

VIN: 962 166

Date project started: 2/26/2008

Date project finished: 12/22/2008

Project Outline (Race preparation, spare parts)

Air jack wand:

Provide air jack hose coupling wand and fittings.

***Battery:**

Modify battery holddown. Fabricate new battery stainless steel rod. Install insulator cover on positive terminal.

Bodywork:

Install all body work. Check fit and clearance of each component. Fabricate shims for nose mounting bracket to improve retaining pin fit and clearance.

***Brakes:**

Inspect entire brake system: Install new front and rear Pagid brake pads. Flush brake fluid from system. Refill with Motul RBF600 brake fluid. Bleed air from system. Test brake pressures.

Brake ducts:

Remove front brake ducts. Refit, align, prep and paint front brake ducts. Reinstall front brake ducts.

***Breather hose:**

Replace engine breather system hose with oil resistant silicon hose.

Clear guard:

Prep areas to be covered with "clear guard" material. Sublet for installation of "clear guard" vinyl on key areas of nose, side pods, and wheel openings/quarter extensions.

Clutch:

Remove original clutch and inspect components. Install new clutch disc and pressure plate assembly. Install with new high strength fasteners and washers.

***Cooling system overflow hose:**

Install new cooling system overflow hose.

Differential:

Source custom machined limited slip differential. Remove transaxle and disassemble. Remove original "spool" final drive. Install new limited slip differential with titanium end caps and new carrier bearings. Shim final drive for proper backlash and bearing pre-load. Install new differential ring gear bolts and lock tabs.

***ECU:**

Remove Engine Control Units from vehicle. Sublet to Bosch AG in Germany for inspection, testing, and reconditioning. Reinstall ECU and connect to main wiring system.

***Fire system:**

Remove original fire system: Install new electronically controlled fire system, with discharge nozzles, plumbing, trigger wires, control module, etc. Fabricate custom spacers for proper fit of fire bottle in original fire bottle mount and clamps. Fabricate custom fire bottle control, wiring harness with sealed connectors.

Spoilers:

Fabricate ¼" and ½" "Gurney" flaps for rear wing. Fabricate one adjustable fence for engine cover. Sublet flaps for powder coated finish. Drill holes and install flap on rear wing.

Labels:

Label dash lights, switches, knobs, etc. as needed.

***Safety harness:**

Remove original safety harness. Install Hans Device compatible safety harness.

***Shift rod padding:**

Disassemble gear shift linkage. Apply foam rubber padding on gear shift linkage to protect driver's arm. Reassemble gear shift linkage.

Shock absorbers:

Remove front and rear shock absorbers from vehicle. Sublet shock assemblies for inspection, testing, and rebuilding. Install rebuilt shock absorbers.

Suspension upgrade:

Inspect suspension system. Disassemble front suspension. Install Canepa Design Suspension upgrade system. The Canepa Design, Porsche 962 front suspension upgrade consists of the following components. 2 custom machined and anodized front steering arms. 2 custom machined and anodized front control arms. 2 custom machined and anodized diagonal caster adjuster rods. 2 custom machined and anodized toe links. 2 custom machined and anodized steering arm mounts. 8 Custom machined spherical rod end spacers. Aircraft grade mounting hardware. The goal of this upgrade is to address the shortcomings of the original Porsche 962 front suspension geometry and design. Our upgrade package dramatically changes the front spindle inclination and front caster angle. These changes allow the new geometry to work together to accurately place the front tire contact patch in the optimum position during turn-in steering and throughout the corner. The changes also improve the overall chassis performance by altering the relationship between the front and rear roll centers, effectively lowering the front roll center and eliminating the tendency to push when entering a corner. Straight line braking stability has been improved, and the rate of camber gain during full suspension travel has been reduced by the new camber specifications. The new front geometry removes the anti-squat feature designed into the original chassis design, and frees up front suspension movement, which provides more suspension compliance during dynamic transitions.

Suspension set up:

Set preliminary chassis settings. Set vehicle on four point vehicle scales. Measure each corner weight. Calculate proper spring rates. Install new 2800 Lb front springs with new helper springs and spring couplers. Remove rear springs. Relocate 2500 Lb front springs to the rear. Fabricate new upper spring perches, and lower spring guides. Set final vehicle ride height. Perform corner weight balance. Perform four wheel alignment; including front and rear toe, caster, camber, etc. Set front and rear anti sway bars to zero preload.

Transaxle:

Drain fluid from transaxle. Remove rear suspension components and body work supports, as necessary to remove transaxle from vehicle. Disassemble transaxle. Clean and inspect all components. Calculate appropriate gear ratios for Laguna Seca Raceway. Install new 1st 16:36, 2nd 20:33, 3rd 23:30, 4th 26:27, and 5th 28:25 gear sets. Install new pinion shaft bearing. Install new output shaft seals. Reassemble transaxle with all new gaskets, seals, and external hardware. Install transaxle with new drive shaft coupling bolts. Assemble rear suspension and bodywork supports. Refill transaxle with SWEPCO 203 Gear oil and EP1 friction reducing additive.

***Transport nuts:**

Sublet for machining of wheel nut blank. Custom fabricate tie down "hoops" and weld to blanks. Sublet for heat treating and zinc plating. Install transport nuts and prepare vehicle for shipment.

Undertrays:

Remove under trays from vehicle. Clean and inspect undertrays. Prep, repaint, and reinstall undertrays.

Wheel nuts:

Provide two complete sets of Canepa Design custom machined and anodized center lock wheel nuts.

Wheel socket:

Provide one Canepa Design custom machined, heat treated, zinc plated wheel socket.

Wheels/tires:

Provide two complete sets of new BBS wheels. Mount and balance two sets of new Goodyear radial racing tires.

Detail:

Wash engine cover and nose. Hand wipe side pods and roof. Wipe down engine compartment and suspension components. Blow and vacuum interior. Clean windows. Polish and wax entire exterior. Touch up nicks and scratches all around.

***Additional modifications, components not included in original outline.**