

## Your Brucato ACU is completely PLUG-N-PLAY and ready to go!

- 1. Check to be sure you have RESISTOR SPARK PLUGS installed. See the chart below.
- 2. Disconnect battery.
- 3. Unplug harness and MAP sensor hose from old ECU.
- 4. Unbolt old ECU from motor, remove any accessories from old ECU and install onto new Brucato ACU.
- 5. Bolt Brucato ACU in the same location as old ECU.

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- 6. Attach yellow vacuum hose.
- 7. Plug in Brucato ACU harness CAREFULLY. The pins line up in a single orientation. Do NOT FORCE the ends together. Spin the harness until the pins slide together easily.
- 8. Reconnect the battery.

\*For Cold Start Enrichment, you must push the key in while cranking the motor. Treat it like it's a choke on a carbureted motor.

\*The Brucato ACU does not buzz the injectors, but instead, it increases the injector pulse width by 2 milliseconds to add extra fuel.

\*\*The Brucato ACU does not use the factory Throttle Position Sensor (TPS) so there is no need to adjust it. The Brucato ACU calculates virtual throttle position using engine RPM and the MAP sensor. The ACU will work with the TPS connected or disconnected.

The smaller pigtail with a triangular fitting is for the optional Brucato SteamWheel. The Brucato SteamWheel is available for advanced users interested in making on-the-water adjustments for customized tuning.

## SPARK PLUG REQUIREMENTS:

It is required that <u>RESISTOR Spark Plugs</u> be utilized with the Brucato ACU. This may or may not be the Mercury Factory recommended spark plugs in your motor now. Brucato Power recommends ONLY using NGK spark plugs. Please do not substitute any other brand.

NGK: BR8HS-10 or BUZ8H	NGK: BPZ8H	NGK: BR9HS-10 or BUZHW	
Mercury/Mariner	Mercury/Mariner	Mercury/Mariner	
150 (up to 1999)	150 (2000-01)	2.4 Bridgeport	
175 (up to 1999)	175 (2000-01)	260	
200 Laser (up to 1999)	200 (2000-01)	280	
220 (up to 1999)	240 Sport Jet	300 Drag	
150 ProMax/Super Magnum		2.5 Drag	
200 ProMax/Super Magnum			
225 ProMax/Super Magnum			

Spark plugs should be gapped at 0.035". Be sure there is an "R" or "Z" in the part number. This designates a resistor plug. A part number with a "-10" suffix, such as BR8HS-10 denotes that the plug is pre-gapped, usually at 0.040" (1mm). You will still need to gap the pre-gapped plugs to 0.035". <u>DO NOT use plugs BU8H or BUHW!</u>



The Brucato ACU comes preprogrammed with a preliminary fuel curve based on the specifications you provided. Further fine tuning and adjustability is as easy as turning a dial on the Potentiometer but should be done with caution.

After removing the bracket, you'll see five Potentiometers (POTS) on the inside of the ACU with a label. Each controls a different segment of the fuel curve within a range of -15% (counterclockwise) and +15% (clockwise). The pointer location of the Phillips head is denoted by the slot with half circles on either side; shown straight up in the first image below at 0%. Each graduation on the body of the potentiometer represents approximately a 4% adjustment, however adjustments as small as 1% can and should be made when fine tuning. When turning the POTS counterclockwise, remember you are leaning out your motor so do this with great caution.



See label inside the ACU for location of each POT:

MAIN: controls entire fuel delivery +/- 15% from 0 to Wide Open Throttle (WOT)

**ACCELERATION COMPENSATION SENSITIVITY:** adjusts the minimum (least) amount of throttle movement required to activate Accel Comp function

**ACCELERATION COMPENSATION VOLUME:** controls volume of extra fuel metered during acceleration (at different rates of throttle)

**PART THROTTLE:** adjusts fuel delivery +/-15% at less than full throttle in the RPM range of ~1,800 through ~7,500 RPM, with no affect at wide open throttle (WOT)

**IDLE:** adjusts fuel delivery +/-15% at less than full throttle in the RPM range of 0 through ~1,800 RPM with no change to fuel delivery at WOT

Sea Level – 600'	0%	2250'-2500'	-8%
600'-800'	-1%	2500'-2750'	-9%
800'-1000'	-2%	2750'-3000'	-10%
1000'-1250'	-3%	3000'-3300'	-11%
1250'-1500'	-4%	3300'-3600'	-12%
1500'-1750'	-5%	3600'-3900'	-13%
1750'-2000'	-6%	3900'-4200'	-14%
2000'-2250'	-7%	4200'-4500'	-15%

## **Compensation Adjustments for Elevation on Main Potentiometer:**

Elevation above 4500' may require a custom fuel curve. Contact Brucato Power for more information.

## Thank you for being a loyal Brucato Power customer!