NISSAN GTR AMS CAN-BUS/FLEX FUEL/AUX

INSTALL INSTRUCTIONS

Introduction ///

The goal of AMS Performance is to provide the highest quality, best performing products available. By utilizing research and development, and rigorous testing programs AMS Performance will never compromise the quality or performance of our products. In addition, AMS Performance will only provide the finest customer service offering only parts and advice that are in the best interests of the customer. AMS Performance was built on a foundation of integrity. This is who we are. This is what you can count on.

A vehicle modified by the use of performance parts and tuning may not meet the legal requirements for use on public roads. AMS Performance makes no claims of compliance unless otherwise stated on a per-product basis. Use or installation of performance parts and tuning may adversely affect the drivability and reliability of your vehicle, and may also affect or eliminate your insurance coverage, factory warranty and new OEM part warranty. There is no stated or implied guarantee by AMS of continued OEM vehicle warranty, insurance coverage, or emissions compliance, due to the stress placed on your vehicle by performance parts and our inability to monitor its use, tuning or modification.

These instructions are not intended to be a comprehensive guide for installation as there are many variables that may affect your particular vehicle, including but not limited to model year differences, sub-model/trim/optional equipment differences, the presence of non-OEM parts, or other modifications that may have previously been completed. A basic understanding of automotive parts and systems and novice mechanical skills should be all that is necessary for installation, but certain circumstances may necessitate professional installation.

AMS Performance is committed to providing quality support for our products. If you are in need of technical support, installation help, or a replacement component, our Customer Service Team is available directly via telephone at 847-709-0530, or digitally via the contact form linked here: amsperformance.com/support
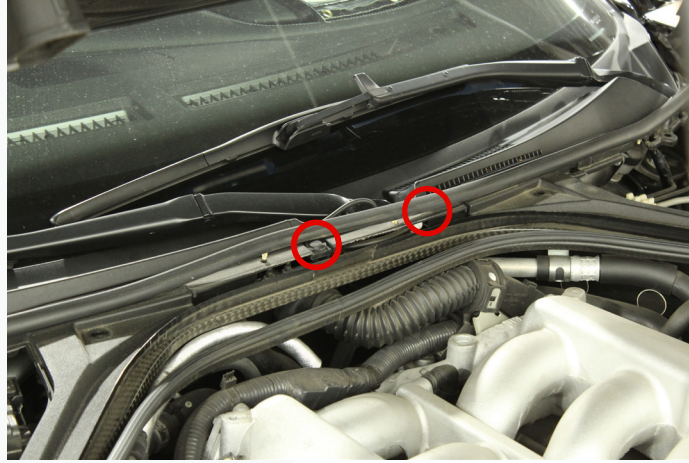
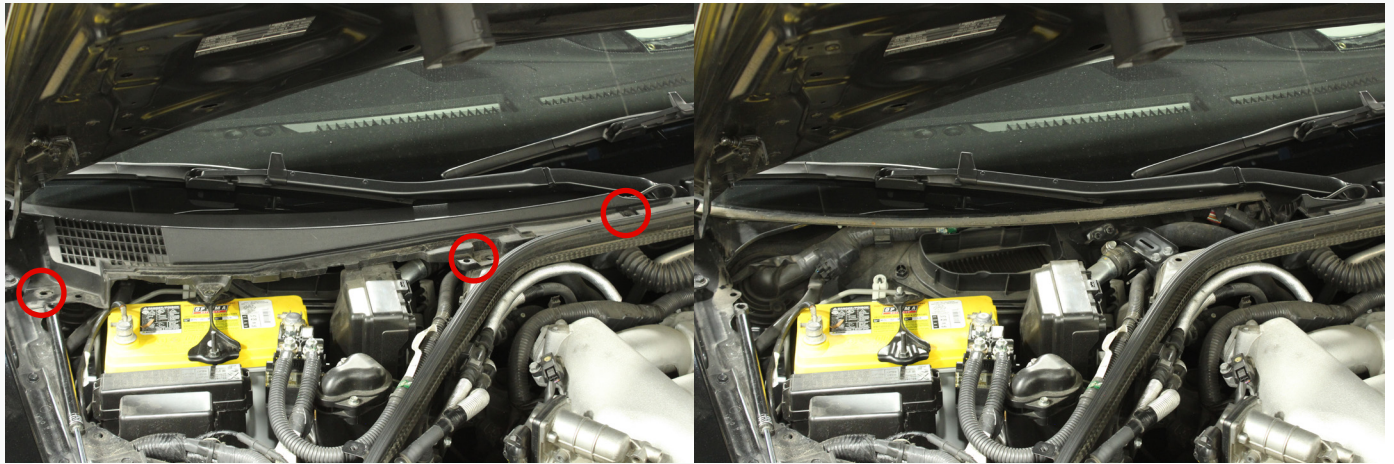## Table of contents ///

