



S300 v3 Flex Fuel Kit Install Guide

 **Install Notes:** *This product requires a Hondata S300 v3 system. It will not work with a stock ECU or earlier versions of the S300. Installation by a professional is highly recommended unless you are comfortable and experienced in working with fuel lines and Hondata ECU's. When finished with installation, make sure your ECU is seeing the appropriate Ethanol Content Signal. Also, double check for leaks and if any are present do address them immediately, as fuel can easily be ignited by the smallest of sparks given the right conditions.*

 **Emissions Information:** *This product is not designed for public highway or street use and is only legal for formally sanctioned race use on a racing vehicle that may never be used on a public highway or street.*

TABLE OF CONTENTS

Parts Overview	3
Kit Contents/Part Numbers	3
Harness Overview	4
Installation	5
ECU Harness Installation.....	5
Power Harness Installation.....	5
Mounting/Plumbing Ethanol Content Sensor	6
Sensor Harness Installation	6
Final Checks / Powering-On.....	7
ECU Calibration (Hondata S300)	7
Enable Flex Fuel	7
Ethanol Mixtures and E85 Info	8
What is E85?	8
How Does Ethanol Make More Power?	8
Is There an Ideal Ethanol Mixture?.....	8
Where Can I Get E85?.....	9

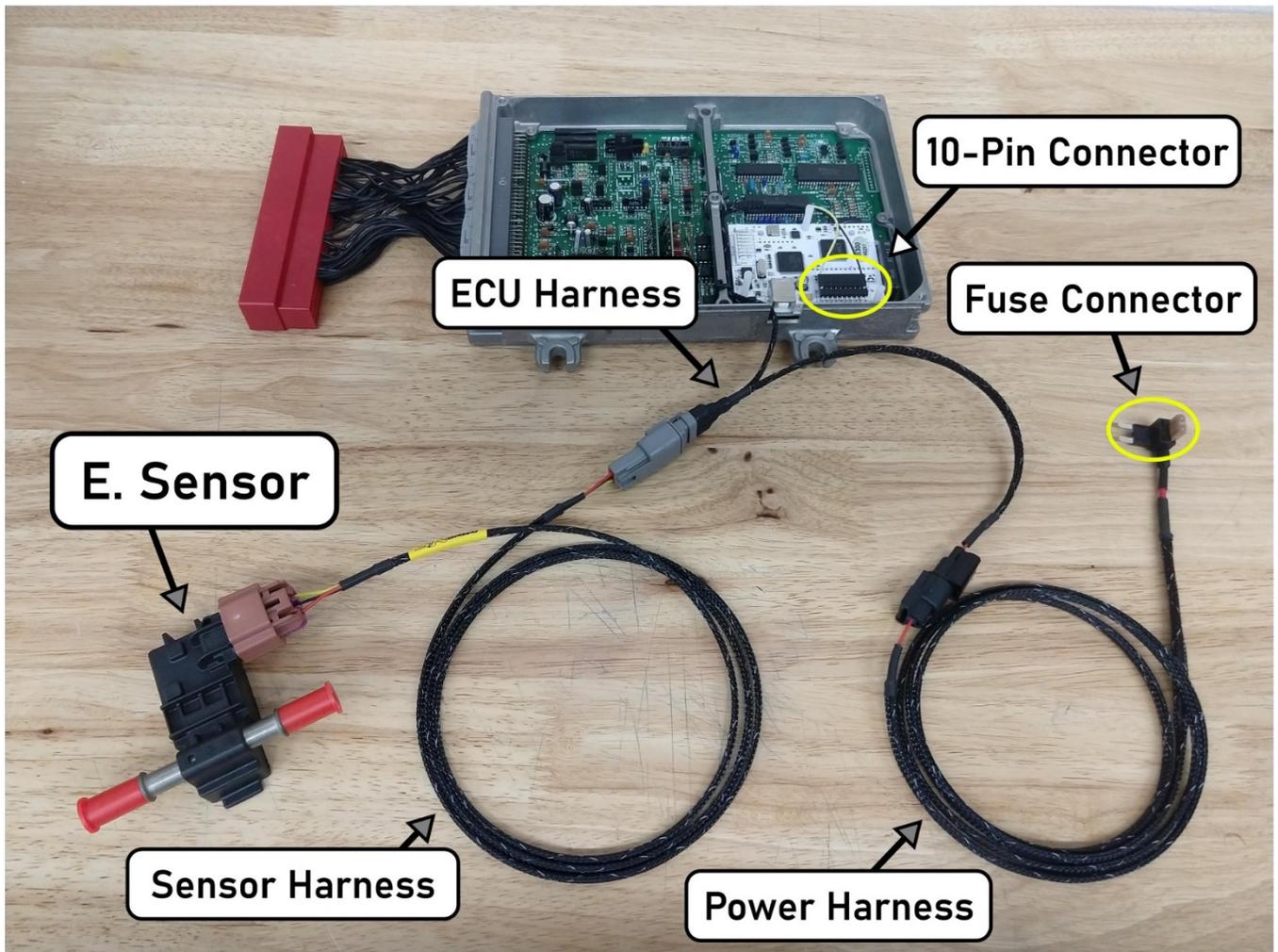
IMPORTANT SAFETY DISCLAIMER: When working on your car, always follow proper safety procedures. This includes, but is not limited to, letting your car cool down, using the correct tools and protection, jacking/lifting your car correctly, and in general being careful about what you are doing. If you do not feel confident doing something, do not attempt it! Instead, have someone else with more experience try or hire a professional. SiriMoto (and any reseller) cannot be held responsible for any incidental or direct damages, injuries, or additional costs caused by installing any of the parts in this kit.

