



## 2020 X3 Turbo RR Stage 1-5x85 ECU Programming

SKU(s): Stage 1 (004FC0083), Stage 2 (004FC0084), Stage 3 (004FC0085), Stage 3R (004FC0086), Stage 3Bi (044FC0088), Stage 4x100 (004FC0090), Stage 5 (004FC0092), Stage 5x85 (004FC0094)



### Performance Features

- Revised intercooler fan settings.
- Left foot braking for 2-foot operation.
- Improved boost response.
- Speed limits raised in high and low gear.
- Torque limits removed in high and low gear.
- High and low gear rev limit increased from 8300 to 9000
- V-Max raised.
- Improved throttle response.
- Engine fan turns on at 185 degrees.
- Race Start- No need to press the brake to start the engine.

Stage	Fuel Octane	Boost	Spark Plug Gap	Waste Gate	Engine HP	Kit Components
Stock	91	18	.020-.022 Stock	9psi	195	N/A
	Requires: Stock components					
Stage 1	91	18.5	.016 - .018	9psi	200	N/A
	Requires: Stock Exhaust					
Stage 2	91	19.5	.016 - .018	9psi	210	N/A
	Requires: Stock Exhaust or Race Bypass pipe					
Stage 3	91	20	.016 - .018	9psi	215	N/A
	Requires: Stock Exhaust or Race Bypass Pipe and High Flow Muffler					
Stage 3R	93	21.5	.016 - .018	10psi	225	N/A
	Requires: Stock Exhaust or Race Bypass Pipe and High Flow Muffler					
Stage 3Bi	91	20	.016-.018	12psi	210	EVP Fuel Injectors
	Requires: Stock Exhaust or Race Bypass Pipe and High Flow Muffler					
Stage 4 X100	100	24	.016 - .018	12psi	245	EVP Fuel Injectors
	Requires: Stock Exhaust or Race Bypass Pipe and High Flow Muffler					
Stage 5	E85	24	.016 - .018	12psi	245	EVP Fuel Injectors
	Requires: Stock Exhaust or Race Bypass Pipe and High Flow Muffler					
Stage 5 X85	E85	27	.016 - .018	12psi	255	EVP Fuel Injectors and Fuel Pump
	Requires: Stock Exhaust or Race Bypass Pipe and High Flow Muffler					

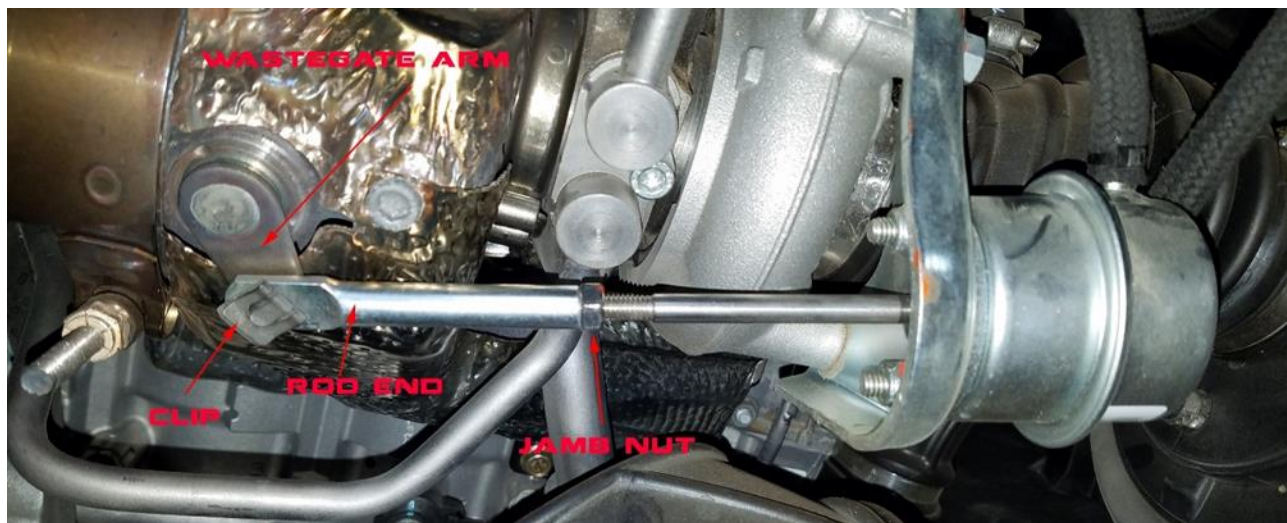
**WASTEGATE ADJUSTMENT PROCEDURE****REQUIRED TOOLS**