DISASSEMBLY:

1. Remove both cowls by removing the brake and battery covers to access all the push clips. There are two clips holding the weatherstrip that connects the two cowls.
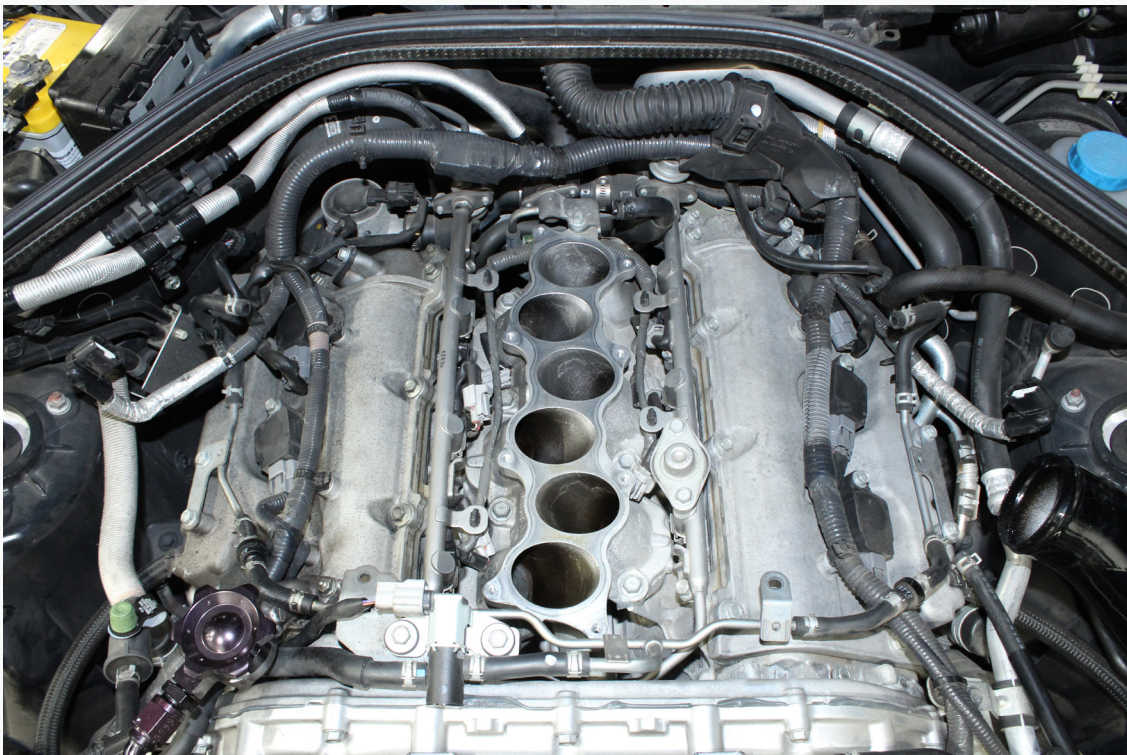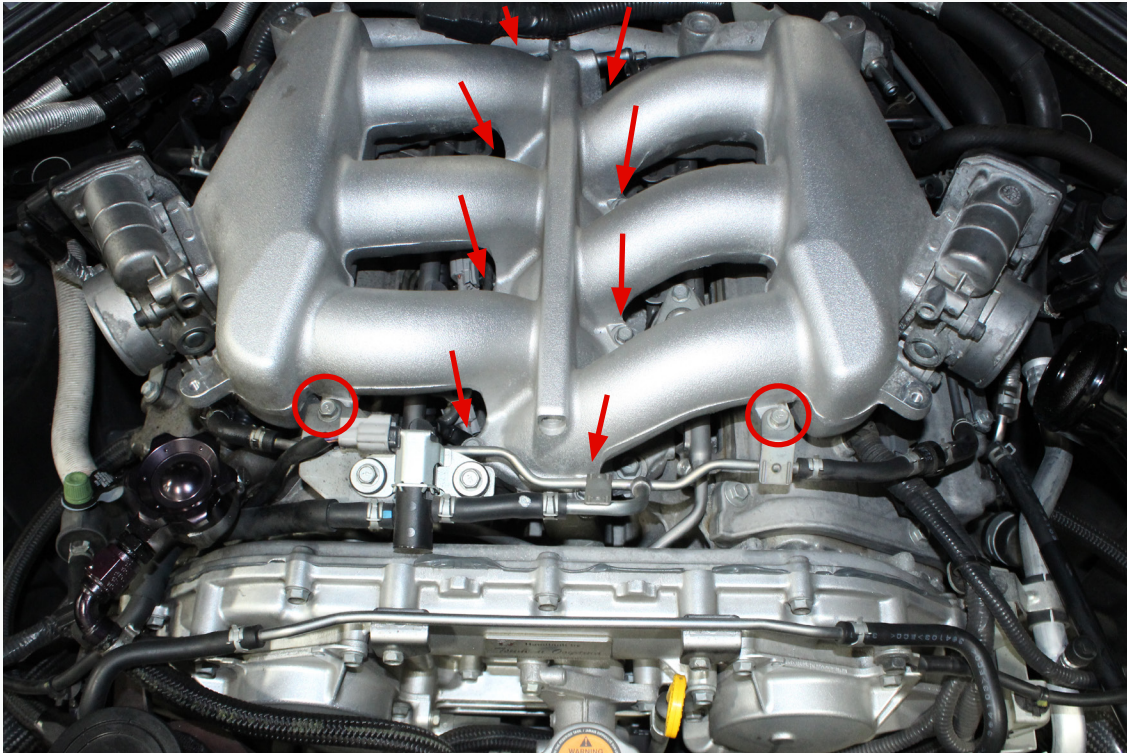