PART NUMBER	DESCRIPTION/CONTENTS	QUANTITY
SM-S300-FFK	SiriMoto Hondata S300 v3 Flex Fuel Installation Kit	
017-FF-0009	ECU Harness - Flex Fuel - S300 (DTM to ECU)	1
017-FF-0008	Sensor Harness - Flex Fuel - Continental (GT150 to DTM)	1
13577429	Ethanol Content Sensor - GM Original Equipment	1
015-AL-0005	Ethanol Sensor Bracket (Flat)	1
015-AL-0015	Ethanol Sensor Bracket (Raised)	1
	M6x1.0, 14mm Length, Hex Head Screw with Washer	1
	M6x1.0, Hex Nut with Washer	1
	Zip Tie – 4"	5
	Zip Tie – 8"	5
048-EP-0007	SiriMoto Flex Fuel Badge	1

OPTIONAL PARTS

PART NUMBER	Description/Contents	Quantity
017-FF-0006	Power Harness - Mini Fuse	1
017-FF-0007	Power Harness - ATO Fuse	1
090-FF-0013	6mm Return Hose Kit	
• FQC-38QC-90-14B	• Quick Connect – 3/8" Pipe to 1/4" Barb (90°)	2
• FIHC-025-SZ	• Hose Clamp – for 1/4" Hose	4
• GAT-BARR-6MM	• Gates Barricade Hose – 1/4" EFI Hose	60"
090-FF-0015	-6AN Male Adapter Kit	
• FQC-38QC-180-6ANM	• Quick Connect – 3/8" Pipe to -6AN Male	2

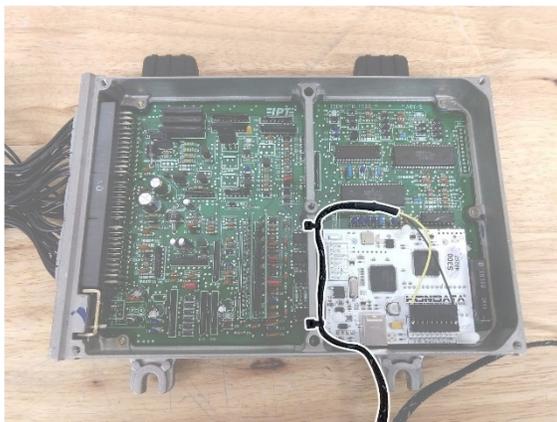
HARNESS OVERVIEW



I. Installation

a. ECU Harness Installation

1. Disconnect the negative battery terminal and let the car cool to a comfortable temperature.
2. Remove the ECU cover to access the Hondata S300 board.
3. Connect the SiriMoto ECU Harness 10-Pin Connector to the Analog Input Pins, ensuring that the Black Wire connects to the Ground (GND) Pin and the Yellow Wire connects to Analog Input '0'.
 - *NOTE: If the Input/Output Pins are already populated by other components/wires, then simply splicing the SiriMoto harness to the existing wires will be necessary. Alternatively, the 10-Pin Connectors can be de-pinned and installed onto the existing connector.*
4. With the ECU Harness in place, secure it with the provided 4" Zip Ties to prevent strain/tension on the 10-Pin Connector. One good option is to tie it to the frame as shown bellow:

