

Technical BULLETIN

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CERTAIN 2020 YZ250FX MODELS

Rich Running Condition - ECU Reprogramming

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INTRODUCTION

Problem: Some units may experience a condition where the engine is hard to start due to a fouled spark plug.

Cause: The 2020 YZ250FX's ignition timing and air / fuel ratio were set to meet this model's target of good low speed torque for off-road closed-course competition. When riding in certain conditions, the slightly retarded ignition timing and richer air / fuel mixture may lead to the spark plug fouling, causing a hard-starting condition.



Original ECU Programming



Revised ECU Programming

Remedy: To remedy this condition, Yamaha has revised the ECU programming to address the rich running condition.



DEALER ACTION SUMMARY

Unsold Units: Use Unit Status in YDS to check to be sure that the unit is within the affected range and that it has not already been modified. Then, to ensure customer satisfaction, update the ECU on all affected unsold units at the time of PDI using YDT (Yamaha Diagnostic Tool).

Sold Units: If a unit is experiencing a hard start concern due to a fouled spark plug on an affected unit, reprogram the ECU with the revised program file using YDT (Yamaha Diagnostic Tool).

Parts: No.

Warranty: Submit a Service-per-Bulletin (90 Code) Warranty Request for reimbursement (refer to the *Warranty Information* section).



AFFECTED RANGE

Check Unit Status on YDS to make sure the PID is within the Affected Range and has not previously been modified. The affected unit range for this issue is:

Year	Model	Model Code	Primary ID		
			Prefix	From	To
2020	YZ250FXL1	BAJ1	CG41C	0000301	0002417

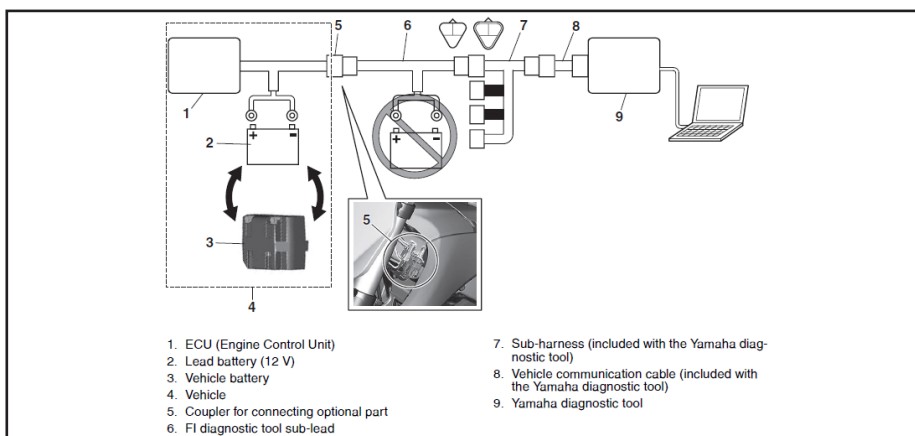
IMPORTANT: Affected Primary IDs are not consecutive. Always check YDS Unit Status before starting any repair.



SERVICE PROCEDURES

To successfully reprogram the ECU on this model, the following items are required:

- A PC with Yamaha Diagnostic Tool Version 3.1.x or later installed including all available Standard, Definition, ECU reprogramming files, and with the AI (Adapter Interface) up-to-date. Refer to Technical Bulletin MSA2018-001 if you are having difficulty updating YDT.
- FI diagnostic tool sub-lead (YU-03212). This sub-lead was originally shipped with the FI Diagnostic Tool, NOT with YDT. It is easily identified by the switch and battery-connection terminals that are integrated into the lead.

