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# SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J1939

REV. OCT2007

Issued 2000-04
Revised 2007-10

Superseding J1939 FEB2007

## Recommended Practice for a Serial Control and Communications Vehicle Network

### RATIONALE

New parameters, parameter groups and other assignments are reviewed and discussed by the Subcommittee on a regular basis. This SAE Recommended Practice has been updated to reflect all changes and additions approved and balloted through May 2006. This limited scope revision adds three source addresses (249, 250, and 251) to Table B2.

### FOREWORD

This series of SAE Recommended Practices has been developed by the Truck & Bus Control and Communications Network Subcommittee of the Truck & Bus Electrical & Electronics Committee. The objectives of the subcommittee are to develop information reports, recommended practices and standards concerned with the requirements, design, and usage of ECUs which transmit electrical signals and control information among vehicle components. The usage of these Recommended Practices is not limited to truck and bus applications; other applications may be accommodated with immediate support being provided for construction and agricultural equipment, and stationary power systems.

These SAE Recommended Practices are intended as a guide toward standard practice and are subject to change so as to keep pace with experience and technical advances.

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These Recommended Practices are being generated to continue the work accomplished by the SAE J1708, SAE J1587, and SAE J1922 Recommended Practices. The SAE J1939 series of Recommended Practices will offer a higher performance alternative to these earlier documents.

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SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

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## 1. SCOPE

These Recommended Practices are intended for light, medium, and heavy duty vehicles used on or off road as well as appropriate stationary applications which use vehicle derived components (e.g. generator sets). Vehicles of interest include, but are not limited to: on and off highway trucks and their trailers; construction equipment; and agricultural equipment and implements.

The purpose of these Recommended Practices is to provide an open interconnect system for electronic systems. It is the intention of these Recommended Practices to allow Electronic Control Units to communicate with each other by providing a standard architecture.

### 1.1 Degree of Openness

An SAE J1939 network is open to the degree that any two ECUs which conform to the same J1939/0*X* document can be connected via the network and communicate with each other without functional interference. The SAE J1939/0X dcouments describe a specific type of application, typically representing a specific industry to which it pertains such as agricultural or heavy duty trucks. ECUs which conform to a different SAE J1939/0*X* document may not be capable of communicating directly with one another and in some cases may cause degradation or complete disruption of the entire network.

### 1.2 Proof of Compliance

There is no procedure presently in place to test, validate, or provide formal approval for ECUs utilizing the J1939 network. Each developer is expected to design their products to the spirit of, as well as the specific content of, this recommended practice. Provisions are made in SAE J1939/11 and SAE J1939/12 for self certification to these documents. In the future, it is hoped that procedures will be defined and implemented to test new products to ensure full compliance with all appropriate SAE J1939 documents. Until that time, compliance will be honorarily determined. Should questions arise regarding the use or interpretation of any part of these recommended practices they should be directed to the SAE Control and Communications Subcommittee for resolution.

## 2. REFERENCES

### 2.1 Publications

SAE publications are available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

ISO publications are available from ANSI, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

SAE J1213 Glossary of Automotive Electronic Terms

SAE J1587 Recommended Practice for Electronic Data Interchange Between Microcomputer Systems in Heavy Duty Vehicle Applications

SAE J1708 Recommended Practice for Serial Data Communication Between Microcomputer Systems in Heavy Duty Vehicle Applications.

SAE J1922 Powertrain Control Interface for Electronic Controls Used in Medium and Heavy Duty Diesel On-Highway Vehicle Applications

ISO 7498 Information processing systems—Open systems interconnection (OSI)—Basic reference model

ISO 11898 Road vehicles—Interchange of digital information—Controller area network (CAN) for high speed communication, December 1992

ISO 11992 Road vehicles—Electrical connections between towing and towed vehicles—Interchange of digital information (Parts 1, 2, 3)

2.2 Definitions and Abbreviations

Definitions provided herein will supersede those contained in SAE J1213. SAE J1213 will otherwise apply throughout.

2.2.1 Definitions

Acknowledgment (ACK) — Confirms that the requested action has been understood and performed.

Address — The 8 bit field (or fields) used to define the source (and destination when applicable) of a message (e.g. engine, transmission, etc.).

Arbitration — The process by which one or more ECUs resolve conflicts in obtaining access to a shared network bus.

Bit Stuffing — A procedure used to assure the transmitted and received messages maintain a minimum number of dominant to recessive edges, and vise versa, to maintain the proper resynchronization within the string of bits in a CAN Data Frame. See CAN specification for a more detailed discussion.

Bridge — A device which stores and forwards messages between two SAE J1939 network segments. This permits changes in the media, the electrical interface, and data rate between segments. The protocol and address space remain the same on both sides of the bridge. Note that a bridge may selectively filter messages going across it so that the bus load is minimized on each segment.

Bus — See Segment.

CAN Data Frame — The ordered bit fields necessary to create a CAN frame used to convey data, beginning with an SOF and ending with an EOF.

Cyclic Redundancy Check (CRC) — An error control mechanism. A 15 bit cyclic redundancy check is performed for detecting transmission errors. Given a *k*-bit frame or message, the transmitter generates an *n*-bit sequence, known as a frame check sequence so that the resulting frame, consisting of $k + n$ bits is exactly divisible by some predefined number. The receiver then divides the incoming frame by the same number and, if there is no remainder, assumes that there was no error.

Data Field — A 0 to 64-bit field normally placed in a CAN data frame which contains the data as defined in the Application Layer (document SAE J1939/7X).

Data Page — One bit in the Identifier portion of the CAN Arbitration Field is used to select one of two pages of Parameter Group Numbers. This provides for the future growth of Parameter Group definitions. It also is one of the fields used to determine the Parameter Group Number which labels the data field of the CAN Data Frame.

Destination Address (DA) — This is a Protocol Data Unit (PDU) specific field in the 29 bit CAN identifier used to indicate the address of the ECU intended to receive the SAE J1939 message.

Device — A physical component with one or more ECUs and network connections.

Electronic Control Unit (ECU) — A computer based electronic assembly from which SAE J1939 messages may be sent or received.

End of Frame (EOF) — A 7 bit field marking the ending of a CAN data frame.

Extended Frame — A CAN data frame using a 29 bit identifier as defined in the CAN 2.0 specification.

Frame — A series of data bits making up a complete message. The frame is subdivided into a number of fields, each field containing a predefined type of data. See CAN Data Frame

Function — A capability of a vehicle system having one or more ECUs that are connected to a SAE J1939 bus segment of a Vehicle System. The function value is used in the 8 bit Function field in the 64 bit NAME entity (See SAE J1939/81, Section 4.1)

Gateway — This device permits data to be transferred between two networks with different protocols or message sets. The gateway provides a means to repackage parameters into new message groups when transferring messages from one segment to another.

Group Extension (GE) — This is a PDU specific field of a SAE J1939 CAN Data Frame that is used as part of the information necessary to determine the Parameter Group Number.

Identifier — The identifier portion of the CAN arbitration field.

Idle — A state on the CAN bus where no node is transmitting or attempting to transmit data.

Implement — A machine consisting of one or more ECUs which may be attached to or detached from the vehicle as a unit.

Media — The physical entity which conveys the electrical transmission (or equivalent means of communication) between ECUs on the network. For SAE J1939/11, the media consists of shielded twisted pair copper wires.

Message — A “message” is equivalent to one or more “CAN Data Frames” that have the same Parameter Group Number. For instance the information related to a single Parameter Group Number to be transferred on the bus may take several CAN data frames.

Multipacket Messages — A type of SAE J1939 message which is used when more than one CAN data frame is required to transmit all data specific to a given Parameter Group Number. Each CAN data frame will have the same identifier but will contain different data in each packet.

NAME - An 8 byte value which uniquely identifies the primary function of an ECU and its instance on the network. A device's NAME must be unique, no two devices may share the same NAME value on a given vehicle network.

Node — A specific hardware connection of an ECU to the physical media. A specific node may have more than one address claimed on the network.

Non-Volatile — Retention of changeable memory values even though power is turned off for any reason. This term is used with respect to data values, such as ECU addresses or NAMEs, that are changed during use. Read Only Memory (ROM) is technically non-volatile, but is not changeable during use and thus not what is referred to in these documents.

Negative-Acknowledgment (NACK) — A response which indicates that a message has not been understood or a requested action could not be performed.

Packet — A single CAN data frame. This can also be a message if the Parameter Group to be transferred can be expressed in one CAN data frame.

Parameter Group (PG) — A collection of parameters that are conveyed in a SAE J1939 message. Parameter Groups include commands, data, requests, acknowledgments, and negative-acknowledgments. The PG identifies the data in a message, regardless of whether it is a single packet or multipacket message. Parameter Groups are not dependent on the source address field thus allowing any source to send any Parameter Group.

Parameter Group Number (PGN) — A three byte, 24 bit, representation of the Reserved Bit, Data Page, PDU Format, and GE fields. The Parameter Group Number uniquely identifies a particular Parameter Group.

PDU Format (PF) — An 8 bit field in the 29 bit identifier that identifies the PDU format and is used in whole or in part to provide a label for a Parameter Group. It also is one of the fields used to determine the Parameter Group Number which labels the data field of the CAN Data Frame.

PDU Specific (PS) — An 8-bit field in the 29 bit identifier whose definition depends upon the value of the PDU Format field. It can be either a destination address (DA) or Group Extension (GE). It also is one of the fields used to determine the Parameter Group Number which labels the data field of the CAN Data Frame.

PDU1 Format — A PDU format used for messages that are to be sent to a destination address (DA). The PS field contains the destination address (specific or global).

PDU2 Format — A PDU format used to send information that has been labeled using the Group Extension technique. This PDU does not contain a destination address. The PS field contains the Group Extension in the case of PDU2 formats.

Preferred Address — The address that an ECU will attempt to use first when claiming an address. Preferred Addresses are assigned by the committee.

Priority — A 3-bit field in an identifier that establishes the arbitration priority of the information communicated. The highest priority is zero and the lowest priority is seven.

Protocol Data Unit (PDU) — A PDU is a SAE J1939 specific CAN Data Frame format.

Remote Transmission Request (RTR) — A feature of the CAN protocol allowing an ECU to request that another ECU or ECUs send a message. This feature of CAN is not used in SAE J1939. An alternate request mechanism is specified for SAE J1939.

Repeater — An ECU which regenerates the bus signal onto another segment of media. This permits the network to connect more electrical loads (ECUs) onto the bus, or to connect to another type of media (Physical Layer Expansion). The speed (data rate), protocol (data link layer), and address space are the same on both sides of the repeater. For SAE J1939, any delays in regenerating the data signal must be kept to a very small fraction of one bit interval.

Reserved Bit —A bit in a SAE J1939 29 bit identifier reserved for future definition by SAE. It also is one of the fields used to determine the Parameter Group Number which labels the data field of the CAN Data Frame.

Router— An ECU which allows segments with independent address spaces, data rates, and media to exchange messages. A router may permit each segment to operate with minimum bus loading yet still obtain critical messages from remote segments. The protocol remains the same across all segments. Note that the router must have look up tables to permit the translation and routing of a message with ID X on segment 1 to ID Y on segment 2.

Segment — The physical media and attached nodes of a network not interconnected by network interconnection ECUs. A single segment of a network is characterized by all of the ECUs “seeing” the signal at the same time (i.e., there is no intermediate ECU between electrical sections of the network). Multiple segments can be connected together by network interconnection ECUs including repeaters, bridges, and routers.

Source Address (SA) — An 8-bit field in the 29 bit identifier which allows for the unique identification of the source of a message. The SA field contains the address of the ECU that is sending the message.

Standard Frame — A CAN data frame using an 11 bit identifier as defined in the CAN 2.0b specification.

Start of Frame (SOF) — The initial bit in a CAN frame serving only to indicate the beginning of the frame.

Subnetwork — This refers to the network activity (message traffic) on a specific SAE J1939 segment when multiple segments are used. Subnetworks may include: Tractor; Trailer, Implement, and Braking System. Note that they may be separated by a bridge or router to minimize total bus loading. Collectively the subnetworks are the SAE J1939 Vehicle Network.

Vehicle — A machine which, in most applications, includes a capability to propel itself and includes one or more SAE J1939 segments. A vehicle may be assembled of one or more Vehicle systems which are connected together to form the whole vehicle.

Vehicle System — A subcomponent of a vehicle, or a component that is analogous to a subcomponent of a vehicle, that includes one or more SAE J1939 segments and may be connected or disconnected from the vehicle. A Vehicle System may be made up of one or more Functions, which have ECU's that are connected to a SAE J1939 segment of the Vehicle System.

2.2.2 Abbreviations

| | |
|---|---|
| ABS | Antilock Braking System |
| ACK | Acknowledgment |
| AP | Accelerator Pedal |
| ASR | Acceleration Slip Regulation (Traction Control) |
| ASCII | American Standard Code for Information Interchange |
| CAN | Controller Area Network |
| Con-Ag | Construction-Agriculture Industry |
| CRC | Cyclic Redundancy Check |
| DA | Destination Address |
| DLC | Data Length Code |
| DP | Data Page |
| ECU | Electronic Control Unit |
| EOF | End of Frame |
| GE | Group Extension |
| ID | Identifier |
| IDE | Identifier Extension Bit |
| LLC | Logical Link Control |
| LSB | Least Significant Byte or Least Significant Bit |
| MAC | Medium Access Control |
| MID | Message Identifier |
| MSB | Most Significant Byte or Most Significant Bit |
| NA | Not Allowed |
| NA | Not Available |
| NACK | Negative-Acknowledgment |
| OSI | Open System Interconnect |
| P | Priority |
| PDU | Protocol Data Unit |
| PF | PDU Format |
| PG | Parameter Group |
| PGN | Parameter Group Number |
| PID | Parameter Identifier |
| PS | PDU Specific |
| PS_GE | PDU Specific - Group Extension |
| PS_DA | PDU Specific - Destination Address |
| PTO | Power Take-Off |
| R | Reserved |
| RTR | Remote Transmission Request |
| SA | Source Address |
| SID | Subsystem Identifier |
| SLOT | Scaling, Limits, Offset, and Transfer Function |
| SOF | Start of Frame |
| SPN | Suspect Parameter Number |
| SRR | Substitute Remote Request |
| un | Undefined |

2.3 References to the OSI Model

The Open System Interconnect (OSI) model was developed by the International Organization for Standardization (ISO) in 1984 as a model of a computer communications architecture. There are seven layers to the OSI model as shown in Figure 1. The intent is that protocols be developed to perform the functions of each layer as needed. SAE J1939 is structured into several parts based on this ISO Model. While there is a SAE J1939 document allocated to each layer, not all of them are explicitly identified by having their own SAE J1939 document. Some of the layers not having their own documents are supported by functionality included within other documents.

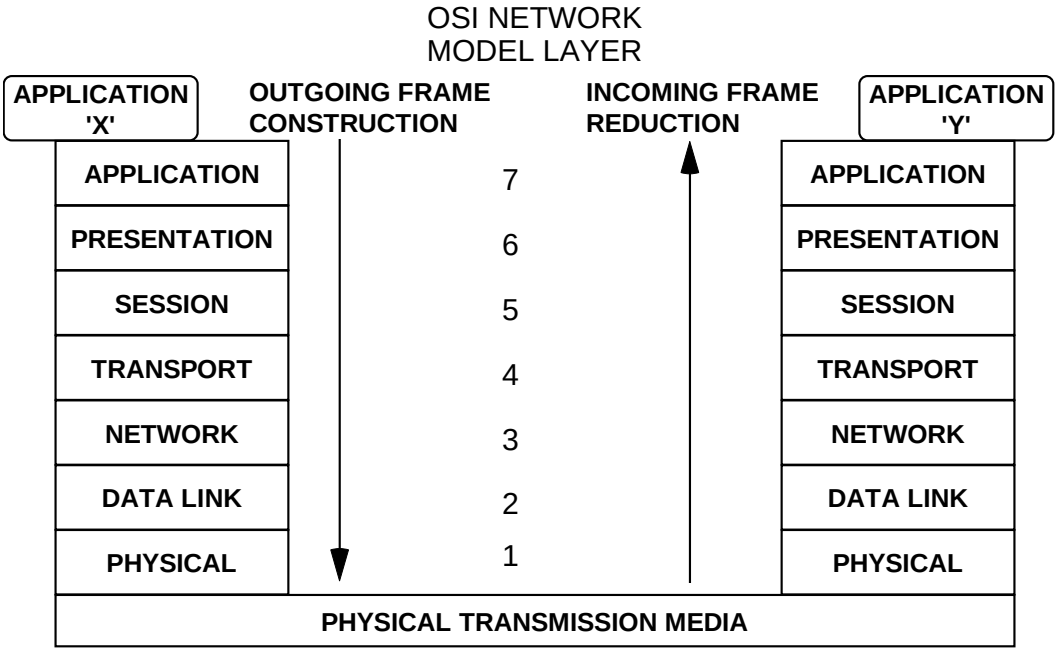


FIGURE 1 - THE OSI SEVEN LAYER MODEL

The functionality of each layer is:

1. Physical — Concerns the transmission of structured bit stream over physical media; deals with the mechanical, electrical, functional, and procedural characteristics to access the physical media

2. Data Link — Provides the reliable transfer of information across the physical layer; sends blocks of data (frames) with the necessary synchronization, error control, sequence control, and flow control;

3. Network — Provides upper layers with independence from the data transmission and switching technologies used to connect systems; responsible for establishing, maintaining, and terminating connections;

4. Transport — Provides reliable, transparent transfer of data between end points; provides end-to-end error recovery and flow control; provides segmentation and reassembly of very large messages;

5. Session — Provides the control structure for communication between applications; establishes, manages, and terminates connections (sessions) between cooperating applications;

6. Presentation — Provide independence to the application process from differences in data representation (syntax); and

7. Application — Provides access to the OSI environment for users and also provides distributed information services.

The purpose of the OSI model is to provide a common basis for coordinating standards development by placing them within the perspective of the overall model. Any resulting standard, such as SAE J1939, is not required to be explicitly partitioned into these seven layers as long as the fundamental functionality is supported. In addition, the hardware and software which perform the functions of each layer need not be rigidly defined such that each layer is recognizable within the system design. The distinction between layers can become totally obscured upon allocating these functions to a specific system design. In reviewing the SAE J1939 layer documents, it can be seen that some SAE J1939 layers include some functions normally associated with other OSI layers. This usually occurs when a layer may not require, or justify having, a standalone document of its own.

Because the SAE J1939 network is a specific communications system, supporting specific sets of applications and a specific industry, rather than being generalized, not all of the OSI layers are required. Only those layers which are required for the anticipated SAE J1939 uses will be defined, with a separate document being used for each of these layers.

### 2.4 Documentation Structure and Guide

This SAE J1939 document is merely the top level of a hierarchy of related documents. A separate document, identified as SAE J1939/*N*, has been defined for each application of the network and for each of the seven OSI model layers. To accommodate multiple versions of any one layer, a second slash digit (*X*) is used to identify the version of a document. Thus to determine the total network definition for a particular application, such as for North American agricultural equipment, one must obtain the top level application document, SAE J1939/02, which identifies all of the layer versions used, and then obtain each of these individual layer documents. The presently defined documents and numbering system are as follows:

J1939 This top level document describes the network in general, the OSI layering structure, the subordinate document structure, and provides control for all preassigned values and names.

J1939/0*X* An application document, where *X* refers to a specific network/application version of the network. This document will identify the industry or applications for which it pertains and will list the specific versions of each layer that makes up this network.

J1939/01 Truck and Bus Control and Communications Network.

J1939/02 (Draft) Agricultural Equipment Control and Communications Network.

J1939/1*X* A Physical Layer document, where *X* refers to a specific version of the Physical Layer.

J1939/11 Physical Layer, 250K Bits/sec, Shielded Twisted Pair.

J1939/12 (Draft) Physical Layer, 250K Bits/sec, Twisted Quad.

J1939/13 Physical Layer, Diagnostic Connector

J1939/15 (Draft) Reduced Physical Layer, 250K bits/sec, Unshielded Twisted Pair (UTP)

J1939/21 Data Link Layer (no alternative versions permitted)

J1939/3*X* Network Layer document, where *X* refers to a specific version of the Network Layer.

J1939/31 Network Layer,

J1939/4*X* Transport Layer document, where *X* refers to a specific version of the Transport Layer. No Transport Layer documents are presently defined.

J1939/5*X* Session Layer document, where *X* refers to a specific version of the Session Layer. No Session Layer documents are presently defined.

J1939/6*X* Presentation Layer document, where *X* refers to a specific version of the Presentation Layer. No Presentation Layer documents are presently defined.

J1939/7*X* Applications Layer Document, where *X* refers to a specific version of the Application Layer.

J1939/71 Vehicle Application Layer.

J1939/72 (Draft) Virtual Terminal Application Layer.

J1939/73 Application Layer - Diagnostics.

J1939/74 Application – Configurable Messaging

J1939/75 Application Layer-Generator Sets and Industrial

J1939/81 J1939 Network Management Protocol (no alternative versions permitted).

J1939/82 (Draft) Compliance

Document numbers have been assigned to all seven of the OSI model layers even though they are not all specifically defined within the present definition of SAE J1939. This was done in part to provide an easily recognizable relationship between the documents and the OSI model and also to provide growth capabilities should it be determined later that such documents are needed. SAE J1939/81, Network Management, is kept separate as it represents a vertical slice through all of the layers and is thus best explained and understood as an individual subject rather than include a subset of network management within each of the affected layers.

Multiple application layer documents may be utilized simultaneously on the same network and thus must maintain compatibility. An example of such a system is a piece of agricultural equipment that utilizes both SAE J1939/71 for the majority of communications and SAE J1939/72 for the display terminal communications, both sets of messages being carried over the exact same network. A single vehicle/application may also utilize different physical layers within the same system but they need not be compatible if on different segments. An example is on-highway trucks where the physical layer used to connect the tractor to the trailer may be different than that used on the tractor itself.

## 3. TECHNICAL REQUIREMENTS

Beyond being an introduction to the full set of SAE J1939 documents, this document is meant to aid those unfamiliar with SAE J1939 by answering the most basic questions of:

- How SAE J1939 is intended to work
- How to construct and process messages (transmit and receive)
- How to design an ECU to support SAE J1939
- How typical control sequences are done (application examples)
- How a typical network is wired

### 3.1 SAE J1939 Tutorial

The following tutorial is for the Truck and Bus Control and Communications Network as specified in SAE J1939/01. SAE J1939/01 is used in this tutorial as a typical example, and not to infer that all applications must follow SAE J1939/01. Other applications may elect to utilize alternative versions of one or more layers resulting in corresponding changes to the following discussion. This section is offered as a means of illustrating and clarifying the network, not as a definition of it. See the individual sub documents, SAE J1939/0*X* to SAE J1939/81 for the correct definition and specification of each aspect of the network.

#### 3.1.1 Introduction

J1939 is a high speed communications network designed to support real-time closed loop control functions between ECUs which may be physically distributed throughout the vehicle. SAE J1708/SAE J1587 is an older, widely used low speed network intended to provide simple information exchange, including diagnostic data, between ECUs. SAE J1939 is capable of performing all of the functions of SAE J1708/SAE J1587 as well as the control system support. Any one application may utilize one or the other or both of these networks.

J1939 uses the CAN protocol which permits any ECU to transmit a message on the network when the bus is idle. Every message includes an identifier which defines the message priority, who sent it, and what data is contained within it. Collisions are avoided due to the arbitration process that occurs while the identifier is transmitted (using a non-destructive arbitration scheme). This permits high priority messages to get through with low latency (delay) times because there is equal access on the network for any ECU, but when multiple ECUs are simultaneously attempting to transmit, the highest priority message prevails.

3.1.2 Message Format and Usage (SAE J1939/21 for 29 Bit Identifier)

J1939 provides a complete network definition using the 29 bit identifier (CAN Extended Frame) defined within the CAN protocol shown in Figure 2. SAE J1939/21 enables 11 bit identifier (CAN Standard Frame) devices to be used within the same network, defining all messages as proprietary, permitting both device types to coexist without interference. The 11 bit identifier definition is not directly a part of SAE J1939 but is included to assure that users of it can coexist on the same network without conflict. SAE J1939 will not provide any further definition of the use of the 11 bit identifier. The CAN Data Frame Bits SOF, SRR, IDE, and RTR bits will not be discussed in the following description (see SAE J1939/21 and ISO 11898). The first 3 bits of the 29 bit identifier are used for determining message priority during the arbitration process. A value of 000 has the highest priority. Higher priority messages would typically be used for high speed control messages. An example of this is the torque control message from the transmission to the engine (see SAE J1939/71). A lower priority would be used for data which is not time critical. An example of this is the engine configuration message. The priority field may be programmable for each message type so that network tuning can be performed by an OEM if necessary.

| CAN EXTENDED FRAME FORMAT | SOF | IDENTIFIER 11 BITS | | | | | | | | | | | SRR | IDE | IDENTIFIER EXTENSION 18 BITS | | | | | | | | | | | | | | | | RTR | • • • |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J1939 FRAME FORMAT | SOF | PRIORITY | | | R | DP | PDU FORMAT (PF) 6 BITS (MSB) | | | | | | SRR | IDE | PF (CONT.) | | PDU SPECIFIC (PS) (DESTINATION ADDRESS, GROUP EXT. OR PROPRIETARY) | | | | | | | | SOURCE ADDRESS | | | | | | | | RTR | • • • |
| | | 3 | 2 | 1 | | | 8 | 7 | 6 | 5 | 4 | 3 | | | 2 | 1 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| J1939 FRAME BIT POSTION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | |
| CAN 29 BIT ID POSTION | | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | | | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | | |

FIGURE 2 - THE SAE J1939 29 BIT IDENTIFIER

The next bit of the identifier is reserved. The bit should be set to 0 for transmitted messages. This default will permit future use of the bit for other purposes as defined by the SAE committee.

The next set of 9 bits in the identifier is the Data Page (DP) bit and PDU Format (PF) field. PDU stands for Protocol Data Unit (i.e. Message Format). The DP bit is used as a page selector. Page 0 contains all the messages which are presently being defined. Page 1 provides additional expansion capacity for the future, to be assigned after page 0 has been completed. The PF field identifies one of two PDU formats able to be transmitted. PDU Formats are described in SAE J1939/21, Section 3.3. The SRR and IDE bits are entirely defined and controlled by CAN and therefore not described or modified by SAE J1939.

The next 8 bits of the identifier are PDU Specific (PS), meaning that they are dependent on the value of the PF. If the PF value is between 0 and 239 (PDU1), this PS field contains a destination address. If the PF field is between 240 and 255 (PDU2), the PS field contains a Group Extension (GE) to the PDU Format. The Group Extension provides a larger set of values to identify messages which can be broadcast to all ECUs on the network.

Most messages on SAE J1939 are intended to be broadcast using the PDU2 format. Data transmitted on the network using PDU2 format cannot be directed to a specific destination. When a message must be directed to a particular ECU, it must have been assigned a PGN in the PDU1 format range of numbers so a specific destination address can be included within the identifier of the message. An example of this is the transmission commanding a specific torque value from the engine or a specific torque value from a retarder. Requiring a destination must be considered when the Parameter Group is first defined and published by the SAE committee (see SAE J1939/21).

Collectively, the Reserved bit,Data Page, PF, and PS values define the PG being transmitted. These PGs have definitions which include the parameter assignments within the 8 byte data field of each message as well as the transmission repetition rate and priority. The term "Parameter Group" is used because they are groups of specific parameters. Parameter Groups are identified by a Parameter Group Number (PGN), which uniquely identifies each Parameter Group. The PGN structure permits a total of up to 8672 different Parameter Groups to be defined per page. Parameter Groups and Parameter Group Numbers are described in SAE J1939/21 and current assignments are listed in Appendix A.

The last 8 bits of the identifier contain the address of the ECU transmitting the message (Source Address). For a given network, every address must be unique (254 available). Two different ECUs cannot use the same address at the same time. The PGNs are independent of the Source Address, thus any ECU can transmit any message.

3.1.3 Addresses and NAME (SAE J1939/81 and Appendix B)

Each ECU on the network will have at least one name and one address associated with it. There are examples, such as an engine and engine retarder residing in a common ECU, wherein multiple names and multiple addresses may coexist within a single electronics unit. The address of an ECU defines a specific communications source or destination for messages, the name includes identification of the primary function performed at that address and adds an indication of the instance of that functionality in the event that multiple ECUs with the same primary function coexist on the same network. As many as 254 different ECUs of the same function can coexist on the network, each identified by their own address and name.

To uniquely name each ECU, SAE J1939 defines a 64 bit NAME consisting of the fields shown in Table 1. The Function Instance, ECU Instance, and Identity Number fields permit multiple ECUs of the same make and model to coexist on the same network but still have unique NAMEs for each. See SAE J1939/81 for a full description of ECU naming and address assignment and Appendix B for current committee assignments.

TABLE 1 - NAME FIELDS

| Arbitrary Address Capable | Industry Group | Vehicle System Instance | Vehicle System | Reserved | Function | Function Instance | ECU Instance | Manufacturer Code | Identity Number |
|---|---|---|---|---|---|---|---|---|---|
| 1 bit | 3 bit | 4 bit | 7 bit | 1 bit | 8 bit | 5 bit | 3 bit | 11 bit | 21 bit |

NAMEs identify the primary vehicle function or functions which an ECU performs and uniquely identify each ECU, even when there are more than one of the same type on the network. But with a length of 64 bits, a NAME is inconvenient to use in normal communications. Therefore, once the network is fully initialized, each ECU utilizes an 8 bit address as its source identifier or “handle” to provide a way to uniquely access a given ECU on the network. For example, an engine may be assigned address 0, but if a second engine is present, it needs a separate, unique address (e.g. 1) and instance. ECUs that accept destination specific commands may require multiple addresses. This permits distinguishing which action is to occur. For example, if the transmission is commanding a specific torque value from the engine (address 0), this must be differentiated from commanding a specific torque value from the engine brake (retarder)(address 15). As can be seen by this example, a single ECU on the network may have multiple addresses and each address will have an associated NAME. To facilitate the initialization process of determining the address(es) for each ECU on the network, commonly used devices have Preferred Addresses assigned by the committee (Preferred Addresses are listed in Tables B2 - B9). Using the Preferred Addresses minimizes the frequency of multiple devices attempting to claim the same address.

In general, most ECUs will use their Preferred Addresses immediately upon power up. A specific procedure (defined in SAE J1939/81 and elaborated on in SAE J1939/01) for assigning addresses after powerup is used to resolve any conflicts that may occur. Each ECU must be capable of announcing which address(es) it intends to use. This is the address claim feature. Two options are available:

1. Upon power-up and whenever requested, an ECU must send an Address Claimed message to claim an address. When an ECU sends the Address Claimed message, all ECUs record or compare this newly claimed address to their own table of addresses on the network. Not all ECUs are required to maintain such a table, but all must at least compare the newly claimed address with their own. Should multiple ECUs claim the same address, the one having the lowest value NAME uses this address and the other(s) must claim a different address or stop transmitting on the network.

2. An ECU may send a request for Address Claimed message to determine addresses claimed by other ECUs. When an ECU sends a request for Address Claimed, all requested ECUs then send their Address Claimed messages. This permits transitional ECUs (tools, trailers, etc.) or ECUs powering up late to obtain the current address table so that an available address can be found and claimed or to determine which ECUs are currently on the network. This approach permits the option of self-configurable addresses for those ECUs which may need it, but does not make this a requirement for all ECUs. Self-configurable addressing is optional; those ECUs which might be expected to encounter address conflicts are recommended to support this capability.

When an address conflict has been detected, the following four options are available, depending upon the capabilities of the ECU involved:

Self-Configurable ECUs — a self-configurable ECU is capable of dynamically computing and claiming an unused address. Most service tools and bridges will have this capability.

Command Configurable ECUs — A network interconnection ECU, such as a bridge, or a service tool may command another ECU to use a given address. The ECU having the unclaimable address would then issue an Address Claimed message to acknowledge acceptance of this new commanded address. The ECU may be commanded to accept a new address even though it has already claimed a valid address.

Service Configurable ECUs — ECUs which are modifiable by service personnel, usually by the means of DIP switches or a service tool. When "commanded address" messages are used, his option differs from the Command Configurable in that a service tool is required and will often use proprietary techniques.

Non-Configurable ECUs — Those ECUs that are neither self-configurable nor reprogrammable would have to cease transmitting if they fail to claim a valid address.

### 3.1.4 Communication Methods

Three primary communication methods exist within SAE J1939 and appropriate use of each type allows effective use of the available Parameter Group Numbers. The three communications methods are:

Destination specific communications, using PDU1 (PF values 0 - 239) (includes the use of the global destination address - 255)
Broadcast Communications using PDU2 (PF values 240 - 255)
Proprietary Communications using either PDU1 or PDU2 format

Each of the communications methods has an appropriate use. Destination specific Parameter Group Numbers are needed where the message must be directed to one or another specific destination and not to both. SAE J1939 currently defines a torque control message which may be sent to an engine or retarder. In the case of more than one engine, this message must be sent only to the desired engine and a destination specific Parameter Group Number is needed and has been assigned.

Broadcast Communications apply in several situations, including:

Messages sent from a single or multiple sources to a single destination
Messages sent from a single or multiple sources to multiple destinations

Broadcast Communications cannot be used where a message must be sent to one or another destination and not to both.

The third communications method in SAE J1939, proprietary communications, is provided by the use of two proprietary Parameter Group Numbers. A Parameter Group Number has been assigned for broadcast proprietary communications and a Parameter Group Number has been assigned for destination specific proprietary communications. This allows for two functions. One, a specific source can send its proprietary message in a PDU2 type format (broadcast). Two, it allows for situations where a service tool must direct its communication to a specific destination out of a possible group of ECUs. For instance this case arises when an engine uses more than one controller but the service tool must be able to perform calibration/reprogramming while all ECUs are connected to the same network. In this case the proprietary protocol needs to be destination specific. Note that the destination ECU must be capable of properly interpreting the proprietary data.

Proprietary communications are useful in two situations:

Where it is unnecessary to have standardized communications
Where it is important to communicate proprietary information

3.1.5 Transmitting Messages (Using SAE J1939/21 and SAE J1939/7X)

In addition to the 29 bit identifier shown in Figure 2, a CAN Data Frame includes a 6 bit control field, a data field which is typically 8 bytes, and terminates with CRC, ACK, and EOF fields. To send a particular data item, a message must be constructed by properly filling each of these fields. This is done by first referencing the applicable SAE J1939 documents. This process will define the Parameter Group Number (PGN) to use, the message update (transmission) rate, and default priority. Since multiple data items are typically packed together within a message, it will also define the data field format. Note that when the ECU does not have data available for a given parameter it sets those bits to “not available” so that a receiver knows that the data is not provided.

Parameter Groups which have more than eight bytes of data must be sent as multipacket messages using the Transport Protocol functions defined in SAE J1939/21 Section 3.10.

3.1.6 Receiving Messages (Using SAE J1939/21 and SAE J1939/7X)

There are various techniques (and electronic ICs) available for capturing selected messages off the network. Several general observations can be made however regarding received messages.

1. If it is a destination specific request or command, the ECU must determine if there is an address match between itself and the incoming messages' destination address. If there is, it must process the message and provide some type of acknowledgment.

2. If a message is a global request, every ECU, even the originator, must process it and respond if the data is available.

3. If a message is broadcast, each ECU must determine if it is relevant or not.

3.1.7 ECU Design (Using SAE J1939/11, SAE J1939/21, and SAE J1939/7X)

Although every manufacturer will have different performance requirements for the ECU contained within their product, several observations should be made regarding the resources needed to support SAE J1939. The current data rate of SAE J1939/11 is 250 kbps (400μS/bit). A typical message containing 8 data bytes is 128 bits long (excluding bits used for bit stuffing) which is approximately 0.5 ms. The shortest message is 64 bits long. This means that a new message could be present every 250 microseconds. Even though not every message is relevant, nor is the bus loading likely to be above 50%, the receiving processor must still be able to handle (or buffer) multiple back to back messages. This will require some RAM space as well as processor time for the memory transfers. The requirement is that no messages should be lost due to ECU hardware or software design limitations.

3.1.8 Network Topology — SAE J1939/01 Using Physical Layer SAE J1939/11 and Network Layer SAE J1939/31

The SAE J1939/01 network defines a system containing one or more segments connected by network interconnecting ECUs. Each SAE J1939 segment consists of a single, linear, shielded twisted pair of wires running around a section of the vehicle to each ECU. A short stub is permitted to connect this “bus” to each ECU. This simplifies the routing of the main bus wiring by not requiring it to come in direct proximity with each ECU. The linear bus is necessary at a data rate of 250 Kbps in order to minimize reflections of the electrical signals. The termination resistor at each end of the bus also reduces reflections. To support a tractor pulling one or more trailers, and the frequent removal and addition of new trailers, a separate SAE J1939 segment (subnetwork) is used within the tractor and in each trailer or dolly.

The SAE J1939 network may thus be composed of multiple segments, with a network interconnection ECU (bridge) between them. These segments need not be directly compatible with each other, as they may operate at different data rates or use different physical media. For example, a bridge provides electrical isolation between segments, provides initialization support for the subnetwork connected to it, and can provide message filtering to prevent unnecessary message traffic on the subnetworks. In the event of a bus failure on the wires exposed between the tractor and trailer, the main SAE J1939 subnetwork on the tractor will continue to function.

### 3.2 Preassigned Values

Application specific parameters and Parameter Groups are defined in the SAE J1939/7*X* documents. Parameter Groups that are used for control and management of the network are defined in SAE J1939/21, SAE J1939/31, and SAE J1939/81. Assignments for Preferred Addresses, NAME elements, and Parameter Group Numbers are maintained in the appendices to this document. Each of these items are described in this section. The actual values that have been assigned are listed in the Appendices. If new values are required that are not already assigned, developers may request new values to be assigned by the SAE Control and Communications Network Subcommittee. See Appendix D for information on making a request. Users of the documents should assure that this base document is newer or has the same revision date as the particular application document they are using to avoid making requests that are obsolete at the time of submittal.

#### 3.2.1 Parameter Group Numbers

Parameter Group Numbers are assigned specifically to use either PDU1 format or PDU2 format (PDU types are described in Section 3.1.2 and in SAE J1939/21, Section 3.3). Once assigned to a format the other PDU type is not available for that Parameter Group. The assignment of a Parameter Group Number should be done keeping in mind the following characteristics: priority, update rate, importance of the data in the packet to other ECUs, and length of the data associated with the Parameter Group. Appendix A includes a template for assigning Parameter Group Numbers and the current assignments.

Parameter Group Numbers are assigned linearly to the various sections of the Parameter Group list in Appendix A based on the criteria provided on the Parameter Group Request form (Appendix D).

Much of the communications between ECUs constructed by a single manufacturer do not require standardization. The information that is communicated is not generally useful to other ECUs on the network. In this situation the proprietary Parameter Groups can be used. The use of standardized communications is preferred and should be used whenever practical, however the proprietary option is offered as a means of solving unique problems and situations.

If proprietary information is being communicated, or the information to be communicated is not of general interest, the proprietary method should be used. If the information is of general interest and does not require direction of the message to a particular ECU, a Parameter Group Number utilizing the PDU2 broadcast format should be sought. Finally, if the information is of general interest but requires direction to one or another ECUs then destination specific addressing is needed and a PDU1 format Parameter Group Number should be sought. Proprietary and PDU1 communications methods should be considered carefully and used sparingly.

#### 3.2.2 Data Field Grouping

Minimizing message overhead with CAN based systems requires full use of the data fields of messages. Except in the case of very time critical messages, parameters should be grouped to fill the 8 byte data field. Following this principle conserves PGNs for future assignment and allows for minimum network loading when all data bytes are known by and sent from the same address. Strong justification is needed to allow definition of Parameter Group Numbers that result in sparsely used data fields.

Parameters should be grouped as follows:

1. By common subsystem (the ECU likely to measure and send the data)
2. With similar update rates (to minimize unnecessary overhead)
3. By function (Oil, Coolant, Fuel, etc.)

It should be recognized that, while these are guidelines, in most cases when parameters are grouped together they will end up violating one or more of the above rules. Since all parameters defined in SAE J1939 have a technique for identifying when they are not available it is not critical that all of the parameters in one Parameter Group come from the same ECU. If a new parameter is defined and there are spare bytes or bits in an existing Parameter Group, then it can be easily added there. When the update rate is fast, it is desirable to make sure that a Parameter Group is as fully utilized as possible (i.e. uses all 8 data bytes) before defining another PG and preferable that all parameters are normally coming from one specific ECU.

For the slower update rate data it is not as critical that all of the parameters in a Parameter Group come from the same ECU. Even though it is desirable to have parameters come from one ECU, the intention of SAE J1939 is to provide a means for communicating the data and not dictating which ECU is to send what data.

3.2.3 NAME Systems and Functions

A Function is a capability of a component or group of components served by one or more ECUs. The Function of each ECU is identified within an 8 bit field of that ECU's NAME. As there may be multiple ECUs which identify themselves with the same Function, the Function Instance field of NAME is used to distinguish between them. The same Function value (upper 128 only) may mean different things for different Industry Groups or Vehicle Systems, therefore the Function (upper 128 only) identification is dependent upon the Industry Group, and the Vehicle System as shown in Figure 3 (see SAE J1939/81 Section 4.1.12).

A Vehicle System is a subcomponent of a vehicle or an analogous component that includes one or more SAE J1939 network segments and may be connected or disconnected from the total vehicle. A Vehicle System may be made up of one or more Functions, which have ECUs that are connected to a SAE J1939 network segment of that Vehicle System. A typical on-highway Vehicle System is a tractor or trailer. Because the definition of Vehicle Systems will vary from one industry to another, the System definition is dependent upon the Industry Group as shown in Figure 3 (see SAE J1939/81 Section 4.1.12).