2. On the passenger side, remove the 3 clips holding the upper cowl. Then remove the battery.

3. Remove the throttle body coupler, hose connections and sensor connectors from the intake manifold.
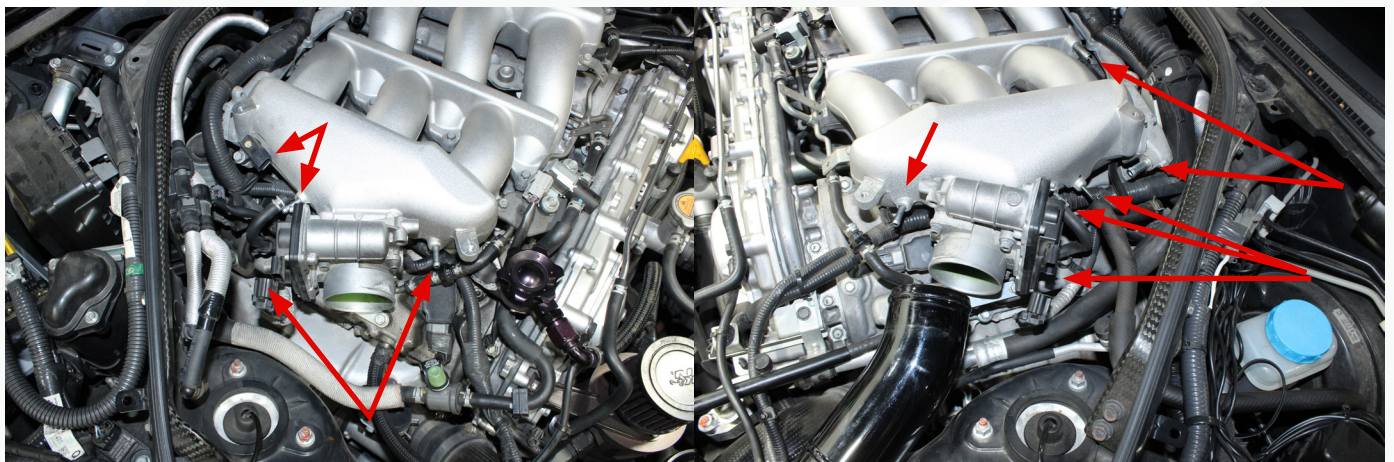
4. Remove the 2x m6 bolts holding the bracket and the 8x intake manifold bolts securing the intake manifold. Remove the intake manifold and set aside.

Checkpoint – If your vehicle has a stock fuel rail or an aftermarket rail with a two-bolt flange, proceed with step 5. If you have an aftermarket rail with -8AN fittings, proceed to step 9.