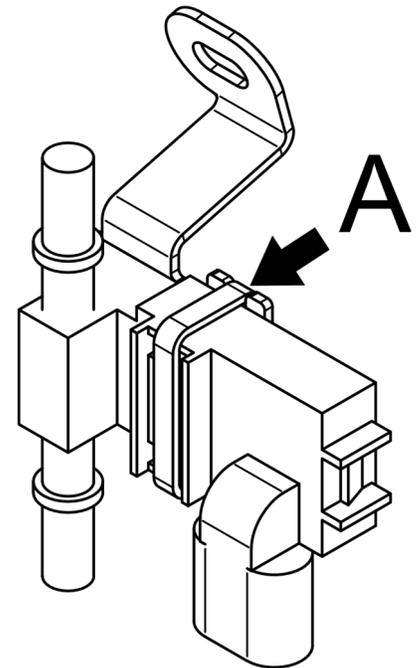


b. Power Harness Installation

1. At the Underdash Fuse Box, find a suitable fuse position that can be used to power on the Ethanol Content Sensor. The fuse position must provide Positive Battery Voltage during Ignition-On **and** Cranking.
2. Install the Add-A-Circuit Fuse Connector from the Power Harness onto the selected fuse location and route the other end to the ECU.
3. Connect the 1-Pin Connector to the accompanying connector at the ECU Harness.

c. Mounting/Plumbing Ethanol Content Sensor

1. Using one of the two supplied brackets (along with the M6 Hardware), determine the location where the Ethanol Content Sensor will be mounted and where in the fuel system it will be installed.
 - *NOTE: Direction of Flow and Orientation of the Sensor is not critical. Also, the sensor can be installed on the Fuel Feed (Pressure) Side but is not recommended it be subjected to over 100psi of Pressure. Plumbing the sensor to the Return Line is possible as well, but not always necessary as the sensor can flow enough fuel for 500+hp.*
2. Once the mounting location of the sensor is determined, use one of the 8" Zip Ties to secure the sensor to the bracket as shown and fasten the bracket to its mounting location.
3. Continue by plumbing the sensor into the Fuel System with your connection of choice (see *Optional Parts on Pg. 3, Part Numbers 090-FF-0013, 090-FF-0015*).



d. Sensor Harness Installation

1. Start by connecting the Sensor Cable to the Ethanol Sensor and route the grey Deutsch connector into the cabin.
2. Route the harness to the ECU and connect it to the Deutsch connector on the ECU Harness.