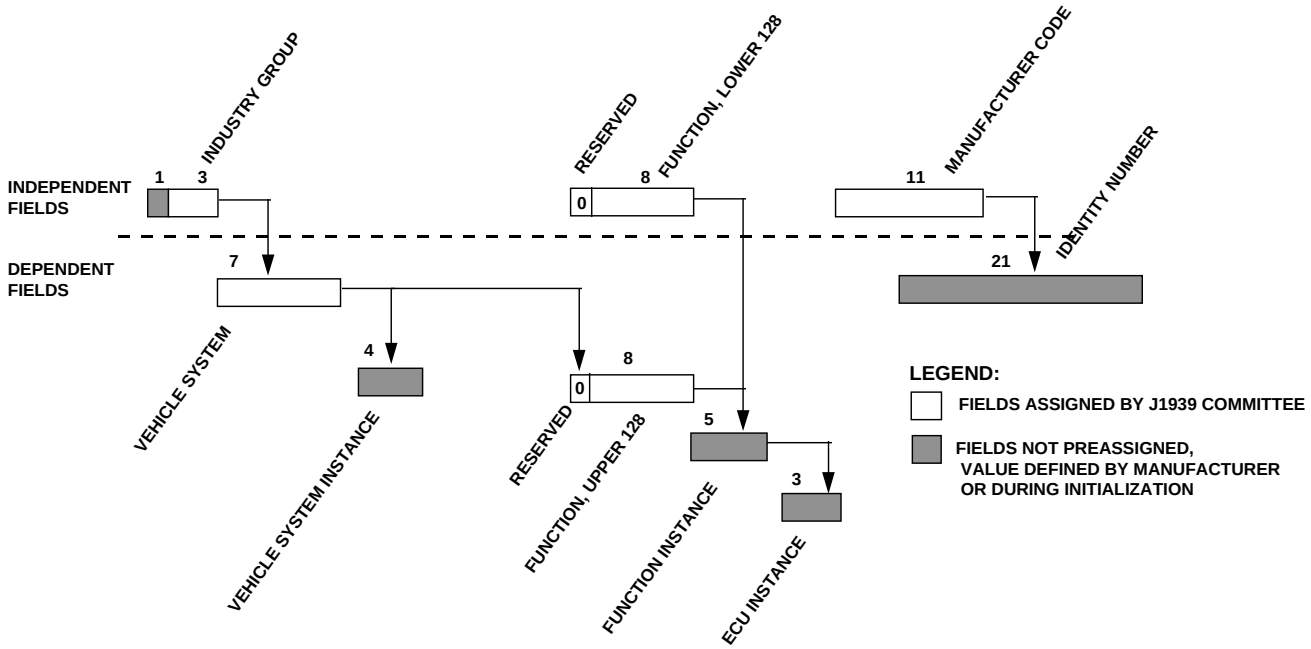


FIGURE 3 - DEPENDENCIES IN THE NAME FIELDS

A single ECU on the network may combine multiple Functions, and would then have the option to claim a separate address for each supported function. The assigned Vehicle System and Function values are listed in Appendix B, Tables B11 and B12.

### 3.2.4 Industry Group

To permit multiple industries to use SAE J1939, an Industry Group code is used to identify the industry to which the ECU is associated. Code 0 is a special category of Industry Group in that it identifies Preferred Addresses and NAMEs that are common to all industries. Any ECU which may be used in more than one industry application, such as diesel engines, should have NAMEs and Preferred Addresses within this global group. It is the responsibility of those requesting new definitions to consider if this may be the case, and to request the new definition in the correct group. To avoid running out of NAME or address values, it is requested that global values be used only when truly applicable, if an ECU may exist in only one group, such as agricultural equipment, it would be preferable to add the definition to the applicable group rather than to use a global value. Industry Group codes are listed in Appendix B, Table B1.

### 3.2.5 Manufacturer Code

As defined in SAE J1939/81, the NAME convention includes a Manufacturer Code, permitting a unique Identity Number to be a part of the full name. This Identity Number is assigned by the manufacturer and can be an individual ECU's serial number if desired. To enable the Identity Numbers to be unique to a given manufacturer, all manufacturers using SAE J1939 are assigned a code. The Manufacturer's Code numbers are listed in Appendix B, Table B10. A manufacturer is permitted to have multiple codes, such as when there are multiple divisions or major product lines. Having a unique Manufacturer Code for each individual product would be discouraged as this would quickly exhaust the range of available codes. There are 21 bits available in the Identity Number field of NAME, permitting the manufacturer to include a reference to each particular product if desired.

### 3.2.6 Preferred Address

The number of addresses within a given system cannot exceed 254 (null and global cannot be claimed by devices). Most ECUs that operate on a SAE J1939 network will have an assigned Preferred Address that the ECU may use. If the ECU's Preferred Address has been claimed or is in use by another ECU on the network, the conflict will be resolved using the procedures outlined in Section 3.1.3 and detailed in SAE J1939/81 Sections 4.2 and 5. There may be additional contraints or procedures defined in the applicable SAE J1939/0X document. For instance, on-highway trailer bridges and devices have address claiming constraints that differ from Con-Ag systems. A supplier of a Self Configurable ECU may provide any strategy for selecting an address to attempt to claim. However, if an alternative approach is not defined, it should attempt to claim an address in the range 128 - 247, starting at 128. Individual reserved Preferred Address assignments begin at zero and are assigned in a linear fashion as follows:

| | |
|---|---|
| 0 to 127 | Reserved for most conventional ECUs in Industry Group 0 - Global |
| 128 to 247 | Reserved for Industry Specific assignments |
| 248 to 253 | Reserved for special ECUs |
| 254 | Null Address |
| 255 | Global Address |

The current Preferred Address assignments are provided in Appendix B and information for requesting new assignments can be found in Appendix D. For further information, see SAE J1939/81.

### 3.2.7 Suspect Parameter Number (SPN)

A Suspect Parameter Number (SPN) is a 19 bit number used to identify a particular element, component, or parameter associated with an ECU. This capability is especially useful for diagnostics, permitting an ECU which has detected a fault associated with a particular component, such as a sensor, to transmit a fault message identifying the faulty component. SPNs are assigned by the Committee and are listed in Appendix C. The first 511 SPNs are reserved and will be assigned, when possible, to the exact same number as the Parameter Identifier (PID) of SAE J1587. For example, SAE J1587 PID 91 is "Percent Accelerator Pedal Position" and an accelerator pedal position parameter fault could be reported in SAE J1939 by using SPN 91. All following SPNs will be assigned in order as they are received.

Due to the very large number of SPNs which may ultimately be assigned, and their assignment in order of request, it will be very difficult for one interested in finding the SPN value of a particular component of interest simply by looking through the table. To facilitate the verification that new SPN requests are not duplications of existing assignments, the committee retains this table as an MS Excel™ spreadsheet, with additional data beyond that shown in Table C1. This permits sorting based upon SPN number, name, description, attribute (actuator, pressure, temperature, solenoid, etc.), SAE J1587 attributes (MID, PID, SID), SAE J1939 document paragraph, source name, and source address. It would be desirable for those developing SAE J1939 applications or wishing to request the assignment of a new SPN to have access to an up-to-date version of this spreadsheet so that they can perform various sorts and searches of the data. At the time of publication, the SAE has not yet determined how this data can best be made available to the users of SAE J1939 who are not committee participants.

3.3 Application Examples

A typical shift sequence consists of a series of commands from the transmission to the engine for controlling engine RPM and torque. Messages from the engine provide status and information which is used to determine when a particular condition has occurred. Other messages may also be sent regularly to disable the engine retarder at the proper time interval, or to inhibit ASR functions which might effect engine demand during portions of the shift sequence.

| Parameter Group | Msg. Type | Sender | Using ECU | Action/Function |
|---|---|---|---|---|
| ETC1 | Info | Trans | Eng, ASR | Transmission decision to shift (Shift in progress) |
| TSC1 | Cmd | Trans | Eng. | Override Priority bits set for Trans. (01 priority) Torque control, Torque = 0 |
| TSC1 | Cmd | Trans | Retarder (Eng.) | Disable Mode, Torque = 0 |
| EEC1 | Info | Eng. | Trans | Torque = 0 (Clutch may be disengaged) |
| TSC1 | Cmd | Trans | Eng | Speed Control Mode, Requested Speed = X |
| EEC1 | Info | Eng | Trans | Speed = X (Clutch may be engaged) |
| TSC1 | Cmd | Trans | Eng | Speed/Torque Limit Mode (11 priority) |
| ETC1 | Info | Trans | ASR | Allow ASR (11 priority) |
| TSC1 | Cmd | Trans | Ret (Eng) | Enable Mode |
| TSC1 | Cmd | Trans | Eng | Override Disable |
| ETC1 | Info | Trans | Eng, ASR | Shift complete |

A typical ABS sequence will cause a message to be transmitted which indicates that the engine should reduce torque and the driveline (transmission) to remain in its existing (stable) state. If the ABS condition is "significant" (i.e. not just bouncing tires), it may request that the driveline also be disengaged. Note that this message must be sent at regular intervals to maintain the condition. Once the event is over, the ABS inactive indicates that the transmission and engine may return to "normal" operation

| Parameter Group | Msg. Type | Sender | Using ECU | Action/Function |
|---|---|---|---|---|
| | | | | ABS decision to modulate brakes |
| EBC1 | Cmd | ABS | Eng, Trans | ABS active |
| TSC1 | Cmd | ABS | Retarder (Eng.) | Disable Mode, Torque = 0 (Prevent engine stall) |
| TC1 | Cmd | ABS | Trans | Disengage Driveline |
| | | | | ABS event over |
| EBC1 | Cmd | ABS | Eng, Trans | ABS inactive |

A typical ASR sequence will attempt to reduce torque by sending torque limit messages to the engine. Torque can also be reduced by requesting more driveline retardation or permitting some clutch slip. Ultimately an upshift may be requested in order to achieve acceptable torque values. Note that the transmission takes over engine control during the shift.

| Parameter Group | Msg. Type | Sender | Using ECU | Action/Function |
|---|---|---|---|---|
| | | | | ASR Torque Reduction Decision |
| EBC1 | Cmd | ASR | Eng, Trans, Retarder (Drvl) | ASR Torque control active |
| TSC1 | Cmd | ASR | Eng | Torque Limit |
| TSC1 | Cmd | ASR | Retarder (Drvl.) | Request more retardation |
| TC1 | Cmd | ASR | Trans | Request more clutch slip |
| TC1 | Cmd | ASR | Trans | Request new gear selection,<br>No clutch slip request<br>Shift if possible<br>Shift complete, ASR continues torque limit<br>ASR event over |
| EBC1 | Cmd | ASR | Eng, Trans, Retarder (Drvl) | ASR inactive, disable override |

4. NOTES

4.1 Marginal Indicia

The change bar (l) or an (R) symbol located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

PREPARED BY THE SAE TRUCK AND BUS CONTROL AND COMMUNICATIONS SUBCOMMITTEE
OF THE SAE TRUCK AND BUS ELECTRICAL/ELECTRONICS COMMITTEE

# APPENDIX A

# PARAMETER GROUP ASSIGNMENTS

# TABLE A2
# Parameter Groups (PGN)

Legend:

EDP = Extended Data Page (1 bit)
DP = Data page (1 bit)
PF = PDU Format (8 bits)
PS = PDU Specific (8 bits) (either DA or GE)
GE = Group Extension (8 bits)
DA = Destination Address (8 bits)
MP = Multipacket Allowed (Yes or No)
PGN = Parameter Group Number (3 bytes) (see J1939-21 for description)