5. Cover the lower intake runners while you work in the area. Remove the 2x M6 bolts on the back of the rail holding the fuel damper/line assembly.
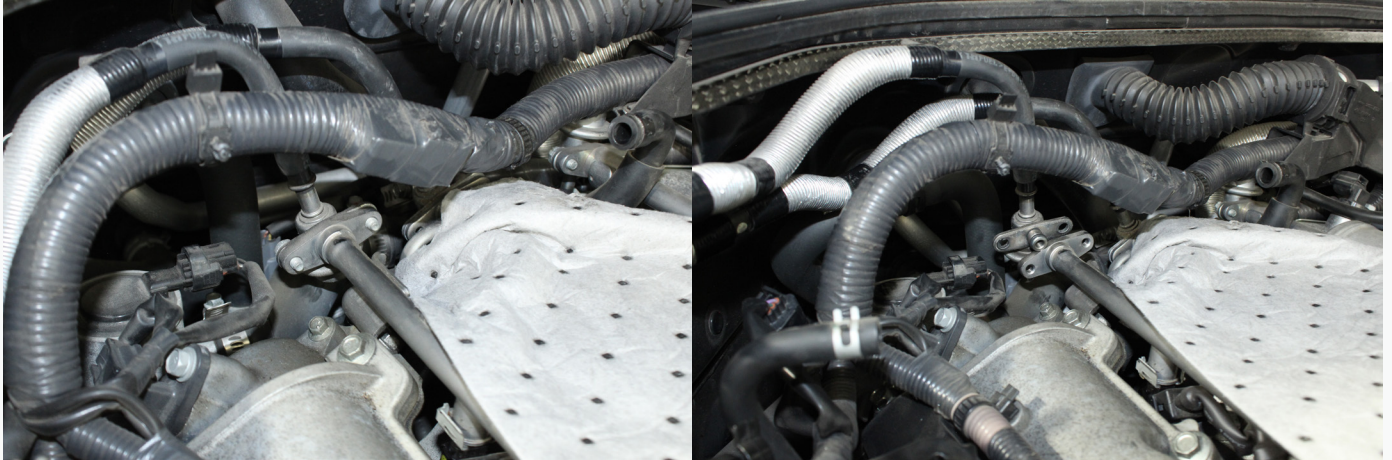
6. Disconnect the fuel line and remove the orange clip and set aside. **They will not be reused.**
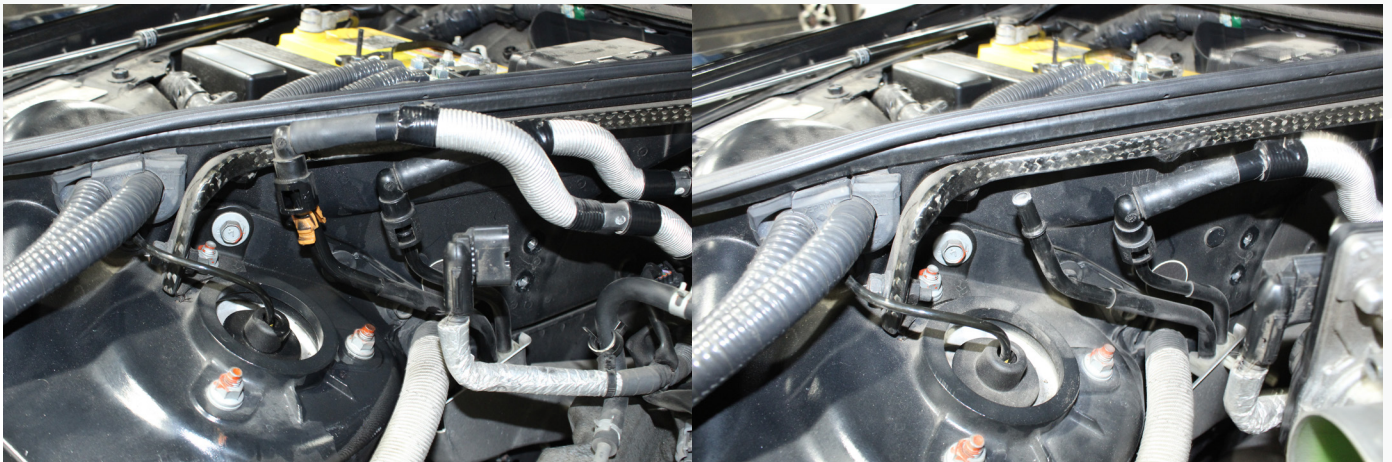
ASSEMBLY:

7. Locate the AMS stock fuel rail adapter with o-ring, M6 bolts and 1/8" NPT plug. The fuel rail adapter has an 1/8" NPT sensor port on it to be able to run the optional CAN Fuel Pressure Sensor Kit (sold separately). Apply thread sealant to the NPT plug or sensor and install it tightly to the rail adapter.

Note: Use only liquid thread sealant on fuel system components

8. Lightly lubricate the o-ring and install the adapter onto the back of the rail. Torque the two M6 bolts to 8ft/lbs.

9. Connect the 90° end of the fuel line to the rail behind the other fuel line and tighten it with the line pointed upwards.

10. Reinstall the intake manifold and torque the bolts to 9ft/lbs. Mount the flex fuel bracket to M6 hole at the back of the intake manifold.

11. Locate the flex fuel sensor, small bracket, fittings and hardware. Install the fittings to the flex fuel sensor as shown below, making sure the fitting nut is aligned with the groove on the pipe and tighten the nut.


