

Lot 18

Page: 1 of 4

Perih Heavy Duty Inc
RR1
Gilbert Plains, MB R0L 0X0, CA
perihhd@gmail.com
204-648-3122



Invoice: 796
Date: 3/8/2023

Remit Payment To
Perih Heavy Duty Inc
RR1
Gilbert Plains, MB R0L 0X0, CA

Service Order	Terms	Due Date	Authorizer	Customer PO	Service Writer	Unit #
1438	Net 30	4/7/2023	Lowell Penner		Perih, Steven	

Item	Description	Quantity	Rate	Amount
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Complaint: Diagnose Front End Noise

Cause: Customer request

Labor	Correction:	44.50000	\$110.00	\$4,895.00
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Transmission / Internal Gears & Clutches / Brought transmission into shop and set down in crane area. Removed both output yokes from bottom of transmission and input yoke from top and layed transmission down on front half. Removed both seal guards from front and rear output shaft removed valve body from transmission and set on bench. Rigged up crane on valve body mount on rear of transmission and removed all mounting bolts and lifted half case off of the front case. Removed all clutch packs and gears from transmission and set onto bench in order as they came out.

Found that the bearing on clutch shaft A had failed and was causing the growling noise in lower gear. Removed all bearing races and began making parts list. Removed all bearings off of the ends of all shafts and installed new bearings onto shafts. Found that the bearing under the damaged bearing had some wear and grinding marks on it so changed it as well. Cleaned out all steel shavings out of the suction screen and out of transmission housing. Installed all new sealing rings on valve body end of shafts and changed one sealing ring sleeve on clutch pack A.

Installed transmission shafts back into transmission housing with new races installed on both halves of case. Cleaned off mating surfaces of both case halves and used high flex sealant and lowered upper half down onto bottom half and torqued mount bolts to spec. Cleaned off valve body mount from gasket material and installed new gaskets and plate installed all mount bolts and torqued to spec. Reinstalled all hydraulic lines and electrical harness with protective shields over solenoid's.

Stood transmission up and installed all input and out put seals into housing and installed both lower seal guards onto shafts. Installed yokes loosely for installing the drive shafts. Installed both mounts onto transmission and lifted transmission up on truck crane and carried out to be installed into skidder. -

Completed: 3/7/2023

Item	Description	Quantity	Rate	Amount
Parts	O-Ring	1.00000	\$12.20	\$12.20
Parts	Seal	1.00000	\$18.15	\$18.15
Parts	O-Ring	1.00000	\$6.60	\$6.60
Parts	O-Ring	3.00000	\$2.56	\$7.68
Parts	O-Ring	2.00000	\$1.99	\$3.98
Parts	O-Ring	1.00000	\$5.96	\$5.96
Parts	Filter	1.00000	\$125.29	\$125.29
Parts	Bearing Cone	2.00000	\$119.69	\$239.38
Parts	Seal	12.00000	\$18.18	\$218.16
Parts	Ball Bearing	2.00000	\$283.38	\$566.76
Parts	Ball Bearing	4.00000	\$174.55	\$698.20
Parts	Bearing Cone	2.00000	\$99.28	\$198.56
Parts	Guard	2.00000	\$335.19	\$670.38
Parts	Bearing Cone	2.00000	\$127.64	\$255.28
Parts	O-Ring	1.00000	\$18.54	\$18.54
Parts	Seal	1.00000	\$55.16	\$55.16
Parts	Seal	1.00000	\$45.37	\$45.37
Parts	Bearing Cup	2.00000	\$138.14	\$276.28
Parts	Bearing Cup	2.00000	\$48.39	\$96.78
Parts	Bearing Cup	2.00000	\$58.08	\$116.16
Parts	O-Ring	1.00000	\$17.38	\$17.38
Parts	O-Ring	1.00000	\$5.94	\$5.94
Parts	O-Ring	5.00000	\$9.77	\$48.85
Parts	Pressure Relief Valve	1.00000	\$178.79	\$178.79
Parts	Guard	2.00000	\$335.19	\$670.38
Parts	Seal	1.00000	\$85.99	\$85.99
Parts	Ball Bearing	2.00000	\$264.58	\$529.16
Parts	Seal	2.00000	\$25.64	\$51.28
Parts	Gasket	1.00000	\$36.95	\$36.95
Parts	Gasket	1.00000	\$30.69	\$30.69
Parts	Plate	1.00000	\$227.38	\$227.38
Parts	Seal	2.00000	\$44.25	\$88.50
Parts	O-Ring	2.00000	\$9.36	\$18.72
Parts	Gasket	1.00000	\$12.78	\$12.78
Parts	Sleeve	2.00000	\$128.89	\$257.78
Parts	-4 ORFS O-ring	2.00000	\$2.24	\$4.48