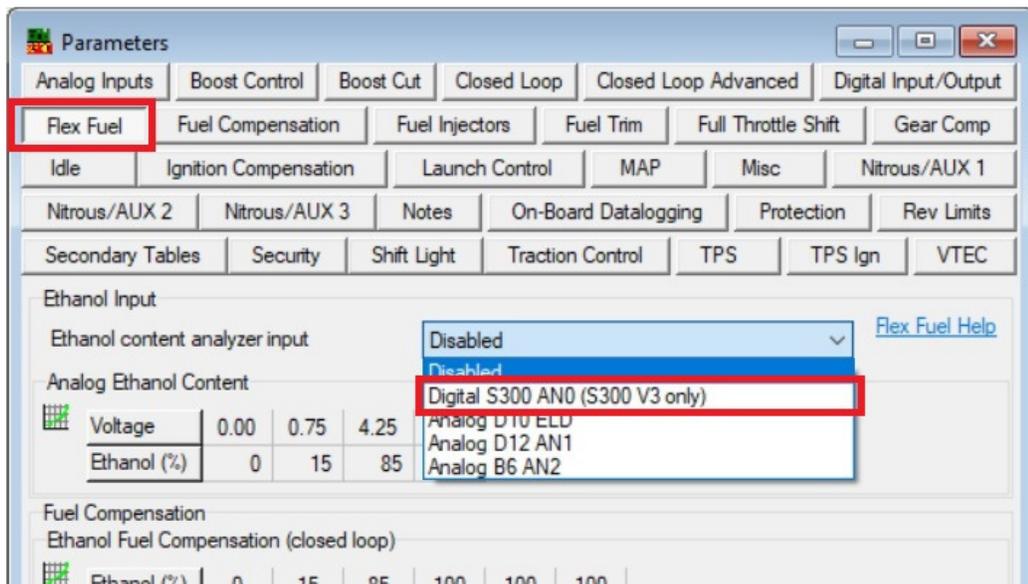
e. Final Checks / Powering-On

1. Make sure everything has been properly secured and all connections have been made.
2. Reconnect the battery and cycle the ignition on ~10 times to prime the fuel system, BUT DO NOT turn on the engine.
3. Double check all connections to make sure they are properly plugged in, along with checking for fuel leaks. *If any errors occur, double check the power/ground/signal wires, and correct any fuel leaks if present.*

II. ECU Calibration (Hondata S300)

a. Enable Flex Fuel

1. At this point you can use your S300 to enable Flex Fuel. Do so by selecting the '*Digital S300 AN0 (S300 v3 Only)*' option:



2. With Flex Fuel enabled, ensure the ECU is receiving the correct *Ethanol Content Sensor %* signal (usually ~10% on Pump Gas).
3. Reinstall any remaining parts that were previously removed.
4. You can now start your car and enjoy the benefits of the SiriMoto Flex Fuel Kit with E85!
 - **NOTE:** Custom tuning is highly recommended, and hard driving or full throttle runs **MUST BE AVOIDED** until the calibration is checked for correct fueling and ignition-timing. This is especially true on Turbo/Supercharged set-ups.

III. Ethanol Mixtures and E85 Info

a. What is E85?

1. E85 is a biofuel composed of up to 85% ethanol. The remaining 15% of the fuel is traditional gasoline. Keep in mind the ethanol percentage can be lower during the winter months in some areas. The ethanol often is made from corn and is the same type of alcohol you would find in hard liquor, with the exception that fuel ethanol is denatured with additives to make it undesirable and harmful to drink. Although E85 is cheaper to purchase at the pump and has huge performance gains, it does yield lower fuel economy. One nice side effect of that is that extra E85 fuel will help cool your combustion chamber and turbo, and thus help maintain maximum power and reliability.
2. Vehicles sold in the U.S. are designed to operate correctly on the factory tune when using fuel that contains between 10% (E10) and 15% (E15) ethanol. E10 is normally found at almost every standard gas pump in the U.S., so you most likely fill up with it all the time. The reason for this is that ethanol has been found to reduce overall emissions while keeping engine performance strong (see https://afdc.energy.gov/fuels/ethanol_benefits.html for more information).

b. How Does Ethanol Make More Power?

1. The reason E85 allows for so much more power than traditional gasoline is that it has a very high-octane rating, usually from around 100 to 105 octane compared to 91 to 93 octane from normal gasoline. This high-octane rating allows E85 to resist engine knock. E85 also allows your turbo to spool earlier and faster and causes your engine and turbo to operate considerably cooler and smoother.

c. Is There an Ideal Ethanol Mixture?

1. For port injection systems, E85 fuel mixtures will give you the best power delivery.

d. Where Can I Get E85?

1. The easiest way is to find E85 stations using websites such as getbiofuel.com or e85prices.com, or phone apps like GasBuddy. Also, E85 blend calculator apps can help you achieve your target ethanol blend.

NOTE: A decrease in fuel mileage is to be expected, although normally only by 10% on ~E30 blends and 20~25% on pure E85. Also, it is not recommended to store a vehicle with high concentrations of ethanol fuel in the system. It is best practice to bring the concentration down to about 15% (E15) or lower when storing a car.

Congratulations! Installation of our SiriMoto Flex Fuel Kit is complete, and you can now enjoy the power potential of ethanol fuel.

We believe our SiriMoto kit provides the simplest bolt-in installation, and gives enthusiasts the privilege of choosing to run any blend of ethanol without having to rely on separate tunes for Pump Gas and Ethanol Fuels.

From the SiriMoto Team, we thank you for choosing this kit, as countless hours were put into the development of this kit along with real-world track testing.

Best Regards,
TEAM
SIRIMOTO