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | DA | 0 | Torque/Speed Control 1 | | TSC1 | No | J1939-71 |
| | 0 | 0 | 1 | DA | 256 | Transmission Control 1 | | TC1 | No | J1939-71 |
| | 0 | 0 | 2 | DA | 512 | Reserved for ISO 11992 | | EBS11 | No | ISO 11992 |
| | 0 | 0 | 3 | DA | 768 | Reserved for ISO 11992 | | EBS21 | No | ISO 11992 |
| | 0 | 0 | 4 | DA | 1024 | External Brake Request | Used for brake control by an external device | XBR | No | J1939-71 |
| | 0 | 0 | 5 | DA | 1280 | Reserved for CANopen | CANopen Application Message #1/1 | CAM11 | No | ISO 11992 |
| | 0 | 0 | 6 | DA | 1536 | Reserved for CANopen | CANopen Application Message #2/1 | CAM21 | No | ISO 11992 |
| | 0 | 0 | 7 | DA | 1792 | General Purpose Valve Pressure | The measured load sense pressure and pilot pressure of a valve. | GPV4 | No | J1939-71 |
| | 0 | 0 | 165 | DA | 42240 | Auxiliary Input/Output Status 4 | AUXIO PGNs are intended for use in which fixed mapping to functions is not possible. | AUXIO4 | No | J1939-71 |
| | 0 | 0 | 166 | DA | 42496 | Auxiliary Input/Output Status 3 | AUXIO PGNs are intended for use in which fixed mapping to functions is not possible. | AUXIO3 | No | J1939-71 |
| | 0 | 0 | 167 | DA | 42752 | Auxiliary Input/Output Status 2 | AUXIO PGNs are intended for use in which fixed mapping to functions is not possible. | AUXIO2 | No | J1939-71 |
| | 0 | 0 | 168 | DA | 43008 | Text Display | This provides ASCII text information, for example to an display instrument | DISP1 | Yes | J1939-71 |
| | 0 | 0 | 169 | DA | 43264 | Forward Lane Image Command | Message containing commands, sent to the forward image controller | FLIC | No | J1939-71 |
| | 0 | 0 | 170 | DA | 43520 | Client (ECU) to File Server message | Used for send Status of the client to the file server, volume handling, file access, file handling and directory handling. Description of messages is given in ISO 11783 Part 13. | CFS | Yes | ISO 11783-13 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 171 | DA | 43776 | File Server to Client (ECU) message | Used for obtaining status of the client, volume handling, file access, file handling and directory handling. Description of messages is given in ISO 11783 Part 13. | FSC | Yes | ISO 11783-13 |
| | 0 | 0 | 172 | DA | 44032 | Agricultural Guidance Machine Info | Machine system feedback detailing status of machine relative to guidance operation | GMS | No | ISO 11783-7 |
| | 0 | 0 | 173 | DA | 44288 | Agricultural Guidance System Command | Steering command expressed as desired curvature | GSC | No | ISO 11783-7 |
| | 0 | 0 | 174 | DA | 44544 | Tire Pressure Reference Setting | For setting the tire pressure reference values. | TPRS | No | J1939-71 |
| | 0 | 0 | 175 | DA | 44800 | Parameter Locate Message | This message is designed to cause other CAs to respond with the identity of any message that they send in which the particular parameter (identified by specific SPN) is contained | PLM | No | J1939-74 |
| | 0 | 0 | 176 | DA | 45056 | Configuration Identification Message | Message used to identify the data content (by SPN) of one of the configurable messages (identified by PGN). | CIM | No | J1939-74 |
| | 0 | 0 | 177 | DA | 45312 | Proprietarily Configurable Message #1 | Proprietarily Configuration message for use in J1939-74. | PCM1 | Yes | J1939-74 |
| | 0 | 0 | 178 | DA | 45568 | Proprietarily Configurable Message #2 | Proprietarily Configuration message for use in J1939-74. | PCM2 | Yes | J1939-74 |
| | 0 | 0 | 179 | DA | 45824 | Proprietarily Configurable Message #3 | Proprietarily Configuration message for use in J1939-74. | PCM3 | Yes | J1939-74 |
| | 0 | 0 | 180 | DA | 46080 | Proprietarily Configurable Message #4 | Proprietarily Configuration message for use in J1939-74. | PCM4 | Yes | J1939-74 |
| | 0 | 0 | 181 | DA | 46336 | Proprietarily Configurable Message #5 | Proprietarily Configuration message for use in J1939-74. | PCM5 | Yes | J1939-74 |
| | 0 | 0 | 182 | DA | 46592 | Proprietarily Configurable Message #6 | Proprietarily Configuration message for use in J1939-74. | PCM6 | Yes | J1939-74 |
| | 0 | 0 | 183 | DA | 46848 | Proprietarily Configurable Message #7 | Proprietarily Configuration message for use in J1939-74. | PCM7 | Yes | J1939-74 |
| | 0 | 0 | 184 | DA | 47104 | Proprietarily Configurable Message #8 | Proprietarily Configuration message for use in J1939-74. | PCM8 | Yes | J1939-74 |
| | 0 | 0 | 185 | DA | 47360 | Proprietarily Configurable Message #9 | Proprietarily Configuration message for use in J1939-74. | PCM9 | Yes | J1939-74 |
| | 0 | 0 | 186 | DA | 47616 | Proprietarily Configurable Message #10 | Proprietarily Configuration message for use in J1939-74. | PCM10 | Yes | J1939-74 |
| | 0 | 0 | 187 | DA | 47872 | Proprietarily Configurable Message #11 | Proprietarily Configuration message for use in J1939-74. | PCM11 | Yes | J1939-74 |
| | 0 | 0 | 188 | DA | 48128 | Proprietarily Configurable Message #12 | Proprietarily Configuration message for use in J1939-74. | PCM12 | Yes | J1939-74 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 189 | DA | 48384 | Proprietarily Configurable Message #13 | Proprietarily Configuration message for use in J1939-74. | PCM13 | Yes | J1939-74 |
| | 0 | 0 | 190 | DA | 48640 | Proprietarily Configurable Message #14 | Proprietarily Configuration message for use in J1939-74. | PCM14 | Yes | J1939-74 |
| | 0 | 0 | 191 | DA | 48896 | Proprietarily Configurable Message #15 | Proprietarily Configuration message for use in J1939-74. | PCM15 | Yes | J1939-74 |
| | 0 | 0 | 192 | DA | 49152 | Proprietarily Configurable Message #16 | Proprietarily Configuration message for use in J1939-74. | PCM16 | Yes | J1939-74 |
| | 0 | 0 | 193 | DA | 49408 | Diagnostic Readiness 2 | Message to convey information relevant to the readiness of the OBD system. | DM21 | No | J1939-73 |
| | 0 | 0 | 194 | DA | 49664 | Monitor Performance Ratio | | DM20 | Yes | J1939-73 |
| | 0 | 0 | 195 | DA | 49920 | Individual Clear/Reset Of Active And Previously Active DTC | Individual Clear/Reset Of Active And Previously Active DTC | DM22 | No | J1939-73 |
| | 0 | 0 | 196 | DA | 50176 | General Purpose Valve Command | This message provides control of the flow through a general purpose valve. Defined in ISO 11783-7. | GPV3 | No | ISO 11783-7 |
| | 0 | 0 | 197 | DA | 50432 | General Purpose Valve Measured Flow | This message provides the measurement of a general purpose valve. Defined in ISO11783-7. | GPV2 | No | ISO 11783-7 |
| | 0 | 0 | 198 | DA | 50688 | General Purpose Valve Estimated Flow | This message provides the estimated flow of a general purpose valve. Defined in ISO 11783-7. | GPV1 | No | ISO 11783-7 |
| | 0 | 0 | 199 | DA | 50944 | Extended Transport Protocol - Data Transfer | Defined in ISO 11783-6 Annex L | ETP.DT | Yes | ISO 11783-6 |
| | 0 | 0 | 200 | DA | 51200 | Extended Transport Protocol - Connection Management | Defined in ISO 11783-6 Annex L | ETP.CM | No | ISO 11783-6 |
| | 0 | 0 | 201 | DA | 51456 | Request 2 | Used to Request a PGN from network device or devices and to specify whether the response should use the Transfer PGN or not. PGN and data set for all devices it is tasked with reporting. | RQST2 | No | J1939-21 |
| | 0 | 0 | 202 | DA | 51712 | Transfer | The Transfer PGN provides a mechanism for reporting multiple data sets for a given PGN. | XFER | No | J1939-21 |
| | 0 | 0 | 203 | DA | 51968 | Process Data Message | The Process Data message has been defined as a destination specific message implying that the sender must decide which implement should receive the message.Working Set). | PD | No | ISO 11783-7 |
| | 0 | 0 | 204 | DA | 52224 | Request for Repetition Rate | This message allows the system to adapt the bus bandwidth to the needs of the user of messages. | REQRR | No | ISO 11783-7 |
| | 0 | 0 | 205 | DA | 52480 | Reserved for ISO 15765 | KWP2000 Mixed functional addressing | KWP4 | No | ISO 15765 |
| | 0 | 0 | 206 | DA | 52736 | Reserved for ISO 15765 | KWP2000 Mixed physical addressing | KWP3 | No | ISO 15765 |
| | 0 | 0 | 207 | DA | 52992 | Continuous Torque & Speed Limit Request | | CTL | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 208 | DA | 53248 | Cab Illumination Message | This message contains information that controls illumination devices inside the vehicle's cab. | CL | No | J1939-71 |
| | 0 | 0 | 209 | DA | 53504 | Air Suspension Control 6 | Used for suspension control | ASC6 | No | J1939-71 |
| | 0 | 0 | 210 | DA | 53760 | Air Suspension Control 2 | Used for suspension control | ASC2 | No | J1939-71 |
| | 0 | 0 | 211 | DA | 54016 | Calibration Information | Provide information about the calibration to scan tool | DM19 | Yes | J1939-73 |
| | 0 | 0 | 212 | DA | 54272 | Data Security | | DM18 | Yes | J1939-73 |
| | 0 | 0 | 213 | DA | 54528 | Time/Date Adjust | | TDA | No | J1939-71 |
| | 0 | 0 | 214 | DA | 54784 | Boot Load Data | | DM17 | Yes | J1939-73 |
| | 0 | 0 | 215 | DA | 55040 | Binary Data Transfer | | DM16 | Yes | J1939-73 |
| | 0 | 0 | 216 | DA | 55296 | Memory Access Response | | DM15 | No | J1939-73 |
| | 0 | 0 | 217 | DA | 55552 | Memory Access Request | | DM14 | Yes | J1939-73 |
| | 0 | 0 | 218 | DA | 55808 | Reserved for ISO 15765 | | KWP2 | No | ISO 15765 |
| | 0 | 0 | 219 | DA | 56064 | Reserved for ISO 15765 | | KWP1 | No | ISO 15765 |
| | 0 | 0 | 220 | DA | 56320 | Anti-theft Status | | ATS | No | J1939-71 |
| | 0 | 0 | 221 | DA | 56576 | Anti-theft Request | | ATR | Yes | J1939-71 |
| | 0 | 0 | 222 | DA | 56832 | Reset | | RESET | No | J1939-71 |
| | 0 | 0 | 223 | DA | 57088 | Stop Start Broadcast | This message is used to stop or start broadcast messages. These broadcast messages may be on networks other than SAE J1939. | DM13 | No | J1939-73 |
| | 0 | 0 | 224 | DA | 57344 | Cab Message 1 | Message containing parameters originating from the vehicle cab. | CM1 | No | J1939-71 |
| | 0 | 0 | 225 | DA | 57600 | Reserved for ISO 11992 | | GPM21 | No | ISO 11992 |
| | 0 | 0 | 226 | DA | 57856 | Reserved for ISO 11992 | | GPM11 | No | ISO 11992 |
| | 0 | 0 | 227 | DA | 58112 | Command Non-continuously Monitored Test | | DM7 | No | J1939-73 |
| | 0 | 0 | 228 | DA | 58368 | Reserved for ISO 11992 | | RGE11 | No | ISO 11992 |
| | 0 | 0 | 229 | DA | 58624 | Reserved for ISO 11992 | | RGE21 | No | ISO 11992 |
| | 0 | 0 | 230 | DA | 58880 | Virtual Terminal-to-Node | | VT12 | Yes | ISO 11783-6 |
| | 0 | 0 | 231 | DA | 59136 | Node-to-Virtual Terminal | | VT21 | Yes | ISO 11783-6 |
| | 0 | 0 | 232 | DA | 59392 | Acknowledgment Message | The Acknowledgment PG is used to provide a handshake mechanism between transmitting and receiving devices. | ACKM | No | J1939-21 |
| | 0 | 0 | 234 | DA | 59904 | Request | This message type, identified by the PGN, provides the capability to request information globally or from a specific destination. | RQST | No | J1939-21 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 235 | DA | 60160 | Transport Protocol - Data Transfer | Used for the transfer of data associated with Parameter Groups that have more than 8 bytes of data. | TP.DT | No | J1939-21 |
| | 0 | 0 | 236 | DA | 60416 | Transport Protocol - Connection Mgmt | Used for the transfer of Parameter Groups that have 9 or more bytes of data. | TP.CM.xx | No | J1939-21 |
| | 0 | 0 | 237 | DA | 60672 | Network Layer | | N.xx | Yes | J1939-31 |
| | 0 | 0 | 238 | DA | 60928 | Address Claimed | Message used to claim an address for a Controller Application. | AC | No | J1939-81 |
| | 0 | 0 | 239 | DA | 61184 | Proprietary A | This proprietary PG uses the Destination Specific PDU Format allowing manufacturers to direct their proprietary communications to a specific destination node. | PropA | Yes | J1939-21 |
| | 0 | 0 | 240 | 0 | 61440 | Electronic Retarder Controller 1 | This message will be transmitted by several types of retarding devices. | ERC1 | No | J1939-71 |
| | 0 | 0 | 240 | 1 | 61441 | Electronic Brake Controller 1 | Used for brake control information. | EBC1 | No | J1939-71 |
| | 0 | 0 | 240 | 2 | 61442 | Electronic Transmission Controller 1 | | ETC1 | No | J1939-71 |
| | 0 | 0 | 240 | 3 | 61443 | Electronic Engine Controller 2 | Identifies electronic engine control related parameters. | EEC2 | No | J1939-71 |
| | 0 | 0 | 240 | 4 | 61444 | Electronic Engine Controller 1 | Engine related parameters | EEC1 | No | J1939-71 |
| | 0 | 0 | 240 | 5 | 61445 | Electronic Transmission Controller 2 | | ETC2 | No | J1939-71 |
| | 0 | 0 | 240 | 6 | 61446 | Electronic Axle Controller 1 | | EAC1 | No | J1939-71 |
| | 0 | 0 | 240 | 7 | 61447 | Forward Lane Image urgent msg | | FLI1 | No | J1939-71 |
| | 0 | 0 | 240 | 8 | 61448 | Hydraulic Pressure Governor Info | Information to be used for a hydraulic pressure governing control system | HPG | No | J1939-71 |
| | 0 | 0 | 240 | 9 | 61449 | Vehicle Dynamic Stability Control 2 | Contains information which relates to the vehicle's movement. | VDC2 | No | J1939-71 |
| | 0 | 0 | 240 | 10 | 61450 | Engine Gas Flow Rate | Flow rates of Air and mixed gasses into the engine cylinders. | EGF1 | No | J1939-71 |
| | 0 | 0 | 240 | 11 | 61451 | Electronic Steering Control | PGN which indicates the actual angle and the status of a steerable axle | ESC1 | No | J1939-71 |
| | 0 | 0 | 240 | 12 | 61452 | Electronic Transmission Controller #8 | Electronic Transmission Controller #8 | ETC8 | No | J1939-71 |
| | 0 | 0 | 240 | 13 | 61453 | Land Leveling System Operational Information | Group of operational parameters associated with the Land Leveling System, such as switch states | LOI | No | J1939-71 |
| | 0 | 0 | 240 | 14 | 61454 | Aftertreatment 1 Intake Gas 1 | The purpose of this PGN is to group the aftertreatment intake sensor data for bank 1. These values include the NOx, %O2 etc. | AT1IG1 | No | J1939-71 |
| | 0 | 0 | 240 | 15 | 61455 | Aftertreatment 1 Outlet Gas 1 | The purpose of this PGN is to group the aftertreatment outlet sensor data for bank 1. These values include the NOx, %O2 etc. | AT1OG1 | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 240 | 16 | 61456 | Aftertreatment 2 Intake Gas 1 | The purpose of this PGN is to group the aftertreatment intake sensor data for bank 2. These values include the NOx, %O2, etc. | AT2IG1 | No | J1939-71 |
| | 0 | 0 | 240 | 17 | 61457 | Aftertreatment 2 Outlet Gas 1 | The purpose of this PGN is to group the aftertreatment outlet sensor data for bank 2. These values include the NOx, %O2, etc. | AT2OG1 | No | J1939-71 |
| | 0 | 0 | 240 | 18 | 61458 | Fifth Wheel Smart Systems 1 | Fifth wheel smart system information. Parameters used to determine the status of the tractor to trailer coupling system integrity. | FWSS1 | No | J1939-71 |
| | 0 | 0 | 240 | 19 | 61459 | Slope Sensor Information | Slope Sensor Information | SSI | No | J1939-71 |
| | 0 | 0 | 240 | 20 | 61460 | Blade Information | A measurement of the machine's relative blade height and a rotational angle measurement of the machine blade yaw angle around the machine z-axis | BI | No | J1939-71 |
| | 0 | 0 | 240 | 21 | 61461 | Requested Generator Total AC Reactive Power | Contains requested reactive and power factor control values | RGTACRP | No | J1939-75 |
| | 0 | 0 | 240 | 22 | 61462 | Cylinder Combustion Status | Used to send the SPNs containing information relating to the state of combustion for 24 cylinders. | CCS | No | J1939-71 |
| | 0 | 0 | 240 | 23 | 61463 | Engine Knock Level #1 | Used to send the SPNs containing information relating to the level of knock for 8 cylinders. | KL1 | No | J1939-71 |
| | 0 | 0 | 240 | 24 | 61464 | Engine Knock Level #2 | Used to send the SPNs containing information relating to the level of knock for 8 cylinders. | KL2 | No | J1939-71 |
| | 0 | 0 | 240 | 25 | 61465 | Engine Knock Level #3 | Used to send the SPNs containing information relating to the level of knock for 8 cylinders. | KL3 | No | J1939-71 |
| | 0 | 0 | 240 | 26 | 61466 | Engine Throttle / Fuel Actuator Control Command | Used to control networked electronic throttle control actuator and/or fuel control actuator valves. | TFAC | No | J1939-71 |
| | 0 | 0 | 240 | 27 | 61467 | General Purpose Message #1/7 | Message to control lights on towed vehicle(s). See ISO 11992. | GPM17 | No | ISO 11992 |
| | 0 | 0 | 240 | 28 | 61468 | Requested Generator Average Basic AC Quantities | Contains Requested Generator Average Basic AC Quantities | RGAAC | No | J1939-75 |
| | 0 | 0 | 240 | 29 | 61469 | Steering Angle Sensor Information | Contains information which relates to a steering angle sensor. | SAS | No | J1939-71 |
| | 0 | 0 | 240 | 30 | 61470 | Generator Control 2 | Contains parameters that allow the generator control system to control the engine and to provide information about the generator control system | GC2 | No | J1939-75 |
| | 0 | 0 | 240 | 31 | 61471 | Electronic Brake System #2/6 | Message to transmit data of the towed vehicle to the towing vehicle. See ISO 11992. | EBS26 | No | ISO 11992 |
| | 0 | 0 | 240 | 32 | 61472 | Electronic Brake System #2/5 | Message to transmit data of the towed vehicle to the towing vehicle. See ISO 11992. | EBS25 | No | ISO 11992 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 101 | 64869 | Aftertreatment 1 Fuel Control 2 | Contains information about the aftertreatment 1 fuel system | AT1FC2 | No | J1939-71 |
| | 0 | 0 | 253 | 102 | 64870 | Engine Temperature 4 | Engine temperatures | ET4 | No | J1939-71 |
| | 0 | 0 | 253 | 103 | 64871 | Zero Net Vehicle Weight Change | Zero Net Vehicle Weight Change | ZNVW | No | J1939-71 |
| | 0 | 0 | 253 | 104 | 64872 | Gross Combination Vehicle Weight | Gross Combination Vehicle Weight | GCVW | No | J1939-71 |
| | 0 | 0 | 253 | 105 | 64873 | Axle Group Calibration Weights | Indicates axle group calibration weights | AGCW | No | J1939-71 |
| | 0 | 0 | 253 | 106 | 64874 | Axle Group Weight | Combination of specific axle group and the weight imposed on that axle group | AGW | No | J1939-71 |
| | 0 | 0 | 253 | 107 | 64875 | Available Axle Group Weights | Indicates which axle groups are included in the current weight calculation | AAGW | No | J1939-71 |
| | 0 | 0 | 253 | 108 | 64876 | Aftertreatment 2 Air Control 2 | This PGN contains information about the Aftertreatment 2 Air Control. | AT2AC2 | No | J1939-71 |
| | 0 | 0 | 253 | 109 | 64877 | Aftertreatment 1 Air Control 2 | This PGN contains information about the Aftertreatment 1 Air Control. | AT1AC2 | No | J1939-71 |
| | 0 | 0 | 253 | 110 | 64878 | Catalyst Use Information | Used to provide information to an inspection tool regarding the proper use of reagent in SCR type emissions control systems. | SCR1 | No | J1939-71 |
| | 0 | 0 | 253 | 111 | 64879 | Electronic Engine Controller 8 | Engine related parameters | EEC8 | No | J1939-71 |
| | 0 | 0 | 253 | 112 | 64880 | Door ramp control | This message reports the current status of door ramps | DRC | No | J1939-71 |
| | 0 | 0 | 253 | 113 | 64881 | Brake actuator stroke status | The Brake Stroke Alert (BSA) message will provide the brake actuator stroke status for up to 20 wheel ends. | BSA | No | J1939-71 |
| | 0 | 0 | 253 | 114 | 64882 | Engine Spark Voltage 6 | This is the secondary voltage of the combustion event, cylinders 21 through 24. | ESV6 | No | J1939-71 |
| | 0 | 0 | 253 | 115 | 64883 | Engine Spark Voltage 5 | This is the secondary voltage of the combustion event, cylinders 17 through 20. | ESV5 | No | J1939-71 |
| | 0 | 0 | 253 | 116 | 64884 | Engine Spark Voltage 4 | This is the secondary voltage of the combustion event, cylinders 13 through 16. | ESV4 | No | J1939-71 |
| | 0 | 0 | 253 | 117 | 64885 | Engine Spark Voltage 3 | This is the secondary voltage of the combustion event, cylinders 9 through 12. | ESV3 | No | J1939-71 |
| | 0 | 0 | 253 | 118 | 64886 | Engine Spark Voltage 2 | This is the secondary voltage of the combustion event, cylinders 5 through 8. | ESV2 | No | J1939-71 |
| | 0 | 0 | 253 | 119 | 64887 | Engine Spark Voltage 1 | This is the secondary voltage of the combustion event, cylinders 1 through 4. | ESV1 | No | J1939-71 |
| | 0 | 0 | 253 | 120 | 64888 | Aftertreatment 2 Trip Information | This PGN contains trip total information about the aftertreatment 2. | AT2TI | Yes | J1939-71 |
| | 0 | 0 | 253 | 121 | 64889 | Aftertreatment 1 Trip Information | This PGN contains trip total information about the aftertreatment 1. | AT1TI | Yes | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 122 | 64890 | Aftertreatment 2 Service | This PGN contains information about the aftertreatment 2 (particulate trap 2 soot and ash load). | AT2S | No | J1939-71 |
| | 0 | 0 | 253 | 123 | 64891 | Aftertreatment 1 Service | This PGN contains information about the aftertreatment 1 (particulate trap 1 soot and ash load). | AT1S | No | J1939-71 |
| | 0 | 0 | 253 | 124 | 64892 | Particulate Trap Control 1 | Contains information about the particulate trap regeneration control. | PTC1 | No | J1939-71 |
| | 0 | 0 | 253 | 126 | 64894 | Adaptive Front-Lighting System Status | This message reports information about the current operation mode of the Adaptive Front-Lighting System (AFS). | AFSS | No | J1939-71 |
| | 0 | 0 | 253 | 127 | 64895 | Engine Configuration 2 | Contains static information about the engine. | EC2 | Yes | J1939-71 |
| | 0 | 0 | 253 | 128 | 64896 | Permanent DTCs | | DM28 | Yes | J1939-73 |
| | 0 | 0 | 253 | 129 | 64897 | EGR Cooler Bypass | Contains information about the EGR Cooler Bypass | EGRBV | No | J1939-71 |
| | 0 | 0 | 253 | 130 | 64898 | All Pending DTCs | To transmit “pending” diagnostic trouble codes detected during current or last completed driving cycle for components/systems that are tested or continuously monitored during normal driving conditions. | DM27 | No | J1939-73 |
| | 0 | 0 | 253 | 131 | 64899 | Transfer Case Information | Transfer Case Information | TCI | No | J1939-71 |
| | 0 | 0 | 253 | 132 | 64900 | Engine Fluid Level/Pressure 9 | This message contains Engine Intake Valve Actuation Oil Pressure information. | EFL/P9 | No | J1939-71 |
| | 0 | 0 | 253 | 133 | 64901 | Engine Fluid Level/Pressure 8 | This message contains Engine Intake Valve Actuation Oil Pressure information. | EFL/P8 | No | J1939-71 |
| | 0 | 0 | 253 | 134 | 64902 | Engine Fluid Level/Pressure 7 | This message contains Engine Intake Valve Actuation Oil Pressure information. | EFL/P7 | No | J1939-71 |
| | 0 | 0 | 253 | 135 | 64903 | Engine Fluid Level/Pressure 6 | This message contains Engine Intake Valve Actuation Oil Pressure information. | EFL/P6 | No | J1939-71 |
| | 0 | 0 | 253 | 136 | 64904 | Engine Fluid Level/Pressure 5 | This message contains Engine Intake Valve Actuation Oil Pressure information. | EFL/P5 | No | J1939-71 |
| | 0 | 0 | 253 | 137 | 64905 | Vehicle Direction/Speed 2 | Vehicle Direction/Speed 2 PGN contains the vehicle roll data (used to insure that fluid level measurements are valid.). | VDS2 | No | J1939-71 |
| | 0 | 0 | 253 | 138 | 64906 | SAE J2012 DTC Display | Conveys basic SAE J2012 DTC information for on-board or service tool displays. | J2012 | Yes | J1939-71 |
| | 0 | 0 | 253 | 139 | 64907 | Aftertreatment 2 Gas Parameters | Particulate Trap gas parameters for system or bank 2 | AT2GP | No | J1939-71 |
| | 0 | 0 | 253 | 140 | 64908 | Aftertreatment 1 Gas Parameters | Particulate Trap gas parameters for system or bank 1 | AT1GP | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 141 | 64909 | Utility Total AC Reactive Energy | This PGN contains quantities for the cumulative AC reactive energy from the utility. | UTACER | No | J1939-75 |
| | 0 | 0 | 253 | 142 | 64910 | Generator Total AC Reactive Energy | This PGN contains quantities for the cumulative AC reactive energy from the generator. | GTACER | No | J1939-75 |
| | 0 | 0 | 253 | 143 | 64911 | Generator Total AC Percent Power | This PGN contains quantities for the instantaneous AC power from the generator, as percentages of rated power | GTACPP | No | J1939-75 |
| | 0 | 0 | 253 | 144 | 64912 | Advertised Engine Torque Curve | This message conveys the advertised torque curve for the engine, as typically seen on specification sheets available from most engine manufacturers. | AETC | Yes | J1939-71 |
| | 0 | 0 | 253 | 145 | 64913 | AC Switching Device Status | This contains parameters indicating the status of various breakers throughout a power generation system. | ACS | No | J1939-75 |
| | 0 | 0 | 253 | 146 | 64914 | Engine Operating Information | Contains engine parameters related to operation. | EOI | No | J1939-71 |
| | 0 | 0 | 253 | 147 | 64915 | Generator Control 1 | Message for the generator set control to change or report the status of the generator system. | GC1 | No | J1939-75 |
| | 0 | 0 | 253 | 148 | 64916 | Electronic Engine Controller 7 | Engine related parameters | EEC7 | No | J1939-71 |
| | 0 | 0 | 253 | 149 | 64917 | Transmission Fluids 2 | | TRF2 | No | J1939-71 |
| | 0 | 0 | 253 | 152 | 64920 | Aftertreatment 1 Historical Information | Contains information about the history of the aftertreatment 1 system. | AT1HI | Yes | J1939-71 |
| | 0 | 0 | 253 | 153 | 64921 | Aftertreatment 2 Historical information | Contains information about the history of the aftertreatment 2 system | AT2HI | Yes | J1939-71 |
| | 0 | 0 | 253 | 154 | 64922 | Electronic Brake System #2/4 | Message to transmit data of the towed vehicle to the towing vehicle. See ISO 11992. | EBS24 | No | ISO 11992 |
| | 0 | 0 | 253 | 155 | 64923 | Catalyst Reagent Information | Sensor Information which measures temperature, concentration, and conductivity of the catalyst reagent | CRI1 | No | J1939-71 |
| | 0 | 0 | 253 | 156 | 64924 | Sensor Electrical Power #2 | Voltage supplies for sensors #2 | SEP2 | No | J1939-71 |
| | 0 | 0 | 253 | 157 | 64925 | Sensor Electrical Power #1 | Voltage supplies for sensors #1 | SEP1 | No | J1939-71 |
| | 0 | 0 | 253 | 158 | 64926 | Aftertreatment 2 Air Control 1 | Contains information about the aftertreatment 2 air system | AT2AC1 | No | J1939-71 |
| | 0 | 0 | 253 | 159 | 64927 | Aftertreatment 1 Air Control 1 | Contains information about the aftertreatment 1 air system | AT1AC1 | No | J1939-71 |
| | 0 | 0 | 253 | 160 | 64928 | Aftertreatment 2 Fuel Control 1 | Contains information about the aftertreatment 2 fuel system | AT2FC | No | J1939-71 |
| | 0 | 0 | 253 | 161 | 64929 | Aftertreatment 1 Fuel Control 1 | Contains information about the aftertreatment 1 fuel system | AT1FC1 | No | J1939-71 |
| | 0 | 0 | 253 | 162 | 64930 | Fuel Information 3 (Gaseous) | Gaseous fuel information 3 | GFI3 | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 163 | 64931 | Electronic Engine Controller 6 | Engine related parameters | EEC6 | No | J1939-71 |
| | 0 | 0 | 253 | 164 | 64932 | PTO Drive Engagement | Information relating to the request for engagement, consent for engagement, and status of engagement of various specific physical PTO drives | PTODE | No | J1939-71 |
| | 0 | 0 | 253 | 165 | 64933 | Door Control 2 | Used for door information. | DC2 | No | J1939-71 |
| | 0 | 0 | 253 | 166 | 64934 | Voltage Regulator Excitation Status | Contains voltage regulator parameters that pertain to the generation excitation | VREP | No | J1939-75 |
| | 0 | 0 | 253 | 167 | 64935 | Voltage Regulator Operating Mode | Contains operating modes for the voltage regulator functions | VROM | No | J1939-75 |
| | 0 | 0 | 253 | 168 | 64936 | Wireless Communications Message 2 | Message for reporting status information regarding the second instance of a wireless communications network on a device or system. | WCM2 | No | J1939-71 |
| | 0 | 0 | 253 | 169 | 64937 | Wireless Communications Message 1 | Message for reporting status information regarding the first instance of a wireless communications network on a device or system. | WCM1 | No | J1939-71 |
| | 0 | 0 | 253 | 170 | 64938 | Engine Fluid Level/Pressure 4 | 4th PGN which identifies parameters that are either measuring various pressures within the engine or identifying engine fluid levels | EFL/P4 | No | J1939-71 |
| | 0 | 0 | 253 | 171 | 64939 | Request For Complete Configurable Message Set | This message is designed to cause all CAs to respond with the complete sequence of configuration identification messages for a particular one or all of the configurable messages that they send. | RCMS | No | J1939-74 |
| | 0 | 0 | 253 | 173 | 64941 | Request For Complete Configurable Message Set | Request For Complete Configurable Message Set | RCMS | No | J1939-74 |
| | 0 | 0 | 253 | 174 | 64942 | Fifth Wheel Smart Systems 2 | Fifth wheel smart system information #2. Message to convey operator parameters associated with the tractor to trailer coupling control and error state. | FWSS2 | No | J1939-71 |
| | 0 | 0 | 253 | 175 | 64943 | Aftertreatment 2 Intermediate Gas | The purpose of this PGN is to group the aftertreatment intermediate gas temperature and pressure messages for bank 2. | AT2IMG | No | J1939-71 |
| | 0 | 0 | 253 | 176 | 64944 | Aftertreatment 2 Outlet Gas 2 | The purpose of this PGN is to group the aftertreatment outlet gas temperature messages for bank 2. | AT2OG2 | No | J1939-71 |
| | 0 | 0 | 253 | 177 | 64945 | Aftertreatment 2 Intake Gas 2 | The purpose of this PGN is to group the aftertreatment intake gas temperature messages for bank 2. | AT2IG2 | No | J1939-71 |
| | 0 | 0 | 253 | 178 | 64946 | Aftertreatment 1 Intermediate Gas | The purpose of this PGN is to group the aftertreatment intermediate gas temperature and pressure messages. | AT1IMG | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 179 | 64947 | Aftertreatment 1 Outlet Gas 2 | The purpose of this PGN is to group the aftertreatment outlet gas temperature messages. | AT1OG2 | No | J1939-71 |
| | 0 | 0 | 253 | 180 | 64948 | Aftertreatment 1 Intake Gas 2 | The purpose of this PGN is to group the aftertreatment intake gas temperature messages for bank 1. | AT1IG2 | No | J1939-71 |
| | 0 | 0 | 253 | 181 | 64949 | Previously Active Emission Related Faults | This message contains DTCs that are confirmed but for which the MIL is off. | DM23 | Yes | J1939-73 |
| | 0 | 0 | 253 | 182 | 64950 | SPN Support | This message is used to identify those SPNs supported by the product for freeze frames and data stream messages. | DM24 | No | J1939-73 |
| | 0 | 0 | 253 | 183 | 64951 | Expanded Freeze Frame | This message defines the expanded freeze frame length | DM25 | No | J1939-73 |
| | 0 | 0 | 253 | 184 | 64952 | Diagnostic Readiness 3 | This message conveys information useful in determining whether the OBD System has a defect or not. | DM26 | No | J1939-73 |
| | 0 | 0 | 253 | 185 | 64953 | Tire Pressure Reference Information | Information on actual tire pressure reference value for monitoring. | TPRI | No | J1939-71 |
| | 0 | 0 | 253 | 186 | 64954 | Farebox Status | Used to report alarms of the fare collection unit. | TR6 | No | J1939-71 |
| | 0 | 0 | 253 | 187 | 64955 | Farebox Point of Sale | Used to report stop level point of sale detail. | TR5 | No | J1939-71 |
| | 0 | 0 | 253 | 188 | 64956 | Farebox Service Detail | Used to identify service, assignments, and fare preset detail of the fare collection unit. | TR4 | Yes | J1939-71 |
| | 0 | 0 | 253 | 189 | 64957 | Signal Preemption | Status and configuration of the device used for intersection preemption. | TR3 | No | J1939-71 |
| | 0 | 0 | 253 | 190 | 64958 | Transit Route | The current route assigned to this transit vehicle | TR1 | Yes | J1939-71 |
| | 0 | 0 | 253 | 191 | 64959 | Transit Milepost | Identification of a transit route milepost | TR2 | Yes | J1939-71 |
| | 0 | 0 | 253 | 192 | 64960 | Passenger Counter | Used to notify the transit link devices of the passenger count. | TR7 | No | J1939-71 |
| | 0 | 0 | 253 | 193 | 64961 | Engine Fluid Level/Pressure 3 | 3rd PGN which identifies parameters that are either measuring various pressures within the engine or identifying engine fluid levels | EFL/P3 | No | J1939-71 |
| | 0 | 0 | 253 | 196 | 64964 | Electronic Brake Controller 5 | Used for information on brake control. | EBC5 | No | J1939-71 |
| | 0 | 0 | 253 | 197 | 64965 | ECU Identification Information | Message for reporting identification and information about the physical ECU and its hardware. | ECUID | Yes | J1939-71 |
| | 0 | 0 | 253 | 198 | 64966 | Cold Start Aids | Cold start aid information and settings. | | No | J1939-71 |
| | 0 | 0 | 253 | 199 | 64967 | Off-Highway Engine Control Selection States | Reports the states of off-highway engine control modes, as they apply to different modes of engine operation which may be used to aid particular working environments. | OHCSS | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 200 | 64968 | Operator Primary Intermediate Speed Control state | The Operator Primary Intermediate Speed Control State is used to provide the controller feedback to indicate the controls state achieved. | ISCS | No | J1939-71 |
| | 0 | 0 | 253 | 201 | 64969 | Electronic Control Module Information | Information relating to electronic control modules | CMI | Yes | J1939-71 |
| | 0 | 0 | 253 | 202 | 64970 | Intermediate Speed Control | This message addresses the particular needs of the Industrial Engine operational functionality concerning the Intermediate Speed Control operation | ISC | No | J1939-71 |
| | 0 | 0 | 253 | 203 | 64971 | Off-Highway Engine Control Selection | Allows for the selection of off-highway engine control modes, as they apply to different modes of engine operation which may be used to aid particular working environments. | OHECS | No | J1939-71 |
| | 0 | 0 | 253 | 204 | 64972 | Operators External Light Controls Message | The message containing the information about the position of the operator's external light control switch(s). | OEL | No | J1939-71 |
| | 0 | 0 | 253 | 205 | 64973 | Operator Wiper and Washer Controls Message | Message for items related to the operators controls for the window wipers and washers on the front and rear cab windows | OWW | No | J1939-71 |
| | 0 | 0 | 253 | 206 | 64974 | Working Set Member Message | Message sent by the Master of a Working Set to identify an individual member of a specific Working Set. | WSMM | No | J1939-81 |
| | 0 | 0 | 253 | 207 | 64975 | Working Set Master Message | Message sent by the Master of a Working Set to identify how many members there are in said set. | WSM | No | J1939-81 |
| | 0 | 0 | 253 | 208 | 64976 | Inlet/Exhaust Conditions 2 | Inlet/Exhaust Conditions 2 is a second PGN conveying this type of engine information. Also see PGN 65270. | IC2 | No | J1939-71 |
| | 0 | 0 | 253 | 209 | 64977 | FMS-standard Interface Identity/Capabilities | Information which specifies the capabilities of the Fleet Management System (FMS) - standard interface device. | FMS | No | J1939-71 |
| | 0 | 0 | 253 | 210 | 64978 | ECU Performance | Message used to transfer ECU performance parameters. | EP | No | J1939-71 |
| | 0 | 0 | 253 | 211 | 64979 | Turbocharger Information 6 | Turbocharger Compressor Outlet Discharge Temperature | TCI6 | No | J1939-71 |
| | 0 | 0 | 253 | 212 | 64980 | Cab Message 3 | Provides information from Cab mounted operator inputs. | CM3 | No | J1939-71 |
| | 0 | 0 | 253 | 213 | 64981 | Electronic Engine Controller 5 | Engine related parameters | EEC5 | No | J1939-71 |
| | 0 | 0 | 253 | 214 | 64982 | Basic Joystick Message 1 | Used to transfer information about the measured status of the 1st 2 axes and up to 12 buttons of a joystick. | BJM1 | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 215 | 64983 | Extended Joystick Message 1 | Used to transfer information about the measured status of three additional axes of a joystick and switches of the joystick grip or handle. | EJM1 | No | J1939-71 |
| | 0 | 0 | 253 | 216 | 64984 | Basic Joystick Message 2 | Used to transfer information about the measured status of the 1st 2 axes and up to 12 buttons of a joystick. | BJM2 | No | J1939-71 |
| | 0 | 0 | 253 | 217 | 64985 | Extended Joystick Message 2 | Used to transfer information about the measured status of three additional axes of a joystick and switches of the joystick grip or handle. | EJM2 | No | J1939-71 |
| | 0 | 0 | 253 | 218 | 64986 | Basic Joystick Message 3 | Used to transfer information about the measured status of the 1st 2 axes and up to 12 buttons of a joystick. | BJM3 | No | J1939-71 |
| | 0 | 0 | 253 | 219 | 64987 | Extended Joystick Message 3 | Used to transfer information about the measured status of three additional axes of a joystick and switches of the joystick grip or handle. | EJM3 | No | J1939-71 |
| | 0 | 0 | 253 | 220 | 64988 | Marine Control Information | This messages contains marine vessel control information for the engine | MCI | No | J1939-71 |
| | 0 | 0 | 253 | 221 | 64989 | ISO 11992 Military Application Tractor - Trailer Message | Tractor to trailer message for military applications using ISO 11992. | MAM11 | No | ISO 11992 |
| | 0 | 0 | 253 | 222 | 64990 | ISO 11992 Military Application Trailer - Tractor Feedback Message | Feedback message from trailer to tractor for military applications using ISO 11992. | MAM21 | No | ISO 11992 |
| | 0 | 0 | 253 | 223 | 64991 | Front Wheel Drive Status | Front wheel drive ECU information | FWD | No | J1939-71 |
| | 0 | 0 | 253 | 224 | 64992 | Ambient Conditions 2 | This message contains measurement and configuration information about the vehicle ambient conditions. | AMB2 | No | J1939-71 |
| | 0 | 0 | 253 | 225 | 64993 | Cab A/C Climate System Information | This message contains measurement and condition information from cab air conditioning components. | CACI | No | J1939-71 |
| | 0 | 0 | 253 | 226 | 64994 | Supply Pressure Demand | Used for controlling the supply pressure. Often used to raise the pressure of a supply pressure circuit in situations where more pneumatic energy is needed. | SPR | No | J1939-71 |
| | 0 | 0 | 253 | 227 | 64995 | Equipment Operation and Control | Parameters related to the operation and controls for equipment | EOAC | No | J1939-71 |
| | 0 | 0 | 253 | 228 | 64996 | Equipment Performance Data | Parameters related to the performance characteristics of equipment | EPD | No | J1939-71 |
| | 0 | 0 | 253 | 229 | 64997 | Maximum Vehicle Speed Limit Status | Reports the possible maximum vehicle speed limits, one through seven, and the applied maximum vehicle speed limit. | MVS | No | J1939-71 |
| | 0 | 0 | 253 | 230 | 64998 | Hydraulic Braking System | Used for information on a hydraulic brake system | HBS | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 253 | 231 | 64999 | Bus #1/Utility Sync Check Status | | BUSC | No | J1939-75 |
| | 0 | 0 | 253 | 232 | 65000 | Bus #1/Generator Sync Check Status | | BGSC | No | J1939-75 |
| | 0 | 0 | 253 | 233 | 65001 | Bus #1 Phase C Basic AC Quantities | | BPCAC | No | J1939-75 |
| | 0 | 0 | 253 | 234 | 65002 | Bus #1 Phase B Basic AC Quantities | | BPBAC | No | J1939-75 |
| | 0 | 0 | 253 | 235 | 65003 | Bus #1 Phase A Basic AC Quantities | | BPAAC | No | J1939-75 |
| | 0 | 0 | 253 | 236 | 65004 | Bus #1 Average Basic AC Quantities | | BAAC | No | J1939-75 |
| | 0 | 0 | 253 | 237 | 65005 | Utility Total AC Energy | | UTACE | No | J1939-75 |
| | 0 | 0 | 253 | 238 | 65006 | Utility Phase C AC Reactive Power | | UPCACR | No | J1939-75 |
| | 0 | 0 | 253 | 239 | 65007 | Utility Phase C AC Power | | UPCACP | No | J1939-75 |
| | 0 | 0 | 253 | 240 | 65008 | Utility Phase C AC Basic Quantities | | UPCAC | No | J1939-75 |
| | 0 | 0 | 253 | 241 | 65009 | Utility Phase B AC Reactive Power | | UPBACR | No | J1939-75 |
| | 0 | 0 | 253 | 242 | 65010 | Utility Phase B AC Power | | UPBACP | No | J1939-75 |
| | 0 | 0 | 253 | 243 | 65011 | Utility Phase B AC Basic Quantities | | UPBAC | No | J1939-75 |
| | 0 | 0 | 253 | 244 | 65012 | Utility Phase A AC Reactive Power | | UPACCR | No | J1939-75 |
