SERVICE MANUAL
SM535

NP 15-20-12D

WARNING

Read and observe all warnings on the unit before operating it. Do not operate this equipment unless all factory installed guard and shields are properly secured in place.

SM535 00-00

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CASTER TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	REMARKS
1. No or very little traction on drive tire.	1. Caster springs too tight	1. Loosen caster spring tension
2. Caster will not pivot	1. Caster pivot bearing damaged	1. Replace bearing
3. Caster wheels will not roll	1. Caster wheel bearing damaged	1. Replace bearings

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50-01 GENERAL DESCRIPTION

This section covers the specification charts and schematics used on the NP15-20-12D Electric Reach Truck.

An Index has been provided for reference and index numbers.
Illustrations also have been utilized for use in assemblies.

This section also covers special tools used to service this unit.

AMPS draw charts for pump and drive motors are found in this section.

Before disassembling or assembling any major components, read and observe all warnings.

WARNING

Perform all service routines with the battery disconnected, except where noted within certain procedures outlined.

Do not attempt to assemble the unit without the appropriate assembly instructions. See Index at he front of this manual to locate the section and d index numbers for appropriate assembly instructions.

Before accomplishing detail procedures, perform the following general checks.

Check key switch position, determine its proper position.

Check brake pedal is in proper position.

Check that battery is fully charged.

Check that battery connectors are connected and free of corrosion (or disconnected).

Check that all fuses are functioning (control and power).

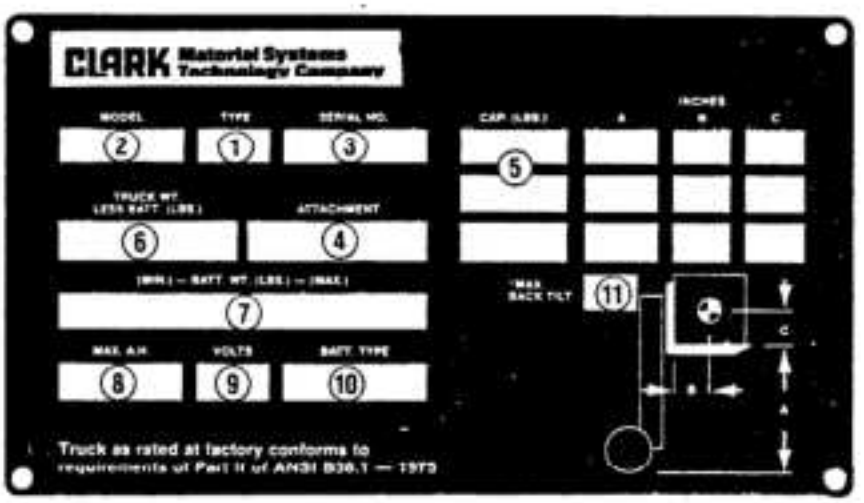
Check that battery voltage with correct polarity is present ant control circuit fuse panel buss bar.

If all checks prove satisfactory, proceed to specification tables and charts.

50:02 DATA PLATE AND DECALS

Know the rated capacity on the data plate and understand areas 1 through 11 as shown in the illustration.

1. Truck type
2. Truck model
3. Truck serial number
4. Attachment
5. Capacity
6. Truck weight
7. Battery weight
8. Battery AMP hours
9. Voltage
10. Battery type
11. Back tilt



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SYMPTOM	POSSIBLE CAUSE	POSSIBLE CURE
Will Not Shift Left Pump Not Running	Diode Open at Wire No.51(Located above the relays, in the wire harness. The diodes are enclosed in shrink tubing.)	Change the Diode if it is visably burned. If not see the electrical section "Testing Diodes."
	Pump Contactor	See Electrical Section "Pump Contactors"
	Pump Motor	See Electrical Section "Motor Troubleshooting."
Will Not Shift Left Pump Is Running	Low Oil Level	Fill Hydraulic Tank, check for oil leaks.
	Pinched or Crimped Hose or Line	Inspect lines and repair if necessary.
	Incorrect Relief Valve Pressure	Adjustment relief pressure to 1475-1575 against the stops. Change relief valve.
	Open Wire in the Wire Harness to Relay No. 1 (This relay is the upper most relay mounted on the frame.)	Remove wire No. 13 from relay No. 1 and check for continuity from wire No. 13 back to battery negative. This check can be made using an ohmeter or test light. If there is no continuity on this wire, it is an indication of an open wire.
	Relay No. 1	Remove wire No. 61 from the relay. Using an ohmeter on the R x 1 scale and with the shift lever actuated, check the resistance between the wire terminal on the relay and battery negative. If the reading is not near zero, change the relay.
	Open Wire in the Wire Harness to Relay No. 2 (This relay is mounted directly below relay No. 1.)	Using a VOM on the 50 VDC scale, check for battery voltage at wire No. 51 to the relay. If voltage is absent with the shift lever acutated, an open wire is indicated between the relay and the auxiliary valve switch.

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