

Z1 DE SUPERCHARGER KIT INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2003-2004	Nissan 350Z (Non-Revup)
2003-2004	Infiniti G35 Coupe (Non-Revup)
2003-2004	Infiniti G35 Sedan (Non-Revup)

PROLOGUE:

Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation. If unfamiliar with any of the concepts outlined in this instruction, we recommend the installation be completed by a qualified professional.

WARNING!

Extreme caution should be taken when performing maintenance or performance upgrades to your vehicle. Please observe and abide by any Warning or Caution labels placed on the various components and tools used when servicing your vehicle. If you have any questions regarding installation or the various components included with the Z1 Motorsports DE Supercharger Kit, consult with a Professional Mechanic, or contact Z1 Motorsports for more information.

PARTS INCLUDED:

The entire Z1 Supercharger kit will arrive in 2 boxes. Each box will be labeled “Box 1” or “Box 2”. Throughout the instructions, pieces of the kit will be called out to be located and marked with their item number in parenthesis (#X). Use the chart below to help locate each item.

Item	Quantity	Description
BOX 1 – Contains BOX B, POWER STEERING COOLER RELOCATION KIT, and ASSORTED ITEMS		
1	1	Z1 Intercooler
2	1	Supercharger Pipe Set
3	1	Supercharger Coupler Set
4	1	Z1 13 Row Procooler
5	1	Rotrex In-Line Priming Bulb
BOX B- Hardware Tray		
6	5	Supercharger Pulley Spacer
7	10	Spring Clamps (Supercharger Cooling System)
8	2	Banjo Fitting, M22 to 8mm (Supercharger Cooling System)
9	2	Banjo Bolt, M22 x 1.5 (Supercharger Cooling System)
10	4	M22 Aluminum Crush Washer (Supercharger Cooling System)
11	1	Banjo Fitting, M10 to 8mm
12	1	Banjo Bolt, M10 x 1.0
13	1	M6 x 1.0 Socket Head Screw, 16mm (Main Supercharger Bracket)
14	4	M6 x 1.0 Socket Head Screw, 55mm (Main Supercharger Bracket)
15	5	M10 x 50mm Socket Head Screw (Supercharger Pulley)
16	4	M8 x 1.25 Flanged Hex Head Screw, 10mm (Intercooler Bracket)
17	1	1" ID Cushioned P-Clamp (Coolant Crossover Hose)
18	2	M6 x 1.0 SEMS Bolt, 25mm (Supercharger Reservoir Bracket)
19	3	M5 x 0.8 Button Head Screw, 8mm (Supercharger Reservoir Bracket)
20	2	5/8" ID Cushioned P-Clamp (Supercharger Cooling Hose Support)
21	1	5mm Vacuum Line Clamp (Bypass Valve Barb)
22	4	4mm Vacuum Line Clamp (Tee Fitting and Manifold Port)
23	10	Zip Tie
24	1	Tee Fitting (Fuel Pressure Regulator to BPV Line)
25	1	Z1 Radiator Cap
26	1	Supercharger Oil Filter P-Clamp
27	1	90° NPT to Barb Fitting (BOV Fitting)
28	1	M8 x 1.25 to 8mm Hose Barb Fitting (Coolant Overflow Tank)
29	1	8mm Aluminum Crush Washer (Coolant Overflow Tank)
30	2	10mm Copper Crush Washer (Coolant Overflow Tank)

31	2	Spring Clamp (Coolant Overflow Tank)
32	1	M6 x 1.0 Flanged Nut (Oil Filter Mounting)
33	1	M6 x 1.0 Flanged Bolt, 25mm (Oil Filer Mounting)
POWER STEERING COOLER RELOCATION KIT		
34	10'	Power Steering Hose
35	4	Hose Clamp
36	1	3/8" Cushioned P-Clamp
37	1	5/8" Cushioned P-Clamp
38	1	6AN Straight Barbed Union Push Lock Fitting
39	2	M6 x 1.0 SEMS Bolt, 25mm
BOX 2 – Contains Box C, D, E, F, G and ASSORTED ITEMS		
40	1	Supercharger Oil Reservoir
41	1	Rotrex Supercharger Oil Filter
43	1	Turbosmart RacePort
44	1	Z1 Bash Bar
BOX C – Supercharger Hose Clamps		
45	1	Supercharger Outlet Hose Clamp (Smaller)
46	9	Charge Pipe Hose Clamp (Larger)
BOX D – Supercharger Pulley/Belt Kit		
47	1	Supercharger Pulley (Size dependent on selection)
48	1	Supercharger Drive Belt
49	1	Uprev MAF GT (Only 75mm Pulley Option)
BOX E – Hose and Bracket Kit		
50	1	Coolant Overflow Hose
51	8'	5/8" PCV Hose
52	2	Black Hose Clamp (PCV Hose)
53	120"	4mm Vacuum Line (BOV Vacuum Line)
54	25'	8mm Hose (Supercharger Cooler Hose)
55	1	Intercooler Bracket Kit
56	1	Oil Cooler Bracket Kit
BOX F – Supercharger Unit and Idler Pulley/Bracket Kit		
57	1	Supercharger Assembly
58	1	Rotrex Fluid, 1L
59	1	Oil Control Solenoid Relocation Bracket (Includes Hardware)
60	1	Single Idler Bracket
61	1	Dual Idler Bracket
62	3	Idler Pulley (Sizes will Depend on Main Supercharger Pulley Size)

63	2	60mm Ribbed Pulley
BOX G – 350Z/G35 Intake, Coolant Overflow and Oil Reservoir Bracket		
350Z		
64	1	Supercharger Intake (350Z 3.5" Only)
65	1	Supercharger Intake Coupler (350Z 3.5" Only)
66	1	Recirculation Hose (350Z 3.5" Only)
67	4	Large Hose Clamp (Intake)
68	2	Air Filter Joiner (Filter and Turndown Coupler)
69	1	350Z Coolant Overflow Tank
70	1	350Z Coolant Overflow Tank Hose
71	1	M6 Rubber Isolating Mount (Coolant Overflow Tank)
72	1	M6 Isolating Mount Insert (Coolant Overflow Tank)
73	1	Air Filter
74	1	350Z Hood Strut Kit
75	1	350Z Supercharger Reservoir Bracket
76	2	M6 x 1.0 Flanged Bolt, 25mm (Supercharger Reservoir Bracket)
77	2	M6 Rubber Isolating Mount (Supercharger Reservoir Bracket)
78	2	M6 Isolating Mount Insert (Supercharger Reservoir Bracket)
G35		
79	1	Supercharger Intake (G35 3.5" Only)
80	1	Recirculation Hose
81	1	Air Filter Joiner
82	3	Large Hose Clamp
83	1	G35 Coolant Overflow Tank
84	1	Coolant Overflow Tank Hose
85	1	Air Filter
86	1	G35 Supercharger Reservoir Bracket (Comes with necessary Hardware)
Catch Can Relocation		
87	1	Z1 Catch Can Feed Hose
88	1	Catch Can Bracket

TOOLS REQUIRED:

- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Ratchet
- Ratchet Extension(s)
- Assorted Metric Sockets
- Torque Wrench
- Screwdrivers
- Hose Cutter
- Trim Removal Tool
- Pliers
- Body Saw or Die Grinder
- Assorted Metric Wrenches
- Assorted Metric Allen/Hex Keys
- 12mm Allen/Hex Bit
- SAE 5/16" Allen/Hex Key
- SAE 1/2" Wrench
- Silicone Spray
- File/Deburring Tool
- Long Funnel or Small Fluid Pump
- Marker
- AN Wrenches
- Thread Sealant

SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Always turn the ignition to the OFF position and disconnect the NEGATIVE battery terminal.
- Always use properly rated jack stands when working under your vehicle.
- Always keep limbs and parts away from moving drivetrain parts.
- Only operate drivetrain in safe space and well-ventilated areas.

BEFORE YOU BEGIN:

Remove contents from Z1 Motorsports DE Supercharger Kit and verify that ALL necessary hardware is present.

The following installation manual will outline the procedure for installing the Z1 Supercharger Kit on a relatively stock 350Z/G35 besides some fueling upgrades and an engine oil cooler. It will not cover the steps for installing the necessary fueling components or engine oil cooler as those will change depending on the options chosen and what fuel system you have. This installation manual cannot possibly cover every step or account for the other modifications you may have. You will most likely need to use some leeway to adjust these instructions to fit your vehicle.

For those using the Smallest Pulley with the Z1 Supercharger Kit, you will need a fueling upgrade. For 450hp and 500hp levels, we recommend at least [1000CC Injectors](#) and a drop-in fuel pump. For 550hp and 600hp+ levels, you will most likely need a [Fuel Return System](#).

DO NOT spin the Supercharger Unit prior to installation and before filling it with fluid. The Supercharger Priming Procedure MUST BE PERFORMED before starting the engine. Failure to follow the Priming Procedure may result in permanently damaging the Supercharger Unit.

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Section One: Disassembly

Tools Needed:

- Ratchet
- Assorted Metric Sockets
- Assorted Metric Wrenches
- Flat-head Screwdriver
- Trim Removal Tool
- Pliers
- Hydraulic Jack
- Jack-Stands

PROCEDURE:

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Loosen but do not remove the lug nuts on the front wheels.
3. Locate proper jacking points on the vehicle's chassis (refer to vehicle's Owner Manual). Raise and support vehicle using jack and jack stands.
4. Remove the front wheels.
5. Raise and support the hood of the vehicle.
6. Remove the Undershroud from the vehicle if applicable and set aside. *Figure 1.*



Figure 1

7. Remove plastic clips and remove the Front Fender/Fender Liners to reveal a mounting screw on each side of the vehicle which mounts the corner of the Bumper Fascia to the vehicle. Remove each Mounting Screw.
Figure 2.

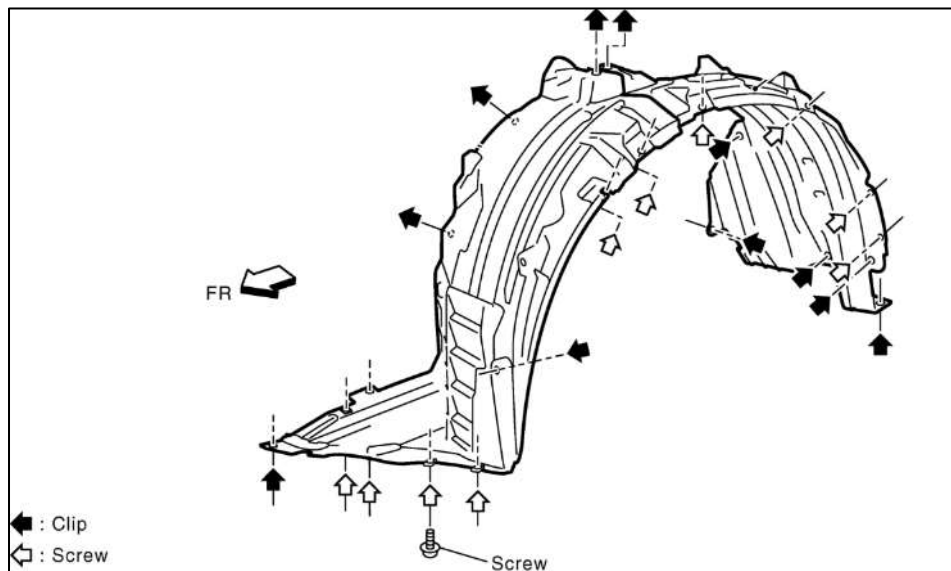
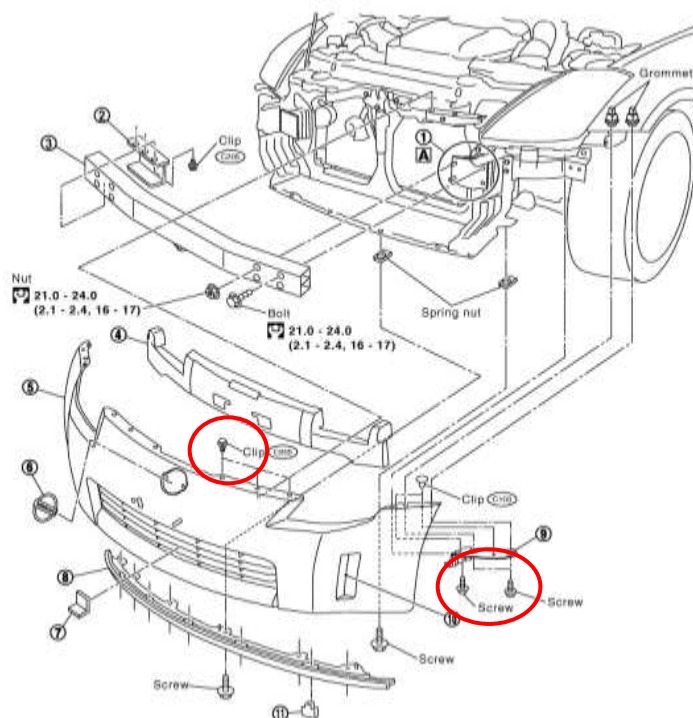


Figure 2

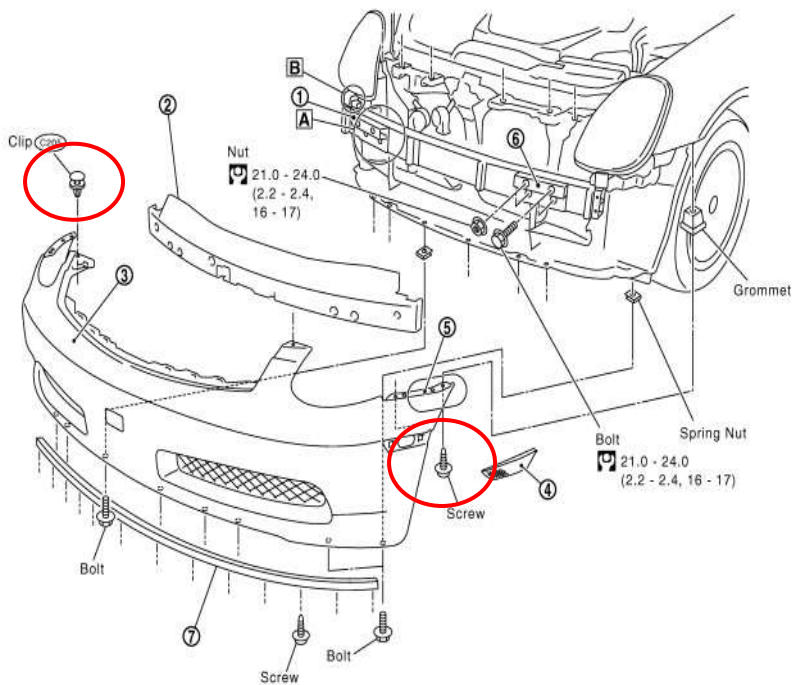
8. **G35 MODELS:** Disconnect the Front Bumper Side Marker Harnesses.

NOTE: Refer to *Figure 3* below for locations of Bumper mounting hardware and Core Support Clips for applicable models.

350Z



G35 Coupe



G35 Sedan

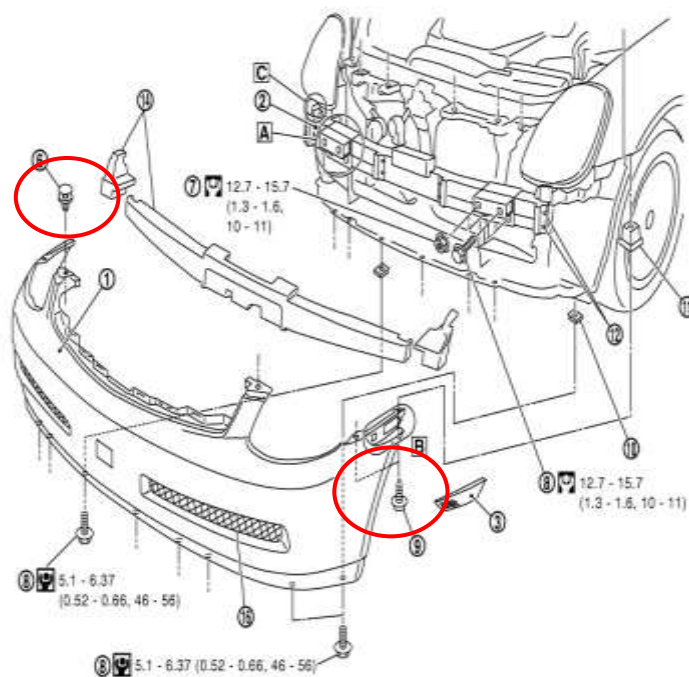


Figure 3

9. Remove plastic pop clips securing the upper Bumper Fascia to the vehicle at the Radiator Core Support. *Figure 3.*
10. With a light pull motion, carefully disengage the Bumper Fascia from the clips on the vehicle just below the headlight. Remove Bumper Fascia and set aside.
11. Remove the Foam Impact Absorber in front of the Crash Bar. *Figure 3.*
12. Remove the (4) four bolts and (4) four hex nuts securing the Front Crash Bar to the chassis, retain the hardware as it will be reused. Remove Crash Bar. *Figure 3.*
13. **G35 Owners:**

- a. Remove the (4) four screws that secure the Headlights to the Vehicle. *Figure 4.*

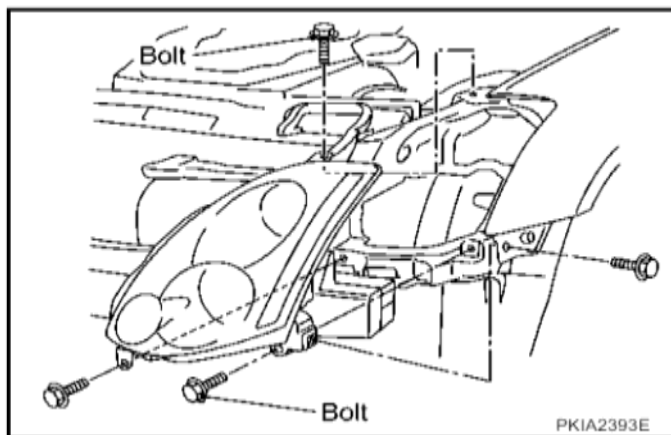
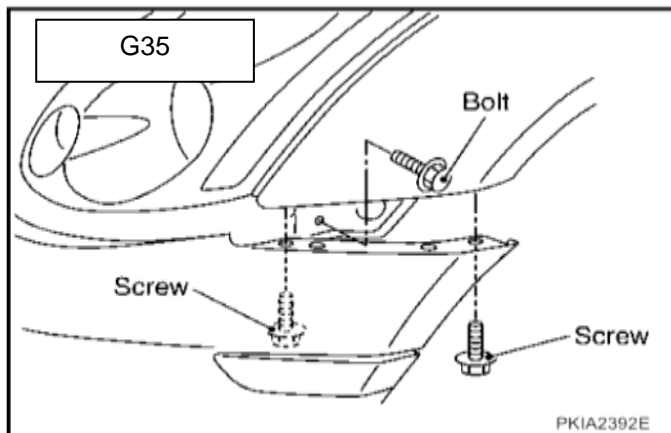


Figure 4

- b. Disconnect the wiring harness to each headlight.
- c. Once disconnected, pull headlight towards the front of the vehicle, and remove.

NOTE: Use *Figure 5* below as reference for Steps 14-16.

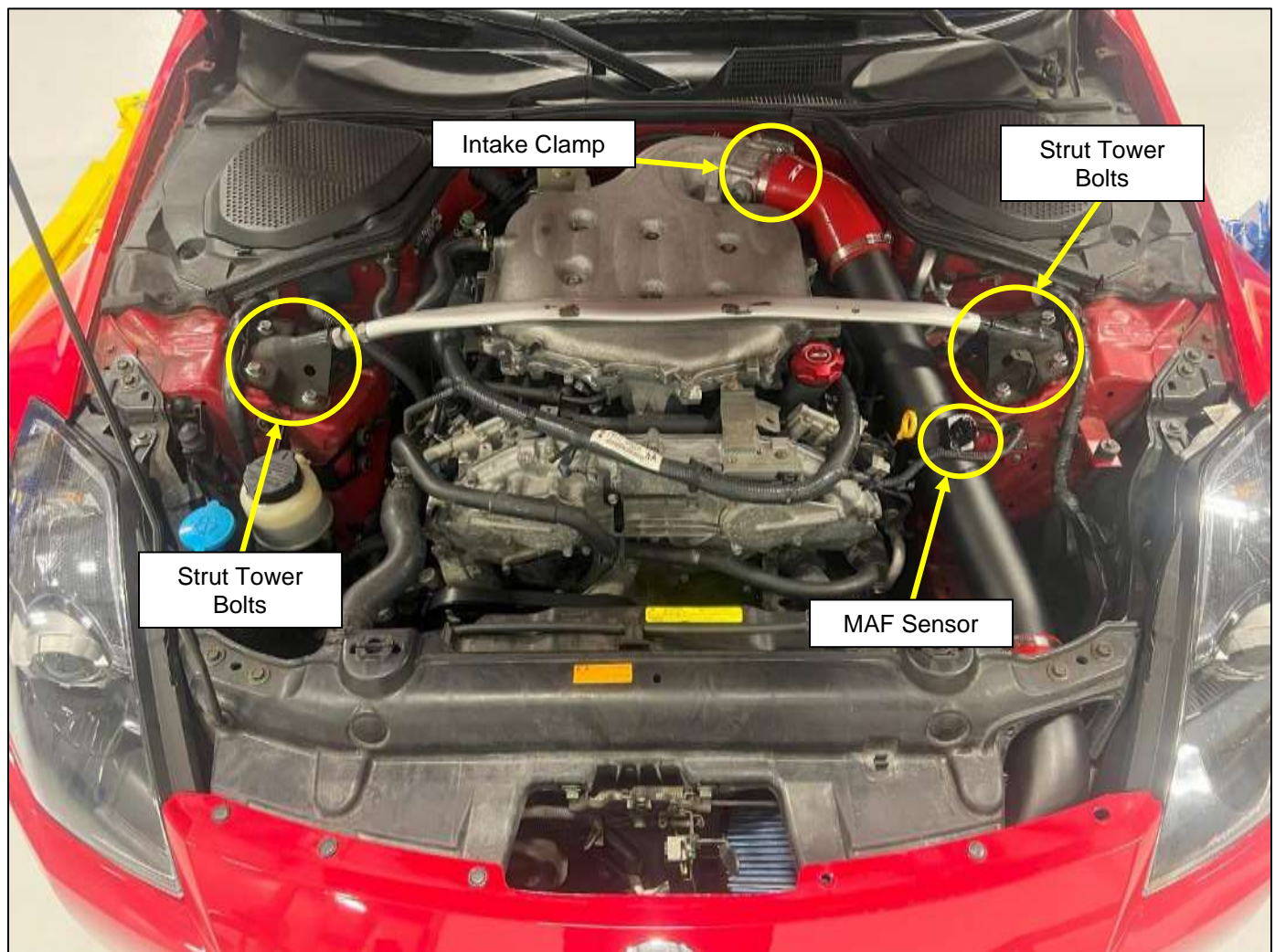


Figure 5

14. Remove the (8) eight bolts that secure the Strut Tower Brace to the chassis if your vehicle is equipped with one.
15. Loosen the Hose Clamp that secures the Air Intake to the Throttle Body.

16. Disconnect and remove the OE Air Intake from the Vehicle. 350Z and G35 Models will vary slightly. *Figure 6.*

NOTE: Disassembly of Aftermarket Intakes may vary.

- a. Remove the Clips and slide the Air Duct Inlet towards the front of the Vehicle. Disengage the clips and Air Filter Box.
- b. Disconnect the MAF Sensor Harness from the Intake Tube.
- c. Disconnect the PCV Hose from the Intake Tube.
- d. Remove the bolts securing the OE Airbox and Intake Tube from the vehicle. Circled below.

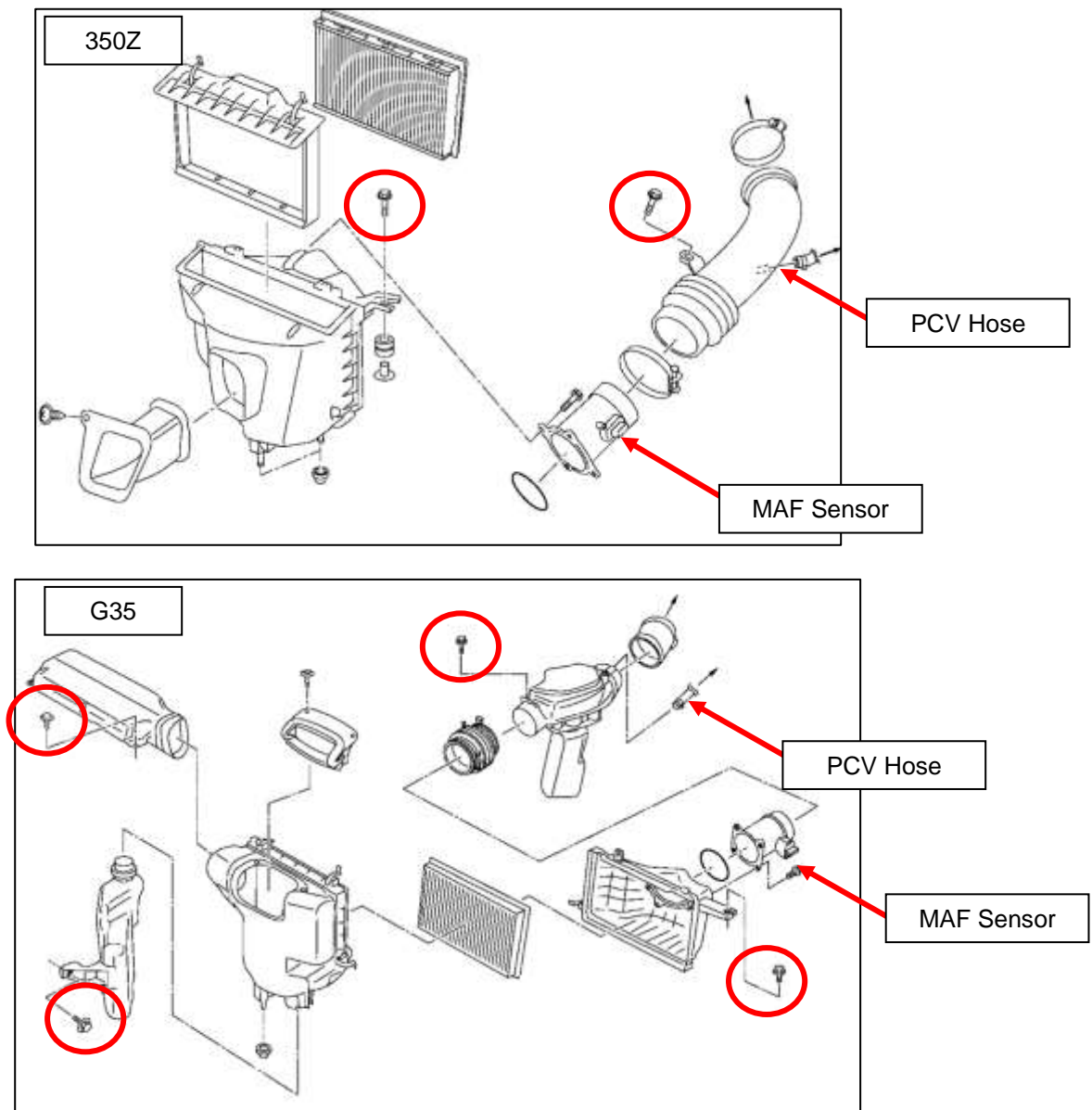


Figure 6

17. Remove the rear PCV Hose from the rear of the Valve Cover. *Figure 7.*

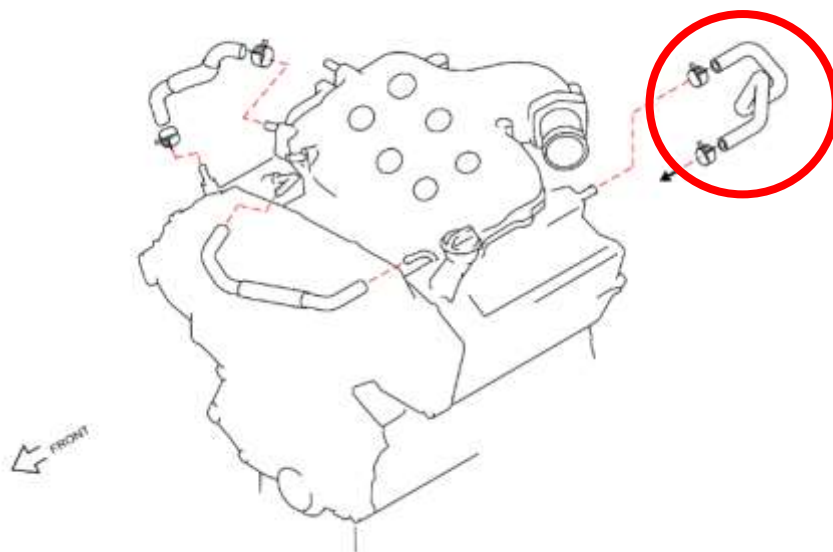


Figure 7

18. Drain and collect coolant from the vehicle. There is a drain plug on the passenger side of the Radiator. *Figure 8.*

NOTE: CAUTION, COOLANT MAY BE HOT IF ENGINE WAS RECENTLY RAN.

19. Disconnect the Coolant Reservoir Tank Hose from the Reservoir and the Radiator. *Figure 8.*

20. Remove the (1) one bolt that secures the Coolant Reservoir to the Chassis. Retain this Hardware. *Figure 8.*

21. Remove the Coolant Reservoir from the Vehicle.

22. Remove the (1) one bolt securing the Coolant Reservoir Bracket to the Chassis and remove the Bracket. *Figure 8.*

NOTE: The bracket may have an extra bolt for a ground wire, if applicable remove this bolt and reinstall the ground wire once the bracket has been removed.