| | 0 | 0 | 253 | 245 | 65013 | Utility Phase A AC Power | | UPAACP | No | J1939-75 |
| | 0 | 0 | 253 | 246 | 65014 | Utility Phase A Basic AC Quantities | | UPAAC | No | J1939-75 |
| | 0 | 0 | 253 | 247 | 65015 | Utility Total AC Reactive Power | | UTACR | No | J1939-75 |
| | 0 | 0 | 253 | 248 | 65016 | Utility Total AC Power | | UTACP | No | J1939-75 |
| | 0 | 0 | 253 | 249 | 65017 | Utility Average Basic AC Quantities | | UAAC | No | J1939-75 |
| | 0 | 0 | 253 | 250 | 65018 | Generator Total AC Energy | | GTACE | No | J1939-75 |
| | 0 | 0 | 253 | 251 | 65019 | Generator Phase C AC Reactive Power | | GPCACR | No | J1939-75 |
| | 0 | 0 | 253 | 252 | 65020 | Generator Phase C AC Power | | GPCACP | No | J1939-75 |
| | 0 | 0 | 253 | 253 | 65021 | Generator Phase C Basic AC Quantities | | GPCAC | No | J1939-75 |
| | 0 | 0 | 253 | 254 | 65022 | Generator Phase B AC Reactive Power | | GPBACRP | No | J1939-75 |
| | 0 | 0 | 253 | 255 | 65023 | Generator Phase B AC Power | | GPBACP | No | J1939-75 |
| | 0 | 0 | 254 | 0 | 65024 | Generator Phase B Basic AC Quantities | | GPBAC | No | J1939-75 |
| | 0 | 0 | 254 | 1 | 65025 | Generator Phase A AC Reactive Power | | GPAACR | No | J1939-75 |
| | 0 | 0 | 254 | 2 | 65026 | Generator Phase A AC Power | | GPAACP | No | J1939-75 |
| | 0 | 0 | 254 | 3 | 65027 | Generator Phase A Basic AC Quantities | | GPAAC | No | J1939-75 |
| | 0 | 0 | 254 | 4 | 65028 | Generator Total AC Reactive Power | | GTACR | No | J1939-75 |
| | 0 | 0 | 254 | 5 | 65029 | Generator Total AC Power | | GTACP | No | J1939-75 |
| | 0 | 0 | 254 | 6 | 65030 | Generator Average Basic AC Quantities | | GAAC | No | J1939-75 |
| | 0 | 0 | 254 | 7 | 65031 | Exhaust Temperature | | ET | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 8 | 65032 | Required Tractor Facilities message | Implement response to task controller or Tractor ECU desired tractor classification and facilities | RTF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 9 | 65033 | Tractor Facilities response message | Tractor response to an implement ECU or task controller tractor classification and facilities request | TFR | No | ISO 11783-7 |
| | 0 | 0 | 254 | 10 | 65034 | Implement Remote Control Command Tractor Response | This command is a task controller or an implement ECU to tractor ECU message. | IRCR | No | ISO 11783-7 |
| | 0 | 0 | 254 | 11 | 65035 | Implement Remote Control Command | This command is a task controller or an implement ECU to tractor ECU message. | IRC | No | ISO 11783-7 |
| | 0 | 0 | 254 | 12 | 65036 | Working Set Member | This message is sent by the Master of a Working Set to identify an individual member of a specific Working Set (Master's Source Address identifies the particular Working Set). | WSMEM | No | J1939-81 |
| | 0 | 0 | 254 | 13 | 65037 | Working Set Master | This message is sent by the Master of a Working Set to identify how many members there are in said set. | WSMSTR | No | J1939-81 |
| | 0 | 0 | 254 | 14 | 65038 | Response for Repetition Rate | This global message is the response of the request of a specific user to change the repetition rate. | RESRR | No | ISO 11783-7 |
| | 0 | 0 | 254 | 15 | 65039 | Language Command | The language message has been defined as a global message to inform all ECUs on the 11783 bus the language that the operator wants to use, the date and time format and the units of measure with which the connected system should work. | LC | No | ISO 11783-7 |
| | 0 | 0 | 254 | 16 | 65040 | Auxiliary Valve Number 0 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV00EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 17 | 65041 | Auxiliary Valve Number 1 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV01EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 18 | 65042 | Auxiliary Valve Number 2 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV02EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 19 | 65043 | Auxiliary Valve Number 3 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV03EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 20 | 65044 | Auxiliary Valve Number 4 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV04EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 21 | 65045 | Auxiliary Valve Number 5 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV05EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 22 | 65046 | Auxiliary Valve Number 6 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV06EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 23 | 65047 | Auxiliary Valve Number 7 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV07EF | No | ISO 11783-7 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 24 | 65048 | Auxiliary Valve Number 8 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV08EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 25 | 65049 | Auxiliary Valve Number 9 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV09EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 26 | 65050 | Auxiliary Valve Number 10 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV10EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 27 | 65051 | Auxiliary Valve Number 11 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV11EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 28 | 65052 | Auxiliary Valve Number 12 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV12EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 29 | 65053 | Auxiliary Valve Number 13 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV13EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 30 | 65054 | Auxiliary Valve Number 14 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV14EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 31 | 65055 | Auxiliary Valve Number 15 Estimated Flow | This message provides the estimated flow of specified auxiliary valve. | AV15EF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 32 | 65056 | Auxiliary Valve Number 0 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV00MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 33 | 65057 | Auxiliary Valve Number 1 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV01MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 34 | 65058 | Auxiliary Valve Number 2 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV02MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 35 | 65059 | Auxiliary Valve Number 3 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV03MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 36 | 65060 | Auxiliary Valve Number 4 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV04MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 37 | 65061 | Auxiliary Valve Number 5 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV05MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 38 | 65062 | Auxiliary Valve Number 6 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV06MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 39 | 65063 | Auxiliary Valve Number 7 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV07MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 40 | 65064 | Auxiliary Valve Number 8 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV08MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 41 | 65065 | Auxiliary Valve Number 9 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV09MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 42 | 65066 | Auxiliary Valve Number 10 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV10MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 43 | 65067 | Auxiliary Valve Number 11 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV11MF | No | ISO 11783-7 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 44 | 65068 | Auxiliary Valve Number 12 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV12MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 45 | 65069 | Auxiliary Valve Number 13 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV13MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 46 | 65070 | Auxiliary Valve Number 14 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV14MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 47 | 65071 | Auxiliary Valve Number 15 Measured Flow | This message provides the measurement of specified auxiliary valve. | AV15MF | No | ISO 11783-7 |
| | 0 | 0 | 254 | 48 | 65072 | Auxiliary Valve Number 0 Command | This message provides control of the flow through the auxiliary valves. | AV00C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 49 | 65073 | Auxiliary Valve Number 1 Command | This message provides control of the flow through the auxiliary valves. | AV01C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 50 | 65074 | Auxiliary Valve Number 2 Command | This message provides control of the flow through the auxiliary valves. | AV02C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 51 | 65075 | Auxiliary Valve Number 3 Command | This message provides control of the flow through the auxiliary valves. | AV03C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 52 | 65076 | Auxiliary Valve Number 4 Command | This message provides control of the flow through the auxiliary valves. | AV04C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 53 | 65077 | Auxiliary Valve Number 5 Command | This message provides control of the flow through the auxiliary valves. | AV05C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 54 | 65078 | Auxiliary Valve Number 6 Command | This message provides control of the flow through the auxiliary valves. | AV06C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 55 | 65079 | Auxiliary Valve Number 7 Command | This message provides control of the flow through the auxiliary valves. | AV07C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 56 | 65080 | Auxiliary Valve Number 8 Command | This message provides control of the flow through the auxiliary valves. | AV08C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 57 | 65081 | Auxiliary Valve Number 9 Command | This message provides control of the flow through the auxiliary valves. | AV09C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 58 | 65082 | Auxiliary Valve Number 10 Command | This message provides control of the flow through the auxiliary valves. | AV10C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 59 | 65083 | Auxiliary Valve Number 11 Command | This message provides control of the flow through the auxiliary valves. | AV11C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 60 | 65084 | Auxiliary Valve Number 12 Command | This message provides control of the flow through the auxiliary valves. | AV12C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 61 | 65085 | Auxiliary Valve Number 13 Command | This message provides control of the flow through the auxiliary valves. | AV13C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 62 | 65086 | Auxiliary Valve Number 14 Command | This message provides control of the flow through the auxiliary valves. | AV14C | No | ISO 11783-7 |
| | 0 | 0 | 254 | 63 | 65087 | Auxiliary Valve Number 15 Command | This message provides control of the flow through the auxiliary valves. | AV15C | No | ISO 11783-7 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 64 | 65088 | Lighting Data | This lighting message is a response to the request for lighting data in the lighting command message. lighting controllers on the tractor and attached implements. | LD | No | J1939-71 |
| | 0 | 0 | 254 | 65 | 65089 | Lighting Command | The lighting command message has been defined as a global message from the tractor to all lighting controllers on the tractor and attached implements. | LC | No | J1939-71 |
| | 0 | 0 | 254 | 66 | 65090 | Hitch and PTO Commands | This message provides control of the hitch position, PTO shaft set point speed and PTO engagement. | HPTOC | No | ISO 11783-7 |
| | 0 | 0 | 254 | 67 | 65091 | Primary or Rear Power Take off Output Shaft | This message provides the measurement of the current primary or rear PTO output shaft parameters. | RPTO | No | ISO 11783-7 |
| | 0 | 0 | 254 | 68 | 65092 | Secondary or Front Power Take off Output Shaft | This message provides the measurement of the current secondary or front PTO output shaft parameters. | FPTO | No | ISO 11783-7 |
| | 0 | 0 | 254 | 69 | 65093 | Primary or Rear Hitch Status | This message provides the measurement of the current rear hitch parameters. | RHS | No | ISO 11783-7 |
| | 0 | 0 | 254 | 70 | 65094 | Secondary or Front Hitch Status | This message provides the measurement of the current front hitch parameters. | FHS | No | ISO 11783-7 |
| | 0 | 0 | 254 | 71 | 65095 | Maintain Power | This message is sent by any ECU connected to the implement bus requesting that the Tractor ECU not switch off the power for the next 2 seconds. | MP | No | ISO 11783-7 |
| | 0 | 0 | 254 | 72 | 65096 | Wheel-based Speed and Distance | This message is sent by the Tractor ECU on the implement bus on construction and agricultural implements and provides to connected systems, the current measured wheel-based speed. | WBSD | No | ISO 11783-7 |
| | 0 | 0 | 254 | 73 | 65097 | Ground-based Speed and Distance | This message is normally sent by the Tractor ECU on the implement bus on construction and agricultural implements and provides to connected systems, the current measured ground speed. | GBSD | No | ISO 11783-7 |
| | 0 | 0 | 254 | 74 | 65098 | Electronic Transmission Controller 7 | Transmission State Information | ETC7 | No | J1939-71 |
| | 0 | 0 | 254 | 75 | 65099 | Transmission Configuration 2 | Contains transmission configuration information. | TCFG2 | Yes | J1939-71 |
| | 0 | 0 | 254 | 76 | 65100 | Military Lighting Command | The message contains parameters that control military specific lights. | ML | No | J1939-71 |
| | 0 | 0 | 254 | 77 | 65101 | Total Averaged Information | Averages of information accumulated over the life of the engine | TAVG | No | J1939-71 |
| | 0 | 0 | 254 | 78 | 65102 | Door Control 1 | Used for door information. | DC1 | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 79 | 65103 | Vehicle Dynamic Stability Control 1 | Contains information which relates to the VDC system status. | VDC1 | No | J1939-71 |
| | 0 | 0 | 254 | 80 | 65104 | Battery Temperature | Contains battery temperature information. | BT1 | No | J1939-71 |
| | 0 | 0 | 254 | 81 | 65105 | Adaptive Cruise Control, Operator Input | The operator requested characteristics for the ACC systems operation. | ACC2 | No | J1939-71 |
| | 0 | 0 | 254 | 82 | 65106 | Vehicle Electrical Power #3 | Vehicle Electrical Power 3 | VEP3 | No | J1939-71 |
| | 0 | 0 | 254 | 83 | 65107 | Retarder Continuous Torque & Speed Limit | | RTC1 | No | J1939-71 |
| | 0 | 0 | 254 | 84 | 65108 | Engine Continuous Torque & Speed Limit | | ECT1 | No | J1939-71 |
| | 0 | 0 | 254 | 85 | 65109 | Gaseous Fuel Properties | Properties of the gaseous fuel | GFD | No | J1939-71 |
| | 0 | 0 | 254 | 86 | 65110 | Tank Information 1 | Contains information on various tank levels | TI1 | No | J1939-71 |
| | 0 | 0 | 254 | 87 | 65111 | Air Suspension Control 5 | Used for damper stiffness information | ASC5 | No | J1939-71 |
| | 0 | 0 | 254 | 88 | 65112 | Air Suspension Control 4 | Used for bellow pressure information | ASC4 | No | J1939-71 |
| | 0 | 0 | 254 | 89 | 65113 | Air Suspension Control 3 | Used for height information | ASC3 | No | J1939-71 |
| | 0 | 0 | 254 | 90 | 65114 | Air Suspension Control 1 | Used for suspension control information | ASC1 | No | J1939-71 |
| | 0 | 0 | 254 | 91 | 65115 | Forward Lane Image | | FLI2 | No | J1939-71 |
| | 0 | 0 | 254 | 92 | 65116 | ISO 11992 (even) - Running Gear Equipment #2/2 | Used for suspension information, direction from towed vehicle to towing vehicle. | RGE22 | No | ISO 11992 |
| | 0 | 0 | 254 | 93 | 65117 | ISO 11992 (odd) - General Purpose Message #1/2 | Used for powertrain information, direction from towing vehicle to towed vehicle | GPM12 | No | ISO 11992 |
| | 0 | 0 | 254 | 94 | 65118 | ISO 11992 (even) - Running Gear Equipment #2/3 | Used for tire monitoring, direction from towed vehicle to towing vehicle. | RGE23 | No | ISO 11992 |
| | 0 | 0 | 254 | 95 | 65119 | ISO 11992 (odd) - General Purpose Message #1/3 | Used for powertrain information, direction from towing vehicle to towed vehicle | GPM13 | No | ISO 11992 |
| | 0 | 0 | 254 | 96 | 65120 | ISO 11992 (even) - General Purpose Message #2/3 | Used for powertrain control,direction from towed vehicle to towing vehicle | GPM23 | No | ISO 11992 |
| | 0 | 0 | 254 | 97 | 65121 | ISO 11992 (odd) - General Purpose Message #1/4 | Used for powertrain information, direction from towing vehicle to towed vehicle | GPM14 | No | ISO 11992 |
| | 0 | 0 | 254 | 98 | 65122 | ISO 11992 (even) - General Purpose Message #2/4 | Used for powertrain control, direction from towed vehicle to towing vehicle | GPM24 | No | ISO 11992 |
| | 0 | 0 | 254 | 99 | 65123 | ISO 11992 (odd) - General Purpose Message #1/5 | Used for powertrain information, direction from towing vehicle to towed vehicle | GPM15 | No | ISO 11992 |
| | 0 | 0 | 254 | 100 | 65124 | ISO 11992 (even) - General Purpose Message #2/5 | Used for lights information, direction from towed vehicle to towing vehicle | GPM25 | No | ISO 11992 |
| | 0 | 0 | 254 | 101 | 65125 | ISO 11992 (odd) - General Purpose Message #1/6 | Used for general information direction from towing vehicle to towed vehicle | GPM16 | No | ISO 11992 |
| | 0 | 0 | 254 | 102 | 65126 | Battery Main Switch Information | | BM | No | J1939-71 |
| | 0 | 0 | 254 | 103 | 65127 | Climate Control Configuration | | CCC | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 104 | 65128 | Vehicle Fluids | This parameter group transfers vehicle fluid information. | VF | No | J1939-71 |
| | 0 | 0 | 254 | 105 | 65129 | Engine Temperature 3 | This parameter group is used to transmit high resolution engine temperatures for control purposes. | ET3 | No | J1939-71 |
| | 0 | 0 | 254 | 106 | 65130 | Engine Fuel/lube systems | | EFS | No | J1939-71 |
| | 0 | 0 | 254 | 107 | 65131 | Driver's Identification | | DI | Yes | J1939-71 |
| | 0 | 0 | 254 | 108 | 65132 | Tachograph | | TCO1 | No | J1939-71 |
| | 0 | 0 | 254 | 109 | 65133 | Heater Information | | HTR | No | J1939-71 |
| | 0 | 0 | 254 | 110 | 65134 | High Resolution Wheel Speed | | HRW | No | J1939-71 |
| | 0 | 0 | 254 | 111 | 65135 | Adaptive Cruise Control | | ACC1 | No | J1939-71 |
| | 0 | 0 | 254 | 112 | 65136 | Combination Vehicle Weight | | CVW | Yes | J1939-71 |
| | 0 | 0 | 254 | 113 | 65137 | Laser Tracer Position | | LTP | No | J1939-71 |
| | 0 | 0 | 254 | 114 | 65138 | Laser Leveling System Blade Control | | LBC | No | J1939-71 |
| | 0 | 0 | 254 | 115 | 65139 | Laser Receiver Mast Position | | LMP | No | J1939-71 |
| | 0 | 0 | 254 | 116 | 65140 | Modify Leveling System Control Set Point | | LSP | No | J1939-71 |
| | 0 | 0 | 254 | 117 | 65141 | Laser Leveling System Vertical Deviation | | LVD | No | J1939-71 |
| | 0 | 0 | 254 | 118 | 65142 | Laser Leveling System Vertical Position Display Data | | LVDD | No | J1939-71 |
| | 0 | 0 | 254 | 119 | 65143 | Auxiliary Pressures | | AP | No | J1939-71 |
| | 0 | 0 | 254 | 120 | 65144 | Tire Pressure Control Unit Mode and Status | | TP1 | No | J1939-71 |
| | 0 | 0 | 254 | 121 | 65145 | Tire Pressure Control Unit Target Pressures | | TP2 | No | J1939-71 |
| | 0 | 0 | 254 | 122 | 65146 | Tire Pressure Control Unit Current Pressures | | TP3 | No | J1939-71 |
| | 0 | 0 | 254 | 123 | 65147 | Combustion Time 1 | | CT1 | No | J1939-71 |
| | 0 | 0 | 254 | 124 | 65148 | Combustion Time 2 | | CT2 | No | J1939-71 |
| | 0 | 0 | 254 | 125 | 65149 | Combustion Time 3 | | CT3 | No | J1939-71 |
| | 0 | 0 | 254 | 126 | 65150 | Combustion Time 4 | | CT4 | No | J1939-71 |
| | 0 | 0 | 254 | 127 | 65151 | Combustion Time 5 | | CT5 | No | J1939-71 |
| | 0 | 0 | 254 | 128 | 65152 | Combustion Time 6 | | CT6 | No | J1939-71 |
| | 0 | 0 | 254 | 129 | 65153 | Fuel Information 2 (Gaseous) | Gaseous fuel information 2 | GFI2 | No | J1939-71 |
| | 0 | 0 | 254 | 130 | 65154 | Ignition Timing 1 | | IT1 | No | J1939-71 |
| | 0 | 0 | 254 | 131 | 65155 | Ignition Timing 2 | | IT2 | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 132 | 65156 | Ignition Timing 3 | | IT3 | No | J1939-71 |
| | 0 | 0 | 254 | 133 | 65157 | Ignition Timing 4 | | IT4 | No | J1939-71 |
| | 0 | 0 | 254 | 134 | 65158 | Ignition Timing 5 | | IT5 | No | J1939-71 |
| | 0 | 0 | 254 | 135 | 65159 | Ignition Timing 6 | | IT6 | No | J1939-71 |
| | 0 | 0 | 254 | 136 | 65160 | Ignition Transformer Secondary Output 1 | | ISO1 | No | J1939-71 |
| | 0 | 0 | 254 | 137 | 65161 | Ignition Transformer Secondary Output 2 | | ISO2 | No | J1939-71 |
| | 0 | 0 | 254 | 138 | 65162 | Ignition Transformer Secondary Output 3 | | ISO3 | No | J1939-71 |
| | 0 | 0 | 254 | 139 | 65163 | Gaseous Fuel Pressure | | GFP | No | J1939-71 |
| | 0 | 0 | 254 | 140 | 65164 | Auxiliary Analog Information | Auxiliary Analog Information | AAI | No | J1939-71 |
| | 0 | 0 | 254 | 141 | 65165 | Vehicle Electrical Power #2 | Voltage data for the main vehicle Power Distribution system. | VEP2 | No | J1939-71 |
| | 0 | 0 | 254 | 142 | 65166 | Service 2 | | S2 | Yes | J1939-71 |
| | 0 | 0 | 254 | 143 | 65167 | Supply Pressure 2 | | SP2 | No | J1939-71 |
| | 0 | 0 | 254 | 144 | 65168 | Engine Torque History | | ETH | Yes | J1939-71 |
| | 0 | 0 | 254 | 145 | 65169 | Fuel Leakage | | FL | No | J1939-71 |
| | 0 | 0 | 254 | 146 | 65170 | Engine Information | | EI | No | J1939-71 |
| | 0 | 0 | 254 | 147 | 65171 | Engine Electrical System/Module Information | | EES | No | J1939-71 |
| | 0 | 0 | 254 | 148 | 65172 | Engine Auxiliary Coolant | | EAC | No | J1939-71 |
| | 0 | 0 | 254 | 149 | 65173 | Rebuild Information | | RBI | No | J1939-71 |
| | 0 | 0 | 254 | 150 | 65174 | Turbocharger Wastegate | | TCW | No | J1939-71 |
| | 0 | 0 | 254 | 151 | 65175 | Turbocharger Information 5 | | TCI5 | No | J1939-71 |
| | 0 | 0 | 254 | 152 | 65176 | Turbocharger Information 4 | | TCI4 | No | J1939-71 |
| | 0 | 0 | 254 | 153 | 65177 | Turbocharger Information 3 | | TCI3 | No | J1939-71 |
| | 0 | 0 | 254 | 154 | 65178 | Turbocharger Information 2 | | TCI2 | No | J1939-71 |
| | 0 | 0 | 254 | 155 | 65179 | Turbocharger Information 1 | | TCI1 | No | J1939-71 |
| | 0 | 0 | 254 | 156 | 65180 | Main Bearing Temperature 3 | | MBT3 | No | J1939-71 |
| | 0 | 0 | 254 | 157 | 65181 | Main Bearing Temperature 2 | | MBT2 | No | J1939-71 |
| | 0 | 0 | 254 | 158 | 65182 | Main Bearing Temperature 1 | | MBT1 | No | J1939-71 |
| | 0 | 0 | 254 | 159 | 65183 | Exhaust Port Temperature 5 | | EPT5 | No | J1939-71 |
| | 0 | 0 | 254 | 160 | 65184 | Exhaust Port Temperature 4 | | EPT4 | No | J1939-71 |
| | 0 | 0 | 254 | 161 | 65185 | Exhaust Port Temperature 3 | | EPT3 | No | J1939-71 |
| | 0 | 0 | 254 | 162 | 65186 | Exhaust Port Temperature 2 | | EPT2 | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 163 | 65187 | Exhaust Port Temperature 1 | | EPT1 | No | J1939-71 |
| | 0 | 0 | 254 | 164 | 65188 | Engine Temperature 2 | | ET2 | No | J1939-71 |
| | 0 | 0 | 254 | 165 | 65189 | Intake Manifold Information 2 | | IMT2 | No | J1939-71 |
| | 0 | 0 | 254 | 166 | 65190 | Intake Manifold Information 1 | | IMT1 | No | J1939-71 |
| | 0 | 0 | 254 | 167 | 65191 | Alternator Temperature | | AT | No | J1939-71 |
| | 0 | 0 | 254 | 168 | 65192 | Articulation Control | | AC | No | J1939-71 |
| | 0 | 0 | 254 | 169 | 65193 | Exhaust Oxygen 1 | | EO1 | No | J1939-71 |
| | 0 | 0 | 254 | 170 | 65194 | Alternate Fuel 2 | | AF2 | No | J1939-71 |
| | 0 | 0 | 254 | 171 | 65195 | Electronic Transmission Controller 6 | | ETC6 | No | J1939-71 |
| | 0 | 0 | 254 | 172 | 65196 | Wheel Brake Lining Remaining Information | | EBC4 | No | J1939-71 |
| | 0 | 0 | 254 | 173 | 65197 | Wheel Application Pressure High Range Information | | EBC3 | No | J1939-71 |
| | 0 | 0 | 254 | 174 | 65198 | Air Supply Pressure | Air Supply Pressure | AIR1 | No | J1939-71 |
| | 0 | 0 | 254 | 175 | 65199 | Fuel Consumption (Gaseous) | | GFC | No | J1939-71 |
| | 0 | 0 | 254 | 176 | 65200 | Trip Time Information 2 | | TTI2 | No | J1939-71 |
| | 0 | 0 | 254 | 177 | 65201 | ECU History | | EH | No | J1939-71 |
| | 0 | 0 | 254 | 178 | 65202 | Fuel Information 1 (Gaseous) | | GFI1 | No | J1939-71 |
| | 0 | 0 | 254 | 179 | 65203 | Fuel Information (Liquid) | | LFI | No | J1939-71 |
| | 0 | 0 | 254 | 180 | 65204 | Trip Time Information 1 | | TTI1 | No | J1939-71 |
| | 0 | 0 | 254 | 181 | 65205 | Trip Shutdown Information | | TSI | No | J1939-71 |
| | 0 | 0 | 254 | 182 | 65206 | Trip Vehicle Speed/Cruise Distance Information | | TVI | No | J1939-71 |
| | 0 | 0 | 254 | 183 | 65207 | Engine Speed/Load Factor Information | | LF | No | J1939-71 |
| | 0 | 0 | 254 | 184 | 65208 | Trip Fuel Information (Gaseous) | | GTFI | No | J1939-71 |
| | 0 | 0 | 254 | 185 | 65209 | Trip Fuel Information (Liquid) | | LTFI | No | J1939-71 |
| | 0 | 0 | 254 | 186 | 65210 | Trip Distance Information | | TDI | No | J1939-71 |
| | 0 | 0 | 254 | 187 | 65211 | Trip Fan Information | | TFI | No | J1939-71 |
| | 0 | 0 | 254 | 188 | 65212 | Compression/Service Brake Information | | CBI | No | J1939-71 |
| | 0 | 0 | 254 | 189 | 65213 | Fan Drive | This parameter group transfers status and measured information on the engine coolant fan. | FD | No | J1939-71 |
| | 0 | 0 | 254 | 190 | 65214 | Electronic Engine Controller 4 | | EEC4 | No | J1939-71 |
| | 0 | 0 | 254 | 191 | 65215 | Wheel Speed Information | | EBC2 | No | J1939-71 |
| | 0 | 0 | 254 | 192 | 65216 | Service Information | | SERV | Yes | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 193 | 65217 | High Resolution Vehicle Distance | | VDHR | No | J1939-71 |
| | 0 | 0 | 254 | 194 | 65218 | Electronic Retarder Controller 2 | | ERC2 | No | J1939-71 |
| | 0 | 0 | 254 | 195 | 65219 | Electronic Transmission Controller 5 | | ETC5 | No | J1939-71 |
| | 0 | 0 | 254 | 196 | 65220 | Reserved for ISO 11992 | | EBS22 | No | ISO 11992 |
| | 0 | 0 | 254 | 197 | 65221 | Electronic Transmission Controller 4 | | ETC4 | No | J1939-71 |
| | 0 | 0 | 254 | 198 | 65222 | Reserved for ISO 11992 | | EBS23 | No | ISO 11992 |
| | 0 | 0 | 254 | 199 | 65223 | Electronic Transmission Controller 3 | | ETC3 | No | J1939-71 |
| | 0 | 0 | 254 | 200 | 65224 | Reserved for ISO 11992 | | GPM22 | No | ISO 11992 |
| | 0 | 0 | 254 | 201 | 65225 | Reserved for ISO 11992 | | EBS12 | No | ISO 11992 |
| | 0 | 0 | 254 | 202 | 65226 | Active Diagnostic Trouble Codes | Active Diagnostic Trouble Codes | DM1 | Yes | J1939-73 |
| | 0 | 0 | 254 | 203 | 65227 | Previously Active Diagnostic Trouble Codes | | DM2 | Yes | J1939-73 |
| | 0 | 0 | 254 | 204 | 65228 | Diagnostics Data Clear/Reset for Previously Active DTCs | | DM3 | No | J1939-73 |
| | 0 | 0 | 254 | 205 | 65229 | Freeze Frame Parameters | | DM4 | Yes | J1939-73 |
| | 0 | 0 | 254 | 206 | 65230 | Diagnostic Readiness 1 | | DM5 | Yes | J1939-73 |
| | 0 | 0 | 254 | 207 | 65231 | Pending DTCs | | DM6 | Yes | J1939-73 |
| | 0 | 0 | 254 | 208 | 65232 | Test Results for Non-continuously Monitored Systems | | DM8 | Yes | J1939-73 |
| | 0 | 0 | 254 | 209 | 65233 | Oxygen Sensor Test Results | | DM9 | No | J1939-73 |
| | 0 | 0 | 254 | 210 | 65234 | Non-continuously Monitored System Test Identifiers Support | | DM10 | No | J1939-73 |
| | 0 | 0 | 254 | 211 | 65235 | Diagnostic Data Clear/Reset for Active DTCs | | DM11 | No | J1939-73 |
| | 0 | 0 | 254 | 212 | 65236 | Emissions Related Active DTCs | | DM12 | Yes | J1939-73 |
| | 0 | 0 | 254 | 213 | 65237 | Alternator Information | | AS | No | J1939-71 |
| | 0 | 0 | 254 | 214 | 65238 | Reserved for Network Management | | RESV1 | No | J1939-81 |
| | 0 | 0 | 254 | 215 | 65239 | Reserved | | RESV2 | No | J1939-81 |
| | 0 | 0 | 254 | 216 | 65240 | Commanded Address | Message that is used to assign a source address to a specific Controller Application Name. | CA | Yes | J1939-81 |
| | 0 | 0 | 254 | 217 | 65241 | Auxiliary Input/Output Status 1 | AUXIO PGNs are intended for use in which fixed mapping to functions is not possible. | AUXIO1 | No | J1939-71 |
| | 0 | 0 | 254 | 218 | 65242 | Software Identification | | SOFT | Yes | J1939-71 |
| | 0 | 0 | 254 | 219 | 65243 | Engine Fluid Level/Pressure 2 | | EFL/P2 | No | J1939-71 |
| | 0 | 0 | 254 | 220 | 65244 | Idle Operation | | IO | Yes | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 221 | 65245 | Turbocharger | | TC | No | J1939-71 |
| | 0 | 0 | 254 | 222 | 65246 | Air Start Pressure | | AIR2 | No | J1939-71 |
| | 0 | 0 | 254 | 223 | 65247 | Electronic Engine Controller 3 | | EEC3 | No | J1939-71 |
| | 0 | 0 | 254 | 224 | 65248 | Vehicle Distance | | VD | No | J1939-71 |
| | 0 | 0 | 254 | 225 | 65249 | Retarder Configuration | | RC | Yes | J1939-71 |
| | 0 | 0 | 254 | 226 | 65250 | Transmission Configuration | Total message length depends on total number of forward and reverse gear ratios. | TCFG | Yes | J1939-71 |
| | 0 | 0 | 254 | 227 | 65251 | Engine Configuration 1 | Engine configuration information | EC1 | Yes | J1939-71 |
| | 0 | 0 | 254 | 228 | 65252 | Shutdown | | SHUTDN | No | J1939-71 |
| | 0 | 0 | 254 | 229 | 65253 | Engine Hours, Revolutions | | HOURS | No | J1939-71 |
| | 0 | 0 | 254 | 230 | 65254 | Time/Date | | TD | No | J1939-71 |
| | 0 | 0 | 254 | 231 | 65255 | Vehicle Hours | | VH | No | J1939-71 |
| | 0 | 0 | 254 | 232 | 65256 | Vehicle Direction/Speed | | VDS | No | J1939-71 |
| | 0 | 0 | 254 | 233 | 65257 | Fuel Consumption (Liquid) | | LFC | No | J1939-71 |
| | 0 | 0 | 254 | 234 | 65258 | Vehicle Weight | | VW | No | J1939-71 |
| | 0 | 0 | 254 | 235 | 65259 | Component Identification | | CI | Yes | J1939-71 |
| | 0 | 0 | 254 | 236 | 65260 | Vehicle Identification | | VI | Yes | J1939-71 |
| | 0 | 0 | 254 | 237 | 65261 | Cruise Control/Vehicle Speed Setup | | CCSS | No | J1939-71 |
| | 0 | 0 | 254 | 238 | 65262 | Engine Temperature 1 | | ET1 | No | J1939-71 |
| | 0 | 0 | 254 | 239 | 65263 | Engine Fluid Level/Pressure 1 | | EFL/P1 | No | J1939-71 |
| | 0 | 0 | 254 | 240 | 65264 | Power Takeoff Information | | PTO | No | J1939-71 |
| | 0 | 0 | 254 | 241 | 65265 | Cruise Control/Vehicle Speed | | CCVS | No | J1939-71 |
| | 0 | 0 | 254 | 242 | 65266 | Fuel Economy (Liquid) | | LFE | No | J1939-71 |
| | 0 | 0 | 254 | 243 | 65267 | Vehicle Position | | VP | No | J1939-71 |
| | 0 | 0 | 254 | 244 | 65268 | Tire Condition | Tire Condition Message | TIRE | No | J1939-71 |
| | 0 | 0 | 254 | 245 | 65269 | Ambient Conditions | | AMB | No | J1939-71 |
| | 0 | 0 | 254 | 246 | 65270 | Inlet/Exhaust Conditions 1 | | IC1 | No | J1939-71 |
| | 0 | 0 | 254 | 247 | 65271 | Vehicle Electrical Power 1 | | VEP1 | No | J1939-71 |
| | 0 | 0 | 254 | 248 | 65272 | Transmission Fluids 1 | | TRF1 | No | J1939-71 |
| | 0 | 0 | 254 | 249 | 65273 | Axle Information | Axle information message | AI | No | J1939-71 |
| | 0 | 0 | 254 | 250 | 65274 | Brakes | | B | No | J1939-71 |
| | 0 | 0 | 254 | 251 | 65275 | Retarder fluids | | RF | No | J1939-71 |
| | 0 | 0 | 254 | 252 | 65276 | Dash Display | | DD | No | J1939-71 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 254 | 253 | 65277 | Alternate Fuel 1 | | A1 | No | J1939-71 |
| | 0 | 0 | 254 | 254 | 65278 | Auxiliary Water Pump Pressure | | AWPP | No | J1939-71 |
| | 0 | 0 | 254 | 255 | 65279 | Water in Fuel Indicator | | WFI | No | J1939-71 |
| | 0 | 0 | 255 | 0 | 65280 | Proprietary B (first entry) | | PropB_00 | Yes | J1939-21 |
| | 0 | 0 | 255 | 255 | 65535 | Proprietary B (last entry) | | PropB_FF | Yes | J1939-21 |
| | 0 | 1 | 237 | DA | 126208 | NMEA - Request/Command/Acknowledge group function | The Request / Command / Acknowledge Group type of function is defined by first field. | | No | NMEA 2000 |
| | 0 | 1 | 238 | DA | 126464 | PGN List - Transmit/Receive PGN's group function | The Transmit / Receive PGN List Group type of function is defined by first field. | | No | NMEA 2000 |
| | 0 | 1 | 239 | DA | 126720 | Proprietary A2 | This proprietary PG uses the Destination Specific PDU Format allowing manufacturers to direct their proprietary communications to a specific destination node. | PropA2 | Yes | J1939-21 |
| | 0 | 1 | 240 | 16 | 126992 | System Time | The purpose of this PGN is to provide a regular transmission of UTC time and date. | | No | NMEA 2000 |
| | 0 | 1 | 240 | 20 | 126996 | Product Information | Provides product information onto the network that could be important for determining quality of data coming from this product. | | No | NMEA 2000 |
| | 0 | 1 | 240 | 22 | 126998 | Configuration Information | Free-form alphanumeric fields describing the installation (e.g., starboard engine room location) of the device. | | No | NMEA 2000 |
| | 0 | 1 | 241 | 5 | 127237 | Heading/Track Control | Sends Commands to, and receives data from, heading control systems. | | No | NMEA 2000 |
| | 0 | 1 | 241 | 13 | 127245 | Rudder | Rudder order command in direction or angle with current rudder angle reading. | | No | NMEA 2000 |
| | 0 | 1 | 241 | 18 | 127250 | Vessel Heading | Heading sensor value with a flag for True or Magnetic. | | No | NMEA 2000 |
| | 0 | 1 | 241 | 19 | 127251 | Rate of Turn | Rate of Turn PGN added in version 1.004 of this standard. | | No | NMEA 2000 |
| | 0 | 1 | 241 | 25 | 127257 | Attitude | This PGN provides a single transmission that describes the position of a vessel relative to both horizontal and vertical planes. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 0 | 127488 | Engine Parameters, Rapid Update | Provides data with a high update rate for a specific engine in a single frame message. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 1 | 127489 | Engine Parameters, Dynamic | Used to provide real-time operational data and status relevant to a specific engine, indicated by the engine instance field. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 5 | 127493 | Transmission Parameters, Dynamic | Used to provide the operational state and internal operating parameters of a specific transmission. | | No | NMEA 2000 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 242 | 9 | 127497 | Trip Parameters, Small Craft | Trip engine hours and fuel consumption. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 10 | 127498 | Engine Parameters, Static | Provides identification information and rated engine speed for the engine indicated by the engine instance field. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 13 | 127501 | Binary Switch Bank Status | Universal status report for multiple banks of two-state indicators. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 14 | 127502 | Switch Bank Control | Universal commands to multiple banks of two-state devices. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 17 | 127505 | Fluid Level | Fluid Level contains an instance number, level of fluid, and type of fluid. | | No | NMEA 2000 |
| | 0 | 1 | 242 | 20 | 127508 | Battery Status | Provides parametric data for a specific battery, indicated by the battery instance field. | | No | NMEA 2000 |
| | 0 | 1 | 245 | 3 | 128259 | Speed | The purpose of this PGN is to provide a single transmission that describes the motion of a vessel. | | No | NMEA 2000 |
| | 0 | 1 | 245 | 11 | 128267 | Water Depth | Water depth relative to the transducer and offset of the measuring transducer. | | No | NMEA 2000 |
| | 0 | 1 | 245 | 19 | 128275 | Distance Log | This PGN provides the cumulative voyage distance traveled since the last reset. | | No | NMEA 2000 |
| | 0 | 1 | 246 | 8 | 128520 | Tracked Target Data | Message for reporting status and target data from tracking radar external devices. | | No | NMEA 2000 |
| | 0 | 1 | 248 | 1 | 129025 | Position, Rapid Update | This PGN provides latitude and longitude referenced to WGS84. | | No | NMEA 2000 |
| | 0 | 1 | 248 | 2 | 129026 | COG & SOG, Rapid Update | This PGN is a single frame PGN that provides Course Over Ground (COG) and Speed Over Ground (SOG). | | No | NMEA 2000 |
| | 0 | 1 | 248 | 5 | 129029 | GNSS Position Data | This PGN conveys a comprehensive set of Global Navigation Satellite System (GNSS) parameters, including position information. | | No | NMEA 2000 |
| | 0 | 1 | 248 | 9 | 129033 | Time & Date | This PGN has a single transmission that provides: UTC Time, UTC Date, and Local offset. | | No | NMEA 2000 |
| | 0 | 1 | 248 | 20 | 129044 | Datum | Local geodetic datum and datum offsets from a reference datum. | | No | NMEA 2000 |
| | 0 | 1 | 248 | 21 | 129045 | User Datum Settings | Transformation parameters for converting from WGS-84 to other Datums. | | No | NMEA 2000 |
| | 0 | 1 | 249 | 3 | 129283 | Cross Track Error | This PGN provides the magnitude of position error perpendicular to the desired course. | | No | NMEA 2000 |
| | 0 | 1 | 249 | 4 | 129284 | Navigation Data | This PGN provides essential navigation data for a route following. | | No | NMEA 2000 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 249 | 11 | 129291 | Set & Drift, Rapid Update | The Set and Drift effect on the Vessel is the direction and the speed of a current. | | No | NMEA 2000 |
| | 0 | 1 | 249 | 21 | 129301 | Time to/from Mark | Time to go to or elapsed from a generic mark, that may be non-fixed. | | No | NMEA 2000 |
| | 0 | 1 | 249 | 22 | 129302 | Bearing and Distance between two Marks | Bearing and distance from the origin mark to the destination mark, calculated at the origin mark, for any two arbitrary generic marks. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 2 | 129538 | GNSS Control Status | GNSS common satellite receiver parameter status | | No | NMEA 2000 |
| | 0 | 1 | 250 | 3 | 129539 | GNSS DOPs | This PGN provides a single transmission containing GNSS status and dilution of precision components (DOP). | | No | NMEA 2000 |
| | 0 | 1 | 250 | 4 | 129540 | GNSS Sats in View | GNSS information on current satellites in view tagged by sequence ID. Information includes PRN, elevation, azimuth, and SNR. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 5 | 129541 | GPS Almanac Data | This PGN provides a single transmission that contains relevant almanac data for GPS products. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 6 | 129542 | GNSS Pseudorange Noise Statistics | GNSS pseudorange measurement noise statistics can be translated in the position domain. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 9 | 129545 | GNSS RAIM Output | This PGN is used to provide the output from a GNSS Receiver's Receiver Autonomous Integrity Monitoring (RAIM) process. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 10 | 129546 | GNSS RAIM Settings | This PGN is used to report the control parameters for a GNSS Receiver Autonomous Integrity Monitoring (RAIM) process. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 11 | 129547 | GNSS Pseudorange Error Statistics | This PGN is used to support Receiver Autononmous Integrity Monitoring (RAIM). | | No | NMEA 2000 |
| | 0 | 1 | 250 | 13 | 129549 | DGNSS Corrections | This PGN provides a means to pass differential GNSS corrections between NMEA 2000 devices. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 14 | 129550 | GNSS Differential Correction Receiver Interface | GNSS common differential correction receiver parameter status. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 15 | 129551 | GNSS Differential Correction Receiver Signal | GNSS differential correction receiver status tagged by sequence ID. | | No | NMEA 2000 |
| | 0 | 1 | 250 | 20 | 129556 | GLONASS Almanac Data | This PGN provides a single transmission that contains relevant almanac data for Glonass products. | | No | NMEA 2000 |
| | 0 | 1 | 251 | 7 | 129799 | Radio Frequency/Mode/Power | This PGN provides status and control for a Radiotelephone, connected to a NMEA 2000 network. | | No | NMEA 2000 |

