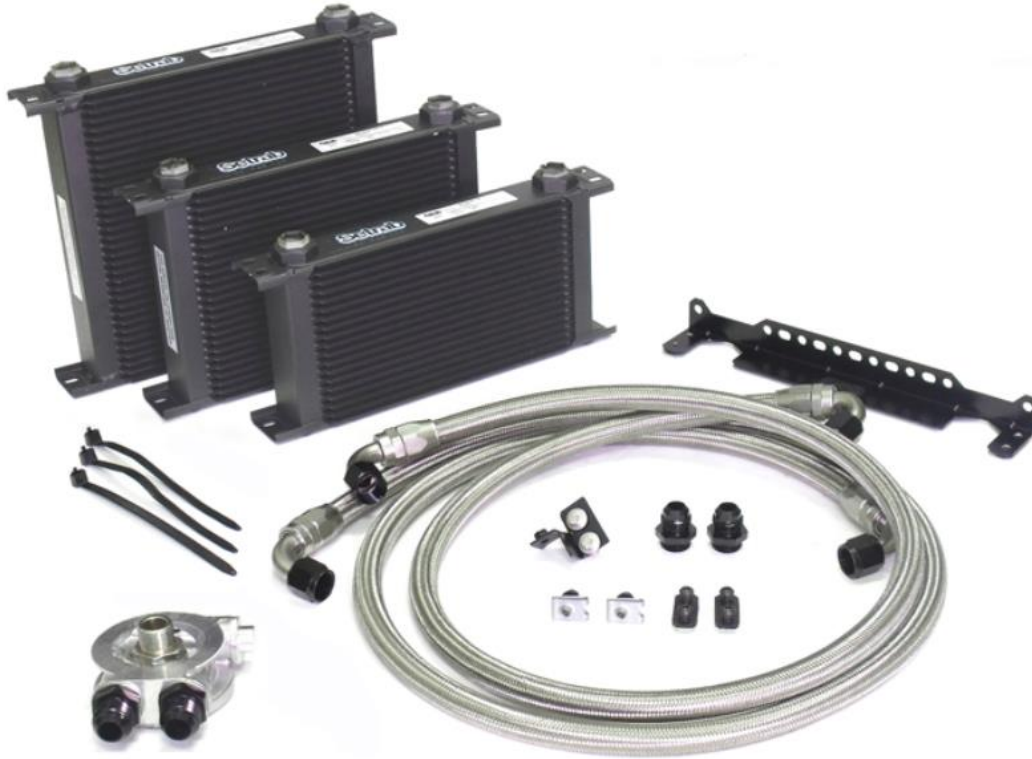


# Z1 370Z / G37 OIL COOLER KIT INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2009+	Nissan 370Z
2008-2013	Infiniti G37
2007-2008	Infiniti G35

## NOTICE:

The instructions for this kit details the installation on the Nissan 370Z. Infiniti G37 owners installing this kit onto a G37 coupe will follow the majority of the installation instructions with only a few alterations. The ONLY difference between the installation of the Z1 370Z/G37 Oil Cooler Kit on a 370Z and a G37 are the steps needed to remove the front fascia, grill assembly in order to access the front core support.

## 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 370Z / G37 Oil Cooler Kit, consult with a Professional Mechanic or contact Z1 Motorsports for more information.

## **PARTS INCLUDED:**

Item	Quantity	Description
1	1	SETRAB Oil Cooler Core
2	1	Aluminum SETRAB Brackets w/ Hardware
3	1	Z1 Custer SETRAB Upper Bracket
4	1	Z1 SS Oil Cooler Line Set
5	1	Mocal Oil Sandwich Adapter Plate
6	2	SETRAB Oil -10 AN Fittings (w/ O-Ring)
7	2	Mocal (-10 AN to -10 Port) Sandwich Adapter Fittings
8	2	M6 x 1mm Threaded U-Clip
9	2	M6 x 1mm x 20mm (10mm) Bolts
10	2	Mocal Rubber Sealing Washers
11	1	SETRAB Oil Cooler Assembly Instruction Bulletin
12	1	Plastic Space (1")
13	1	M6 x 1mm x 40mm (10mm) Bolt

