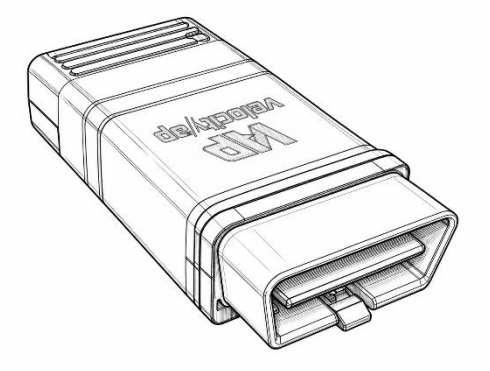


VTUNE PRO FLASHING TOOL & SUITE

SYSTEM REQUIREMENTS:

- Windows 10/11 PC x86 Intel/AMD Processor + 8GB Ram
- Does not support Mac, ARM, Snapdragon, iOS or Android
- Reliable & Active Internet Connection
- Battery Tender or Charger (+15AMPS or greater)

SECTION 1 - Ordering Process

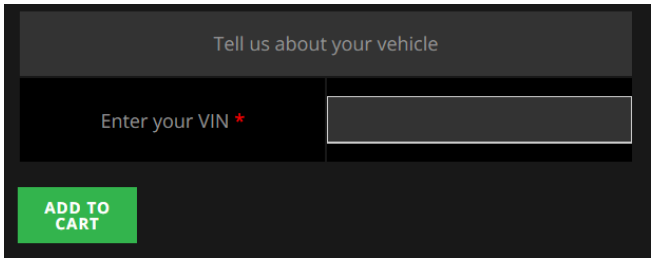
- **AJ126 3.0L V6 VEHICLES :** 3.0 V6 AJ126 ECU & TCU Tuning
- **AJ133 5.0L V8 VEHICLES :** 5.0 V8 AJ133 ECU & TCU Tuning
- **TDV6 3.0L TURBO DIESEL VEHICLES**: 3.0L TDV6 Turbo-Diesel ECU Tuning
- **ZF8HP70 TCU TUNING:** JLR ZF8HP70 Transmission Tuning

Step 1 — Configure Your Order

1. You must add at least **QTY: 1** of the new VTune Pro Flashing Tool if you do not already own one.
2. You can choose from the following options:
    a. Stage 1 Tune only
    b. Stage 1 and 2 (Requires you already own or purchase our VAP lower crank pulley)
    c. Stage 1, 2 and 3 (Requires you already own or purchase both the VAP lower crank pulley and VAP upper supercharger pulley
    d. Stage 1, 2, 3 and 4 (Requires all the above. V6 Stage 4 = E85 Tune, V8 Stage 4 Tune = support for Harrop 2300)

Please note: To purchase any of the higher stages (2-4), you must also already own or purchase the previous stage files and hardware requirements (i.e. Stage 2, requires stage 1. Stage 3, requires stage 1 & 2, etc.) When configuring your cart, please include all the required stage tune files or your order will not be processed. **Existing VAP customers refer to Appendix at the end of this document for upgrade scenarios.**

3. Add optional hardware or tuning options (some products, i.e. pulleys, will require you to configure your selections on their respective product pages.)
    a. Lower Crank Pulley
    b. Upper Supercharger Pulley
    c. O2 Downpipe Tuning
    d. VAP Data Logging Suite
    e. TCU Tune
    f. Enter your VIN in the box provided below:



Step 2 — Add items to cart by clicking the green ADD TO CART button or navigate to other product pages to configure selected products needed.

Example Customer Scenarios – please reach out to sales@velocityap.com with questions

New VAP customer, never tuned before and wants Stage 1 tune with support for their high flow downpipes.	You would need to select quantity 1 for the VTune Pro Flashing Tool, stage 1 tune file and the O2 Downpipe Tuning and add to cart.
New VAP customer, never tuned before and wants Stage 3 tune, TCU tune and O2 Downpipe Tuning enabled	You would need to select quantity 1 for the VTune Pro Flashing Tool, quantity 1 for stage 1, 2 and 3 tune files. If you do not already have a lower crank pulley and upper supercharger pulley, you will need to add those to the cart as well. Select the TCU tune option as well as the O2 Downpipe tuning option and add them all to the cart.
Previous customer, who has not used new system, and still have their old VFlash and want to upgrade from Stage 1 to Stage 2	**Option A:** Purchase crank pulley ($949), submit for a revised tune file following previous tuning process, receive an updated file and use the VFlash to load onto the vehicle. https://www.velocityap.com/ecu-file-upload/ **Option B:** Purchase the VTune Pro Flashing Tool ($229) to migrate over to the new platform, purchase the stage 2 file ($199) and required crank pulley ($599) and follow the steps outlined starting in **Section 2 – refer to Appendix for more details.**
Previous customer, who has not used new system, and still have their old VFlash and want to upgrade from Stage 1 to Stage 3	**Option A:** Purchase required crank & supercharger pulley ($949 + $329), submit for a revised tune file following previous tuning process, receive an updated file and use the VFlash to load onto the vehicle. https://www.velocityap.com/ecu-file-upload/ **Option B:** Purchase the VTune Pro Flashing Tool to migrate over to the new platform, purchase stage 2 and 3 files and required pulleys (new pricing) and follow the steps outlined starting in **Section 2 – refer to Appendix for more details.**
Previous customer who has purchased our tuning solutions before and wants to add just new TCU tuning capabilities.	Select quantity 1 for the VTune Pro Flashing Tool, add the TCU tune option and add to cart. VAP Stage 1 ECU tuning is required at a minimum. If your vehicle was not tuned by VAP, you will need to purchase and install our ECU tune to run our TCU tune or work with your previous tuner to update your ECU tune file.
Customer has installed 3rd party (non-VAP pulley) and now wants to get the vehicle tuned	Select quantity 1 for the VTune Pro Flashing Tool and add the correct stage tune files required for your modification. Stage 2 (lower crank pulley), Stage 3 (upper supercharger pulley), etc.