12. Mount the flex fuel sensor with the fittings at the top using the small bracket and M5 bolts to the bracket installed on the intake manifold.
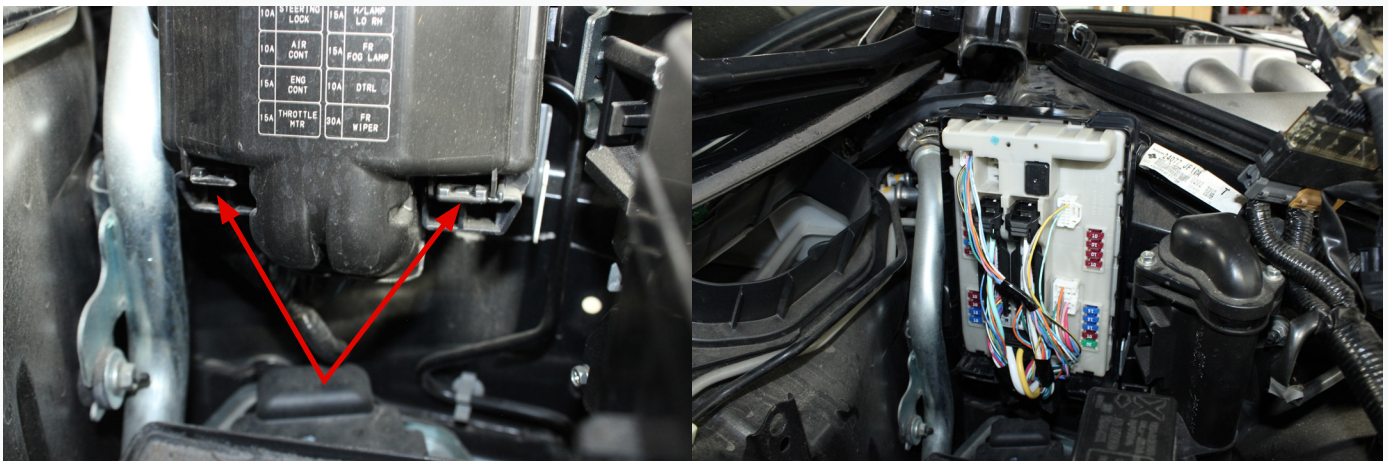
13. Using the remaining fuel line, make the connections as shown below. Make sure to tighten all fittings before continuing.
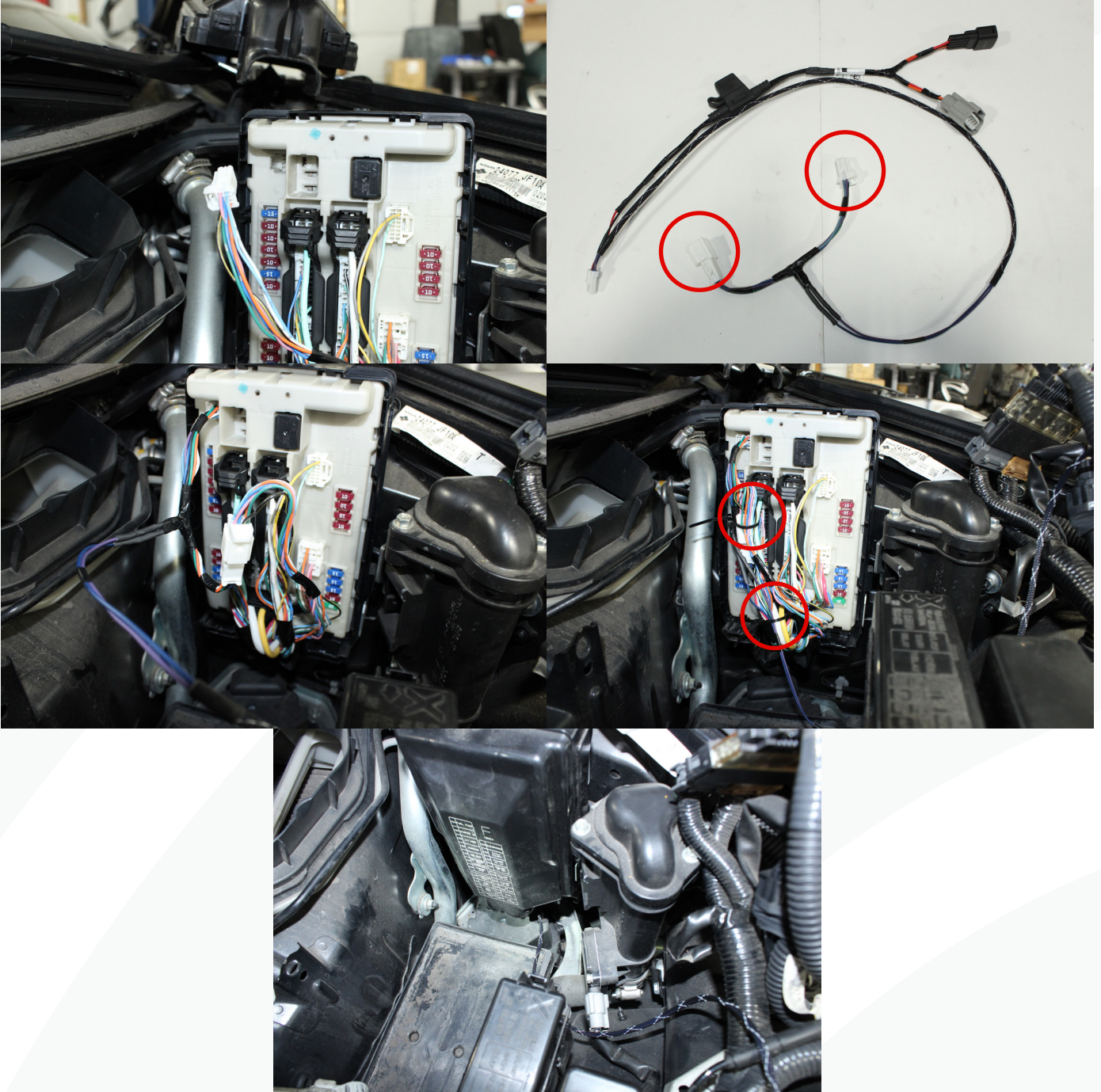