Item	Description	Quantity	Rate	Amount
Parts	-16 ORB O-ring	1.00000	\$6.08	\$6.08
Parts	Oil Filter	1.00000	\$34.77425	\$34.77
Parts	Oil Filter	1.00000	\$76.0151	\$76.02
			Subtotal	\$10,911.79

Complaint: Remove and Install Transmission**Cause:** Customer request

Labor	Correction: Transmission / Internal Gears & Clutches / Backed skidder into pole shed and removed all panels from left hand side of the engine compartment and underneath cab to gain access to cab mounts and cab lift jack. Removed all lower skid plates to gain access to drive shafts and drain of transmission. Drained transmission oil out and removed all hydraulic lines to front and rear of transmission, also unplugged transmission harness and left with transmission. Removed all three drive shafts and dipstick tube, then rigged up crane and removed all three transmission mounts and started lifting transmission out of machine. Lifted transmission and had to remove right hand side upper mount to gain more clearance to remove transmission fully. Plugged off what open holes we could before washing unit to be disassembled. After repairing transmission in the shop rigged up crane to transmission housing and brought back out to pole shed to be installed into skidder. Dropped transmission in from top and installed rh upper mount and set down onto mounts and dropped bolts through frame and installed lower mount. Reinstalled all hydraulic and electrical lines from machine to transmission. Ran cab coolant lines across top of transmission and made hose guard for coolant lines so that they would not rub through on top of transmission case. Reinstalled all three drive shafts onto transmission. Filled transmission with new power trans oil and checked for standing leaks found none. Removed diff lock filter and transmission filter to be cut open and inspected for steel shavings. Found no steel in the diff lock filter but did find some small flakes in the transmission main filter. Installed new filters on machine. Flushed out trans lines and cooler. Ran unit to check for leaks found no leaks but had to move two coolant hoses and the dip stick to better position and installed hose guard onto coolant lines so they would not rub on the transmission mount. Installed all shields and doors onto machine and lowered cab down onto mounts and tightened mount bolts. Installed ROPS mount bolts and tightened. Will run machine and top off transmission oil. - Completed: 3/7/2023	22.75000	\$110.00	\$2,502.50
Parts	0404 O-Ring Face Female Crimp Fitting	1.00000	\$8.68	\$8.68
Parts	0404 O-Ring Face 90 Degree Female Crimp Fitting	1.00000	\$19.78	\$19.78
Parts	-04 5800psi Arctic Hydraulic Hose	1.50000	\$4.36	\$6.54
Parts	10 Liter Phillips Trans Hydraulic	5.00000	\$55.00	\$275.00
			Subtotal	\$2,812.50
Freight		1.00	\$115.60	\$115.60

Unit: VIN: DW460DG581918
 Timberjack 460D
 Engine: 16,562 Hours

Labor	\$7,397.50
Parts	\$6,326.79
Shop Supplies	\$275.00
Pre-Charge Subtotal	\$13,999.29
Freight	\$115.60
GST (5.0000% of \$14,114.89)	\$705.74
PST (7.0000% of \$14,114.89)	\$988.04
Total	\$15,808.67
Payments & Credits	\$0.00
Balance Due	\$15,808.67