Step 3 — Complete Checkout

1. Select Proceed to Checkout.
2. Review your billing information and order details for accuracy.
3. Open the Terms and Conditions and scroll to the bottom before accepting.
4. Once accepted, select Place Order to complete the checkout process.

You should receive an automated order confirmation by email.

Step 4 — Await Authorization

Once your order is submitted, no further action is required until you receive additional instructions from VelocityAP. Our team will review your order, prepare the necessary account access, and notify you when your tuning account is created.

Step 5 — Retrieve your account information

Once you receive your account information, it is now time to download, install and log in to our new tuning application. Continue onto to **section 2** on the next page.

SECTION 2 - Tuning Software Installation & Account Access

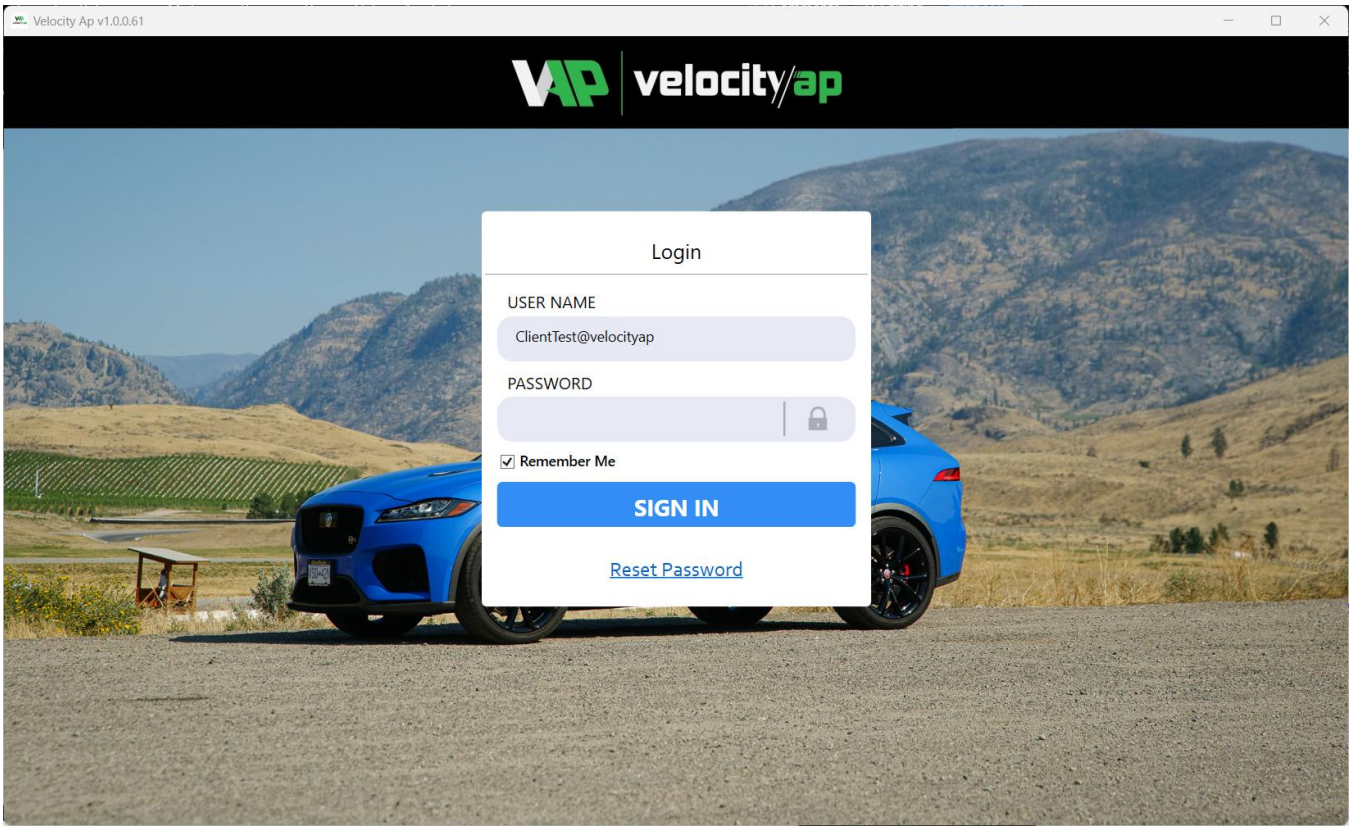
Step 1 — Download the VTune Pro Flashing Tool Software Suite (Windows PC Laptop running Windows 10 or later)

Download the latest version using the following link and install:

https://updates-velocity.s3.amazonaws.com/latest/VA+Installer+Client.exe

Step 2 — Log In to the Application

1. Launch the VTune Pro Tuning application.
2. Enter the username and password provided by VelocityAP.
3. Change the initial password by selecting “reset password” and follow the steps to set new password.
4. Select Sign In to access the application.
5. Continue onto the next section.



SECTION 3 - Connecting the VTune Pro Flashing Tool to Your Vehicle

Before beginning the ECU or TCU reading or programming process, you must establish a connection between your vehicle, the VTune Pro Flashing Tool Application, and your Windows laptop. You must have an active and reliable internet connection.