## **TOOLS REQUIRED:**

- Assorted Drill Bits
- Assorted Metric Sockets (10mm – 19mm)
- Assorted Metric Wrenches (10mm – 19mm)
- Assorted Metric Allen Head Wrenches
- Assorted Screwdrivers
- Ratchet
- Pliers
- Funnel
- Drill
- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Torque Wrench
- 1" Shallow Socket

## **SAFETY REQUIREMENTS:**

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- 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:**

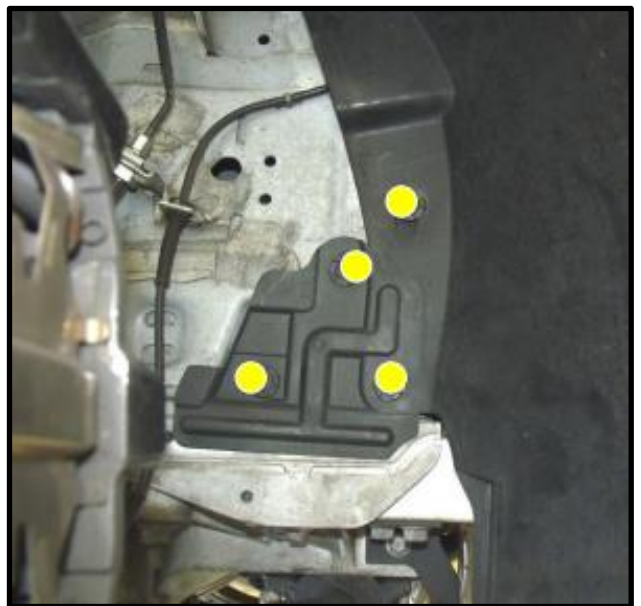
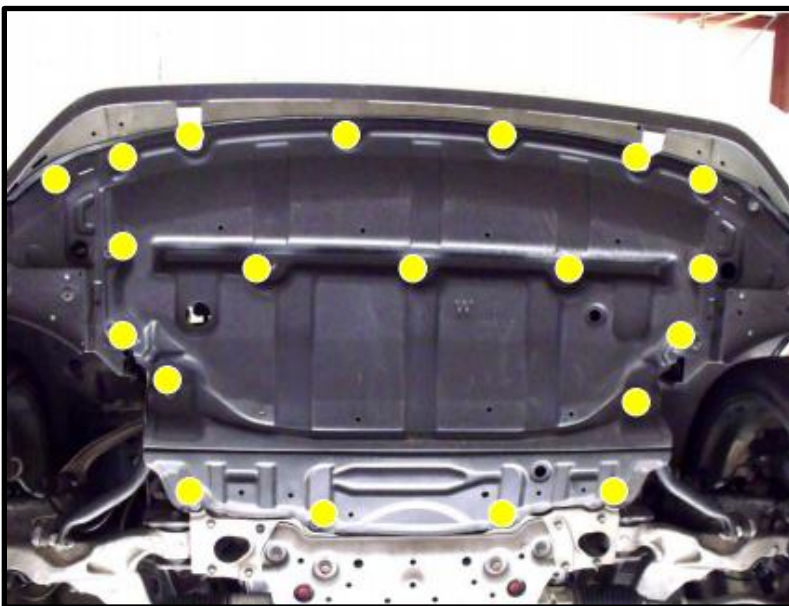
Remove contents from the Z1 Motorsports 370Z / G37 Oil Cooler Kit and verify that ALL necessary hardware is present.

