

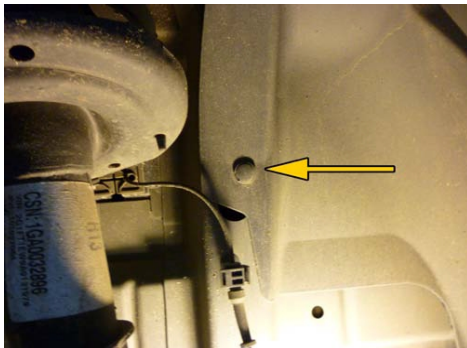


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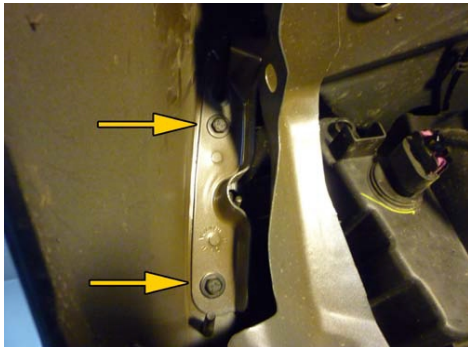
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## Gen5 Camaro LS3 Twin Turbo Kit Install

1. Disconnect battery ground
2. Remove front wheels
3. Remove (5) push pins and (5) #20 torx screws on inner front wheel well liners and remove liners on each side

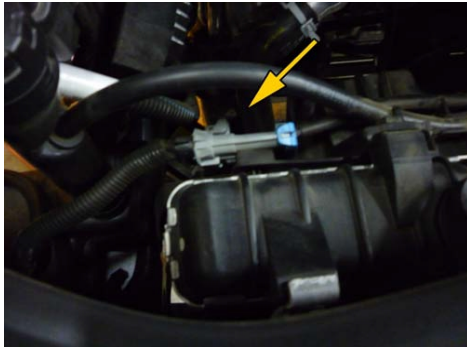


4. Remove (4) 10mm and (1) 7mm bolt that holds fascia at front corners, on each side

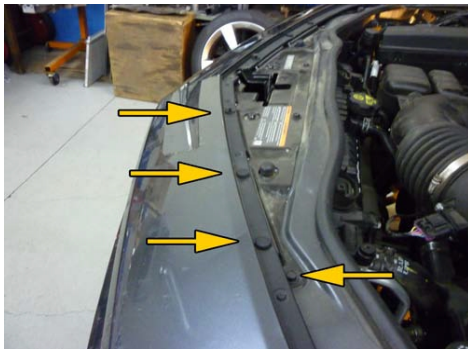


5. Remove (2) 10mm bolts at the bottom of the valance

6. Disconnect head light wire loom, connector is found under passenger headlight

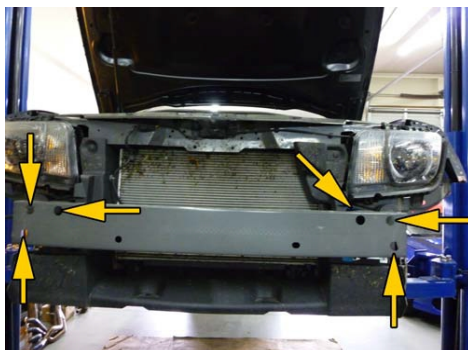


7. Remove (6) push pins and (2) bolts along the top of fascia.

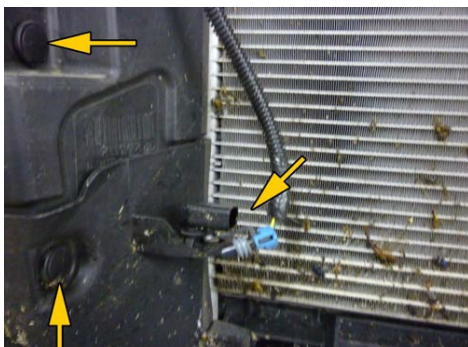


8. With two people, gently lift fascia forward and remove whole fascia assembly

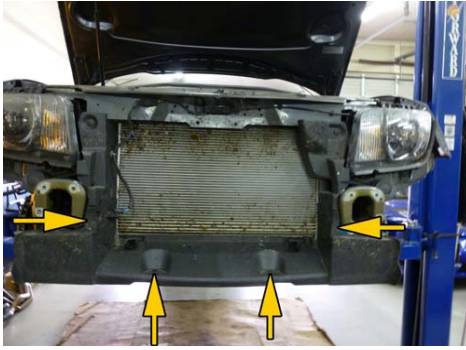
9. Remove (6) bolts holding metal bumper and remove bumper