Step 1 — Prepare Your Equipment

You will need the following equipment:

- VTune Pro Flashing Tool.
- Supplied USB connection cable.
- Windows laptop with the VTune Pro Flashing Suite Installed
- Laptop should have at least 50% battery life or be plugged into outlet before proceeding. **Ensure sleep mode is OFF.**
- Access to your vehicle's OBD-II diagnostic port.

Step 2 — Connect the Interface

1. Locate the OBD-II diagnostic port inside your vehicle.
2. Connect the VTune Pro Flashing Tool to the OBD-II port.
3. Connect the USB cable between the VTune Pro Flashing Tool and your Windows laptop.

Step 3 — Verify Vehicle Battery Condition & Charging Recommendations

Important — Vehicle Battery Voltage

Before beginning any ECU or TCU reading or programming operation, ensure your vehicle's battery is fully charged. **We strongly recommend connecting a suitable battery maintainer or regulated power supply to support stable vehicle voltage throughout the process (+15 AMPS or higher).** ECU or TCU communication and programming operations can take an extended timeframe, and maintaining consistent battery voltage is important.

Important Vehicle Behavior During ECU or TCU Communication

During ECU or TCU reading and programming, your vehicle may exhibit behavior that differs from normal operation. These conditions are expected and do not necessarily indicate a problem with your vehicle or the tuning process.

- The vehicle may enter a temporary hibernation or unresponsive state.
- Certain electronic systems may appear to shut down or stop responding.
- Instrument cluster gauges may flicker or temporarily become inactive.
- Interior or exterior lights may flash or remain illuminated.
- Do not interrupt the process, do not shut down your laptop or turn off the ignition.
- Follow all instructions displayed in the tuning application and allow the operation to be completed. Failure to do so can result in a bricked ECU or TCU requiring your vehicle to be towed to a service or repair shop.

Vehicle Settings After Programming

Once an ECU or TCU read or write operation has completed, certain personalized vehicle settings may need to be restored. In some cases, the vehicle's key fob may temporarily become unresponsive. If this occurs:

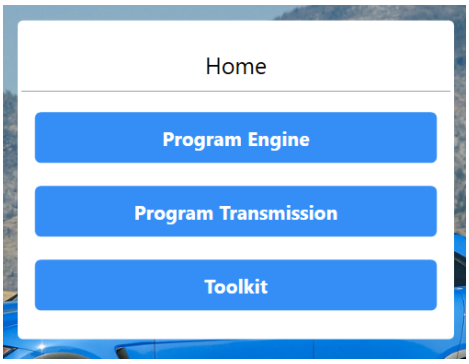
1. Move the key fob away from the vehicle.
2. Allow approximately 10–15 minutes for the vehicle's electronic systems to reset.
3. Return to the vehicle and check whether normal key fob operation has resumed.
4. Do not disconnect car battery/negative battery terminal if car remains unresponsive, reach out to tuning@velocityap.com for technical assistance.

SECTION 4 - Starting the ECU or TCU Tuning Process

Once the VTune Pro application is running, you are logged in, and the vehicle is properly connected; you can begin the ECU/TCU identification process.

Step 1 — Select Program Engine or Program Transmission

- From the application's main menu, select Program Engine or Program Transmission based on what you have purchased or which module you are looking to flash. This will open the main programming window.