### **Installation Note #1:**

*It is recommended that you perform the Z1 Motorsports 370z / G37 Oil Cooler Kit installation at a scheduled interval when your vehicle requires an oil change. This is because the oil filter must be removed, and that some engine oil will be lost in order to properly install the kit.*

## **PROCEDURE:**

1. Assure the car's ignition is in the OFF position and the NEGATIVE (-) battery terminal is disconnected.
2. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
3. Unlatch and raise vehicle's hood. Apply hood prop.
4. Remove front passenger side wheel.
5. Remove both the lower engine splash shield and the passenger side inner fender liner. Refer to the images below for the exact location of fasteners:
  - a. Remove the following fasteners, highlighted below. Fasteners will be an assortment of 10mm screws and plastic panel clips. Use a flat blade screwdriver to gently pry the pop clips up.
  - b. Do NOT discard the small plastic panel shown below. It will be reinstalled later.



- c. Be sure to remove these two plastic panel clips. The one shown in the image below on the left will be exposed only after the lower engine shroud is removed. There is also a plastic panel clip (not shown) at the very top of the fender liner that will also need to be removed.



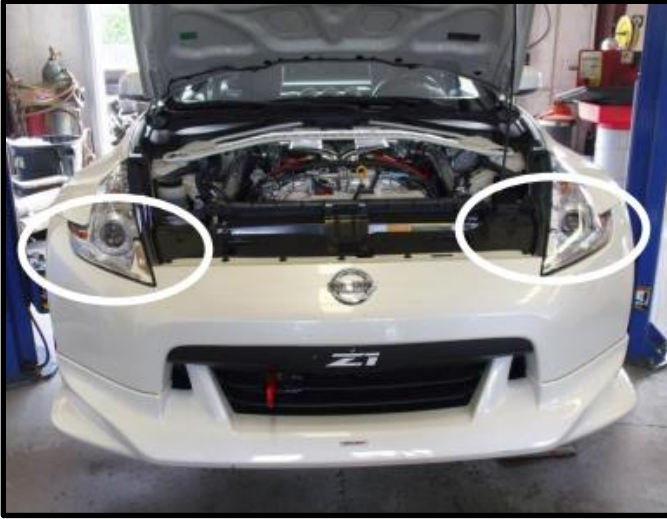
6. Remove the front fascia radiator air guide. This is done by using a flat-head screwdriver and gently popping out the center section of the 7 plastic pop clips located under the hood. The air guide will simply slide up and out from beneath the front fascia. Refer to the image below for the location of the plastic pop clips.
7. You will also need to remove the 7 additional plastic pop clips securing the front fascia. Refer to the image below for location of the plastic pop clips.



8. Remove the (2) 10mm plastic screws.



9. Gripping the sides of fascia (circled below) pull the fascia towards you. This part of the fascia snaps in place and will pop loose when a limited amount of force is applied. Once free, carefully remove the fascia from the chassis and set aside. You should see something similar to the image on the right.



**Installation Note #2:**

*Some individuals find that removing the front aluminum crash bar and foam reinforcement pad eases in the installation of the 370Z Oil Cooler Kits. This is not necessary.*

**Nismo 370Z Owners:**

*Removal of the factory equipped Autech/Yamaha/NISMO Chassis is recommended at this time. Please refer to page 13 for special instructions regarding the installation of the Z1 Motorsports 370Z/G37 Oil Cooler Kit onto your vehicle.*

10. Assemble the SETRAB Oil Cooler Assembly using the supplied hardware and brackets by following the instructions below:

Locate the following parts:

- (1) SETRAB Oil Cooler Core
- (1) Aluminum SETRAB Brackets w/ Hardware
- (1) Z1 Motorsports Custom SETRAB Upper Bracket