10mm Open End Wrench

Mityvac (MV8255)

Flat Head Screwdriver

- Step 1:** Remove panel between the seats that allows access to the turbocharger.
- Step 2:** Using a small flat blade screwdriver, remove the retaining clip that holds the wastegate actuator rod onto the wastegate arm. (Do not lose the retaining clip.)
- Step 3:** Using a 10mm wrench, loosen the jamb nut on the wastegate rod. (Careful not to bend the wastegate rod) (If the jamb nut is too tight you may have to remove the wastegate actuator from the turbo.)
- Step 4:** Screw the rod end clockwise to shorten the arm to raise the crack pressure. Conversely, lengthen the rod to lower the crack pressure. Check crack pressure with Mityvac. Please see our YouTube video for the correct way to do this <https://youtu.be/qOq2MnBf108>
- Step 5:** Check the pressure 3 times to make sure it is correct.
- Step 6:** Put the wastegate rod end back onto the wastegate arm.
- Step 7:** Reinstall the clip and tighten the jamb nut.



## CLUTCHING

**NOTE:** The X3 engine tuned makes best power around **7900-8100 RPMS**. Strongly consider a clutch kit to maximize the performance and belt life out of your vehicle.

### Fuel Pump Installation

**NOTE:** it is best to syphon all fuel out of the tank prior to starting this job.

**NOTE:** The fuel pump relay harness must be installed prior to powering up the dash or starting the vehicle – failure to adhere to this will damage your ECU.

**Step 1:** Remove plastics covering fuel tank. See picture below for location

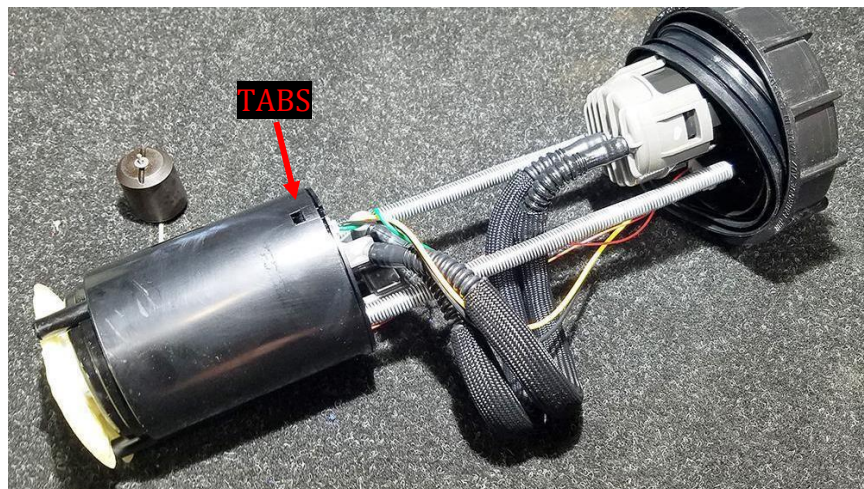
**Step 2:** Unplug electrical connector going into the top of the pump.

**Step 3:** Unhook fuel hose by removing the red clip from the connection. Then push down on the fitting while pushing in on the back side of the fitting – then lift the fitting off the pump assembly.