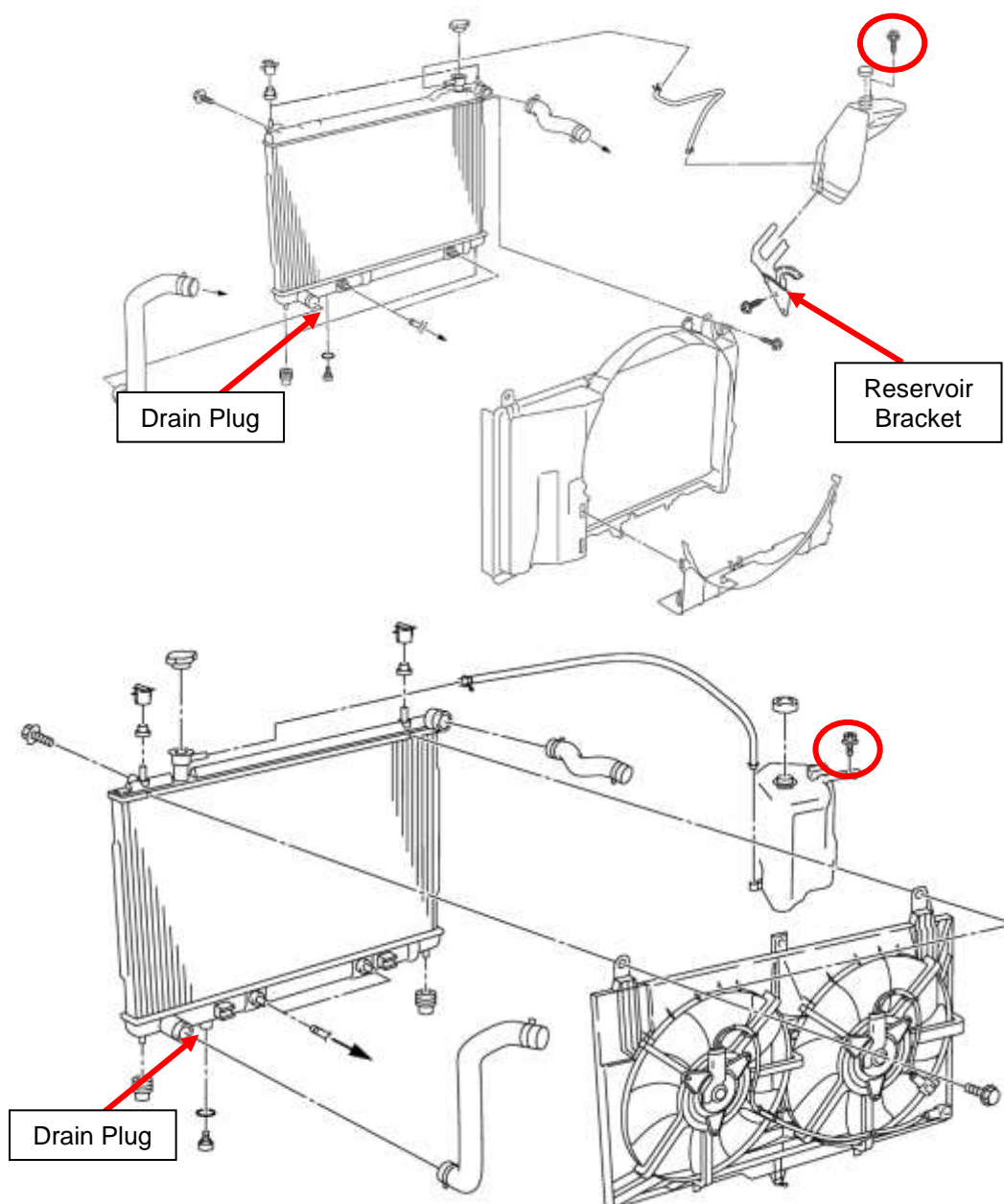


Figure 8

23. Loosen the (4) four bolts on the Upper Idler Pulley if your Vehicle is equipped with it, it is easier to do with the belt tensioned. Some later model DE Engines do not have this Pulley. *Figure 9.*

NOTE: *Figure 9* below shows the Drive Belt removed, **DO NOT** remove the Drive Belt before loosening all (4) four bolts on the Idler Pulley.

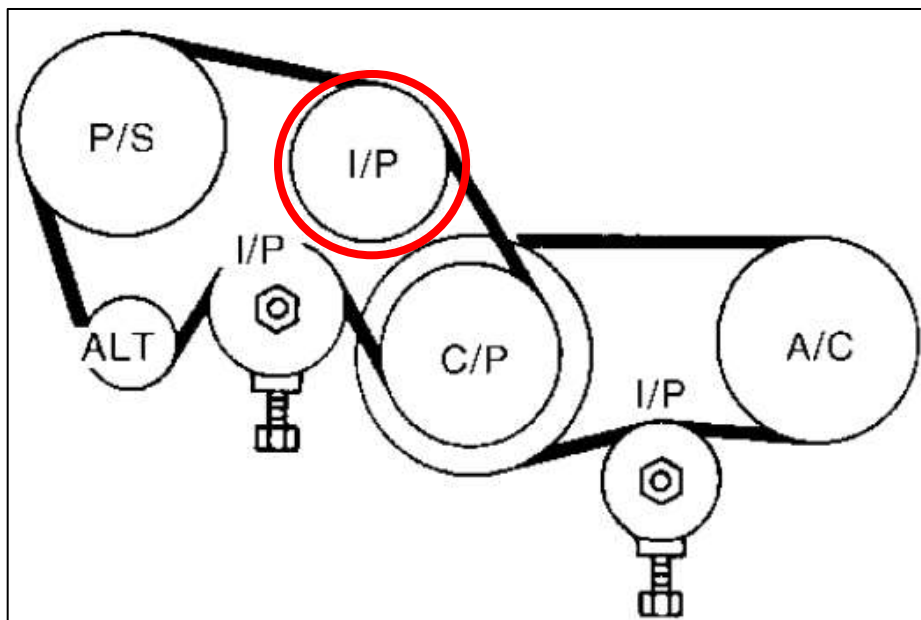


Figure 9

24. Loosen the Bolt on the Tensioner Pulley. *Figure 10.*

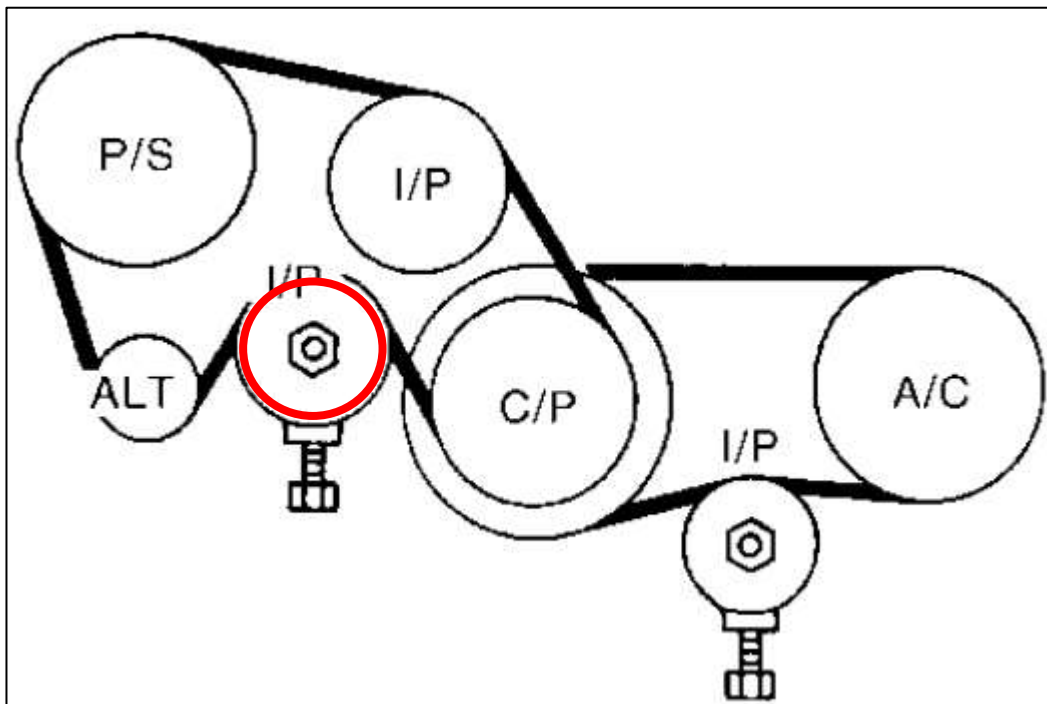


Figure 10

25. Loosen the Tension of the Pulley by adjusting the Screw beneath the Pulley. *Figure 11.*

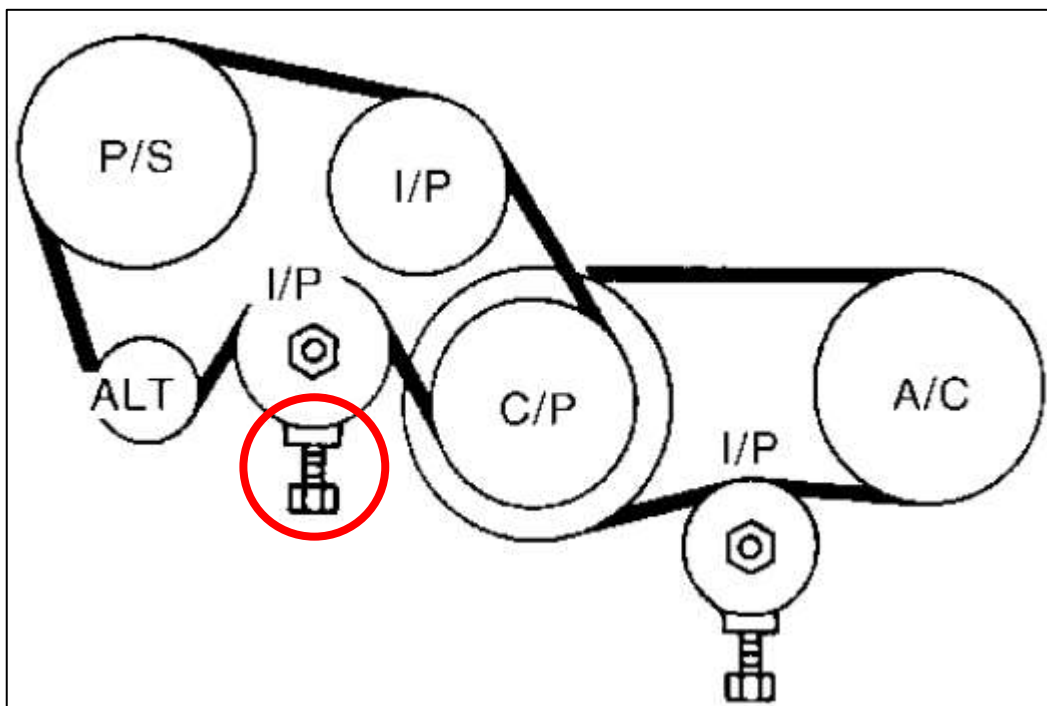


Figure 11

26. Remove the OE Drive Belt.

27. Remove the Idler Pulley that was loosened in *Step 23. Figure 12.*

NOTE: Late Model DE Engines may not have this Idler Pulley. Disregard this Step if your vehicle is not equipped with this Pulley.



Figure 12

28. If you have not replaced your Spark Plugs recently, it is recommended to do so at this time. For forced induction applications like the Z1 Supercharger, we recommend spark plugs to be gapped at 0.032". Be very careful when handling the Spark Plugs, do not drop them. When installing Spark Plugs, check them for any cracks. If your Spark Plugs are cracked, replace them with new ones.

29. If you have not already installed upgraded fueling components (injectors, fuel pump, etc.), do so at this time. Follow the instructions provided with your fueling components for proper installation.

Section Two: Clearancing

Tools Needed:

- Body Saw or Dremel
- File or Deburring Tool
- Touch-up paint/ Spray Paint
- Ratchet
- Metric Sockets
- Allen/Hex Keys

Parts Needed:

- Power Steering Cooler Relocation Kit (#34-39)
- Oil Control Solenoid Bracket (#59)
- Hood Strut Kit (350Z Only) (#74)
- Catch Can Relocation Kit (#87-88)

PROCEDURE:

1. **G35 Owners:** The AC Lines on the Driver Side will need to be bent out of the way to clear the Intake Piping for the Supercharger. Carefully Grab and bend the Lines away from the opening in the Core Support to make room for the intake piping. They may have to be bent more later if there is not enough clearance for the Intake Piping. *Figure 13.*



Figure 13

2. **G35 Owners:** The Driver Side Core Support will need to be opened up and enlarged to allow the Intake piping to fit. We recommend using a body saw to cut the Core Support. If you want a very clean installation, it may require multiple trimming sessions after you test fit the blower. However, if you just want to cut it once and be done, you should cut out as much of the Core Support as possible. Refer to *Figure 14* as a reference.

NOTE: Cover any open holes into the engine on the Valve Covers and Throttle Body before proceeding. Debris from cutting can get into the engine. More of the Core Support may need to be trimmed later if there is not enough clearance.

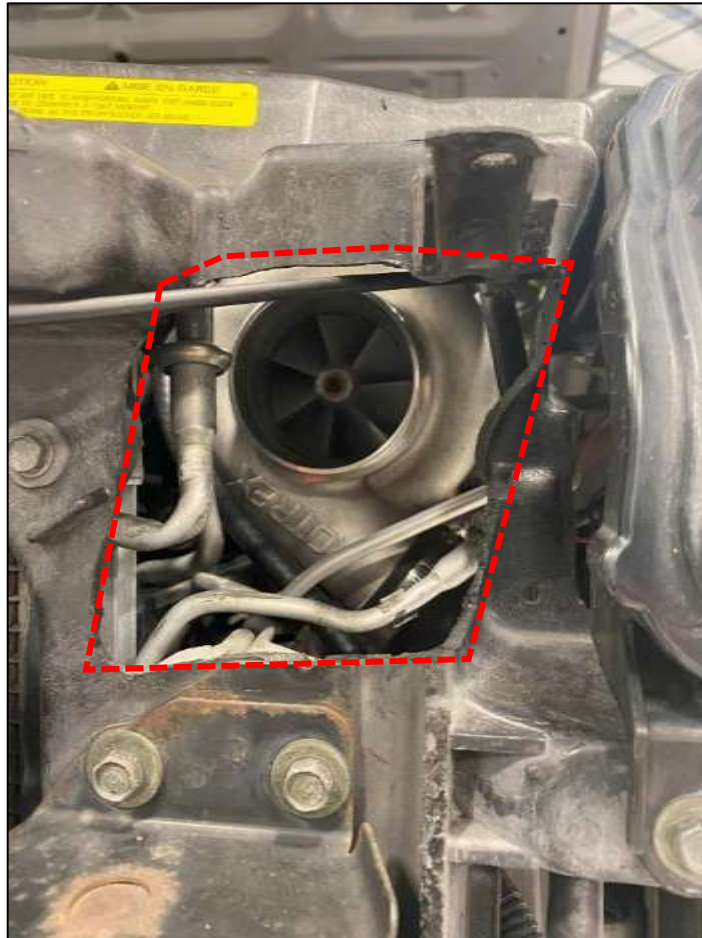


Figure 14

3. **350Z Owners:** The Driver Side Core Support Pass Through should clear the Intake Piping, however it can be enlarged with a Body Saw if you want more clearance and an easier installation. *Figure 15.*

NOTE: Cover any open holes into the engine on the Valve Covers and Throttle Body before proceeding to cut if you decide to enlarge the Pass Through. Debris from cutting can get into the engine.

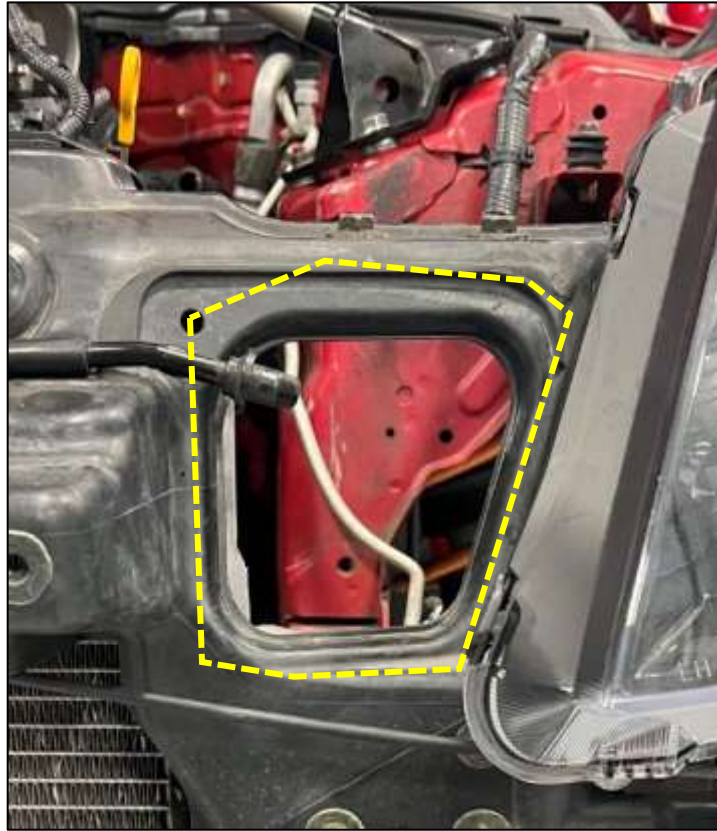


Figure 15

4. **350Z Owners:** The Headlight Buckets on both sides will need to be trimmed and enlarged to allow clearance for Charge Piping. View *Figure 16* below on where to trim. It may be necessary to trim more later once the Blower is installed if there is not enough room.

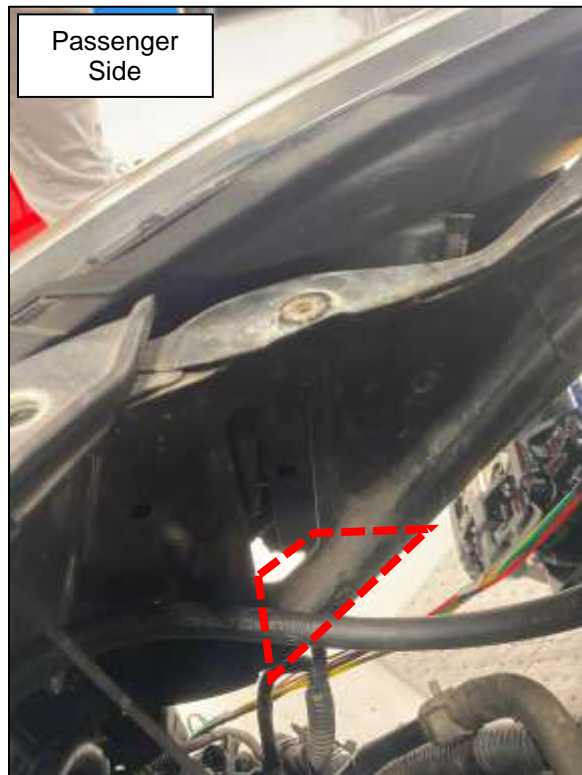


Figure 16

5. Once all areas have been trimmed, use a file or deburring tool to clean up the cut edges.
6. Vacuum up all metal and plastic debris.
7. The hole in the bottom left of the Core Support will need to be enlarged to allow the Power Steering Lines to pass through. If you are using an Oil Cooler, the lines can be run through this hole as well. Enlarge the hole accordingly. *Figure 17.*

NOTE: Clean up any debris and smoothen any sharp edges to prevent rubbing and damage to the lines. The Figure below shows the hole already enlarged with lines running through it.

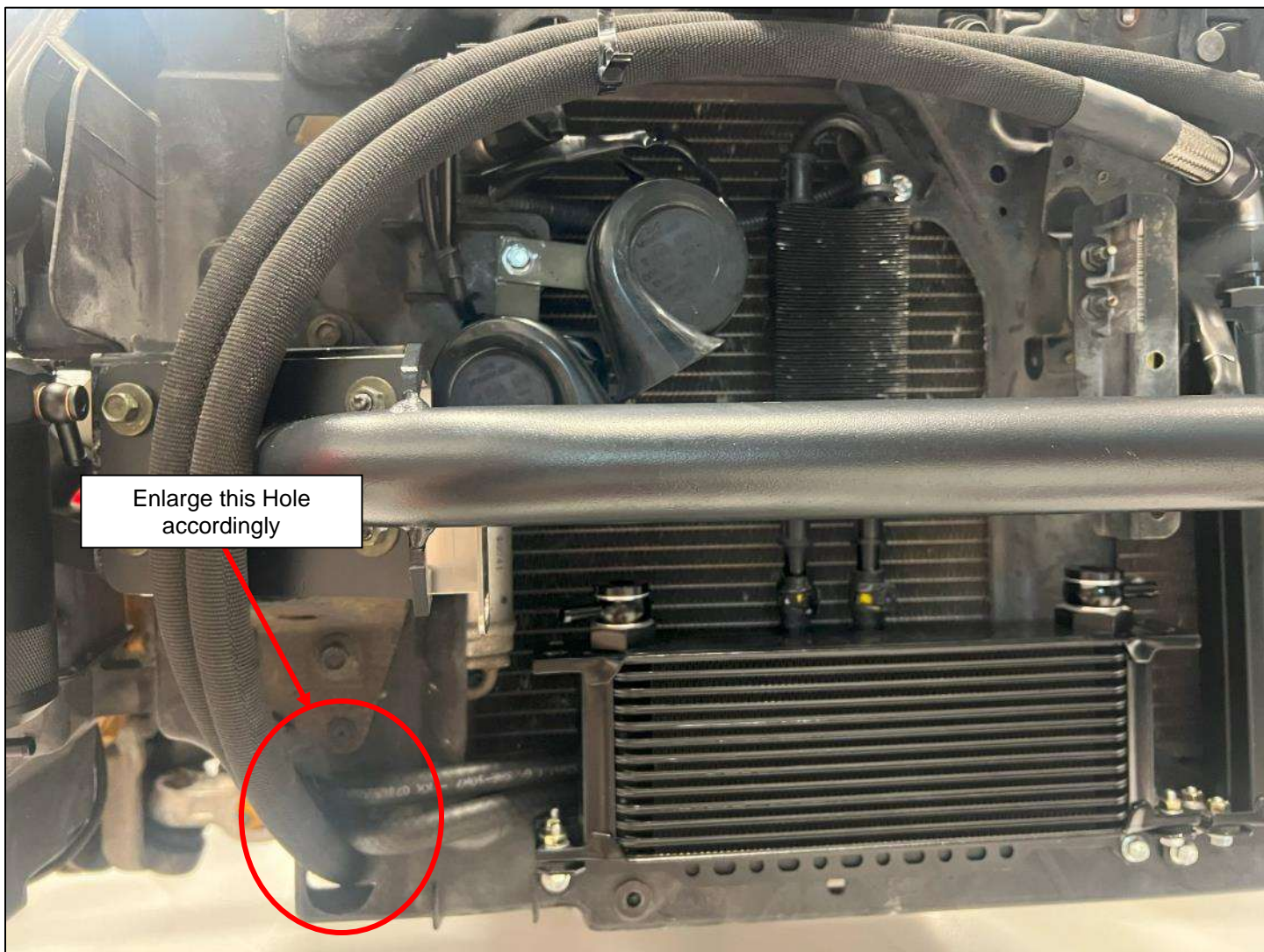


Figure 17

8. Unbolt the Right Horn from the Core Support and retain the mounting bolt. *Figure 18.*

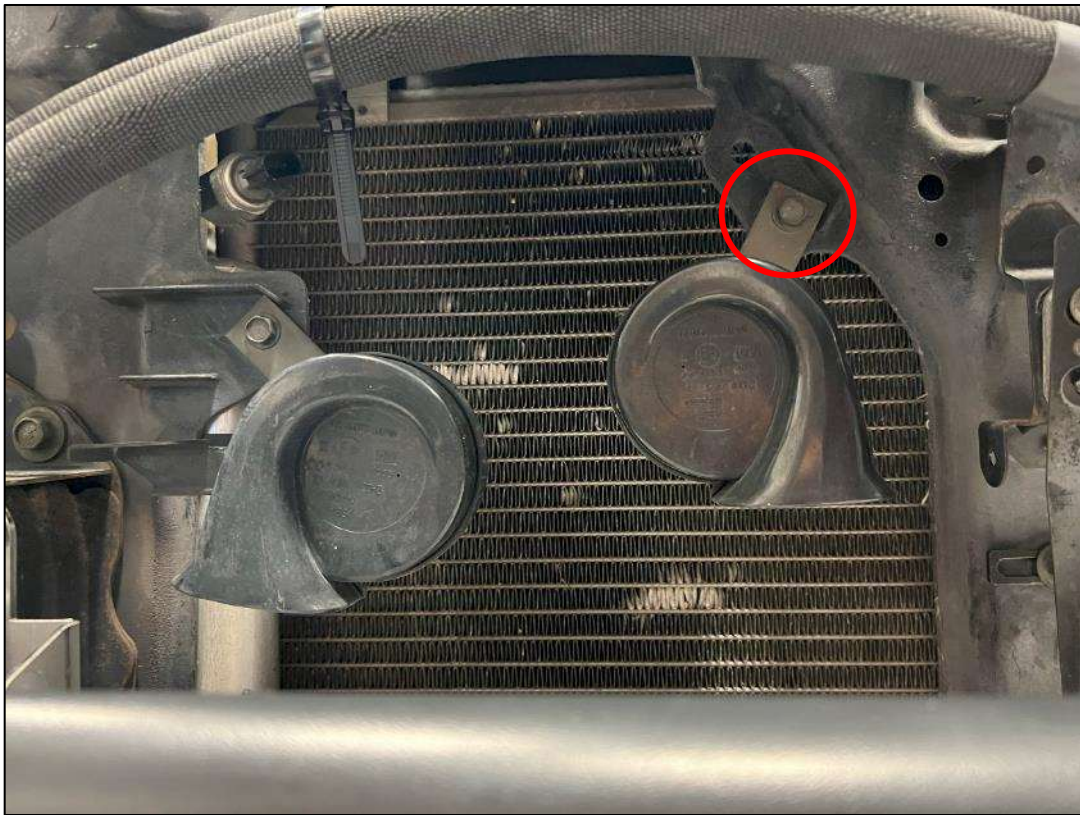


Figure 18

9. Reposition the Right Horn to mount on the same location as the Left Horn and secure them together with the OEM Bolt. *Figure 19.*

NOTE: The Power Steering Cooler will be repositioned in the upcoming Steps.



Figure 19

10. The OE Power Steering Cooler will need to be moved. Unbolt the (2) two bolts securing the OE Power Steering Cooler to the Core Support. *Figure 20.*

NOTE: If you are using an aftermarket Power Steering Cooler, it may need to be moved higher or moved behind where the Supercharger Cooler will go.