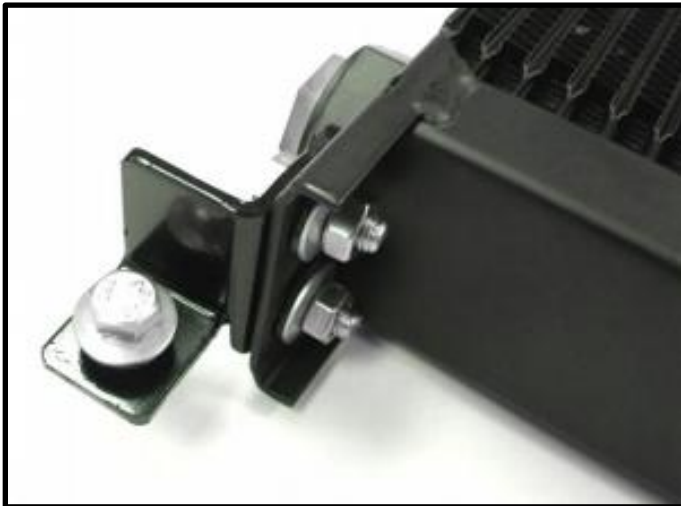
- a. Using the aluminum SETRAB bracket and its supplied hardware, attach the bracket to the bottom of the oil cooler (opposite of the end with the fittings). The rotation of the bracket does not matter. The core can be rotated depending on installation preferences. Refer to the image below:



- b. Referring to the images below, you will attach the bracket to the top left hand corner of the SETRAB Oil Cooler Core.

**Installation Note #3:**

*Since the core's position is reversible, it is recommended that the oil cooler core be positioned as close to the A/C condenser as possible. The Z1 Motorsports custom upper bracket can only be installed with the core in this position.*

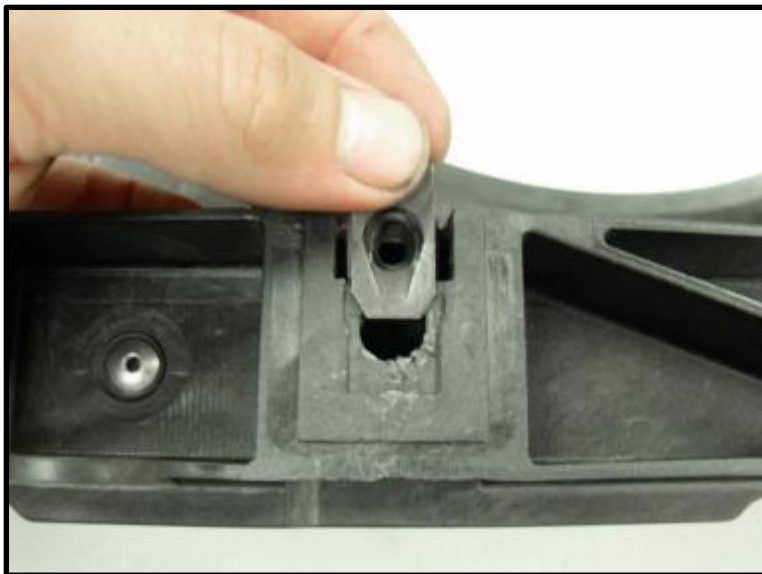


**Installation Note #3 (continued):**

Refer to the image below for the exact position of the oil cooler brackets. This configuration is recommended for all 370Z/G37's equipped with either the *STILLEN GEN III Intake* or a *Forced Induction Setup*. Some modifications or reversal of the core support will be necessary when installing an oil cooler core onto a 370Z with the *NISMO Brace Kit* (Nissan Part # E4420-1EK000).