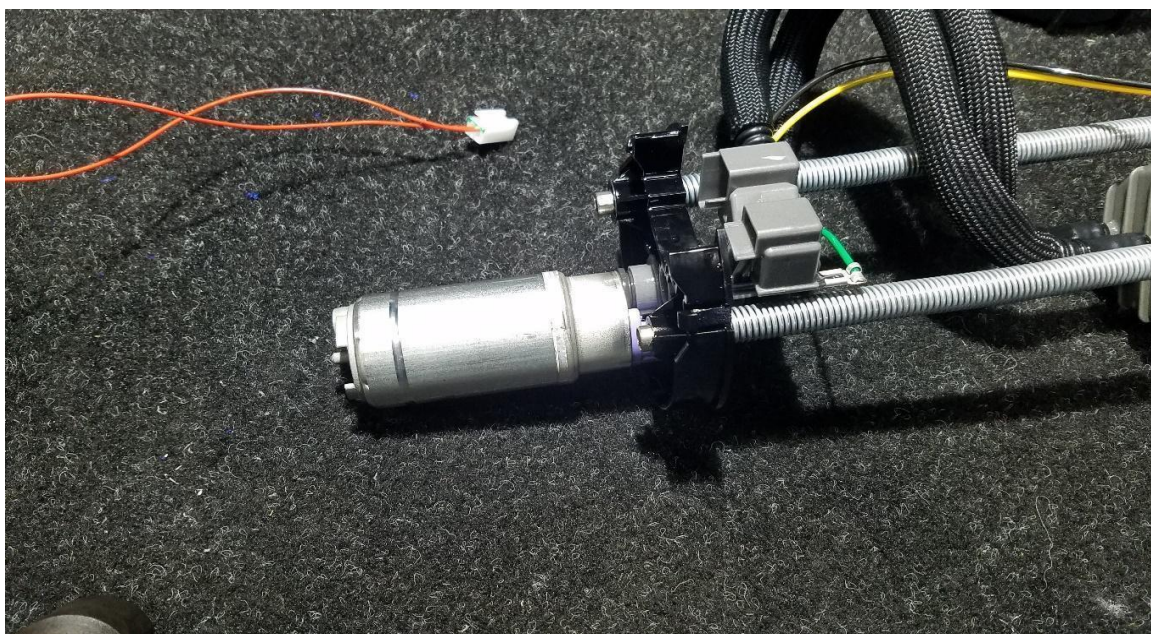
**Step 4:** Rotate pump assembly cap counterclockwise and remove. Remove assembly. (see the pictures on the next few pages for clarification)