| Rev | EDP | DP | PF | PS | PGN | Parameter Group Label | Description | Acronym | MP | PGN Doc |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 251 | 16 | 129808 | DSC Call Information | This PGN provides Digital Selective Calling (DSC) data according to ITU M.493-9 with optional expansion according to ITU M.821- | | No | NMEA 2000 |
| | 0 | 1 | 252 | 4 | 130052 | Loran-C TD Data | This provides Time Difference (TD) lines of position of Loran-C signals relative to a single Group Repetition Interval. | | No | NMEA 2000 |
| | 0 | 1 | 252 | 5 | 130053 | Loran-C Range Data | This provides Propagation times (Ranges) of Loran-C signals relative to a single Group Repetition Interval. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 2 | 130306 | Wind Data | Direction and speed of Wind. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 6 | 130054 | Loran-C Signal Data | SNR, ECD, and ASF values of Loran-C signals. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 6 | 130310 | Environmental Parameters | Local atmospheric environmental conditions | | No | NMEA 2000 |
| | 0 | 1 | 253 | 16 | 130320 | Tide Station Data | Tide station measurement data including station location, numeric identifier, and name. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 17 | 130321 | Salinity Station Data | Salinity station measurement data including station location, numeric identifier, and name. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 18 | 130322 | Current Station Data | Current station measurement data including station location, numeric identifier, and name. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 19 | 130323 | Meteorological Station Data | Meteorological station measurement data including station location, numeric identifier, and name. | | No | NMEA 2000 |
| | 0 | 1 | 253 | 20 | 130324 | Moored Buoy Station Data | Moored buoy measurement data including station location and numeric identifier. | | No | NMEA 2000 |
| | 0 | 1 | 254 | 16 | 130576 | Small Craft Status | Provides data on various small craft control surfaces and speed through the water. | | No | NMEA 2000 |
| | 0 | 1 | 254 | 17 | 130577 | Direction Data | The purpose of this PGN is to group three fundamental vectors related to vessel motion. | | No | NMEA 2000 |
| | 0 | 1 | 254 | 18 | 130578 | Vessel Speed Components | This PGN provides a single transmission that accurately describes the speed of a vessel by component vectors. | | No | NMEA 2000 |

# APPENDIX B

# ADDRESS AND IDENTITY ASSIGNMENTS

# Table B1
# J1939 Industry Groups

| Rev | Industry Group | Industry | Description |
|---|---|---|---|
| | 0 | Global, applies to all | |
| | 1 | On-Highway Equipment | |
| | 2 | Agricultural and Forestry Equipment | |
| | 3 | Construction Equipment | |
| | 4 | Marine | |
| | 5 | Industrial-Process Control-Stationary (Gen-Sets) | |
| | 6 | Reserved for future assignment by SAE | |
| | 7 | Reserved for future assignment by SAE | |

# Table B2
# J1939 Preferred Addresses
# Industry Group #0 – Global

Note: Preferred Addresses 128 thru 247 are Industry Group specific. See Tables B3 thru B9.

| Rev | SA | Controller Application | Comments | Associated NAME Function |
|---|---|---|---|---|
| | 0 | Engine #1 | The #1 on the Engine CA is to identify that this is the first PA being used for the particular function, Engine. It may only be used for the NAME Function of 0, Function Instance 0, and an ecu instance of 0, which is commonly know as the “first engine”. | 0 |
| | 1 | Engine #2 | The #2 on the Engine CA is to identify that this is the second PA available for use for the function, Engine. It may be used by the “second” engine (Function 0, Function Instance 1, ECU Instance 0), but it may also be used by the second ecu on the first engine (Function 0, Function Instance 0, ECU Instance 1), if there is no second engine. | 0 |
| | 2 | Turbocharger | Turbocharger used on the engine. | |
| | 3 | Transmission #1 | The first transmission - may only be used for the NAME Function of 3, Function Instance 0, and an ecu instance of 0. | 3 |
| | 4 | Transmission #2 | The second PA available for use for the function, Transmission. It may be used by the “second” transmission (Function 3, Function Instance 1, ECU Instance 0), but it may also be used by the second ecu on the first transmission (Function 3, Function Instance 0, ECU Instance 1), if there is no second transmission. | 3 |

| Rev | SA | Controller Application | Comments | Associated NAME Function |
|---|---|---|---|---|
| | 5 | Shift Console - Primary | The shift console mounted in the normal drivers position | 5 |
| | 6 | Shift Console - Secondary | A shift console mounted remotely from the normal drivers position (May not be used for any ecu instances of the primary shift console) | 5 |
| | 7 | Power TakeOff - (Main or Rear) | | 6 |
| | 8 | Axle - Steering | | 7 |
| | 9 | Axle - Drive #1 | The first drive axle - may only be used for the NAME Function of 8, Function Instance 0, and an ecu instance of 0. | 8 |
| | 10 | Axle - Drive #2 | The second PA available for use for the function, Axle, Drive. It may be used by the “second” drive axle (Function 8, Function Instance 1, ECU Instance 0), but it may also be used by the second ecu on the first drive axle (Function 8, Function Instance 0, ECU Instance 1), if there is no second drive axle. | 8 |
| | 11 | Brakes - System Controller | | 9 |
| | 12 | Brakes - Steer Axle | | 10 |
| | 13 | Brakes - Drive axle #1 | The brakes on the first drive axle - may only be used for the NAME Function of 11, Function Instance 0, and an ecu instance of 0. | 11 |
| | 14 | Brakes - Drive Axle #2 | The second PA available for use for the function, Brakes on a Drive Axle. It may be used by the “second” drive axle brakes (Function 11, Function Instance 1, ECU Instance 0), but it may also be used by the second ecu on the first drive axle brakes (Function 11, Function Instance 0, ECU Instance 1), if there is no second drive axle brakes. | 11 |
| | 15 | Retarder - Engine | Engine Compression Braking | 12 |
| | 16 | Retarder - Driveline | | 13 |
| | 17 | Cruise Control | Speed-based control | 14 |
| | 18 | Fuel System | | 15 |
| | 19 | Steering Controller | | 16 |
| | 20 | Suspension - Steer Axle | | 17 |
| | 21 | Suspension - Drive Axle #1 | The suspension on the first drive axle - may only be used for the NAME Function of 18, Function Instance 0, and an ecu instance of 0. | 18 |
| | 22 | Suspension - Drive Axle #2 | The second PA available for use for the function, suspension on drive axle. It may be used by the “second” drive axle’s suspension system (Function 18, Function Instance 1, ECU Instance 0), but when there is no second drive axle it may be used by the second ecu on the first drive axle’s suspension (Function 18, Function Instance 0, ECU Instance 1). | 18 |
| | 23 | Instrument Cluster #1 | The first instrument cluster - may only be used for the NAME Function of 19, Function Instance 0, and an ecu instance of 0. | 19 |
| | 24 | Trip Recorder | | 20 |

| Rev | SA | Controller Application | Comments | Associated NAME Function |
|---|---|---|---|---|
| | 25 | Passenger-Operator Climate Control #1 | The first climate control - may only be used for the NAME Function of 21, Function Instance 0, and an ecu instance of 0, and must be associated with the driver (operator) climate control, when there are multiple climate control systems. | 21 |
| | 26 | Alternator/Electrical Charging System | Vehicle's primary charging controller | 53 |
| | 27 | Aerodynamic Control | | 22 |
| | 28 | Vehicle Navigation | | 23 |
| | 29 | Vehicle Security | | 24 |
| | 30 | Electrical System | This may include Load Centers, Fuseboxes, & Power Distribution boards | 67 |
| | 31 | Starter System | | 59 |
| | 32 | Tractor-Trailer Bridge #1 | The first Tractor mounted bridge leading to trailer(s) - may only be used for the NAME Function of , Function Instance 0, and an ecu instance of 0. | |
| | 33 | Body Controller | | 26 |
| | 34 | Auxiliary Valve Control | | |
| | 35 | Hitch Control | Straight truck hitch (NOT Ag hitch – it is in IG 2) | |
| | 36 | Power TakeOff (Front or Secondary) | | 27 |
| | 37 | Off Vehicle Gateway | | 28 |
| | 38 | Virtual Terminal (in cab) | | 29 |
| | 39 | Management Computer #1 | The first Management Computer - may only be used for the NAME Function of 30, Function Instance 0, and an ecu instance of 0. | 30 |
| | 40 | Cab Display #1 | The first Cab Display - may only be used for the NAME Function of 60, Function Instance 0, and an ecu instance of 0. | 60 |
| | 41 | Retarder, Exhaust, Engine #1 | The first engine exhaust retarder - may only be used for the NAME Function of 12, Function Instance 0, and an ecu instance of 0. | 12 |
| | 42 | Headway Controller | Forward-looking collision warning, collision avoidance, speed controller, or speed matching | 32 |
| | 43 | On-Board Diagnostic Unit | | 62 |
| | 44 | Retarder, Exhaust, Engine #2 | The second PA available for use for the function, engine exhaust retarder. It may be used by the “second” engine’s exhaust retarder (Function 12, Function Instance 1, ECU Instance 0), but in cases without a second engine it may also be used by the second exhaust retarder on the first engine or by the second ecu on the first exhaust retarder on the first engine (Function 12, Function Instance 0, ECU Instance 1). | 12 |
| | 45 | Endurance Braking System | | 64 |
| | 46 | Hydraulic Pump Controller | | 34 |
| | 47 | Suspension - System Controller #1 | The first Suspension - System Controller - may only be used for the NAME Function of 35, Function Instance 0, and an ecu instance of 0. | 35 |
| | 48 | Pneumatic - System Controller | | 36 |

| Rev | SA | Controller Application | Comments | Associated NAME Function |
|---|---|---|---|---|
| | 49 | Cab Controller - Primary | | 37 |
| | 50 | Cab Controller - Secondary | | 37 |
| | 51 | Tire Pressure Controller | | 38 |
| | 52 | Ignition Control Module #1 | The first Ignition Control Module - may only be used for the NAME Function of 39, Function Instance 0, and an ecu instance of 0. | 39 |
| | 53 | Ignition Control Module #2 | The second PA available for use for the function, Ignition Control Module. It may be used by the "second" engine's Ignition Control Module (Function 39, Function Instance 1, ECU Instance 0), but in cases without a second engine it may also be used by the second Ignition Control Module on the first engine or even by the second ecu on the first Ignition Control Module on the first engine (Function 39, Function Instance 0, ECU Instance 1) when there is only one Ignition Control Module Instance. | 39 |
| | 54 | Seat Control #1 | The first seat control module - may only be used for the NAME Function of 40, Function Instance 0, and an ecu instance of 0, and must be associated with the driver seat, when there are multiple seats with separate controls. | 40 |
| | 55 | Lighting - Operator Controls | | 41 |
| | 56 | Rear Axle Steering Controller #1 | | |
| | 57 | Water Pump Controller | | 42 |
| | 58 | Passenger-Operator Climate Control #2 | The second PA available for climate control - must be associated with the passenger climate control (NAME Function of 21, function instance 1, and an ecu instance of 0), when there are multiple climate control systems. If only one climate control system then may be used for the second ecu of the climate control (Function 21, Function Instance 0, ECU Instance of 1). | 21 |
| | 59 | Transmission Display - Primary | Display to operate specifically in conjunction with the transmission control mounted in the normal drivers position | 43 |
| | 60 | Transmission Display - Secondary | Secondary display to operate specifically in conjunction with the transmission control mounted remotely from the normal drivers position (May not be used for any ecu instances of the primary transmission display) | 43 |
| | 61 | Exhaust Emission Controller | | 44 |
| | 62 | Vehicle Dynamic Stability Controller | | 45 |
| | 63 | Oil Sensor | | 46 |
| | 64 | Suspension - System Controller #2 | | 35 |
| | 65 | Information System Controller #1 | The first Information System Controller - may only be used for the NAME Function of 47, Function Instance 0, and an ecu instance of 0. | 47 |
| | 66 | Ramp Control | Control of ramps, lifts, or tailgates | 48 |
| | 67 | Clutch/Converter Unit | Control of either the clutch and/or converter | 49 |

| Rev | SA | Controller Application | Comments | Associated NAME Function |
|---|---|---|---|---|
| | 68 | Auxiliary Heater #1 | The first Auxiliary Heater - may only be used for the NAME Function of 50, Function Instance 0, and an ecu instance of 0. | 50 |
| | 69 | Auxiliary Heater #2 | The second PA available for auxiliary heater - must be associated with the second auxiliary heater control (NAME Function of 50, Function Instance 1, and an ecu instance of 0), when there are multiple auxiliary heaters. If only one auxiliary heater control on the vehicle then may be used for the second ecu of the first auxiliary heater (Function 50, Function Instance 0, ECU Instance of 1). | 50 |
| | 70 | Engine Valve Controller | Electronic control used to control actuation of engine intake and/or exhaust valves | 63 |
| | 71 | Chassis Controller #1 | The first Chassis Controller - may only be used for the NAME Function of 52, Function Instance 0, and an ecu instance of 0. | 52 |
| | 72 | Chassis Controller #2 | The second PA available for chassis control - must be associated with the second chassis (NAME Function of 52, Function Instance 1, and an ecu instance of 0), when there are multiple chassis. If only one chassis on the vehicle then may be used for the second ecu of the first chassis (Function 52, Function Instance 0, ECU Instance of 1). | 52 |
| | 73 | Propulsion Battery Charger | A device used to charge propulsion batteries in an electric vehicle from an off-board source of electrical energy. | 31 |
| | 74 | Communications Unit, Cellular | Cellular communications device | 54 |
| | 75 | Communications Unit, Satellite | Satellite communications device | 55 |
| | 76 | Communications Unit, Radio | Radio communications device, either receiver only, transmitter only or transceiver | 56 |
| | 77 | Steering Column Unit | Device that gathers the operator inputs from switches/levers/etc located in and/or around the steering wheel/column | 57 |
| | 78 | Fan Drive Controller | Controls the main cooling fan operation | 58 |
| | 79 | Seat Control #2 | The second PA available for seat controls - must be associated with the passenger seat (NAME Function of 40, Function Instance 1, and an ecu instance of 0), when there are multiple seats with separate controls. If only one seat then may be used for the second ecu of the seat control (Function 40, Function Instance 0, ECU Instance of 1). | 40 |
| | 80 | Parking brake controller | Module controlling the parking brake | 9 |
| | 81 | Aftertreatment system gas intake | Used for exhaust gas measurement such NOx or oxygen, etc. | 68 |
| | 82 | Aftertreatment system gas outlet | Used for exhaust gas measurement such NOx or oxygen, etc. | 68 |
| | 83 | Safety Restraint System | The safety restraint system can be for controlling activation of airbags, belt tensioners, roll over protection systems, etc. | |
| | 84 | Cab Display #2 | The second Cab Display, this can used for supplemental displays such as retarder display, driver information display, etc. | |

| Rev | SA | Controller Application | Comments | Associated NAME Function |
|---|---|---|---|---|
| | 85 | thru 127 are reserved for future assignment by SAE | | |
| | 248 | File Server / Printer | On-board file and/or print server | 61 |
| (R) | 249 | Off Board Diagnostic-Service Tool #1 | The address for the first off board diagnostic service tool - may only be used for the NAME Function of 129, Industry Group 0, Function Instance 0, and an ECU instance of 0. | |
| (R) | 250 | Off Board Diagnostic-Service Tool #2 | The second preferred address available for use for the function “Off Board Diagnostic-Service Tool”. It should only be used by the “second” Off Board Diagnostic-Service Tool (Function 129, Industry Group 0, Function Instance 1, ECU Instance 0). | |
| (R) | 251 | On-Board Data Logger | | |
| | 252 | Reserved for Experimental Use | | |
| | 253 | Reserved for OEM | | |
| | 254 | Null Address | | |
| | 255 | GLOBAL (All-Any Node) | | |

# Table B3
# J1939 Preferred Addresses
# Industry Group #1 – On-Highway Equipment

| Rev | SA | ECU-Module | Definition |
|---|---|---|---|
| | 128 | thru 160 are reserved for future assignment by SAE but available for use by self configurable ECUs | Used for dynamic address assignment |
| | 161 | Fifth Wheel Smart Systems | Any systems relative to the operation & status/safety monitoring of the fifth wheel coupler system (including mounting bracket). |
| | 162 | Slope Sensor | A device that measures the slope along an axis. |
| | 163 | Catalyst Fluid Sensor | The Catalyst Fluid Sensor can measure the catalyst fluid temperature, the catalyst fluid level and the catalyst fluid quality. |
| | 164 | On Board Diagnostic Unit #2 | Controller used to report On Board Diagnostics |
| | 165 | Rear Steering Axle Controller #2 | Rear steering controller 2 for axle group |
| | 166 | Rear Steering Axle Controller #3 | Rear steering controller 3 for axle group |
| | 167 | Instrument Cluster #2 | A second optional, or auxiliary, gauge display for a vehicle |
| | 168 | Trailer #5 Bridge | Bridge for fifth towed Vehicle System (e.g. trailer or dolly) |
| | 169 | Trailer #5 Lighting-electrical | |
| | 170 | Trailer #5 Brakes (ABS-EBS) | |
| | 171 | Trailer #5 Reefer | |
| | 172 | Trailer #5 Cargo | |
| | 173 | Trailer #5 Chassis-Suspension | |
| | 174 | Other Trailer #5 Devices | Recommended address space for subnetwork devices |
| | 175 | Other Trailer #5 Devices | Recommended address space for subnetwork devices |
| | 176 | Trailer #4 Bridge | Bridge for fourth towed Vehicle System (e.g. trailer or dolly) |
| | 177 | Trailer #4 Lighting-electrical | |
| | 178 | Trailer #4 Brakes (ABS-EBS) | |
| | 179 | Trailer #4 Reefer | |
| | 180 | Trailer #4 Cargo | |
| | 181 | Trailer #4 Chassis-Suspension | |
| | 182 | Other Trailer #4 Devices | Recommended address space for subnetwork devices |
| | 183 | Other Trailer #4 Devices | Recommended address space for subnetwork devices |
| | 184 | Trailer #3 Bridge | Bridge for third towed Vehicle System (e.g. trailer or dolly) |
| | 185 | Trailer #3 Lighting-electrical | |
| | 186 | Trailer #3 Brakes (ABS-EBS) | |
| | 187 | Trailer #3 Reefer | |
| | 188 | Trailer #3 Cargo | |
| | 189 | Trailer #3 Chassis-Suspension | |
| | 190 | Other Trailer #3 Devices | Recommended address space for subnetwork devices |
| | 191 | Other Trailer #3 Devices | Recommended address space for subnetwork devices |
| | 192 | Trailer #2 Bridge | Bridge for second towed Vehicle System (e.g. trailer or dolly) |
| | 193 | Trailer #2 Lighting-electrical | |

| Rev | SA | ECU-Module | Definition |
|---|---|---|---|
| | 194 | Trailer #2 Brakes (ABS-EBS) | |
| | 195 | Trailer #2 Reefer | |
| | 196 | Trailer #2 Cargo | |
| | 197 | Trailer #2 Chassis-Suspension | |
| | 198 | Other Trailer #2 Devices | Recommended address space for subnetwork devices |
| | 199 | Other Trailer #2 Devices | Recommended address space for subnetwork devices |
| | 200 | Trailer #1 Bridge | Bridge for first towed Vehicle System (e.g. trailer or dolly) |
| | 201 | Trailer #1 Lighting-electrical | |
| | 202 | Trailer #1 Brakes (ABS-EBS) | |
| | 203 | Trailer #1 Reefer | |
| | 204 | Trailer #1 Cargo | |
| | 205 | Trailer #1 Chassis-Suspension | |
| | 206 | Other Trailer #1 Devices | Recommended address space for subnetwork devices |
| | 207 | Other Trailer #1 Devices | Recommended address space for subnetwork devices |
| | 208 | thru 227 are reserved for future assignment by SAE | To be used for individual preassigned addresses |
| | 228 | Steering Input Unit | May be used for measuring steering angle, steering torsion, steering force feedback, etc. |
| | 229 | Body Controller #2 | This is for the second instance of a body controller on a chassis. |
| | 230 | Body-to-Vehicle Interface Control | Interface controller managing interaction of vehicle functions and body functions. May be a combination of body signals and gateway functionalities. |
| | 231 | Articulation Turntable Control | Controller managing the articulation turntable for joined body buses. |
| | 232 | Forward Road Image Processor | Views the road ahead for electronic recognition of several items |
| | 233 | Door Controller #3 | |
| | 234 | Door Controller #4 | |
| | 235 | Tractor/Trailer Bridge #2 | Second tractor mounted bridge leading to trailer(s) |
| | 236 | Door Controller #1 | cab drivers side or first door |
| | 237 | Door Controller #2 | cab codrivers side or second door |
| | 238 | Tachograph | |
| | 239 | Electric Propulsion Control Unit #1 | First or only on-board device converting torque commands to current commands in an electric vehicle system |
| | 240 | Electric Propulsion Control Unit #2 | Second on-board device converting torque commands to current commands in an electric vehicle system |
| | 241 | Electric Propulsion Control Unit #3 | Third on-board device converting torque commands to current commands in an electric vehicle system |
| | 242 | Electric Propulsion Control Unit #4 | Fourth on-board device converting torque commands to current commands in an electric vehicle system |
| | 243 | Battery Pack Monitor #1 | Device to monitor battery pack #1 |
| | 244 | Battery Pack Monitor #2 | Device to monitor battery pack #2 |
| | 245 | Battery Pack Monitor #3 | Device to monitor battery pack #3 |
| | 246 | Battery Pack Monitor #4 | Device to monitor battery pack #4 |
| | 247 | Auxiliary Power Unit (APU) | Device used to provide auxiliary power, such as electrical, hydraulic, pneumatic, or rotary |

# Table B4
# J1939 Preferred Addresses
# Industry Group #2 – Agricultural and Forestry Equipment

| Rev | SA | DC | DC Instance | Function | Description | Function Instance | ECU Instance |
|---|---|---|---|---|---|---|---|
| | | | | | All devices in IG2 using preferred addresses shall be self-configurable. IG2 devices shall include the value of the first full 32 bits of NAME field. | | |
| | 128 | | | thru 207 are reserved for dynamic address assignment | Used for dynamic address assignment (self-configurable) | | |
| | 208 | | | thru 238 are reserved for future assignment by SAE | Used for individual preassigned addresses | | |
| | 239 | 0 | 0 | Depth Control | | 0 | 0 |
| | 240 | 0 | 0 | Tractor ECU | Gateway between the power train and the implement bus | 0 | 0 |
| | 241 | 7 | 0 | Tailings Monitoring | | 0 | 0 |
| | 242 | 7 | 0 | Header Control | | 0 | 0 |
| | 243 | 7 | 0 | Product Loss Monitoring | | 0 | 0 |
| | 244 | 7 | 0 | Product Moisture Sensing | | 0 | 0 |
| | 245 | 0 | 0 | Non Virtual Terminal Display (Implement Bus) | A non Virtual Terminal cab display connected to the implement bus | 0 | 0 |
| | 246 | 0 | 0 | Operator Controls - Machine Specific | | 0 | 0 |
| | 247 | 0 | 0 | Task Control (Mapping Computer) | | 0 | 0 |

# Table B5
# J1939 Preferred Addresses
# Industry Group #3 – Construction Equipment

| Rev | SA | ECU-Module | Definition |
|---|---|---|---|
| | 128 | thru 207 are reserved for future assignment by SAE | Used for dynamic address assignment (self-configurable) |
| | 208 | thru 223 are reserved for future assignment | Used for individual preassigned addresses |
| | 224 | Rotation Sensor | A device that measures the rotational angle around an axis. |
| | 225 | Lift Arm Controller | Controls the lift arms and tilt functions on a construction loader, skid steer loader, or similar machine. Refers to the main elevation and tilt functions of the machine's lift arms but may not include the control of the attachment itself. |
| | 226 | Slope Sensor | A device that measures the slope along an axis. |
| | 227 | Main Controller - Skid Steer Loader | Primary system controller for skid steer loader |
| | 228 | Loader Control | Controls the hydraulic system of the loader attachment of a loader/backhoe, wheel loader, skid steer, or similar vehicle |
| | 229 | Laser Tracer | A device that receives a laser strike and reports the vertical and horizontal position. |
| | 230 | Land Leveling System Display | This device displays position information at a remote location. |
| | 231 | Single Land Leveling System Supervisor | This device is the Land Leveling System Supervisor for a single control loop. |
| | 232 | Land Leveling Electric Mast | A device that moves a Sensor to maintain a specific position. |
| | 233 | Single Land Leveling System Operator Interface | A component that allows the user to control the Land Leveling System and display information about the operation of the system. |
| | 234 | Laser Receiver | A device that receives a laser strike, and reports the specific position. |
| | 235 | Supplemental Sensor Processing Unit #1 | |
| | 236 | Supplemental Sensor Processing Unit #2 | |
| | 237 | Supplemental Sensor Processing Unit #3 | |
| | 238 | Supplemental Sensor Processing Unit #4 | |
| | 239 | Supplemental Sensor Processing Unit #5 | |
| | 240 | Supplemental Sensor Processing Unit #6 | |
| | 241 | Engine Monitor #1 | |
| | 242 | Engine Monitor #2 | |
| | 243 | Engine Monitor #3 | |
| | 244 | Engine Monitor #4 | |
| | 245 | Engine Monitor #5 | |
| | 246 | Engine Monitor #6 | |
| | 247 | Engine Monitor #7 | |

# Table B6
# J1939 Preferred Addresses
# Industry Group #4 – Marine Equipment

| Rev | SA | ECU-Module | Definition |
|---|---|---|---|
| | 128 | thru 207 are reserved for future assignment by SAE | Used for dynamic address assignment (self-configurable) |
| | 208 | thru 235 are reserved for future assignment | Used for individual preassigned addresses |
| | 236 | Display #1 for Protection System for Marine Engines | The first ecu that provides the display of information and/or indicators associated specifically with the protection system on the first engine of a Marine System. |
| | 237 | Protection System for Marine Engines | The first ecu that controls the Protection functions on the first engine of a Marine System. |
| | 238 | Alarm System Control #1 for Marine Engines | The first ecu that controls the Alarm functions on the first engine of a Marine System. |
| | 239 | Engine #3 | The Engine ECU for the third engine within a system. |
| | 240 | Engine #4 | The Engine ECU for the fourth engine within a system. |
| | 241 | Engine #5 | The Engine ECU for the fourth engine within a system. |
| | 242 | Marine Display #1 | The first Marine Display for an engine. |
| | 243 | Marine Display #2 | The second Marine Display for an engine. |
| | 244 | Marine Display #3 | The third Marine Display for an engine. |
| | 245 | Marine Display #4 | The fourth Marine Display for an engine. |
| | 246 | Marine Display #5 | The fifth Marine Display for an engine. |
| | 247 | Marine Display #6 | The sixth Marine Display for an engine. |

# Table B7
# J1939 Preferred Addresses
# Industry Group #5 – Industrial, Process Control, Stationary Equipment

| Rev | SA | ECU-Module | Definition |
|---|---|---|---|
| | 128 | thru 207 are reserved for future assignment by SAE | Used for dynamic address assignment (self-configurable) |
| | 208 | thru 229 are reserved for future assignment | Used for individual preassigned addresses |
| | 230 | Generator Voltage Regulator | The voltage regulator controls the generator output voltage |
| | 231 | Engine #3 | The Engine ECU for the third engine within a system. |
| | 232 | Engine #4 | The Engine ECU for the fourth engine within a system. |
| | 233 | Engine #5 | The Engine ECU for the fourth engine within a system. |
| | 234 | Generator Set Controller | Used for data collection and control of a generator system |
| | 235 | Supplemental Sensor Processing Unit #1 | |
| | 236 | Supplemental Sensor Processing Unit #2 | |
| | 237 | Supplemental Sensor Processing Unit #3 | |
| | 238 | Supplemental Sensor Processing Unit #4 | |
| | 239 | Supplemental Sensor Processing Unit #5 | |
| | 240 | Supplemental Sensor Processing Unit #6 | |
| | 241 | Engine Monitor #1 | |
| | 242 | Engine Monitor #2 | |
| | 243 | Engine Monitor #3 | |
| | 244 | Engine Monitor #4 | |
| | 245 | Engine Monitor #5 | |
| | 246 | Engine Monitor #6 | |
| | 247 | Engine Monitor #7 | |