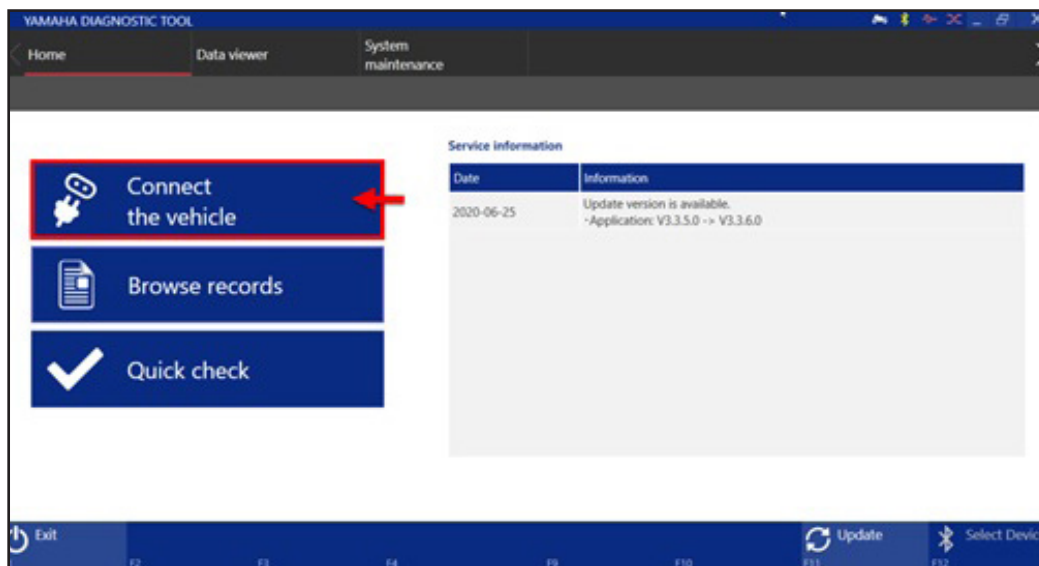


NOTICE:

To avoid possible irreversible damage to the ECU and to perform the reprogramming successfully, follow these precautions:

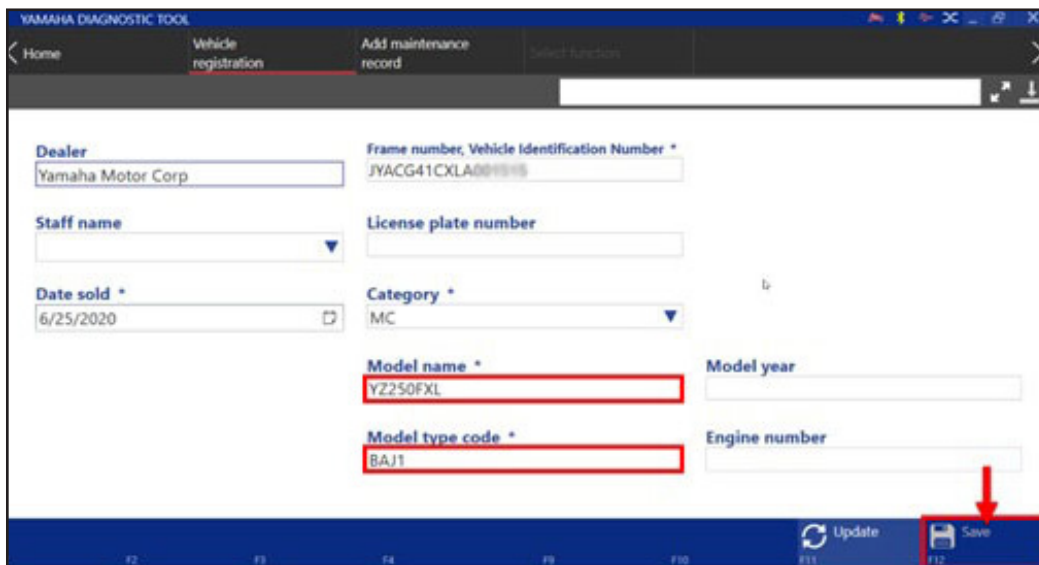
- Be sure the lead-acid battery connected to the vehicle is fully charged. It is advised to connect the battery to an appropriate battery charger during the reprogramming process.
- DO NOT allow the PC's screen saver to initiate during this reprogramming process. Avoid using other programs. Do not disconnect any of the cables.
- DO NOT turn the inline switch off or press the stop switch on the handlebars during the ECU reprogramming process.

1. Temporarily replace the stock lithium-ion battery with a fully charged lead-acid battery before beginning the process. Verify that the computer's screensaver is disabled. Close all other programs running on the PC.
2. Establish a full connection to the vehicle by using the "Connect the vehicle" function. Refer to the Tech Tip section of the 2020 Technical Update book for tips on connecting YDT to competition models.



