



WAUKESHA-PEARCE INDUSTRIES, LLC

A PEARCE INDUSTRIES, INC. COMPANY
P.O. BOX 35068, HOUSTON TEXAS 77235-5068
PHONE (713) 723-1050

SERVICE INVOICE

Sold To: 200239 503
CITY OF CORPUS CHRISTI
FLEET MAINTENANCE
P.O. BOX 9277
CORPUS CHRISTI TX 78408

Ship To: 317103
CITY OF CORPUS CHRISTI
5253 AYERS ST. BLDG. 3B
CORPUS CHRISTI TX 78415

Invoice: 2221564	Ship Via:
Inv Date: 1/10/2024	Contact Name:
Cust PO: 615544	Contact Phone:
Branch: 503	Note 3:
Entered: Allen, Brooke	Note 4:
SO Order: 251205 - CL	Note 5:
Job Desc: ENGINE	SlsRep: Estrada Sr., Beto

Unit ID: 146168 **Mfg:** GRADALL IND., INC. **Model:** XL3100-V **Serial No:** 3120000406 **Hours:**

WO#: 365712 SV ENGINE

Comments:

Complaint
Egnine

Cause
Engine knocking

Correction
10/19/23

Completed a JSA, put air in the tanks, started machine and brought in the shop. Moved the boom to the left, removed the air piping and removed the hood. Removed the after cooler piping, removed the 2 center covers, removed the exhaust piping.

10/20/23

Completed a JSA, found drain pans, drained the transmission oil, removed, and capped lines. Removed starter to disassemble engine, drained the coolant, removed the lines. Removed steering pump lines, pump was very low on oil, the reservoir was empty. Removed the fan assembly, transferred some parts to the new engine.

10/23/23

Completed a JSA, removed the electrical and coolant lines, under the engine. Removed the bolts from the transmission to the flywheel. Removed the bolts from engine to trans, connected crane, put trans jack under the trans, and removed left rear mount bolt. Removed the steering pump, lifted the engine out of the machine, set the engine on the deck and started to transfer over parts.

10/24/23

Completed s JSA, continue to transfer parts from old engine to the new engine, ordered parts as needed, for assembly.

10/30/23

Completed a JSA, installed the right side of the engine, installed belt, the flywheel, and new bolts. Torqued to 140 ft lbs.

11/3/23

Completed a JSA, removed the fuel lines and the common rail, to install the compressor hoses. Assembled the fuel system, moved lines and mounts to install the compressor. Installed the compressor and connected lines, assembled the rest of the engine. Assembled the old engine, prepped the new engine for installation.

11/6/23

Completed a JSA, finished assembling engine. Set the crane up and lift it into the machine.

11/7/23

Completed a JSA, installed all the coolant lines and the steering pump. Connected steering line, had the main steering supply line made. Connected hydraulic lines to pump, filled with steering fluid. Connected the trans cooler lines, filled with



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synthetic atf.
11/9/23

Completed a JSA, cleaned and connected batteries, tried to start the machine, lights came on then a clang and all power went away. Traced wires, removed the front panel, and checked the fuses and relays. Removed the right cab panel and checked the key switch, checked the fuses box in the battery box, got the machine to run, but the other issue is it will not shut off. Had to manually shut down, possible software issue. Repaired the a/c.

11/28/23

Completed a JSA, connected and checked the software on the Volvo site. Called Gradall on the software for the machine, they said I need to contact Volvo for the info on what goes on it. Talked to Cullie and he said to do some more checking on the front panel, fuses and relays. Check the upper cab.

11/29/23

Completed a JSA, tried to download and install software, talked to Volvo and tried again, was not successful with software install.

11/30/23

Completed a JSA, tried to install software again and it failed. Contacted Curt at Volvo and we looked at it together and found the part numbers are different from the removed engine, there is no software package for it, it must be made. Curt is in the process of getting that done.

12/15/23

Completed a JSA, set up computer, put the battery charger on the machine. Connected computer, called Volvo and talked with Robert. Downloaded the engine info, could not installed, called back and talked to Corey. Went through the process and it was accepted. Started machine and it stopped, removed computer, replaced the water separator took an oil sample of the engine. installed the hood. Test engine ok
note: hydraulic leaks on RR of machine and upper controls inop.

Labor:

Description	Total Labor	Amount
LABOR		\$19,937.28

Parts:

Qty	Part Number	Description	Price	Ext. Price
1.00	3801764	ENGINE, REMAN	\$34,790.70	\$34,790.70
1.00	VFB	INBOUND OVERSEAS FREIGHT FEE	\$5,391.00	\$5,391.00
1.00	24079751	GASKET	\$59.00	\$59.00
1.00	21532261	SEALING RING	\$11.50	\$11.50
4.00	25375316	HOSE CLAMP	\$2.40	\$9.60
1.00	21697308	WATER PIPE	\$77.10	\$77.10
4.00	1677370	SEALING RING	\$6.50	\$26.00
1.00	948888	ORING	\$10.40	\$10.40



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Unit ID:	146168	Mfg:	GRADALL IND., INC.	Model:	XL3100-V	Serial No:	3120000406	Hours:	
1.00	1542780	SEALING RING						\$3.80	\$3.80
1.00	1542781	SEALING RING						\$4.50	\$4.50
10.00	465815	FLANGE SCREW						\$22.60	\$226.00
1.00	VFB	INBOUND FREIGHT FEE						\$200.05	\$200.05
1.00	976932	GASKET						\$8.60	\$8.60
2.00	11994	GASKET						\$1.20	\$2.40
1.00	18677	GASKET						\$3.20	\$3.20
11.00	BPC503	ZXELRU1 COOLANT (OAT)						\$12.99	\$142.89
8.00	BPC503	122062 MOBIL DELVAC1 TF						\$45.44	\$363.52
1.00	88591207	O-RING						\$1.51	\$1.51
2.00	88591206	O RING						\$1.51	\$3.02
2.00	88591209	O-RING						\$0.87	\$1.74
1.00	425-03-51691	HOSE						\$39.89	\$39.89
1.00	80773170	HOSE REDUCER 3.5IN TO 3IN						\$68.94	\$68.94
2.00	16M2T-MTF	16M2T-MTF REEL						\$13.90	\$27.80
2.00	16G-16FFORX	16G-16FFORX						\$55.17	\$110.34
1.00	BPC503	QTY-8) 75200 QTS						\$44.62	\$44.62
1.00	80994192	SAFETY FILTER						\$187.19	\$187.19
1.00	80994250	PRIMARY FILTER						\$394.97	\$394.97
1.00	80774141	FUEL PRE-FILTER ELEMENT						\$136.60	\$136.60
1.00	1677370	SEALING RING						\$6.50	\$6.50
1.00	MSS	MISCELLANEOUS SHOP						\$750.00	\$750.00
1.00	ENV	ENVIRONMENT FEE						\$350.00	\$350.00
								Total Parts	\$43,453.38
								Tax	.
								Total WO	\$63,390.66

TOTAL INVOICE (USD)

\$63,390.66

*** REMIT TO ADDRESS ***
WAUKESHA-PEARCE INDUSTRIES, LLC. EXCHANGE ACCOUNT
P O BOX 204116 DALLAS, TX 75320-4116
ACH/WIRING: WELLS FARGO BANK, N.A.
ABA#: 121000248 ACCOUNT#: 4122374218

In accordance with acceptable state laws, we may impose a surcharge on credit cards that is not greater than our cost of acceptance.