Fore Innovations ATS-V Fuel System Installation

SAC - 3/2/2019

- 1. Run fuel tank as low as possible to ease installation.
- 2. Put car on lift with shifter in Neutral and emergency brake not engaged.
- 3. Remove back seat lower cushion.



4. Remove trunk liner in addition to front, rear and left side trim covers. There are attached by clips and some Torx head screws.



- 5. Remove windshield wipers, wiper motor assembly, plastic shroud and wiper cowl.
- 6. Remove right front wheel, tire and rear liner.



7. Remove crossmember.



- 8. Remove exhaust system.
- 9. Loosen differential cooling lines from both sides of driveshaft tunnel.



10. Remove passenger side under body panel.



11. Remove passenger side catalytic converter heat shield.



12. Remove driveshaft guard and heat shield.



13. Mark both ends of driveshaft, then remove driveshaft with carrier bearing assembly.



14. Remove locking clips from differential cooler lines.



15. Remove cooling lines, then plug them to prevent fluid leakage. Fold back toward rear of car and secure out of the way with Bungee cords.



16. Remove two outboard black plastic panels and air deflectors directly in front of rear wheels.



17. Disconnect OEM fuel lines at tank.



18. Disconnect OEM fuel lines in front of tank.



19. Use jack stand to support tank.



20. Remove tank mounting straps on both sides.

21. Tilt rear of tank down, then disconnect one electrical connector on each side.



22. Set tank on ground.



23. Remove OEM fuel pressure sensor and lines.



24. Disconnect pressure and vent lines from OEM fuel basket.

25. Mark location of OEM basket retaining ring, then remove using OTC 310-123 or equivalent fuel pump retaining ring tool.



- 26. Remove OEM basket, taking care not to damage fuel level sensor.
- 27. Transfer level sensor to new basket, using lower mounting bolt holes.



- 28. Cut off OEM fuel level sensor connector and connect existing wires to new ones.
- 29. Install new module in fuel tank, following instructions in this video link:

https://www.youtube.com/watch?v=0gGSe07uzqE&feature=youtu.be

30. Use 90 and 120° hose ends and orient as shown.



31. Reinstall OEM basket retaining ring.



32. Assemble hose ends, then add paint stripes or tape to clearly indicate which line is pressure and which is return.



33. Cut off OEM fuel pressure sensor connector and splice existing wires to new ones. It's best to use heat shrink tubing (not shown). Route these along with the new feed and pressure fuel lines toward the front of the car.



34. Remove plug from existing hole under right hand side of back seat, then pull fuel pump wires up through floor, under back seat, around trunk perimeter and to the new fuel pump controller. Use a rubber grommet to prevent damage where wires pass through floor.



35. Locate the OEM fuel pump control module (FPCM) under the car near the left rear tire. Disconnect connector and splice into violet/black wire on pin 6. Route this wire up through floor, under back seat, around trunk perimeter and to the new fuel pump controller as the trigger for pump #2.



36. Reinstall fuel tank.



37. Reinstall driveshaft with carrier bearing, brace and heat shield.

38. Reconnect differential cooler lines.

39. Fabricate simple mounting bracket and mount to supplied fuel filter mounting bracket. Install with self-tapping screws, then mount check valve and fuel filter along outside of right front frame rail. Add some heater hose to exterior of braided stainless steel lines if desired.



40. Route feed line through check valve and fuel filter, assembling hose ends as required.

41. Route feed and return lines through frame rail into right front fender well.



42. Route feed and return lines through right front fender well and into engine compartment using pre-existing holes.



43. Route fuel lines into engine compartment by EBTCM.



44. Lay the wiper cowl on the floor and mount fuel pressure regulator to the underside as shown.



45. Route fuel system components and assemble hose ends as listed below:

Feed side:

Low pressure fuel pump feed > check valve > fuel filter > T-block > high pressure fuel pump



Return side:

T-block > fuel pressure regulator > alcohol content sensor > low pressure fuel pump return



46. Reinstall wiper cowl, plastic shroud, wiper motor assembly and windshield wipers.

47. Install fuel pressure sensor on fuel pressure regulator.



48. Tee into vacuum/boost source and run to boost sensor switch. Secure with cable ties.



49. Run wires for fuel pressure sensor and boost sensor switch along with fuel feed and return lines, through right front fender and along underside of car.

50. Splice fuel pressure sensor wires into OEM wires, which were originally located above fuel tank.

51. Run boost pressure switch wires into passenger compartment, under back seat and around trunk perimeter.

52. Mount fuel pressure controller on left side of trunk above battery.

53. Connect one boost pressure switch wire to 12 volts through an inline fuse.

54. Wire fuel pump controller as follows:

Battery Power: terminate at 70A battery block fuse

Chassis Ground: terminate at chassis ground

- Pump 1 + large red wire to pump 1
- **Pump 1 -** large black wire to pump 1
- Pump 2 + large red wire to pump 2
- Pump 2 large black wire to pump 2
- **Remote 1** violet/black trigger wire from OEM FPCM pin 6

Remote 2 trigger wire from boost pressure switch



- 55. Turn on ignition, but don't start engine.
- 56. Carefully check entire fuel system for leaks.
- 57. Resolve any fuel system leaks as required.
- 58. Using HP Tuners to monitor low side fuel pressure, set fuel pressure regulator to 58 psi.
- 59. Reinstall remaining covers under bottom of car.
- 60. Reinstall right front wheel well liner, wheel and tire.
- 61. Reinstall trunk trim pieces.
- 62. Reinstall back seat cushion.

63. Have your tuner disable DTC P0089, P0091, P0092, P018B, P018C, P018D, P0231, P0232, P023F and P2635.