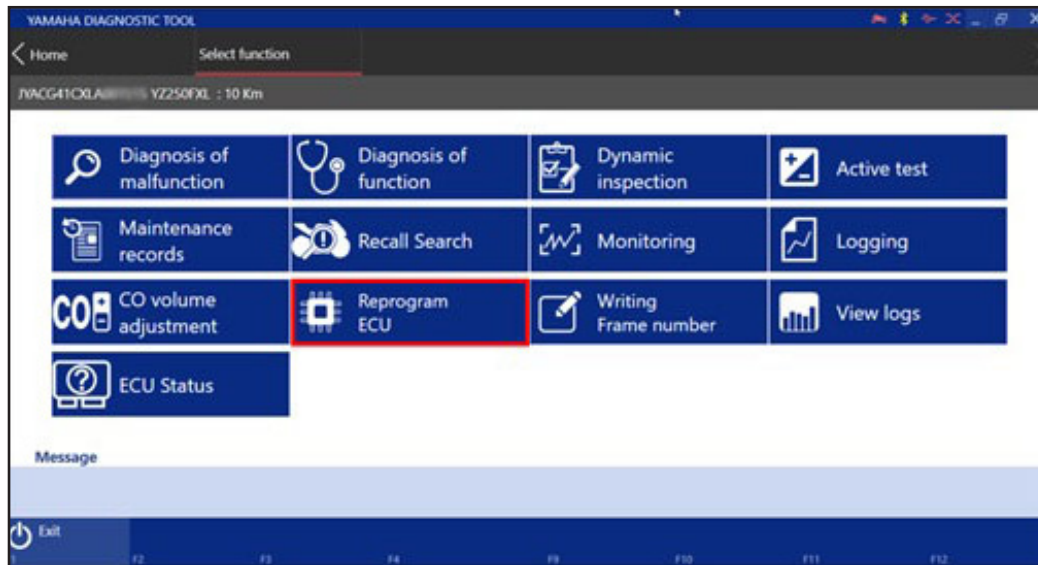
If the unit has previously been connected to YDT Version 3.x, the unit's information will be auto-populated. If this is the first time YDT has been connected to the vehicle, you will be prompted to enter the unit's VIN and customer information to proceed.

It is CRITICAL to enter the correct VIN or PID and verify that Model Code is correct. If you are unsure of the model code, it is generally located under the seat on a small label or can be found using Parts Manager Pro through YDS.

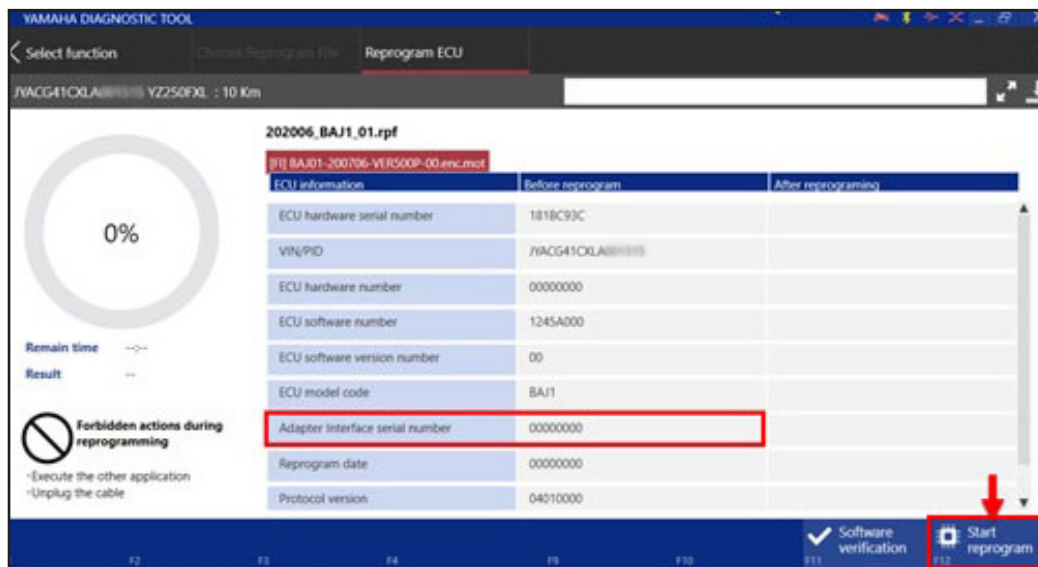


3. On the "Add maintenance record" screen, select Recall/Service campaign from the drop-down menu. Add the technician and mileage/hours, then click "Save" in the bottom right corner of the screen. Next choose "Select Function" option at the top of the screen, which will bring you to the function menu.