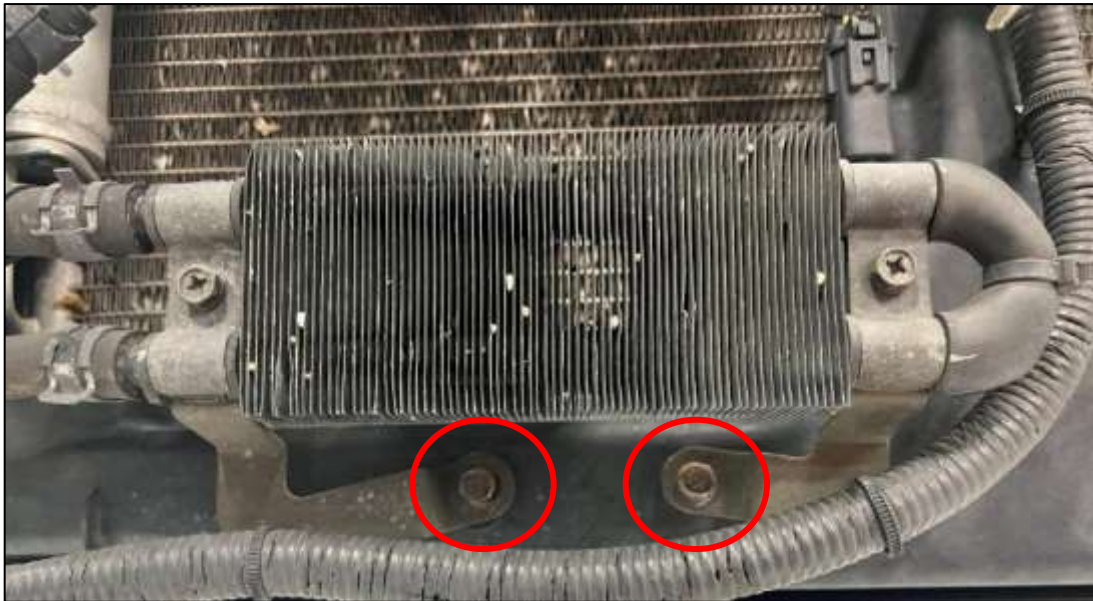


Figure 20

11. Remove the (2) two screws securing the Clamps to the Power Steering Cooler and discard the clamps. *Figure 21.*

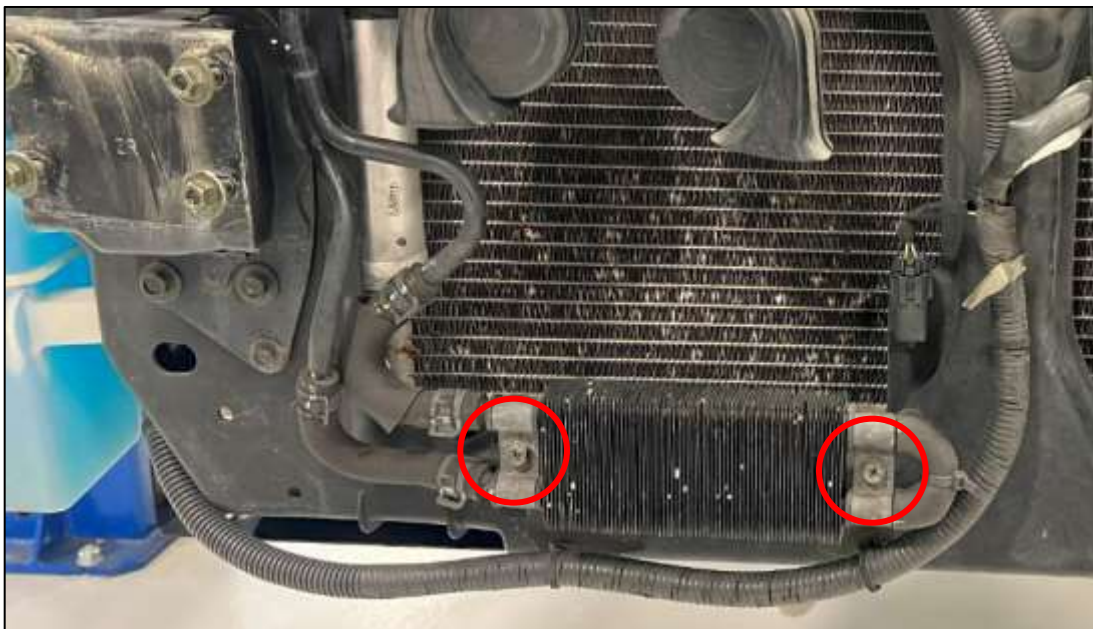


Figure 21

12. Remove the OE Lines from the Power Steering Cooler to the Power Steering Reservoir. This will leak Power Steering Fluid, so prepare a catch can or rag to collect any leaking fluid. *Figure 22.*

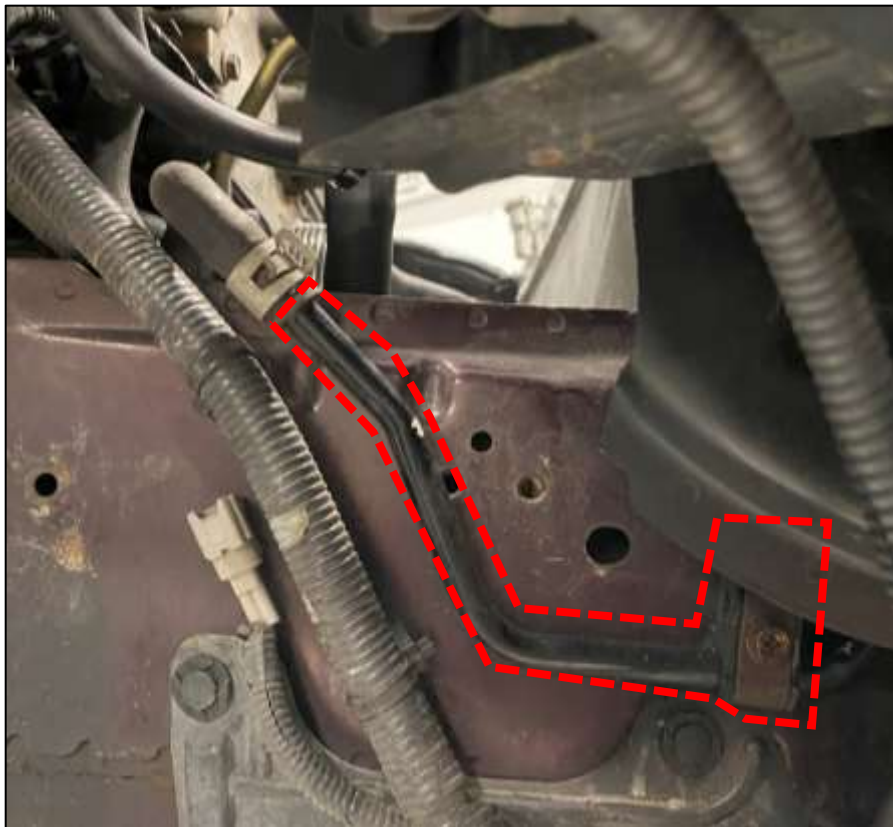
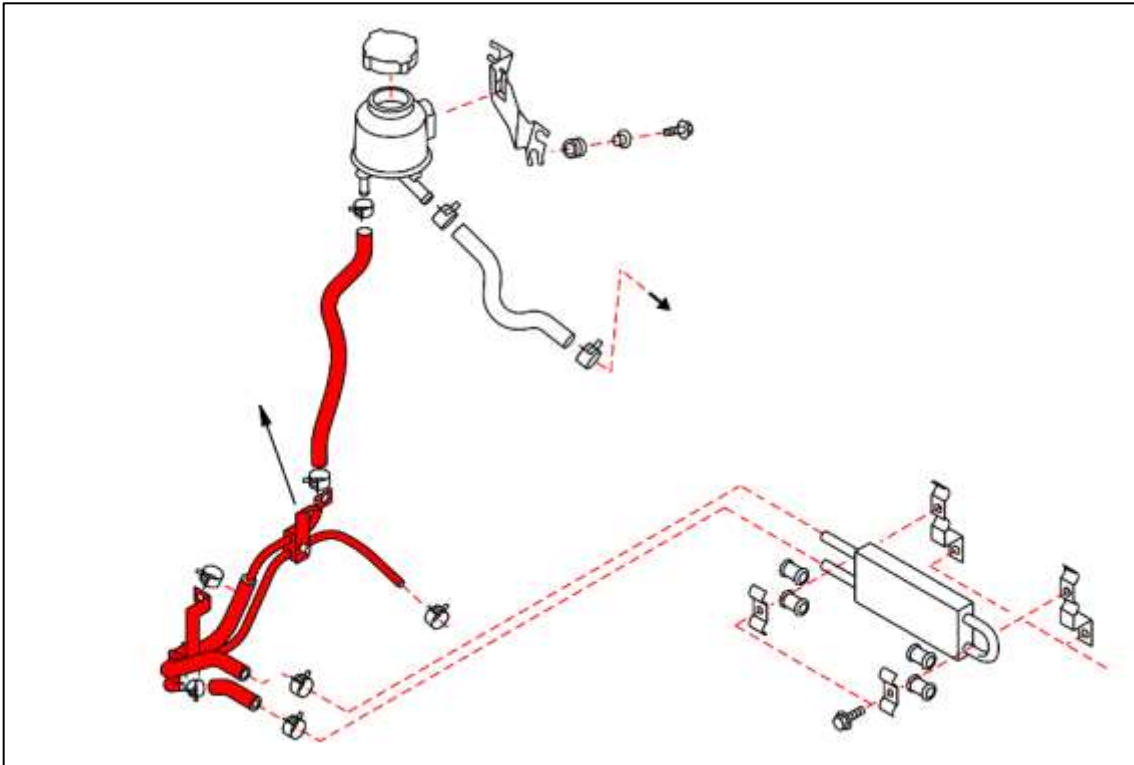


Figure 22

13. Locate the 3/8" Cushioned P-Clamp (#36) and (1) one M6 x 1.0 SEMS Bolt, 25mm (#39). Install the P-Clamp onto the Power Steering Cooler and secure it to the Horn Mount on the Core Support using the M6 Bolt as shown below. *Figure 23.*

NOTE: The Power Steering Cooler can be mounted anywhere where there is a Threaded M6 Hole in the Core Support. The Horns can be mounted together in different locations as well.

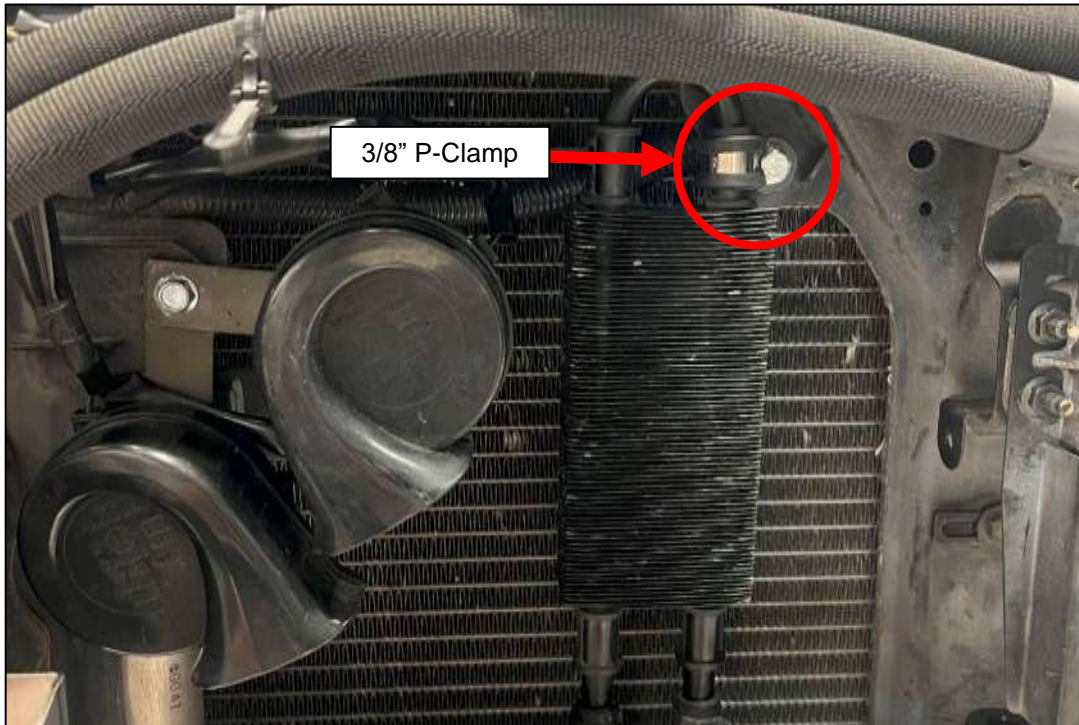


Figure 23

14. Locate The Power Steering Hose (#34) and connect the Power Steering Reservoir to the Power Steering Cooler, secure with a Hose Clamp (#35) on each end. The Hose will need to be cut to length. Run the Line through the opening in the lower left of the Core Support that was enlarged in *Step 7*.
15. Using the Remainder of the Power Steering Hose, connect the outlet of the Power Steering Cooler to the Union Barb (#38), and connect the OE Power Steering Line to the other end of the Union Barb. Run the Line through the opening in the lower left of the Core Support that was enlarged in *Step 6*, and secure with the supplied Hose Clamps. *Figure 24*.

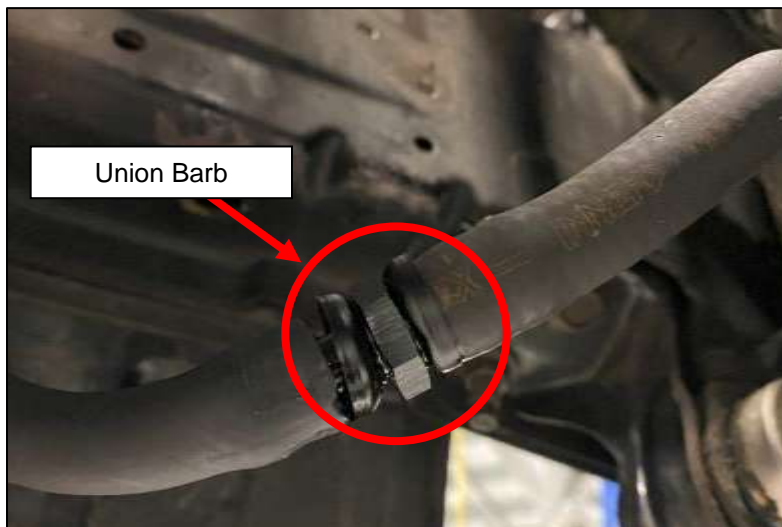


Figure 24

16. Locate the 5/8" P-Clamp (#37) and (1) one M6 x 1.0 SEMS Bolt, 25mm (#39). Secure the Power Steering Line to the Passenger Side Frame Rail. *Figure 25*.



Figure 25

17. Depending on the condition of your Motor Mounts, the Driver Side Frame Rail may need to be notched to clear the Blower. If you have solid Motor Mounts, this most likely will not be needed. If you decide to notch the Frame Rail, use a Body Saw or Cut Off Wheel to cut the Frame Rail as shown below. *Figure 26.*

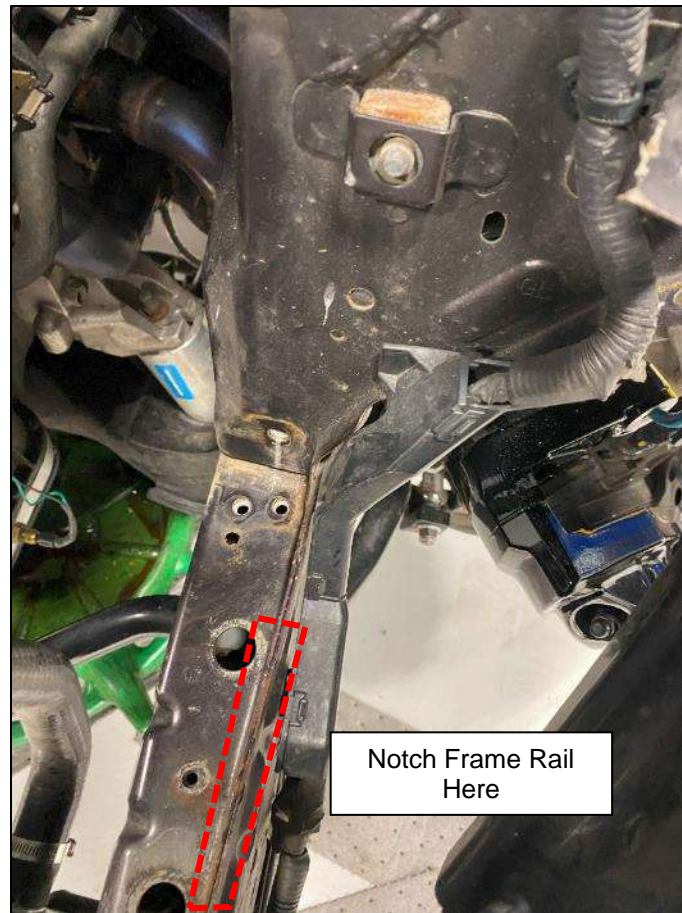


Figure 26

18. Disconnect the Coolant Crossover Pipe on the front of the engine from the Driver Side Hard Pipe. More Coolant will most likely pour out, prepare a rag or bucket. *Figure 27.*

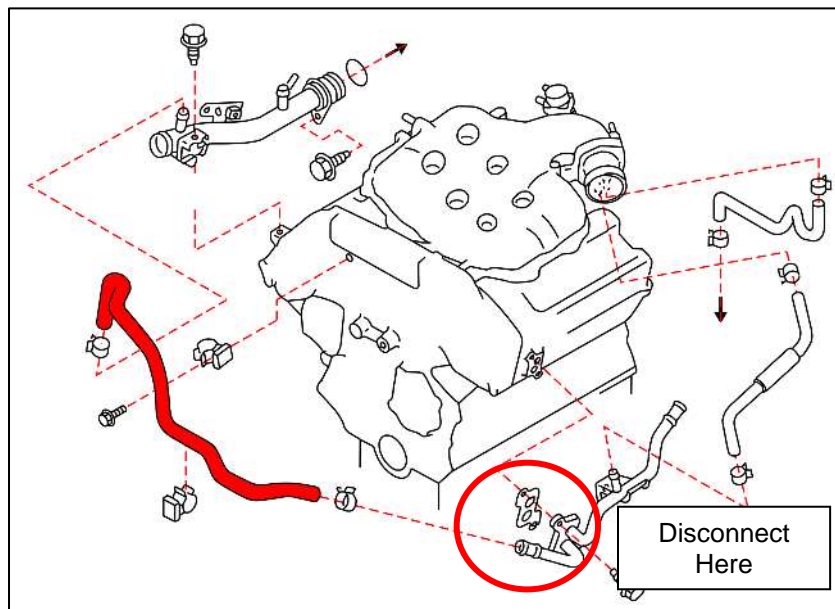


Figure 27

19. With a screwdriver or similar tool, bend the Coolant Hard Pipe downwards some. This needs to be slightly bent to clear the Supercharger once installed and may need to be bent more later. *Figure 28.*

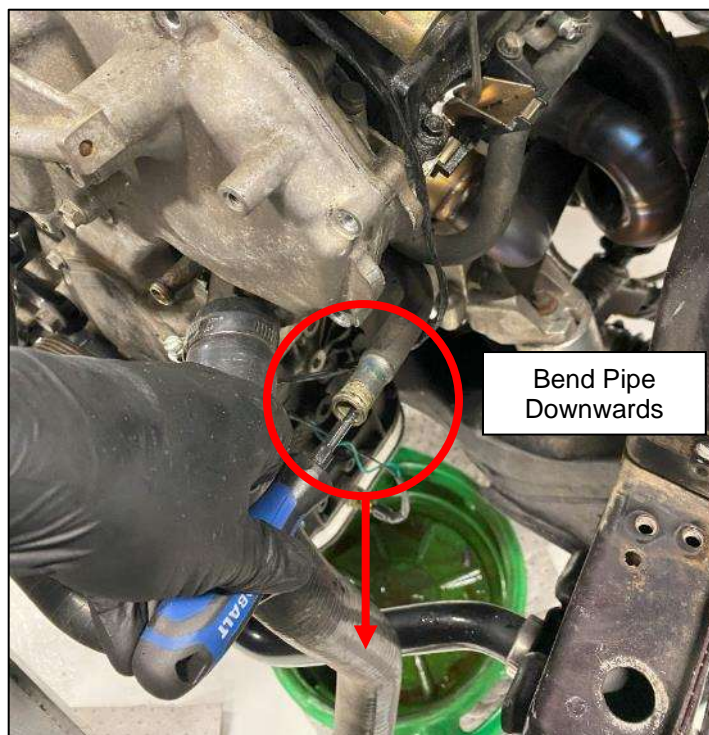


Figure 28

20. Remove the (1) one bolt securing the Intake Valve Timing Control Solenoid to the Driver Side of the engine.
Figure 29.



Figure 29

21. Remove the Solenoid from its housing. *Figure 30.*



Figure 30

22. Locate the Oil Control Solenoid Relocation Bracket (#59). Attach it to the Solenoid with (2) two Socket Head Screws that are included with the Bracket.
23. Reposition the Solenoid into its housing. The Electrical Connector should be clocked upward now to give more clearance to the Supercharger. Torque to **87-112 in-lbs.** *Figure 31.*

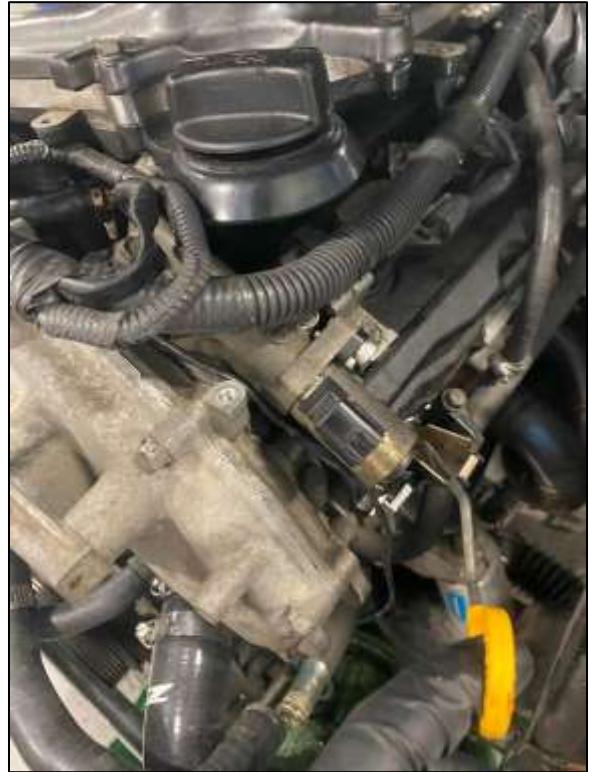


Figure 31

24. Unclip the Wiring Harness on the Driver Side Frame Rail/Shock Tower. It will need to be moved for Blower clearance. *Figure 32.*

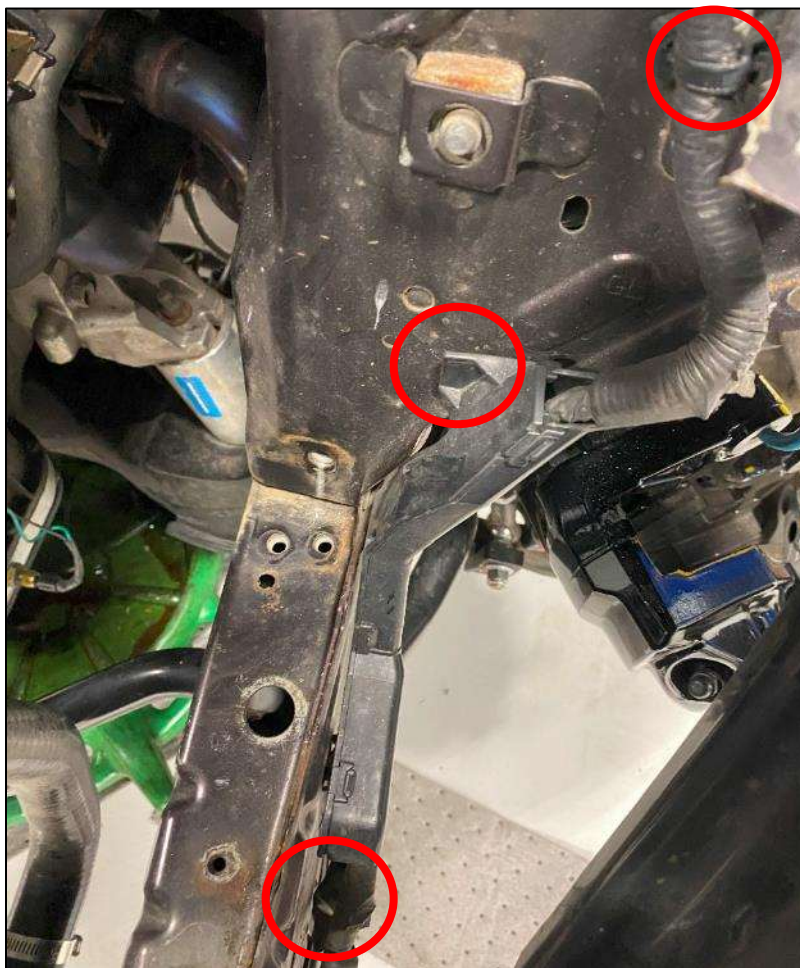


Figure 32

25. **G35 Sedan Owners:** The lower Air Guides can either be completely removed or trimmed to allow the Charge Piping to fit. *Figure 33.*

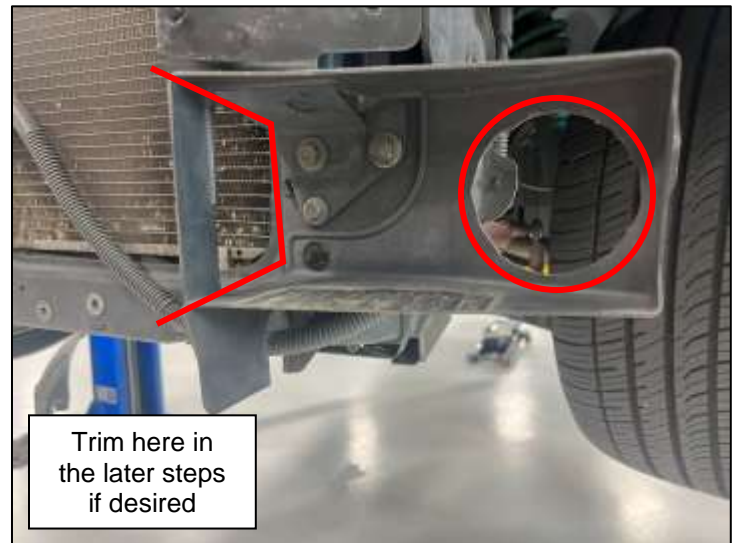
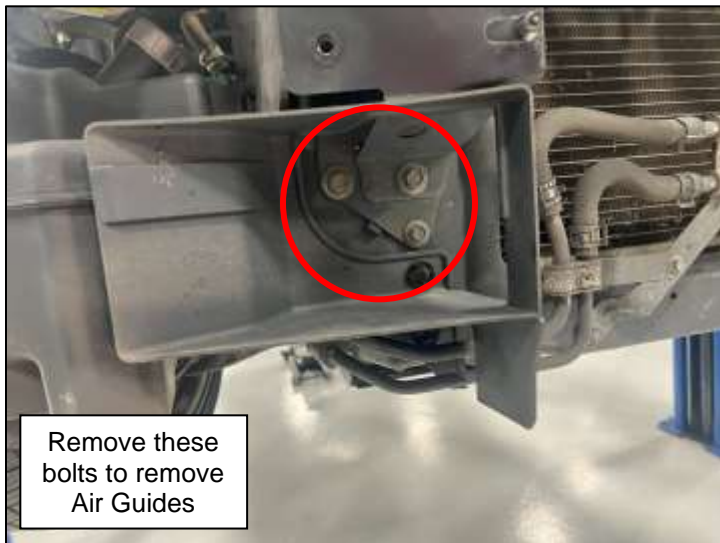
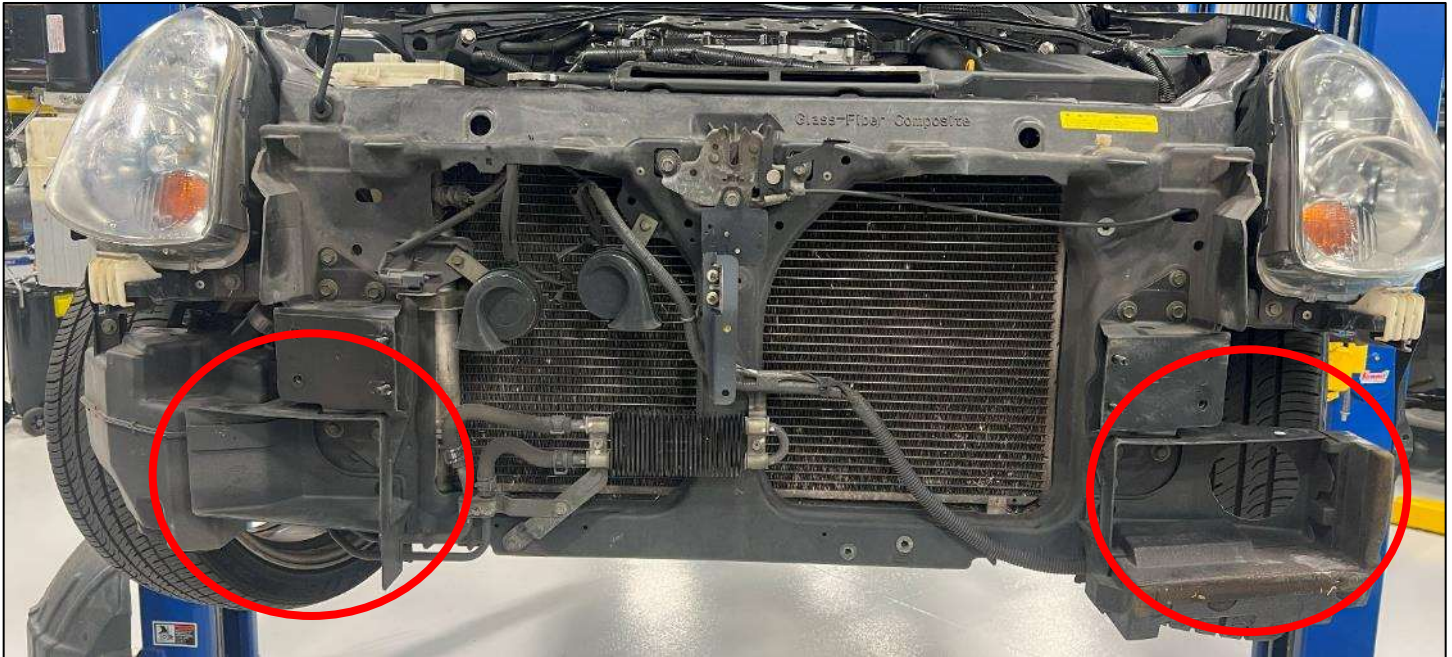
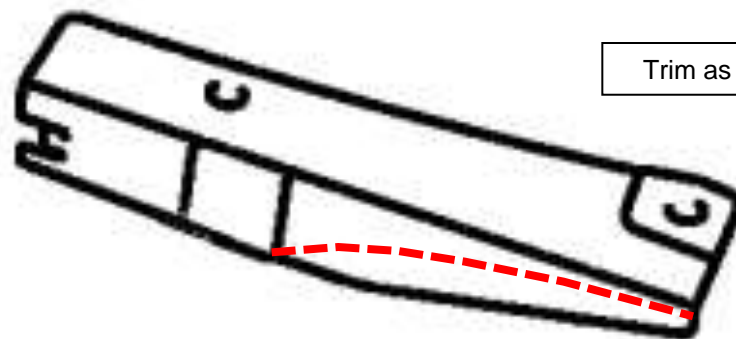
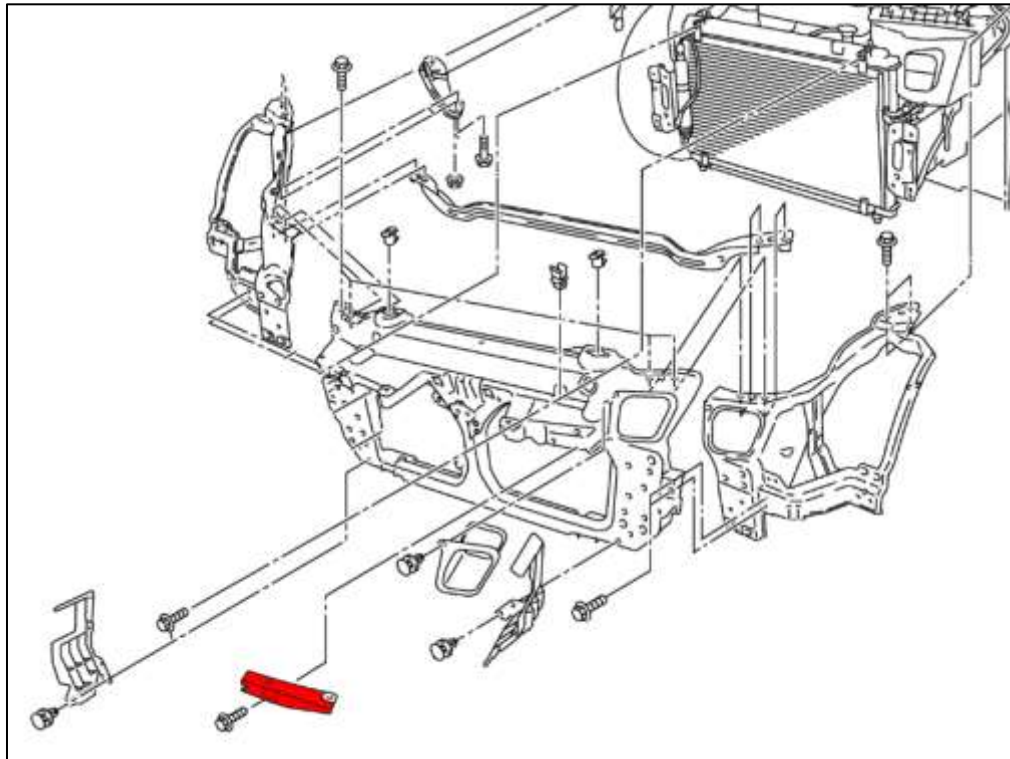


Figure 33

26. If your vehicle is still equipped with the Bumper Fascia Stay highlighted below, it will need to be trimmed slightly to clear the Intake Tube. *Figure 34.*



Trim as shown

Figure 34

27. If you currently have a Z1 Oil Catch Can, it will need to be adjusted to clear the Charge Piping. Locate the Z1 Catch Can Feed Hose (#87) and the Catch Can Bracket (#88). Remove the Feed Hose and from the Catch Can and transfer the Catch Can to the new bracket. The Catch Can will need to be clocked 90° to the right. Reinstall the Catch Can into the vehicle. Install the new Feed Hose onto the Valve Cover and Catch Can as shown below. *Figure 35.*

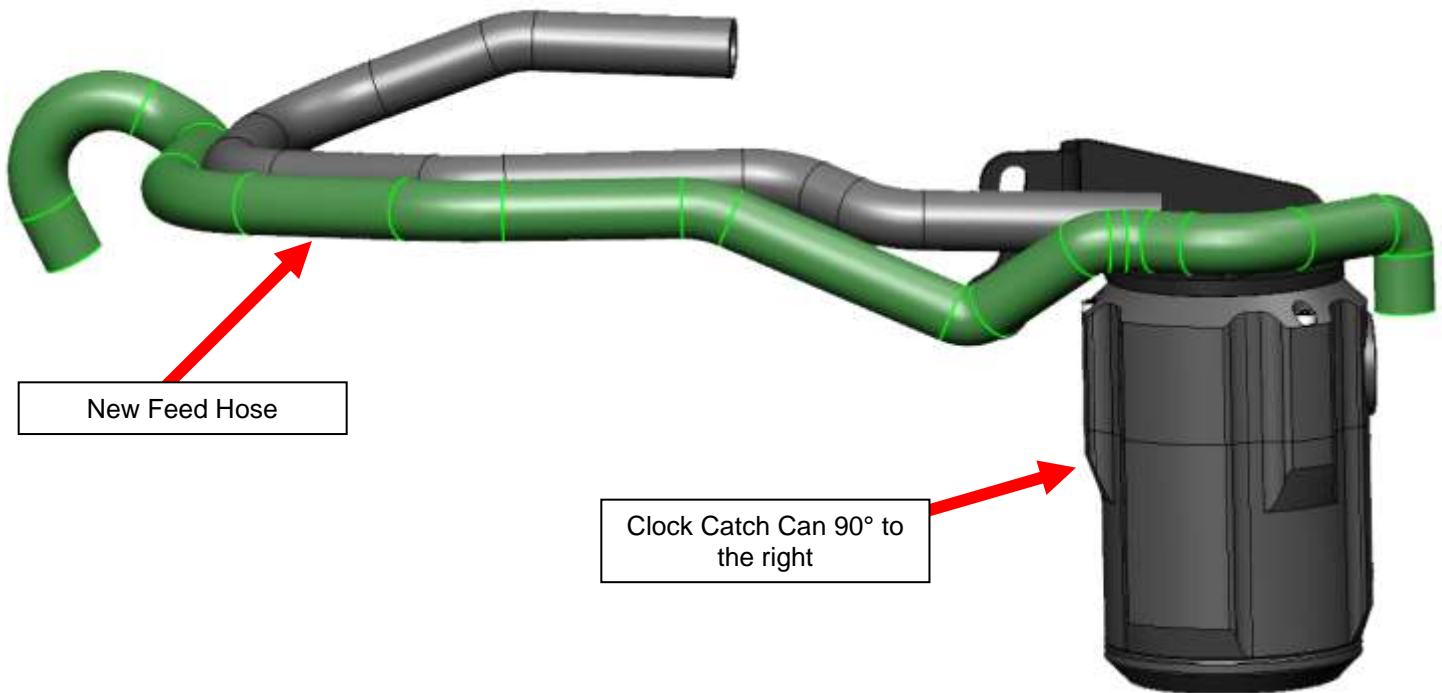


Figure 35

28. **350Z Owners:** [350Z Hood Struts](#) (#74) are included as the Hood Prop will not fit with the new Intake. Follow the instructions with the Hood Struts, and remove the OE Prop Rod from the vehicle.

