

**Repairs/Mods to my Barth:**

**1994 Breakaway 30 ft.  
#3864 side entry  
Spartan Chassis  
230 Cummins w/Allison 6 speed**

- 1. Power steering unit**
- 2. Shortened steering drive shaft to steering unit**
- 3. Left rear wheel inner oil seal**
- 4. New left wheel bearings**
- 5. All new wheel studs, 3/4 inch longer (three rears were stripped on one side!)**
- 6. All new brake pads, front and rear**
- 7. New front brake rotors**
- 8. Flushed and bled brakes**
- 9. Replaced front tires**
- 10. Adjusted toe**
- 11. Re-built air assist bag supports to prevent bags from moving around on springs**
- 12. Re-designed air lines to air bags and included gauges, central air point**
- 13. Replaced air pump-to-dryer air line, original was cut thru by edge of oil pan**
- 14. Changed air dryer element**
- 15. Added "Shore Power" socket from inverter in cable storage to plug coach power into the inverter so entire coach has 120 volts while running (not for A/C use)**
- 16. Replaced shocks with Bilsteins**
- 17. Re-built front shock brackets, one had cracked**
- 18. Moved co-pilot's seat up and forward, dinette seat back, still not good!**
- 19. Replaced furnace (two stage) original had burned thru because of blockages in heat runs**
- 20. Added an extra heat run to bring exit air outlet square inches to furnace minimums**
- 21. Replaced all heat ducts with new material**
- 22. Drained and re-filled transmission with synthetic oil, new trans filters**
- 23. Re-set engine valve lash**
- 24. Flushed and refilled coolant system**
- 25. Replaced both engine belts**
- 26. Drained and re-filled diff**
- 27. Replaced alternator (original was 100 amp replacement is 160 amp)**
- 28. Filled dash A/C system with Freon, 2 lbs.**
- 29. Replaced coach batteries with 4 Trojan golf cart batteries, re-built battery box**
- 30. Added small trickle charger for chassis batteries**
- 31. Replaced rear tires**
- 32. Rebuilt access door to electrical panel under the bed**
- 33. Replaced all coolant hoses, heater hoses with Goodyear "green stripe" material**
- 34. Replaced red and amber clearance lights with LED style**
- 35. Replaced tail light with LED style**
- 36. Added relay in low beam head light circuit to eliminate voltage drop, can see now!**
- 37. Changed headlight to H1, H4 style**
- 38. Re-built generator box and straightened frame rails after hitting speed bump**

39. Repositioned muffler outlet from generator to eliminate pipe out the bottom of the generator box
40. Replaced timing belt on generator
41. Relocated Beam vaporizer from generator to firewall to prevent oil build-up
42. Added 50 amp socket on firewall for access to generator output for emergency power
43. Replaced all spring eye bushings and shackles
44. Replaced rear track bar
45. Re-built steering column support to move steering column forward
46. Replaced master cylinder and air chamber, front brake system
47. Re-designed DC distribution/charging system using "Big Boy" contactors and controller
48. Replaced muffler, added heat shield
49. Replaced engine mounts (2 near transmission)
50. Removed and re-cored radiator, rebuilt rear bumper supports, changed overflow tank to driver's side.
51. Removed vacuum venture generator and replace with electric vacuum pump (front) for heater control
52. Removed vacuum venture generator (rear) and vacuum cruise control.
53. Eliminated connectors at rear of coach, spliced all wires and resealed junctions
54. Replaced cruise control with GM electronic unit from K2500 truck
55. Added boost gauge
56. Modified air inlets at rear for increased air flow to engine compartment
57. Added fans to air inlets with coolant switch

**For the hobby things:**

1. Installed Dell desktop computer in storage compartment above driver
2. Added two GPS receivers above the insulation in the top fiberglass nose section
3. Added Sirius Satellite radio receiver next to GPS receivers
4. Added "flip down 10 inch LCD display in front of Sony backup TV for connection to computer and display GPS information while driving
5. Moved "search light" controls to center dash panel above Sony back up TV
6. Added IC-706 "ham" transceiver in area where "search light" control was
7. Added Yaesu FT-8900 VHF/UHF transceiver above IC-706
8. Installed VHF antennas in rear attached to luggage rack
9. Installed 30 foot HF antenna attached to luggage rack with hinge to raise for use and lower for travel
10. Installed router with Sprint wireless card for internet access while traveling

**Ed Raether  
02-14-06**

**Last entry 09-10-07**