Tables B8 through B9
J1939 PREFERRED ADDRESSES
(Industry Groups 6 to 7)
Reserved for future assignment

# Table B10
# J1939 Manufacturer Codes

| Rev | Code | Manufacturer | Location |
|---|---|---|---|
| | 0 | Reserved | |
| | 1 | Allied Signal Inc. | Elyria, OH USA |
| | 2 | Allison Transmission, GMC | Indianapolis, IN USA |
| | 3 | Ametek, US Gauge Division | Sellersville, PA USA |
| | 4 | Ametek-Dixson | Grand Junction, CO USA |
| | 5 | AMP Inc. | Harrisburg, PA USA |
| | 6 | Berifors Electronics AB | Stockholm, Sweden |
| | 7 | Case Corp. | Burr Ridge, IL USA |
| | 8 | Caterpillar Inc. | Peoria, IL USA |
| | 9 | Chrysler Corp. | Auburn Hills, MI USA |
| | 10 | Cummins Inc (formerly Cummins Engine Co.) | Columbus, IN USA |
| | 11 | Dearborn Group Inc. | Indianapolis, IN & Farmington Hills, MI USA |
| | 12 | Deere & Company, Precision Farming | East Moline, IL USA |
| | 13 | Delco Electronics | Kokomo, IN USA |
| | 14 | Detroit Diesel Corporation | Detroit, MI USA |
| | 15 | Dickey-john Corp. | Auburn, IL USA |
| | 16 | Eaton Corp | Southfield, MI USA |
| | 17 | Eaton Corp, Corp Res & Dev | Milwaukee, WI USA |
| | 18 | Eaton Corp, Transmission Div. | Kalamazoo, MI USA |
| | 19 | Eaton Corp. Trucking Info Services | Clemmons, NC USA |
| | 20 | Eaton Ltd | Worsley, England |
| | 21 | Echlin Inc., Midland Brake Inc. | Kansas City, MO USA |
| | 22 | Ford Motor Co., Electronic Concepts & Systems | Dearborn, MI USA |
| | 23 | Ford Motor Co., Heavy Truck | Dearborn, MI USA |
| | 24 | Ford Motor Co., Vehicle Controls | Dearborn, MI USA |
| | 25 | Freightliner LLC | Portland, OR USA |
| | 26 | General Motors Corp, Service Technology Grp | Romulus, MI USA |
| | 27 | GMC | Troy, MI USA |
| | 28 | Grote Ind. Inc. | Madison, IN USA |
| | 29 | Hino Motors Ltd. | Tokyo, Japan |
| | 30 | Isuzu Motors Ltd | Kawasaki, Japan |
| | 31 | J Pollak Corp | Boston, MA USA |
| | 32 | Jacobs Vehicle Systems | Bloomfield, CT USA |
| | 33 | John Deere | Waterloo, IA USA |
| | 34 | Kelsey Hayes Co. | Livonia, MI USA |
| | 35 | Kenworth Truck Co. | Kirkland, WA USA |
| | 36 | Lucas Ind. | Solihull WMidlnd, England |
| | 37 | Mack Trucks Inc. | Hagerstown, MD USA |
| | 38 | Micro Processor Systems Inc. | Sterling Hts, MI USA |

| Rev | Code | Manufacturer | Location |
|---|---|---|---|
| | 39 | Microfirm Inc. | Stillwater, OK USA |
| | 40 | Motorola AIEG Inc. | Northbrook, IL USA |
| | 41 | Motorola Inc. | Schaumburg, IL USA |
| | 42 | International Truck and Engine Corporation - Engine Electronics (formerly Navistar Intl Trans Co., Engine Electronics) | Warrenville, IL USA |
| | 43 | International Truck and Engine Corporation - Vehicle Electronics (formerly Navistar Intl Trans Corp.) | Warrenville, IL USA |
| | 44 | Nippondenso Co. Ltd. | Kariya Aichi, Japan |
| | 45 | PACCAR | Mount Vernon, WA USA |
| | 46 | Parasoft Computing Solutions | Winston Salem, NC USA |
| | 47 | Phillips Semiconductor | Sunnyvale, CA USA |
| | 48 | Pollak Alphabet | El Paso, TX USA |
| | 49 | RE America Inc. | Cleveland, OH USA |
| | 50 | Robert Bosch Corp | Broadview, IL USA |
| | 51 | Robert Bosch GmbH | Stuttgart, Germany |
| | 52 | Meritor Automotive, Inc. (formerly Rockwell Automotive) | Troy, MI USA |
| | 53 | Rockwell Land Transportation | Cedar Rapids, IA USA |
| | 54 | Meritor Wabco | Troy, MI USA |
| | 55 | Ryder System Inc. | Miami, FL USA |
| | 56 | SAIC | San Diego, CA USA |
| | 57 | Sauer-Danfoss Co (formerly Sauer Sundstrand Co.) | Minneapolis, MN USA |
| | 58 | SPX Corporation, OTC Div | Owatonna, MN USA |
| | 59 | VES Inc. | Rock Hill, SC USA |
| | 60 | Volvo Trucks North America Inc. | Greensboro, NC USA |
| | 61 | Volvo Truck Corp. | Gothenburg, Sweden |
| | 62 | Wabco | Hanover, Germany |
| | 63 | ZF Industries Inc. | Vernon Hills, IL USA |
| | 64 | unused (formerly SpectraPrecision Laserplane, then SpectraPhysics) | |
| | 65 | MAN Nutzfahrzeuge AG | Munich, Germany |
| | 66 | John Deere Construction Equipment Division | Dubuque, IA USA |
| | 67 | Funk Manufacturing Company | Coffeyville, KS USA |
| | 68 | Scania | Södertälje, Sweden |
| | 69 | Trimble Navigation | |
| | 70 | Flex-coil Limited | Saskatoon, SK Canada |
| | 71 | Vansco Electronics Ltd. | Winnipeg, MAN Canada |
| | 72 | Sisu Corporation | ESPOO, Finland |
| | 73 | LeTourneau, Inc. | Longview, TX USA |
| | 74 | Eaton Axle-Brake Division | Kalamazoo, MI USA |
| | 75 | Deere & Co, Agricultural Division | |
| | 76 | unused (formerly Deere & Co, Construction Division) | |
| | 77 | Deere Power Systems Group | |
| | 78 | Frank W. Murphy Manufacturing, Inc | Tulsa, OK USA |

| Rev | Code | Manufacturer | Location |
|---|---|---|---|
| | 79 | Daimler Benz AG - Engine Division (PBM) | Stuttgart, Germany |
| | 80 | Twin Disc, Inc. | Racine, WI USA |
| | 81 | Fire Research Corp. | Nesconset, NY USA |
| | 82 | Bobcat/Ingersoll-Rand (formerly Melroe/Ingersoll-Rand) | Fargo, ND USA |
| | 83 | Eaton VORAD Technologies | San Diego, CA USA |
| | 84 | New Holland UK Limited | Basildon, Essex, UK |
| | 85 | Kohler Co | Kohler, WI USA |
| | 86 | C. E. Niehoff & Company | Evanston, IL USA |
| | 87 | J.C. Bamford Excavators Ltd (JCB) | Rocester, Staffordshire, UK |
| | 88 | Satloc Precision GPS | Scottsdale, AZ USA |
| | 89 | Kverneland Group, Electronics Division | Nieuw-Vennep, Netherlands |
| | 90 | Knorr-Bremse SfN GmbH | Munich, Germany |
| | 91 | BSG Bodensee Steuergeraete GmbH | Immenstaad, Germany |
| | 92 | Ag-Chem Equipment Co., Inc. | Minnetonka, MN USA |
| | 93 | Perkins Engines Company Ltd. | Peterborough, UK |
| | 94 | CNH Global N.V. | Racine, WI USA |
| | 95 | Pacific Insight Electronics Corp. | Nelson, BC Canada |
| | 96 | Mech@tronic IT GmbH | Hetzenhausen, Germany |
| | 97 | Ag Leader Technology, Inc. | Ames, IA USA |
| | 98 | Mueller-Elektronik GmbH & Co | Salzkotten, Germany |
| | 99 | International Transmissions Ltd (ITL) | Wrexham, North Wales, UK |
| | 100 | VDO Technik AG | Rüthi, Switzerland |
| | 101 | Sensoria | San Diego, CA USA |
| | 102 | AGCO GmbH & Co. | Marktoberdorf, Germany |
| | 103 | Agrocom GmbH & Co. Agrarsystem KG | Bielefeld, Germany |
| | 104 | Claas Selbstfahrende Erntemaschinen GmbH | Harsewinkel, Germany |
| | 105 | Kiepe Elektrik GmbH & Co. KG | Duesseldorf, Germany |
| | 106 | BAE Systems Controls, Inc. | Johnson City, NY USA |
| | 107 | Grimme Landmaschinen GmbH & Co. KG | Damme, Germany |
| | 108 | WTK-Elecktronik GmbH | Neustadt, Germany |
| | 109 | LH Technologies ApS | Aabybro, Denmark |
| | 110 | EPIQ Sensor-Nite | Fenton, MI USA |
| | 111 | Maschinenfabrik Bernhard Krone GmbH | Spelle, Germany |
| | 112 | MECALAC | Annecy le Vieux, France |
| | 113 | Stress-Tek, Inc. | Kent, WA USA |
| | 114 | EControls, Inc. | San Antonio, TX USA |
| | 115 | NACCO Materials Handling Group, Inc. | Portland, OR USA |
| | 116 | BEELINE Technologies | Brisbane, QLD Australia |
| | 117 | HUSCO International | Waukesha, WI USA |
| | 118 | Intron GmbH | Schwaebisch Hall, Germany |
| | 119 | IntegriNautics | Menlo Park, CA USA |
| | 120 | RDS Technology Ltd | Minchinhampton, Stroud, UK |

| Rev | Code | Manufacturer | Location |
|---|---|---|---|
| | 121 | HED (Hydro Electronic Devices, Inc.) | Hartford, WI USA |
| | 122 | FG Wilson (Engineering) Limited | Larne, County Antrim, UK |
| | 123 | Basler Electric | Highland, IL USA |
| | 124 | Hydac Electronic | Saarbruecken, Germany |
| | 125 | Nevada Automotive Test Center | Carson City, NV USA |
| | 126 | Driver Tech | Salt Lake City, UT USA |
| | 127 | Holland USA | Holland, MI USA |
| | 128 | Gerhard Duecker GmbH & Co. KG | Stadtlohn, Germany |
| | 129 | OMNEX Control Systems Inc. | Port Coquitlam, BC, Canada |
| | 130 | Nido - Universal Machines B.V. | Holten, Netherlands |
| | 131 | ITT Industries | Eden Prarie, MN USA |
| | 132 | Mulag-Fahrzeugwerk | Oppenau, Germany |
| | 133 | Bucher Schoerling GmbH | Hannover, Germany |
| | 134 | Iris Technology Ltd | Lancaster, Lancs, UK |
| | 135 | Airmar Technology Corporation | Milford, NH USA |
| | 136 | Komatsu Ltd | Hiratsuka, Kanagawa, Japan |
| | 137 | Maretron | Phoenix AZ USA |
| | 138 | Georg Fritzmeier GmbH & Co. KG | Grosshelfendorf, Germany |
| | 139 | Caterpillar Trimble Control Technologies (CTCT), LLC | Dayton, OH USA |
| | 140 | Lowrance Electronics, Inc. | Tulsa, OK USA |
| | 141 | Thales Navigation Ltd. | Surrey, UK |
| | 142 | TRW Automotive (Commercial Steering Systems) | Lafayette, IN USA |
| | 143 | W. Gmeiner GmbH & Co. | Kummersbruck, Germany |
| | 144 | Mercury Marine | Fond du Lac, WI USA |
| | 145 | MurCal Controls | Palmdale, CA USA |
| | 146 | Maxima Technologies | Lancaster, PA USA |
| | 147 | Nautibus electronic GmbH | Quern, Germany |
| | 148 | Blue Water Data, Inc. | Salem, NJ USA |
| | 149 | Holset | Charleston, SC USA |
| | 150 | Fleetguard | Nashville, TN USA |
| | 151 | Raven Industries Inc. - Flow Controls Division | Sioux Falls, SD USA |
| | 152 | Elobau Elektrobauelemente GmbH & Co. KG | Leutkirch, Baden Württemberg, Germany |
| | 153 | Woodward, Industrial Controls Division | Fort Collins, CO USA |
| | 154 | Westerbeke Corporation | Taunton, MA USA |
| | 155 | Vetronix Corporation | Santa Barbara, CA |
| | 156 | ITT Industries - Cannon | Shakopee, MN USA |
| | 157 | ISSPRO Inc. | Portland, OR USA |
| | 158 | Firestone Industrial Products Company | Carmel, IN USA |
| | 159 | NTech Industries Inc | Ukiah, CA USA |
| | 160 | Nido | Holten, Netherlands |
| | 161 | Offshore Systems (UK) Ltd | New Milton, Hampshire, UK |
| | 162 | Axiomatic Technologies | Mississauga, ON Canada |

| Rev | Code | Manufacturer | Location |
|---|---|---|---|
| | 163 | BRP Inc. | Waukegan, IL USA |
| | 164 | DaimlerChrysler Off-Highway | Friedrichshafen, Germany |
| | 165 | CPAC Systems AB | Vastra Frolunda, Sweden |
| | 166 | Phoenix International | Fargo, ND USA |
| | 167 | JLG Industries Inc | McConnellsburg, PA USA |
| | 168 | Xantrex | Burnaby, BC Canada |
| | 169 | Marlin Technologies Inc. | Horicon, WI USA |
| | 170 | Computronics Corporation Ltd. | Bentley, WA Australia |
| | 171 | Wachendorff Elektronik GmbH & Co. KG | Geisenheim, Germany |
| | 172 | Yanmar Marine USA | Adairsville, GA USA |
| | 173 | Ryeso, Inc. | Palmdale, CA USA |
| | 174 | AB Volvo Penta | Goteburg, Sweden |
| | 175 | Veris Technologies, Inc. | Salina, KS USA |
| | 176 | Moritz Aerospace | Dublin, PA USA |
| | 177 | Diagnostic Systems Associates | Kalamazoo, MI USA |
| | 178 | Siemens VDO Automotive AG | Regensburg, Germany |
| | 179 | Midwest Technologies Illinois, LLC | Springfield, IL USA |
| | 180 | Smart Power Systems | Reed City, MI USA |
| | 181 | Coretronics, Inc. | Eagle, ID USA |
| | 182 | Vehicle Systems Engineering B.V. | Veenendaal, Netherlands |
| | 183 | KDS Controls, Inc | Troy, MI USA |
| | 184 | EIA Electronics | Aartselaar, Belguim |
| | 185 | Beede Electrical Instrument Company | Penacock, NH USA |
| | 186 | Altronic, Inc | Girard, OH USA |
| | 187 | Air-Weigh | Eugene, OR USA |
| | 188 | EMP Corp | Escanaba, MI USA |
| | 189 | QUALCOMM | San Diego, CA USA |
| | 190 | Hella KGaA Hueck & Co | Lippstadt, Germany |
| | 191 | XATA Corporation | Burnsville, MN USA |
| | 192 | Floscan | Seattle, WA USA |
| | 193 | Jeppesen Marine | Portland, OR USA |
| | 194 | TriMark Corporation | New Hampton, IA USA |
| | 195 | General Engine Products | Livonia, MI USA |
| | 196 | LEMKEN GmbH & Co KG | Alpen, Germany |
| | 197 | Mechron Power Systems | Ottawa, ON Canada |
| | 198 | Mystic Valley Communications | Mystic, CT USA |
| | 199 | Actia Corp | Elkhart, IN USA |
| | 200 | MGM Brakes | Charlotte, NC USA |
| | 201 | Disenos y Tecnologia S.A. | Barcelona, Spain |
| | 202 | Curtis Instruments, Inc | Mount Kisco, NY USA |
| | 203 | MILtronik GmbH | Hilden, Germany |
| | 204 | The Morey Corporation | Woodridge, IL USA |
| | 205 | SmarTire Systems Inc | Richmond, BC Canada |

| Rev | Code | Manufacturer | Location |
|---|---|---|---|
| | 206 | port GmbH | Halle, Germany |
| | 207 | Otto Engineering | Carpentersville, IL USA |
| | 208 | Drew Technologies, Inc | Whitmore Lake, MI USA |
| | 209 | Bell Equip. Co. SA (PTY) LTD | Richards Bay, South Africa |
| | 210 | Iteris, Inc. | Anaheim, CA USA |
| | 211 | DNA Group | Raleigh, NC USA |
| | 212 | Sure Power Industries, Inc | Tualatin, OR USA |
| | 213 | CNH Belgium N.V. | Zedelgem, Belgium |
| | 214 | MC elettronica Srl | Fiesso Umbertiano, Rovigo, Italy |
| | 215 | Aetna Engineering/Fireboy-Xintex | Grand Rapids, MI USA |
| | 216 | Paneltronics Inc. | Hialeah Gardens, FL USA |
| | 217 | RM Michaelides Software & Elektronik GmbH | Fulda, Germany |
| | 218 | Gits Manufacturing Company | Creston, IA USA |
| | 219 | Cat OEM Solutions | Mossville, IL USA |
| | 220 | Beede Electrical Instrument Company, Inc | Penacook, NH USA |
| | 221 | SiE | Kempten/Allgaeu, Germany |
| | 222 | Generac Power Systems, Inc. | Waukesha, WI, USA |
| | 1850 | Teleflex | Limerick, PA USA |
| | 1851 | RayMarine | Portsmouth, Hampshire, UK |
| | 1852 | Navionics | Wareham, MA USA |
| | 1853 | Japan Radio Co | Seattle, WA USA |
| | 1854 | Northstar Technologies | Acton, MA USA |
| | 1855 | Furuno USA | Camas, WA USA |
| | 1856 | Trimble | Sunnyvale, CA USA |
| | 1857 | Simrad | Egersund, Norway |
| | 1858 | Litton | Charlottesville, VA USA |
| | 1859 | Kvasar AB | Kinnahult, Sweden |
| | 1860 | MMP | Fircrest, WA USA |
| | 1861 | Vector Cantech | Novi, MI USA |
| | 1862 | Sanshin | Shizuoka, Japan |
| | 1863 | Thomas G. Faria Co. | Uncasville, CT USA |

# Table B11
# J1939 All Industry Inclusive Names

The NAME fields are described in Section 3.1.3 and in J1939-81, Section 4.1. This table defines the Lower 128 Functions which are independent of the Vehicle System or Industry Group. These functions are used with all 8 Industry Groups, which is a distinction from Industry Group 0 which is an Industry Group itself but applicable to all industries.

| Rev | Value | NAME Function | Description |
|---|---|---|---|
| | 0 | Engine | While the function identifies what is typically the mechanical power source of the machine, the reference tends to be to the management system that controls the torque vs speed vs command (typically throttle) of said power source. |
| | 1 | Auxiliary Power Unit (APU) | Power source for operating systems without the use of the prime 'drive' engine. |
| | 2 | Electric Propulsion Control | Control system which operates the drive mechanism when it is electrically powered, such as battery-motor, or engine-generator-motor hybrids |
| | 3 | Transmission | A mechanical system for alter the speed vs torque output of the engine to a level usable by another system on the machine. Although again the network reference is actually to the system which controls the operation of said transmission. |
| | 4 | Battery Pack Monitor | Monitors the condition - charge, temperature, power remaining, etc. for an internal battery pack - typically used with electric propulsion |
| | 5 | Shift Control/Console | The device which determines and transmit onto the network the gear, the range, the operating mode or any or all of these that the operator desires for the transmission. (Not to be confused with transmission control which is Transmission) |
| | 6 | Power TakeOff - (Main or Rear) | The system which controls the mechanical power derived from a prime engine and used to operate auxiliary items such as compressors in on highway vehicles and such as implements in ag applications. This being the main or rear unit. |
| | 7 | Axle - Steering | Adjust attack angle as function of steering |
| | 8 | Axle - Drive | |
| | 9 | Brakes - System Controller | Controls service braking system electronically – might be any of a number of schemes – may also control (at least partly) the endurance braking system in the sense of an integrated control (application phased in with the service braking system). |
| | 10 | Brakes - Steer Axle | Control for actuating the service brakes on a steered axle |
| | 11 | Brakes - Drive axle | Control for actuating the service brakes on a drive axle |
| | 12 | Retarder - Engine | The control for the retarder capabilities of the engine. There are several types of retarders possible and these are defined within the parameter - Retarder Type, (SPN 901). |
| | 13 | Retarder - Driveline | The control for the retarder capabilities of the driveline. There are several types of retarders possible and these are defined within the parameter - Retarder Type, (SPN 901). |
| | 14 | Cruise Control | Control system for maintaining the vehicle's speed at a fixed operator selectable value with various over-rides linked to other systems |
| | 15 | Fuel System | Controls fuel flow from the tank to the filter to the water-removal/separator to the engine and then back to the tank. |
| | 16 | Steering Controller | Controls steering in steer-by-wire |

| Rev | Value | NAME Function | Description |
|---|---|---|---|
| | 17 | Suspension - Steer Axle | Control system for the suspension of a steered axle |
| | 18 | Suspension - Drive Axle | Control system for the suspension of a driven axle |
| | 19 | Instrument Cluster | A gauge display for a vehicle. Typically mounted in the cab within the driver's field of view and generally a somewhat limited display such as: dedicated dials or a small digit 7 segment display. See Cab Display for larger more elaborate display. |
| | 20 | Trip Recorder | A system for accumulating data versus travel of the vehicle (machine), since a specific starting point sometimes expressed in terms of distance or time traveled. |
| | 21 | Cab Climate Control | A system for controlling the climate within the cab of the vehicle (machine). Note: The operator controls (message) for this system should be designed to allow any source to transmit them. |
| | 22 | Aerodynamic Control | Modify drag by altering Body panels – lower air ferrings when dead heading, extend side panels when on interstate |
| | 23 | Vehicle Navigation | System associated with the vehicles physical location – may be as simple as display of current location, driving instructions from current to desired location, (do we need a separate guidance?). |
| | 24 | Vehicle Security | System for comparing operator provided data sequences against reference to verify that operation or certain operations should be allowed for the particular operator. Also may include functions to prevent unauthorized operations. Examples: unlocking doors, starting engine, … |
| | 25 | Network Interconnect ECU | ECU for connecting different network segments together – may be bridge or gateway - see J1939 –31 for details For any vehicle system (tractor or trailer) |
| | 26 | Body Controller | May handle suspension control for the body sections independent from the axle sections - Controls the body (not chassis or cab) components |
| | 27 | Power TakeOff (Secondary or Front) | The system which controls the mechanical power derived from a prime engine and used to operate auxiliary items such as compressors in on highway vehicles and such as implements in ag applications. This being the secondary or front unit. |
| | 28 | Off Vehicle Gateway | ECU for connecting between vehicle network(s) and an off-vehicle system or network, such as fleet management. Connection may be wireless. Performs Gateway functions, i.e., filters messages, translates between protocols... |
| | 29 | Virtual Terminal (in cab) | A general purpose 'intelligent' display with a specific message set (J1939-72 or ISO 11783 –6) specifically mounted in cab for the operators use, which may be connected to the drive train segment of the network or to the implement bus segment which exists in an ag application |
| | 30 | Management Computer | Manages vehicle systems, i.e. powertrain. |
| | 31 | Propulsion Battery Charger | A device used to charge propulsion batteries in an electric vehicle from an off-board source of electrical energy. |
| | 32 | Headway Controller | Forward-looking collision avoidance, collision warning, speed controller, or speed matching |
| | 33 | System Monitor | |
| | 34 | Hydraulic Pump Controller | Pump which provides hydraulic power to operate installed equipment, such as: Man buckets, cranes, augers, shredders Example vehicles: Digger Derrick – plants telephone poles, Bucket Truck - - thus this is the controller for said pump |
| | 35 | Suspension - System Controller | A controller responsible for co-ordinating the over-all suspension of a vehicle. It may cause inter action between the axle suspension controls and the body controller |

| Rev | Value | NAME Function | Description |
|---|---|---|---|
| | 36 | Pneumatic - System Controller | |
| | 37 | Cab Controller | A controller located in/near vehicle cab to perform functions that are grouped together for convenience and proximity. May handle any number of vehicle specific items but not other specifically NAMEd functions, such as: Instrument Cluster. A prime use would be to read cab mounted operator controls (not handled by any other specific device) and to then transmit the associated messages onto the network. |
| | 38 | Tire Pressure Control | The device providing centralised tire inflation |
| | 39 | Ignition Control Module | A device for altering the ignition of an engine and with which an engine controller may communicate. |
| | 40 | Seat Control | A system for controlling the seats (operator and passenger) within the cab of the vehicle (machine). May include position and suspension of seat. Note: The operator controls (message) for the seat system should be designed to allow any source to transmit them. |
| | 41 | Lighting - Operator Controls | The controller for sending the operator lighting controls messages when they are coming from a device dedicated to transmitting these specific messages on the network. |
| | 42 | Water Pump Control | Controller for a water pump mounted on the vehicle/machine. For Instance – Emergency equipment with pump for pumping water onto fire. A Utilities delivery truck for delivery fluids, such as water to remote areas. |
| | 43 | Transmission Display | Display designed specifically to display transmission information, such as the transmission gear. |
| | 44 | Exhaust Emission Control | |
| | 45 | Vehicle Dynamic Stability Control | |
| | 46 | Oil Sensor Unit | |
| | 47 | Information System Controller | Information management for the vehicle's application, such as transit passenger/fare monitoring, truck cargo management, etc. Handles grouping and processing data into information displays to be presented to driver. It also enforces the DI rules for interfacing with driver. |
| | 48 | Ramp Control | Loading unloading – chairlift, ramps, lifts, or tailgates |
| | 49 | Clutch/Converter Control | When transmission is distributed this handles torque converter lock-up or engine - transmission connection |
| | 50 | Auxiliary Heater | Primary heat is typically taken from the engine coolant. This is the heater for use without the prime ‘drive’ engine operating or when it is unable to supply sufficient heat. Can be fuel fired, electrical or other type of heating source and may use air, water, or other transfer media. |
| | 51 | Forward-Looking Collision Warning System | A system which detects and warns of impending collision with object in path of present forward travel - Not to be confused with #32, Headway Controller |
| | 52 | Chassis Controller | Controls the chassis (not body or cab) components - See web site for RLs definitions of Body, chassis, drivetrain to add – but still do not know what this is ??? |
| | 53 | Alternator/Charging System | Vehicle's primary on-board charging controller - Alternator used to generate electrical power for vehicle electrical system and storage battery. |
| | 54 | Communications Unit, Cellular | Radio communications device designed specifically to communicate via the ‘Cellular telephone system’. May be either receiver only, transmitter only or transceiver. |

| Rev | Value | NAME Function | Description |
|---|---|---|---|
| | 55 | Communications Unit, Satellite | Radio communications device designed specifically to communicate via some satellite system. May be either receiver only, transmitter only or transceiver. |
| | 56 | Communications Unit, Radio | Radio communications device designed specifically to communicate via a terrestrial point to point system. May be either receiver only, transmitter only or transceiver. |
| | 57 | Steering Column Unit | Device that gathers the operator inputs from switches/levers/etc located in and/or around the steering wheel/column and transmits the associated messages on the network., when a separate NAME is needed for this device (i.e. other devices might be sending the messages and this device not exist on the network). |
| | 58 | Fan Drive Control | Primary control system affecting the operation of the main cooling fan on the engine coolant. Other systems may send commands or requests to this device. |
| | 59 | Starter | A mechanical system for initiating rotation in an engine that is stopped. Although here the reference is more to the system that controls the starter than the starter itself. |
| | 60 | Cab Display | Cab Display is for a fairly elaborate in cab display, typically capable of greater than 30 'ascii' characters and differentiated from the Instrument Cluster and Virtual Terminal. |
| | 61 | File Server / Printer | A printing or file storage unit on the network - A permanent connection may exist and the unit is expected to be able to print (paper type output) or store data (as in magnetic or eerom devices). |
| | 62 | On-Board Diagnostic Unit | A tool which may be permanently mounted on the vehicle and that may not support all of the J1939-73 messages (services). |
| | 63 | Engine Valve Controller | Control system used to manipulate the actuation of engine intake and/or exhaust valves in response to other factors |
| | 64 | Endurance Braking | Sum of all devices in a vehicle which enable the driver with virtually no friction brake wear / tear to reduce the speed or to maintain the speed on a long descent. May contain energy supplying device(s), control device(s), transmission(s), retarder(s) and energy dissipation device(s). The control may be independent of the service brake system or may be integrated with the service brake control such that both are applied simultaneously or in a phased fashion. An integrated system may also have a control to prevent linking of operation. |
| | 65 | Gas Flow Measurement | Provides measurement of gas flow rates and associated parameters. |
| | 66 | I/O Controller | Reporting and/or control device for external input and output channels |
| | 67 | Electrical System Controller | This may include Load Centers, Fuseboxes, & Power Distribution boards |
| | 68 | Aftertreatment system gas measurement | Sensor for measuring gas properties before and after an aftertreatment system. For example measurement of NOx or Oxygen level. |
| | 69 | Engine Emission Aftertreatment System | Engine Emission Aftertreatment System |
| | 70 | Auxiliary Regeneration Device | Auxiliary Regeneration Device used as part of an after treatment system |
| | 71 | Transfer Case Control | The device which controls the selection of the number of drive wheels (for example 2 or 4 wheel drive). |
| | 72 | Coolant Valve Controller | Device used to control the flow of coolant (water, oil, air, etc…) for any thermal management system. |
| | 73 | | thru 127 are reserved |

# Table B12
# J1939 Names

The NAME fields are described in Section 3.1.3 and in J1939-81, Section 4.1. This table defines the Upper 128 Functions which are dependent on the Industry Group and Vehicle System. Due to the dependencies of Vehicle System on Industry Group, and of Function on Vehicle System, the following table is used to define both Vehicle System and Function.

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 0 | 0 | Non-specific System | 128 | Reserved | |
| | 0 | 0 | Non-specific System | 129 | Off-board diagnostic-service tool | |
| | 0 | 0 | Non-specific System | 130 | On-board data logger | |
| | 0 | 0 | Non-specific System | 131 | PC Keyboard | A user interface similar to a PC keyboard. |
| | 0 | 0 | Non-specific System | 132 | Safety Restraint System | The safety restraint system can be for controlling activation of airbags, belt tensioners, roll over protection systems, etc. |
| | 0 | 0 | Non-specific System | 133 | Turbocharger | Turbocharger used on the engine. |
| | 0 | 0 | Non-specific System | 134 | Ground based speed sensor | Measures actual ground speed of a vehicle with a device such as radar or other such devices. |
| | 0 | 0 | Non-specific System | 135 | Keypad | An operator input device used to control machine functions or provide data. |
| | 0 | 0 | Non-specific System | 136 | Humidity sensor | Device which measures air humidity |
| | 0 | 0 | Non-specific System | 137 | Thermal Management System Controller | This device controls all devices that may be used in a thermal management system including Jacket Water Cooling, Charged Air Cooling, Transmission Cooling, Electronics Cooling, Aux Oil Cooling, etc. |
| | 0 | 0 | Non-specific System | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 0 | 127 | Not Available | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 1 | 0 | Non-specific System | 128 | Tachograph | |
| | 1 | 0 | Non-specific System | 129 | Door Controller | |
| | 1 | 0 | Non-specific System | 130 | Articulation Turntable Control | Control of the articulation turntable for joined body buses. |
| | 1 | 0 | Non-specific System | 131 | Body-to-Vehicle Interface Control | Interface controller managing interaction of vehicle functions and body functions.May be combination of body signals and gateway functionalities. |
| | 1 | 0 | Non-specific System | 132 | Slope Sensor | Sensor for measuring a slope along an axis. |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 1 | 0 | Non-specific System | 134 | Retarder Display | Display module that shows information pertaining to the retarder (driveline or exhaust or engine). |
| | 1 | 0 | Non-specific System | 135 | Differential Lock Controller | |
| | 1 | 0 | Non-specific System | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 1 | 1 | Tractor | 128 | Forward Road Image Processing | Determine vehicle position from lane markings. Performance, Advisory & Warning only |
| | 1 | 1 | Tractor | 129 | Fifth Wheel Smart System | Any systems relative to the operation & status/safety monitoring of the fifth wheel coupler system (including mounting bracket). |
| | 1 | 1 | Tractor | 130 | Catalyst Fluid Sensor | The Catalyst Fluid Sensor can measure the catalyst fluid temperature, the catalyst fluid level and the catalyst fluid quality |
| | 1 | 1 | Tractor | 131 | Adaptive Front Lighting System | System used to adjust the vehicle front lighting for the current operating conditions (city, highway, country,etc.) |
| | 1 | 1 | Tractor | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 1 | 2 | Trailer | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 1 | 127 | Not Available | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 0 | Non-specific System | 128 | Non Virtual Terminal Display | Implement Bus |
| | 2 | 0 | Non-specific System | 129 | Operator Controls - Machine Specific | |
| | 2 | 0 | Non-specific System | 130 | Task Controller (Mapping Computer) | |
| | 2 | 0 | Non-specific System | 131 | Position Control | |
| | 2 | 0 | Non-specific System | 132 | Machine Control | |
| | 2 | 0 | Non-specific System | 133 | Foreign Object Detection | Detection of undesireable objects in the product flow |
| | 2 | 0 | Non-specific System | 134 | Tractor ECU | |
| | 2 | 0 | Non-specific System | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 1 | Tractor | 129 | Auxiliary Valve Control | The unit knows the parsing and security for the tractor mounted auxiliary valves |
| | 2 | 1 | Tractor | 130 | Rear Hitch Control | The control of the rear hitch of an agricultural tractor |
| | 2 | 1 | Tractor | 131 | Front Hitch Control | The control of the front hitch of an agricultural tractor |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 2 | 1 | Tractor | 132 | Tractor Machine Control | |
| | 2 | 1 | Tractor | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 2 | Tillage | 132 | Tillage Machine Control | |
| | 2 | 2 | Tillage | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 3 | Secondary Tillage | 132 | Secondary Tillage Machine Control | |
| | 2 | 3 | Secondary Tillage | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 4 | Planters/ Seeders | 128 | Seed Rate Control | |
| | 2 | 4 | Planters/ Seeders | 129 | Section On/ Off Control | |
| | 2 | 4 | Planters/ Seeders | 132 | Planters/ Seeders Machine Control | |
| | 2 | 4 | Planters/ Seeders | 133 | Product Flow | Controlling and or monitoring the flow of product. |
| | 2 | 4 | Planters/Seeders | 134 | Product Level | Controlling and or monitoring the product level. |
| | 2 | 4 | Planters/ Seeders | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 5 | Fertilizers | 128 | Fertilize Rate Control | |
| | 2 | 5 | Fertilizers | 129 | Section On/ Off Control | |
| | 2 | 5 | Fertilizers | 132 | Fertilizers Machine Control | |
| | 2 | 5 | Fertilizers | 133 | Product Flow | Controlling and or monitoring the flow of product. |
| | 2 | 5 | Fertilizers | 134 | Product Level | Controlling and or monitoring the product level. |
| | 2 | 5 | Fertilizers | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 6 | Sprayers | 128 | Spray Rate Control | |
| | 2 | 6 | Sprayers | 129 | Section On/ Off Control | |
| | 2 | 6 | Sprayers | 130 | Product Pressure | Control and or monitoring of product pressure. |
| | 2 | 6 | Sprayers | 132 | Sprayers Machine Control | |
| | 2 | 6 | Sprayers | 133 | Product Flow | Controlling and or monitoring the flow of product. |
| | 2 | 6 | Sprayers | 134 | Product Level | Controlling and or monitoring the product level. |
| | 2 | 6 | Sprayers | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 7 | Harvesters | 128 | Tailing Monitor | |
| | 2 | 7 | Harvesters | 129 | Header Control | |
| | 2 | 7 | Harvesters | 130 | Product Loss Monitor | |
| | 2 | 7 | Harvesters | 131 | Product Moisture Sensor | |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 2 | 7 | Harvesters | 132 | Harvester Machine Control | |
| | 2 | 7 | Harvesters | 133 | Product Flow | Controlling and or monitoring the flow of product. |
| | 2 | 7 | Harvesters | 134 | Product Level | Controlling and or monitoring the product level. |
| | 2 | 7 | Harvesters | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 8 | Root Harvesters | 132 | Root Harvesters Machine Control | |
| | 2 | 8 | Root Harvesters | 133 | Product Flow | Controlling and or monitoring the flow of product. |
| | 2 | 8 | Root Harvesters | 134 | Product Level | Controlling and or monitoring the product level. |
| | 2 | 8 | Root Harvesters | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 9 | Forage | 128 | Twine Wrapper Control | Controls such items on a baler such as the twine wrap controls and actuators |
| | 2 | 9 | Forage | 132 | Forage Machine Control | |
| | 2 | 9 | Forage | 133 | Product Flow | Controlling and or monitoring the flow of product. |
| | 2 | 9 | Forage | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 10 | Irrigation | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 11 | Transport/Trailer | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 12 | Farm Yard Operations | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 13 | Powered Auxiliary Devices | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 14 | Special Crops | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 15 | Earth Work | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 16 | Skidder | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 2 | 127 | Not Available | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 0 | Non-specific system | 128 | Supplemental Engine Control Sensing | |
| | 3 | 0 | Non-specific system | 129 | Laser Receiver | |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 3 | 0 | Non-specific system | 130 | Land Leveling System Operator Interface | A component that allows the user to control the Land Leveling System and display information about the operation of the system. |
| | 3 | 0 | Non-specific system | 131 | Land Leveling Electric Mast | |
| | 3 | 0 | Non-specific system | 132 | Single Land Leveling System Supervisor | |
| | 3 | 0 | Non-specific system | 133 | Land Leveling System Display | |
| | 3 | 0 | Non-specific system | 134 | Laser Tracer | |
| | 3 | 0 | Non-specific system | 135 | Loader Control | |
| | 3 | 0 | Non-specific system | 136 | Slope Sensor | Measures the slope along a axis. |
| | 3 | 0 | Non-specific system | 137 | Liftarm Control | Controller whose primary purpose is to control the lift arms and tilt functions on a construction loader, skid steer loader, or similar machine. Not a loader attachment. |
| | 3 | 0 | Non-specific system | 138 | Supplemental Sensor Processing Units | An ECU functioning as an I/O module connected to the bus with the designed purpose of data collection (input or output) and not necessarily containing any control algorithms or processing intelligence. |
| | 3 | 0 | Non-specific system | 139 | Hydraulic System Planner | Coordinates the functions of a number of valve controllers. |
| | 3 | 0 | Non-specific system | 140 | Hydraulic Valve Controller | The valve controller will typically control the flow of oil to a specific cylinder. |
| | 3 | 0 | Non-specific system | 141 | Joystick Control | Joystick Control |
| | 3 | 0 | Non-specific system | 142 | Rotation Sensor | A device that measures the rotational angle around an axis. |
| | 3 | 0 | Non-specific system | 143 | Sonic Sensor | A device that measures distance via ultrasonic pulse/echo range techniques. |
| | 3 | 0 | Non-specific system | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 1 | Skid Steer Loader | 128 | Main Controller | |
| | 3 | 1 | Skid Steer Loader | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 2 | Articulated Dump Truck | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 3 | Backhoe | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 4 | Crawler | 128 | Blade Controller | Controller for blade height. |
| | 3 | 4 | Crawler | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 3 | 5 | Excavator | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 6 | Forklift | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 7 | Four Wheel Drive Loader | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 8 | Grader | 128 | HFWD Controller | Hydraulic front wheel drive controller |
| | 3 | 8 | Grader | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 3 | 127 | Not Available | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 4 | 0 | Non-specific System | 128 | Alarm System Control for Marine Engines | The ECU that controls the Alarm functions on an engine of a Marine System. |
| | 4 | 0 | Non-specific System | 129 | Protection System for Marine Engines | The first ECU that controls the Protection functions on the first engine of a Marine System. |
| | 4 | 0 | Non-specific System | 130 | Display for Protection System for Marine Engines | The ECU that provides the display of information and/or indicators associated specifically with the protection system on an engine of a Marine System. |
| | 4 | 0 | Non-specific System | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 4 | 10 | System tools | 255 | Not Available | |
| | 4 | 20 | Safety systems | 255 | Not Available | |
| | 4 | 25 | Gateway | 10 | | |
| | 4 | 30 | Power management and lighting systems | 130 | Switch | |
| | 4 | 30 | Power management and lighting systems | 140 | Load | |
| | 4 | 40 | Steering systems | 130 | Follow-up Controller | |
| | 4 | 40 | Steering systems | 140 | Mode Controller | |
| | 4 | 40 | Steering systems | 150 | Automatic Steering Controller | |
| | 4 | 40 | Steering systems | 160 | Heading Sensors | |
| | 4 | 50 | Propulsion systems | 130 | Engineroom monitoring | |
| | 4 | 50 | Propulsion systems | 140 | Engine Interface | |
| | 4 | 50 | Propulsion systems | 150 | Engine Controller | |
| | 4 | 50 | Propulsion systems | 160 | Engine Gateway | |
| | 4 | 50 | Propulsion systems | 170 | Control Head | |
| | 4 | 50 | Propulsion systems | 180 | Actuator | |
| | 4 | 50 | Propulsion systems | 190 | Gauge Interface | |
| | 4 | 50 | Propulsion systems | 200 | Gauge Large | |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 4 | 50 | Propulsion systems | 210 | Gauge Small | |
| | 4 | 60 | Navigation systems | 130 | Sounder, depth | |
| | 4 | 60 | Navigation systems | 140 | | |
| | 4 | 60 | Navigation systems | 145 | Global Navigation Satellite System (GNSS) | |
| | 4 | 60 | Navigation systems | 150 | Loran C | |
| | 4 | 60 | Navigation systems | 155 | Speed Sensors | |
| | 4 | 60 | Navigation systems | 160 | Turn Rate Indicator | |
| | 4 | 60 | Navigation systems | 170 | Integrated Navigation | |
| | 4 | 60 | Navigation systems | 200 | Radar and/or Radar Plotting | |
| | 4 | 60 | Navigation systems | 205 | Electronic Chart Display & Information System (ECDIS) | |
| | 4 | 60 | Navigation systems | 210 | Electronic Chart System (ECS) | |
| | 4 | 60 | Navigation systems | 220 | Direction Finder | |
| | 4 | 70 | Communications systems | 130 | Emergency Position Indicating Beacon (EPIRB) | |
| | 4 | 70 | Communications systems | 140 | Automatic Identification System | |
| | 4 | 70 | Communications systems | 150 | Digital Selective Calling (DSC) | |
| | 4 | 70 | Communications systems | 160 | Data Receiver | |
| | 4 | 70 | Communications systems | 170 | Satellite | |
| | 4 | 70 | Communications systems | 180 | Radio-Telephone (MF/HF) | |
| | 4 | 70 | Communications systems | 190 | Radio-Telephone (VHF) | |
| | 4 | 80 | Instrumentation/general systems | 130 | Time/Date systems | |
| | 4 | 80 | Instrumentation/general systems | 140 | Voyage Data Recorder | |
| | 4 | 80 | Instrumentation/general systems | 150 | Integrated Instrumentation | |
| | 4 | 80 | Instrumentation/general systems | 160 | General Purpose Displays | |
| | 4 | 80 | Instrumentation/general systems | 170 | General Sensor Box | |
| | 4 | 80 | Instrumentation/general systems | 180 | Weather Instruments | |
| | 4 | 80 | Instrumentation/general systems | 190 | Transducer/general | |
| | 4 | 80 | Instrumentation/general systems | 200 | NMEA 0183 Converter | |
| | 4 | 90 | Environmental (HVAC) systems | 255 | Not Available | |
| | 4 | 100 | Deck, cargo, and fishing equipment systems | 255 | Not Available | |
| | 4 | 127 | Not Available | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 5 | 0 | Industrial-Process Control-Stationary (Gen-Sets) | 128 | Supplemental Engine Control Sensing | |

| Rev | IG | Veh Sys | Veh Sys Desc | Func | Func Desc | Notes |
|---|---|---|---|---|---|---|
| | 5 | 0 | Industrial-Process Control-Stationary (Gen-Sets) | 129 | Generator Set Controller | Generator set controller used to collect data and control. |
| | 5 | 0 | Generator Voltage Regulator | 130 | Generator Voltage Regulator | |
| | 5 | 0 | Industrial-Process Control-Stationary (Gen-Sets) | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |
| | 5 | 127 | Not Available | 255 | Not Available | This assignment can be used until an explicit function has been assigned. |