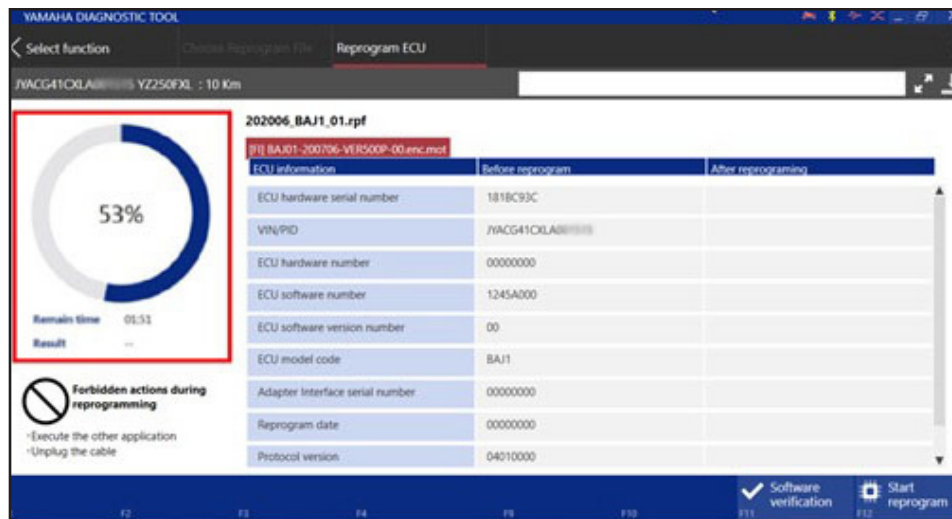
4. From the function menu, click on “Reprogram ECU.”



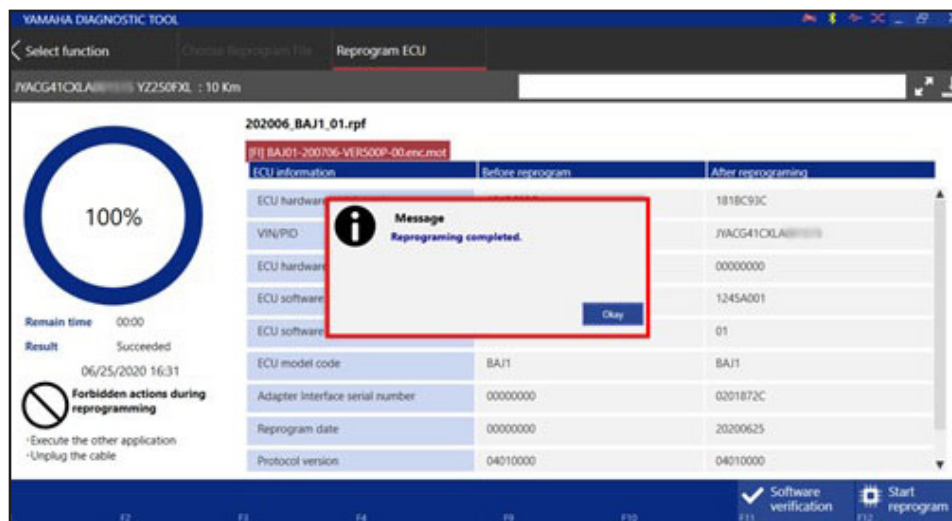
Once the Reprogramming function opens, be patient while the Diagnostic Tool reads the ECU's information; reading the ECU may take several minutes. When the information has been read successfully, the “before program” chart will populate. To ensure the unit has not been previously reprogrammed, verify that the “Reprogram Date” displayed is “00000000.” When you have verified this information, click “Start Reprogram” from the bottom right side corner.



