

# This is a detailed analysis of the 2020 Jaguar F-Type Vehicle Diagnostic Report

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## Vehicle and Report Summary

- **Vehicle:** 2020 Jaguar F-Type (X152) 2.0L Petrol
- **VIN:** SAJDD1GX4LCK67497
- **Odometer:** 28,812.36 miles
- **Scan Date:** 2025-08-27 11:47:36
- **Scan Tool:** Autel MaxiSys Elite

## High-Level Diagnostic Overview

The vehicle scan revealed a significant number of Diagnostic Trouble Codes (DTCs), with **33 total faults found across 18 different electronic control modules**. The issues range from minor historical faults to critical permanent failures in core communication modules.

The primary concerns are widespread communication network errors and two **permanent** faults that point to a potential systemic electrical issue.

## Critical Faults (Requiring Immediate Attention)

Two modules have reported **permanent** faults, which are active and indicate a persistent problem:

### 1. GWM (Gateway Module 'A'):

- **DTC B1412-96 (Permanent):** *Quiescent relay box - Component internal fault.*
- **Analysis:** This is the most critical fault in the report. The Gateway Module is the central communication hub for the vehicle's various networks (CAN, LIN, etc.). An internal fault here can cause unpredictable behavior and is the likely root cause of the numerous communication errors seen in other modules.

### 2. PSM (Passenger Front Seat Module):

- **DTC U3001-46 (Permanent):** *Control module improper shutdown (voltage related) - Calibration/parameter memory fault.*
- **Analysis:** This indicates the module lost power improperly, possibly due to a low battery condition, a wiring issue, or a fault within the module itself. A vehicle-wide low voltage event could explain this and many other historical codes.

## Key Problem Areas

### 1. Widespread Communication Failures

Numerous modules are reporting communication errors ('U' codes), indicating a network-level problem.

- **High-Speed CAN Bus Errors (U0001-xx):** Found in the ABS, CHCM, PAM, and IPMA modules. This bus is critical for powertrain, chassis, and safety systems.

- **Inter-Module Communication Errors:** The PCM and GSM report invalid data from the Transmission Control Module (TCM) (U0402-xx). The IPMB reports invalid data from the Gateway (U0447-29).
- **Other Network Errors:** The HVAC module reports the LIN bus is off (B1088-88), and both Headlamp Control Modules report errors on "communication bus C" (U0046-81).

**Conclusion:** These widespread errors strongly suggest the **Gateway Module (GWM) fault is the primary issue**, disrupting communication across the entire vehicle.

## 2. Powertrain and Cooling System

The Powertrain Control Module (PCM) has logged three historical faults:

- **P2B61-73:** *Engine coolant flow control valve stuck closed.*
- **P26CB-72:** *Variable coolant pump performance/stuck off - Actuator stuck open.*
- **Analysis:** Although these are "History" codes, their presence indicates a past or intermittent issue with the engine's sophisticated variable cooling system. This is a significant concern that could lead to overheating if the fault reoccurs.

## 3. Body Control and Component Faults

The Body Control Module (BCM) has five faults, pointing to several issues:

- **Turn Signals (B123A-23, B123B-23):** Historical faults for both left and right front turn signals being "stuck low."
- **Steering Column (B1C33-14, B1C35-14):** "Unknown" status faults for the power tilt and telescope functions. The power adjustment for the steering wheel may not be working correctly.
- **Audio System (AAM):** Four faults related to Speaker #13 and Speaker #14 having circuit shorts to ground and battery. This indicates a wiring problem or faulty speakers.

## 4. Module Configuration and Calibration Issues

Several modules are reporting missing calibration or configuration data:

- **PSCM (U2300-54):** Power Steering Control Module missing central configuration.
- **IPMB (U201B-54):** Image Processing Module 'B' missing calibration data.
- **Analysis:** These modules may not be functioning correctly and likely require programming with a dealer-level tool, possibly after a battery disconnect or module replacement.

## Recommendations

1. **Test Battery and Charging System:** The U3001-46 code in the PSM and the large number of historical faults suggest a past low-voltage event. A full battery and alternator test is essential.
2. **Diagnose Gateway Module (GWM):** The permanent internal fault (B1412-96) is the top priority. The GWM's power, ground, and network connections should be verified. However, this code typically means the **Gateway Module needs to be replaced and programmed.**
3. **Clear Codes and Re-Scan:** After addressing the battery and GWM issues, clear all DTCs from the vehicle. Drive the vehicle and perform a full re-scan to see which faults return. Many of the historical communication codes may be resolved by fixing the GWM.

4. **Address Remaining Faults:** Any faults that reappear should be diagnosed individually. Pay close attention to:

- The BCM faults related to the steering column and wipers.
- The AAM faults related to speaker wiring.
- Any cooling system faults (PCM) if they return, as this is critical to engine health.
- The modules requiring calibration (PSCM, IPMB) will need to be reprogrammed.