# APPENDIX C

# FAULT REPORTING PARAMETERS

# TABLE C1
## Suspect Parameter Numbers (SPN)

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 16 | Engine Fuel Filter (Suction Side) Differential Pressure (see also SPN 1382) | J1939-71 | | | 8 | Differential pressure measured across the fuel filter located between the fuel tank and the supply pump. | 16 | | |
| | 18 | Engine Extended Range Fuel Pressure | J1939 | | | | | 18 | | |
| | 19 | Engine Extended Range Engine Oil Pressure | J1939 | | | | | 19 | | |
| | 20 | Engine Extended Range Engine Coolant Pressure | J1939 | | | | | 20 | | |
| | 21 | Engine ECU Temperature (use SPN 1136) | J1939-71 | | | 16 | Temperature of the engine electronic control unit. | 21 | | |
| | 22 | Engine Extended Crankcase Blow-by Pressure | J1939-71 | 65263 | 2 | 8 | Differential crankcase blow-by pressure as measured through a tube with a venturi. | 22 | | |
| | 23 | Generator Oil Pressure | J1939 | | | | | 23 | | |
| | 24 | Generator Coolant Temperature | J1939 | | | | | 24 | | |
| | 27 | Engine Exhaust Gas Recirculation Valve Position | J1939-71 | 64916 | 1 | 16 | The position of the exhaust gas recirculation valve expressed as a percentage of full travel. | 27 | | |
| | 28 | Accelerator Pedal Position 3 | J1939 | | | 8 | The ratio of actual position of the third analog engine speed/torque request input device (such as an accelerator pedal or throttle lever) to the maximum position of the input device. | 28 | | |
| | 29 | Accelerator Pedal Position 2 | J1939-71 | 61443 | 5 | 8 | The ratio of actual position of the second analog engine speed/torque request input device (such as an accelerator pedal or throttle lever) to the maximum position of the input device. | 29 | | |
| | 30 | Engine Crankcase Blowby Pressure | J1939 | | | | | 30 | | |
| | 31 | Transmission Range Position | J1939 | | | | | 31 | | |
| | 32 | Transmission Splitter Position | J1939 | | | | The current position of the splitter cylinder. | 32 | | |
| | 33 | Clutch Cylinder Position | J1939 | | | | | 33 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 36 | Clutch Plates | J1939 | | | | | 36 | | |
| | 37 | Transmission Air Tank Pressure | J1939 | | | | The pressure of the air in the tank supplying the automatically shifting transmission. | 37 | | |
| | 38 | Second Fuel Level (Right Side) | J1939 | | | | | 38 | | |
| | 39 | Tire Pressure Check Interval | J1939-71 | 65144 | 1 | 8 | The interval at which the system will check the tire pressures (e.g., 5, 10, 15 min.). | 39 | | |
| | 46 | Pneumatic Supply Pressure | J1939-71 | 65198 | 1 | 8 | The pneumatic pressure in the main reservoir, sometimes referred to as the wet tank. | 46 | | |
| | 48 | Extended Range Barometric Pressure | J1939 | | | | | 48 | | |
| | 51 | Engine Throttle Position | J1939-71 | 65266 | 7 | 8 | The position of the valve used to regulate the supply of a fluid, usually air or fuel/air mixture, to an engine. | 51 | | |
| | 52 | Engine Intercooler Temperature | J1939-71 | 65262 | 7 | 8 | Temperature of liquid found in the intercooler located after the turbocharger. | 52 | | |
| | 53 | Transmission Synchronizer Clutch Value | J1939-71 | 65221 | 1 | 8 | The current modulated value for the air supply to the synchronizer clutch. | 53 | | |
| | 54 | Transmission Synchronizer Brake Value | J1939-71 | 65221 | 2 | 8 | The current modulated value for the air supply to the synchronizer brake. | 54 | | |
| | 59 | Transmission Shift Finger Gear Position | J1939-71 | 65223 | 1 | 8 | The current position of the shift finger in the gear direction. | 59 | | |
| | 60 | Transmission Shift Finger Rail Position | J1939-71 | 65223 | 2 | 8 | The current position of the shift finger in the rail direction. | 60 | | |
| | 64 | Transmission #2 Oil Temperature | J1939 | | | | Temperature of transmission #2 lubricant. | 64 | | |
| | 69 | Two Speed Axle Switch | J1939-71 | 65265 | 1.1 | 2 | Switch signal which indicates the current axle range. | 69 | | |
| | 70 | Parking Brake Switch | J1939-71 | 65265 | 1.3 | 2 | Switch signal which indicates when the parking brake is set. In general the switch actuated by the operator's park brake control, whether a pedal, lever or other control mechanism. | 70 | | |
| | 72 | Engine Blower Bypass Valve Position | J1939-71 | 65277 | 1 | 8 | Relative position of the blower bypass valve. | 72 | | |
| | 73 | Auxiliary Pump Pressure | J1939-71 | 65278 | 1 | 8 | Gage pressure of auxiliary water pump driven as a PTO device. | 73 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 74 | Maximum Vehicle Speed Limit | J1939-71 | 65261 | 1 | 8 | Maximum vehicle velocity allowed. | 74 | | |
| | 75 | Steering Axle Temperature | J1939-71 | 65273 | 1 | 8 | Temperature of lubricant in steering axle. | 75 | | |
| | 76 | Axle Lift Air Pressure | J1939 | | | | | 76 | | |
| | 77 | Forward Rear Drive Axle Temperature | J1939 | | | | | 77 | | |
| | 78 | Rear Rear Drive Axle Temperature | J1939 | | | | | 78 | | |
| | 79 | Road Surface Temperature | J1939-71 | 65269 | 7-8 | 16 | Indicated temperature of road surface over which vehicle is operating. | 79 | | |
| | 80 | Washer Fluid Level | J1939-71 | 65276 | 1 | 8 | Ratio of volume of liquid to total container volume of fluid reservoir in windshield wash system. | 80 | | |
| | 81 | Engine Particulate Trap Inlet Pressure | J1939-71 | 65270 | 1 | 8 | Exhaust back pressure as a result of particle accumulation on filter media placed in the exhaust stream. | 81 | | |
| | 82 | Engine Air Start Pressure | J1939-71 | 65246 | 1 | 8 | Gage pressure of air in an engine starting system that utilizes compressed air to provide the force required to rotate the crankshaft. | 82 | | |
| | 84 | Wheel-Based Vehicle Speed | J1939-71 | 65265 | 2-3 | 16 | Speed of the vehicle as calculated from wheel or tailshaft speed. | 84 | | |
| | 86 | Cruise Control Set Speed | J1939-71 | 65265 | 6 | 8 | Value of set (chosen) velocity of velocity control system. | 86 | | |
| | 87 | Cruise Control High Set Limit Speed | J1939-71 | 65261 | 2 | 8 | Maximum vehicle velocity at which cruise can be set. | 87 | | |
| | 88 | Cruise Control Low Set Limit Speed | J1939-71 | 65261 | 3 | 8 | Minimum vehicle velocity at which cruise can be set or minimum vehicle velocity for cruise operation before it will exit cruise control operation. | 88 | | |
| | 90 | Power Takeoff Oil Temperature | J1939-71 | 65264 | 1 | 8 | Temperature of lubricant in device used to transmit engine power to auxiliary equipment. | 90 | | |
| | 91 | Accelerator Pedal Position 1 | J1939-71 | 61443 | 2 | 8 | The ratio of actual position of the analog engine speed/torque request input device (such as an accelerator pedal or throttle lever) to the maximum position of the input device. | 91 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 92 | Engine Percent Load At Current Speed | J1939-71 | 61443 | 3 | 8 | The ratio of actual engine percent torque (indicated) to maximum indicated torque available at the current engine speed, clipped to zero torque during engine braking. | 92 | | |
| | 93 | Engine Net Brake Torque | J1939 | | | | | 93 | | |
| | 94 | Engine Fuel Delivery Pressure | J1939-71 | 65263 | 1 | 8 | Gage pressure of fuel in system as delivered from supply pump to the injection pump. | 94 | | |
| | 95 | Engine Fuel Filter Differential Pressure | J1939-71 | 65276 | 3 | 8 | Change in fuel delivery pressure, measured across the filter, due to accumulation of solid or semisolid matter on the filter element. | 95 | | |
| | 96 | Fuel Level | J1939-71 | 65276 | 2 | 8 | Ratio of volume of fuel to the total volume of fuel storage container. | 96 | | |
| | 97 | Water In Fuel Indicator | J1939-71 | 65279 | 1.1 | 2 | Signal which indicates the presence of water in the fuel. | 97 | | |
| | 98 | Engine Oil Level | J1939-71 | 65263 | 3 | 8 | Ratio of current volume of engine sump oil to maximum required volume | 98 | | |
| | 99 | Engine Oil Filter Differential Pressure | J1939-71 | 65276 | 4 | 8 | Change in engine oil pressure, measured across the filter, due to the filter and any accumulation of solid or semisolid material on or in the filter. | 99 | | |
| | 100 | Engine Oil Pressure | J1939-71 | 65263 | 4 | 8 | Gage pressure of oil in engine lubrication system as provided by oil pump. | 100 | | |
| | 101 | Engine Crankcase Pressure | J1939-71 | 65263 | 5-6 | 16 | Gage pressure inside engine crankcase. | 101 | | |
| | 102 | Engine Intake Manifold #1 Pressure | J1939-71 | 65270 | 2 | 8 | The gage pressure measurement of the air intake manifold. | 102 | | |
| | 103 | Engine Turbocharger 1 Speed | J1939-71 | 65245 | 2-3 | 16 | Rotational velocity of rotor in the turbocharger. | 103 | | |
| | 104 | Engine Turbocharger Lube Oil Pressure 1 | J1939-71 | 65245 | 1 | 8 | Gage pressure of oil in turbocharger lubrication system. | 104 | | |
| | 105 | Engine Intake Manifold 1 Temperature | J1939-71 | 65270 | 3 | 8 | Temperature of pre-combustion air found in intake manifold number 1 of engine air supply system. | 105 | | |
| | 106 | Engine Air Inlet Pressure | J1939-71 | 65270 | 4 | 8 | Absolute air pressure at inlet to intake manifold or air box. | 106 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 107 | Engine Air Filter 1 Differential Pressure | J1939-71 | 65270 | 5 | 8 | Change in engine air system pressure, measured across the filter, due to the filter and any accumulation of solid foreign matter on or in the filter. | 107 | | |
| | 108 | Barometric Pressure | J1939-71 | 65269 | 1 | 8 | Absolute air pressure of the atmosphere. | 108 | | |
| | 109 | Engine Coolant Pressure | J1939-71 | 65263 | 7 | 8 | Gage pressure of liquid found in engine cooling system. | 109 | | |
| | 110 | Engine Coolant Temperature | J1939-71 | 65262 | 1 | 8 | Temperature of liquid found in engine cooling system. | 110 | | |
| | 111 | Engine Coolant Level | J1939-71 | 65263 | 8 | 8 | Ratio of volume of liquid found in engine cooling system to total cooling system volume | 111 | | |
| | 112 | Engine Coolant Filter Differential Pressure | J1939-71 | 65270 | 8 | 8 | Change in coolant pressure, measured across the filter, due to the filter and any accumulation of solid or semisolid matter on or in the filter. | 112 | | |
| | 113 | Engine Governor Droop | J1939 | | | | | 113 | | |
| | 114 | Net Battery Current | J1939-71 | 65271 | 1 | 8 | Net flow of electrical current into/out of the battery or batteries. | 114 | | |
| | 115 | Alternator Current | J1939-71 | 65271 | 2 | 8 | Measured output current from Alternator | 115 | | |
| | 116 | Brake Application Pressure | J1939-71 | 65274 | 1 | 8 | Gage Pressure of compressed air or fluid in vehicle braking system. | 116 | | |
| | 117 | Brake Primary Pressure | J1939-71 | 65274 | 2 | 8 | Gage pressure of air in the primary, or supply side, of the air brake system | 117 | | |
| | 118 | Brake Secondary Pressure | J1939-71 | 65274 | 3 | 8 | Gage pressure of air in the secondary, or service side, of the air brake system. | 118 | | |
| | 119 | Hydraulic Retarder Pressure | J1939-71 | 65275 | 1 | 8 | Gage pressure of oil in hydraulic retarder system. | 119 | | |
| | 120 | Hydraulic Retarder Oil Temperature | J1939-71 | 65275 | 2 | 8 | Temperature of oil found in a hydraulic retarder. | 120 | | |
| | 122 | Engine Retarder Percent | J1939 | | | | | 122 | | |
| | 123 | Clutch Pressure | J1939-71 | 65272 | 1 | 8 | Gage pressure of oil within a wet clutch. | 123 | | |
| | 124 | Transmission Oil Level | J1939-71 | 65272 | 2 | 8 | Ratio of volume of transmission sump oil to recommended volume | 124 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 126 | Transmission Filter Differential Pressure | J1939-71 | 65272 | 3 | 8 | Change in transmission fluid pressure, measured after the filter, due to accumulation of solid or semisolid material on or in the filter. | 126 | | |
| | 127 | Transmission Oil Pressure | J1939-71 | 65272 | 4 | 8 | Gage pressure of lubrication fluid in transmission, measured after pump. | 127 | | |
| | 129 | Engine Injector Metering Rail 2 Pressure (duplicate, use SPN 1349) | J1939-71 | | | 16 | The gage pressure of fuel in the metering rail #2 as delivered from the supply pump to the injector metering inlet. | 129 | | |
| | 130 | Engine Power Specific Fuel Economy | J1939 | | | | | 130 | | |
| | 131 | Engine Exhaust Back Pressure | J1939 | | | | | 131 | | |
| | 132 | Engine Inlet Air Mass Flow Rate | J1939-71 | 61450 | 3-4 | 16 | Mass flow rate of fresh air entering the engine air intake, before any EGR mixer, if used. | 132 | | |
| | 133 | Engine Average Fuel Rate | J1939 | | | | | 133 | | |
| | 135 | Engine Fuel Delivery Pressure (Absolute) | J1939 | | | | | 135 | | |
| | 136 | Auxiliary Vacuum Pressure Reading | J1939-71 | 65143 | 1-2 | 16 | Identifies the current vacuum pressure (relative to atmosphere) that is configured uniquely per application. Not to be used in place of defined parameters. | 136 | | |
| | 137 | Auxiliary Gage Pressure Reading 1 | J1939-71 | 65143 | 3-4 | 16 | Identifies the current gage pressure (relative to atmosphere) that is configured uniquely per application. | 137 | | |
| | 138 | Auxiliary Absolute Pressure Reading | J1939-71 | 65143 | 5-6 | 16 | Identifies the current absolute pressure (relative to 0 pressure) that is configured uniquely per application. | 138 | | |
| | 141 | Trailer, Tag Or Push Channel Tire Pressure Target | J1939-71 | 65145 | 1-2 | 16 | The tire pressure control system’s target gage pressure for the trailer, tag, or push group of tires. | 141 | | |
| | 142 | Drive Channel Tire Pressure Target | J1939-71 | 65145 | 3-4 | 16 | The tire pressure control system’s target gage pressure for the drive group of tires. | 142 | | |
| | 143 | Steer Channel Tire Pressure Target | J1939-71 | 65145 | 5-6 | 16 | The tire pressure control system’s target gage pressure for the steer group of tires. | 143 | | |
| | 144 | Trailer, Tag Or Push Channel Tire Pressure | J1939-71 | 65146 | 1-2 | 16 | The latest gage pressure reading of the trailer, tag, or push group of tires, as opposed to the pressure in each tire. | 144 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 145 | Drive Channel Tire Pressure | J1939-71 | 65146 | 3-4 | 16 | The latest gage pressure reading of the drive group of tires, as opposed to the pressure in each tire. | 145 | | |
| | 146 | Steer Channel Tire Pressure | J1939-71 | 65146 | 5-6 | 16 | The latest gage pressure reading of the steer group of tires, as opposed to the pressure in each tire. | 146 | | |
| | 147 | Engine Average Fuel Economy (Gaseous) | J1939 | | | | | 147 | | |
| | 148 | Engine Instantaneous Fuel Economy (Gaseous) | J1939 | | | | | 148 | | |
| | 149 | Engine Mass Flow Rate (Gaseous) | J1939 | | | | | 149 | | |
| | 152 | Number Of ECU Resets | J1939 | | | | | 152 | | |
| | 153 | Engine High Resolution Crankcase Pressure | J1939 | | | | | 153 | | |
| | 156 | Engine Injector Timing Rail 1 Pressure | J1939-71 | 65243 | 5-6 | 16 | The gage pressure of fuel in the timing rail delivered from the supply pump to the injector timing inlet. | 156 | | |
| | 157 | Engine Injector Metering Rail 1 Pressure | J1939-71 | 65243 | 3-4 | 16 | The gage pressure of fuel in the primary, or first, metering rail as delivered from the supply pump to the injector metering inlet. | 157 | | |
| | 158 | Keyswitch Battery Potential | J1939-71 | 65271 | 7-8 | 16 | Battery potential measured at the input of the electronic control unit supplied through a keyswitch or similar switching device. | 158 | | |
| | 159 | Engine Gas Supply Pressure | J1939-71 | 65277 | 2-3 | 16 | Gage pressure of gas supply to fuel metering device. | 159 | | |
| | 160 | Main Shaft Speed | J1939-71 | | | 16 | Rotational velocity of the first intermediate shaft of the transmission. | 160 | | |
| | 161 | Transmission Input Shaft Speed | J1939-71 | 61442 | 6-7 | 16 | Rotational velocity of the primary shaft transferring power into the transmission. When a torque converter is present, it is the output of the torque converter. | 161 | | |
| | 162 | Transmission Requested Range | J1939-71 | 61445 | 5-6 | 16 | Range selected by the operator. | 162 | | |
| | 163 | Transmission Current Range | J1939-71 | 61445 | 7-8 | 16 | Range currently being commanded by the transmission control system. | 163 | | |
| | 164 | Engine Injection Control Pressure | J1939-71 | 65243 | 1-2 | 16 | The gage pressure of the engine oil in the hydraulic accumulator that powers an intensifier used for fuel injection. | 164 | | |
| | 165 | Compass Bearing | J1939-71 | 65256 | 1-2 | 16 | Present compass bearing of vehicle. | 165 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 166 | Engine Rated Power | J1939-71 | 65214 | 1-2 | 16 | Net brake power that the engine will deliver continuously, specified for a given application at a rated speed. | 166 | | |
| | 167 | Charging System Potential (Voltage) | J1939-71 | 65271 | 3-4 | 16 | Electrical potential measured at the charging system output. The charging system may be any device charging the batteries. This includes alternators, generators, solid state charger and other charging devices. | 167 | | |
| | 168 | Battery Potential / Power Input 1 | J1939-71 | 65271 | 5-6 | 16 | This parameter measures the first source of battery potential as measured at the input of the ECM/actuator etc. coming from one or more batteries, irrespective of the distance between the component and the battery. | 168 | | |
| | 169 | Cargo Ambient Temperature | J1939-71 | 65276 | 5-6 | 16 | Temperature of air inside vehicle container used to accommodate cargo. | 169 | | |
| | 170 | Cab Interior Temperature | J1939-71 | 65269 | 2-3 | 16 | Temperature of air inside the part of the vehicle that encloses the driver and vehicle operating controls. | 170 | | |
| | 171 | Ambient Air Temperature | J1939-71 | 65269 | 4-5 | 16 | Temperature of air surrounding vehicle. | 171 | | |
| | 172 | Engine Air Inlet Temperature | J1939-71 | 65269 | 6 | 8 | Temperature of air entering vehicle air induction system. | 172 | | |
| | 173 | Engine Exhaust Gas Temperature | J1939-71 | 65270 | 6-7 | 16 | Temperature of combustion byproducts leaving the engine. | 173 | | |
| | 174 | Engine Fuel Temperature 1 | J1939-71 | 65262 | 2 | 8 | Temperature of fuel (or gas) passing through the first fuel control system. | 174 | | |
| | 175 | Engine Oil Temperature 1 | J1939-71 | 65262 | 3-4 | 16 | Temperature of the engine lubricant. | 175 | | |
| | 176 | Engine Turbocharger Oil Temperature | J1939-71 | 65262 | 5-6 | 16 | Temperature of the turbocharger lubricant. | 176 | | |
| | 177 | Transmission Oil Temperature | J1939-71 | 65272 | 5-6 | 16 | Temperature of the transmission lubricant. | 177 | | |
| | 178 | Front Axle Weight | J1939 | | | | | 178 | | |
| | 179 | Rear Axle Weight | J1939 | | | | | 179 | | |
| | 180 | Trailer Weight | J1939-71 | 65258 | 4-5 | 16 | Total mass of freight-carrying vehicle designed to be pulled by truck, including the weight of the contents. | 180 | | |
| | 181 | Cargo Weight | J1939-71 | 65258 | 6-7 | 16 | The mass of freight carried. | 181 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 182 | Engine Trip Fuel | J1939-71 | 65257 | 1-4 | 32 | Fuel consumed during all or part of a journey. | 182 | | |
| | 183 | Engine Fuel Rate | J1939-71 | 65266 | 1-2 | 16 | Amount of fuel consumed by engine per unit of time. | 183 | | |
| | 184 | Engine Instantaneous Fuel Economy | J1939-71 | 65266 | 3-4 | 16 | Current fuel economy at current vehicle velocity | 184 | | |
| | 185 | Engine Average Fuel Economy | J1939-71 | 65266 | 5-6 | 16 | Average of instantaneous fuel economy for that segment of vehicle operation of interest. | 185 | | |
| | 186 | Power Takeoff Speed | J1939-71 | 65264 | 2-3 | 16 | Rotational velocity of device used to transmit engine power to auxiliary equipment. | 186 | | |
| | 187 | Power Takeoff Set Speed | J1939-71 | 65264 | 4-5 | 16 | Rotational velocity selected by operator for device used to transmit engine power to auxiliary equipment. | 187 | | |
| | 188 | Engine Speed At Idle, Point 1 (Engine Configuration) | J1939-71 | 65251 | 01-02 | 16 | Stationary low idle speed of engine which includes influences due to engine temperature (after power up) and other stationary changes (calibration offsets, sensor failures, etc). | 188 | | |
| | 189 | Engine Rated Speed | J1939-71 | 65214 | 3-4 | 16 | The maximum governed rotational velocity of the engine crankshaft under full load conditions. | 189 | | |
| | 190 | Engine Speed | J1939-71 | 61444 | 4-5 | 16 | Actual engine speed which is calculated over a minimum crankshaft angle of 720 degrees divided by the number of cylinders. | 190 | | |
| | 191 | Transmission Output Shaft Speed | J1939-71 | 61442 | 2-3 | 16 | Calculated speed of the transmission output shaft. | 191 | | |
| | 228 | Speed Sensor Calibration | J1939 | | | | | 228 | | |
| | 229 | Total Fuel Used (Gaseous) (duplicate, use SPN 1040) | J1939 | | | | | 229 | | |
| | 230 | Total Idle Fuel Used (Gaseous) (duplicate, use SPN 1010) | J1939 | | | | | 230 | | |
| | 231 | Trip Fuel (Gaseous) (duplicate, use SPN 1039) | J1939 | | | | | 231 | | |
| | 232 | DGPS Differential Correction | J1939 | | | | | 232 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 233 | Unit Number (Power Unit) | J1939-71 | 65259 | d | 1600 | Owner assigned unit number for the power unit of the vehicle | 233 | | |
| | 234 | Software Identification | J1939-71 | 65242 | 2-N | 1600 | Software identification of an electronic module. As an example, this parameter may be represented with ASCII characters MMDDYYaa where MM is the month, DD is the day, YY is the year, and aa is the revision number. | 234 | | |
| | 235 | Engine Total Idle Hours | J1939-71 | 65244 | 5-8 | 32 | Accumulated time of operation of the engine while under idle conditions. | 235 | | |
| | 236 | Engine Total Idle Fuel Used | J1939-71 | 65244 | 1-4 | 32 | Accumulated amount of fuel used during vehicle operation while under idle conditions. | 236 | | |
| | 237 | Vehicle Identification Number | J1939-71 | 65260 | 1 | 1600 | Vehicle Identification Number (VIN) as assigned by the vehicle manufacturer. | 237 | | |
| | 238 | Velocity Vector | J1939 | | | | | 238 | | |
| | 241 | Tire Pressure | J1939-71 | 65268 | 2 | 8 | Pressure at which air is contained in cavity formed by tire and rim. | 241 | | |
| | 242 | Tire Temperature | J1939-71 | 65268 | 3-4 | 16 | Temperature at the surface of the tire sidewall. | 242 | | |
| | 244 | Trip Distance | J1939-71 | 65248 | 1-4 | 32 | Distance traveled during all or part of a journey. | 244 | | |
| | 245 | Total Vehicle Distance | J1939-71 | 65248 | 5-8 | 32 | Accumulated distance traveled by vehicle during its operation. | 245 | | |
| | 246 | Total Vehicle Hours | J1939-71 | 65255 | 1-4 | 32 | Accumulated time of operation of vehicle. | 246 | | |
| | 247 | Engine Total Hours of Operation | J1939-71 | 65253 | 1-4 | 32 | Accumulated time of operation of engine. | 247 | | |
| | 248 | Total Power Takeoff Hours | J1939-71 | 65255 | 5-8 | 32 | Accumulated time of operation of power takeoff device. | 248 | | |
| | 249 | Engine Total Revolutions | J1939-71 | 65253 | 5-8 | 32 | Accumulated number of revolutions of engine crankshaft during its operation. | 249 | | |
| | 250 | Engine Total Fuel Used | J1939-71 | 65257 | 5-8 | 32 | Accumulated amount of fuel used during vehicle operation. | 250 | | |
| | 251 | Time | J1939 | | | | | 251 | | |
| | 252 | Date | J1939 | | | | | 252 | | |
| | 257 | Cold Restart Of Specific Component | J1939 | | | | | 257 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 258 | Warm Restart Of Specific Component | J1939 | | | | | 258 | | |
| | 259 | Acknowledgement Of Warm Or Cold Restart | J1939 | | | | | 259 | | |
| | 354 | Relative Humidity | J1939-71 | 65164 | 7 | 8 | Measures humidity of combustion air prior to entry into turbocharger | 354 | | |
| | 355 | Engine Oil Life | J1939 | | | | Measures the condition of the engine lubricating oil | 355 | | |
| | 378 | Fare Collection Unit Status | J1939 | | | | | 378 | | |
| | 380 | Articulation Angle | J1939 | | | | | 380 | | |
| | 383 | Vehicle Acceleration | J1939 | | | | | 383 | | |
| | 407 | Axle Group Full Weight Calibration | J1939-71 | 64873 | 4-5 | 16 | The full weight calibration measurement of an axle group | | | |
| | 408 | Axle Group Empty Weight Calibration | J1939-71 | 64873 | 2-3 | 16 | The empty weight calibration measurement of an axle group | 408 | | |
| | 409 | Axle Group Weight | J1939-71 | 64874 | 2-3 | 16 | Total mass imposed on the road surface by all the tires in the axle group | 409 | | |
| | 411 | Engine Exhaust Gas Recirculation Differential Pressure | J1939-71 | 65188 | 5-6 | 16 | Differential pressure across the Exhaust Gas Recirculation (EGR) system | 411 | | |
| | 412 | Engine Exhaust Gas Recirculation Temperature | J1939-71 | 65188 | 7-8 | 16 | Temperature of Recirculated Exhaust Gas | 412 | | |
| | 413 | Net Vehicle Weight Change | J1939-71 | 64872 | 4-6 | 24 | Identifies the net vehicle weight change from the time of last vehicle net weight zeroing. | 413 | | |
| | 417 | Gross Combination Weight | J1939-71 | 64872 | 1-3 | 24 | Total weight of the truck and all the trailers with on-board scales. | 417 | | |
| | 430 | Engine Starter Solenoid Voltage | J1939 | | | | This is the voltage at the battery terminal of the starter solenoid. | 430 | | |
| | 441 | Auxiliary Temperature 1 | J1939-71 | 65164 | 1 | 8 | Temperature measured by auxiliary temperature sensor #1. | 441 | | |
| | 442 | Auxiliary Temperature 2 | J1939-71 | 65164 | 2 | 8 | Temperature measured by auxiliary temperature sensor #2. | 442 | | |
| | 443 | Auxiliary Gage Pressure Reading 2 | J1939 | | | | | 443 | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 444 | Battery Potential / Power Input 2 | J1939-71 | 65165 | 1-2 | 16 | This parameter measures the second source of battery potential as measured at the input of the ECM/actuator etc. coming from one or more batteries, irrespective of the distance between the component and the battery. | 444 | | |
| | 445 | Engine Cylinder Head Temperature Bank B (right bank) | J1939 | | | | | 445 | | |
| | 446 | Engine Cylinder Head Temperature Bank A (left bank) | J1939 | | | | | 446 | | |
| | 447 | Passenger Counter | J1939 | | | | | 447 | | |
| | 501 | Signage Message | J1939 | | | | | 501 | | |
| | 502 | Fare Collection Unit - Point Of Sale | J1939 | | | | | 502 | | |
| | 503 | Fare Collection Unit - Service Detail | J1939 | | | | | 503 | | |
| | 504 | Annunciator Voice Message | J1939 | | | | | 504 | | |
| | 505 | Vehicle Control Head Keyboard Message | J1939 | | | | | 505 | | |
| | 506 | Vehicle Control Head Display Message | J1939 | | | | | 506 | | |
| | 507 | Driver Identification | J1939 | | | | | 507 | | |
| | 508 | Transit Route Identification | J1939 | | | | | 508 | | |
| | 509 | Milepost Identification | J1939-71 | 64959 | 2 to n | 800 | Used to identify the milepost as detected by a milepost sensor | 509 | | |
| | 512 | Driver's Demand Engine - Percent Torque | J1939-71 | 61444 | 2 | 8 | The requested torque output of the engine by the driver. | | | |
| | 513 | Actual Engine - Percent Torque | J1939-71 | 61444 | 3 | 8 | The calculated output torque of the engine. | | | |
| | 514 | Nominal Friction - Percent Torque | J1939-71 | 65247 | 1 | 8 | The calculated torque that indicates the amount of torque required by the basic engine itself added by the loss torque of accessories. | | | |
| | 515 | Engine's Desired Operating Speed | J1939-71 | 65247 | 2-3 | 16 | An indication by the engine of the optimal operating speed of the engine for the current existing conditions. | | | |
| | 516 | Ground-Based Vehicle Speed | J1939 | | | 16 | Actual ground speed of the vehicle, measured by a device such as RADAR. (1 km/h = 0.621 mph) | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 517 | Navigation-Based Vehicle Speed | J1939-71 | 65256 | 3-4 | 16 | Speed of the vehicle as calculated from a device such as a Global Positioning System (GPS). | | | |
| | 518 | Engine Requested Torque/Torque Limit | J1939-71 | 0 | 4 | 8 | Parameter provided to the engine or retarder in the torque/speed control message for controlling or limiting the output torque. | | | |
| | 519 | Engine's Desired Operating Speed Asymmetry Adjustment | J1939-71 | 65247 | 4 | 8 | This byte is utilized in transmission gear selection routines and indicates the engine's preference of lower versus higher engine speeds should its desired speed not be achievable. | | | |
| | 520 | Actual Retarder - Percent Torque | J1939-71 | 61440 | 2 | 8 | Actual braking torque of the retarder as a percent of retarder configuration reference torque SPN 556. | | | |
| | 521 | Brake Pedal Position | J1939-71 | 61441 | 2 | 8 | Ratio of brake pedal position to maximum pedal position. Used for electric brake applications. | | | |
| | 522 | Percent Clutch Slip | J1939-71 | 61442 | 4 | 8 | Parameter which represents the ratio of input shaft speed to current engine speed (in percent). | | | |
| | 523 | Transmission Current Gear | J1939-71 | 61445 | 4 | 8 | The gear currently engaged in the transmission or the last gear engaged while the transmission is in the process of shifting to the new or selected gear. | | | |
| | 524 | Transmission Selected Gear | J1939-71 | 61445 | 1 | 8 | The gear that the transmission will attempt to achieve during the current shift if a shift is in progress, or the next shift if one is pending (i.e., waiting for torque reduction to initiate the shift). | | | |
| | 525 | Transmission Requested Gear | J1939-71 | 256 | 3 | 8 | Gear requested by the operator, ABS, or engine. | | | |
| | 526 | Transmission Actual Gear Ratio | J1939-71 | 61445 | 2-3 | 16 | Actual ratio of input shaft speed to output shaft speed. | | | |
| | 527 | Cruise Control States | J1939-71 | 65265 | 7.6 | 3 | This parameter is used to indicate the current state, or mode, of operation by the cruise control device. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 528 | Engine Speed At Point 2 (Engine Configuration) | J1939-71 | 65251 | 04-05 | 16 | Engine speed of point 2 of the engine torque map (see PGN 65251 and supporting document). | | | |
| | 529 | Engine Speed At Point 3 (Engine Configuration) | J1939-71 | 65251 | 07-08 | 16 | Engine speed at point 3 of the engine torque map | | | |
| | 530 | Engine Speed At Point 4 (Engine Configuration) | J1939-71 | 65251 | 10-11 | 16 | Engine speed at point 4 of the engine torque map | | | |
| | 531 | Engine Speed At Point 5 (Engine Configuration) | J1939-71 | 65251 | 13-14 | 16 | Engine speed at point 5 of the engine torque map | | | |
| | 532 | Engine Speed At High Idle, Point 6 (Engine Configuration) | J1939-71 | 65251 | 16-17 | 16 | Engine speed of high idle (point 6) of the engine torque map. | | | |
| | 533 | Engine Maximum Momentary Override Speed, Point 7 (Engine Configuration) | J1939-71 | 65251 | 22-23 | 16 | The maximum engine speed above high idle allowed by the engine control during a momentary high idle override. | | | |
| | 534 | Engine Maximum Momentary Override Time Limit (Engine Configuration) | J1939-71 | 65251 | 24 | 8 | The maximum time limit allowed to override the engine's high idle speed. | | | |
| | 535 | Engine Requested Speed Control Range Lower Limit (Engine Configuration) | J1939-71 | 65251 | 25 | 8 | The minimum engine speed that the engine will allow when operating in a speed control/limit mode. | | | |
| | 536 | Engine Requested Speed Control Range Upper Limit (Engine Configuration) | J1939-71 | 65251 | 26 | 8 | The maximum engine speed regardless of load that the engine will allow when operating in a speed control/limit mode, excluding any maximum momentary engine override speed, if supported. | | | |
| | 537 | Engine Requested Torque Control Range Lower Limit (Engine Configuration) | J1939-71 | 65251 | 27 | 8 | The minimum engine torque that the engine will allow when operating in a torque control/limit mode. | | | |
| | 538 | Engine Requested Torque Control Range Upper Limit (Engine Configuration) | J1939-71 | 65251 | 28 | 8 | The maximum engine torque that the engine will allow when operating in a torque control/limit mode. | | | |
| | 539 | Engine Percent Torque At Idle, Point 1 (Engine Configuration) | J1939-71 | 65251 | 03 | 8 | The torque limit that indicates the available engine torque which can be provided by the engine at idle speed. | | | |
| | 540 | Engine Percent Torque At Point 2 (Engine Configuration) | J1939-71 | 65251 | 06 | 8 | The torque limit that indicates the available engine torque which can be provided by the engine at point 2 of the engine map | | | |
| | 541 | Engine Percent Torque At Point 3 (Engine Configuration) | J1939-71 | 65251 | 09 | 8 | The torque limit that indicates the available engine torque which can be provided by the engine at point 3 of the engine map | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 542 | Engine Percent Torque At Point 4 (Engine Configuration) | J1939-71 | 65251 | 12 | 8 | The torque limit that indicates the available engine torque which can be provided by the engine at point 4 of the engine map | | | |
| | 543 | Engine Percent Torque At Point 5 (Engine Configuration) | J1939-71 | 65251 | 15 | 8 | The torque limit that indicates the available engine torque which can be provided by the engine at point 5 of the engine map. | | | |
| | 544 | Engine Reference Torque (Engine Configuration) | J1939-71 | 65251 | 20-21 | 16 | This parameter is the 100% reference value for all defined indicated engine torque parameters. | | | |
| | 545 | Engine Gain (Kp) Of The Endspeed Governor (Engine Configuration) | J1939-71 | 65251 | 18-19 | 16 | The endspeed governor is defined as a linear line | | | |
| | 546 | Retarder Speed At Idle, Point 1 (Retarder Configuration) | J1939-71 | 65249 | 03-04 | 16 | | | | |
| | 547 | Retarder Speed At Peak Torque, Point 5 (Retarder Configuration) | J1939-71 | 65249 | 15-16 | 16 | | | | |
| | 548 | Maximum Retarder Speed, Point 2 (Retarder Configuration) | J1939-71 | 65249 | 06-07 | 16 | Maximum speed of retarder | | | |
| | 549 | Retarder Speed At Point 3 (Retarder Configuration) | J1939-71 | 65249 | 09-10 | 16 | Retarder speed of point 3 of the engine retarder torque map (see 5.2.4.3). | | | |
| | 550 | Retarder Speed At Point 4 (Retarder Configuration) | J1939-71 | 65249 | 12-13 | 16 | Retarder speed of point 4 of the engine retarder torque map (see 5.2.4.3). | | | |
| | 551 | Percent Torque At Idle, Point 1 (Retarder Configuration) | J1939-71 | 65249 | 05 | 8 | The torque limit that indicates the available retarder torque which can be provided by the retarder at idle speed. | | | |
| | 552 | Percent Torque At Maximum Speed, Point 2 (Retarder Configuration) | J1939-71 | 65249 | 08 | 8 | The torque limit that indicates the available retarder torque which can be provided by the retarder at its maximum speed | | | |
| | 553 | Percent Torque At Point 3 (Retarder Configuration) | J1939-71 | 65249 | 11 | 8 | The torque limit that indicates the available retarder torque which can be provided by the retarder at point 3 of the retarder torque map | | | |
| | 554 | Percent Torque At Point 4 (Retarder Configuration) | J1939-71 | 65249 | 14 | 8 | The torque limit that indicates the available retarder torque which can be provided by the retarder at point 4 of the retarder torque map | | | |
| | 555 | Percent Torque At Peak Torque, Point 5 (Retarder Configuration) | J1939-71 | 65249 | 19 | 8 | The torque limit that indicates the available retarder torque which can be provided by the retarder at point 5 of the retarder torque map | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 556 | Reference Retarder Torque (Retarder Configuration) | J1939-71 | 65249 | 17-18 | 16 | This parameter is the 100% reference value for all defined indicated retarder torque parameters. | | | |
| | 557 | Retarder Control Method (Retarder Configuration) | J1939-71 | 65249 | 02 | 8 | This parameter identifies the number of steps used by the retarder. | | | |
| | 558 | Accelerator Pedal 1 Low Idle Switch | J1939-71 | 61443 | 1.1 | 2 | Switch signal which indicates the state of the accelerator pedal 1 low idle switch. | | | |
| | 559 | Accelerator Pedal Kickdown Switch | J1939-71 | 61443 | 1.3 | 2 | Switch signal which indicates whether the accelerator pedal kickdown switch is opened or closed. | | | |
| | 560 | Transmission Driveline Engaged | J1939-71 | 61442 | 1.1 | 2 | Driveline engaged indicates the transmission controlled portion of the driveline is engaged sufficiently to allow a transfer of torque through the transmission. | | | |
| | 561 | ASR Engine Control Active | J1939-71 | 61441 | 1.1 | 2 | State signal which indicates that ASR engine control has been commanded to be active. | | | |
| | 562 | ASR Brake Control Active | J1939-71 | 61441 | 1.3 | 2 | State signal which indicates that ASR brake control is active. | | | |
| | 563 | Anti-Lock Braking (ABS) Active | J1939-71 | 61441 | 1.5 | 2 | State signal which indicates that the ABS is active. | | | |
| | 564 | Differential Lock State - Central | J1939-71 | 61446 | 3.1 | 2 | State used which indicates the condition of the central differential lock | | | |
| | 565 | Differential Lock State - Central Front | J1939-71 | 61446 | 3.3 | 2 | State used which indicates the condition of the central front differential lock. | | | |
| | 566 | Differential Lock State - Central Rear | J1939-71 | 61446 | 3.5 | 2 | State used which indicates the condition of the central rear differential lock. | | | |
| | 567 | Differential Lock State - Front Axle 1 | J1939-71 | 61446 | 2.1 | 2 | State used which indicates the condition of the front axle 1 differential lock. | | | |
| | 568 | Differential Lock State - Front Axle 2 | J1939-71 | 61446 | 2.3 | 2 | State used which indicates the condition of the front axle 2 differential lock. | | | |
| | 569 | Differential Lock State - Rear Axle 1 | J1939-71 | 61446 | 2.5 | 2 | State used which indicates the condition of the rear axle 1 differential lock. | | | |
| | 570 | Differential Lock State - Rear Axle 2 | J1939-71 | 61446 | 2.7 | 2 | State used which indicates the condition of the rear axle 2 differential lock. | | | |
| | 571 | Retarder Enable - Brake Assist Switch | J1939-71 | 61440 | 1.5 | 2 | Switch signal which indicates whether the operator wishes the retarder to be enabled for vehicle braking assist. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 572 | Retarder Enable - Shift Assist Switch | J1939-71 | 61440 | 1.7 | 2 | Switch signal which indicates whether the operator wishes the retarder to be enabled for transmission shift assist. | | | |
| | 573 | Transmission Torque Converter Lockup Engaged | J1939-71 | 61442 | 1.3 | 2 | State signal which indicates whether the torque converter lockup is engaged. | | | |
| | 574 | Transmission Shift In Process | J1939-71 | 61442 | 1.5 | 2 | Indicates that the transmission is in process of shifting from the current gear to the selected gear. | | | |
| | 575 | ABS Off-road Switch | J1939-71 | 61441 | 3.1 | 2 | Switch signal which indicates the position of the ABS off-road switch. | | | |
| | 576 | ASR Off-road Switch | J1939-71 | 61441 | 3.3 | 2 | Switch signal which indicates the position of the ASR off-road switch. | | | |
| | 577 | ASR "Hill Holder" Switch | J1939-71 | 61441 | 3.5 | 2 | Switch signal which indicates the position of the ASR “hill holder” switch. | | | |
| | 578 | Drive Axle Temperature | J1939-71 | 65273 | 4 | 8 | Temperature of axle lubricant in drive axle. | | | |
| | 579 | Drive Axle Lift Air Pressure | J1939-71 | 65273 | 3 | 8 | Gage pressure of air in system that utilizes compressed air to provide force between axle and frame. | | | |
| | 580 | Altitude | J1939-71 | 65256 | 7-8 | 16 | Altitude of the vehicle referenced to sea level at standard atmospheric pressure and temperature. | | | |
| | 581 | Transmission Gear Ratio | J1939-71 | 65250 | 3-4 | 16 | The transmission configuration describes the number of forward gears, the number of reverse gears, and the ratio of each gear with the following resolution. | | | |
| | 582 | Axle Weight | J1939-71 | 65258 | 2-3 | 16 | Total mass imposed by the tires on the road surface at the specified axle. | | | |
| | 583 | Pitch | J1939-71 | 65256 | 5-6 | 16 | Pitch of the vehicle as calculated by the navigation device(s). | | | |
| | 584 | Latitude | J1939-71 | 65267 | 1-4 | 32 | Latitude position of the vehicle. | | | |
| | 585 | Longitude | J1939-71 | 65267 | 5-8 | 32 | Longitude position of the vehicle | | | |
| | 586 | Make | J1939-71 | 65259 | a | 40 | Make of the component. | | | |
| | 587 | Model | J1939-71 | 65259 | b | 1600 | Model of the component | | | |
| | 588 | Serial Number | J1939-71 | 65259 | c | 1600 | Serial number of the component | | | |
| | 589 | Alternator Speed | J1939-71 | 65237 | 1-2 | 16 | Actual rotation speed of the alternator. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 590 | Engine Idle Shutdown Timer State | J1939-71 | 65252 | 1.7 | 2 | Status signal which indicates the current mode of operation of the idle shutdown timer system. | | | |
| | 591 | Engine Idle Shutdown Timer Function | J1939-71 | 65252 | 2.7 | 2 | Parameter which indicates the configuration of the idle shutdown timer system. | | | |
| | 592 | Engine Idle Shutdown Timer Override | J1939-71 | 65252 | 1.5 | 2 | Status signal which indicates the status of the override feature of the idle shutdown timer system. | | | |
| | 593 | Engine Idle Shutdown has Shutdown Engine | J1939-71 | 65252 | 1.1 | 2 | Status signal which identifies whether or not the engine has been shutdown by the idle shutdown timer system. | | | |
| | 594 | Engine Idle Shutdown Driver Alert Mode | J1939-71 | 65252 | 1.3 | 2 | Status signal which indicates the status of the driver alert mode of the idle shutdown timer system. | | | |
| | 595 | Cruise Control Active | J1939-71 | 65265 | 4.1 | 2 | Cruise control is switched on. | | | |
| | 596 | Cruise Control Enable Switch | J1939-71 | 65265 | 4.3 | 2 | Switch signal which indicates that it is possible to manage the cruise control function. | | | |
| | 597 | Brake Switch | J1939-71 | 65265 | 4.5 | 2 | Switch signal which indicates that the driver operated brake foot pedal is being pressed. | | 0 | 246 |
| | 598 | Clutch Switch | J1939-71 | 65265 | 4.7 | 2 | Switch signal which indicates that the clutch pedal is being pressed. | | 0 | 245 |
| | 599 | Cruise Control Set Switch | J1939-71 | 65265 | 5.1 | 2 | Switch signal of the cruise control activator which indicates that the activator is in the position “set.” | | | |
| | 600 | Cruise Control Coast (Decelerate) Switch | J1939-71 | 65265 | 5.3 | 2 | Switch signal of the cruise control activator which indicates that the activator is in the position “coast (decelerate).” | | | |
| | 601 | Cruise Control Resume Switch | J1939-71 | 65265 | 5.5 | 2 | Switch signal of the cruise control activator which indicates that the activator is in the position “resume.” | | | |
| | 602 | Cruise Control Accelerate Switch | J1939-71 | 65265 | 5.7 | 2 | Switch signal of the cruise control activator which indicates that the activator is in the position “accelerate.” | | | |
| | 603 | Brake Pedal Switch #2 | J1939 | | | | | | 0 | 247 |
| | 604 | Transmission Neutral Switch | J1939-71 | 65219 | 2.3 | 2 | Identifies the status of the switch that indicates neutral. | | 0 | 226 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 605 | Refrigerant High Pressure Switch | J1939-71 | 65252 | 3.5 | 2 | Switch signal which indicates the position of the high pressure switch in the coolant circuit of an air conditioning system. | | 0 | 228 |
| | 606 | Engine Momentary Overspeed Enable | J1939-71 | 61442 | 5.1 | 2 | Command signal used to indicate that the engine speed may be boosted up to the maximum engine overspeed value to accommodate transmission downshifts. | | | |
| | 607 | Progressive Shift Disable | J1939-71 | 61442 | 5.3 | 2 | Command signal used to indicate that progressive shifting by the engine should be disallowed. | | | |
| | 608 | J1587 (previously SAE J1708 (J1587) Data Link) | J1939-73 | 57088 | 1.5 | 2 | Identifies the action to be performed on the J1587 communications port. | | 0 | 250 |
| | 609 | Controller #2 | J1939 | | | | | | 0 | 233 |
| | 610 | Power Connect Device | J1939 | | | | | | 0 | 236 |
| | 611 | System Diagnostic Code #1 | J1939 | | | | | | 0 | 151 |
| | 612 | System Diagnostic Code #2 | J1939 | | | | | | 0 | 152 |
| | 613 | System Diagnostic Code #3 | J1939 | | | | | | 0 | 153 |
| | 614 | System Diagnostic Code #4 | J1939 | | | | | | 0 | 154 |
| | 615 | System Diagnostic Code #5 | J1939 | | | | | | 0 | 155 |
| | 616 | Auxiliary Analog Input #1 | J1939 | | | | | | 0 | 227 |
| | 617 | Parking Brake On Actuator | J1939 | | | | | | 0 | 234 |
| | 618 | Parking Brake Off Actuator | J1939 | | | | | | 0 | 235 |
| | 619 | Parking Brake Actuator | J1939-71 | 65274 | 4.1 | 2 | Signal which indicates the current state of the actuator(s) that control the parking brake | | | |
| | 620 | 5 Volts DC Supply (obsolete) | J1939 | | | | This SPN is obsolete. SPNs 3509-3514 should be used instead. | | 0 | 232 |
| | 621 | Antenna Electronics | J1939 | | | | | | 219 | 2 |
| | 622 | J1922 (previously SAE J1922 Data Link) | J1939-73 | 57088 | 1.3 | 2 | Identifies the action to be performed on the J1922 communications port. | | 0 | 249 |
| | 623 | Red Stop Lamp | J1939-73 | 65226 | 1.5 | | | | 0 | 238 |
| | 624 | Amber Warning Lamp | J1939-73 | 65226 | 1.3 | | | | 0 | 239 |
| | 625 | Proprietary Data Link | J1939 | | | | | | 0 | 248 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 626 | Engine Start Enable Device 1 | J1939-71 | 64966 | 1.1 | 2 | Devices that assist an Engine in starting, e.g. intake heaters and ether. Primary starting aid. | | 0 | 237 |
| | 627 | Power Supply (obsolete) | J1939 | | | | This SPN is obsolete. SPNs 3597 should be used instead. | | 0 | 251 |
| | 628 | Program Memory | J1939 | | | | | | 0 | 240 |
| | 629 | Controller #1 | J1939 | | | | | | 0 | 254 |
| | 630 | Calibration Memory | J1939 | | | | | | 0 | 253 |
| | 631 | Calibration Module | J1939 | | | | | | 0 | 252 |
| | 632 | Engine Fuel Shutoff 1 Control | J1939-71 | 64914 | 4.3 | 2 | Control setting for fuel shutoff 1. Second instance is SPN 2807 | | 128 | 17 |
| | 633 | Engine Fuel Actuator 1 Control Command | J1939-71 | 61466 | 5-6 | 16 | The control command to fuel actuator 1 | | 128 | 18 |
| | 634 | Engine Throttle Bypass Valve | J1939 | | | | | | 128 | 19 |
| | 635 | Engine Timing Actuator #1 | J1939 | | | | | | 128 | 20 |
| | 636 | Engine Position Sensor | J1939 | | | | | | 128 | 21 |
| | 637 | Engine Timing Sensor | J1939 | | | | | | 128 | 22 |
| | 638 | Engine Fuel Rack Actuator | J1939 | | | | Actuator that positions the fuel rack on a diesel fuel injection pump. | | 128 | 23 |
| | 639 | J1939 Network #1, Primary Vehicle Network ( previously SAE J1939 Data Link) | J1939-73 | 57088 | 1.1 | 2 | Identifies the action to be performed on the J1939 Network #1, Primary Vehicle Network" communications port. | | 0 | 231 |
| | 640 | Engine External Protection Input | J1939 | | | | | | 128 | 25 |
| | 641 | Engine Variable Geometry Turbocharger Actuator #1 | J1939-71 | 64931 | 3 | 8 | Actuator that controls the variable geometry turbocharger geometry. | | 128 | 27 |
| | 642 | Engine Turbocharger Variable Geometry Actuator #2 | J1939 | | | | | | 128 | 28 |
| | 643 | Engine External Fuel Command Input | J1939 | | | | | | 128 | 29 |
| | 644 | Engine External Speed Command Input | J1939 | | | | | | 128 | 30 |
| | 645 | Engine Tachometer Signal Output | J1939 | | | | | | 128 | 31 |
| | 646 | Engine Turbocharger 1 Wastegate Drive | J1939 | | | | Do not use - Use SPN 1188 for Turbocharger 1 Wastegate Drive data. | | 128 | 32 |
| | 647 | Engine Fan Clutch Output Device Driver | J1939 | | | | | | 128 | 33 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 648 | Engine Exhaust Back Pressure Sensor | J1939 | | | | | | 128 | 34 |
| | 649 | Engine Exhaust Back Pressure Regulator Solenoid | J1939 | | | | | | 128 | 35 |
| | 650 | Electronic Drive Unit Power Relay | J1939 | | | | | | 128 | 37 |
| | 651 | Engine Injector Cylinder #01 | J1939 | | | | | | 128 | 1 |
| | 652 | Engine Injector Cylinder #02 | J1939 | | | | | | 128 | 2 |
| | 653 | Engine Injector Cylinder #03 | J1939 | | | | | | 128 | 3 |
| | 654 | Engine Injector Cylinder #04 | J1939 | | | | | | 128 | 4 |
| | 655 | Engine Injector Cylinder #05 | J1939 | | | | | | 128 | 5 |
| | 656 | Engine Injector Cylinder #06 | J1939 | | | | | | 128 | 6 |
| | 657 | Engine Injector Cylinder #07 | J1939 | | | | | | 128 | 7 |
| | 658 | Engine Injector Cylinder #08 | J1939 | | | | | | 128 | 8 |
| | 659 | Engine Injector Cylinder #09 | J1939 | | | | | | 128 | 9 |
| | 660 | Engine Injector Cylinder #10 | J1939 | | | | | | 128 | 10 |
| | 661 | Engine Injector Cylinder #11 | J1939 | | | | | | 128 | 11 |
| | 662 | Engine Injector Cylinder #12 | J1939 | | | | | | 128 | 12 |
| | 663 | Engine Injector Cylinder #13 | J1939 | | | | | | 128 | 13 |
| | 664 | Engine Injector Cylinder #14 | J1939 | | | | | | 128 | 14 |
| | 665 | Engine Injector Cylinder #15 | J1939 | | | | | | 128 | 15 |
| | 666 | Engine Injector Cylinder #16 | J1939 | | | | | | 128 | 16 |
| | 667 | Engine Injector Cylinder #17 | J1939 | | | | | | 128 | 47 |
| | 668 | Engine Injector Cylinder #18 | J1939 | | | | | | 128 | 48 |
| | 669 | Engine Injector Cylinder #19 | J1939 | | | | | | 128 | 49 |
| | 670 | Engine Injector Cylinder #20 | J1939 | | | | | | 128 | 50 |
| | 671 | Engine Injector Cylinder #21 | J1939 | | | | | | 128 | 72 |
| | 672 | Engine Injector Cylinder #22 | J1939 | | | | | | 128 | 73 |
| | 673 | Engine Injector Cylinder #23 | J1939 | | | | | | 128 | 74 |
| | 674 | Engine Injector Cylinder #24 | J1939 | | | | | | 128 | 75 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 675 | Engine Glow Plug Lamp | J1939 | | | | | | 128 | 36 |
| | 676 | Engine Glow Plug Relay | J1939 | | | | | | 128 | 38 |
| | 677 | Engine Starter Motor Relay | J1939 | | | | Activates the starter | | 128 | 39 |
| | 678 | ECU 8 Volts DC Supply | J1939 | | | | | | 128 | 41 |
| | 679 | Engine Injection Control Pressure Regulator | J1939 | | | | | | 128 | 42 |
| | 680 | Engine Valve Variable Swirl System | J1939 | | | | | | 128 | 61 |
| | 681 | Transmission Gear Shift Inhibit Request | J1939-71 | 256 | 1.1 | 2 | Command signal to inhibit gear shifts. | | | |
| | 682 | Transmission Torque Converter Lockup Disable Request | J1939-71 | 256 | 1.3 | 2 | Command signal to prevent torque converter lockup, which may cause problems in certain circumstances for ASR. | | | |
| | 683 | Disengage Driveline Request | J1939-71 | 256 | 1.5 | 2 | Command signal used to simply disengage the driveline, e.g., to prevent engine drag torque from causing high wheel slip on slippery surfaces. | | | |
| | 684 | Requested Percent Clutch Slip | J1939-71 | 256 | 2 | 8 | Parameter which represents the percent clutch slip requested by a device. | | | |
| | 685 | Disengage Differential Lock Request - Front Axle 1 | J1939-71 | 256 | 4.1 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |
| | 686 | Disengage Differential Lock Request - Front Axle 2 | J1939-71 | 256 | 4.3 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |
| | 687 | Disengage Differential Lock Request - Rear Axle 1 | J1939-71 | 256 | 4.5 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |
| | 688 | Disengage Differential Lock Request - Rear Axle 2 | J1939-71 | 256 | 4.7 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |
| | 689 | Disengage Differential Lock Request - Central | J1939-71 | 256 | 5.1 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 690 | Disengage Differential Lock Request - Central Front | J1939-71 | 256 | 5.3 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |
| | 691 | Disengage Differential Lock Request - Central Rear | J1939-71 | 256 | 5.5 | 2 | Command signal used to disengage the various differential locks, e.g., to allow an undistributed individual wheel control by ABS. | | | |
| | 692 | ABS Offroad Switch Request | J1939 | | | 2 | Command signal used by the driver via a dashboard switch to choose the ABS offroad function. | | | |
| | 693 | ASR Offroad Switch Request | J1939 | | | 2 | Command signal used by the driver via a dashboard switch to choose the ASR offroad function. | | | |
| | 694 | ASR "Hill Holder" Switch Request | J1939 | | | 2 | Command signal used by the driver via a dashboard switch to choose a special ASR function. | | | |
| | 695 | Engine Override Control Mode | J1939-71 | 0 | 1.1 | 2 | The override control mode defines which sort of command is used: | | | |
| | 696 | Engine Requested Speed Control Conditions | J1939-71 | 0 | 1.3 | 2 | This mode tells the engine control system the governor characteristics that are desired during speed control. | | | |
| | 697 | Auxiliary PWM Driver #1 | J1939 | | | | | | 128 | 57 |
| | 698 | Auxiliary PWM Driver #2 | J1939 | | | | | | 128 | 58 |
| | 699 | Auxiliary PWM Driver #3 | J1939 | | | | | | 128 | 59 |
| | 700 | Auxiliary PWM Driver #4 | J1939 | | | | | | 128 | 60 |
| | 701 | Auxiliary I/O #01 | J1939-71 | 65241 | 1.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 26 |
| | 702 | Auxiliary I/O #02 | J1939-71 | 65241 | 1.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 40 |
| | 703 | Auxiliary I/O #03 | J1939-71 | 65241 | 1.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 51 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 704 | Auxiliary I/O #04 | J1939-71 | 65241 | 1.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 52 |
| | 705 | Auxiliary I/O #05 | J1939-71 | 65241 | 2.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 53 |
| | 706 | Auxiliary I/O #06 | J1939-71 | 65241 | 2.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 54 |
| | 707 | Auxiliary I/O #07 | J1939-71 | 65241 | 2.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | 128 | 55 |
| | 708 | Auxiliary I/O #08 | J1939-71 | 65241 | 2.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 709 | Auxiliary I/O #09 | J1939-71 | 65241 | 3.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 710 | Auxiliary I/O #10 | J1939-71 | 65241 | 3.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 711 | Auxiliary I/O #11 | J1939-71 | 65241 | 3.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 712 | Auxiliary I/O #12 | J1939-71 | 65241 | 3.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 713 | Auxiliary I/O #13 | J1939-71 | 65241 | 4.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 714 | Auxiliary I/O #14 | J1939-71 | 65241 | 4.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 715 | Auxiliary I/O #15 | J1939-71 | 65241 | 4.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 716 | Auxiliary I/O #16 | J1939-71 | 65241 | 4.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 717 | Autoshift High Gear Actuator | J1939 | | | | | | 128 | 43 |
| | 718 | Autoshift Low Gear Actuator | J1939 | | | | | | 128 | 44 |
| | 719 | Autoshift Neutral Actuator | J1939 | | | | | | 128 | 45 |
| | 720 | Autoshift Common Low Side (Return) | J1939 | | | | | | 128 | 46 |
| | 721 | Prestroke Sensor | J1939 | | | | | | 128 | 62 |
| | 722 | Prestroke Actuator | J1939 | | | | | | 128 | 63 |
| | 723 | Engine Speed Sensor #2 | J1939 | | | | | | 128 | 64 |
| | 724 | Engine Oxygen Sensor Heated | J1939 | | | | | | 128 | 65 |
| | 725 | Engine Ignition Control Mode Signal | J1939 | | | | | | 128 | 66 |
| | 726 | Engine Ignition Control Timing Signal | J1939 | | | | | | 128 | 67 |
| | 727 | Engine Turbocharger Secondary Inlet Pressure | J1939 | | | | | | 128 | 68 |
| | 728 | Engine After Cooler-Oil Cooler Coolant Temperature | J1939 | | | | | | 128 | 69 |
| | 729 | Engine Inlet Air Heater Driver #1 | J1939 | | | | | | 128 | 70 |
| | 730 | Engine Inlet Air Heater Driver #2 | J1939 | | | | | | 128 | 71 |
| | 731 | Engine Knock Sensor | J1939 | | | | | | 128 | 76 |
| | 732 | Engine Gas Metering Valve | J1939 | | | | | | 128 | 77 |
| | 733 | Engine Rack Position Sensor | J1939 | | | | Obsolete - Use SPN 1210 | | 128 | 24 |
| | 734 | Transmission Range Clutch C1 Solenoid | J1939 | | | | | | 130 | 1 |
| | 735 | Transmission Range Clutch C2 Solenoid | J1939 | | | | | | 130 | 2 |