10. Disconnect outside air temp sensor (*Picture reflects steps 10-12*)

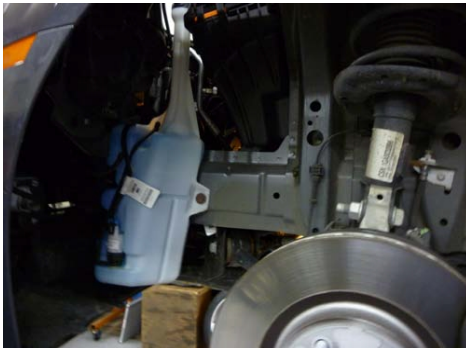


11. Remove (4) push pins from lower radiator ducting and remove ducting



12. Remove (4) push pins in remaining upper radiator ducting (2pcs) and remove ducting

13. Remove washer bottle (this will not be reused but supplied with a replacement)



14. Remove rear O2 sensors and unbolt exhaust flanges at the manifolds.

15. Remove floor brace

16. Remove exhaust mid pipes

17. Intake Removal: Disconnect and remove mass air flow sensor, save for reinstall.



18. Remove 2 nuts holding air box assembly

19. Loosen 2 clamps holding intake pipe

20. Remove crankcase vent pipe from intake pipe and valve cover, install supplied rubber plug onto valve cover nipple using supplied clamp.

21. Lift air box straight up and separate from intake pipe

22. Remove intake pipe and air box assembly

23. Remove all connections to intake manifold (fuel lines, fuel injectors, map sensor, evap, brake booster- any electrical connectors).

24. Loosen intake manifold bolts, leave in manifold, and leave last four bolts in the manifold.

25. Lift manifold up and bring forward gently, do not force, check for obstructions and continue to remove manifold

26. Remove oil sending unit from rear of valley pan



27. Insert supplied adapter & tighten, mark closest flat to left side valve cover, remove, drill and tap to 1/8" npt. Install adapter into valley pan with 1/2" x 90° oil feed fitting installed (see photo) reinstall sending unit but do not plug in yet. (see photo)



28. Remove (4) 10mm bolts holding the fuel rail on the intake manifold. Install the supplied injectors.



29. Install -3AN oil feed hose onto 90° fitting installed in step 27. Be sure tee is flat and the hose with the heat protector sleeve goes towards the right side. (see photo)

30. Locate the left side (driver's side) turbo assembly. Install front O2 sensor after removing it from the OEM converter assembly.



31. Install OEM manifold to converter gaskets onto left side turbo assembly. Install O2 extension harness from the rear of the heads and route it towards the downpipes. The turbo assembly installs from the bottom. Raise it to the exhaust manifold and slip the downpipe portion into the stock band clamps, holding the assembly in place. Start both nuts onto the exhaust manifold studs, align and torque to **35ft/lbs**. Install oil feed supply line and tighten.



32. Like the left side, the right side (passenger side) reuses the OEM gasket, installs from the bottom, start oil feed once nuts are started on studs. Use the OEM exhaust band clamps to slide on to the turbo downpipe. Tighten the manifold to adapter nuts to **35ft/lbs**. Plug in O2s and tighten oil feed on turbocharger. Secure the oil feed line to the turbo.

33. **Installing oil drain assembly and hoses-** the drains are shipped preassembled with the exception of the drain plates. You'll need to install the drain hose onto the passenger oil drain plate first. Using the provided gaskets and bolts install the drivers side drain flange with the drain plate on the drain assembly first. The long – 10AN hose goes forward. Be careful not to twist the lines while tightening. (see photo)



34. Reinstall intake manifold, the vacuum hose for the power brake booster must go over and behind the oil sending unit. It's easier if you leave all the intake bolts out except for the 4 rear until the manifold is installed. Torque the manifold to 89 in/lbs.

35. Plug in the injectors and fuel inlet hose and lock

36. Change plugs to a NGK TR6, Stock# 4177 and gap to .025"

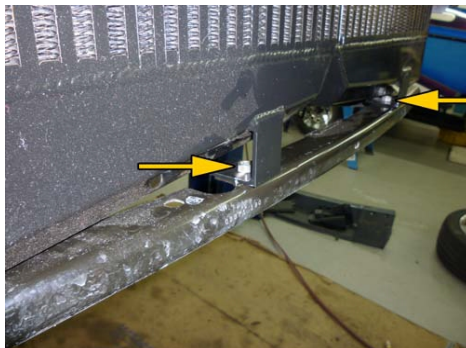
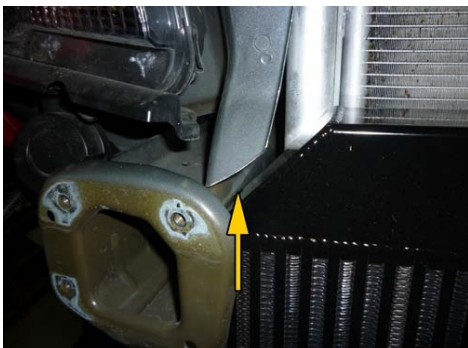
37. Install vacuum log onto brake booster hose. (see photo)



