CERTAIN 2022-2024 MODEL YEAR F-150 BEV VEHICLES EQUIPPED WITH FRONT PARK AID FEATURE (MINOR FEATURE CODE HNLAB) - INOPERATIVE FRONT PARKING SENSORS - SOFTWARE UPDATE — IMAGE PROCESSING MODULE A (IPMA)

SERVICE PROCEDURE

IMPORTANT! The Service Technician Specialty Training (STST) Competency 10 certification requirement, for U.S. market only, will be enforced starting with repair orders opened on or after April 1, 2024. Field Service Action (FSA) repairs will reject if the repairing technician is not certified in STST Competency 10 FSA. See Electronic Field Communication (EFC) 14251 for more details.

Module Programming

IPMA – Technical Support Request (TSR) - Dealer Software Support Hotline (DSSH)
If you experience IPMA software programming errors, multiple programming failures, IPMA module replacement and require assistance - submit a Technical Support Request (TSR) and request the following:

- IPMA programming assistance or IPMA replacement from DSSH
- Repair Validation Code (RVC)

Once you are provided with an RVC:

- **For this program it is NOT necessary to contact the SSSC for additional approvals, this includes the following:**
  - additional labor hours
  - module replacement
  - related damage

NOTE: Program appropriate vehicle modules before performing diagnostics and clear all Diagnostic Trouble Codes (DTCs) after programming. For DTCs generated after programming, follow normal diagnostic service procedures.

1. Connect a battery charger to the 12 Volt (V) battery.

   - Use of a heavy-duty charger is recommended to maintain proper battery voltage during this procedure.

NOTE: Verify the negative cable of the charger is installed on a chassis or engine ground and not the 12V battery negative terminal to prevent the battery saver mode from activating on the vehicle.

NOTE: If the diagnostic software does not load or if the vehicle cannot be identified properly, make sure there is a good internet connection and the Vehicle Communication Module (VCM) is properly connected to the Data Link Connector (DLC).

2. Log into Ford Diagnostic and Repair System (FDRS).

NOTE: Vehicle information is automatically retrieved by the diagnostic software and a Network Test is run. Vehicle identification data appears on the screen when this is complete.

3. Click **Read VIN from Vehicle** or manually enter the Vehicle Identification Number (VIN).

NOTE: Available modules are shown on the left hand (LH) side of the screen and available procedures are listed on the right hand (RH) side of the screen. Modules that are communicating are highlighted in green.

4. Select **Toolbox** tab.

5. From the list on the LH side of the screen, select the **IPMA**.

6. From the list on the RH side of the screen, select **IPMA - Image Processing Module A (IPMA)**.

7. Click **RUN**. Follow all on-screen instructions carefully.

NOTE: The IPMA may take up to 2 hours and 40 minutes to update. However, there is no technician interaction needed once the IPMA begins to update.

NOTE: The following modules may also be programmed during the **IPMA** update:

- **Power Steering Control Module (PSCM)**.

8. From the list on the RH side of the screen, select **Self-Test** and click **RUN**.

9. Click the **Run Selected Tests** button in the lower right.

10. Click the **Clear & Retest** button at the top of the screen to clear DTCs in all modules.

11. On 2022 model year vehicles only:

    a. From the list on the LH side of the screen, select the **APIM**.
    b. From the list on the RH side of the screen, select **APIM - 360 camera view display configuration.** See Figure 1.
    c. Click **RUN**. Follow all on-screen instructions carefully.