GST# 753299528

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Invoice: 245
 Date: 6/28/2021

Remit Payment To
 Perih Heavy Duty Inc
 RR1
 Gilbert Plains, MB R0L 0X0, CA

Service Order	Terms	Due Date	Authorizer	Customer PO	Service Writer	Unit #
1123	COD	6/28/2021	Lowell Penner		Perih, Steven	

Item	Description	Quantity	Rate	Amount
Complaint: R & R Engine to Repair Leaks				
Cause: Customer request				

Item	Description	Quantity	Rate	Amount
Labor	Correction: Engine / Overhaul / Remove side panels, ROPS, hood and removed nose cone assembly. Drained coolant and removed radiator assembly. Removed plug to access torque converter bolts and removed bolts to separate flex plate. Removed engine mounts and batteries. Lifted engine out of machine and drained oil and removed oil pan. Pressure washed engine and brought in shop. Removed main bearing caps and inspected bearings found bearings were in pretty good shape for the amount of hours. Engine had several leaks and the liners looked to have a bunch of wear from the bottom of the engine. Discussed options with Lowell and decided to tear down fully and rebuild. Put engine onto engine stand and start to tear down. Stripped engine and Cleaned out block thoroughly. Installed new main bearings and cleaned out piston cooling jets found that number six cooling jet was stripped in block. Cleaned threads and installed new jet. Transferred fitted connecting rods onto new pistons. Installed new liner packings and installed liners into engine. Checked protrusion, it was .002". Installed new connecting rod bearings and new cap screws and torqued to spec. Plastiguaged to .0015". Installed new oil pump onto timing gear plate installed new oil tube and changed o-ring in block and torque to spec. Peened nut in three places and loctited. Removed timing gear cover and cleaned gasket off and washed. Reinstalled timing gear cover with new gasket and torqued to spec. Installed oil pan with new gasket used 515 sealant on block joints and torqued bolts to spec with blue loc-tite. Installed new head gasket and installed reconditioned head onto engine with new head bolts. Installed push rods and rocker arm assembly and set valves clearance. Installed valve cover and installed new JD injectors. Reinstalled fuel lines and coolant fittings into head. Installed new rear seal and flywheel into flywheel housing with new bolts and torqued to spec with blue loc-tite. Installed new front crank seal into timing gear cover and installed new balancer onto crank and new bolts. Installed new water pump insert plate into timing gear cover. Had to work the timing cover to accept the new updated insert. Installed a new water pump. Changed thermostat and resealed the thermostat housing. Removed engine from stand and installed into machine. Installed torque housing bolts and installed torque to flex plate bolts with blue loc-tite. Installed all coolant lines and electrical back onto engine. Washed radiator and installed. Reinstalled a/c compressor and condenser to rad assembly. Installed fan guards, shroud and nose cone. Put hood onto machine as well as ROPS and filled with new coolant and break in engine oil. Installed new oil filter and hydraulic oil filters. Ran Engine to check for leaks. The throttle cable was not returning all the way and that the old cable was frayed and damaged. Replaced cable with new and routed in machine. Adjusted cable. Reinstalled side panels and topped off coolant and engine oil. - 6/28/2021	60.00000	\$100.00	\$6,000.00
Parts	Nozzle Kit	1.00000	\$32.45235	\$32.45
Parts	Oil Pump	1.00000	\$733.7421	\$733.74
Parts	Tube	1.00000	\$66.56475	\$66.56
Parts	Nut	1.00000	\$1.89875	\$1.90
Parts	Torsional Damper	1.00000	\$697.31865	\$697.32
Parts	Bolt	4.00000	\$4.06875	\$16.28
Parts	Packing	12.00000	\$2.4087	\$28.90
Parts	Sealing Washer	4.00000	\$3.5805	\$14.32
Parts	Water Pump	1.00000	\$331.91235	\$331.91
Parts	Screw	12.00000	\$13.888	\$166.66
Parts	Snap Ring	12.00000	\$2.96205	\$35.54

