



Mechanical

## Whitecloud Mechanical

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501-47  
Blue

## Invoice for RO #6317

Service Advisor: Glen Plaska

Posted Date: 08/23/24 at 01:59 PM MDT

Client: Black Track Paving

Vehicle: 1980 Freightliner 1234

Black Track Paving	1980 Freightliner 1234 VIN: CB213HV174785 License: VGM-380 Unit #: RC16   Color: N/A Odometer In: 990570 / Out: 990570	RO #6317 Time-In: 08/22/24 at 10:53 AM MDT Save Parts: No
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### Client concerns:

- Customer believes truck is not charging, suspect alternator

### 1 - Intake Inspection

Tech: AS

Labor:

Tech to fill out inspection form for units coming into shop, perform prescan on every vehicle

\$0.00

✓ Approved on 08/22/24 at 10:55 AM MDT

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### 2 - Customer believes truck is not charging, suspect alternator

Tech: AS

Labor:

Pulled truck into shop. Checked voltage at alternator and had 13.8 volts which indicates alternator is charging. Shut truck off and let sit a few minutes. Started truck and check for voltage at alternator again. This time was only reading battery voltage of 12.6 volts. Rewired engine up with multi-meter connected to alternator. Alternator started charging. Repeated test a few times and had the same result. It appears that the alternator needs an rpm jump to excite it to start charging. Checked voltage at batteries and only one battery was charging. The battery that was responsible for charging the engine was not charging. After chasing the battery cables it appeared that the battery wasn't hooked up with the charging system. Noticed that there were no jumper wires connecting the two batteries together in parallel. Connected both batteries together temporarily and both batteries were now charging. However the ground cable for the battery that runs to the solenoid on the firewall was getting hot and was not allowing the truck starter to turn over when attempting to start the truck. It was as if it was deadheading the starter. Chased all the battery cables to see where they run and connect too. The battery ground cable running to the solenoid would only give the battery ground when the key was turned on. Did some research and it appears that the ground cable shouldn't be running to the solenoid. Noticed that the alternator, the starter and the solenoid all appeared to be new or not very old. It is possible that whoever installed them hooked up the ground cable wrong. Unhooked the ground cable from the solenoid. Built a pair of jumper wires and connected the two batteries together in parallel. Truck now starts like normal and both batteries are charging the same now. Alternator still needs an rpm increase to excite it to start charging but that just may be due to the fact that the alternator is shaft driven from the blower on the engine.

\$1,012.50

13248  
09 Sept 24

Let truck sit over night with the kill switches turned off. Truck started right up in the morning and both batteries were still charging. Made sure battery connections were tight and put battery cover back on. Cleaned up from job.

\$0.00

Part:

Copper lugs

2 \$8.26

\$16.52

✓ Approved on 08/22/24 at 10:55 AM MDT

Subtotal \$1,029.02 + est. Tax \$51.45

\$1,080.47

### 3 - QC Inspection

Tech: TD

Labor:

A technician who is not working on the vehicle must go through unit to inspect for any leaks or other repairs that original technician may have missed. Go to inspection page and follow step procedure.

\$0.00

✓ Approved on 08/22/24 at 10:55 AM MDT

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### RO Fees

Fee:

Shop supplies

\$61.74

Subtotal

\$61.74

Any warranties on the parts and accessories sold hereby are made by the manufacturer. You understand and agree that we make no warranties of any kind unless expressed in writing. You hereby authorize us to perform the repair work herein set forth and to purchase the necessary material and parts to perform such repair work. You agree that we are not responsible for loss or damage to your vehicle or articles left in your vehicle in case of fire, theft, or any other cause beyond our control or for any delays caused by unavailability of parts or delays in part shipments by the supplier or transporter. In addition, you agree that we are not responsible for damages to your vehicle from freezing due to lack of antifreeze. You hereby grant our employees permission to operate your vehicle on streets, highways, or elsewhere for the purpose of testing and/or inspection. You acknowledge and agree that an express mechanic's lien on your vehicle is granted to secure payment of this invoice for the repair work detailed in this invoice.

if your tires have been removed they must be retorqued at 100km. If you have had Ubolts replaced they must be retorqued at 500km.

All payments are due within 30 days of the invoice date. On commercial there will be 2% interest charged to all outstanding balances over 30 days.

**Total Repair Order & Signature:**

Total Labor:	\$1,012.50
Total Parts:	\$16.52
Total Fees:	\$61.74
Subtotal:	\$1,090.76
Taxes:	\$54.54
Grand Total:	\$1,145.30
BALANCE DUE:	\$1,145.30

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