DEDICATED TO THE PRESERVATION AND RESTORATION OF THE FUHRMANN/PORSCHE FOUR CAM ENGINE



25 October, 2010

The following is billing for parts, crankshaft labor and sub-contract labor for the rebuilding of your 547/1 Carrera engine. Upon disassembly everything looked pretty good. At one time a connecting rod let go but the repair was good to the inside of the crankcase. The engine while tired and needing the usual parts had not really been tampered with compared to some I have seen. The roller bearing crankshaft has been disassembled and the following was noted. The journal surfaces of the pulley and center main bearings were damaged and will need to be repaired. The outer bearing races for both the center and pulley main were damaged and will have to be replaced. The gear set numbers match throughout the engine showing it's originality. Your cylinders are worn and will be repaired using the nickel silicon process. The exhaust valves were excellent but all the intake valves had excessive stem taper and will have to be replaced. I have not billed you for the repair of your exhaust system. I will include that with the final billing

Engine identification

Engine #: P90785

Case match #: 7

Layshaft and timing gear #: 588

Hirth crankshaft #: 447 Layshaft cap #: 7

Cylinder head for 1,2 side: L 34

Cylinder head for 3,4 side: N 45

Solex carburetor for 1,2 side: 14306 Solex carburetor for 3,4 side: 14315

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Engine parts	
1 Gasket set	\$465.00
1 Set layshaft bearings	\$185.00
4 Intake valves @ \$385.00 ea.	\$1540.00
3 Shaft drive bearings @ \$285.00 ea.	\$855.00
8 Valve guides @ \$22.50 ea.	\$180.00
1 Set piston rings	\$195.00
1 Secondary loom	\$165.00
8 Spark plug connectors @ \$14.75 ea.	\$118.00
5 Aluminum wire connector assemblies @ \$22.50 ea.	\$112.50
8 Spark plugs @ \$2.95 ea.	\$23.60
1 Clutch disc	\$185.00
1 Pressure plate	\$385.00
2 Sets ignition points @ \$95.00 ea.	\$190.00-
1 Set generator brushes	\$9.75
1 Fan belt	\$7.85
8 Qts. Valvoline racing oil for test running @ \$6.75/qt.	\$54.00
Engine parts total	\$4670.70
Crankshaft parts	245/EV
I set roller bearings	\$375.00
1 Pulley main outer race	\$575.00
1 Center main outer race	\$690.00
2 Sleeves @ \$145.00 ea.	\$290.00
Crankshaft parts total	\$1930.00

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Sub-contract labor	
Magnafluxing	\$145.00
Cadmium plating including prep work	\$375.00
Grinding crankshaft for sleeves	\$140.00
Balancing	\$135.00
Surface flywheel	\$85.00
Strip, repair, fit sheetmetal	\$575.00
Paint sheet metal	\$750.00
Hone, spray and fit pistons using the nickel silicon process	\$735.00
Sub-contract labor total	\$2940.00
Accounting	
Engine labor	\$12500.00/
Engine parts	\$4670.70
Crankshaft labor	\$3500.00
Crankshaft parts	\$1930.00
Sub-contract labor	\$2940.00
Total of above	\$25540.70
Paid on account check # 1085	-<\$6250.00>
Balance	\$19290.70
Balance on engine labor due during final assembly	-<\$6250.00>
Balance now due	\$13040.70

please send your check for the above amount to P.O. Box 2928, Jackson, WY 83001.

If you have any questions, please call or e-mail me. Thank you.

Best wishes,

Bill Doyle

DEDICATED TO THE PRESERVATION AND RESTORATION OF THE FUHRMANNIPORSCHE FOUR CAM ENGINE



Fuel pumps

October 20, 2012

Was great to meet you and to be able to go for a ride with you with your new engine. A I told you before, your engine that I just rebuilt for you was a very low mileage engine. All of the gear set numbers matched each other and the numbers stamped into the cylinder heads by the factory. The carburetor shafts and the distributors showed very little wear also. This was probably because as you told me the engine had been stored for a good number of years.

Too bombs have a second of the	The state of the s
Completely disassemble, clean, cad plate as necessary and rebuild	1 - 1
4 hrs. @ \$125.00/hr.	\$500.00
Install fuel pumps on chassis 1.5 hrs. @ \$125.00/hr	187.50
2 OEM Steel chassis fuel lines @ \$125,00 ea.	\$250.00
2 Ft OEM rubber fuel hose @ \$2.50/ft.	\$5:00
Track down wiring for fuel pumps in loom and rewire as necessary	
1.5 hrs. @ \$125,00/hr.	\$187.50
Fuel pump total	\$1130.00
Fuel pressure regulator	
Disassemble, clean, install new diaphragm rebuild as necessary	
2.0 hrs. @ \$125.00/hr.	\$250.00
Install on chassis .5 hrs @ \$125.00/hr.	\$62.50
Fuel pressure regulator total	\$312.50
Oil Lines	The second of th
3 oil lines, disassemble, cad plate fittings, install new Argus line	
3 @ \$175.00ea.	\$525.00
Total page one	\$1967.50