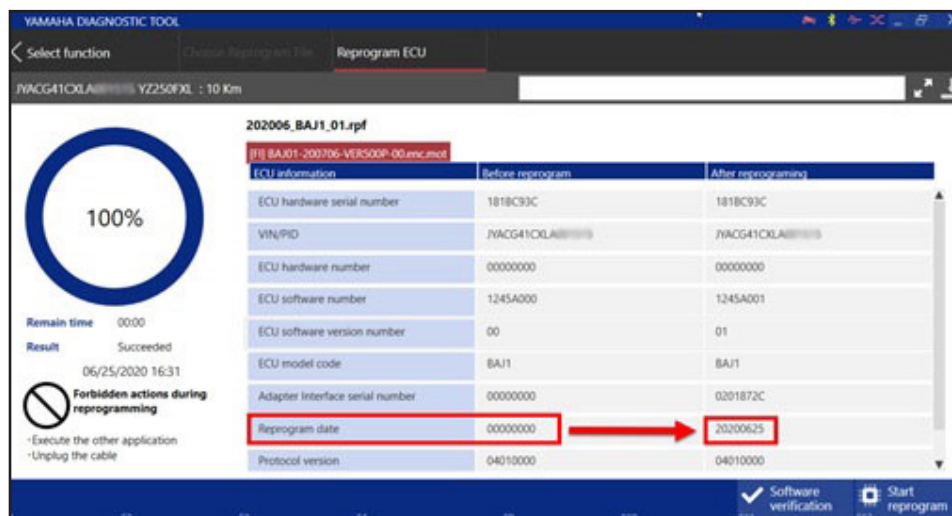
During the ECU reprogramming process, the progress will be displayed on the left-hand side of the screen (see screen below). Even if the reprogramming appears to have stalled or become frozen, do not exit the program or disconnect the unit. Depending on the computer's hardware, the reprogramming may take 5 minutes or more.



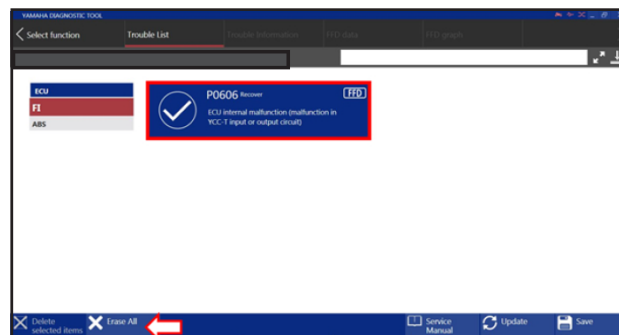
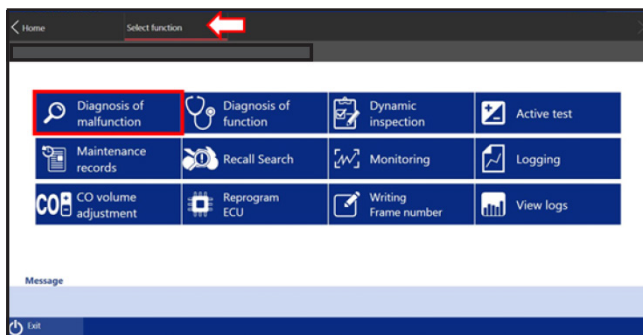
When the progress indicator reaches 100%, wait until YDT displays the “Reprogramming completed” message as shown below before proceeding to the next step.



- Once the “reprogramming completed” message displays, confirm the Reprogram date change from “00...” to the actual date (formatted YYYYMMDD) on the before/after reprogramming chart as shown below.



- Choose “Select Function” at the top left of the screen. When YDT prompts “Turn the main switch to off,” hold the stop switch down for 5 seconds and then click “OK.” Then, when YDT prompts “Turn the main switch on,” briefly press (“bump”) the starter button to reconnect. From the “Select Function” menu, click on “Diagnosis of malfunction,” and erase any trouble codes that are present.



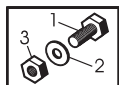
TIP: Trouble codes will not be erased unless the unit is first powered off then back on.

- The reprogramming is complete. Disconnect YDT. Reinstall the stock lithium-ion battery.



IDENTIFICATION PROCEDURE

After completing the procedure, make sure to properly record and submit the warranty claim for this campaign to ensure correct reimbursement and to update the unit's repair history in Yamaha's database



PARTS INFORMATION

No parts are required to perform this modification.

A new ECU that already has the updated software (p/n BAJ-8591A-01-00) will be available later. Until then, be sure to perform the reprogramming described in this bulletin if you must replace an ECU.



WARRANTY INFORMATION

After completion, select Service-per-Bulletin **090ZX** from the Campaign Number pull-down menu in the Yamaha Dealer System (YDS) when entering your claim. The labor allowance for this modification is **0.6 hours**.

This Service-per-Bulletin 90 Code (090ZX) will expire 1 year after the original factory warranty expires.

If you have any questions about proper procedures for Factory Modification Campaigns, see Chapter 7 in your Warranty and Y.E.S. Handbook (LIT-11760-00-16).