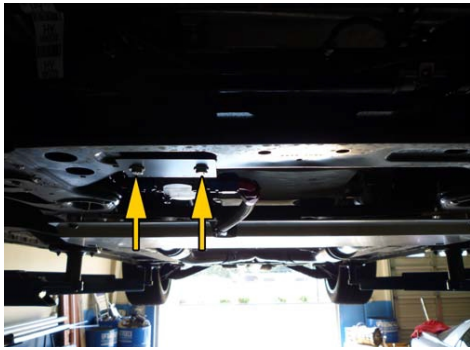
38. Remove passenger side valve cover. Drill and tap right front corner for oil pump return. Use a 9/16" drill bit and a 3/8" NPT tap. (see photo)



39. **Intercooler installation-** Cut sheet metal behind passenger side bumper. Mount the intercooler for clearance and install with (2) 5/16" x 1/2" nuts & bolts. (see photo)



40. Installation of scavenging pump- Using the oil pump bracket as a template. position oil pump and mark holes. Drill 1/4" and install with (2) 1/4" x 3/4" bolts, washers and nuts. (see photo)



41. Install -10AN hose from pump to forward fitting on drain tank (see photo)



42. Install -8AN hose to pump out to valve cover (see photo)

43. **Drivers side intercooler hot side pipes-** Install 2-1/2" elbow onto intercooler with (2) #40 clamps. (see photo)



44. Install 2" x 2-1/4" coupler onto driver's side turbo with (2) #36 clamps. (see photo)

45. *This picture is for reference only. Follow the directions taped to intercooler ducting.*