14. With the battery still removed, push the two tabs at the top of the IPDM box to slide it up off the bracket.
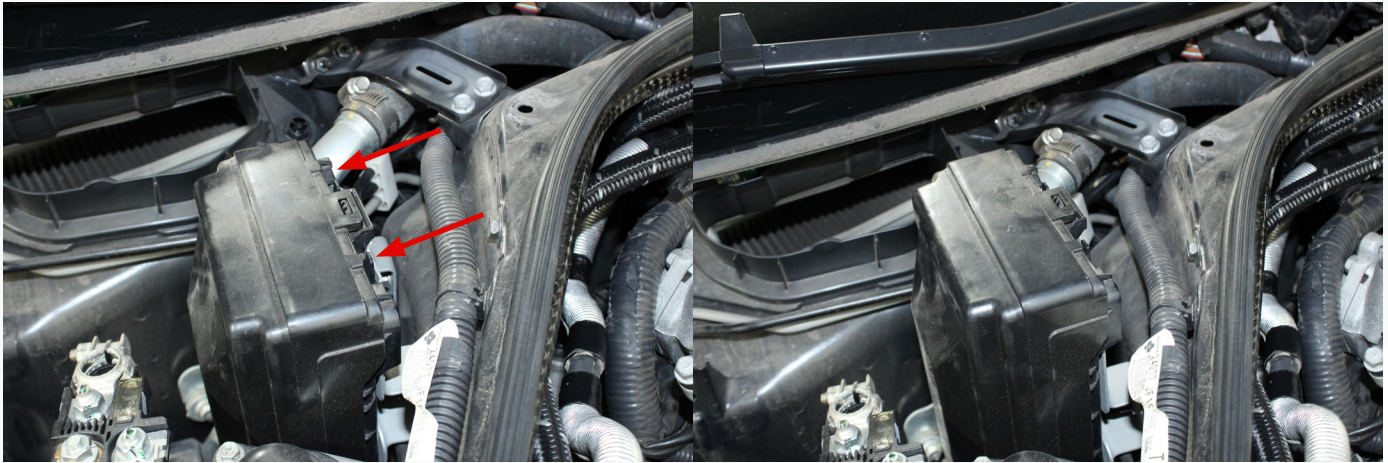

15. Locate the two tabs on the bottom and remove the IPDM cover.

16. Remove the upper left 8 pin connector and plug it into the AMS PNP harness, then plug the AMS harness into the IPDM. Use 2x small zip ties to neatly secure the harness, then reinstall the cover.