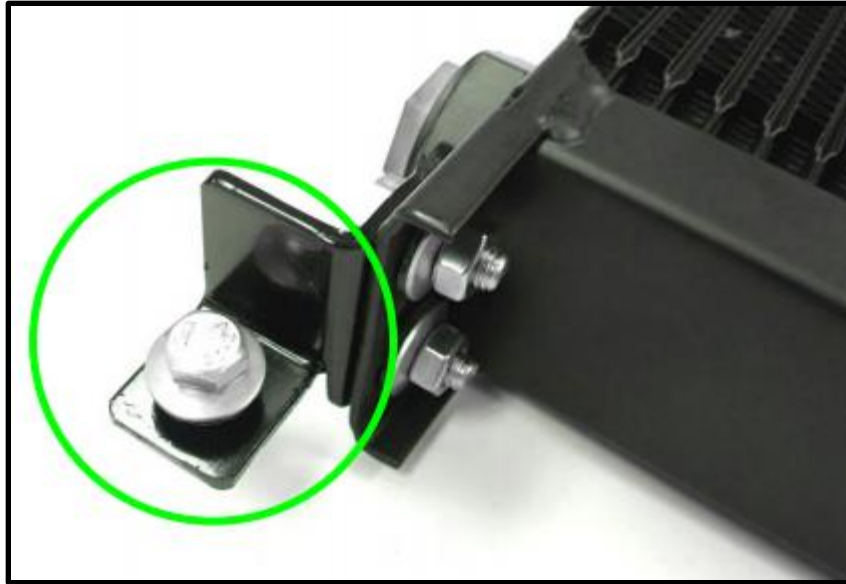


- c. Locate (2) supplied M6 x 1mm threaded U-Clips and (2) M6 x 1mm x 20mm (10mm) bolts. Slide the two threaded U-Clips onto the core support (as shown). You will be using the two blank spots on the driver side of the core support (lower).



- d. You can now temporarily position the oil cooler core and bracket assembly on the core support of the vehicle. Using the (2) M6-1.00 bolts, secure the core support to the chassis, but **DO NOT TIGHTEN DOWN ANY BOLTS**.

- e. Position the oil cooler core so that the unused upper bracket sits just behind the center core support brace (vertical steel brace that should be sitting just to the left of the oil cooler).



- f. With the core in place, you will now need to mark the location of the hole that will be used to attach the upper oil cooler core bracket to the chassis. This hole does not exist from the factory and will need to be drilled. Customers who have purchased 19 and 25 row oil cooler kits can skip this step if they choose (not recommended), all customers who have purchased the 34 row oil cooler kit **MUST** install this bracket. The oil cooler core will be allowed to move too much without the upper bracket and could possibly damage the fiberglass core support or A/C condenser.

**Installation Note #4:**

*Place a thin piece of wood between the vertical steel brace and the A/C condenser core to prevent any accidental damage to the condenser itself while drilling. Remember the saying... "Measure twice and drill once!"*

- g. With the center brace drilled, remove the oil cooler core from the vehicle.
- h. Locate the two SETRAB Oil Cooler Core Fittings. (These will be the only 2 loose fittings supplied with the kit. DO NOT remove the fittings from the oil sandwich plate to complete this step!)
- i. Using a suitable lubricant, apply a thin layer of lubricant to the threads of the fittings and O-Rings. Only install ONE fitting at this time.
- j. Using fresh engine oil, it is HIGHLY recommended that oil cooler core be filled completely. This will prevent a dry start scenario and will help prime the oil cooler **FASTER!**
- k. With the oil cooler filled, you may now install the second SETRAB fitting to the oil cooler core.

11. Again using the supplied bolts, attach the SETRAB Oil Cooler Assembly to the vehicle's core support. Be sure to tighten all (3) 10mm bolts. Ensure that there is no interference with the A/C condenser lines, intake filter (if using the Stillen GEN III Intake) or other hardware.





12. Locate the Z1 Motorsports SS Line Set.

a. Attach the oil cooler lines in the following pattern:

- a. Long Hose – Attach the 90° fitting to the driver side SETRAB fitting on the Oil Cooler Core.
- b. Short Hose – Attach the 90° fitting to the passenger side SETRAB fitting on the oil cooler Core.

*\*Failure to attach the oil cooler lines as listed above may result in insufficient line length in later steps. In addition, customers who choose the pre-wrapped option will have the protective wrapping located in the wrong position.*

- b. Route the line set across the front of the vehicle. You may have to route the lines around aftermarket parts that have been installed.

