

INVOICE

BILL TO

INVOICE #

DATE 08/10/2021

DUE DATE 12/02/2021

DATE	ACTIVITY	DESCRIPTION	QTY	RATE	AMOUNT
		trash truck			
	Parts	front cover assembly, gasket set, oil filter, fuel filter, ziptie, silicone, engine oil, seal, bolts, AC compressor, therm-resistors, trinary AC switch, harnesses, electrical coverage wiring, oil pressure sensor	1		
	Freight on Parts		1		
	Labor	pulled in, removed hood off of truck and hardware for hood,. removed radiator, charged air cooler and AC condenser assemblies. removed radiator hoses and wiring in fan, disassembled fan hub and removed fan hub backing section. removed injection pump, removed air compressor bolting hardware, removed front PTO drive shaft. removed harmonic balancer, removed oil pan, and front engine support brace d/t pan clearance issues. removed pick up tube off front structure, removed pan from upfront of engine. cleaned. removed front main seal, removed front cover, found rear cover busted as well. rolled over engine 43 times to get engine back in complete time. once in time, removed all gear train off front of engine, removed backing plate off of engine, put engine on stands. set back down. cleaned thoroughly and after going and	60		

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		getting cover assemblies, cleaned and installed new used covers with all new sealing components. had to make front main seal installer, installed seal, installed all front engine components, fuel pump. had to install front drive shaft hub adaptor with tool made in shop. got all the way down, reinstalled all components. Reinstalled pan filled engine with oil, r&r fuel filter and oil filter. filled with coolant, started unit, runs good. reinstalled hood and bumper assembly.			
		no throttle - had codes for TPS sensor shortage. after several hours of testing wiring and tracing wiring, found wiring over on passenger side. somebody had ran deck screw through harness into floor to hold down rubber floor. found multiple places behind dash that had to be fixed as well d/t rubbing. secured all wiring back up. tested unit and throttle was working on both sides.			
		installed AC drier wiring harness.			
		R&R discharge line for air compressor.			
		sucked system down on AC and filled system with freon.			
	Shop Supplies	freon, silicone, hardware, bolts/washers, cleaning/buffing pads, metal for making tool, ziptie, fluids, but connectors, heat shrink, wiring	1		
	Labor	After AC completley together, sytem still not working. i tested wiring and found AC wiring and engine harness to chassis extremley poor previous repair. Failed all over harness. new one will need to be built and installed. customer ok'ed work. did not give eta on job completion d/t amount of wiring and length of time to have properly wired and operational.	80		

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removed all harnesses from chassis to engine and power wiring to batteries. completely disassembled all connectors and went to salvage and had to get two harnesses and return to shop. disassembled all three harnesses and built one correct harness from 3 to go back to factory wiring. or correct wiring. all fuses and relays are in distribution panels now. installed harnesses back on engine and truck. After 2 days, after repairing on the chassis side, d/t damage wiring for power to fuse panel and engine. got together, started unit transmission was working. only problem currently was AC. had to replace therm resistors and trinary switch for AC system. Had to remove right side steering wheel, removed all paneling for blower motor. removed it and found pins spread. re clamped pins together and reinstalled connector. checked all blenddoors and doors functioning properly . after getting together, started unit. system is working properly.

note: this AC system has to go through its self check as soon as key is turned on. if you do not let the blenddoors sweep and run through its test, the AC system will disengage and check AC light will come on dash. Clearable as soon as you power down and rekey on.

Got together and road tested. once returned from test drive, truck died. will not run. towed back into shop. hooked up to laptop and found oil pressure system code shorted and stuck at 38lbs. with key on and engine off. found oil pressure sensor bad. changed with known good one and oil pressure code went inactive and reads oil pressure correctly. Also had one wire that was popping fuse and found

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		wire rubbed through on one of harnesses that were not disassembled and rebuilt. once repaired, started truck and system working properly.			
		Took on another road test and no codes returned. power steering gear box on both sides are seeping and ABS light from two sensors. front left steer and right rear. that is the only light on in dash. Repairs done as cost efficient as possible and quickest possible d/t so much wire damage the repair was more extensive than expected. there was no schematics and no generic wiring diagram for this repair. This was all built based off of what was left and looking at other harnesses as guides to rebuild one.			

SUBTOTAL					
TAX					
TOTAL					17,090.37
PAYMENT					
BALANCE DUE					