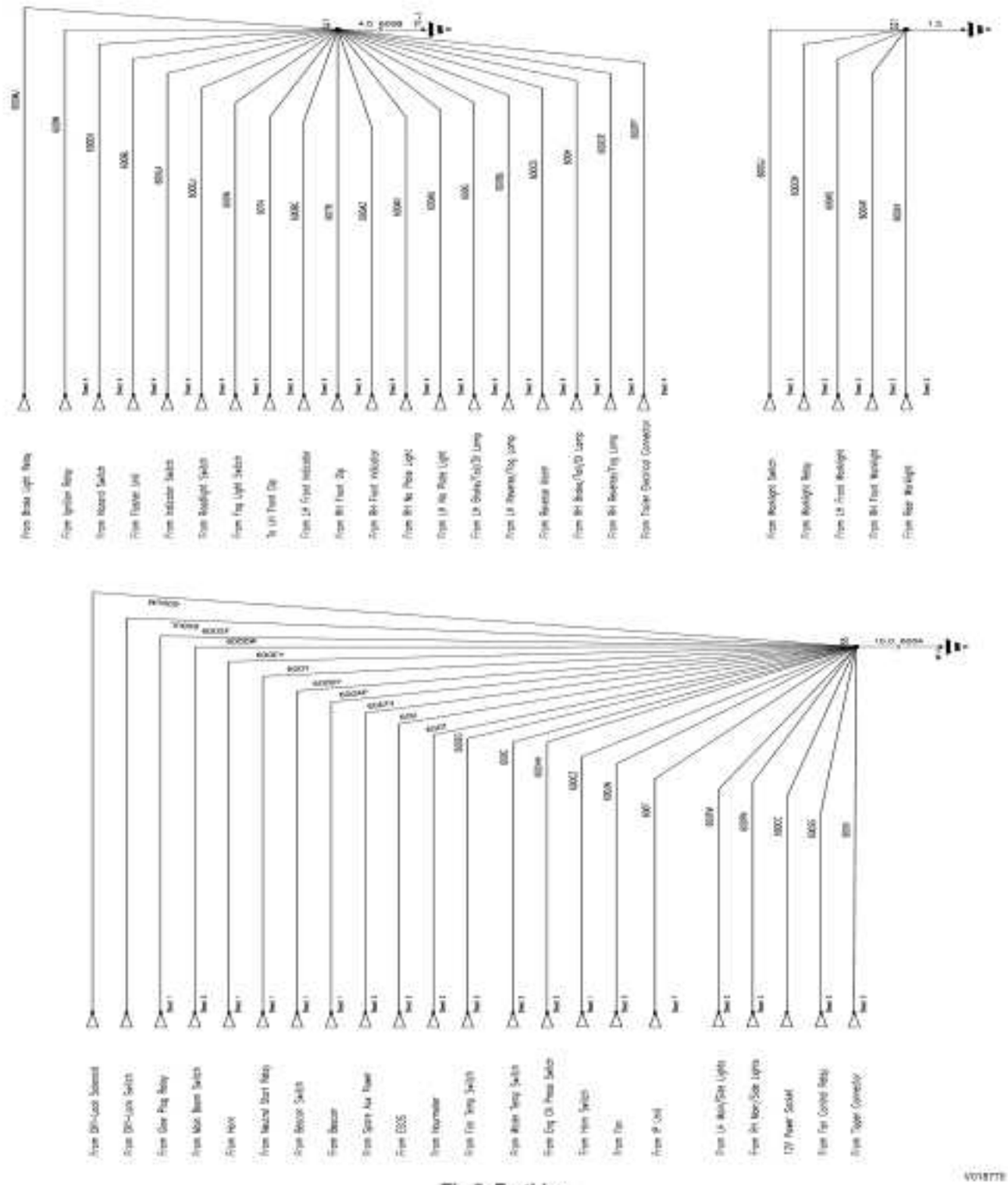


Fig 5. Earthing

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Table 9. Excessive brake noise in operation

Possible Cause	Action
26 Brake pads worn beyond limits.	Renew brake pads - both front sets or both rear sets.
27 Brake pads in poor condition.	Check for distortion or surface pitting and/or roughness of pads.

Table 10. Fluid loss when machine standing for instance - overnight

Possible Cause(1)	Action
28 Severe damage or slight cut/nick in the brake piston seal.	Check piston seals. If necessary, strip caliper and renew seal(s).
29 External leakage through brake pipe connections, etc.	Check for and repair leaking connections.

(1) Confirm fault is as indicated by checking that the brake pedal does not touch the floor under constant pressure.