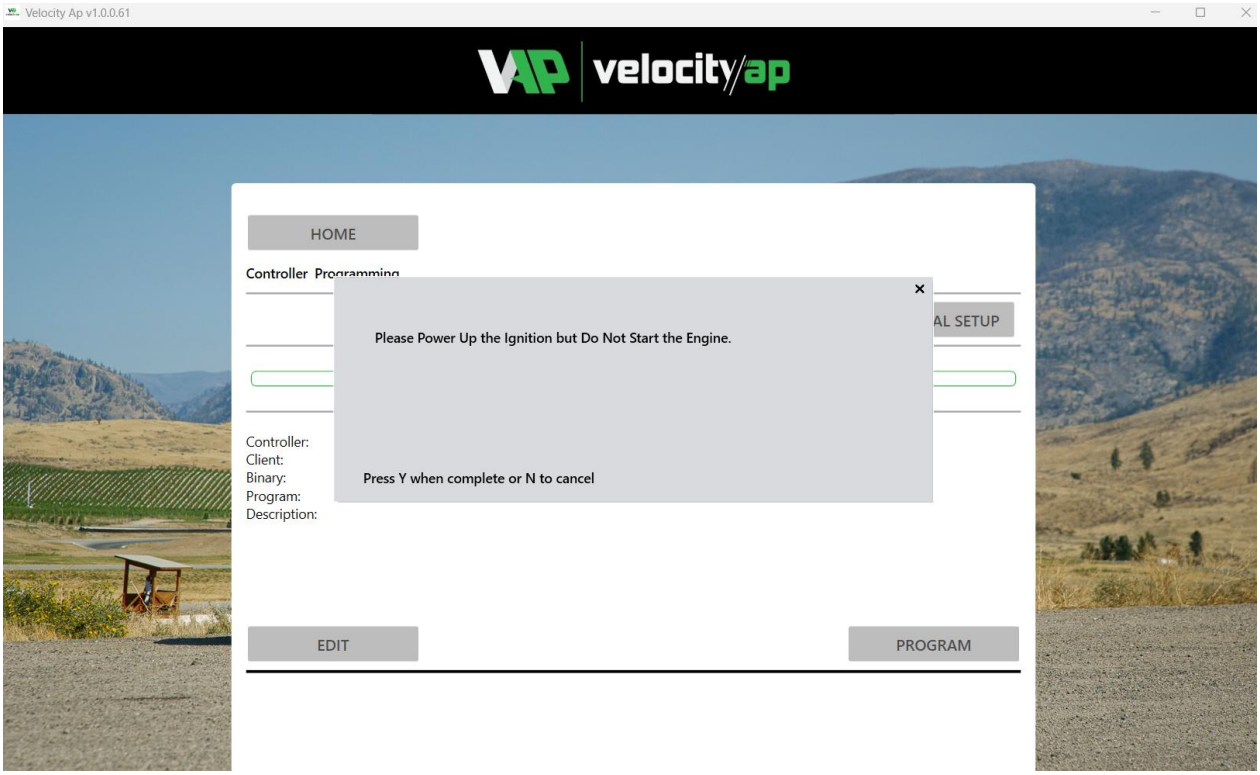


Step 2 — Turn On the Vehicle Ignition

The application will prompt you to switch on the vehicle's ignition.

1. Ensure your foot is **OFF** the brake pedal.
2. Switch the vehicle ignition to the **ON** position.
3. **DO NOT START THE ENGINE.**
4. Once the ignition is on, press Y to confirm and continue.

The application will begin communicating with your vehicle.

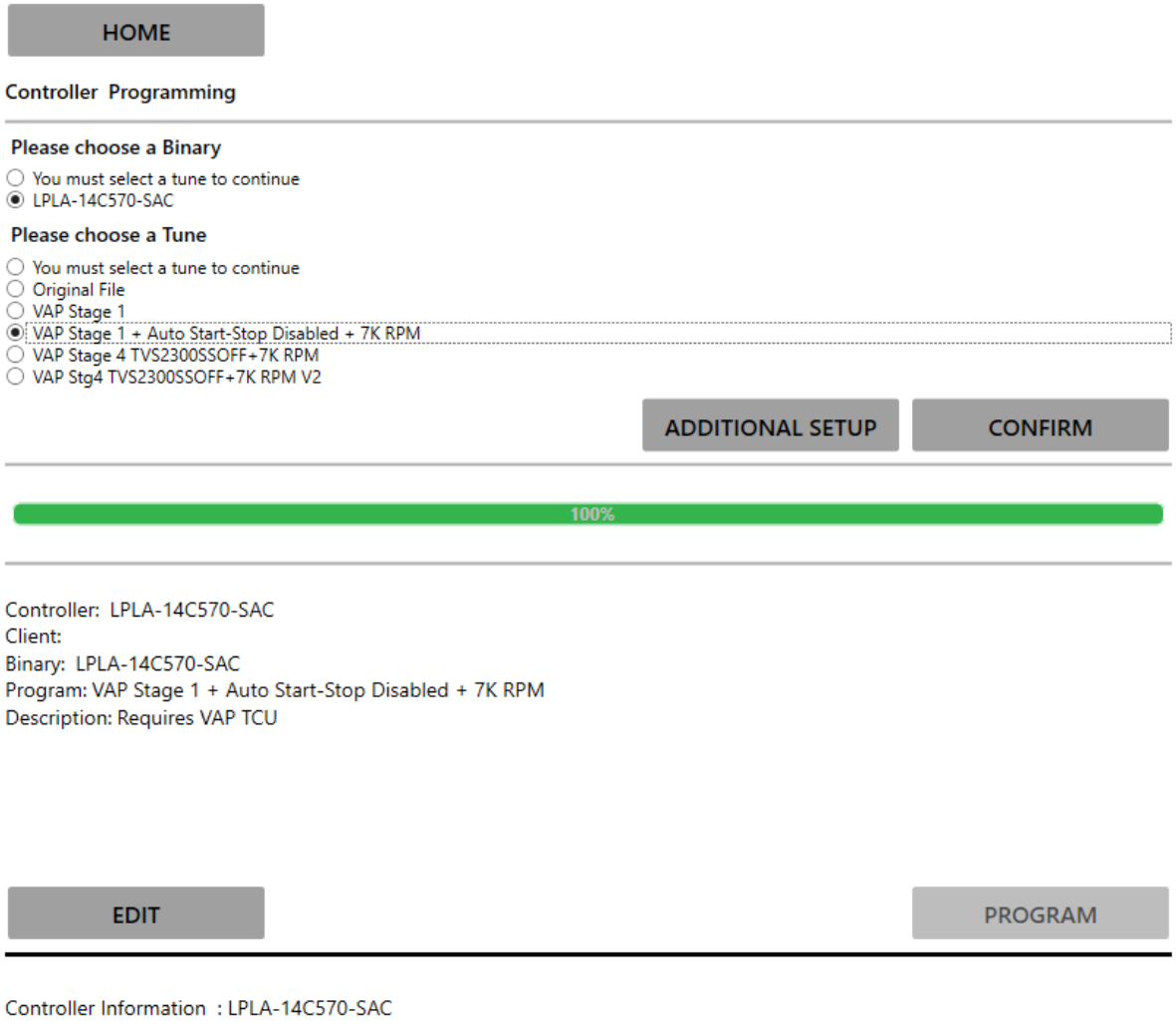


Step 3 — Automatic ECU or TCU Identification

The application will automatically detect if a compatible calibration file is available for your vehicle and account. The system may seem paused or non-responsive during this process.