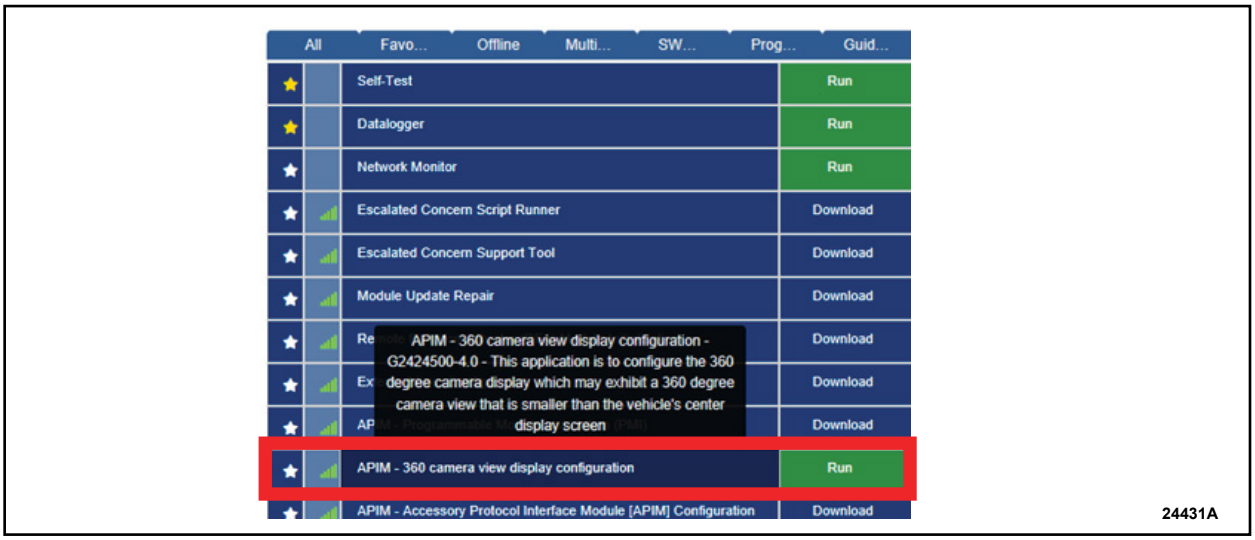

FIGURE 1

12. Disconnect the battery charger from the 12V battery once the programming has completed.

Important Information for Module Programming

NOTE: When programming a module, use the following basic checks to ensure programming completes without errors.

- Make sure the 12V battery is fully charged before carrying out the programming steps and connect FDRS/scan tool to a power source.

NOTE: A good internet connection is necessary to identify the vehicle and to load the diagnostic software.

- Inspect the Vehicle Communication Module II (VCM II)/Vehicle Communication Module III (VCM III) or the Vehicle Communication and Measurement Module (VCMM) and the cables for any damage. Make sure scan tool connections are not interrupted during programming.
- A hardwired connection is strongly recommended.
- Turn off all unnecessary accessories (radio, heated/cooled seats, headlamps, interior lamps, HVAC system, etc.) and close doors.
- Turn the accessories back on after programming has completed.
- Disconnect/depower any aftermarket accessories (remote start, alarm, power inverter, CB radio,etc.).
- Follow all scan tool on-screen instructions carefully.
- Disable FDRS/scan tool sleep mode, screensaver, hibernation modes.
- Create all sessions key on engine off (KOEO). Starting the vehicle before creating a session will cause errors within the programming inhale process.

Recovering a module when programming has resulted in a blank module

a. Disconnect the VCM II/VCM III or the VCMM from the data link connector (DLC) and your computer.
b. After ten seconds, reconnect the VCMII/VCMIII or the VCMM to the DLC and the PC. Launch FDRS. The VCMII/VCMIII or the VCMM icon should turn green in the bottom right corner of the screen. If it does not, troubleshoot the FDRS to VCM connection.
c. If you are using the same FDRS as the initial programming attempt, select the appropriate VIN from the Vehicle Identification menu. If you are using a different FDRS, select “Read VIN from Vehicle” and proceed through the Network Test.
d. In the Toolbox menu, navigate to the failed module and Download/Run Programmable Module Installation (PMI). Follow the on-screen prompts. When asked if the original module is installed, select “No” and continue through the installation application.
e. Once programming has completed, a screen may list additional steps required to complete the programming process. Make sure all applicable steps are followed in order.