Section Three: Blower Installation

Tools Needed:

- Ratchet
- Assorted Metric Sockets
- Torque Wrench
- 5mm Allen/Hex Key
- 8mm Allen/Hex Key
- Pliers
- Screwdriver/Small Pry Bar

Parts Needed:

- Supercharger Pulley Spacers (#6)
- M6 x 1.0 Socket Head Screw, 16mm (#13)
- M6 x 1.0 Socket Head Screw, 55mm (#14)
- M10 x 50mm Socket Head Screw (#15)
- 1" ID Cushioned P-Clamp (#17)
- Supercharger Pulley (#47)
- Supercharger Drive Belt (#48)
- Supercharger Assembly (#57)
- Single Idler Bracket (#60)
- Dual Idler Bracket (#61)
- Smooth Idler Pulleys (#62)
- 60mm Ribbed Pulleys (#63)

PROCEDURE:

1. Remove the (1) one bolt and Wiring Harness Bracket on the Timing Cover on the Driver Side. The Bracket and bolt will not be reused. *Figure 36.*

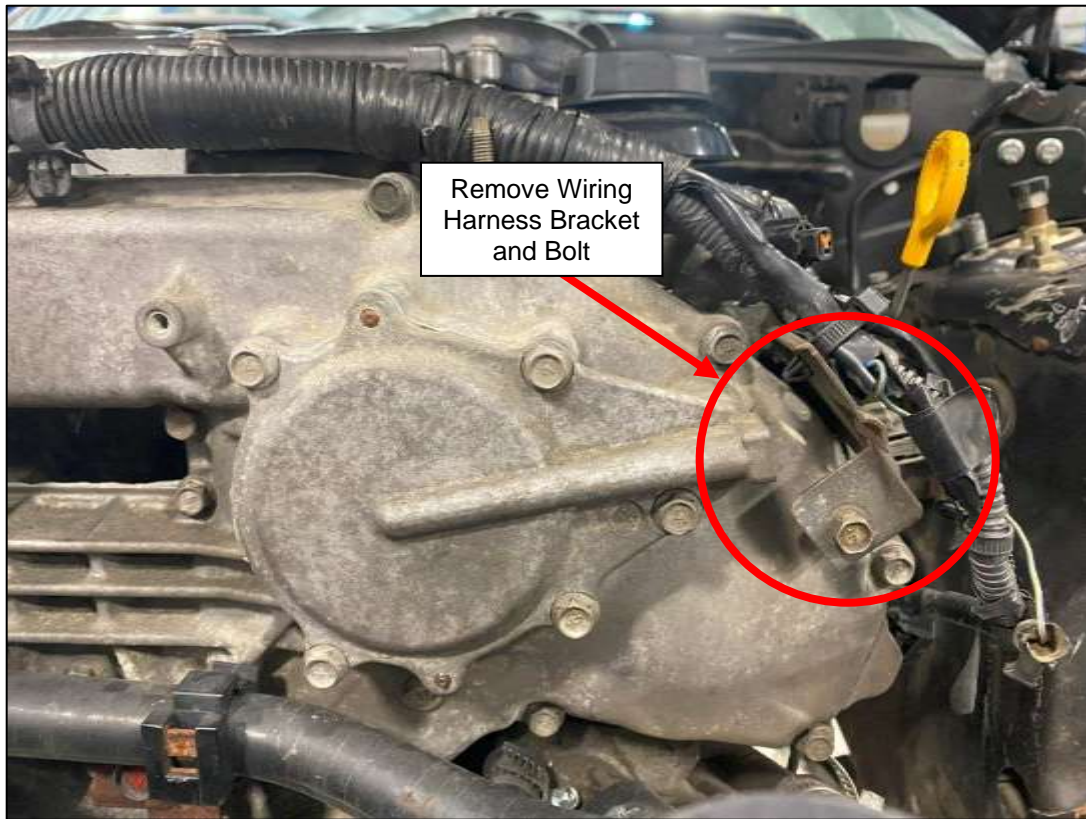


Figure 36

2. Remove the (4) four Bolts from the Timing Cover on the driver side circled below, they will not be reused. The Main Bracket will bolt to the front of the Timing Cover in these locations. *Figure 37.*



Figure 37

3. Locate the (4) four M6 x 1.0 Socket Head Screws, 55mm (#14), (1) one M6 x 1.0 Socket Head Screw, 16mm (#13) and the Main Supercharger Bracket Assembly (#57). Position the Main Supercharger Bracket over the Timing Cover. The Longer 55mm Bolts will be for the outside of the cover, circled in red. The shorter 16mm bolt will be used in the middle where the Wiring Harness bracket was removed in *Step 2*, circled in yellow. Torque the bolts to **9-10 ft-lbs.** *Figure 38.*

NOTE: Check clearance of the Supercharger Unit Inlet to the Frame Rail and Headlight bucket. If there is contact, you will need to clearance the Headlight Bucket more or bend the Coolant Pipe beneath the Bracket more. Refer to *Steps 3 and 17 in Section Two: Clearancing.*

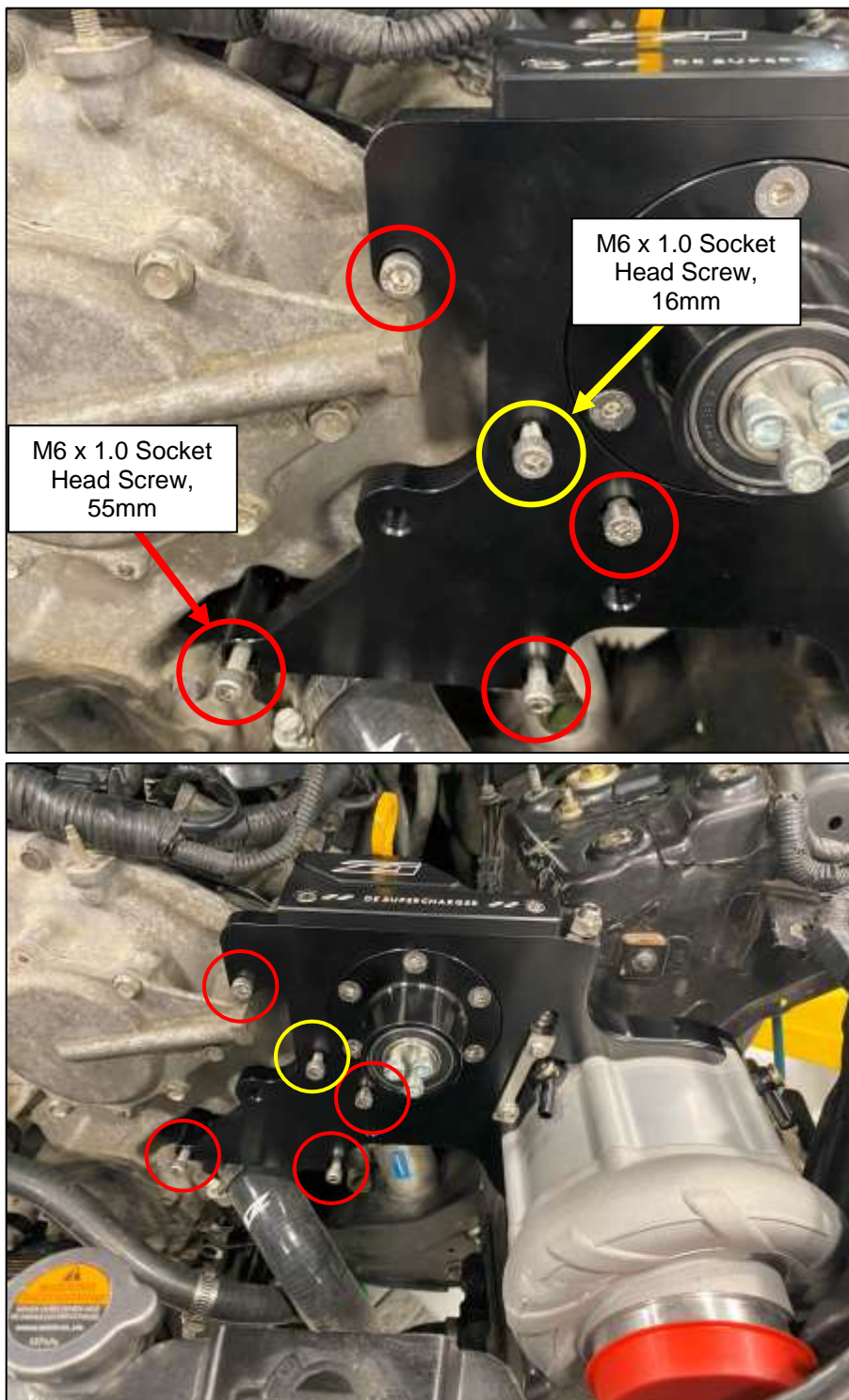


Figure 38

4. Remove the (3) three bolts that secure the Idler Pulley Bracket to the vehicle and remove the Bracket from the vehicle. If you do not have the Idler Pulley, there will be a Spacer behind the other Pulley Bracket, remove it from the vehicle. Retain all hardware. *Figure 39.*

NOTE: The top image below shows the bracket with the Pulley and Belt still installed. The bottom Image below shows an engine out of the vehicle with the bolts you need to remove circled.

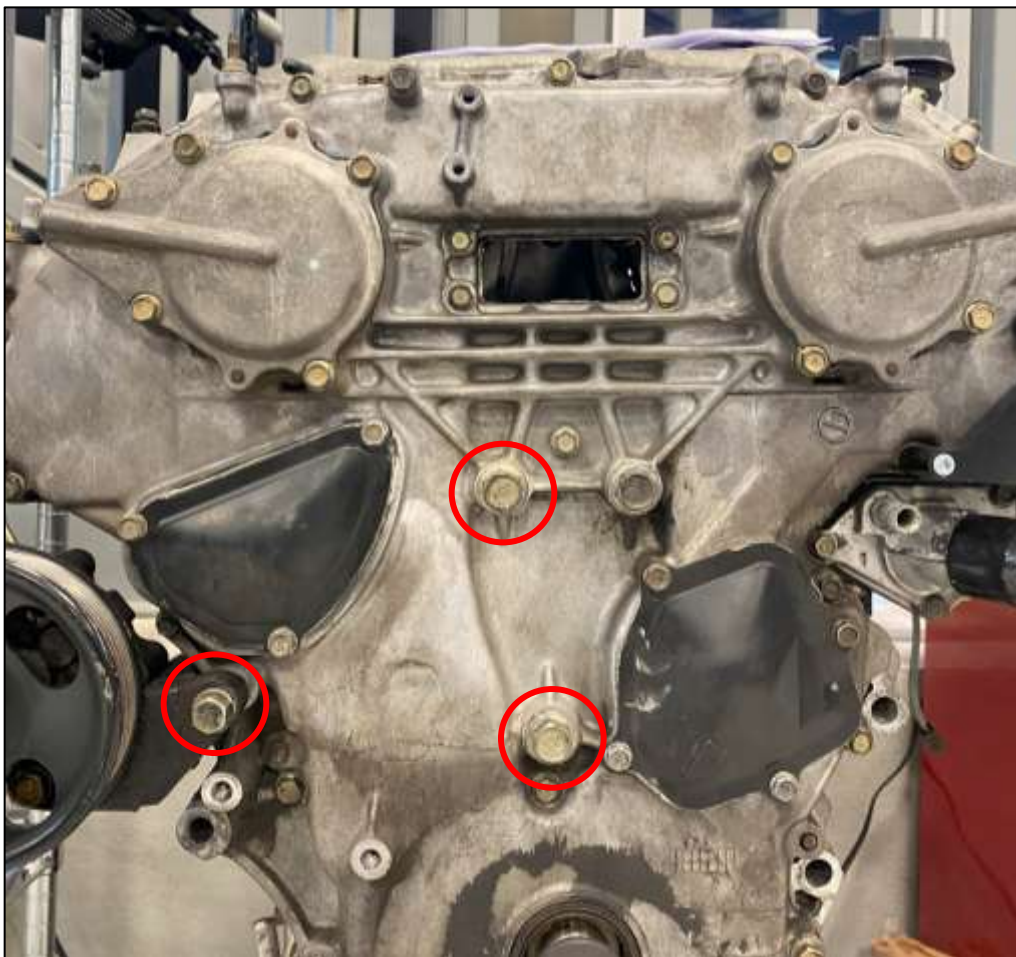


Figure 39

5. Remove the (1) one bolt securing the Coolant Crossover Pipe bracket to the Timing Cover. The bracket will need to be completely removed. Retain the bolt. *Figure 40.*

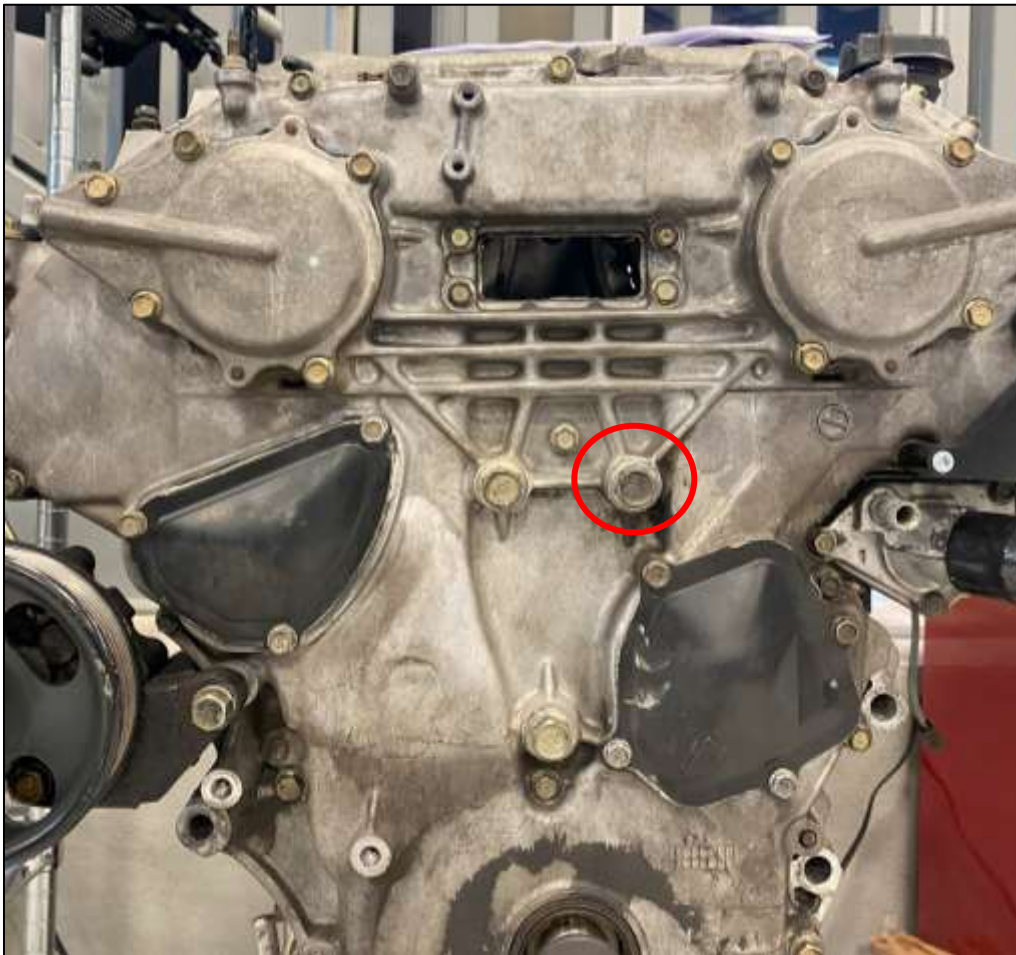
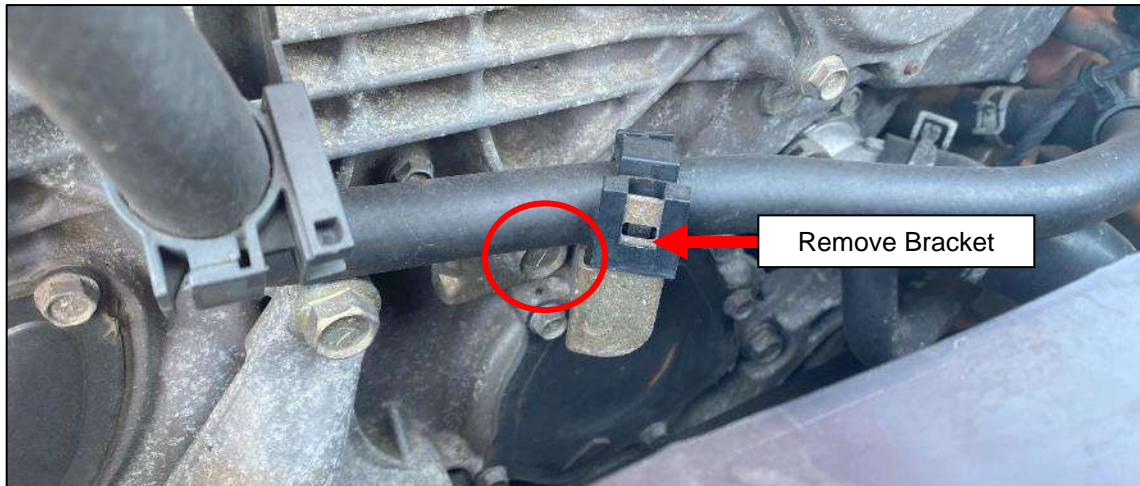


Figure 40

6. Locate the Dual Idler Bracket (#61) and the bolt removed from *Step 5*, as well as the (1) one top bolt removed in *Step 4*. Secure the Dual Idler Bracket to the engine with the (2) two bolts as shown below. Torque the bolts to **51-58 ft-lbs.** *Figure 41.*

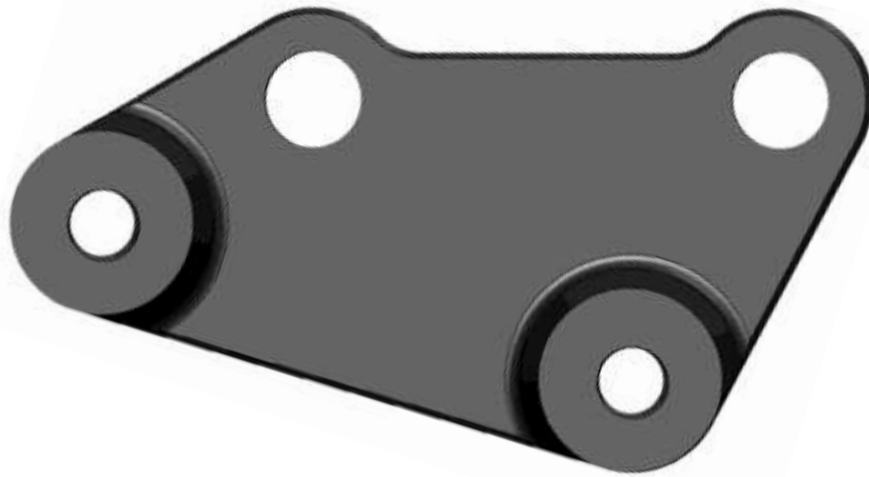


Figure 41

7. Locate the Single Idler Bracket (#60) and the (2) two remaining bolts removed in *Step 6*. Secure the Bracket to the engine with the (2) two bolts as shown below. The left side of the bracket will be **BEHIND** the other bracket, sandwiched between the bracket and the engine. Torque the left bolt to **42-48 ft-lbs**, and the right bolt to **51-58 ft-lbs**. *Figure 42*.

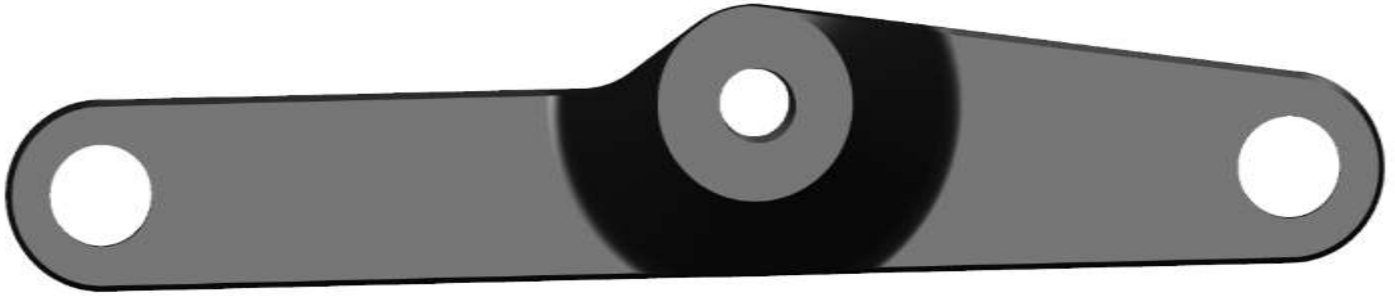


Figure 42

8. **90mm Main Pulley Users:** Locate the (2) two Smooth 60mm Pulleys (#62), (1) one 60mm Ribbed Pulley (#63), (3) three M10 x 50mm Socket Head Bolts (#15), and (3) three Pulley Spacers (#6). Install (1) one Smooth Pulley with a spacer behind it on the Single Idler Bracket. Install the Ribbed Pulley with a Spacer on the left of the Dual Idler Bracket, and the other Smooth Pulley with a Spacer on the right. The order will be **BOLT → PULLEY → SPACER → BRACKET**. Torque to **38 ft-lbs**. *Figure 43.*

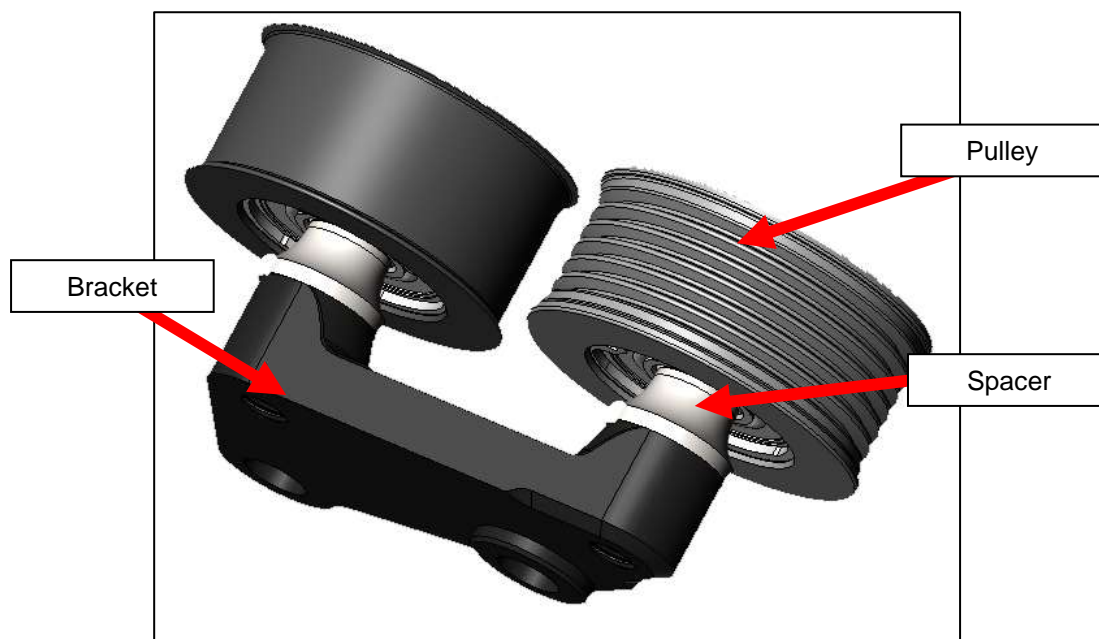
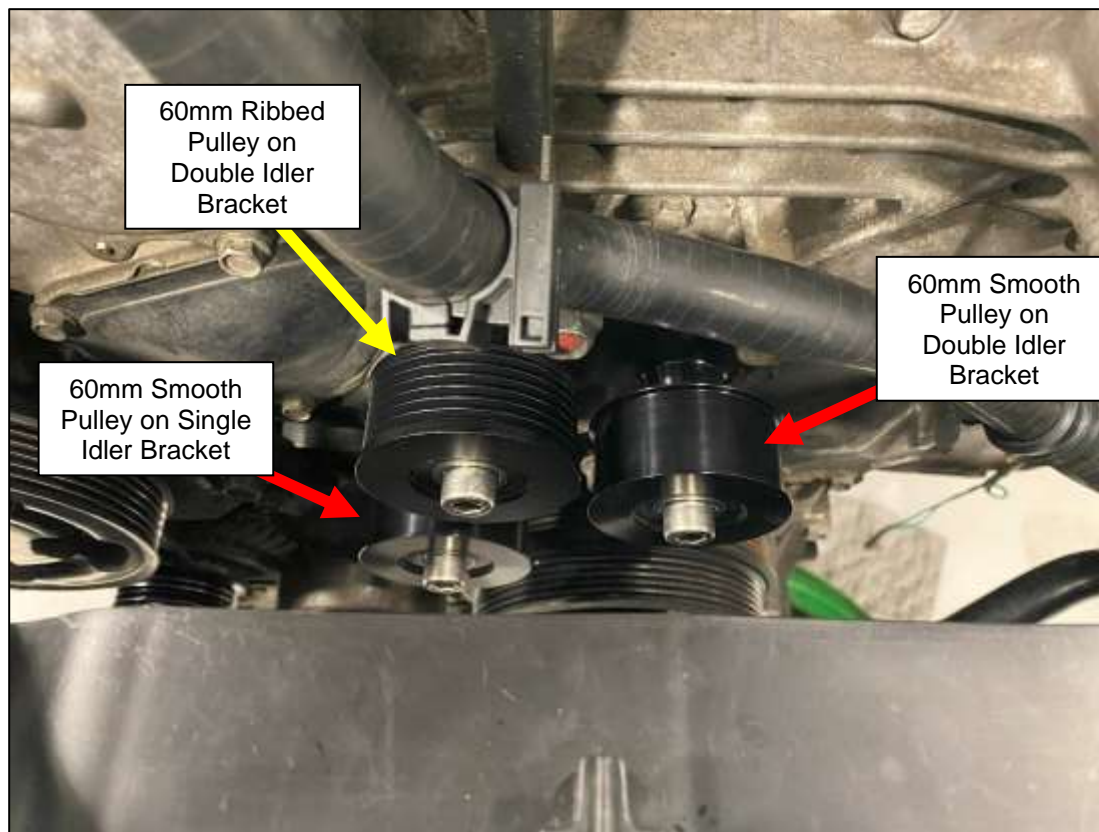