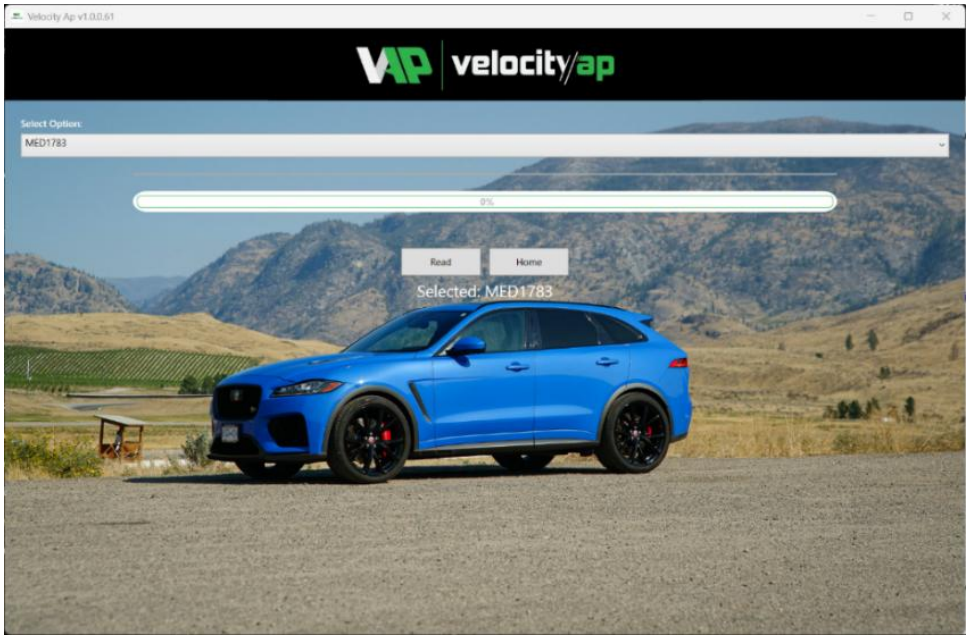
Scenario A — Calibration Files Are Already Available on the server.

- If compatible calibration files are available on the VelocityAP server, they will appear within the application. You will be able to select the appropriate calibration file for your vehicle based on which products or stage tune you own/purchased. First, you will select the Binary file shown, then you can select which stage tune file you want to flash. Continue to **section 5, step 7**



Scenario B — No Calibration Files Are Available

- If no compatible calibration files are currently available on the server, the application will display a list of available ECU and TCU protocols under the **Select Options pulldown menu**. Use the chart below to correctly select which ECU or TCU you have. Select the correct option and then proceed with the reading process outlined in the next section, **section 5, step 1.**



VTUNE PRO FLASHING TOOL & SUITE SELECTOR			
Model	**VIN**	**ECU Type**	**TCU Type**
Jaguar F-Type	2018 or earlier	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
	2019+	MED17832	JLR_ZF8HPXY_ITCU2_3_X_2048
Jaguar F-Pace 3.0L	2017 or earlier	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
	2018+	MED17832	JLR_ZF8HPXY_TC300
Jaguar F-Pace 5.0L SVR (18-20MY)	ALL	MED17832	JLR_ZF8HPXY_TC300
Jaguar F-Pace 5.0L SVR (21MY+)	2021-2024.5	MED17832	under development
Jaguar XE 3.0L	2017 or earlier	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
	2018+	MED17832	JLR_ZF8HPXY_TC300
Jaguar XF 3.0L	2017 or earlier	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
	2018+	MED17832	JLR_ZF8HPXY_TC300
Jaguar XF 5.0L	ALL	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
Jaguar XJ	ALL	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
Land Rover 3.0L Diesel	2016 or earlier	EDC17CP55_CAN	JLR_ZF8HPXY_ITCU2_3_X_2048
	2017 or later	EDC17CP55_FR	JLR_ZF8HPXY_TC300
Land Rover Velar AJ126/AJ133 (18-20)	ALL	MED17832	JLR_ZF8HPXY_TC300
Land Rover Velar AJ126/AJ133 (21+)	ALL	MED17832	under development
Land Rover 17MY+ Discovery	ALL	MED17832	JLR_ZF8HPXY_TC300
Range Rover Sport	2016 or earlier	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
	2017+	MED17832	JLR_ZF8HPXY_TC300
Range Rover Full Size 3.0L/5.0L	2016 or earlier	MED17831	JLR_ZF8HPXY_ITCU2_3_X_2048
	2017+	MED17832	JLR_ZF8HPXY_TC300
Range Rover Defender 5.0L	2024.5 or earlier	MED17832	under development

SECTION 5 - Reading Your Vehicle's ECU or TCU

If your calibration is not yet available through the VTune Pro Application, you may be instructed to perform an ECU or TCU read. This process allows the application to retrieve the information required for the next stage of tuning.

Step 1 — Initiate the Read

- Once the ECU/TCU has been identified, select Read within the application.
- The software will display instructions to prepare the vehicle for the reading process.