For example:

The image below shows that the lines are routed in FRONT of the passenger side Stillen Gen III Intake Filters. This is acceptable since the front fascia does not allow air to pass through this area anyway. This also positions the lines out of the way and in an ideal location for later routing steps.



**Installation Note #5:**

*The use of zip ties is suggested in order to keep the SS line set neat and pulled away from sharp, abrasive edges.*

- c. You will now need to remove the plastic air deflector located on the passenger side of the front fascia. This panel will slide right off.
- d. Once removed, you will need to trim away the illustrated portion at right. This will allow for adequate room for line routing in later steps.
- e. Re-install the modified air deflector panel back onto the chassis.
- f. Route the ends of the oil cooler line set through the opening between the core support and windshield washer bottle. This allows the lines to route neatly along the frame rails.



**Installation Note #6:**

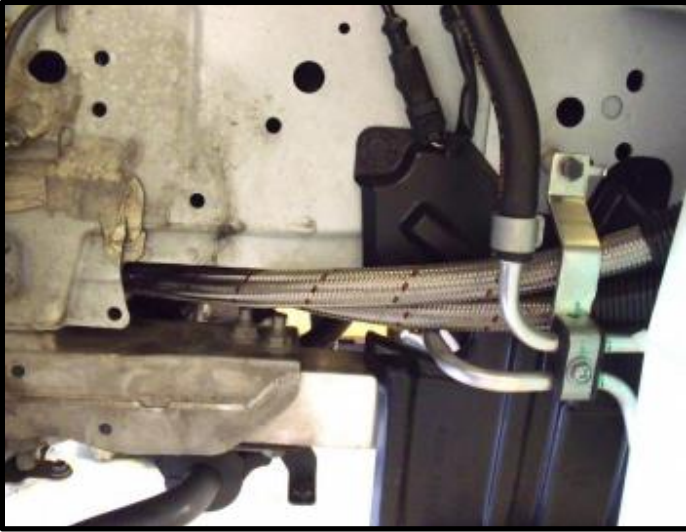
You may need to loosen and/or unbolt the windshield washer bottle to aid in routing the lines. Additionally, route the fittings one at a time. This will allow the lines to pass through much easier.



- g. Locate the supplied 1" plastic spacer and associated bolt. Unbolt the bracket securing the power steering cooler lines to the passenger side frame rail.
- h. Carefully route the lines between the power steering cooler lines and the frame rail.
- i. Insert the 1" spacer in between the bracket and the frame rail and reattach using the supplied bolt. Refer to the image below:



- j. Referring to the following image, route the lines through the opening between the passenger side frame rail and the front subframe.



13. If you are planning on changing the engine oil during the installation of the Z1 Motorsports Oil Cooler Kit, remove the engine oil drain plug and drain the engine oil. If you are not planning on performing this step, continue to STEP #15.
14. Remove engine oil filter.
15. Locate the supplied Mocal sandwich adapter. This unit should already have (2) -10AN to -10 port fittings and (2) rubber sealing washers installed. *Be sure to properly tighten these fittings before continuing.*
16. Position the Mocal sandwich adapter with the large rubber o-rings facing the engine. DO NOT INSTALL YET!
17. Attach the (2) oil cooler line fittings to the Mocal oil sandwich plate.
18. Place the oil sandwich plate assembly onto the engine.

2009–2011 Model Year 370Z/G37 Vehicles:

You will need to rotate the sandwich plate so that the 90° fitting is centered between the alternator and the motor mount. This will result in the oil sandwich plate being rotated to about the 10'o'clock position.

2012+ Model Year 370Z/G37 Vehicles:

2012+ vehicles came with a factory oil cooler installed in between the oil filter and engine. You can either remove the OE cooler and loop the lines together or stack the new sandwich plate onto the OE cooler and run the normal (non-oversized) oil filter. If you remove the factory oil cooler, you will need to replace the long OE oil filter stud with an [early model year 370Z short stud](#) (choose early model year 370Z from dropdown option), and clock the sandwich plate as instructed above for early model year vehicles.