17. Disconnect the secondary air injection pump connector. Plug vehicle harness into the AMS PNP harness, then plug the AMS harness into the secondary air injection pump. Secure the harness with a zip tie.
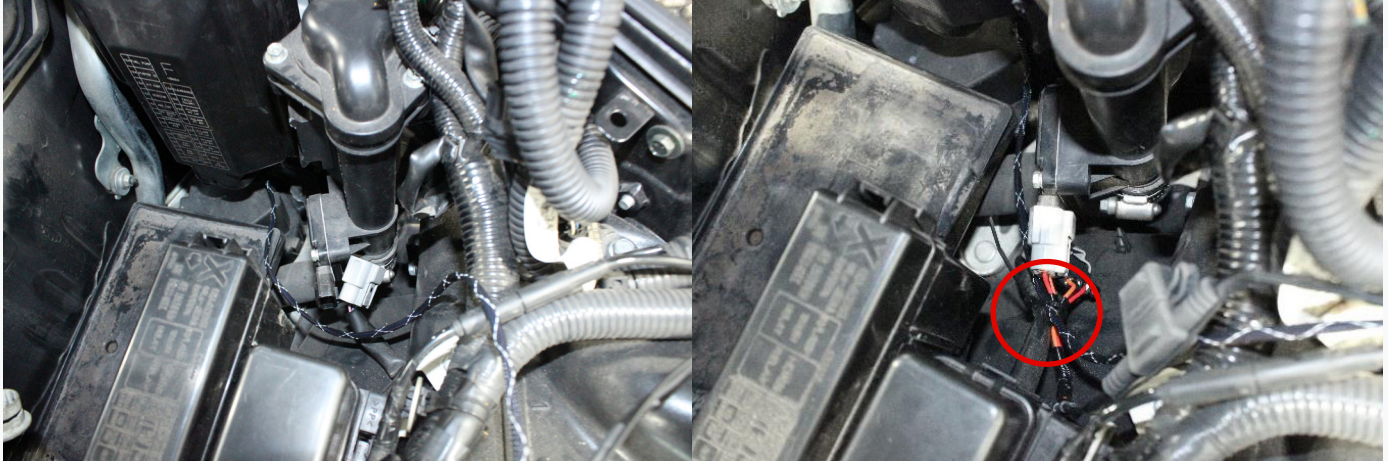
18. Locate the AMS Can Module. It should have 2 connector blanks installed in it already. These are for the optional add-on analog sensors (sold separately). Clean the smooth area of the secondary air injection pump with isopropyl alcohol and adhere the AMS CAN Module to it as shown below.

19. Plug in the small 4 pin connector from the AMS PNP harness into the open connector on right side of the module.
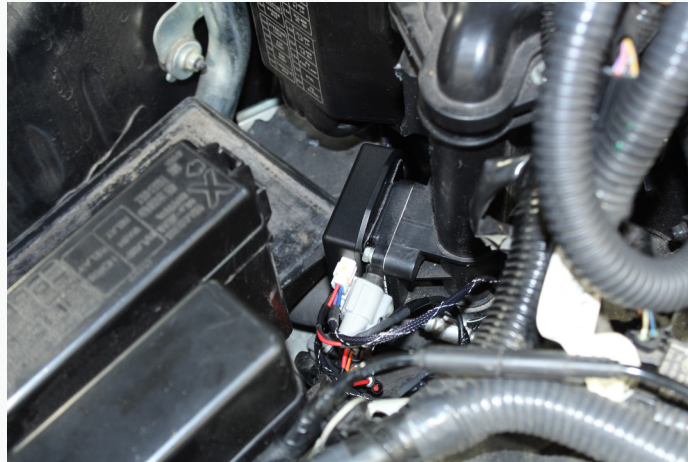
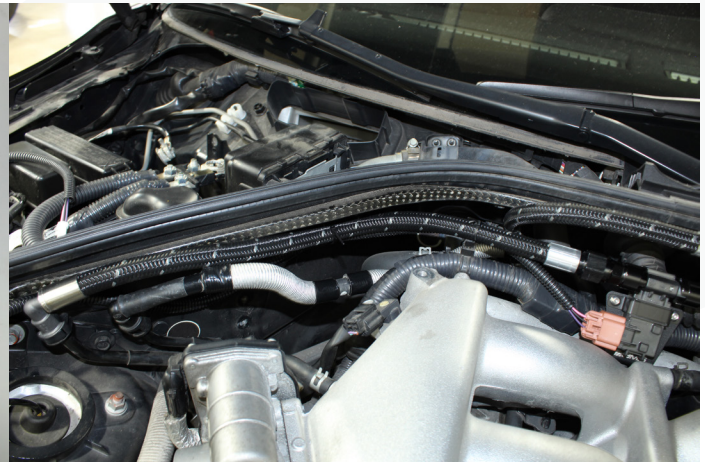20. Locate the AMS Flex Fuel Harness with the brown 4 pin connector. Plug the brown connector into the flex fuel sensor and route the harness along the fuel line towards strut tower. Secure it with a few zip ties

21. Pull the weatherstrip up near the strut tower and spread open the rubber bulkhead and run the harness through with the vehicle harness.
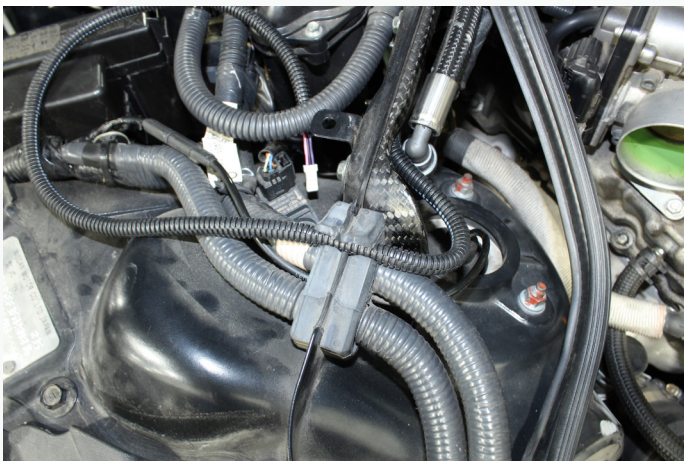
22. Route the harness between the secondary fire wall and secondary air injection pump. Plug the white 4 pin connector into the open connector on the left side of the module.