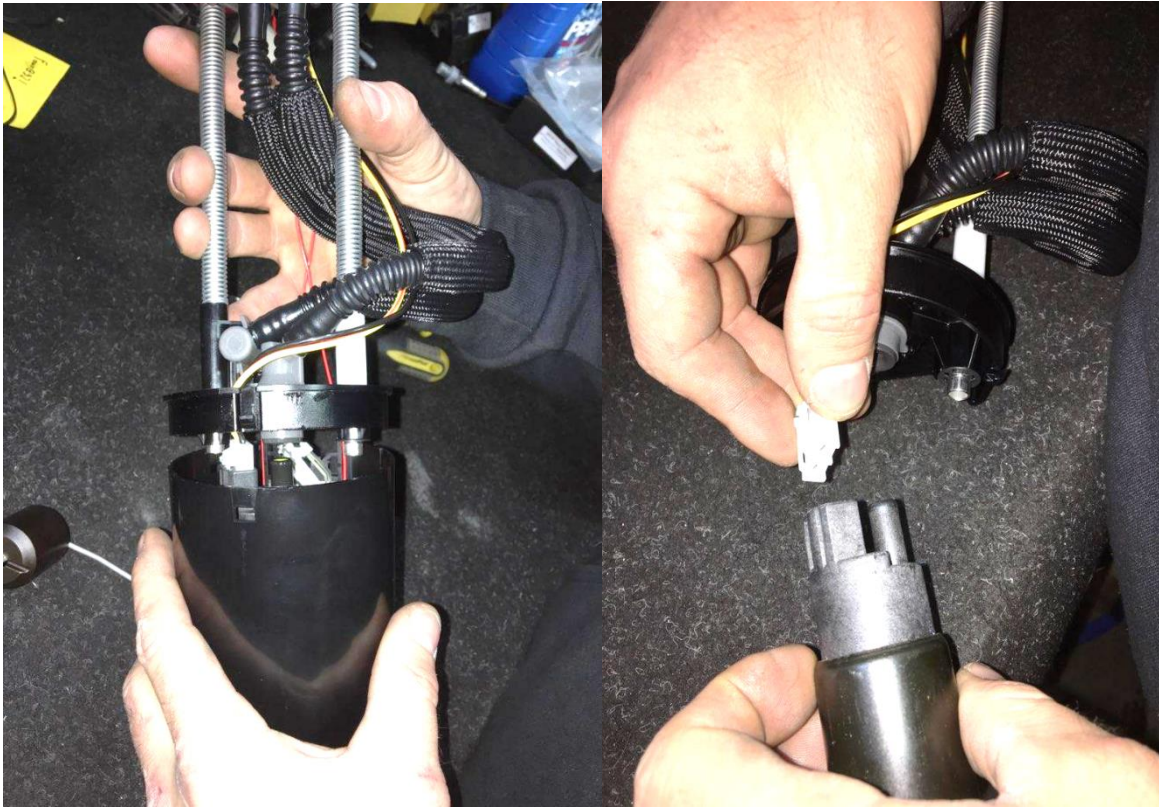


**Step 5:** With the fuel pump on a workbench and all the fuel drained out of the pump assembly, press in on the tabs to release the housing covering the tank.



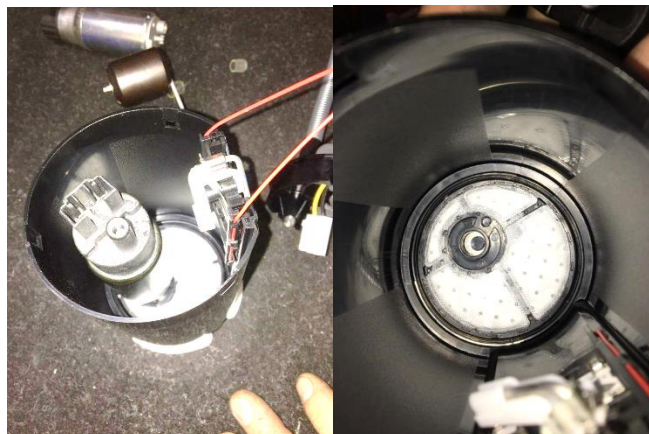
**Step 6:** Below is what the assembly looks like with the housing off.





**Step 7:** Pull the pump out of its seat and disconnect the electrical connection.





**Step 8:** Install the EVP supplied fuel pump into the plastic housing that was removed in step 5 on the previous page. Make sure the pump is oriented and fitted correctly into the bottom of the housing - when properly oriented, the pump will drop into place and it will not rotate.

**Step 9:** Plug the electric connection into the pump.

**Step 10:** Carefully align the tabs and reinsert the cap into the housing – do not force it – if it does not fit in with moderate pressure, something is not correct – recheck. See picture below of fuel line and electrical connection.

**Step 11:** Reinstall pump assembly

**Step 12: INSTALL EVP PLUG N PLAY FUEL PUMP RELAY HARNESS**

**Step 13:** Connect the yellow wire with the ring terminal and the relay to one of the bolts that secure the fuel pump protector strap to the frame. Make sure the ring terminal is grounded to the frame.

**Step 14:** Replace OEM fuel pump fuse with the supplied 20 amp in location F5.

*Thank you for choosing Evolution Powersports products. If you require further assistance, please call our Tech Support @ (715) 247-3862*

**Note:** *This product is exempt from the emission standards and related requirements of 40 C.F.R. § 1051 as provided by 40 C.F.R. § 1051.620, and California law [e.g., vehicle code §§ 27156 and 38391]. This product is sold only for use in connection with EPA certified, purpose-built, nonroad vehicles used solely for closed course, nonroad competition/racing and not used for any recreational purpose or on public highways or right of ways maintained by and open to the public. This product is sold only in connection with machines that do not fall under state and/or federal noise or emission standards/regulations. Purchasers who/that purchase this product represent and warrant that the product is purchased only in connection with EPA -certified, emission-regulations-exempt and noise-regulations-exempt competition/racing vehicles as interpreted under applicable state and/or federal law. Questions: Call Evolution Powersports at (715) 247-3862.*