If you keep the factory oil cooler, you will need to rotate the sandwich plate so that the 90° fittings are oriented in the 7'o'clock position, or as close to the lower engine cross member as possible, while leaving a ~ ¼" gap between the fittings and the cross member. DO NOT allow the fittings to touch or rest against the cross member. *Possible damage to the fittings and/or sandwich plate may occur.*

19. With the sandwich plate in place and oriented properly, angle the fittings so that they clear any and all brackets. Also, be sure to aim the -10 SS lines in a direction so that the smoothest possible bends are created without creating a fold or break in the lines. Tighten the fittings as best as possible (you will be removing the sandwich plate again in the next step so that the fittings can be properly torqued. This step is for "mock-up" and fitment purposes). Use zip ties to secure the lines together and to keep them away from suspension components.
20. Remove the oil sandwich plate assembly carefully. Be careful not to disturb the angle of the fittings. Tighten down the fittings. The fittings in this kit are AN fittings and made out of aluminum. They do not need to be tightened to the same torque as a steel bolt/nut of the same size. They should be fairly snug, but over-tightening will result in damage. If you are not familiar with tightening AN fittings, is it better to under-tighten and have to check for leaks (that you can then tighten a little more), then to over-tighten and have to buy a new fitting/line.
21. Re-install the oil sandwich plate adapter and securing bolt. Tighten down the sandwich adapter bolt using a 1" (~25mm) socket. This will secure the Mocal sandwich adapter to the engine in the proper orientation listed above. Torque the oil sandwich plate adapter bolt to ~25ft-lbs.
22. Install engine oil filter (new preferably).
23. Refill engine with oil.
24. Crank the engine and inspect for any leaks.
25. Re-install the previously removed hardware, fascia, and inner fender liners. When installing the various pieces for the passenger side inner fender liners, be sure that the oil cooler lines are routed neatly behind the panels so that they DO NOT bulge out. This can (and will) eventually break the plastic pop clips, causing the panel to come loose.
26. Perform a final test drive of the vehicle.

**BE SURE TO CHECK ENGINE OIL LEVEL AFTER TEST DRIVING!**

**END**

**Additional Technical Support:**

Contact Z1 Motorsports at [info@z1motorsports.com](mailto:info@z1motorsports.com)

## Z1 Motorsports 370Z/G37 Oil Cooler Installation Manual – NISMO models ONLY

A common concern of NISMO 370Z owners regards the fitment and usage of the factory NISMO Chassis Dampener that runs laterally across the chassis. This dampener can be retained with a few simple steps.

Please note:

*In order to retain the factory NISMO Chassis Dampener, the oil cooler bracket and core must be oriented so that the oil cooler core is positioned as close to the radiator / A/C condenser assembly as possible. Failure to orient the oil cooler core assembly as directed will prevent the re-installation of the NISMO dampener.*

Once the front fascia has been removed, exposing the front core support assembly, follow the instructions as detailed below:

1. Unbolt the NISMO Chassis Dampener from the factory brackets. You will be removing the two 17mm bolts securing the Yamaha/Autech/NISMO labeled dampener to the gray, cast steel brackets.
2. Flip (rotate) the NISMO Chassis Dampener 180° so that the thickest end of the dampener is relocated from the left side of the vehicle to the opposite side.

By doing this, the Yamaha/Autech/NISMO label will be upside down when viewed from the front of the vehicle. You may roll the dampener 180° so that the label is hidden from view if you wish.

3. Re-install the factory 17mm bolts.



On rare instances, some owners have experienced a slight clearance issue between the SETRAB oil cooler core assembly and the NISMO Dampener even after the dampener has been relocated. In the event that this is experienced, four shim washers have been included to space the NISMO Chassis Dampener's gray cast mounting brackets away from the core support. By placing the spacers behind the mounting brackets, between the brackets and the core support, the entire NISMO Dampener assembly is moved forward slightly.