Note: In order to take full advantage of ECUtek Flex Fuel Support, you will need to check with your tuner to have the most recent software release loaded and the following criteria set.
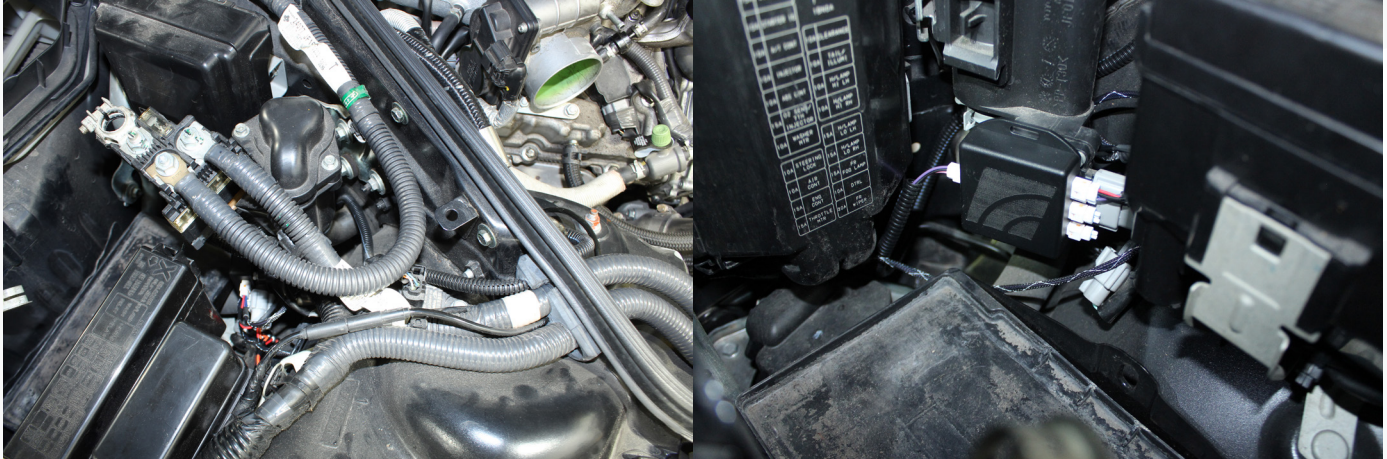

CAN ID	F1								
Format	STD-11bit								
Byte	Bits	endian	Name	Incoming Hex	Incoming Decimal	Multiplier	Offset	Unit	Converted Range	Notes
0	8	n/a	Flex %	0-FF	0-255	1	0	%	0-255 %	Decimal = Flex % exactly 0-100%
1-2	16	Little (lo byte First)	AV 01	0 - 03FF	0-1023	4.8876	0	mv	0-5000mv	
3-4	16	Little (lo byte First)	AV 02	0 - 03FF	0-1023	4.8876	0	mv	0-5000mv	
5-6	16	Little (lo byte First)	AV 03	0 - 03FF	0-1023	4.8876	0	mv	0-5000mv	
7	8	n/a	FlexError	0-1	0-1	1	0		0-1	0 - Sensor Ok _ 1 - Sensor fail

Common sensor Configurations				GTR kpa Scaling			
0-5v Sensor	Multi	Offset	Logged unit	Multi	Offset	Logged unit	
AEM 100psi	0.12219	12.5	psi (gauge)	0.843	86.71	kpa(g)	
AEM 150psi	0.183284	-18.75	psi (gauge)	1.264	-129.31	kpa(g)	
AEM 1 bar	0.018328	-16.875	psi (gauge)	0.126	-114.31	kpa(g)	
AEM 2 bar	0.036657	-18.75	psi (gauge)	0.253	-129.31	kpa(g)	
AEM 3.5 bar	0.061095	-20.95	psi (gauge)	0.421	-144.48	kpa(g)	
AEM 5 bar	0.091642	-24.075	psi (gauge)	0.632	-166.03	kpa(g)	
Omni 4bar	0.058798	0	psi absolute	0.406	0.00	kpa	
Stock Nissan	0.049443	3.4075	psi absolute	0.300	23.50	kpa	

For additional sensors, see our website for Plug'n'Play solutions or if you'd like to wire your own, the pinout is below.

Sensor 5v   **Sensor Ground**   **Sensor Input 3**

Sensor Input 1   **Sensor Input 2**