DEDICATED TO THE PRESERVATION AND RESTORATION OF THE FUHRMANNIPORSCHE FOUR CAM ENGINE

Oil filter assembly	
Disassemble, clean, have filter element ultrasonically cleaned,	
cad plate fittings, reassemble	\$150.00
1 OEM Oil filter bracket assy	\$95.00
Install oil filter assy .5 hr. @ \$125.00/hr.	\$62.50
Oil filter assy total	\$307.50
Oil tank	1
Strip tank, open tank up to remove animal debris, close tank, solde	er and seal as necessary,
fabricate new mounting tabs (none were present), solder tabs to tar	nk. Acid clean external
surfaces, prime and paint. 3.5 hrs. @ \$125.00/hr.	\$437.50
1 OEM oil screen assembly for bottom/inside of oil tank	\$375.00
Remove original push rod engine 1.0 hrs. @ \$125,00/hr.	\$125.00
Remove original push rod engine paneling 1.0hrs. @ \$125.00/hr.	\$125.00
Install coils .5 hrs. @ \$125.00/hr,	\$62.50
Locate and repair wiring in engine compartment for coils, oil	See See Strang - Same
pressure and temp sending units 2.5 hrs. @ \$125.00/hr.	\$312.50
Fit exhaust on spare engine install spare engine in chassis	
exhaust is low by over 2", remove engine block from chassis	and the second
remove exhaust system, 2.0 hrs. @ \$125.00/hr.	\$250:00
Install headers on welding jig, cut headers as necessary to correct	
the 2" drop, measure, weld refit 4.0 hrs. @ \$125.00/hr,	\$500.00
Fabricate support system for exhaust using original muffler	1 (The state of t
support rods 2.0 hrs. @ \$125.00/hr.	\$250.00
Total page two	\$3052.50

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Repair hand throttle, remove floor boards, determine what parts are missing or broken, repair/replace parts as nec. replace floor boards 2.0hrs.@\$125.00/hr. \$250.00

Repair interior panels in engine compartment, prep for rubber channels, fabricate lower engine compartment panels (yours had been cut out), install new lower panels, install new rubber channels, install new rubber in channels.

4.0 hrs. @ \$125.00/hr. \$500.00

4.0 hrs. @ \$125.00/hr.	\$500.00
3 Steel channels from Germany inc. shipping	\$275.00
Rubber for channels	\$85.00
Fit dry sump tank shield, remove original drivers side fender bra	cket, drill 3 holes in body to
mount shield. 1.5 hrs. @ \$125.00	\$187.50
Install dry sump tank, install dry sump tank neck assembly, install	ll two breather hoses
1.0 hrs. @ \$125.00/hr.	\$125.00
Fabricate mounting bracket for dry sump tank neck	1-1
1.0hrs. @ \$125.00/hr	\$125.00
4 OEM hose clamp assemblies @ \$25.00	\$100.00

1.0hrs. @ \$125.00/hr.	la en englin i	\$125.00
4 OEM hose clamp assemblies @ \$25.00		\$100.00
2 Ft. OEM breather hose @ \$27.50/ft.		\$55.00
Install oil tank shield .5 hrs @ \$125.00/hr.		\$62.50
보통 그 이 없는 그림을 그 및 그 보급증명하다면 그렇게 없었다. 그 그가 계약하다면 그 만든 이미팅이 없었다. 이번		

Install engine, rest of oil system, engine wiring, exhaust system	
4.0 hrs.@ \$125,00/hr.	\$500.00
10 Qts. Valvoline racing oil @\$ 7.85/qt.	\$78.50
2 Bosch ignition coils @ \$56.45 ea.	\$112.90
1 Chassis mounts for fuels pumps	\$275.00

Delete push rod fuel system under car, remove push rod heater system install new Carrera fuel lines under rear of car. 2.0hrs@\$125.00/hr. \$

Install sound deadener in engine compartment 1.0hrs.@\$125.00/hr. \$250.00

Total page three \$3106.40

DEDICATED TO THE PRESERVATION AND RESTORATION OF THE FUHRMANN/PORSCHE FOUR CAM ENGINE

Accounting

Page one total	\$1967.50
Page two total	\$3052.50
Page three total	\$3106.40
Total now due	\$8126.40

please send your check for the above amount to P.O. Box 2928, Jackson, WY 83001. Thank you.

Sincerely

Bill Doyle

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TO STATE OF THE PARTY OF THE PA	694 SYNCHROS	34800	NAME CELL PHONE (2/18/10 YES NO CUSTOMER NOTIFIED
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	LAVE SHIET FORKS	9000	1 REBUILD TRANS 850.00
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YES	6-BOLT RINGS PINION	80000	2 BEAD-BLAST, CLEAR PAINT 27500
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DATE:	SUBLET REPAIRS		hereby acknowledged on this vehicle to secure the amount of repairs thereb. You will not be held responsible for loss or damage to the vehicle or articles left in wehicle in case of fire, helf, or any other cause beyond your control. If a becomes necessary for you to employ a collection agency and/or an attorney to collect this account, I the undersigned agree to pay all court costs plus a reasonable attorney's les end/or collection agency less.
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