Figure 43

9. **75mm Main Pulley Users:** Locate the (1) one Smooth 60mm Pulley (#62), (1) one Smooth 70mm Pulley (#62), (1) one 60mm Ribbed Pulley (#63), (3) three M10 x 50mm Socket Head Bolts (#15), and (3) three Pulley Spacers (#6). Install the 70mm Smooth Pulley with a spacer behind it on the Single Idler Bracket. Install the Ribbed Pulley with a Spacer on the left of the Dual Idler Bracket, and the 60mm Smooth Pulley with a Spacer on the right. The order will be **BOLT** → **PULLEY** → **SPACER** → **BRACKET**. Torque to **38 ft-lbs**. *Figure 44.*

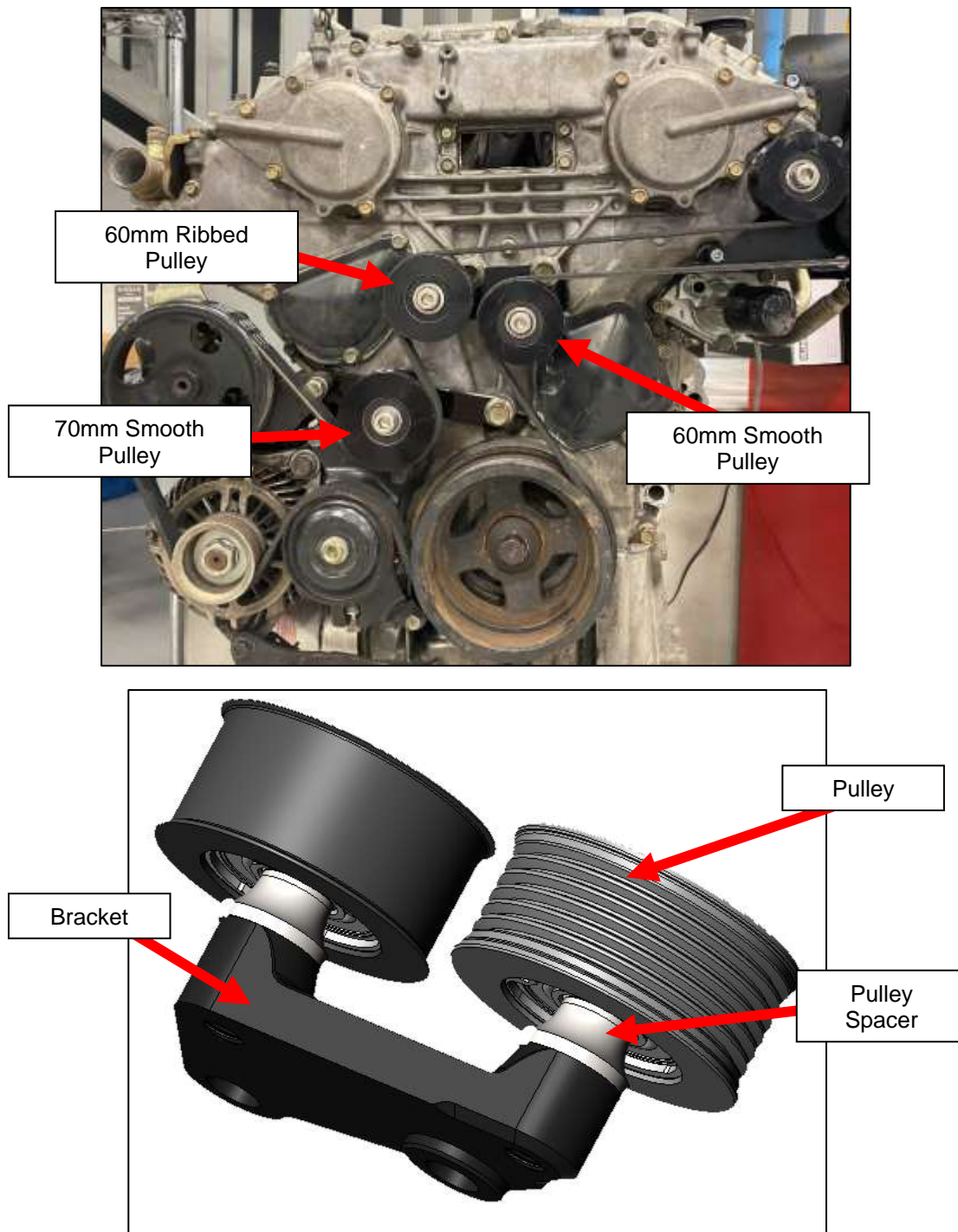


Figure 44

10. Locate (1) one 60mm Smooth Pulley (#62), (1) one 60mm Ribbed Pulley (#63), (2) two Pulley Spacers (#6) and (2) two M10 x 50mm Socket Head Screws (#15). Install the Smooth Pulley with a Spacer on the left side of the Main Super Charger Bracket. Install the Ribbed Pulley on the Right side of the Main Super Charger Bracket. The order should be **BOLT** → **PULLEY** → **SPACER** → **BRACKET**. Torque the M10 Bolts to **38 ft-lbs**. *Figure 44.*



Figure 45

11. Remove the (3) three pre-installed Socket Head Bolts on the Main Bracket and install the Supercharger Pulley (#47) as shown below. **DO NOT** spin the blower. For added security, you can add a drop of Loctite to each bolt. **DO NOT** add too much as it may leak out into the Jackshaft Bearing in the Bracket. *Figure 46.*

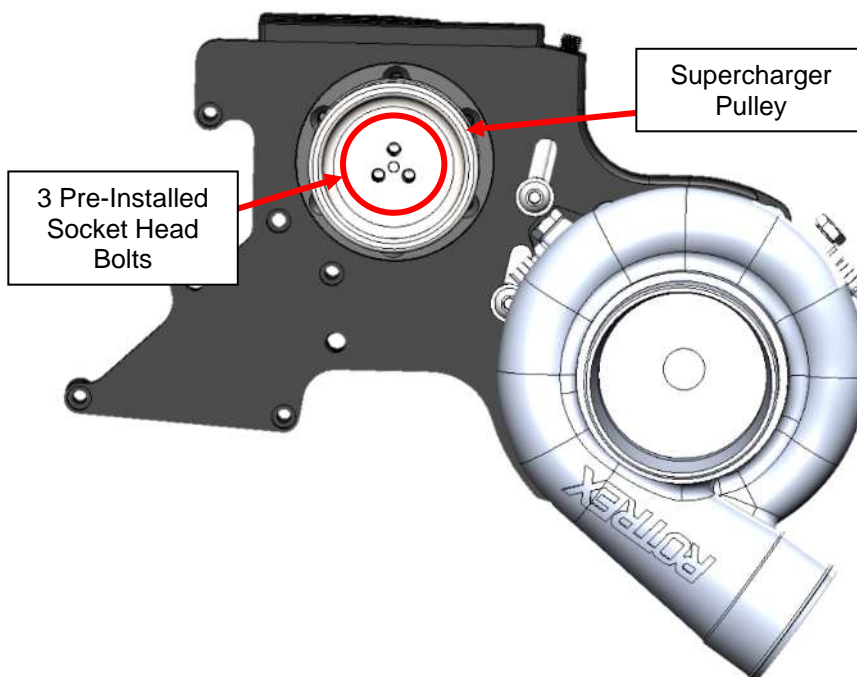


Figure 46

12. Using (2) two 5mm Allen/Hex Keys, one on the rear Pulley and one on the front, torque down the (3) three Socket Head Bolts on both pulleys on each side of the Bracket. **DO NOT** spin the pulleys. Torque the bolts to **9 ft-lbs**. Make sure all (3) three bolts on **BOTH** sides are torqued. *Figure 47.*

NOTE: The image below shows a VHR Supercharger, the process is still the same.

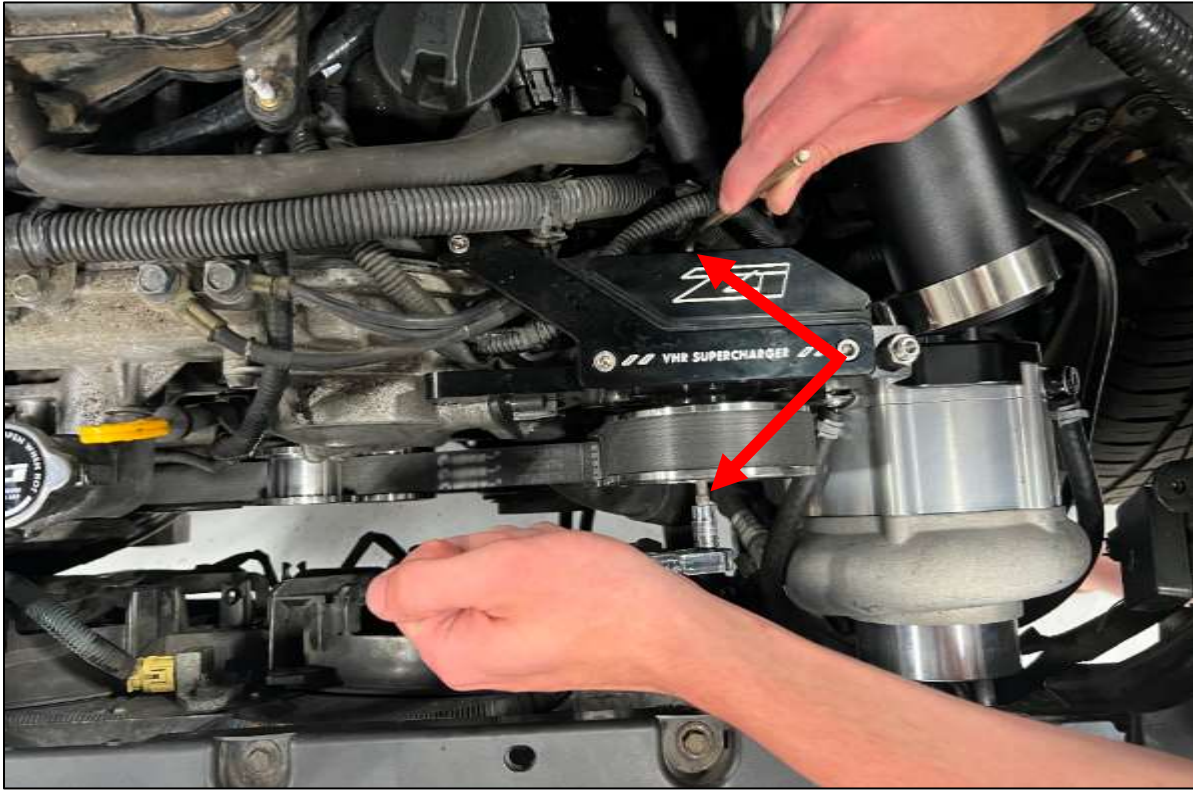


Figure 47

13. Locate the Z1 Supercharger Drive Belt (#48). Route the belt as shown below. It can be easier to install the belt by removing the Smooth Pulley on the Main Supercharger Bracket and reinstalling it after the belt is routed. *Figure 48.*

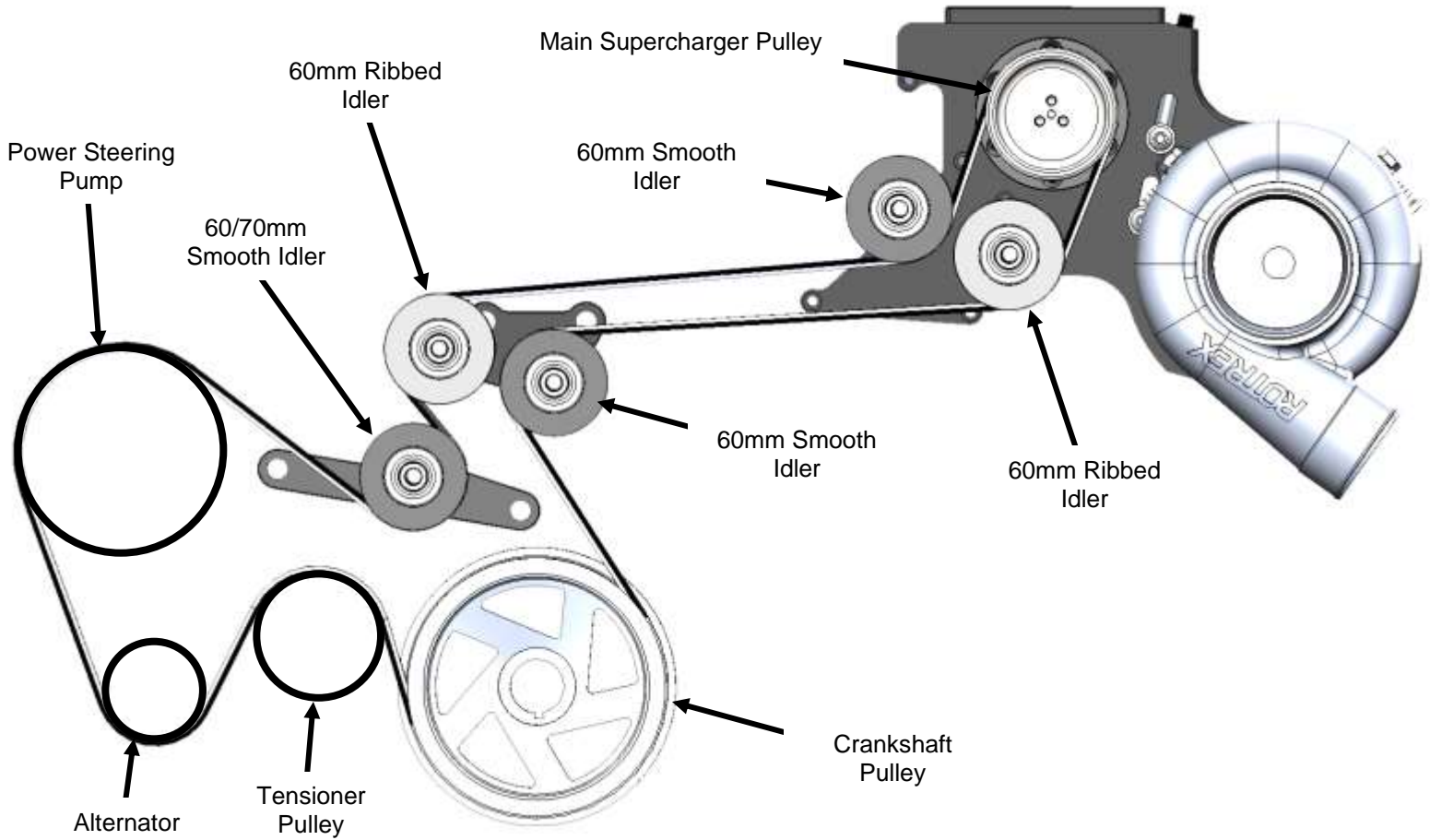


Figure 48

14. Ensure the Drive Belt is properly seated on all Pulleys, and retention the Pulley Tensioner from underneath the vehicle, and retorque the Tensioner Pulley to **24-28 ft-lbs.**

15. Position the Coolant Crossover Pipe out of the way so it does not contact the Drive Belt. Use the Supplied 1" Cushioned P-Clamp (#17) to secure the lower half of the Coolant Crossover Pipe to the Timing Cover. Remove a Timing Cover bolt to secure the P-Clamp. *Figure 49.*

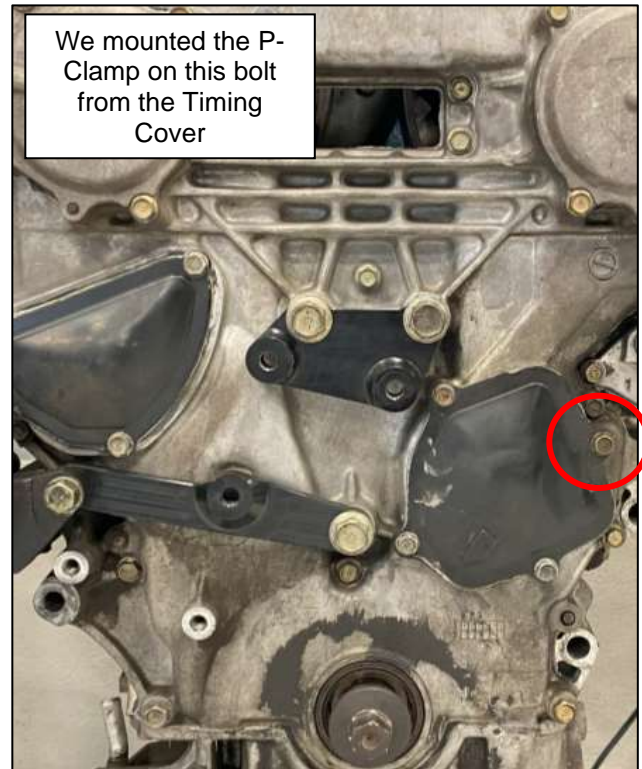


Figure 49

16. Move or reroute any wires, coolant pipes or brackets that may come in contact with the Drive Belt of the Supercharger.

Section Four: The Oiling System

Tools needed:

- Ratchet
- Assorted Metric Sockets
- Allen/Hex Keys
- Torque Wrench
- Pliers
- Vise
- Hose Cutter
- Small Fluid Pump/Long Funnel

Parts Needed:

- Z1 13 Row Procooler (#4)
- Rotrex In-Line Priming Bulb (#5)
- Spring Clamps (#7)
- Banjo Fitting, M22 to 8mm (#8)
- Banjo Bolt, M22 x 1.5 (#9)
- M22 Aluminum Crush Washers (#10)
- M6 x 1.0 SEMS Bolt, 25mm (#18)
- M5 x 0.8 Button Head Screw, 8mm (#19)
- 5/8" ID Cushioned P-Clamp (#20)
- Supercharger Oil Filter P-Clamp (#26)
- M6 x 1.0 Flanged Nut (#32)
- M6 x 1.0 Flanged Bolt (#33)
- Supercharger Oil Reservoir (#40)
- Rotrex Oil Filter (#41)
- 8mm Hose (25') (#54)
- Oil Cooler Bracket Kit (#56)
- Rotrex Traction Fluid (#58)

350Z:

- 350Z Supercharger Reservoir Bracket (#75)
- M6 x 1.0 Flanged Bolt, 25mm (#76)
- M6 Rubber Isolating Mount (#77)
- M6 Isolating Mount Insert (#78)

G35:

- G35 Supercharger Reservoir Bracket (#86)

PROCEDURE:

1. Locate the Z1 Oil Reservoir (#40). Tighten the Banjo Bolts preinstalled on the Z1 Oil Reservoir so that the upper barb is pointing down and the bottom barb is pointing forward. Torque to **80 in-lbs**. Use caution as over torquing the bolts could damage them. *Figure 50.*

NOTE: Some users will receive a Rotrex Oil Reservoir. These users will need to install the Banjo Bolt and Fittings with a Crush Washer on each side of the Fitting into the Reservoir.



Figure 50

2. Secure the assembled Z1 Oil Reservoir to the Oil Reservoir Bracket (#75 or #86) with the (3) three provided M5 x 8mm Button Head Screws (#19) and a 3mm Allen/Hex bit. *Figure 51.*

NOTE: Users with the Rotrex Reservoir will need to assemble the Bracket with the Included Clamps. Install (1) one Clamp onto each Pem Nut of the Bracket and secure with the included M6 Bolts.

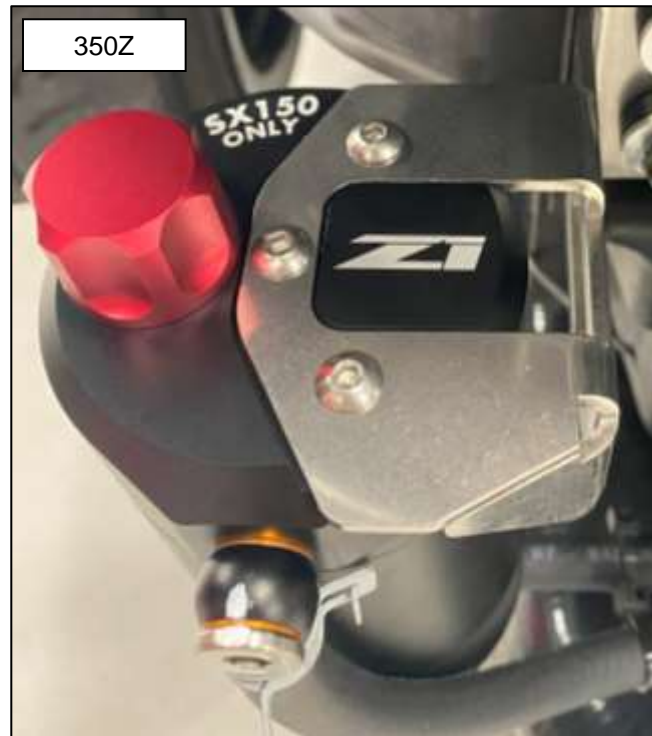


Figure 51

3. Position the Oil Reservoir Bracket Assembly under the Passenger Side Headlight. The 350Z and G35 will have different mounting points and can be seen below.

NOTE: If you use your vehicle primarily as a Drift car, we recommend removing the Isolating Mounts as they can flex a bit too much for the harsh driving environment that is drifting and can cause the Rotrex Fluid to slosh out. The Isolator Mounts are fine for Daily Driving and Track Driving. Isolator Mounts can't be used with the Rotrex Reservoir Brackets.

- a. **350Z Owners:** Locate the (2) two Isolating Mounts (#77), (2) two Mount inserts (#78), and (2) two M6 x 25mm Hex Head Bolts (#76). Under the Passenger Side Headlight are (2) two open threaded holes. Secure the Reservoir Bracket to the mounts and these threaded holes with the M6 Bolts. Rotrex Reservoirs can now be installed into the Clamps. Tighten the clamps with the supplied hardware to secure the Reservoir. *Figure 52.*



Figure 52

- b. **G35 Owners:** The Reservoir Bracket (#86) comes with Hardware. Mount the Top of the Reservoir under the Passenger headlight as shown below. The rear Mount will need to be marked on the Core Support and drilled. After drilling, secure the mount with the included Nut and Bolt. Rotrex Reservoirs can now be installed into the Clamps. Tighten the clamps with the supplied hardware to secure the Reservoir. *Figure 53.*

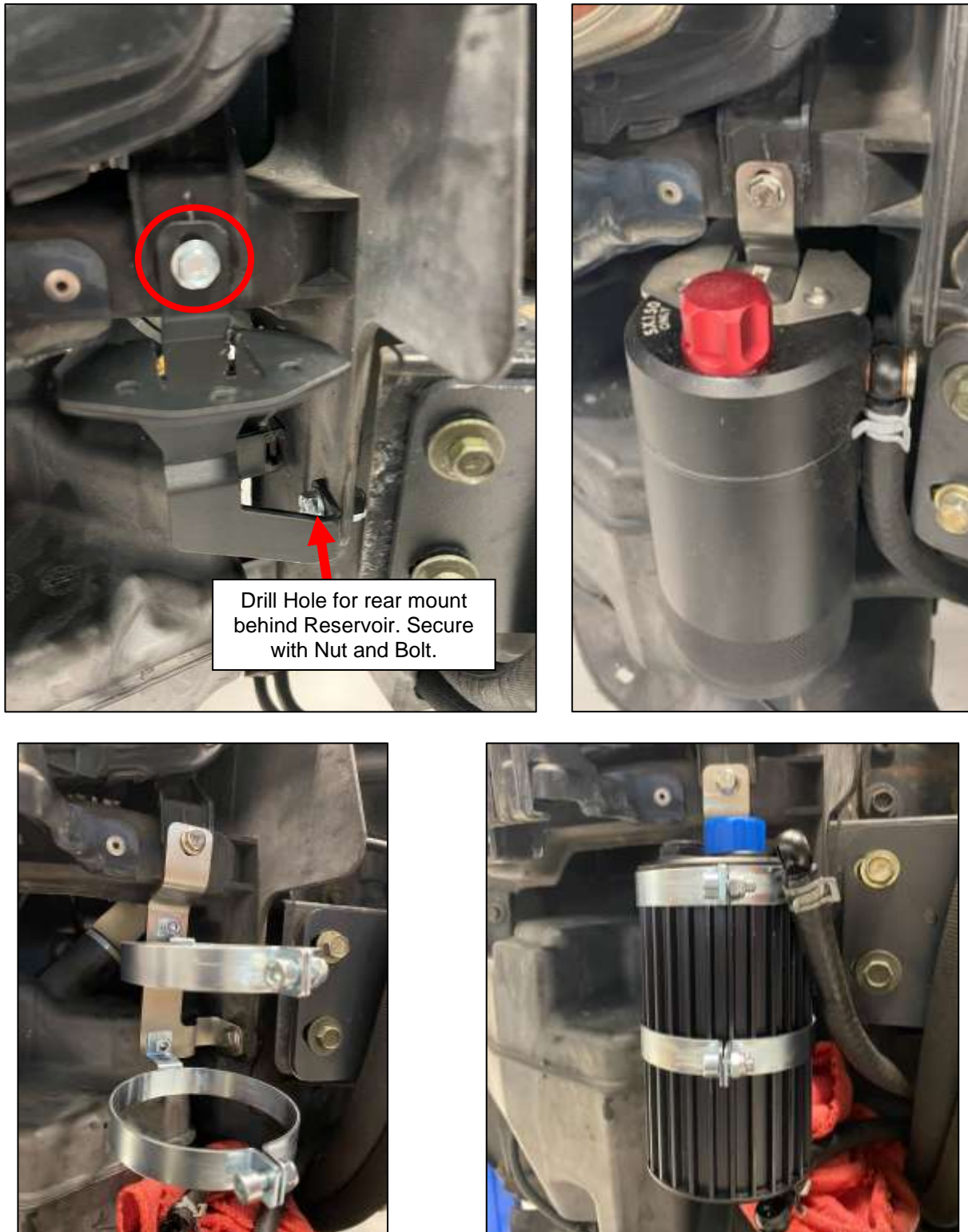


Figure 53

4. Install the Setrab Oil Cooler Bracket (#56) onto the bottom of the Z1 13 Row Procooler (#4) using (4) four M6 nylon lock nuts included with the Oil Cooler Bracket Kit (#56). *Figure 54.*



Figure 54

5. Position the Oil Cooler on the Passenger Side Core Support opening. Mark the Core Support to drill with a marker. There are multiple spots you can choose to drill and mount the Procooler. We used the outermost holes on the bracket, seen below in *Figure 55.*

NOTE: The backside of the Core Support has ribs molded in. Make sure to avoid marking a hole over the ribs as it is more difficult to drill into and can cause issues installing the Rivnuts.

6. Using a 5/16" Drill Bit, drill into the Core Support where you marked in *Step 5*. Be careful not to go too far as you risk puncturing the Radiator. Use of a Drill Stop is recommended.
7. Locate (2) two Rivnuts and the Rivnut Tool (In Oil Cooler Kit). Install a Rivnut into each hole made in *Step 6*.
8. Locate (2) two M6 x 1.0 SEMS Bolts, 25mm (#18). Mount the Oil Cooler to the Core Support with the hardware. *Figure 55.*

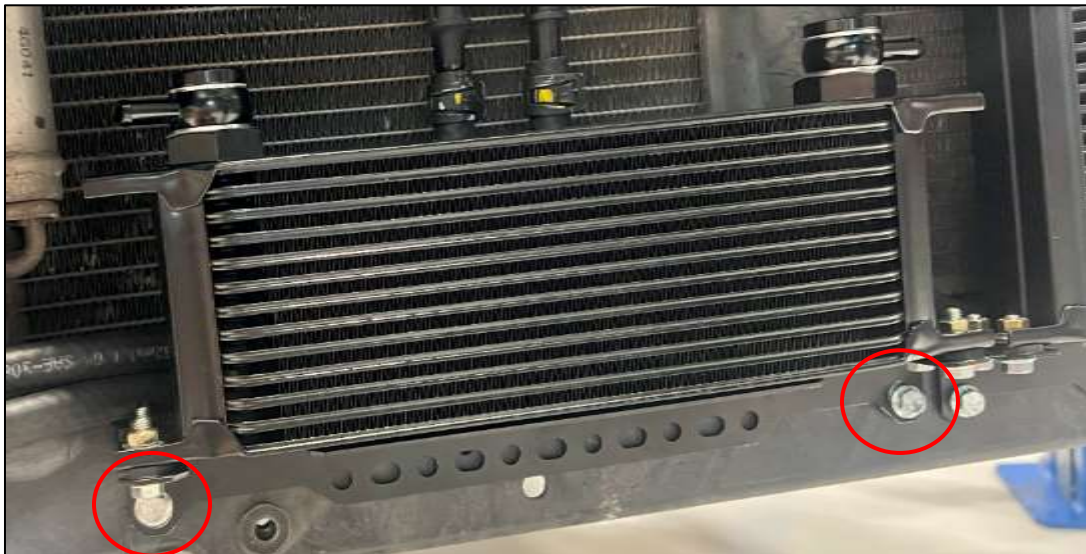


Figure 55

9. Using a long narrow funnel or fluid fill pump, prefill the Z1 Procooler with the supplied Rotrex SX150 Traction Fluid (#58). Be careful not to spill the fluid, only one bottle is included. You can purchase more [HERE](#).