Item	Description	Quantity	Rate	Amount
Parts	Cap Screw	26.00000	\$11.5878	\$301.28
Parts	Thermostat	1.00000	\$25.37815	\$25.38
Parts	Engine Overhaul Kit	1.00000	\$2,510.5381	\$2,510.54
Parts	Insert	1.00000	\$158.50765	\$158.51
Parts	Bolt	6.00000	\$3.04885	\$18.29
Parts	Seal	4.00000	\$7.2695	\$29.08
Parts	Packing	2.00000	\$2.4087	\$4.82
Parts	Tightener	1.00000	\$238.3962	\$238.40
Parts	Screw	2.00000	\$13.888	\$27.78
Parts	Orifice	1.00000	\$25.68195	\$25.68
Parts	Break in Oil 5 Gallon	1.00000	\$143.79505	\$143.80
Parts	Break in Oil 1 Gallon	1.00000	\$30.597	\$30.60
Parts	Oil Filter	1.00000	\$22.2208	\$22.22
Parts	Push Pull Cable	1.00000	\$258.5352	\$258.54
Parts	Head Work	1.00000	\$1,198.625	\$1,198.63
Parts	Intake Valve	6.00000	\$24.00	\$144.00
Parts	Exhaust Valve	6.00000	\$33.00	\$198.00
Parts	Valve Stem Seal	12.00000	\$6.00	\$72.00
Parts	Valve Guide	6.00000	\$6.00	\$36.00
Parts	Pin Bushing	6.00000	\$30.75	\$184.50
Parts	Bearing	2.00000	\$12.53	\$25.06
Parts	Fuel Injector	6.00000	\$147.46235	\$884.77
Subtotal				\$14,663.46

Freight	\$200.00
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Unit: VIN: DW460DG581918

Timberjack 460D

Engine: 15,698 Hours

Labor \$6,000.00**Parts** \$8,663.46**Shop Supplies** \$175.00**Pre Tax Total** \$15,038.46**GST (5.0000% of \$15,038.46)** \$751.92**PST (7.0000% of \$15,038.46)** \$1,052.69**Total** \$16,843.07**Payments & Credits** \$0.00**Balance Due** \$16,843.07

GST# 753299528

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Invoice: 249
Date: 6/29/2021

Remit Payment To
Perih Heavy Duty Inc
RR1
Gilbert Plains, MB R0L 0X0, CA

Service Order	Terms	Due Date	Authorizer	Customer PO	Service Writer	Unit #
1352	COD	6/29/2021	Lowell Penner		Perih, Steven	
Item	Description	Quantity	Rate	Amount		
Complaint: Diagnose Miss and Engine Smoking						
Cause: Customer request						
Labor	Correction: Fuel System / Fuel Pump / Put my heater and Lowell's heater on skidder. Supplied sensor for 2154D that operator broke off on swing motor. Diagnosed and found issue to be blown out #5 injector. Removed injector and replaced with new one I had in the truck. Got engine running and it now runs as it should. - 6/29/2021	4.50000	\$100.00	\$450.00		
Parts	Sealing Washer	2.00000	\$3.6239	\$7.25		
Parts	Tee Fitting	1.00000	\$18.662	\$18.66		
Parts	Fuel Injector	1.00000	\$130.00	\$130.00		
				Subtotal	\$605.91	
Drive to unit						
Labor	Drive to unit (Service Call)	0.75000	\$110.00	\$82.50		
				Subtotal	\$82.50	

Unit: VIN: DW460DG581918
Timberjack 460D
Engine: 15,698 Hours

Labor \$532.50
Parts \$155.91
Shop Supplies \$30.00
Pre Tax Total \$718.41
GST (5.0000% of \$718.41) \$35.92
PST (7.0000% of \$718.41) \$50.29
Total \$804.62
Payments & Credits \$0.00
Balance Due \$804.62

GST# 753299528