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Technical Data

Specification

For additional information, see the following publication:

Engine Service Manual, publication number	9806/3095

Model	**Lombardini LDW 1003**
Emission Compliance	
Type	3-cylinder, 4-stroke, liquid cooled, diesel
Power Output (Gross)	19.5 kW (26.1 hp)
Maximum Torque	61 Nm (44.9 lbf ft)
Displacement	1028 cc (62.7 ci)
Bore (nominal)	75 mm (2.95 in.)
Stroke	77.6 mm (3.06 in.)
Crankcase Capacity (inc. filter)	Crankcase Capacity (inc. filter)
Maximum Recommended Speed	3600 Rev/min
Idle Speed	950 Rev/min
Fuel System	
Fuel Type	Diesel (Greater or Equal to 45 Cetane)
Fuel Tank Capacity	37 litres (8.1 gal)
Coolant System	
Capacity	5.5 litres (1.2 gal)

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Fault Finding

Brakes

Note: *The brakes generate a high temperature when operating, this means that the disc will be hot to touch, this condition is normal.*

Fault(s)

⇨ *Table 1. One or more brakes do not apply. (Brake travel not excessive, brakes not pulling to one side) (G-5)*

⇨ *Table 2. Pedal travel excessive (but not touching floor) (G-5)*

⇨ *Table 3. Pedal hard to operate. (G-5)*

⇨ *Table 4. Pedal touches floor under constant pressure - no fluid loss. (G-6)*

⇨ *Table 5. Pedal touches floor under constant pressure and fluid loss. (G-6)*

⇨ *Table 6. Poor braking (not pulling to one side). (G-6)*

⇨ *Table 7. Brakes not releasing (G-6)*

⇨ *Table 8. Poor braking when hot (G-6)*

⇨ *Table 9. Excessive brake noise in operation (G-7)*

⇨ *Table 10. Fluid loss when machine standing for instance - overnight (G-7)*

Table 1. One or more brakes do not apply. (Brake travel not excessive, brakes not pulling to one side)

Possible Cause		Action
1	Master cylinder fault.	Check master cylinder to identify fault area, service as required.
2	Brake disc distortion.	Renew brake disc - both front discs or both rear discs.

Table 2. Pedal travel excessive (but not touching floor)

Possible Cause		Action
3	Air in hydraulic system.	Check fluid reservoir level. Check for fluid/air leaks, rectify as required. Bleed the brake system.
4	Leak in hydraulic system.	Check for fluid loss at master cylinder and brake piston, all pipes and fittings for loose connections. Rectify as required. Top up brake reservoir and bleed the brake system.
5	Brake disc distortion.	See Item 2.

Table 3. Pedal hard to operate.

Possible Cause		Action
6	Tightness at pedal pivot.	Inspect pedal pivot. Free-off/lubricate.
7	Fluid contamination/seal damage.	Flush system and renew all hydraulic seals. Bleed the brake system.
8	Misaligned push rod/pedal.	Check and rectify as required.
9	Kinked or crushed brake hoses.	Check/renew brake hoses.

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Charging System

Fault:

⇨ *Table 13. Battery is low in charge or discharge (C-7)*
⇨ *Table 14. Battery is charging at a high rate (battery over heating) (C-7)*
⇨ *Table 15. No output from alternator (C-7)*
⇨ *Table 16. Intermittent or low alternator output (C-7)*
⇨ *Table 17. Warning light dim (C-8)*
⇨ *Table 18. Warning light is normal but battery is discharged (C-8)*
⇨ *Table 19. Warning light is lit during operation (C-8)*
⇨ *Table 20. Warning light flashes intermittently (C-8)*

Table 13. Battery is low in charge or discharge

Possible Cause	Action
Loose or worn alternator drive belt.	Check, adjust tension or replace.
Defective battery: It will not accept or hold a charge. Electrolyte level Low.	Check condition of battery and replace if necessary.
Excessive resistance due to loose charging system connections.	Check, clean and tighten circuit connections.
Faulty alternator.	Check, and repair or replace.
15A fuse blown.	Check and replace.

Table 14. Battery is charging at a high rate (battery over heating)

Possible Cause	Action
Defective battery.	Check condition of battery and replace if necessary.
Faulty alternator.	Check, and repair or replace.

Table 15. No output from alternator

Possible Cause	Action
Alternator drive belt is broken.	Replace and tension correctly.
Loose connection or broken cable in charge system.	Inspect system, tighten connections and repair or replace faulty wiring.
Faulty voltage regulator.	Check and replace.
Faulty alternator.	Check, and repair or replace.

Table 16. Intermittent or low alternator output

Possible Cause	Action
Faulty external charging circuit connections.	Inspect system, clean and tighten connections.
Faulty rotor slip rings or brushes in alternator.	Inspect, repair or replace.
Defective monitor and warning light.	Check and replace.
Faulty rectifier or rectifying diodes in alternator.	Check and replace.

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