10. Locate (4) four M22 Aluminum Crush Washers (#10), (2) two M22 Banjo Bolts (#9), and (2) two M22 Banjo Fittings (#8). With a Crush Washer on each side, install the M22 Banjo Bolt through the M22 Barb Fitting, and thread into the open ports on top of the Procooler. Point the Barb Fittings outward towards the sides of the vehicle. They are aluminum bolts, do not overtighten them as they may break. *Figure 56.*

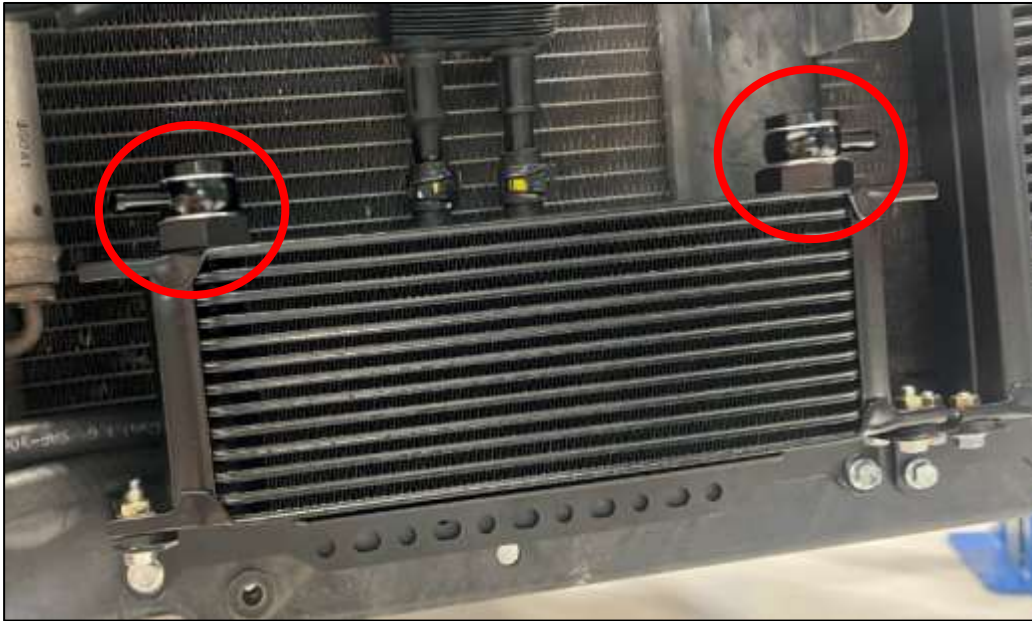


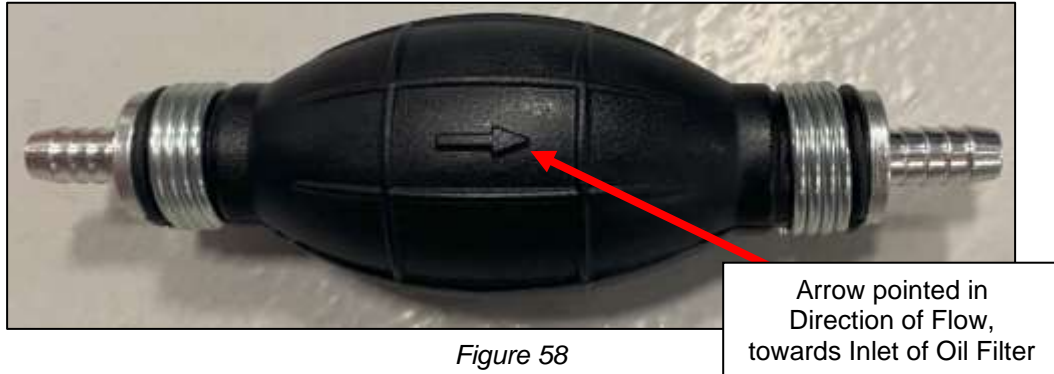
Figure 56

11. There is a hole on the Driver Side of the Core Support we used to secure the Rotrex Magnetic Oil Filter (#41). Enlarge the hole slightly with a drill to fit the supplied M6 x 25mm Bolt (#33) and M6 Flanged Nut (#32). Locate the Rotrex Oil Filter and Large P-Clamp (#26) and secure it to the Core Support. The filter has an arrow indicating the direction of flow for the oil, the arrow **MUST** point up towards the Supercharger. You can optionally mount the Oil Filter elsewhere as long as it is before the Supercharger Inlet and after the Priming Bulb Outlet. *Figure 57.*



Figure 57

12. The Rotrex Oil System will need to be plumbed in the order shown in *Figure 58* below. Using the provided 25 Feet of 8mm Hose (#54), cut appropriate lengths and install the hose onto all of the Rotrex Oil System components, with a Gray Spring Clamp (#7) at each connection. The ports of the Rotrex Supercharger Unit are marked "IN" or "OUT." Use the (2) two supplied 5/8" P-Clamps (#20) to secure the Hose along the Core Support if needed.
- a. Route Hose from the bottom (Outlet) of the Z1 Rotrex Oil Reservoir to the (Inlet) of the Rotrex Priming Bulb (#5). We placed our Priming Bulb right after the Oil Reservoir. The Priming Bulb **MUST** have the → facing towards the Inlet of the Oil Filter. *Figure 58*.



- b. Route Hose from the Outlet of the Priming Bulb to the bottom (Inlet) of the Oil Filter. Secure the Hose with the supplied 5/8" Cushioned P-Clamp somewhere along the Core Support.
- c. Route Hose from the top (Outlet) of the Oil Filter to the Inlet of the Rotrex Supercharger Unit.
- d. Route Hose from the Outlet of the Rotrex Supercharger Unit to the Inlet of the Z1 Procooler.
- e. Route Hose from the Outlet of the Z1 Procooler to the top (Inlet) of the Z1 Rotrex Oil Reservoir.

NOTE: There are countless ways to route all the hoses. *Figure 58* on the next page is what we found best on our vehicles based on other modifications. We have provided a few extra feet of hose as you may prefer to run some of the lines in a different location, just make sure that you follow the same path shown below. For the lines running across the bottom of the Core Support, neatly zip tie them to the Core Support or use the supplied P-Clamps (#20). **MAKE SURE NO LINES ARE PINCHED; THIS CAN CAUSE OIL TO NOT FLOW PROPERLY TO THE SUPERCHARGER AND CAN CAUSE OIL STARVATION.** *Figure 59*.

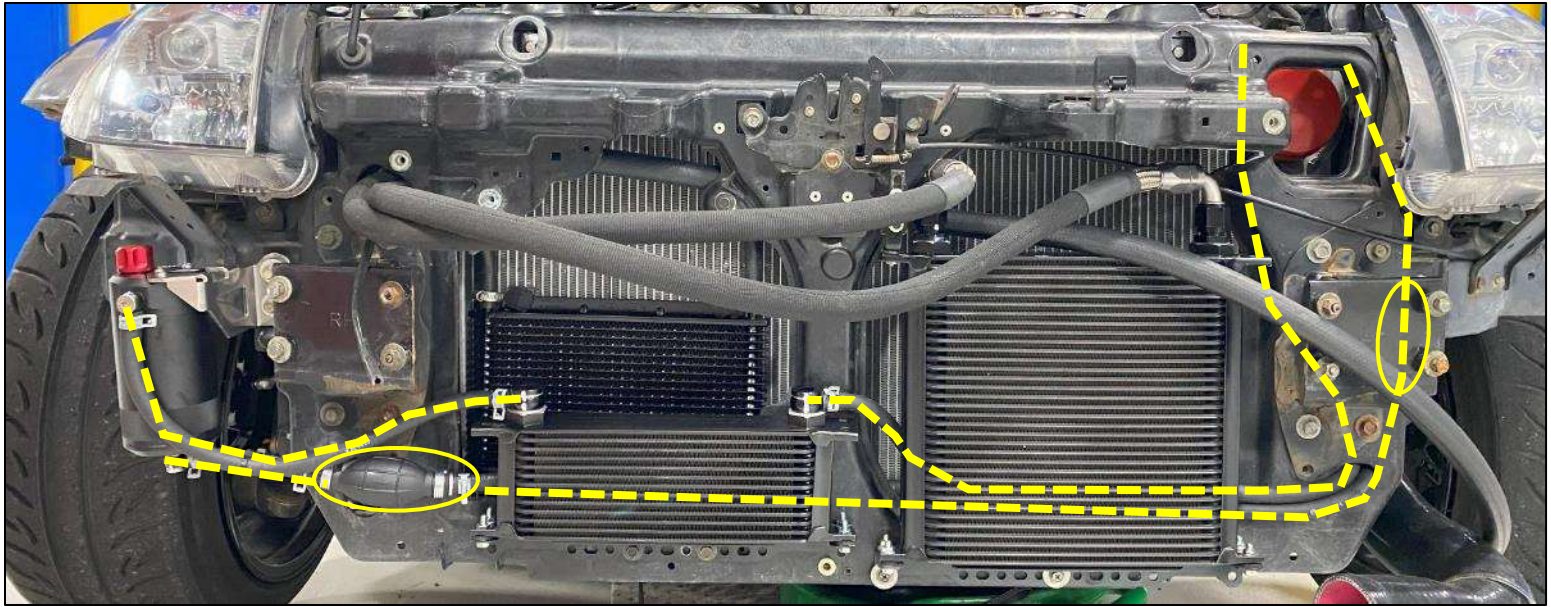


Figure 59

13. Using a long narrow funnel or fluid fill pump, fill the Z1 Rotrex Fluid Reservoir with the supplied Rotrex SX150 Traction Fluid (#58). Be careful not to spill the fluid, only one bottle is included. You can purchase more [HERE](#).

Section Five: Coolant Reservoir

Tools needed:

- Ratchet
- Assorted Metric Sockets
- Assorted Metric Wrenches
- Torque Wrench
- Pliers
- Allen/Hex Keys

Parts needed:

- Banjo Fitting, M10 to 8mm (#11)
- Banjo Bolt, M10 x 1.0 (#12)
- Z1 Radiator Cap (#25)
- M8 x 1.25 to 8mm Hose Barb Fitting (#28)
- 8mm Aluminum Crush Washer (#29)
- 10mm Copper Crush Washers (#30)
- Spring Clamps (#31)
- Coolant Overflow Hose (#50)

350Z:

- 350Z Coolant Overflow Tank (#69)
- 350Z Coolant Overflow Tank Hose (#70)
- M6 Rubber Isolating Mount (#71)
- M6 Mount Insert (#72)

G35:

- G35 Coolant Overflow Tank (#83)
- G35 Coolant Overflow Tank Hose (#84)

PROCEDURE:

1. If you have not already drained coolant and removed the OE Coolant Reservoir, do so now. Removal is outlined in *Section 1: Disassembly, Steps 16-20*. The 350Z and G35 have different Procedures and Coolant Reservoir Tanks.

350Z:

2. Remove the (2) two bolts on the Passenger Side Core Support. *Figure 60.*

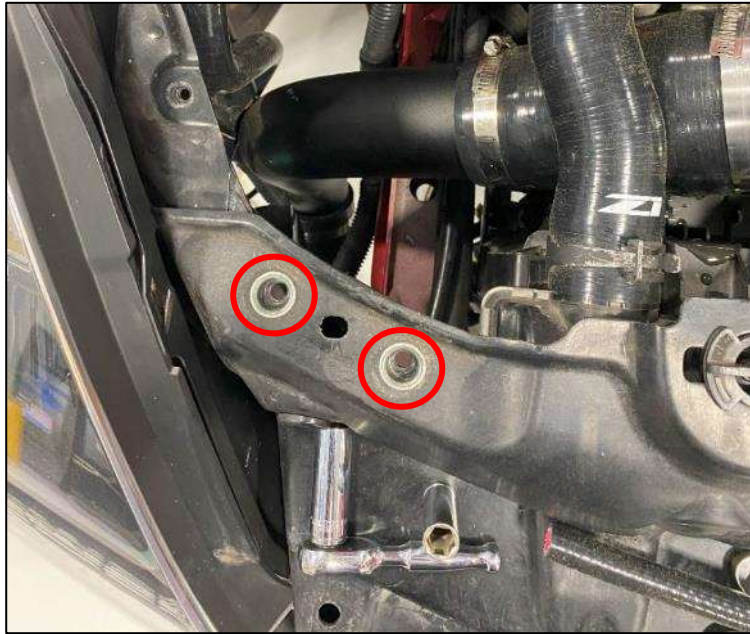


Figure 60

3. Locate the 350Z Coolant Overflow Tank (#69), M6 Rubber Mount (#71), and the M6 Mount Insert (#72). Place the Mount Insert into the Rubber Mount, and then install the Rubber Mount into the Clip on the side of the Coolant Overflow Tank. *Figure 61.*

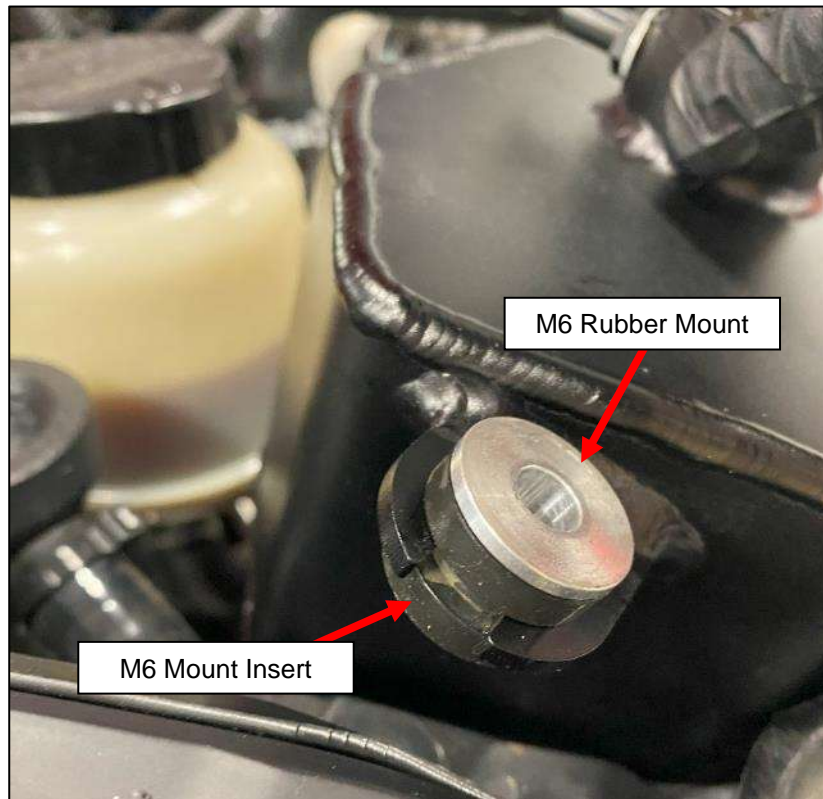


Figure 61

4. Locate the M8 Aluminum Crush Washer (#29), the M8 x 1.25 Barb Fitting (#28), and the Coolant Overflow Tank. Install the Barb Fitting with the Crush Washer onto the Overflow Tank where the Radiator Cap will be positioned. Torque to **17 ft-lbs.** *Figure 62.*



Figure 62

5. Locate (2) two 10mm Copper Crush Washers (#30), the M10 Banjo Bolt (#12), the M10 Banjo Fitting (#11), and the Coolant Reservoir. Install the Banjo Bolt through the Banjo Fitting with a Crush Washer on each side of the Banjo Fitting to the bottom of the Coolant Overflow Tank. Loosely tighten the bolt so that it can still be adjusted. *Figure 63.*

NOTE: *Figure 63* below shows Aluminum Crush Washers. The installation process is still the same.

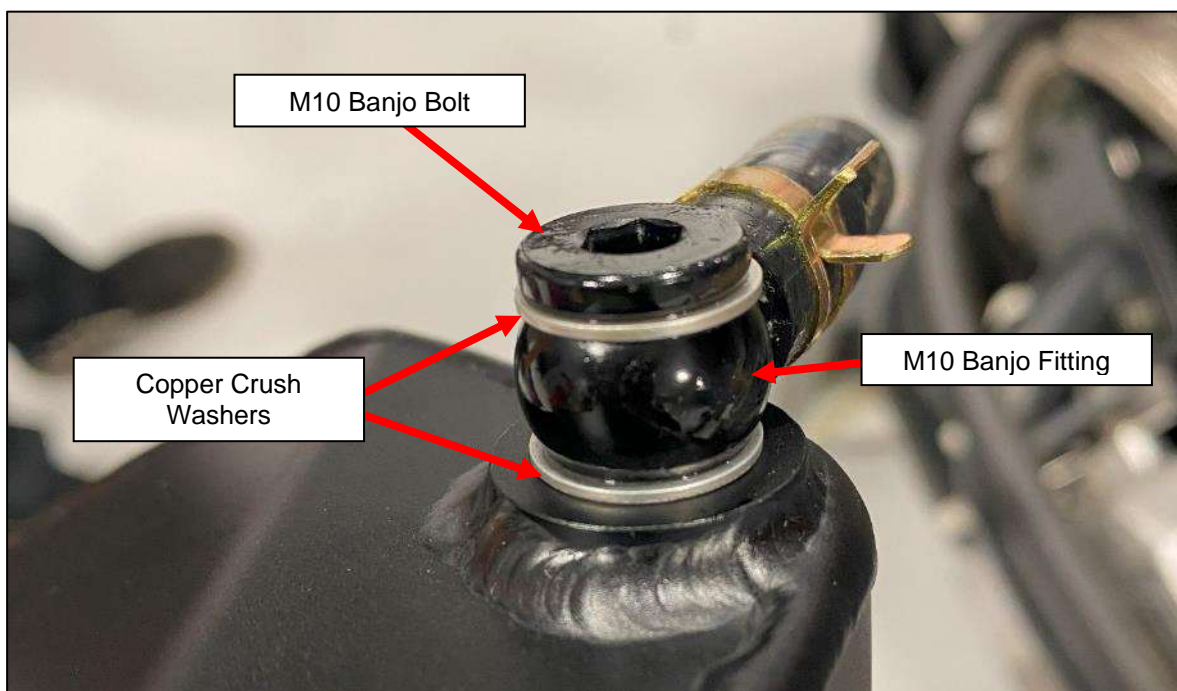


Figure 63

6. Locate the 350Z Coolant Reservoir Hose (#70) and (2) two Hose Clamps (#31). Position a Hose Clamp on each end of the Reservoir Hose.
7. Attach one end of the Coolant Reservoir Hose to the Banjo Fitting on the Coolant Overflow Tank installed in *Step 5*. Secure the Hose with the Hose Clamp. *Figure 64*.

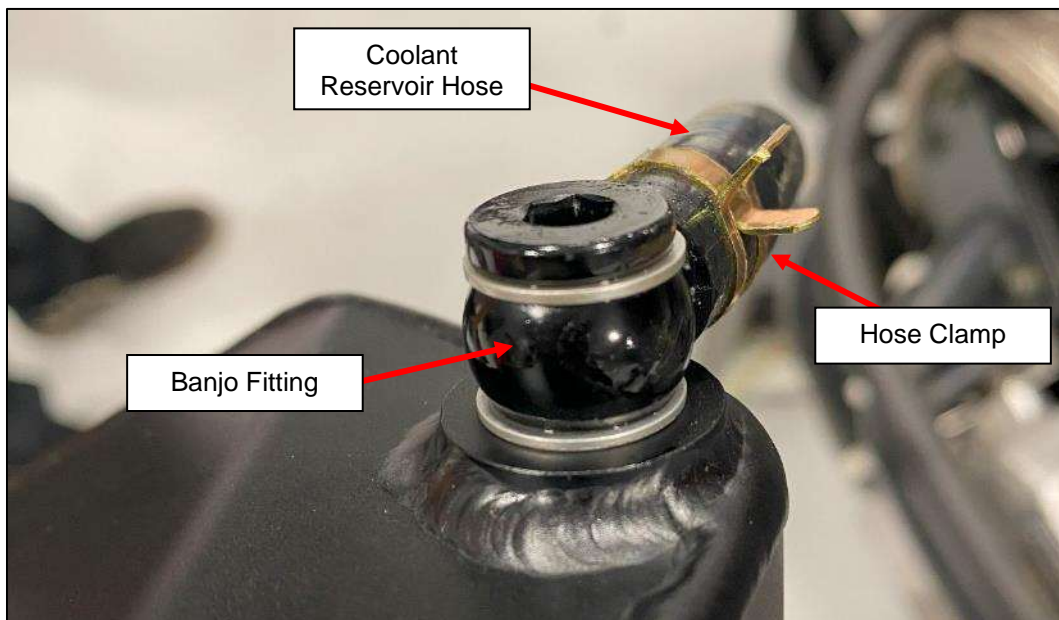


Figure 64

8. Position the Z1 Coolant Overflow Tank where the OE Overflow Tank was located as shown below. *Figure 65*.

NOTE: All of the fittings have not yet been installed in *Figure 65* below.



Figure 65

9. Route the Coolant Reservoir Hose from the Coolant Overflow tank to the Fitting on the Radiator. *Figure 66.*

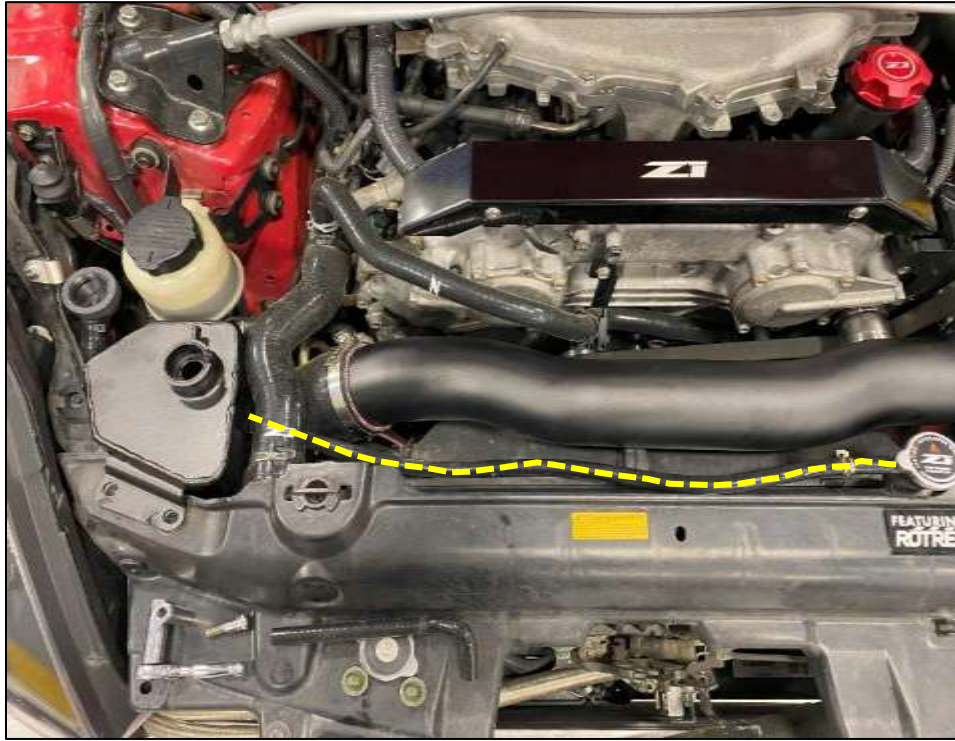


Figure 66

10. Once the Hose has been positioned, and the Banjo Fittings are clocked in the right direction, remove the Coolant Overflow Tank and tighten the Banjo Bolt. Torque to **13 ft-lbs.**
11. Reinstall the Coolant Overflow Tank and secure the Coolant Reservoir Hose to the Radiator with a Hose Clamp.
12. Using the OE Hardware removed in *Step 2*, and *Section One: Disassembly, Step 20*, secure the Coolant Overflow Tank to the vehicle. Torque the single bolt to **34 ft-lbs.**, and the (2) two Core Support Bolts to **17 ft-lbs.** *Figure 67.*

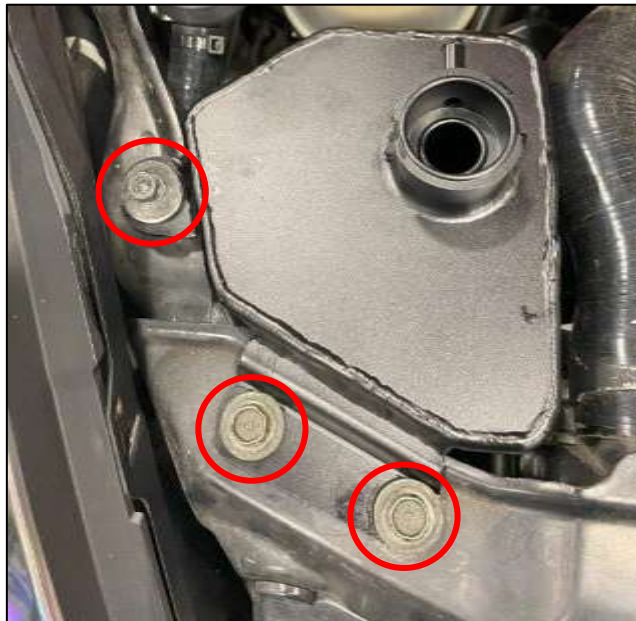


Figure 67

13. Locate the Coolant Overflow Hose (#50). Install it onto the Barb Fitting installed in *Step 4. Figure 68.*

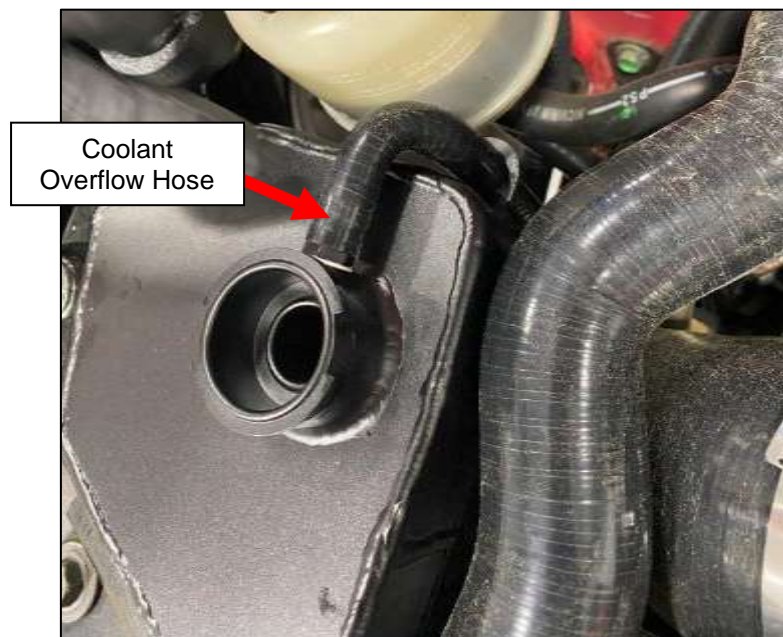


Figure 68

14. Add Coolant to the new Coolant Overflow Tank and add the included Radiator Cap (#25) to the Overflow Tank. *Figure 69.*



Figure 69

15. Check for any leaks, tighten and adjust hoses and bolts as necessary.

16. Fill and bleed Coolant System in accordance with Factory Service Manual (FSM) once the rest of the Supercharger Kit is installed.

G35:

17. Remove the Core Support Bolt and the Bolt securing the Power Steering Reservoir to the Chassis. *Figure 70.*

NOTE: The Figure below shows the Coolant Reservoir Tank already installed, the bolts are in the same location.



Figure 70

18. Locate the new G35 Coolant Reservoir Tank (#83), M8 Aluminum Crush Washer (#29), and the M8 x 1.25 Barb Fitting (#28). Install the Barb Fitting with the Crush Washer into the fill port of the Reservoir Tank. Do not over torque the Barb Fitting as it will break. *Figure 71.*

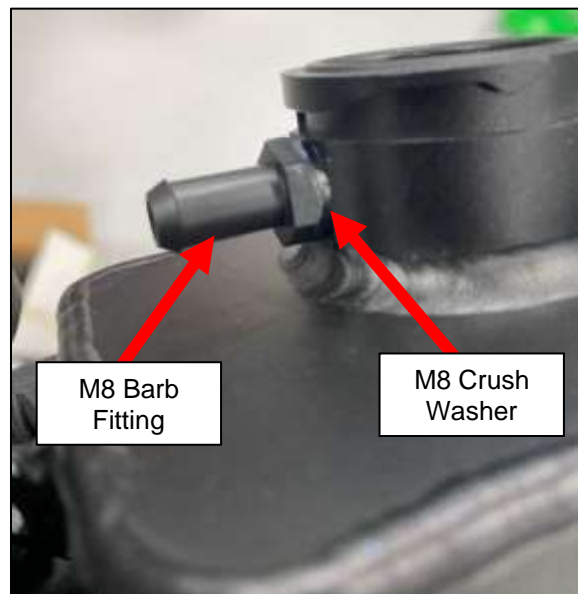


Figure 71

19. Locate the Coolant Overflow Hose (#50). Insert the Longer end of the hose through the collar built into the Coolant Reservoir Tank, then attach the shorter end to the Barb Fitting installed in *Step 18*. *Figure 72*.

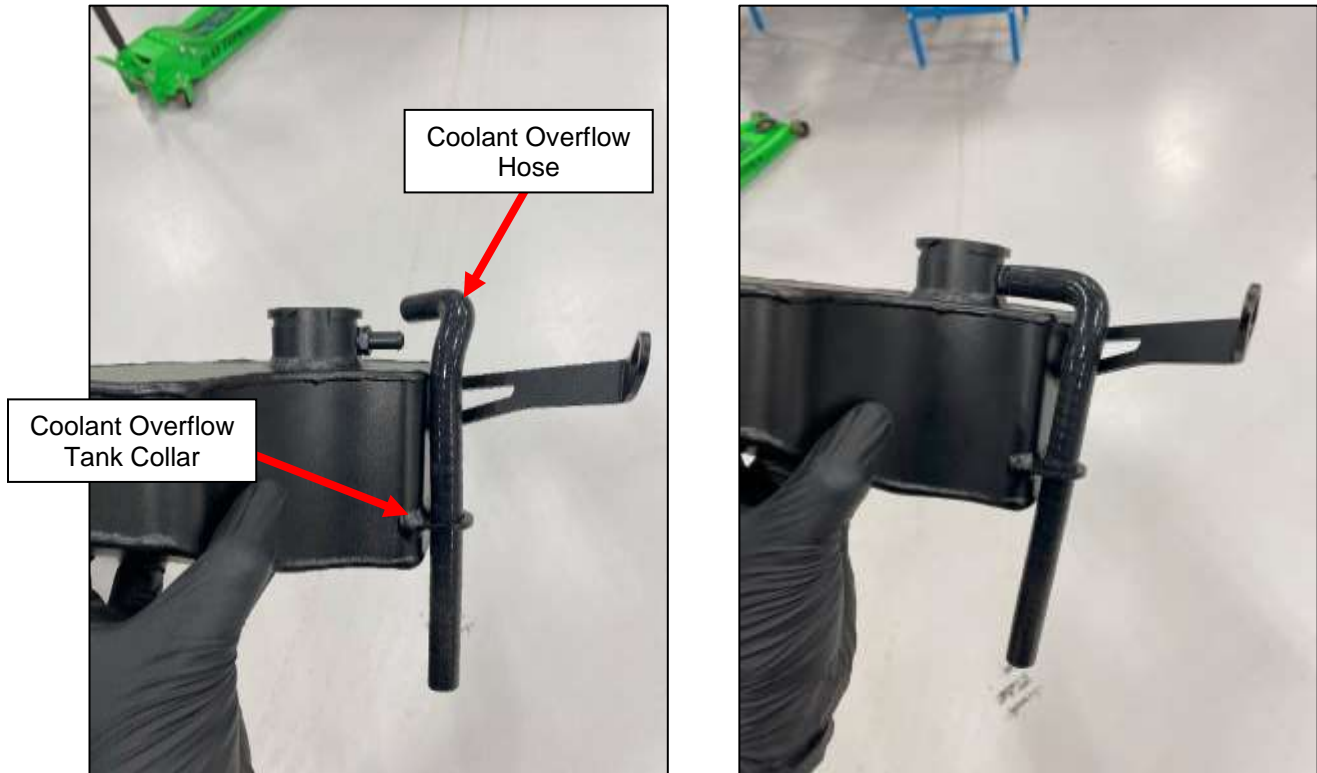


Figure 72

20. Locate the G35 Coolant Reservoir Hose (#84) and (1) one Hose Clamp (#31). Install the Hose Clamp onto the "U" shaped end of the Coolant Reservoir Hose.
21. Install the "U" shaped end of the Coolant Reservoir Hose onto the port from the Radiator. Secure with the Hose Clamp. *Figure 73*.