Step 2 — Confirm Ignition Status

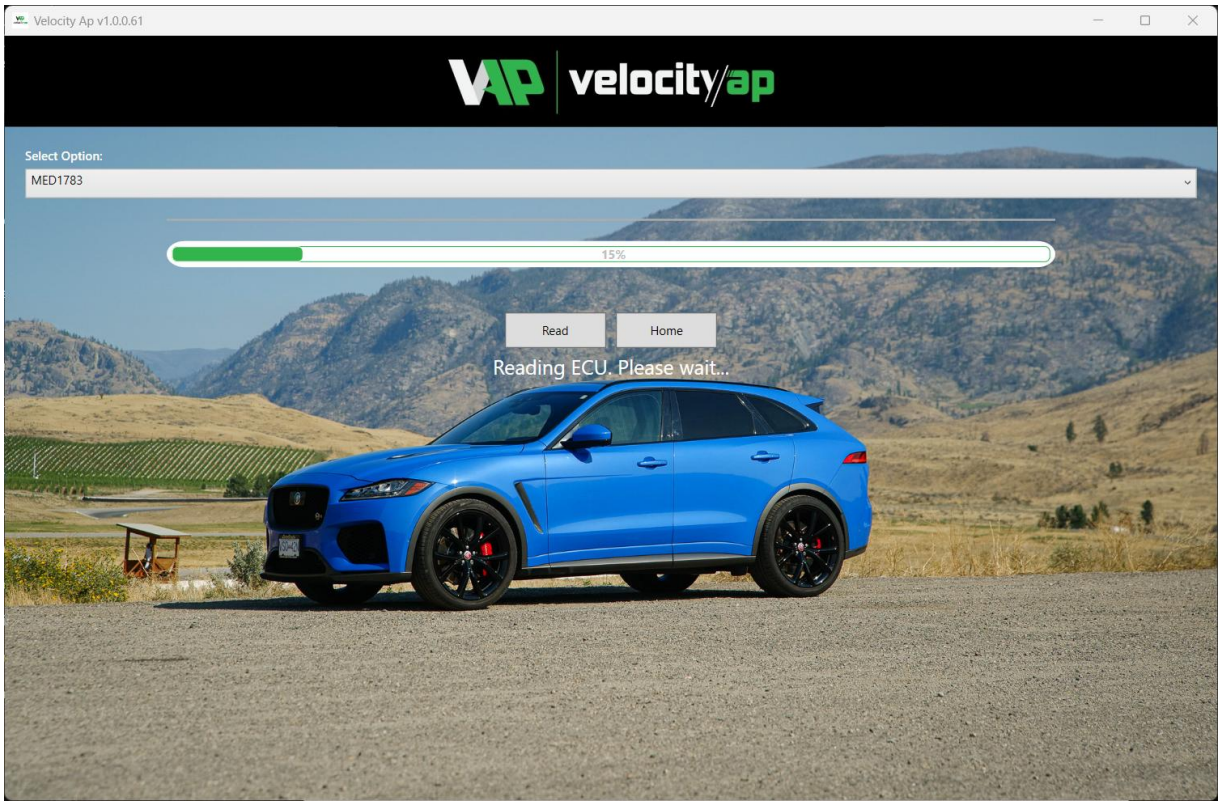
1. Ensure your foot is OFF the brake pedal.
2. Switch the ignition to the ON position without starting the engine.
3. Confirm that the ignition is on by pressing Y when prompted.

Important: The engine must remain OFF throughout the reading operation.

Step 3 — Allow the Read to Complete

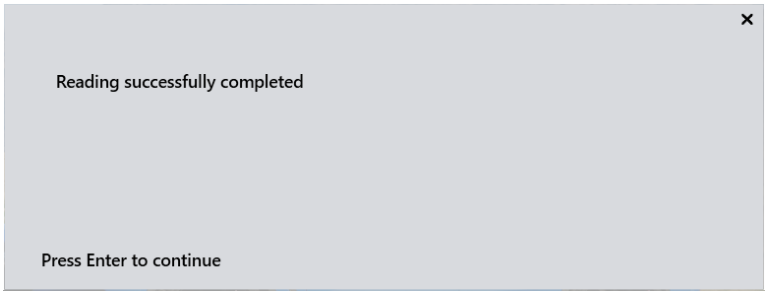
After confirming the ignition status, the application will begin the read.
A progress indicator will appear on the screen, allowing you to monitor the operation.
The process may take several minutes, depending on the vehicle and configuration.

- Keep the laptop and VTune Pro connected.
- Do not switch off the ignition unless instructed by the application.
- Do not start the engine.
- Do not close the application or interrupt the process.
- Allow the software to complete all required operations.



Step 4 — Read Completed

- Once the reading process has finished, the application will display a confirmation message indicating that the operation was successful.
- Reading Successfully Completed. Press Enter to continue.



- After completion, the vehicle's electronic systems and ignition functions should return to their normal operating state. As noted previously, some vehicle personalization settings may need to be restored after the process.

Step 5 — Submit the read was completed (failure to do this will result in a delay of you receiving your tune files)

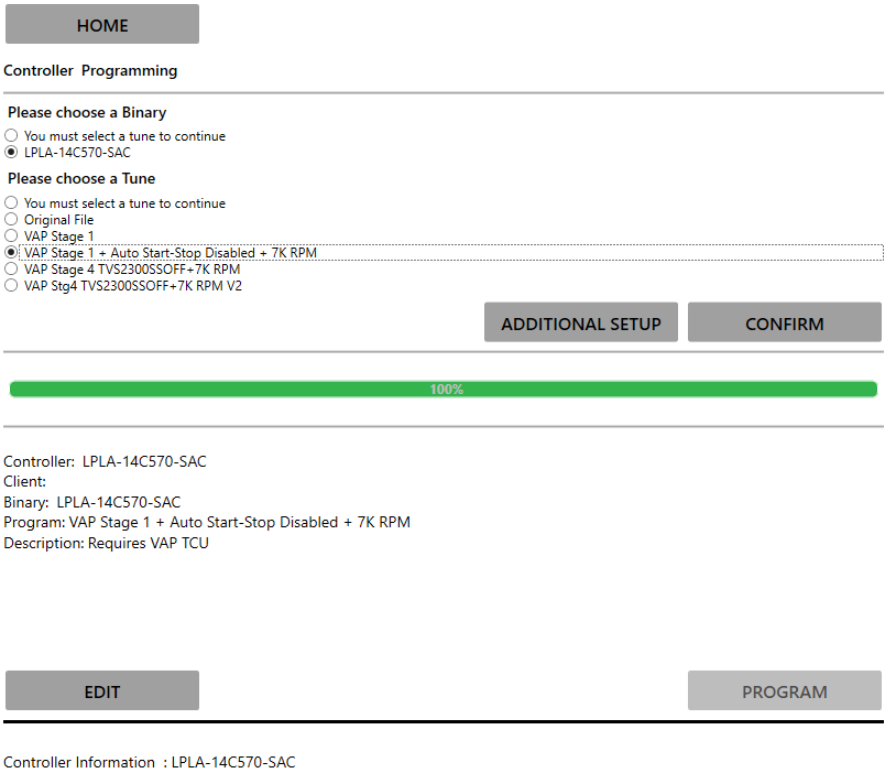
- **After finishing your read, visit the following page and submit the requested information:** https://www.velocityap.com/vap_read_submission/