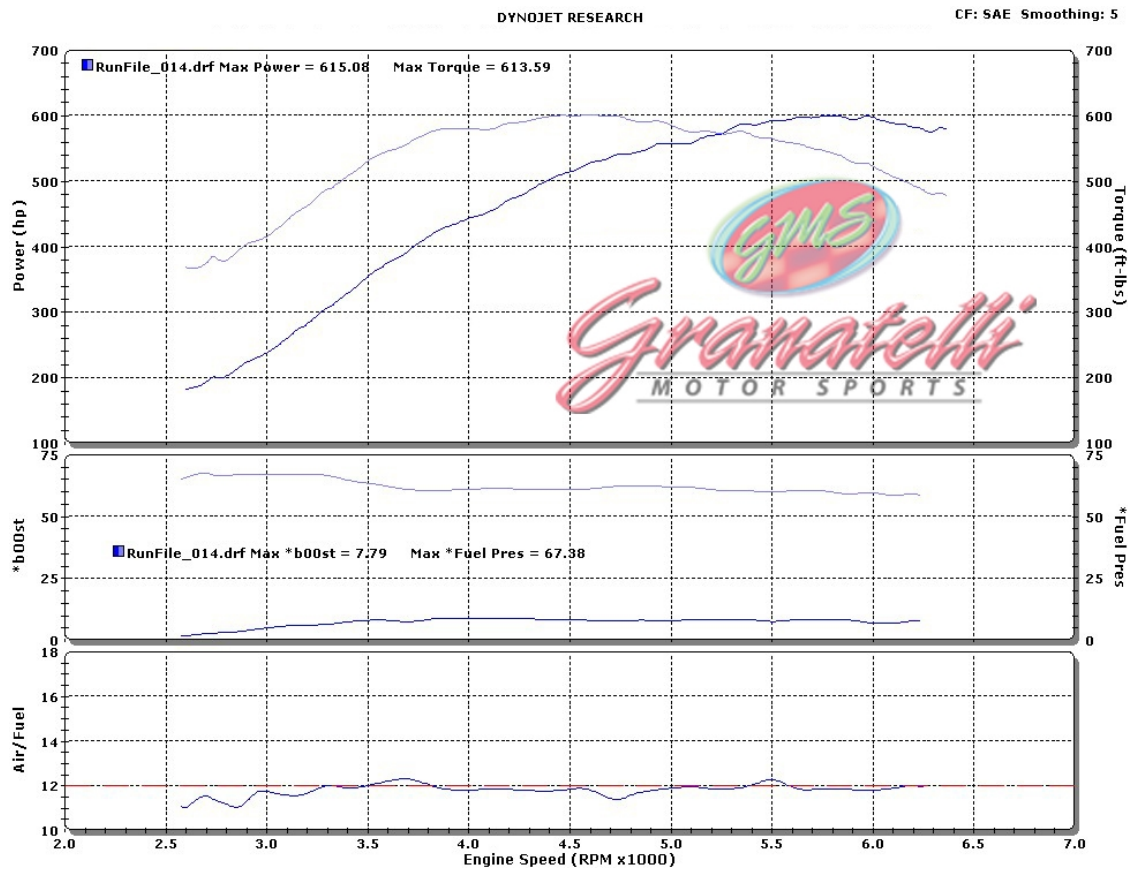




46. Install 2" pipe # from top onto turbo coupler. (see photo)
47. Install 2-1/2" pipe # onto intercooler and through to inside of frame. (see photo)
48. Install 2-1/2" to 2" hose coupler onto both pipes and tighten (6) clamps. (see photo)
49. Note w/g inlet different for M6
50. **Passenger side intercooler ducting hot side-** install 2-1/2" elbow onto intercooler; short leg to intercooler side. (see photo)



51. Install 2" x 2-1/4" hose onto 2" pipe #? turbo side of pipe. (see photo)







52. Install 2" pipe # through outer wheel well and align with turbo. Some slight bending of the a/c lines may be necessary. (see photo)

53. Slide 2" coupler off of pipe onto turbo pipe. It should be pointing straight forward between AC hoses and frame rail. (see photo)

54. Install 2-1/2" to 2" coupler onto long end of 2-1/2" pipe #?. Install pipe through opening and onto 2" pipe from previous step. Align pipe and tighten (6) hose clamps. (see photo)



55. While pushing down on the 2 ½ 90° elbow on the drivers side of the intercooler, route the 3-1/2" intercooler pipe in between the lower frame horn and elbow, this piece will then slide in from the top into the bottom. (see photo)



56. Tighten clamps on the intercooler outlet.

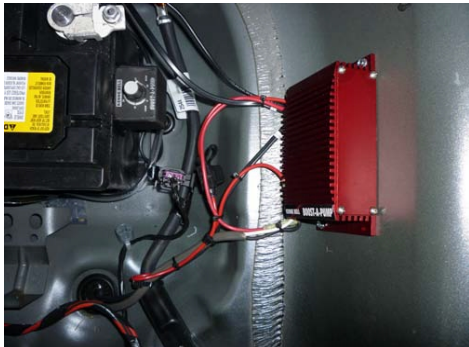
57. Install 4" to 3 ½" transition hose onto the throttle body, install maf pipe from throttle body to lower intercooler pipe installed earlier and tighten. Make sure the pipe doesn't contact the hoses or belts. (see Photo)



58. Install maf sensor and BOV.

59. Slide silicone elbow on other end of pipe previously installed. (see photo)

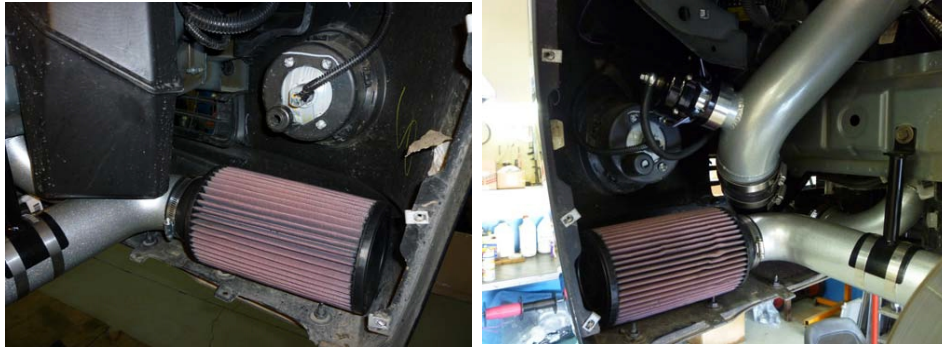
60. Install boost-a-pump in trunk. See photo & BAP instructions. Install vacuum log into hose from intake to PBC. Install sensor from BAP into log and wire. (see photo)