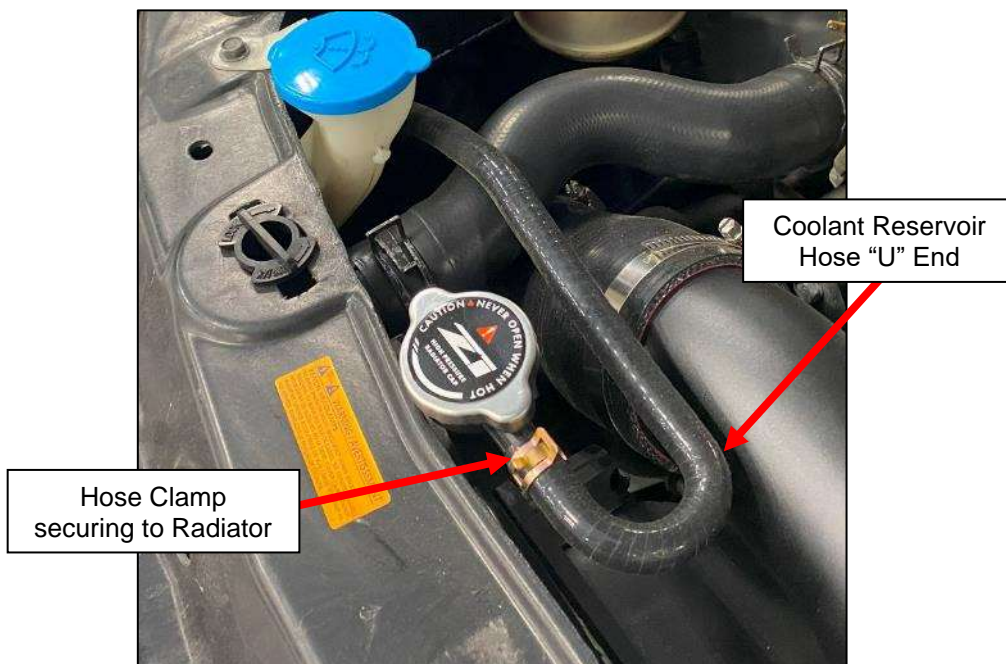


Figure 73

22. Locate the Banjo Fitting (#11) and (1) one Hose Clamp (#31). Install the Banjo Fitting into the other end of the Coolant Reservoir Hose and secure it with the Hose Clamp. *Figure 74.*



Figure 74

23. Locate the Banjo Bolt (#12) and (2) two Copper Crush Washers (#30). Install the Banjo Bolt into the Banjo Fitting with (1) one Copper Crush Washer on each side of the Banjo Fitting. *Figure 75.*

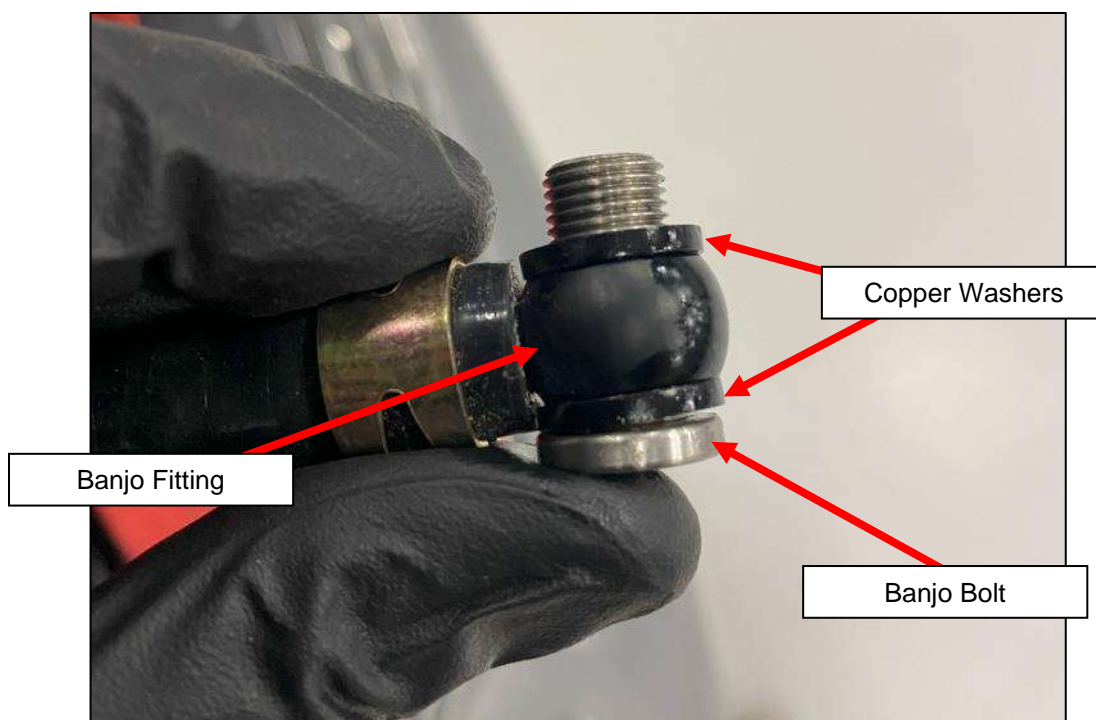


Figure 75

24. Thread the Banjo Bolt into the bottom of the Coolant Reservoir Tank, but do not tighten yet. *Figure 76.*



Figure 76

25. Position the Coolant Reservoir Tank onto the holes where the bolts were removed in *Step 17* and rotate the Coolant Reservoir Hose to fit properly and not have any kinks. After it is positioned, remove the Coolant Reservoir Tank and tighten the Banjo Bolt. *Figure 77.*

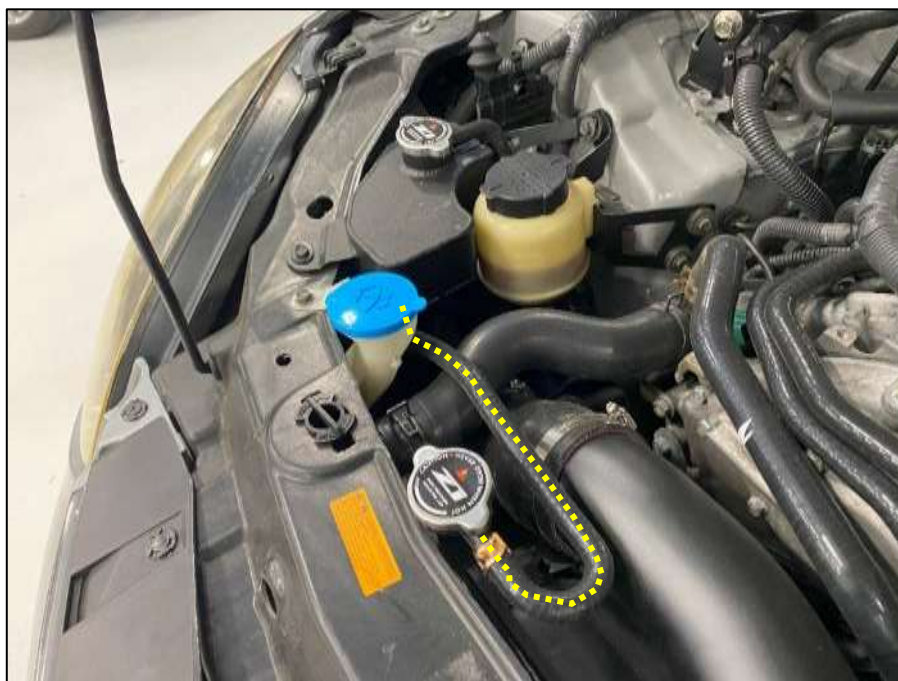


Figure 77

26. Reposition the Coolant Reservoir Tank back into place and secure it with the (2) two OE Bolts removed in *Step 17. Figure 78*. Torque the bolt securing the Power Steering Bracket to **27-34 ft-lbs.** Torque the Core Support bolt to **14-17 ft-lbs.**



Figure 78

27. Fill the Coolant Reservoir halfway with Coolant or Water and install the Radiator Cap (#25). Check for any leaks in the system. Tighten and adjust hoses as necessary.
28. Fill and bleed the Coolant System in accordance with the Factory Service Manual (FSM) once the rest of the Supercharger Kit is installed.

Section Six: Charge Air

Tools Needed:

- Ratchet
- Assorted Metric Sockets
- 1/2" Wrench
- 5/16" Allen/Hex Key
- 5mm Allen/Hex Key
- Thread Sealant
- Silicone Spray

Parts Needed:

- Z1 Intercooler (#1)
- Supercharger Pipe Set (#2)
- Supercharger Coupler Set (#3)
- M8 x 1.25 Flanged Head Screws (#16)
- 90° NPT to Barb Fitting (#27)
- Turbosmart RacePort (#43)
- Z1 Bash Bar (#44)
- Supercharger Outler Hose Clamp (#45)
- Charge Pipe Hose Clamps (#46)
- Uprev MAF GT (75mm Only) (#49)
- Intercooler Bracket Kit (#55)

PROCEDURE:

1. Locate the Z1 Bash Bar (#44), Z1 Intercooler (#1), (2) two Intercooler Brackets (#55), Turbosmart RacePort (#43), and (4) four M8 x 16mm Flanged Button Head Screws (#16).
2. With thread sealant, install the barb fitting into the right port of the RacePort with a 1/2" wrench and install the plug into the left with a 5/16" hex key. Install the Turbosmart RacePort onto the Left side of the Z1 Intercooler. Have the Recirculation Port **FACE** the engine on 350Z. Have the Recirculation Port **FACE AWAY** from the engine on G35 models. *Figure 79.*

NOTE: You can replace the Straight Barbed Port on the Blowoff Valve with the supplied 90° Barbed Fitting (#27) if you have contact issues with the Bumper during reinstallation. This is more of a concern on G35 Models.

NOTE: The Intercooler in *Figure 79* below is a sampled production piece and is a different color than Production Intercoolers. The blowoff valve is clocked to fit a 350Z Recirculation Pipe.

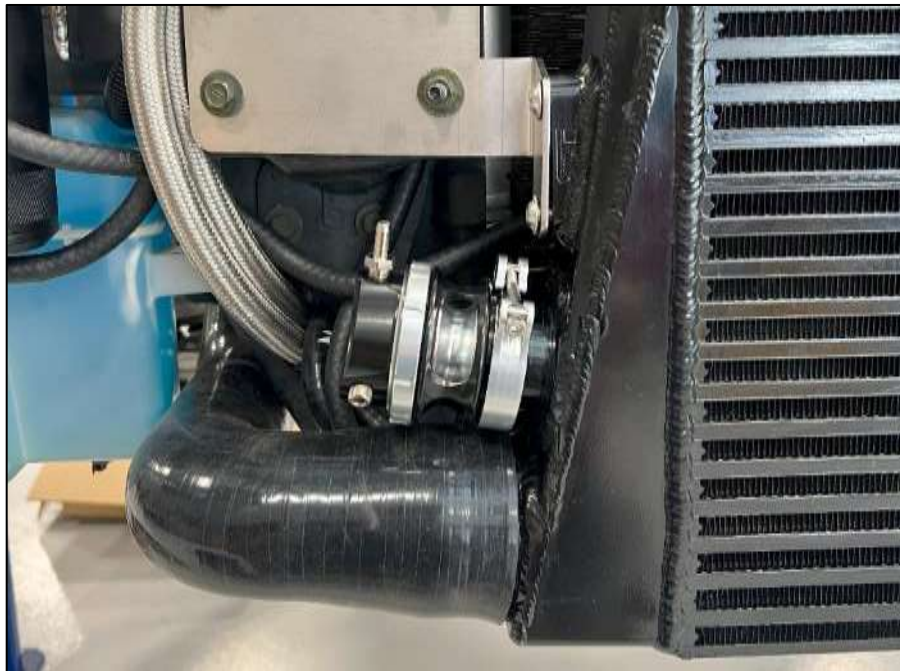


Figure 79

3. Loosely install the Intercooler Brackets onto the Intercooler with the (4) four M8 Flanged Button Head Bolts.
4. Position the Intercooler Brackets onto the studs on the vehicle's frame rails.
5. While holding the Intercooler in place, position the Z1 Bash Bar onto the studs on the frame rails. Secure the Bash Bar and Intercooler to the vehicle with the (4) four nuts and (4) four bolts removed in *Step 12 of Section 1: Disassembly*. Torque to **16 ft-lbs**. *Figure 80*.

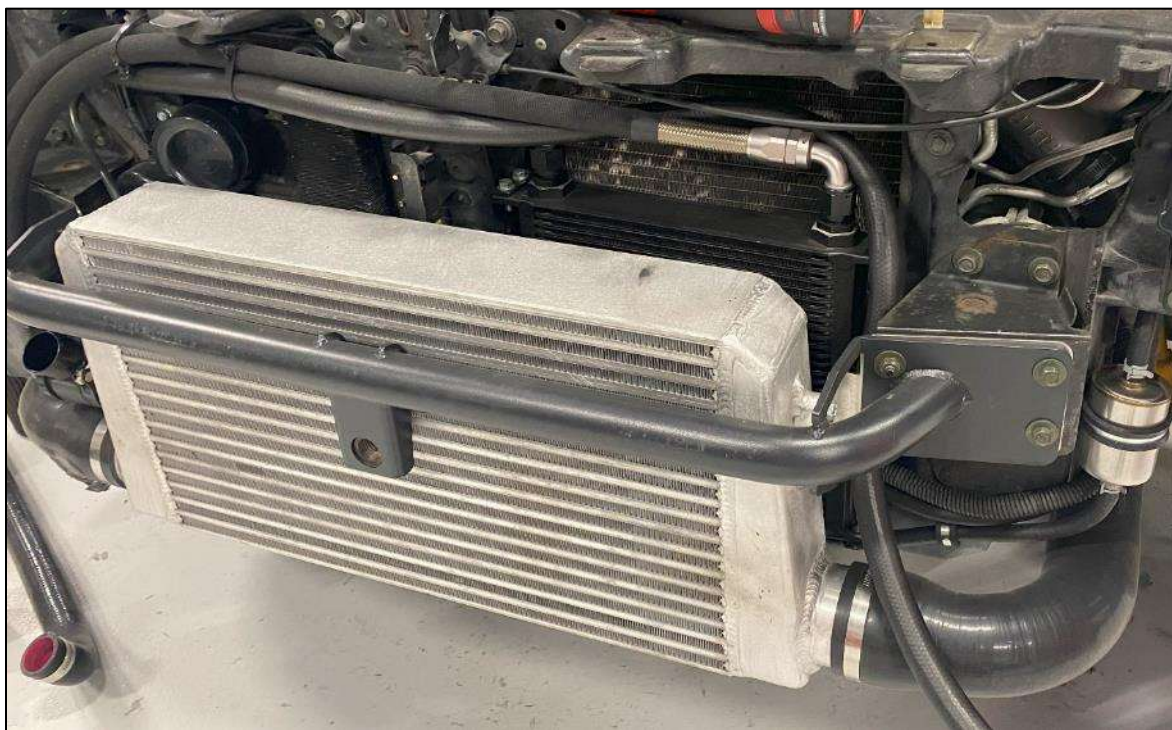


Figure 80

6. Adjust the Intercooler as needed, and then tighten the M8 Bolts on the Intercooler Brackets. Make sure there is nothing contacting the Intercooler. If there is contact, loosen the Bracket Bolts and adjust as needed.
7. Locate the Aluminum Charge Pipe Set (#2), Silicone Coupler Kit (#3), and all Charge Pipe Clamps (#45-46).
8. Transfer over the MAF Sensor from the OE Air Intake Tube to the new Intake Tube. If you are using the 75mm Pulley, you will install the supplied Uprev MAF GT (#49) instead.
9. Install the small Silicone Reducer to the Throttle Body. The Larger end of the Reducer will be on the Throttle Body. Secure with a Hose Clamp on each end.

10. Install the rest of the Charge Pipes and Silicone Connectors with a Hose Clamp at each connection as shown in *Figure 81* and *Figure 82* below. The Supercharger Outlet Pipe will use the Smaller Hose Clamp (#45) to secure it to the Supercharger.

NOTE: Do not tighten the Hose Clamps until all the piping has been adjusted to fit properly.

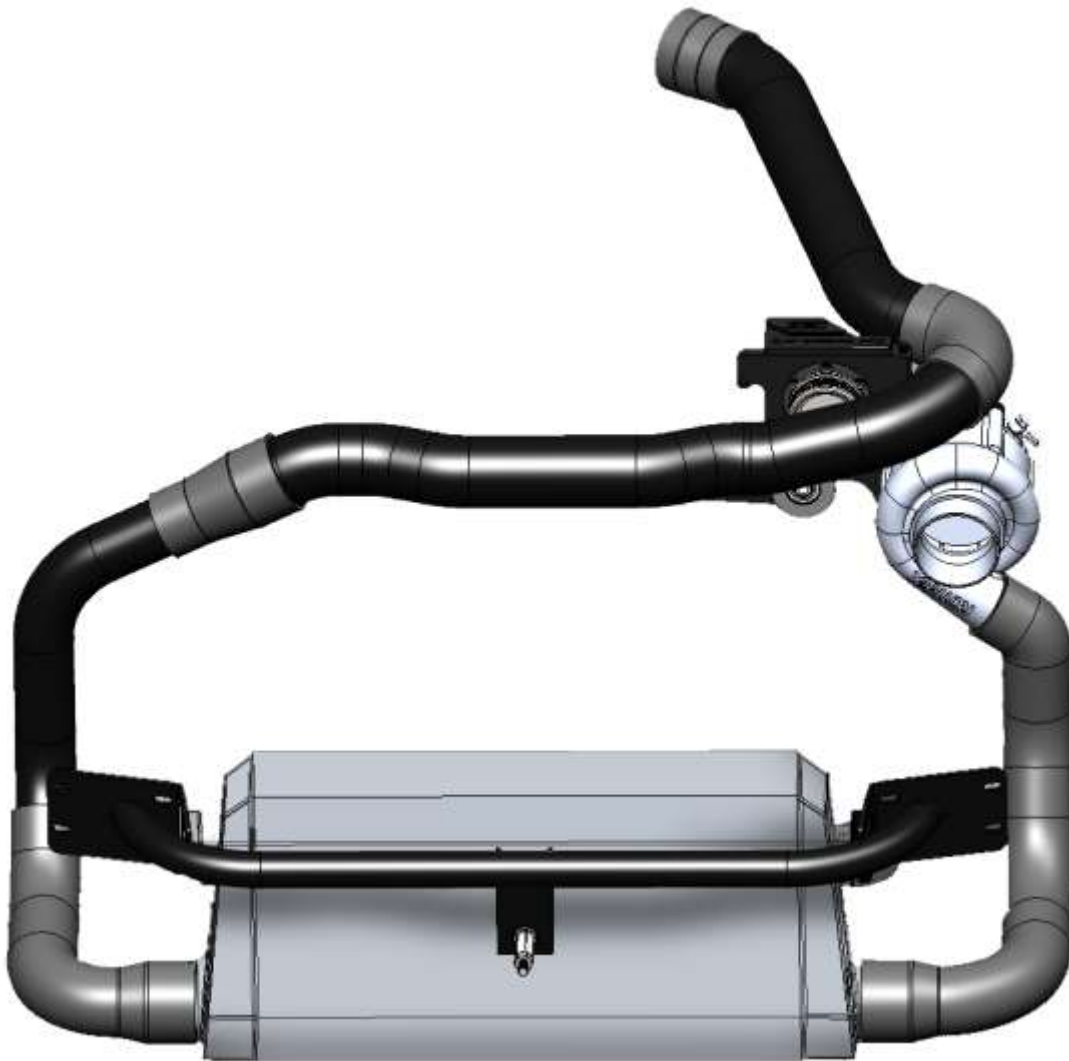


Figure 81



Figure 82

NOTE: Adjust the piping near the Supercharger Unit to have the Silicone Elbow resting on the Supercharger Unit and not the Metal Intake Piping. The Intake Piping will wear from vibrations if it is allowed to sit on the Supercharger Unit. *Figure 83.*



Figure 83

NOTE: If you have a larger Radiator, you may need to trim the Fan Shroud to clear the Silicone Piping on the Passenger side of the Vehicle. *Figure 84.*

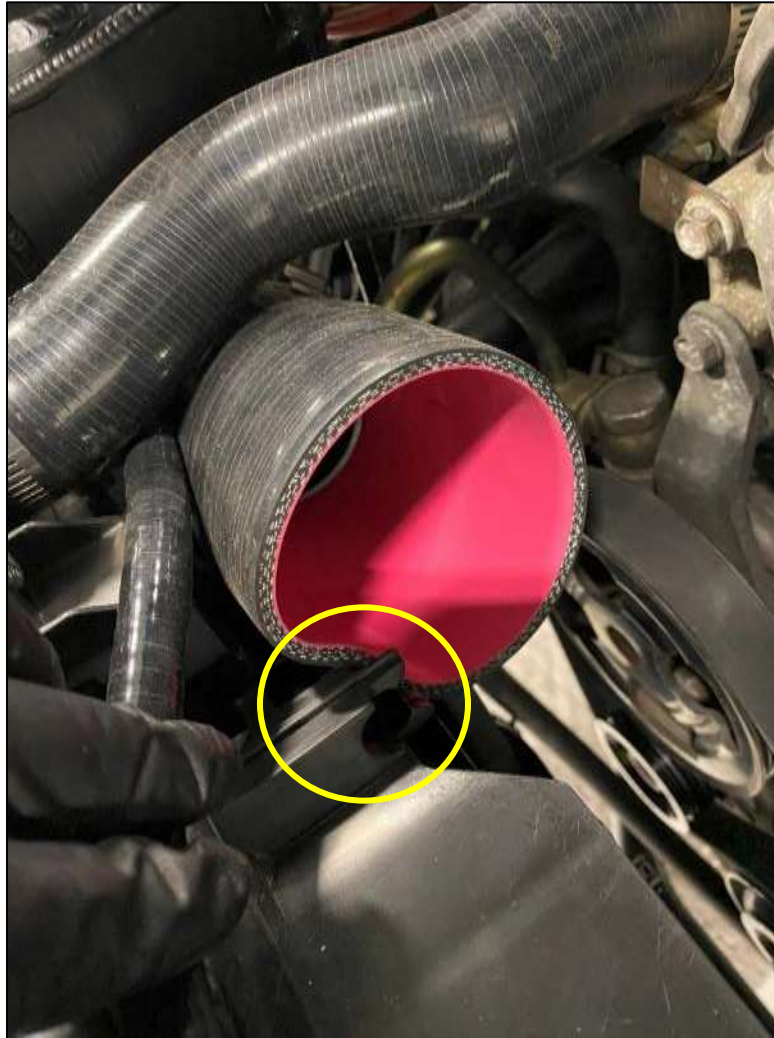


Figure 84

Section Seven: Intake

Tools Needed:

- Ratchet
- Assorted Metric Sockets
- Assorted Metric Wrenches
- Silicone Spray

Parts Needed:

350Z:

- Supercharger Intake (#64)
- Supercharger intake Elbow (#65)
- Recirculation Hose (#66)
- Large Intake Hose Clamps (#67)
- Air Filter Joiners (#68)
- Air Filter (#73)

G35:

- Supercharger Intake (#79)
- Recirculation Hose (#80)
- Air Filter Joiner (#81)
- Large Intake Hose Clamps (#82)
- Air Filter (#85)

PROCEDURE:

1. Locate the Air Filter (#73 or #85), the Large Silicone Intake Pipe (#64 or #79), Air Filter Joiner(s) (#68 or #81), Recirculation Hose (#66 or #80), and the large Intake Clamps (#67 or #82).
2. Place a Clamp on the Supercharger Unit's Inlet. If you place the clamp on the Silicone Intake Tube it will be much harder to install the tube through the Core Support.
3. Install the Silicone Intake Tube through the Core Support Passthrough. It will likely be a tight fit and twisting/rotating the tube while pushing will help. The 350Z and G35 have different Intakes. *Figure 85.*

NOTE: If you are having trouble installing the Intake Tube through the Core Support, the Core Support may need to be clearanced more if it was not enlarged enough in the earlier steps. You may also be able to stick a screwdriver or finger between the Core Support and the Intake Tube to get it past. The use of Silicone Spray can help ease installation as well.



Figure 85

4. Install the (3) three Metal Joiners into the Inlets of the Intake Tube and secure each with a Clamp. *Figure 85* above. The 350Z has an extra Silicone Elbow Piece that will need to be installed with a Joiner before the Air Filter. Seen below in *Figure 86*.
5. With a supplied Clamp, install and secure the Air Filter onto the Joiner of the Intake Tube. *Figure 85* above.
6. Secure the Recirculation Pipe with a Clamp to the Joiner in the Intake Tube. If you are not using the Recirculation Pipe, install the supplied Plug and Hose Clamp into the Intake Pipe, and skip *Step 7*. *Figure 86*.

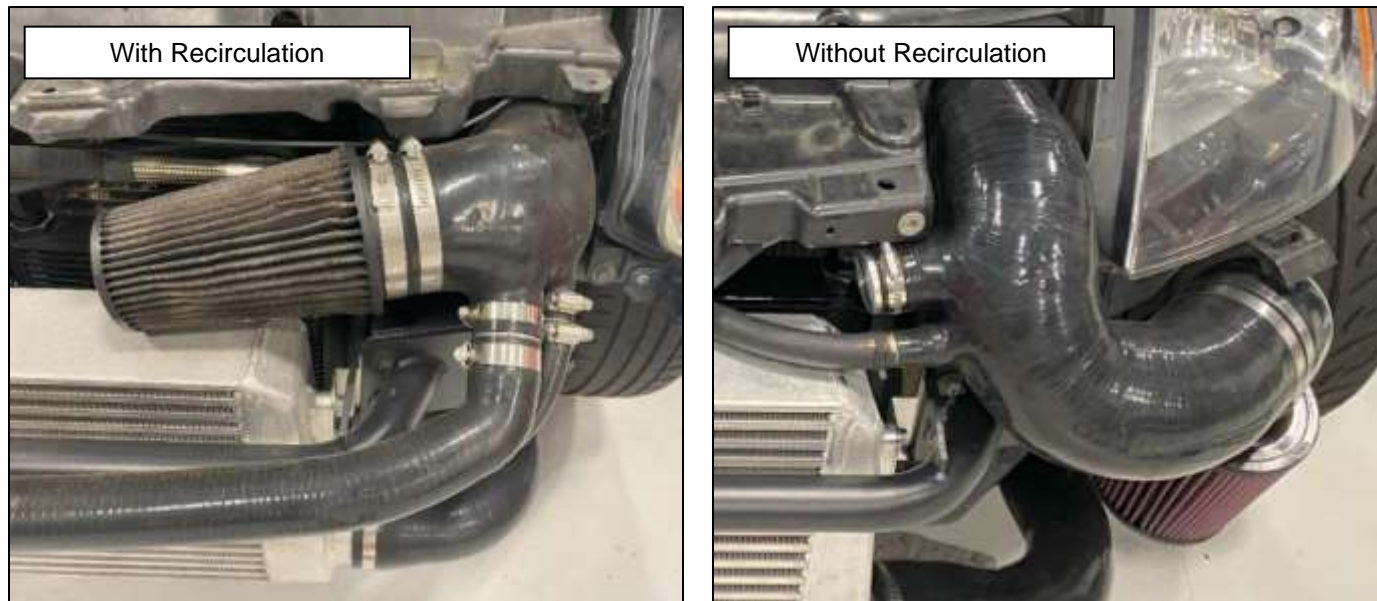


Figure 86

7. Run the other end of the Recirculation Pipe across the Intercooler and secure with another Clamp to the Turbosmart RacePort installed on the Intercooler. The G35 will have the Recirculation Pipe run **IN FRONT** of the Intercooler, the 350Z Recirculation Pipe will run **BEHIND** the Intercooler. *Figure 87*.