Step 6 — Wait for file ready notification

- The tuning department will email you once your file(s) are ready on the server
- Turnaround time for notification that your files are ready will vary based on current workload

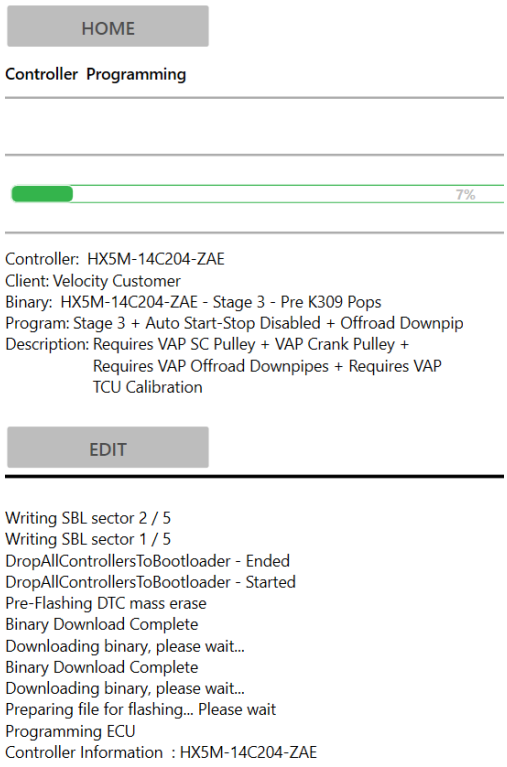
Step 7 — Writing Calibration Files

- Once you've been notified that your files are ready, you can log back into your account and select the Program Engine or Program Transmission button off the main page. You should now see the tune files available for your vehicle based on your order history.
- First select the correct binary (normally should only see one option)
- Next, select which tune file you wish to write.
- Select the **CONFIRM** button.
- Click the **PROGRAM** button.
- Follow the prompts on the screen until the writing is completed. **Do not turn off your laptop, disconnect the cable, or unplug the device. You must maintain an active internet connection during this process.**



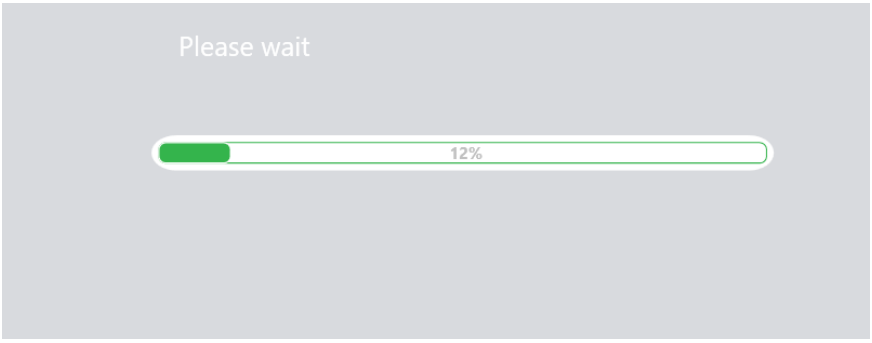
Step 8 — During the programming process

As the programming process begins, you will see a green progress bar and percentage. Please wait for this process to complete. Please wait until the programming completes fully. Follow the prompts on the screen.



Step 9 — Running error check

The system will automatically run an error check. Please allow this to finish and continue to follow the prompts on the screen.



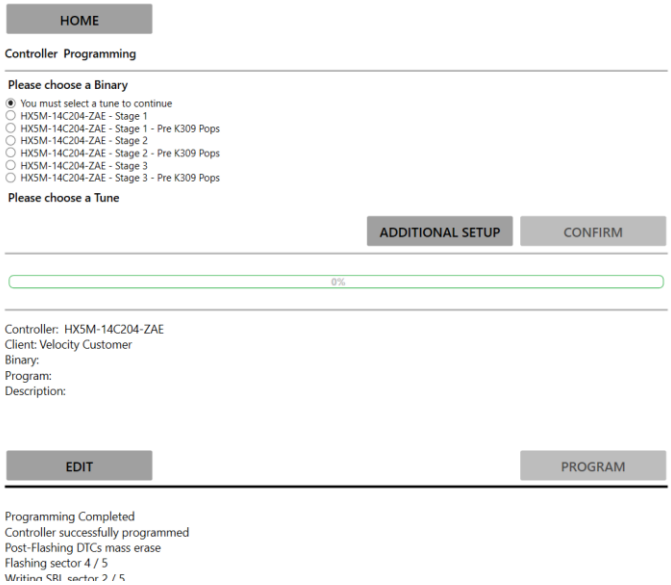
Step 10 — Programming completed

Once the flash process has been completed, you should receive the following message on your screen. **Please wait for the dash lights and ignition systems to power back up before hitting enter.**



Step 11 — Finishing up

Once the flash process has been completed, the application will return to the original programming screen you started on (see below). Once back on this screen, you can safely close the application and unplug your device from your car's ODB port.