61. **Install air inlet tubes**- its easier if the front suspension is loaded (unless the car is lowered) install 90° silicone elbow onto turbo, short side goes onto the compressor, use #44 clamps provided. The shorter of the two brackets is the driver's side, bolt them to the sub frame. Unbolt the sway bar links and slip pipe from forward towards rear to install. Use (2) 44 clamps to hold the bracket and tighten at turbo and support bracket (process is the same on passenger side)



62. Install K&N air filter. (see photo)



63. Same process as right side

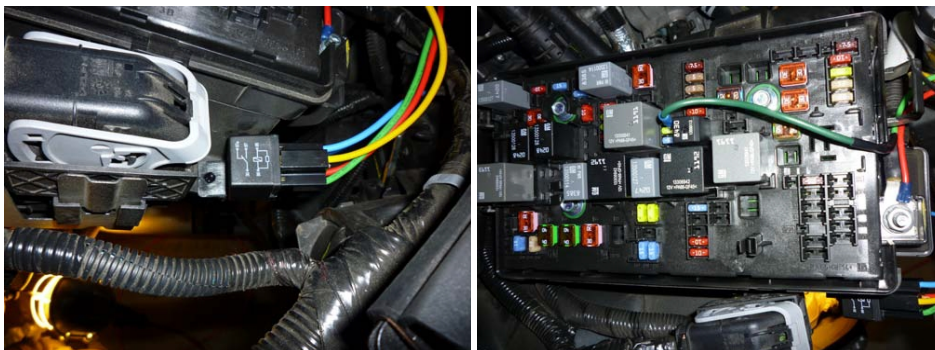
64. Reinstall sway bar using spacers provided. We recommend grinding or cutting the remaining stud after tightening the sway bar links, they'll rub on the inlet pipes if you don't. (see photo)



65. Plug in air temp sensor and reinstall front bumper cover. (see photo)

66. Reinstall front end, some adjustment of air filters will be necessary.

67. **Wiring of oil pump relay-** use *IGN FUSE#19* (GREEN) 20amp and #85 BLUE (ground; see step 68).

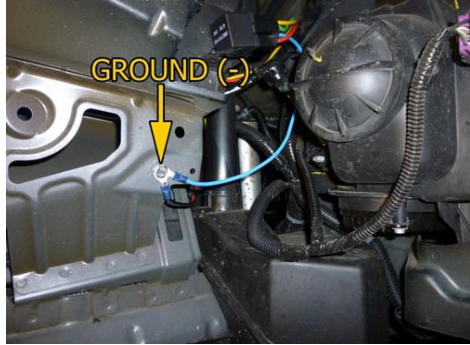


68. Red goes to battery 12V+





69. Light blue from relay to ground (-)

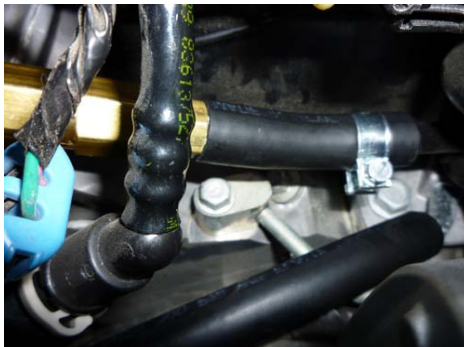


70. Yellow to pump positive (+)

71. Black from oil pump to ground (-) (*same as step 68*)

72. Run boost hose from log to brass tee and then to w/g, if an aftermarket boost controller is added, follow instructions provided with that gate.

73. Install supplied check valve from intake to valley pan nipple. Arrow goes towards intake. *Gently* tighten the clamp on the intake side, *remember*, its plastic (see photo)



74. Install supplied vented oil filler cap.

75. Once you're all finished and ready to start it for the first time, take a moment to double check a few things- make sure the transmission cooler lines aren't touching the wastegate dump tube on the passenger side and also check the steel braided oil return line to the oil pump isn't touching the trans cooler lines either.

76. If you want but isn't necessary you can trim the lower corners of each plastic wheel well liner so they lay flat. (see photo)





77. Reconnect battery.

78. If your kit was purchased with the optional flash tune flash it at this time. Check for leaks and be sure the oil pump is working and there are no exhaust leaks.

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limited warranty), have the RGA number clearly marked on the top and two sides of the box and be insured for full replacement value. We recommend using [UPS](#) or the [UPS Store](#) for shipping. In-bound freight is always customer's responsibility. All returns are subject to a restocking fee up to 25%. The balance will be returned in the form of a check or may be applied as credit towards another purchase. Special orders and electrical components are not eligible for returns. For warranty registration, go to: [www.GranatelliMotorSports.com/warranty.asp](http://www.GranatelliMotorSports.com/warranty.asp).

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