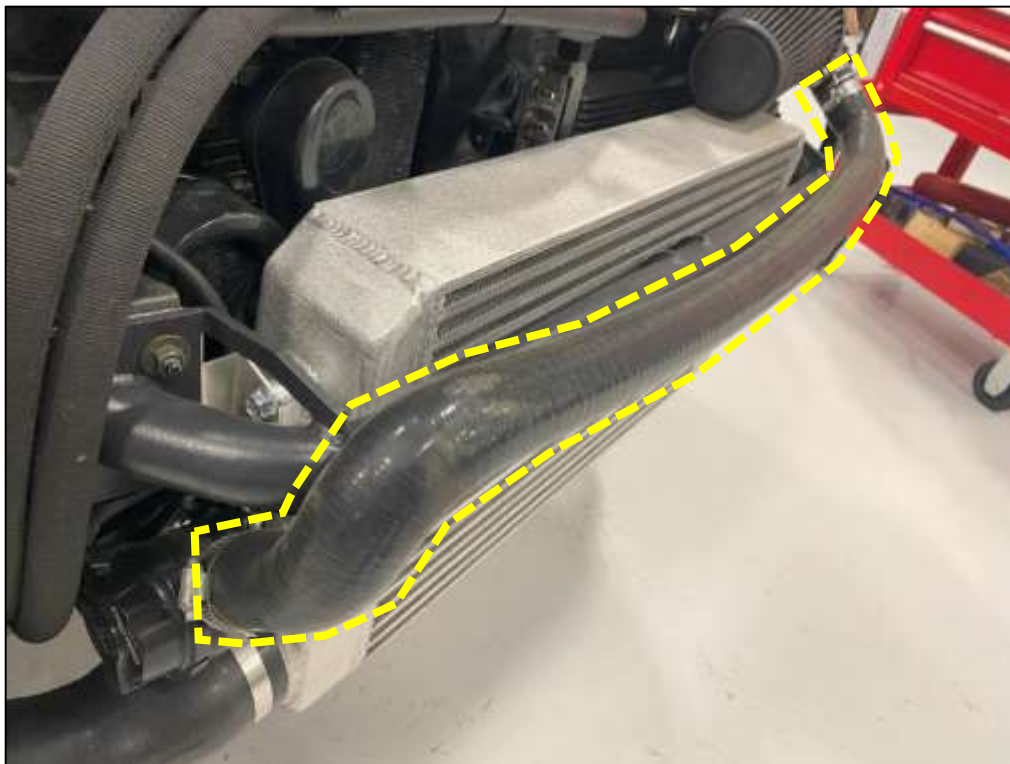


Figure 87

Section Eight: Crankcase Ventilation

Tools Needed

- Pliers
- Hose Cutter

Parts Needed

- 5mm Vacuum Line Clamp (#21)
- 4mm Vacuum Line Clamp (#22)
- Tee Fitting (#24)
- 5/8" PCV Hose (#51)
- Black Hose Clamp (#52)
- 4mm Vacuum Line (#53)

PROCEDURE:

1. Locate the 4mm Vacuum Line (#53). Remove the OE Cap on the Intake Manifold Collector and install the Vacuum Line. Secure with a 4mm Vacuum Line Clamp (#22) *Figure 88*.

If you are utilizing a Fuel Return System, you can use the supplied Tee Fitting (#24) to join the Vacuum Line with the Vacuum Line off of the Fuel Pressure Regulator. If you are not running a Return System, disregard this. Secure the Tee Clamp with the supplied 4mm Vacuum Line Clamps if necessary.

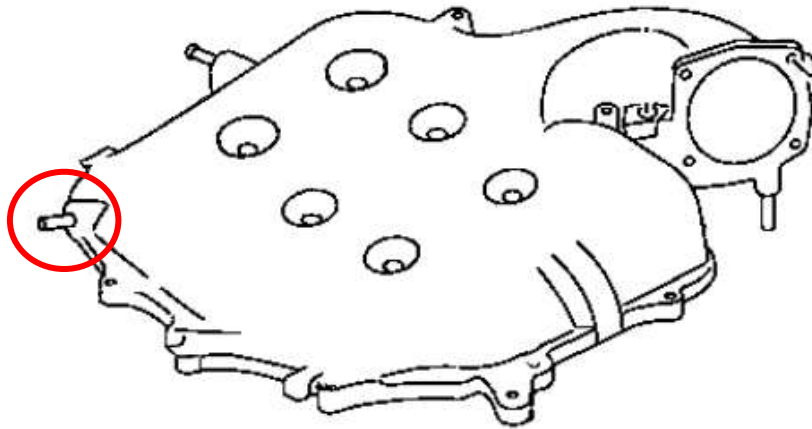


Figure 88

2. Run the Vacuum Line down and through the Core Support and install it onto the Barb Fitting on the Turbosmart RacePort. Secure with the 5mm Vacuum Line Clamp (#21). *Figure 89.*



Figure 89

3. Locate the 5/8" PCV Hose (#51) and (2) two Black Hose Clamps (#52). Install one end of the Hose to the smaller Metal Joiner in the Intake Pipe, and secure with a Hose Clamp. *Figure 90.*

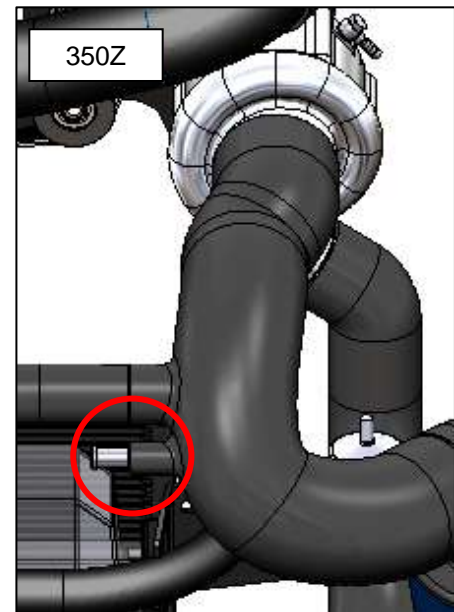


Figure 90

4. Route the rest of the Hose across and through the top of the Core Support, up against the Passenger Side of the vehicle and back behind the engine to the Driver Side Valve Cover. This is the only way the line can run without kinking or interfering with the Supercharger System. *Figure 91.*

NOTE: The Figure below shows a Stock Engine Bay, but the path of the hose will be the same.

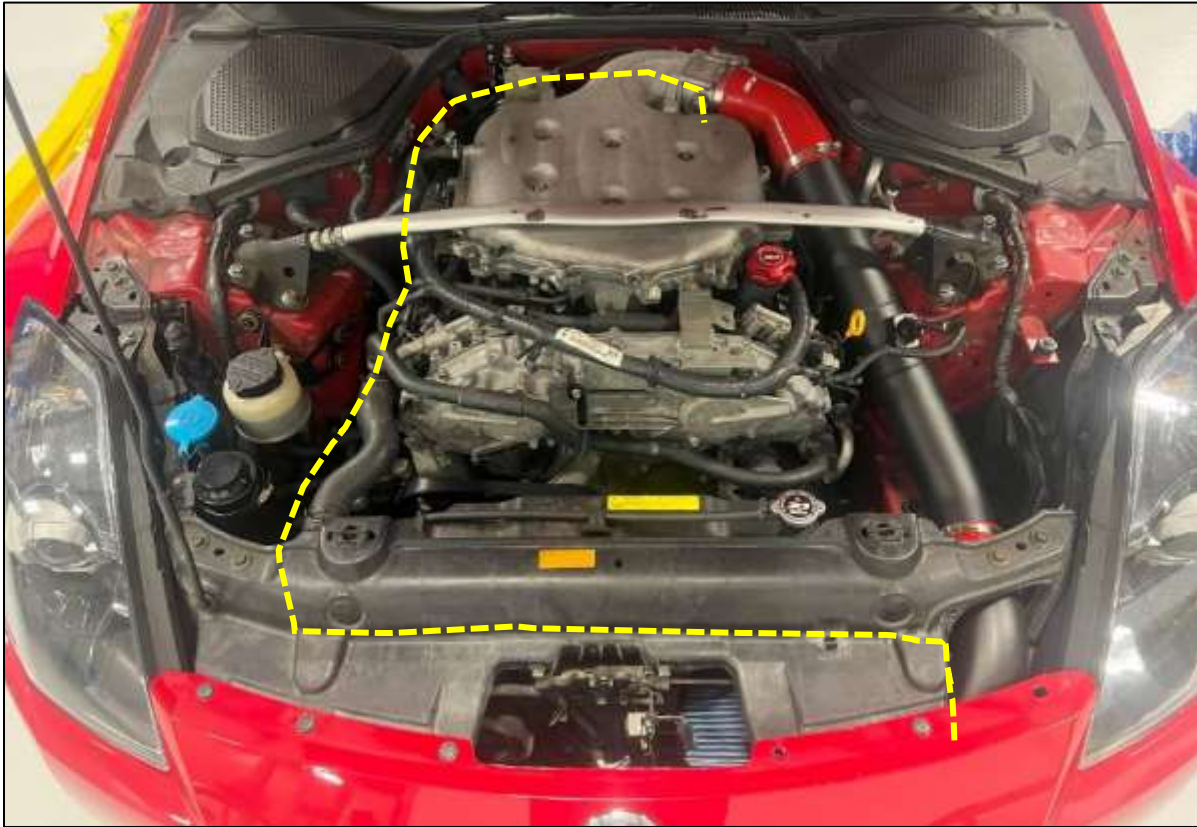


Figure 91

5. Cut the Hose to Length and connect the Hose to the PCV Port on the back of the Driver Side Valve Cover, and secure with a Hose Clamp. *Figure 92.*

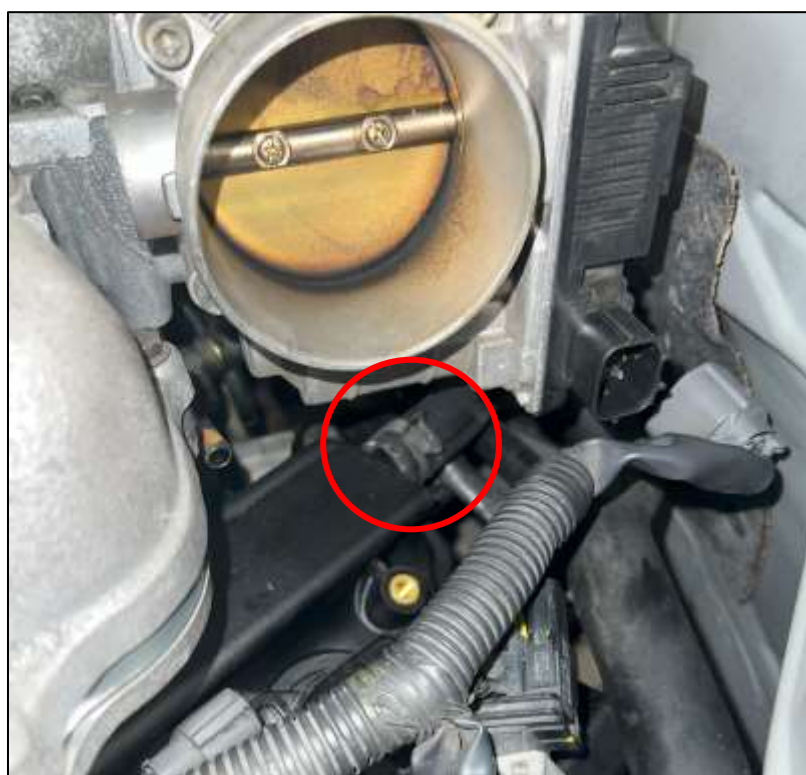
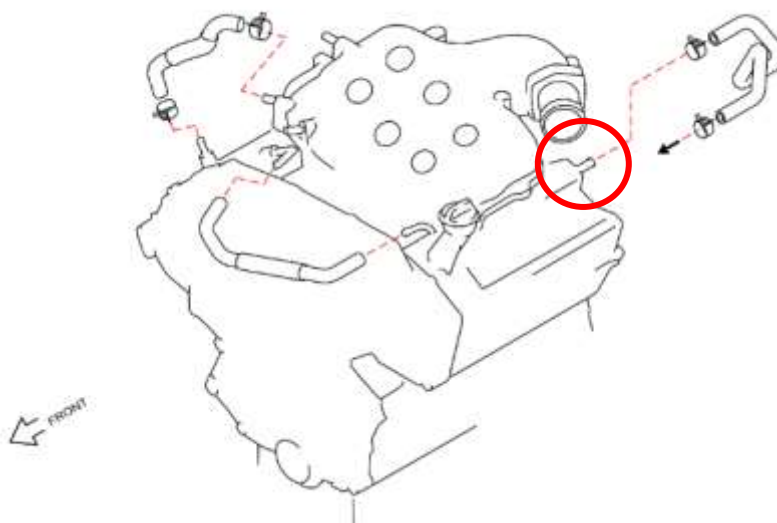


Figure 92

Section Nine: Supercharger Priming

Tools Needed

- Ratchet
- Assorted Metric Sockets
- Assorted Metric Wrenches
- Funnel

Parts Needed

- Rotrex Traction Fluid (#58)

PROCEDURE:

WARNING: NOT FOLLOWING THE PRIMING AND START-UP PROCEDURE WILL CAUSE DAMAGE TO THE SUPERCHARGER AND THE OIL SYSTEM!

1. The Z1 Supercharger Kit is now installed. You **MUST** follow the Supercharger Priming and Starting Procedure in *Step 2*. Prior to starting the vehicle, it is also highly recommended to contact your tuner and get a base map flashed onto the ECU. Failure to follow the Priming Procedure may result in permanently damaging the Supercharger Unit. To ensure proper oil circulation and adequate lubrication during the first few minutes of operation, it is important to prime the oil system before the engine is started for the first time after the Supercharger installation.
2. Fill the Z1 Supercharger Oil Reservoir with Rotrex Traction Fluid. Overfill the Reservoir past the **MAX** mark on the Reservoir. This will ensure that Reservoir has enough fluid for the system during the initial priming and start up. It will eventually spit out excess fluid once the system is primed. Prefill the Supercharger Procooler if you have not done so already.

3. Loosen the Banjo Bolt at the oil line attached to the supercharger inlet marked **IN** a couple of turns allowing air to escape the system. *Figure 93.*



Figure 93

4. Squeeze the In-Line Priming Bulb multiple times until Fluid appears at the Oil Inlet.
5. When oil appears at the “Oil Inlet” on the Supercharger, tighten the banjo bolt and the system is primed. Torque bolt to **80 in-lbs**. Over torquing the banjo bolt could damage it.
6. Squeeze the In-Line Priming Bulb again until it is hard to squeeze. This will indicate that the Lines are full of fluid.
7. Add more Rotrex Traction Fluid to the Oil Reservoir, add a bit extra to the system to prevent it from running air into the system during operation.
8. Start the Engine and check for any leaks. While it is idling, check for Return Oil Flow into the Oil Reservoir, and that the Reservoir does not run dry. Oil will run along the sides of the Reservoir. If you have the Rotrex Reservoir with the Sight Glass, you will see fluid flow here.
9. Let the engine idle for 5-10 minutes while checking the oil system for leaks. Refill and bleed the Engine Coolant system at this time to prevent the Engine from overheating.

10. Check the oil level again using the correct procedure described below:

To check the oil level, set the engine speed to 2-3000 rpm and check the oil level while the engine is kept running at 2-3000 rpm. The correct oil level is between the Min and Max indicators on the dipstick measured with the thread of the cap fully engaged. Measuring oil level in any other way will not give a true reading of the oil volume in the system and can lead to overfilling, oil starvation, foaming, or leaks. *Figure 94.*

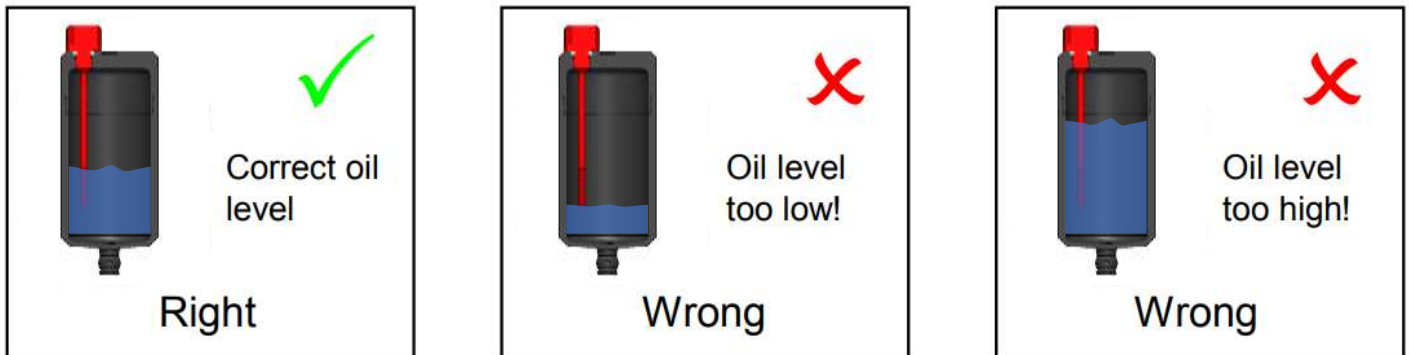


Figure 94

11. A break-in period of 100 km (65 miles) is highly recommended. During this break-in period don't run the engine over more than half of the engine's RPM range and avoid unnecessary revving or heavy acceleration.

Section Ten: Body Panel Trimming

Tools Needed

- Airsaw
- Dremel
- Cutting Tool
- File/Deburring Tool

Parts Needed

- None

PROCEDURE:

1. Your Z1 DE Supercharger Kit is now fully installed and primed! It is now time to reinstall all components previously removed. Many plastic trim pieces (like the fender liners, radiator diversion panels, etc.) may need to be trimmed or cut to prevent interference with the hoses/lines or other components installed. Trimming will vary between 350Z and G35.
2. **350Z Owners:**
 - a. Trim the outer edges of the Grille on both sides of the Front bumper. *Figure 95.*

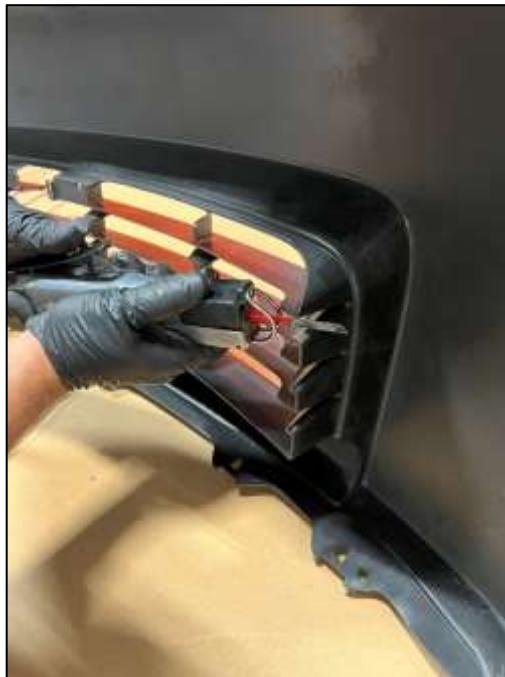
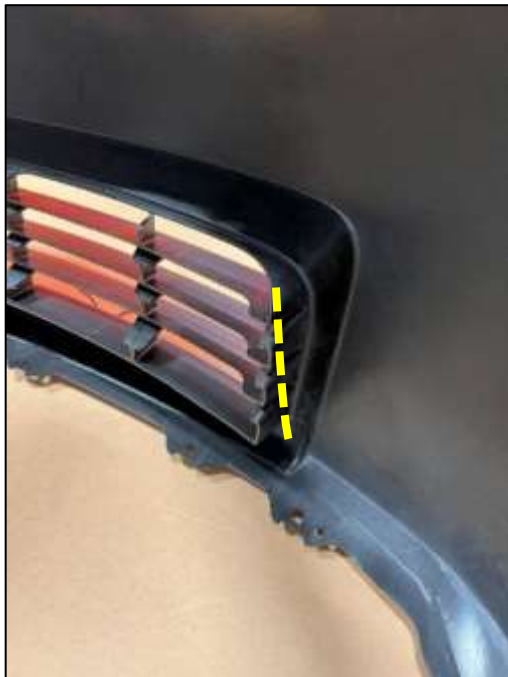


Figure 95

- b. The lower Grille will need to be trimmed on both sides to allow clearance for the Intercooler.
Figure 96.

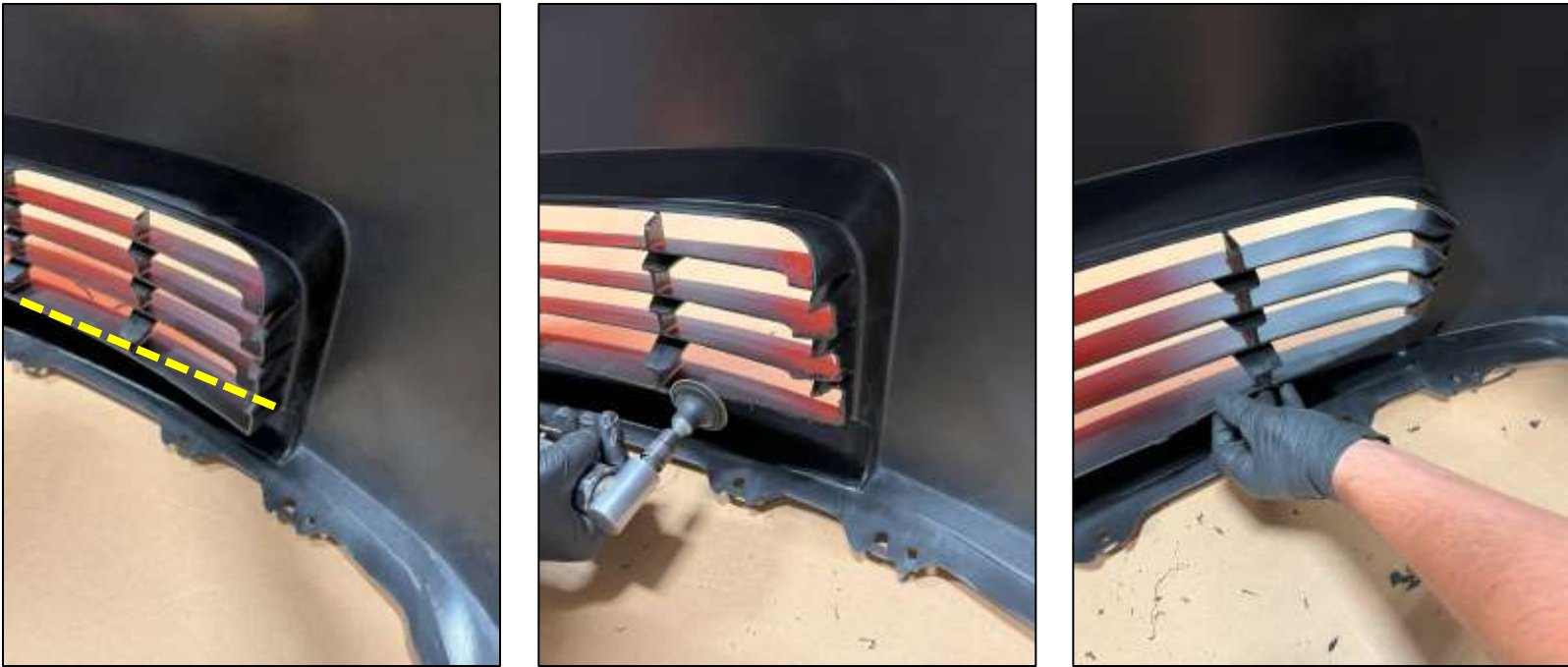


Figure 96

- c. Test fit the bumper on the vehicle and make sure there is no sharp edges contacting the Intercooler or Charge Piping. Trim more as necessary.
- d. Clean up cut edges with a file or deburring tool.

3. **G35 Owners:**

- a. Trim the Driver Side edge of the Upper Grille of the Bumper where the Grille will contact the Air Intake. The image below is a G37 Bumper, but the idea is still the same *Figure 97*.



Figure 97

- b. Test fit the Bumper on the vehicle and make sure there is no sharp edges contacting the Intercooler or Charge Piping. Trim more as necessary.
 - c. Clean up cut edges with a file or deburring tool.
4. Reinstall all other body panels and parts removed in *Section One: Disassembly*.
5. Have your vehicle properly tuned.

Section Eleven: Rear Supercharger Belt Tensioning

The rear belt comes pretensioned from Z1. However, due to various tolerances in the components and the belts themselves, you may need to adjust the tension if your belt is slipping.

If you notice dropping boost levels near the top end of the RPM range and have verified other components like the fuel system or PCV system are not the causes, it may be the rear belt slipping. Follow the steps below on how to tension the rear belt.

The following Images are from a VHR Supercharger and Bracket, but the process is still the same.

1. Loosen the 14mm jam nut on the set screw on the top of the main supercharger bracket and the (2) two 4mm socket head bolts on the front. *Figure 98.*

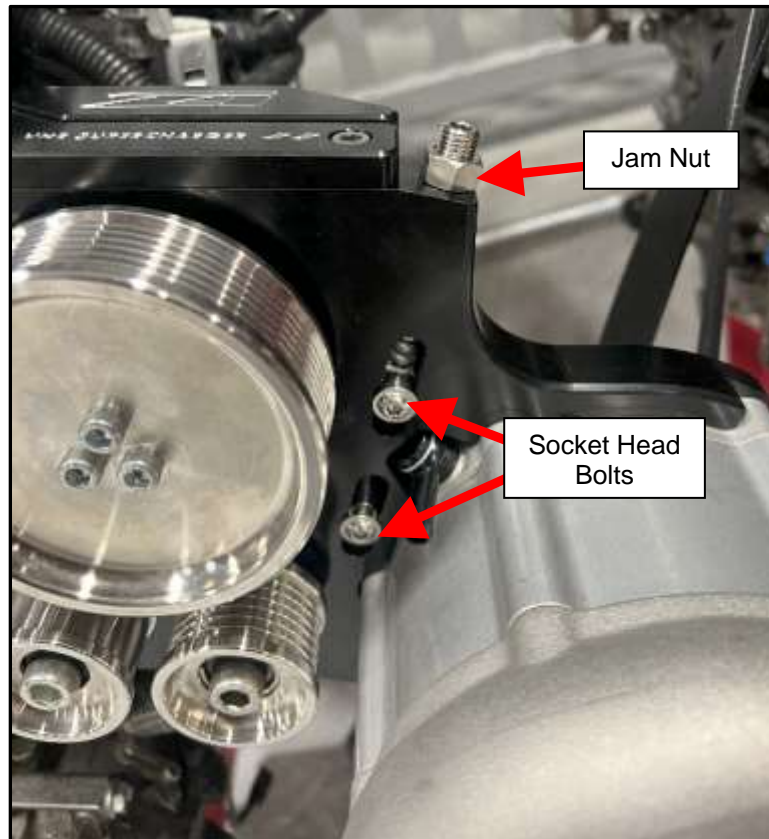


Figure 98

2. Using a 5mm Allen/Hex key, tighten the set screw to increase belt tension or loosen it to decrease belt tension. The belt should be fairly tight but still able to move with your hand.
3. Tighten the 14mm jam nut and the (2) two 4mm socket head bolts on the front to secure the set screw in place.
4. Once the jam nut is tight, there should be ~4-7mm of exposed thread on the set screw.

Section Twelve: Rear Supercharger Belt Replacement

1. Loosen the 14mm jam nut on the set screw on the top of the main supercharger bracket and the (2) two 4mm socket head bolts on the front. *Figure 99.*

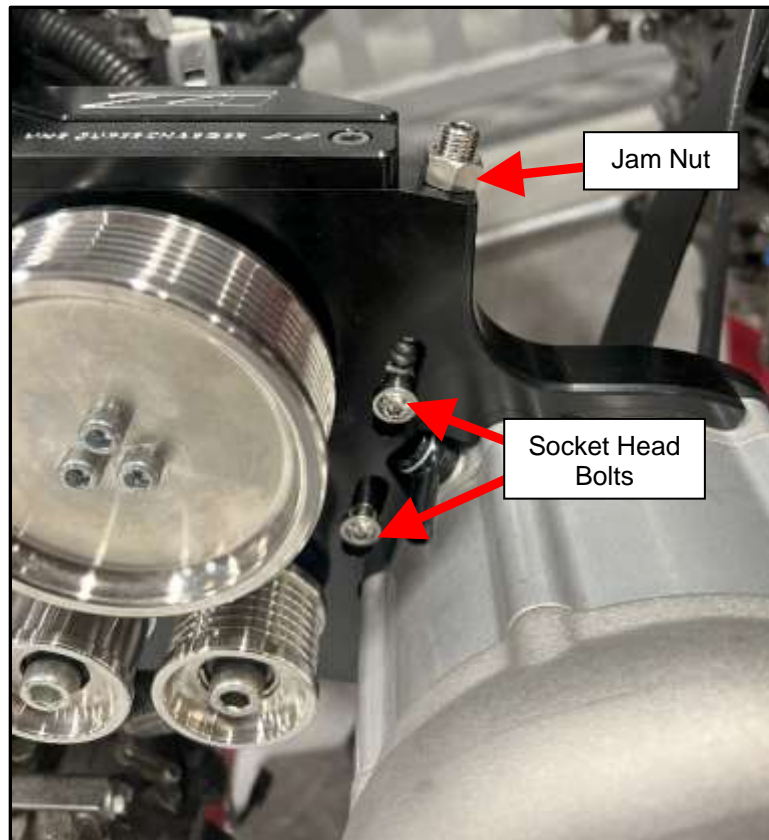
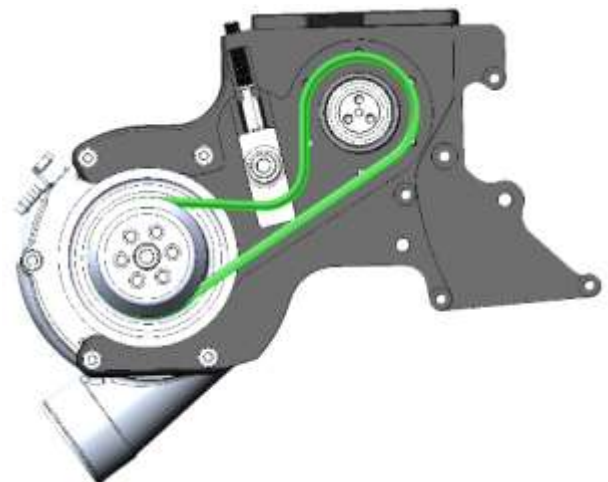


Figure 99

2. Using a 5mm Allen/hex key, back the Set Screw Adjuster out as much as possible until it bottoms out to release the tension on the rear belt.
3. Remove the rear belt.
4. Install the new 10-Rib belt onto the rear pulleys, making sure all ribs of the belt sit in the grooves of the ribbed pulleys.
5. Using a 5mm Allen/Hex key, tighten the set screw back down to re-tension the rear belt. The belt should be fairly tight but still able to move with your hand.
6. Tighten the 14mm jam nut and (2) two 4mm socket head bolts on the front to secure the set screw in place.
7. Once the jam nut is tight, there should be ~4-7mm of exposed thread on the set screw.



END

Additional Technical Support:

Contact Z1 Motorsports at info@z1motorsports.com

Or call 770-838-7777 between 9am and 6pm ET