Need Technical Assistance?

If you have any questions or encounter any issues during the software setup or tuning installation process, our technical support team is here to help. Please submit a post-sales technical support request using the following link: https://www.velocityap.com/contact/

The information is provided by VelocityAP for general informational purposes only. Although we make reasonable efforts to provide accurate information, we make no representations or warranties, express or implied, regarding its accuracy, completeness, or suitability for any vehicle, product, or application. Information is subject to change without notice. You use and rely on this information at your own risk. You are responsible for verifying that it applies to your vehicle and consulting a qualified professional before undertaking any installation, modification, diagnosis, or repair.

You are responsible for confirming product compatibility with your vehicle and its existing modifications, using a qualified installer, and making sure the installer follows applicable product instructions and vehicle service procedures. To the fullest extent permitted by applicable law, VelocityAP is not responsible for injury, loss, damage, or expense caused by improper installation, setup, or use, including work performed by you or a third party.

To the fullest extent permitted by applicable law, VelocityAP and its employees, representatives, and affiliates disclaim liability for injury, loss, damage, costs, or expenses arising from the use of, reliance on, or inability to use the information, including errors or omissions. To the same extent, VelocityAP disclaims liability for damage to your vehicle or its components arising from the installation or use of aftermarket parts, performance tuning, or other modifications, including related diagnostic, repair, replacement, towing, and loss of use costs.

VelocityAP makes no representation or guarantee that any vehicle manufacturer warranty, extended warranty, or service contract will remain in effect or cover a particular claim after an aftermarket product is installed or the vehicle is tuned or otherwise modified. Coverage depends on the applicable warranty or contract terms and applicable law. Review those terms and contact your warranty provider before proceeding with any modification.

This disclaimer does not limit any rights, remedies, or warranties that cannot lawfully be excluded or restricted, or modify any express written product warranty provided by VelocityAP.

APPENDIX

Can I flash this back to the OEM calibration?	Yes, an OEM file is retained and available on the server to be flashed back. You would simply select the original file option under program vehicle.
I previously had a tune using your VFlash device, is that still compatible?	The new tool is an entirely different platform and product suite. The files from your VFlash are not compatible with the new VTune Pro. If you do not wish to upgrade to the new tuning tool and suite, you can continue to use your VFlash like before.
What is the warranty on the new tool?	1 year. It would need to be sent back for inspection to confirm no accidental damage (water ingress, circuit overload, bent pins, etc) were present before a replacement or repair would be provided. The USB cable provided is considered a wear item and does not come with a warranty.
How do I get a replacement for a lost or damaged tool?	You can order a replacement on our website. The tool is not locked to a specific user, only to the VIN it is assigned, and you can re-assign a new tool if ever needed.
Can I use this on more than one vehicle?	Yes. If you purchase a tune for vehicle #1 and then want to use this tool with vehicle #2, you can purchase the tune file for that second, third, etc., vehicle and we can add those VIN to your account for access.
Can I use this for both my ECU and TCU tuning file?	Yes. VTune Pro supports a wide range of TCU calibrations, including Flexray Transmissions and the same device can be used to program both the ECU and TCU.
What if I add your downpipes or similar modification that requires an updated tune file?	The benefit of this system is that we can provide all files per stage. For example. If you have our stage 2 tune (lower crank pulley) and then a few months later added our downpipes and TCU tune. You can purchase the O2 downpipe tuning option ($99 USD) and the TCU tuning option ($399 USD), and we can enable this inside your account immediately for you to flash once the order is placed.
I already have a VFlash device, and I want to just program my TCU, what is the process to get a revised ECU file?	The new tool is an entirely different platform and product suite. The files from your VFlash are not compatible with the new VTune Pro. However, when you purchase the TCU tune, it now comes with our new VTune Pro flashing tool. This would grandfather you into using it for your previously purchased ECU tunes as well, as one device is now capable of working with both the ECU and TCU. You can simply just use this new tool to read and write to the TCU and now use this for your ECU tunes moving forward. It may require a new ECU read using the new tool so we can create the specific ECU files for your VIN and vehicle, but in many cases the files would already be available. Do keep in mind that if you move over your ECU to the new tool as well, your previous tuning files from the VFlash would no longer work. You can choose to unlock the VFlash tool by first flashing your vehicle back to the OEM file still stored on it and then starting the process over to write your ECU file (which you will need to anyway with adding the TCU tune).
What trickle or battery charger do you recommend while flashing the vehicle?	Basic trickle chargers/battery tenders only produce around 1amp. You need at minimal +15amps to charge. We strongly advise having this plugged into a charger that can supply at minimum +15amps.
I purchased my vehicle with a VelocityAP Tune and hardware already installed; how can I verify what was already installed and obtain updates with the new system?	Due to privacy regulations, including the General Data Protection Regulation (GDPR), we are unable to access or disclose a vehicle's prior ownership, service, or order history to subsequent owners. If you require service records, receipts, or previous order information, please contact the selling dealer or the prior owner directly. If we are unable to verify historical orders or upgrades, we are unable to provide future upgrades at no charge.
I am running only an upper Supercharger Pulley, which stage tune file would I select?	In the occurrence a customer elects to run just our upper supercharger pulley, while keeping the stock crank pulley, you would need to own/purchase both our Stage 1 and Stage 2 files for this to be compatible.