| | 736 | Transmission Range Clutch C3 Solenoid | J1939 | | | | | | 130 | 3 |
| | 737 | Transmission Range Clutch C4 Solenoid | J1939 | | | | | | 130 | 4 |
| | 738 | Transmission Range Clutch C5 Solenoid | J1939 | | | | | | 130 | 5 |
| | 739 | Transmission Range Clutch C6 Solenoid | J1939 | | | | | | 130 | 6 |
| | 740 | Transmission Lockup Clutch Actuator | J1939-71 | 65223 | 6.3 | 2 | Identifies the status of the actuator that controls the lockup clutch. | | 130 | 7 |
| | 741 | Transmission Forward Solenoid Valve | J1939 | | | | | | 130 | 8 |
| | 742 | Transmission Low Signal Solenoid Valve | J1939 | | | | | | 130 | 9 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 743 | Retarder Enable Solenoid Valve | J1939 | | | | | | 130 | 10 |
| | 744 | Retarder Modulation Solenoid Valve | J1939 | | | | | | 130 | 11 |
| | 745 | Retarder Response Solenoid Valve | J1939 | | | | | | 130 | 12 |
| | 746 | Differential Lock Solenoid Valve #1 | J1939 | | | | Operates the first differential lock. | | 130 | 13 |
| | 747 | Engine/Transmission Match | J1939 | | | | | | 130 | 14 |
| | 748 | Transmission Output Retarder | J1939-71 | 65218 | 1.1 | 2 | Identifies the status of the transmission output retarder. | | 130 | 15 |
| | 749 | Transmission Neutral Start Output | J1939 | | | | | | 130 | 16 |
| | 750 | Transmission Turbine Speed Sensor | J1939 | | | | | | 130 | 17 |
| | 751 | Transmission Primary Shift Selector | J1939 | | | | | | 130 | 18 |
| | 752 | Transmission Secondary Shift Selector | J1939 | | | | | | 130 | 19 |
| | 753 | Transmission Special Function Inputs | J1939 | | | | | | 130 | 20 |
| | 754 | Transmission Range C1 Clutch Pressure Indicator | J1939 | | | | | | 130 | 21 |
| | 755 | Transmission Range C2 Clutch Pressure Indicator | J1939 | | | | | | 130 | 22 |
| | 756 | Transmission Range C3 Clutch Pressure Indicator | J1939 | | | | | | 130 | 23 |
| | 757 | Transmission Range C4 Clutch Pressure Indicator | J1939 | | | | | | 130 | 24 |
| | 758 | Transmission Range C5 Clutch Pressure Indicator | J1939 | | | | | | 130 | 25 |
| | 759 | Transmission Range C6 Clutch Pressure Indicator | J1939 | | | | | | 130 | 26 |
| | 760 | Transmission Lockup Clutch Pressure Indicator (Obsolete - use 740) | J1939 | | | | | | 130 | 27 |
| | 761 | Transmission Forward Range Pressure Indicator | J1939 | | | | | | 130 | 28 |
| | 762 | Transmission Neutral Range Pressure Indicator | J1939 | | | | | | 130 | 29 |
| | 763 | Transmission Reverse Range Pressure Indicator | J1939 | | | | | | 130 | 30 |
| | 764 | Retarder Response System Pressure Indicator | J1939 | | | | | | 130 | 31 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 765 | Differential Lock Clutch Pressure Indicator | J1939 | | | | | | 130 | 32 |
| | 766 | Transmission Multiple Pressure Indicators | J1939 | | | | | | 130 | 33 |
| | 767 | Transmission Reverse Direction Switch | J1939-71 | 65219 | 2.1 | 2 | Identifies the status of the switch that indicates reverse direction. | | 130 | 34 |
| | 768 | Transmission Range High Actuator | J1939-71 | 65223 | 5.1 | 2 | Identifies the status of the range high actuator in the auxiliary unit. | | 130 | 35 |
| | 769 | Transmission Range Low Actuator | J1939-71 | 65223 | 5.3 | 2 | Identifies the status of the range low actuator in the auxiliary unit. | | 130 | 36 |
| | 770 | Transmission Splitter Direct Actuator | J1939-71 | 65223 | 5.5 | 2 | Identifies the status of the splitter direct actuator in the auxiliary unit. | | 130 | 37 |
| | 771 | Transmission Splitter Indirect Actuator | J1939-71 | 65223 | 5.7 | 2 | Identifies the status of the splitter indirect actuator in the auxiliary unit. | | 130 | 38 |
| | 772 | Transmission Shift Finger Rail Actuator 1 | J1939-71 | 65223 | 4.1 | 2 | Identifies the status of the actuator that moves the shift finger identified as rail actuator #1. | | 130 | 39 |
| | 773 | Transmission Shift Finger Gear Actuator 1 | J1939-71 | 65223 | 4.3 | 2 | Identifies the status of the actuator that moves the shift finger identified as gear actuator #1. | | 130 | 40 |
| | 774 | Transmission Upshift Request Switch | J1939 | | | | | | 130 | 41 |
| | 775 | Transmission Downshift Request Switch | J1939 | | | | | | 130 | 42 |
| | 776 | Torque Converter Interrupt Actuator | J1939 | | | | | | 130 | 43 |
| | 777 | Torque Converter Lockup Actuator | J1939 | | | | | | 130 | 44 |
| | 778 | Transmission High Range Sense Switch | J1939-71 | 65219 | 1.1 | 2 | Identifies the status of the switch that represents high range. | | 130 | 45 |
| | 779 | Transmission Low Range Sense Switch | J1939-71 | 65219 | 1.3 | 2 | Identifies the status of the switch that represents low range. | | 130 | 46 |
| | 780 | Transmission Shift Finger Neutral Indicator | J1939-71 | 65223 | 3.1 | 2 | Indicates the status of the shift finger in the neutral position. | | 130 | 47 |
| | 781 | Transmission Shift Finger Engagement Indicator | J1939-71 | 65223 | 3.3 | 2 | Identifies the status of the shift finger in the engagement position. | | 130 | 48 |
| | 782 | Transmission Shift Finger Center Rail Indicator | J1939-71 | 65223 | 3.5 | 2 | Identifies the status of the shift finger in the center rail position. | | 130 | 49 |
| | 783 | Transmission Shift Finger Rail Actuator 2 | J1939-71 | 65223 | 4.5 | 2 | Identifies the status of the actuator that moves the shift finger identified as rail actuator #2. | | 130 | 50 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 784 | Transmission Shift Finger Gear Actuator 2 | J1939-71 | 65223 | 4.7 | 2 | Identifies the status of the actuator that moves the shift finger identified as gear actuator #2. | | 130 | 51 |
| | 785 | Transmission Hydraulic System | J1939 | | | | | | 130 | 52 |
| | 786 | Transmission Defuel Actuator | J1939-71 | 65223 | 6.5 | 2 | Identifies the status of the actuator that controls the engine defuel mechanism. | | 130 | 53 |
| | 787 | Transmission Inertia Brake Actuator | J1939-71 | 65223 | 6.7 | 2 | Identifies the status of the actuator that controls the inertia brake. | | 130 | 54 |
| | 788 | Transmission Clutch Actuator | J1939-71 | 65223 | 6.1 | 2 | Identifies the status of the actuator that controls the clutch. | | 130 | 55 |
| | 789 | Wheel Sensor ABS Axle 1 Left | J1939 | | | | | | 136 | 1 |
| | 790 | Wheel Sensor ABS Axle 1 Right | J1939 | | | | | | 136 | 2 |
| | 791 | Wheel Sensor ABS Axle 2 Left | J1939 | | | | | | 136 | 3 |
| | 792 | Wheel Sensor ABS Axle 2 Right | J1939 | | | | | | 136 | 4 |
| | 793 | Wheel Sensor ABS Axle 3 Left | J1939 | | | | | | 136 | 5 |
| | 794 | Wheel Sensor ABS Axle 3 Right | J1939 | | | | | | 136 | 6 |
| | 795 | Pressure Modulation Valve ABS Axle 1 Left | J1939 | | | | | | 136 | 7 |
| | 796 | Pressure Modulation Valve ABS Axle 1 Right | J1939 | | | | | | 136 | 8 |
| | 797 | Pressure Modulation Valve ABS Axle 2 Left | J1939 | | | | | | 136 | 9 |
| | 798 | Pressure Modulation Valve ABS Axle 2 Right | J1939 | | | | | | 136 | 10 |
| | 799 | Pressure Modulation Valve ABS Axle 3 Left | J1939 | | | | | | 136 | 11 |
| | 800 | Pressure Modulation Valve ABS Axle 3 Right | J1939 | | | | | | 136 | 12 |
| | 801 | Retarder Control Relay | J1939 | | | | | | 136 | 13 |
| | 802 | Relay Diagonal 1 | J1939 | | | | | | 136 | 14 |
| | 803 | Relay Diagonal 2 | J1939 | | | | | | 136 | 15 |
| | 804 | Mode Switch ABS | J1939 | | | | | | 136 | 16 |
| | 805 | Mode Switch ASR | J1939 | | | | | | 136 | 17 |
| | 806 | Dif 1 - ASR Valve | J1939 | | | | | | 136 | 18 |
| | 807 | Dif 2 - ASR Valve | J1939 | | | | | | 136 | 19 |
| | 808 | Pneumatic Engine Control | J1939 | | | | | | 136 | 20 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 809 | Electronic Engine Control (Servomotor) | J1939 | | | | | | 136 | 21 |
| | 810 | Speed Signal Input | J1939 | | | | | | 136 | 22 |
| | 811 | Warning Light Bulb | J1939 | | | | | | 136 | 23 |
| | 812 | ASR Light Bulb | J1939 | | | | | | 136 | 24 |
| | 813 | Wheel Sensor ABS Axle 1 Average | J1939 | | | | | | 136 | 25 |
| | 814 | Wheel Sensor ABS Axle 2 Average | J1939 | | | | | | 136 | 26 |
| | 815 | Wheel Sensor ABS Axle 3 Average | J1939 | | | | | | 136 | 27 |
| | 816 | Pressure Modulator, Drive Axle Relay Valve | J1939 | | | | | | 136 | 28 |
| | 817 | Pressure Transducer, Drive Axle Relay Valve | J1939 | | | | | | 136 | 29 |
| | 818 | Master Control Relay | J1939 | | | | | | 136 | 30 |
| | 819 | Trailer Brake Slack Out Of Adjustment Forward Axle Left | J1939 | | | | | | 136 | 31 |
| | 820 | Trailer Brake Slack Out Of Adjustment Forward Axle Right | J1939 | | | | | | 136 | 32 |
| | 821 | Trailer Brake Slack Out Of Adjustment Rear Axle Left | J1939 | | | | | | 136 | 33 |
| | 822 | Trailer Brake Slack Out Of Adjustment Rear Axle Right | J1939 | | | | | | 136 | 34 |
| | 823 | Tractor Brake Slack Out Of Adjustment Axle 1 Left | J1939 | | | | | | 136 | 35 |
| | 824 | Tractor Brake Slack Out Of Adjustment Axle 1 Right | J1939 | | | | | | 136 | 36 |
| | 825 | Tractor Brake Slack Out Of Adjustment Axle 2 Left | J1939 | | | | | | 136 | 37 |
| | 826 | Tractor Brake Slack Out Of Adjustment Axle 2 Right | J1939 | | | | | | 136 | 38 |
| | 827 | Tractor Brake Slack Out Of Adjustment Axle 3 Left | J1939 | | | | | | 136 | 39 |
| | 828 | Tractor Brake Slack Out Of Adjustment Axle 3 Right | J1939 | | | | | | 136 | 40 |
| | 829 | Left Fuel Level Sensor | J1939 | | | | | | 140 | 1 |
| | 830 | Right Fuel Level Sensor | J1939 | | | | | | 140 | 2 |
| | 831 | Engine Fuel Feed Rate Sensor | J1939 | | | | | | 140 | 3 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 832 | Engine Fuel Return Rate Sensor | J1939 | | | | | | 140 | 4 |
| | 833 | Fuel Rack Position Sensor | J1939 | | | | Obsolete - Use SPN 1210 | | 142 | 3 |
| | 834 | Fuel Rack Actuator | J1939 | | | | Obsolete - Use SPN 638 | | 142 | 4 |
| | 835 | Oil Level Indicator Output | J1939 | | | | | | 142 | 5 |
| | 836 | Tachometer Drive Output | J1939 | | | | | | 142 | 6 |
| | 837 | Speedometer Drive Output | J1939 | | | | | | 142 | 7 |
| | 838 | PWM Input (ABS/ASR) | J1939 | | | | | | 142 | 8 |
| | 839 | Dead Reckoning Unit | J1939 | | | | | | 162 | 1 |
| | 840 | Loran Receiver | J1939 | | | | | | 162 | 2 |
| | 841 | Global Positioning System (GPS) | J1939 | | | | | | 162 | 3 |
| | 842 | Integrated Navigation Unit | J1939 | | | | | | 162 | 4 |
| | 843 | Operator Control Panel (OCP) | J1939 | | | | | | 166 | 1 |
| | 844 | Pneumatic Control Unit (PCU) | J1939 | | | | | | 166 | 2 |
| | 845 | PCU Steer Solenoid | J1939 | | | | | | 166 | 3 |
| | 846 | PCU Drive Solenoid | J1939 | | | | | | 166 | 4 |
| | 847 | PCU Trailer, Tag, Or Push Solenoid | J1939 | | | | | | 166 | 5 |
| | 848 | PCU Supply Solenoid | J1939 | | | | | | 166 | 6 |
| | 849 | PCU Control Solenoid | J1939 | | | | | | 166 | 7 |
| | 850 | PCU Deflate Solenoid | J1939 | | | | | | 166 | 8 |
| | 851 | Pneumatic - Steer Channel | J1939 | | | | | | 166 | 9 |
| | 852 | Pneumatic - Drive Channel | J1939 | | | | | | 166 | 10 |
| | 853 | Pneumatic - Trailer, Tag Or Push Channel | J1939 | | | | | | 166 | 11 |
| | 854 | Heater Circuit #01 | J1939 | | | | | | 177 | 1 |
| | 855 | Heater Circuit #02 | J1939 | | | | | | 177 | 2 |
| | 856 | Heater Circuit #03 | J1939 | | | | | | 177 | 3 |
| | 857 | Heater Circuit #04 | J1939 | | | | | | 177 | 4 |
| | 858 | Heater Circuit #05 | J1939 | | | | | | 177 | 5 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 859 | Heater Circuit #06 | J1939 | | | | | | 177 | 6 |
| | 860 | Heater Circuit #07 | J1939 | | | | | | 177 | 7 |
| | 861 | Heater Circuit #08 | J1939 | | | | | | 177 | 8 |
| | 862 | Heater Circuit #09 | J1939 | | | | | | 177 | 9 |
| | 863 | Heater Circuit #10 | J1939 | | | | | | 177 | 10 |
| | 864 | Heater Circuit #11 | J1939 | | | | | | 177 | 11 |
| | 865 | Heater Circuit #12 | J1939 | | | | | | 177 | 12 |
| | 866 | Heater Circuit #13 | J1939 | | | | | | 177 | 13 |
| | 867 | Heater Circuit #14 | J1939 | | | | | | 177 | 14 |
| | 868 | Heater Circuit #15 | J1939 | | | | | | 177 | 15 |
| | 869 | Heater Circuit #16 | J1939 | | | | | | 177 | 16 |
| | 870 | Heater Regeneration System | J1939 | | | | | | 177 | 17 |
| | 871 | Refrigerant Charge | J1939 | | | | | | 190 | 1 |
| | 872 | Refrigerant Moisture Level | J1939 | | | | | | 190 | 2 |
| | 873 | Non-Condensable Gas In Refrigerant | J1939 | | | | | | 190 | 3 |
| | 874 | Refrigerant Flow Control Solenoid | J1939 | | | | | | 190 | 4 |
| | 875 | Refrigerant Low Pressure Switch | J1939-71 | 65252 | 3.3 | 2 | Switch signal which indicates the position of the low pressure switch in the coolant circuit of an air conditioning system. | | 190 | 5 |
| | 876 | Compressor Clutch Circuit | J1939 | | | | | | 190 | 6 |
| | 877 | Evaporator Thermostat Circuit | J1939 | | | | | | 190 | 7 |
| | 878 | Clearance, Side Marker, Identification Lamp Circuit (Black) | J1939 | | | | | | 217 | 9 |
| | 879 | Left Turn Lamp Circuit (Yellow) | J1939 | | | | | | 217 | 10 |
| | 880 | Stop Lamp Circuit (Red) | J1939 | | | | | | 217 | 11 |
| | 881 | Right Turn Lamp Circuit (Green) | J1939 | | | | | | 217 | 12 |
| | 882 | Tail Lamp/License Plate Lamp Circuit (Brown) | J1939 | | | | | | 217 | 13 |
| | 883 | Auxiliary Lamp Circuit (Blue) | J1939 | | | | | | 217 | 14 |
| | 884 | Tractor Mounted Rear Axle Slider Control Unit | J1939 | | | | | | 217 | 15 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 885 | Trailer Mounted Rear Axle Slider Control Unit | J1939 | | | | | | 217 | 16 |
| | 886 | Headway Controller Forward Antenna | J1939 | | | | | | 219 | 1 |
| | 887 | Headway Controller Brake Input Monitor | J1939 | | | | | | 219 | 3 |
| | 888 | Headway Controller Speaker Monitor | J1939 | | | | | | 219 | 4 |
| | 889 | Headway Controller Steering Sensor Monitor | J1939 | | | | | | 219 | 5 |
| | 890 | Headway Controller Speedometer Monitor | J1939 | | | | | | 219 | 6 |
| | 891 | Headway Controller Right Turn Signal Monitor | J1939 | | | | | | 219 | 7 |
| | 892 | Headway Controller Left Turn Signal Monitor | J1939 | | | | | | 219 | 8 |
| | 893 | Headway Controller Control Display Unit | J1939 | | | | | | 219 | 9 |
| | 894 | Headway Controller Right Side Sensor | J1939 | | | | | | 219 | 10 |
| | 895 | Headway Controller Left Side Sensor | J1939 | | | | | | 219 | 11 |
| | 896 | Headway Controller Rear Sensor | J1939 | | | | | | 219 | 12 |
| | 897 | Override Control Mode Priority | J1939-71 | 0 | 1.5 | 2 | This field is used as an input to the engine or retarder to determine the priority of the Override Control Mode received in the Torque/Speed Control message (see PGN 0). | | | |
| | 898 | Engine Requested Speed/Speed Limit | J1939-71 | 0 | 2-3 | 16 | This is the engine speed which the engine is expected to operate at if the speed control mode is active or the engine speed which the engine is not expected to exceed if the speed limit mode is active. | | | |
| | 899 | Engine Torque Mode | J1939-71 | 61444 | 1.1 | 4 | State signal which indicates which engine torque mode is currently generating, limiting, or controlling the torque. | | | |
| | 900 | Retarder Torque Mode | J1939-71 | 61440 | 1.1 | 4 | State signal which indicates which retarder torque mode is currently generating, limiting, or controlling the torque. | | | |
| | 901 | Retarder Type | J1939-71 | 65249 | 01.1 | 4 | This parameter provides some indication of the retarder dynamics. | | | |
| | 902 | Retarder Location | J1939-71 | 65249 | 01.5 | 4 | This parameter defines whether the “torque/speed curve” defined by the retarder configuration message. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 903 | Transmission Forward Direction Switch | J1939-71 | 65219 | 2.5 | 2 | Identifies the status of the switch that indicates forward direction. | | | |
| | 904 | Front Axle Speed | J1939-71 | 65215 | 1-2 | 16 | The average speed of the two front wheels. | | | |
| | 905 | Relative Speed; Front Axle, Left Wheel | J1939-71 | 65215 | 3 | 8 | The speed of the front axle, left wheel relative to the front axle speed, SPN 904. | | | |
| | 906 | Relative Speed; Front Axle, Right Wheel | J1939-71 | 65215 | 4 | 8 | The speed of the front axle, right wheel relative to the front axle speed, SPN 904. | | | |
| | 907 | Relative Speed; Rear Axle #1, Left Wheel | J1939-71 | 65215 | 5 | 8 | The speed of the rear axle #1, left wheel relative to the front axle speed, SPN 904. | | | |
| | 908 | Relative Speed; Rear Axle #1, Right Wheel | J1939-71 | 65215 | 6 | 8 | The speed of the rear axle #1, right wheel relative to the front axle | | | |
| | 909 | Relative Speed; Rear Axle #2, Left Wheel | J1939-71 | 65215 | 7 | 8 | The speed of the rear axle #2, left wheel relative to the front axle. | | | |
| | 910 | Relative Speed; Rear Axle #2, Right Wheel | J1939-71 | 65215 | 8 | 8 | The speed of the rear axle #2, right wheel relative to the front axle | | | |
| | 911 | Service Component Identification | J1939-71 | 65216 | 1 | 8 | Identification of component needing service. | | | |
| | 912 | Service Component Identification | J1939-71 | 65216 | 4 | 8 | Identification of component needing service. | | | |
| | 913 | Service Component Identification | J1939-71 | 65216 | 6 | 8 | Identification of component needing service. | | | |
| | 914 | Service Distance | J1939-71 | 65216 | 2-3 | 16 | The distance which can be traveled by the vehicle before the next service inspection is required. | | | |
| | 915 | Service Delay/Calendar Time Based | J1939-71 | 65216 | 5 | 8 | The time in weeks until the next vehicle service inspection is required. | | | |
| | 916 | Service Delay/Operational Time Based | J1939-71 | 65216 | 7-8 | 16 | The time in vehicle operational time until the next vehicle service inspection is required. | | | |
| | 917 | High Resolution Total Vehicle Distance | J1939-71 | 65217 | 1-4 | 32 | Accumulated distance traveled by the vehicle during its operation. | | | |
| | 918 | High Resolution Trip Distance | J1939-71 | 65217 | 5-8 | 32 | Distance traveled during all or part of a journey. | | | |
| | 919 | Ambient Light Sensor | J1939 | | | | | | 0 | 223 |
| | 920 | Audible Alarm | J1939 | | | | | | 0 | 224 |
| | 921 | Green Lamp | J1939 | | | | | | 0 | 225 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 922 | Ride Height Relay | J1939 | | | | | | 136 | 41 |
| | 923 | PWM Output | J1939 | | | | | | 142 | 9 |
| | 924 | Auxiliary Output #1 | J1939 | | | | | | 142 | 10 |
| | 925 | Auxiliary Output #2 | J1939 | | | | | | 142 | 11 |
| | 926 | Auxiliary Output #3 | J1939 | | | | | | 142 | 12 |
| | 927 | Location | J1939-71 | 61446 | 1 | 8 | To identify to which of several similar devices (such as tires or fuel tanks) the information applies. | | | |
| | 928 | Axle Location | J1939-71 | 65258 | 1 | 8 | To identify to which of several similar devices (such as tires or fuel tanks) the information applies. | | | |
| | 929 | Tire Location | J1939-71 | 65268 | 1 | 8 | Identifies which tire is associated with the parametric data in this PGN. | | | |
| | 930 | Drive Axle Location | J1939-71 | 65273 | 2 | 8 | To identify to which of several similar devices (such as tires or fuel tanks) the information applies. | | | |
| | 931 | Engine Fuel Supply Pump Actuator | J1939 | | | | | | 128 | 78 |
| | 932 | Brake System Hold Modulator Valve Solenoid Axle 1 Left | J1939 | | | | | | 136 | 42 |
| | 933 | Brake System Hold Modulator Valve Solenoid Axle 1 Right | J1939 | | | | | | 136 | 43 |
| | 934 | Brake System Hold Modulator Valve Solenoid Axle 2 Left | J1939 | | | | | | 136 | 44 |
| | 935 | Brake System Hold Modulator Valve Solenoid Axle 2 Right | J1939 | | | | | | 136 | 45 |
| | 936 | Brake System Hold Modulator Valve Solenoid Axle 3 Left | J1939 | | | | | | 136 | 46 |
| | 937 | Brake System Hold Modulator Valve Solenoid Axle 3 Right | J1939 | | | | | | 136 | 47 |
| | 938 | Brake System Dump Modulator Valve Solenoid Axle 1 Left | J1939 | | | | | | 136 | 48 |
| | 939 | Brake System Dump Modulator Valve Solenoid Axle 1 Right | J1939 | | | | | | 136 | 49 |
| | 940 | Brake System Dump Modulator Valve Solenoid Axle 2 Left | J1939 | | | | | | 136 | 50 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 941 | Brake System Dump Modulator Valve Solenoid Axle 2 Right | J1939 | | | | | | 136 | 51 |
| | 942 | Brake System Dump Modulator Valve Solenoid Axle 3 Left | J1939 | | | | | | 136 | 52 |
| | 943 | Brake System Dump Modulator Valve Solenoid Axle 3 Right | J1939 | | | | | | 136 | 53 |
| | 944 | Driver Air Bag Ignitor Loop | J1939 | | | | | | 232 | 1 |
| | 945 | Passenger Air Bag Ignitor Loop | J1939 | | | | | | 232 | 2 |
| | 946 | Left Belt Tensioner Ignitor Loop | J1939 | | | | | | 232 | 3 |
| | 947 | Right Belt Tensioner Ignitor Loop | J1939 | | | | | | 232 | 4 |
| | 948 | Safety Restraint System Lamp | J1939 | | | | | | 232 | 5 |
| | 949 | Automotive Seat Occupancy Sensor - passenger side | J1939 | | | | | | 232 | 6 |
| | 950 | Side Collision Detector - Left | J1939 | | | | | | 232 | 7 |
| | 951 | Side Bag Ignitor Loop 1 - Left | J1939 | | | | | | 232 | 8 |
| | 952 | Side Bag Ignitor Loop 2 - Left | J1939 | | | | | | 232 | 9 |
| | 953 | Side Collision Detector - Right | J1939 | | | | | | 232 | 10 |
| | 954 | Side Bag Ignitor Loop 1 - Right | J1939 | | | | | | 232 | 11 |
| | 955 | Side Bag Ignitor Loop 2 - Right | J1939 | | | | | | 232 | 12 |
| | 956 | Rollover Sensor | J1939 | | | | | | 232 | 13 |
| | 957 | Number of Forward Gear Ratios | J1939-71 | 65250 | 2 | 8 | Number of forward gear ratios in the transmission, provided as part of the configuration. | | | |
| | 958 | Number of Reverse Gear Ratios | J1939-71 | 65250 | 1 | 8 | Number of reverse gear ratios in the transmission, provided as part of the transmission configuration. | | | |
| | 959 | Seconds | J1939-71 | 65254 | 1 | 8 | Part of a parameter used to represent time. | | | |
| | 960 | Minutes | J1939-71 | 65254 | 2 | 8 | Part of a parameter used to represent time. | | | |
| | 961 | Hours | J1939-71 | 65254 | 3 | 8 | Part of a parameter used to represent time. | | | |
| | 962 | Day | J1939-71 | 65254 | 5 | 8 | Part of a parameter used to represent a calendar date. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 963 | Month | J1939-71 | 65254 | 4 | 8 | Part of a parameter used to represent a calendar date. | | | |
| | 964 | Year | J1939-71 | 65254 | 6 | 8 | Part of a parameter used to represent a calendar date. | | | |
| | 965 | Number of Software Identification Fields | J1939-71 | 65242 | 1 | 8 | Number of software identification designators represented in the software identification parameter group. | | | |
| | 966 | Engine Test Mode Switch | J1939-71 | 65265 | 8.5 | 2 | Switch signal which indicates the position of the engine test mode switch. | | | |
| | 967 | Engine Idle Decrement Switch | J1939-71 | 65265 | 8.3 | 2 | Switch signal which indicates the position of the idle decrement switch. | | | |
| | 968 | Engine Idle Increment Switch | J1939-71 | 65265 | 8.1 | 2 | Switch signal which indicates the position of the idle increment switch. | | | |
| | 969 | Remote Accelerator Enable Switch | J1939-71 | 61441 | 4.7 | 2 | Switch signal which indicates that the remote accelerator has been enabled and controls the engine. | | | |
| | 970 | Engine Auxiliary Shutdown Switch | J1939-71 | 61441 | 4.5 | 2 | Switch signal which requests that all engine fueling stop. | | | |
| | 971 | Engine Derate Switch | J1939-71 | 61441 | 4.3 | 2 | Switch signal used to activate the torque limiting feature of the engine. | | | |
| | 972 | Accelerator Interlock Switch | J1939-71 | 61441 | 4.1 | 2 | Switch signal used to disable the accelerator and remote accelerator inputs, causing the engine to return to idle. | | | |
| | 973 | Engine Retarder Selection | J1939-71 | 61441 | 5 | 8 | The position of the operator controlled selector, expressed as a percentage and determined by the ratio of the current position of the selector to its maximum possible position. | | | |
| | 974 | Remote Accelerator Pedal Position | J1939-71 | 61443 | 4 | 8 | The ratio of actual position of the remote analog engine speed/torque request input device (such as an accelerator pedal or throttle lever) to the maximum position of the input device. | | | |
| | 975 | Estimated Percent Fan Speed | J1939-71 | 65213 | 1 | 8 | Estimated fan speed as a ratio of the fan drive (current speed) to the fully engaged fan drive (maximum fan speed). | 26 | | |
| | 976 | PTO State | J1939-71 | 65265 | 7.1 | 5 | This parameter is used to indicate the current state or mode of operation by the power takeoff (PTO) device. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 977 | Fan Drive State | J1939-71 | 65213 | 2.1 | 4 | This parameter is used to indicate the current state or mode of operation by the fan drive. | | | |
| | 978 | Engine Remote PTO Variable Speed Control Switch | J1939-71 | 65264 | 6.5 | 2 | Switch signal which indicates that the remote PTO toggle switch is in the enabled (ON) position. | | | |
| | 979 | Engine Remote PTO Preprogrammed Speed Control Switch | J1939-71 | 65264 | 6.3 | 2 | Switch signal which indicates that the remote PTO toggle switch is in the enabled (ON) position. | | | |
| | 980 | Engine PTO Enable Switch | J1939-71 | 65264 | 6.1 | 2 | Switch signal which indicates that the PTO toggle switch is in the enabled (ON) position and therefore it is possible to manage the PTO control function. | | | |
| | 981 | Engine PTO Accelerate Switch | J1939-71 | 65264 | 7.7 | 2 | Switch signal of the PTO control activator which indicates that the activator is in the position "accelerate". | | | |
| | 982 | Engine PTO Resume Switch | J1939-71 | 65264 | 7.5 | 2 | Switch signal of the PTO control activator which indicates that the activator is in the position "resume". | | | |
| | 983 | Engine PTO Coast/Decelerate Switch | J1939-71 | 65264 | 7.3 | 2 | Switch signal of the PTO control activator which indicates that the activator is in the position "coast/decelerate". | | | |
| | 984 | Engine PTO Set Switch | J1939-71 | 65264 | 7.1 | 2 | Switch signal of the PTO control activator which indicates that the activator is in the position "set". | | | |
| | 985 | A/C High Pressure Fan Switch | J1939-71 | 65252 | 3.1 | 2 | Switch signal which indicates that the pressure in the coolant circuit of an air conditioning system is high and the fan may be engaged. | | | |
| | 986 | Requested Percent Fan Speed | J1939-71 | 57344 | 1 | 8 | Fan speed as a ratio of the actual fan drive (current speed) to the fully engaged fan drive (maximum fan speed). | | | |
| | 987 | Protect Lamp | J1939-73 | 65226 | 1.1 | | | | 0 | 222 |
| | 988 | Trip Group 1 | J1939-71 | 56832 | 1.1 | 2 | Command signal used to reset the PGNs and parameters as defined in Table SPN988_A. | | | |
| | 989 | Trip Group 2 - Proprietary | J1939-71 | 56832 | 1.3 | 2 | Command signal used to reset proprietary parameters associated with a trip but not defined within this document. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 990 | Total Compression Brake Distance | J1939-71 | 65212 | 01-04 | 32 | Total distance over which the compression brakes have been active for the life of the engine. | | | |
| | 991 | Trip Compression Brake Distance | J1939-71 | 65212 | 05-08 | 32 | Total distance over which the compression brakes have been active since the last trip reset. | | | |
| | 992 | Trip Service Brake Distance | J1939-71 | 65212 | 09-12 | 32 | Total distance over which the service brakes have been active since the last trip reset. | | | |
| | 993 | Trip Service Brake Applications | J1939-71 | 65212 | 13-16 | 32 | Total number of times the service brakes have been activated since the last trip reset. | | | |
| | 994 | Trip Fan On Time | J1939-71 | 65211 | 01-04 | 32 | Total time the fan has been on (due to an automatic trigger or manual trigger) since the last trip reset. | | | |
| | 995 | Trip Fan On Time Due to the Engine System | J1939-71 | 65211 | 05-08 | 32 | Total time the fan has been on due to engine triggers (i.e., excluding time on due to an operator manual switch or A/C system) since the last trip reset. | | | |
| | 996 | Trip Fan On Time Due to a Manual Switch | J1939-71 | 65211 | 09-12 | 32 | Total time the fan has been on due to manual activation by the operator | | | |
| | 997 | Trip Fan On Time Due to the A/C System | J1939-71 | 65211 | 13-16 | 32 | Total time the fan has been on due to the A/C system since the last trip reset. | | | |
| | 998 | Trip Distance on VSL | J1939-71 | 65210 | 1-4 | 32 | Total distance accumulated while the engine torque mode is road speed governing since the last trip reset. | | | |
| | 999 | Trip Gear Down Distance | J1939-71 | 65210 | 5-8 | 32 | Total distance accumulated while the vehicle has operated in the gear which is one gear down from top gear | | | |
| | 1000 | Trip Distance in Top Gear | J1939-71 | 65210 | 9-12 | 32 | Total distance accumulated while the vehicle has operated in top gear for a calibrated minimum time since the last trip reset. | | | |
| | 1001 | Trip Drive Fuel Used | J1939-71 | 65209 | 01-04 | 32 | Total fuel consumed while the engine speed is greater than zero, vehicle speed is greater than or equal to 2 km/h, and neither the PTO or the remote PTO is controlling the engine power output, since the last trip reset. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1002 | Trip PTO Moving Fuel Used | J1939-71 | 65209 | 05-08 | 32 | Total fuel consumed while the PTO or remote PTO is in the hold state, the engine speed is greater than zero, and vehicle speed is greater than or equal to 2 km/h, since the last trip reset. | | | |
| | 1003 | Trip PTO Non-moving Fuel Used | J1939-71 | 65209 | 09-12 | 32 | Total fuel consumed while the PTO or remote PTO is in the hold state, the engine speed is greater than zero, and vehicle speed is less than 2 km/h, since the last trip reset. | | | |
| | 1004 | Trip Vehicle Idle Fuel Used | J1939-71 | 65209 | 13-16 | 32 | Total fuel consumed while neither the PTO or remote PTO is in the hold state, the engine speed is greater than zero, and vehicle speed is less than 2 km/h, since the last trip reset. | | | |
| | 1005 | Trip Cruise Fuel Used | J1939-71 | 65209 | 17-20 | 32 | Total fuel consumed while the engine is in the cruise hold state since the last trip reset. | | | |
| | 1006 | Trip Drive Fuel Economy | J1939-71 | 65209 | 21-22 | 16 | Trip drive fuel economy is equal to the distance traveled by vehicle in the drive state | | | |
| | 1007 | Trip Drive Fuel Used (Gaseous) | J1939-71 | 65208 | 01-04 | 32 | Total fuel consumed while the engine speed is greater than zero | | | |
| | 1008 | Trip PTO Moving Fuel Used (Gaseous) | J1939-71 | 65208 | 05-08 | 32 | Total fuel consumed while the PTO or remote PTO is in the hold state, the engine speed is greater than zero, and vehicle speed is greater than or equal to 2 km/h, since the last trip reset. | | | |
| | 1009 | Trip PTO Non-moving Fuel Used (Gaseous) | J1939-71 | 65208 | 09-12 | 32 | Total fuel consumed while the PTO or remote PTO is in the hold state, the engine speed is greater than zero, and vehicle speed is less than to 2 km/h, since the last trip reset. | | | |
| | 1010 | Trip Vehicle Idle Fuel Used (Gaseous) | J1939-71 | 65208 | 13-16 | 32 | Total fuel consumed while neither the PTO or remote PTO is active, the engine speed is greater than zero, and vehicle speed is less than to 2 km/h, since the last trip reset. | | | |
| | 1011 | Trip Cruise Fuel Used (Gaseous) | J1939-71 | 65208 | 17-20 | 32 | Total fuel consumed while the engine is in the cruise hold state since the last trip reset. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1012 | Trip Drive Fuel Economy (Gaseous) | J1939-71 | 65208 | 21-22 | 16 | Trip drive fuel economy is equal to the distance traveled by vehicle in the drive state | | | |
| | 1013 | Trip Maximum Engine Speed | J1939-71 | 65207 | 1-2 | 16 | Maximum engine speed achieved since the last trip reset. | | | |
| | 1014 | Trip Average Engine Speed | J1939-71 | 65207 | 3-4 | 16 | Average speed of the engine since the last trip reset. | | | |
| | 1015 | Trip Drive Average Load Factor | J1939-71 | 65207 | 5 | 8 | Average engine load factor while engine speed is greater than zero, | | | |
| | 1016 | Total Drive Average Load Factor | J1939-71 | 65207 | 6 | 8 | Average engine load factor while engine speed is greater than zero. | | | |
| | 1017 | Total Engine Cruise Time | J1939-71 | 65207 | 7-10 | 32 | Total time that the engine has operated in the cruise hold state, excluding time in accelerator override, over the life of the engine. | | | |
| | 1018 | Trip Maximum Vehicle Speed | J1939-71 | 65206 | 1-2 | 16 | Maximum vehicle speed achieved while the engine speed is greater than zero and the accelerator pedal position (APS) is at a value greater than 0%, since the last trip reset. | | | |
| | 1019 | Trip Cruise Distance | J1939-71 | 65206 | 3-6 | 32 | Total distance that the engine has operated in the cruise hold state, excluding time in accelerator override, since the last trip reset. | | | |
| | 1020 | Trip Number of Hot Shutdowns | J1939-71 | 65205 | 1-2 | 16 | Total number of hot shutdowns since the last trip reset. A hot shutdown is based on operation at high load or high engine speed or for long operating periods without allowing the engine to cool sufficiently. | | | |
| | 1021 | Trip Number of Idle Shutdowns | J1939-71 | 65205 | 3-4 | 16 | Total number of times the engine has been shutdown due to idling too long (at normal idle or fast idle) since the last trip reset. | | | |
| | 1022 | Trip Number of Idle Shutdown Overrides | J1939-71 | 65205 | 5-6 | 16 | Total number of times an operator disables idle shutdown to prevent an engine shutdown, since the last trip reset. | | | |
| | 1023 | Trip Sudden Decelerations | J1939-71 | 65205 | 7-8 | 16 | Total number of decelerations whenever the vehicle deceleration is more than XYZ km/h/sec (where XYZ is a calibratible threshold), since the last trip reset. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1024 | Trip Time in VSL | J1939-71 | 65204 | 01-04 | 32 | Total time accumulated when the engine has operated on the vehicle speed limiter (VSL) while not in the cruise hold state, since the last trip reset. | | | |
| | 1025 | Trip Time in Top Gear | J1939-71 | 65204 | 05-08 | 32 | Total time accumulated when the vehicle has operated in top gear for a calibrated minimum time, since the last trip reset. | | | |
| | 1026 | Trip Time in Gear Down | J1939-71 | 65204 | 09-12 | 32 | Total time accumulated when the vehicle has operated in one gear down from the top gear for a calibrated minimum time, since the last trip reset. | | | |
| | 1027 | Trip Time in Derate by Engine | J1939-71 | 65204 | 13-16 | 32 | Total time accumulated when the engine final fueling has been derated due to an engine protection algorithm, since the last reset. | | | |
| | 1028 | Total Engine PTO Fuel Used | J1939-71 | 65203 | 1-4 | 32 | Total fuel used while the PTO or remote PTO is in the hold state and engine speed is above zero, over the life of the engine. | | | |
| | 1029 | Trip Average Fuel Rate | J1939-71 | 65203 | 5-6 | 16 | Average fuel rate, equal to trip fuel divided by trip time while the engine speed is above zero, since the last trip reset. | | | |
| | 1030 | Total Engine PTO Fuel Used (Gaseous) | J1939-71 | 65202 | 1-4 | 32 | Total fuel used while the PTO or remote PTO is in the hold state and engine speed is above zero, over the life of the engine. | | | |
| | 1031 | Trip Average Fuel Rate (Gaseous) | J1939-71 | 65202 | 5-6 | 16 | Average fuel rate, equal to trip fuel divided by trip time while the engine speed is above zero, since the last trip reset. | | | |
| | 1032 | Total ECU Distance | J1939-71 | 65201 | 1-4 | 32 | Total distance accumulated over the life of the ECU. When the ECU is replaced this value shall be reset. | | | |
| | 1033 | Total ECU Run Time | J1939-71 | 65201 | 5-8 | 32 | Total time accumulated over the life of the ECU, from ignition switch ON to ignition switch OFF. When the ECU is replaced this value shall be reset. | | | |
| | 1034 | Trip Cruise Time | J1939-71 | 65200 | 01-04 | 32 | Total time accumulated while the engine is in the cruise hold state, excluding time in accelerator override, since the last trip reset. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1035 | Trip PTO Time | J1939-71 | 65200 | 05-08 | 32 | Total time accumulated while the engine is in the PTO or remote PTO hold state since the last trip reset. | | | |
| | 1036 | Trip Engine Running Time | J1939-71 | 65200 | 09-12 | 32 | Total time accumulated while the engine speed is greater than zero since the last trip reset. | | | |
| | 1037 | Trip Idle Time | J1939-71 | 65200 | 13-16 | 32 | Total time accumulated while the engine speed is greater than zero, both the PTO and remote PTO is inactive, and the vehicle speed is less than 2 km/h, since the last trip reset. | | | |
| | 1038 | Trip Air Compressor On Time | J1939-71 | 65200 | 17-20 | 32 | Total time that the air compressor is on and compressing air since the last trip reset. | | | |
| | 1039 | Trip Fuel (Gaseous) | J1939-71 | 65199 | 1-4 | 32 | Total fuel consumed (trip drive fuel + trip PTO moving fuel + trip PTO non-moving fuel + trip idle fuel) since the last trip reset. | | | |
| | 1040 | Total Fuel Used (Gaseous) | J1939-71 | 65199 | 5-8 | 32 | Total fuel consumed (trip drive fuel + trip PTO moving fuel + trip PTO non-moving fuel + trip idle fuel) over the life of the engine. | | | |
| | 1041 | Start Signal Indicator | J1939 | | | | | | 0 | 219 |
| | 1042 | Electronic Tractor/Trailer Interface (ISO 11992) | J1939 | | | | | | 0 | 220 |
| | 1043 | Internal Sensor Voltage Supply | J1939 | | | | | | 0 | 221 |
| | 1044 | Hydraulic Pump Motor | J1939 | | | | | | 136 | 54 |
| | 1045 | Brake Light Switch 1 | J1939 | | | | | | 136 | 55 |
| | 1046 | Brake Light Switch 2 | J1939 | | | | | | 136 | 56 |
| | 1047 | Electronic Pressure Control Axle 1 | J1939 | | | | | | 136 | 57 |
| | 1048 | Pneumatic Back-up Pressure Control Axle 1 | J1939 | | | | | | 136 | 58 |
| | 1049 | Brake Pressure Sensing Axle 1 | J1939 | | | | | | 136 | 59 |
| | 1050 | Electronic Pressure Control Axle 2 | J1939 | | | | | | 136 | 60 |
| | 1051 | Pneumatic Back-up Pressure Control Axle 2 | J1939 | | | | | | 136 | 61 |
| | 1052 | Brake Pressure Sensing Axle 2 | J1939 | | | | | | 136 | 62 |
| | 1053 | Electronic Pressure Control Axle 3 | J1939 | | | | | | 136 | 63 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1054 | Pneumatic Back-up Pressure Control Axle 3 | J1939 | | | | | | 136 | 64 |
| | 1055 | Brake Pressure Sensing Axle 3 | J1939 | | | | | | 136 | 65 |
| | 1056 | Electronic Pressure Control, Trailer Control | J1939 | | | | | | 136 | 66 |
| | 1057 | Pneumatic Back-up Pressure Control, Trailer Control | J1939 | | | | | | 136 | 67 |
| | 1058 | Brake Pressure Sensing, Trailer Control | J1939 | | | | | | 136 | 68 |
| | 1059 | Axle Load Sensor | J1939 | | | | | | 136 | 69 |
| | 1060 | Lining Wear Sensor Axle 1 Left | J1939 | | | | | | 136 | 70 |
| | 1061 | Lining Wear Sensor Axle 1 Right | J1939 | | | | | | 136 | 71 |
| | 1062 | Lining Wear Sensor Axle 2 Left | J1939 | | | | | | 136 | 72 |
| | 1063 | Lining Wear Sensor Axle 2 Right | J1939 | | | | | | 136 | 73 |
| | 1064 | Lining Wear Sensor Axle 3 Left | J1939 | | | | | | 136 | 74 |
| | 1065 | Lining Wear Sensor Axle 3 Right | J1939 | | | | | | 136 | 75 |
| | 1066 | Brake Signal Transmitter | J1939 | | | | | | 136 | 76 |
| | 1067 | Brake Signal Sensor 1 | J1939 | | | | | | 136 | 77 |
| | 1068 | Brake Signal Sensor 2 | J1939 | | | | | | 136 | 78 |
| | 1069 | Tire Dimension Supervision | J1939 | | | | | | 136 | 79 |
| | 1070 | Vehicle Deceleration Control | J1939 | | | | | | 136 | 80 |
| | 1071 | Cooling Fan Drive Output | J1939 | | | | | | 143 | 27 |
| | 1072 | Engine (Compression) Brake Output #1 | J1939 | | | | Engine Compression Brake driver circuit (includes the ECM driver and solenoid coil). | | 143 | 28 |
| | 1073 | Engine (Compression) Brake Output #2 | J1939 | | | | Engine Compression Brake driver circuit (includes the ECM driver and solenoid coil). | | 143 | 29 |
| | 1074 | Engine (Exhaust) Brake Output | J1939 | | | | | | 143 | 30 |
| | 1075 | Engine Electric Lift Pump for Engine Fuel Supply | J1939 | | | | | | | |
| | 1076 | Engine Fuel Injection Pump Fuel Control Valve | J1939 | | | | | | | |
| | 1077 | Engine Fuel Injection Pump Controller | J1939 | | | | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1078 | Engine Fuel Injection Pump Speed/Position Sensor | J1939 | | | | | | | |
| | 1079 | Sensor Supply Voltage 1 (+5V DC) (obsolete) | J1939 | | | | This SPN is obsolete. SPNs 3509-3514 should be used instead. | | | |
| | 1080 | Sensor Supply Voltage 2 (+5V DC) (obsolete) | J1939 | | | | This SPN is obsolete, SPNs 3509-3514 should be used instead. | | | |
| | 1081 | Engine Wait to Start Lamp | J1939-71 | 65252 | 4.1 | 2 | Lamp signal which indicates that the engine is too cold to start and the operator should wait until the signal becomes inactive (turns off). | | | |
| | 1082 | Engine Coolant Load Increase | J1939-71 | 61440 | 4.1 | 2 | Status of an event, external to the engine, that may increase the nominal temperature of the engine coolant liquid. | | | |
| | 1083 | Auxiliary I/O Channel #1 | J1939-71 | 65241 | 5-6 | 16 | Auxiliary channel of data (16 bit) read by the ECU. This data is in A/D counts and is manufacturer specific. | | | |
| | 1084 | Auxiliary I/O Channel #2 | J1939-71 | 65241 | 7-8 | 16 | Auxiliary channel of data (16 bit) read by the ECU. This data is in A/D counts and is manufacturer specific. | | | |
| | 1085 | Intended Retarder Percent Torque | J1939-71 | 61440 | 3 | 8 | Braking torque of retarder that the retarder is currently trying to achieve. | | | |
| | 1086 | Parking and/or Trailer Air Pressure | J1939-71 | 65198 | 2 | 8 | The pneumatic pressure in the circuit or reservoir for the parking brake and/or the trailer supply. | | | |
| | 1087 | Service Brake Circuit 1 Air Pressure | J1939-71 | 65198 | 3 | 8 | The pneumatic pressure in the primary service brake circuit or reservoir, supplying the rear axle. | | | |
| | 1088 | Service Brake Circuit 2 Air Pressure | J1939-71 | 65198 | 4 | 8 | The pneumatic pressure in the secondary service brake circuit or reservoir, supplying the front axle. | | | |
| | 1089 | Auxiliary Equipment Supply Pressure | J1939-71 | 65198 | 5 | 8 | The pneumatic pressure in the auxiliary circuit. | | | |
| | 1090 | Air Suspension Supply Pressure | J1939-71 | 65198 | 6 | 8 | The pneumatic pressure in the circuit for the electronically controlled air suspension system. | | | |
| | 1091 | Brake Application Pressure High Range, Front Axle, Left Wheel | J1939-71 | 65197 | 1 | 8 | The brake application pressure for the left wheel on the front axle. | | | |
| | 1092 | Brake Application Pressure High Range, Front Axle, Right Wheel | J1939-71 | 65197 | 2 | 8 | The brake application pressure for the right wheel on the front axle. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1093 | Brake Application Pressure High Range, Rear Axle #1, Left Wheel | J1939-71 | 65197 | 3 | 8 | The brake application pressure for the left wheel on the rear axle #1. | | | |
| | 1094 | Brake Application Pressure High Range, Rear Axle #1, Right Wheel | J1939-71 | 65197 | 4 | 8 | The brake application pressure for the right wheel on the rear axle #1. | | | |
| | 1095 | Brake Application Pressure High Range, Rear Axle #2, Left Wheel | J1939-71 | 65197 | 5 | 8 | The brake application pressure for the left wheel on the rear axle #2. | | | |
| | 1096 | Brake Application Pressure High Range, Rear Axle #2, Right Wheel | J1939-71 | 65197 | 6 | 8 | The brake application pressure for the right wheel on the rear axle #2. | | | |
| | 1097 | Brake Application Pressure High Range, Rear Axle #3, Left Wheel | J1939-71 | 65197 | 7 | 8 | The brake application pressure for the left wheel on the rear axle #3. | | | |
| | 1098 | Brake Application Pressure High Range, Rear Axle #3, Right Wheel | J1939-71 | 65197 | 8 | 8 | The brake application pressure for the right wheel on the rear axle #3. | | | |
| | 1099 | Brake Lining Remaining, Front Axle, Left Wheel | J1939-71 | 65196 | 1 | 8 | The percentage of brake lining which can still be measured for the left wheel on the front axle. | | | |
| | 1100 | Brake Lining Remaining, Front Axle, Right Wheel | J1939-71 | 65196 | 2 | 8 | The percentage of brake lining which can still be measured for the right wheel on the front axle. | | | |
| | 1101 | Brake Lining Remaining, Rear Axle #1, Left Wheel | J1939-71 | 65196 | 3 | 8 | The percentage of brake lining which can still be measured for the left wheel on the rear axle #1. | | | |
| | 1102 | Brake Lining Remaining, Rear Axle #1, Right Wheel | J1939-71 | 65196 | 4 | 8 | The percentage of brake lining which can still be measured for the right wheel on the rear axle #1. | | | |
| | 1103 | Brake Lining Remaining, Rear Axle #2, Left Wheel | J1939-71 | 65196 | 5 | 8 | The percentage of brake lining which can still be measured for the left wheel on the rear axle #2. | | | |
| | 1104 | Brake Lining Remaining, Rear Axle #2, Right Wheel | J1939-71 | 65196 | 6 | 8 | The percentage of brake lining which can still be measured for the right wheel on the rear axle #2. | | | |
| | 1105 | Brake Lining Remaining, Rear Axle #3, Left Wheel | J1939-71 | 65196 | 7 | 8 | The percentage of brake lining which can still be measured for the left wheel on the rear axle #3. | | | |
| | 1106 | Brake Lining Remaining, Rear Axle #3, Right Wheel | J1939-71 | 65196 | 8 | 8 | The percentage of brake lining which can still be measured for the right wheel on the rear axle #3. | | | |
| | 1107 | Engine Protection System Timer State | J1939-71 | 65252 | 5.7 | 2 | Status signal which indicates the current mode of the engine protection system timer system. See Figure SPN1107_A. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1108 | Engine Protection System Timer Override | J1939-71 | 65252 | 5.5 | 2 | Status signal which indicates the status of the override feature of the engine protection system timer. | | | |
| | 1109 | Engine Protection System Approaching Shutdown | J1939-71 | 65252 | 5.3 | 2 | Status signal which indicates that engine shutdown is imminent. | | | |
| | 1110 | Engine Protection System has Shutdown Engine | J1939-71 | 65252 | 5.1 | 2 | Status signal which indicates whether or not the engine protection system has shutdown the engine. | | | |
| | 1111 | Engine Protection System Configuration | J1939-71 | 65252 | 6.7 | 2 | Parameter which indicates the configuration of the engine shutdown system. | | | |
| | 1112 | Engine (Compression) Brake Output #3 | J1939 | | | | Engine Compression Brake driver circuit (includes the ECM driver and solenoid coil). | | 128 | 82 |
| | 1113 | Recommended Gear | J1939-71 | 65195 | 1 | 8 | The transmission calculates this gear continuously. | | | |
| | 1114 | Lowest Possible Gear | J1939-71 | 65195 | 3 | 8 | The transmission calculates this gear continuously. Together with the highest possible gear (see SPN 1115), it enables a management computer to know the exact range of available gears. | | | |
| | 1115 | Highest Possible Gear | J1939-71 | 65195 | 2 | 8 | The transmission calculates this gear continuously. Together with the lowest possible gear (see SPN 1114), it enables a management computer to know the exact range of available gears. | | | |
| | 1116 | Engine Gaseous Fuel Correction Factor | J1939-71 | 65194 | 1 | 8 | A correction to a predefined gaseous fuel energy (expressed in energy per unit volume) represented as a percentage. | | | |
| | 1117 | Engine Desired Rated Exhaust Oxygen | J1939-71 | 65193 | 1-2 | 16 | The desired amount of oxygen in the exhaust at rated conditions represented as a percentage by volume with respect to the total volume of exhaust gases leaving the engine. | | | |
| | 1118 | Engine Desired Exhaust Oxygen | J1939-71 | 65193 | 3-4 | 16 | The desired amount of oxygen in the exhaust represented as a percentage by volume with respect to the total volume of exhaust gases leaving the engine. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1119 | Engine Actual Exhaust Oxygen | J1939-71 | 65193 | 5-6 | 16 | The actual amount of oxygen in the exhaust represented as a percentage by volume with respect to the total volume of exhaust gases leaving the engine. | | | |
| | 1120 | Articulation Angle | J1939-71 | 65192 | 1 | 8 | Angle of deflection of an articulated transit vehicle. A right turn is indicated with a positive angle and a left turn is indicated with a negative angle. | | | |
| | 1121 | EBS Brake Switch | J1939-71 | 61441 | 1.7 | 2 | Switch signal which indicates that the brake pedal is being pressed. The EBS brake switch is independent of the brake light switch and has no provisions for external connections. | | | |
| | 1122 | Engine Alternator Bearing 1 Temperature | J1939-71 | 65191 | 1 | 8 | Temperature of the bearing inside the alternator. Bearing 1 is the left or rear bearing. | | | |
| | 1123 | Engine Alternator Bearing 2 Temperature | J1939-71 | 65191 | 2 | 8 | Temperature of the bearing inside the alternator. Bearing 2 is the right or front bearing. | | | |
| | 1124 | Engine Alternator Winding 1 Temperature | J1939-71 | 65191 | 3 | 8 | Temperature of the windings inside the alternator. | | | |
| | 1125 | Engine Alternator Winding 2 Temperature | J1939-71 | 65191 | 4 | 8 | Temperature of the windings inside the alternator. | | | |
| | 1126 | Engine Alternator Winding 3 Temperature | J1939-71 | 65191 | 5 | 8 | Temperature of the windings inside the alternator. | | | |
| | 1127 | Engine Turbocharger 1 Boost Pressure | J1939-71 | 65190 | 1-2 | 16 | Gage pressure of air measured downstream of the compressor discharge side of the turbocharger. | | | |
| | 1128 | Engine Turbocharger 2 Boost Pressure | J1939-71 | 65190 | 3-4 | 16 | Gage pressure of air measured downstream of the compressor discharge side of the turbocharger. | | | |
| | 1129 | Engine Turbocharger 3 Boost Pressure | J1939-71 | 65190 | 5-6 | 16 | Gage pressure of air measured downstream of the compressor discharge side of the turbocharger. | | | |
| | 1130 | Engine Turbocharger 4 Boost Pressure | J1939-71 | 65190 | 7-8 | 16 | Gage pressure of air measured downstream of the compressor discharge side of the turbocharger. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1131 | Engine Intake Manifold 2 Temperature | J1939-71 | 65189 | 1 | 8 | Temperature of pre-combustion air found in intake manifold number 2 of engine air supply system. | | | |
| | 1132 | Engine Intake Manifold 3 Temperature | J1939-71 | 65189 | 2 | 8 | Temperature of pre-combustion air found in intake manifold number 3 of engine air supply system. | | | |
| | 1133 | Engine Intake Manifold 4 Temperature | J1939-71 | 65189 | 3 | 8 | Temperature of pre-combustion air found in intake manifold number 4 of engine air supply system. | | | |
| | 1134 | Engine Intercooler Thermostat Opening | J1939-71 | 65262 | 8 | 8 | The current position of the thermostat used to regulate the temperature of the engine intercooler. | | | |
| | 1135 | Engine Oil Temperature 2 | J1939-71 | 65188 | 1-2 | 16 | Temperature of the engine lubricant. | | | |
| | 1136 | Engine ECU Temperature | J1939-71 | 65188 | 3-4 | 16 | Temperature of the engine electronic control unit. | | | |
| | 1137 | Engine Exhaust Gas Port 1 Temperature | J1939-71 | 65187 | 1-2 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1138 | Engine Exhaust Gas Port 2 Temperature | J1939-71 | 65187 | 3-4 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1139 | Engine Exhaust Gas Port 3 Temperature | J1939-71 | 65187 | 5-6 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1140 | Engine Exhaust Gas Port 4 Temperature | J1939-71 | 65187 | 7-8 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1141 | Engine Exhaust Gas Port 5 Temperature | J1939-71 | 65186 | 1-2 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1142 | Engine Exhaust Gas Port 6 Temperature | J1939-71 | 65186 | 3-4 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1143 | Engine Exhaust Gas Port 7 Temperature | J1939-71 | 65186 | 5-6 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1144 | Engine Exhaust Gas Port 8 Temperature | J1939-71 | 65186 | 7-8 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1145 | Engine Exhaust Gas Port 9 Temperature | J1939-71 | 65185 | 1-2 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1146 | Engine Exhaust Gas Port 10 Temperature | J1939-71 | 65185 | 3-4 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1147 | Engine Exhaust Gas Port 11 Temperature | J1939-71 | 65185 | 5-6 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1148 | Engine Exhaust Gas Port 12 Temperature | J1939-71 | 65185 | 7-8 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1149 | Engine Exhaust Gas Port 13 Temperature | J1939-71 | 65184 | 1-2 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1150 | Engine Exhaust Gas Port 14 Temperature | J1939-71 | 65184 | 3-4 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1151 | Engine Exhaust Gas Port 15 Temperature | J1939-71 | 65184 | 5-6 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1152 | Engine Exhaust Gas Port 16 Temperature | J1939-71 | 65184 | 7-8 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1153 | Engine Exhaust Gas Port 17 Temperature | J1939-71 | 65183 | 1-2 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1154 | Engine Exhaust Gas Port 18 Temperature | J1939-71 | 65183 | 3-4 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1155 | Engine Exhaust Gas Port 19 Temperature | J1939-71 | 65183 | 5-6 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1156 | Engine Exhaust Gas Port 20 Temperature | J1939-71 | 65183 | 7-8 | 16 | Temperature at the cylinder exhaust port of the engine. | | | |
| | 1157 | Engine Main Bearing 1 Temperature | J1939-71 | 65182 | 1-2 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1158 | Engine Main Bearing 2 Temperature | J1939-71 | 65182 | 3-4 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1159 | Engine Main Bearing 3 Temperature | J1939-71 | 65182 | 5-6 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1160 | Engine Main Bearing 4 Temperature | J1939-71 | 65182 | 7-8 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1161 | Engine Main Bearing 5 Temperature | J1939-71 | 65181 | 1-2 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1162 | Engine Main Bearing 6 Temperature | J1939-71 | 65181 | 3-4 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1163 | Engine Main Bearing 7 Temperature | J1939-71 | 65181 | 5-6 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1164 | Engine Main Bearing 8 Temperature | J1939-71 | 65181 | 7-8 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1165 | Engine Main Bearing 9 Temperature | J1939-71 | 65180 | 1-2 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1166 | Engine Main Bearing 10 Temperature | J1939-71 | 65180 | 3-4 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1167 | Engine Main Bearing 11 Temperature | J1939-71 | 65180 | 5-6 | 16 | Temperature of the main bearing which supports the crankshaft of the engine. | | | |
| | 1168 | Engine Turbocharger Lube Oil Pressure 2 | J1939-71 | 65179 | 1 | 8 | Gage pressure of oil in turbocharger lubrication system. | | | |
| | 1169 | Engine Turbocharger 2 Speed | J1939-71 | 65179 | 2-3 | 16 | Rotational velocity of rotor in the turbocharger. | | | |
| | 1170 | Engine Turbocharger 3 Speed | J1939-71 | 65179 | 4-5 | 16 | Rotational velocity of rotor in the turbocharger. | | | |
| | 1171 | Engine Turbocharger 4 Speed | J1939-71 | 65179 | 6-7 | 16 | Rotational velocity of rotor in the turbocharger. | | | |
| | 1172 | Engine Turbocharger 1 Compressor Inlet Temperature | J1939-71 | 65178 | 1 | 16 | Temperature of the air entering the compressor side of the turbocharger. | | | |
| | 1173 | Engine Turbocharger 2 Compressor Inlet Temperature | J1939-71 | 65178 | 2 | 16 | Temperature of the air entering the compressor side of the turbocharger. | | | |
| | 1174 | Engine Turbocharger 3 Compressor Inlet Temperature | J1939-71 | 65178 | 3 | 16 | Temperature of the air entering the compressor side of the turbocharger. | | | |
| | 1175 | Engine Turbocharger 4 Compressor Inlet Temperature | J1939-71 | 65178 | 4 | 16 | Temperature of the air entering the compressor side of the turbocharger. | | | |
| | 1176 | Engine Turbocharger 1 Compressor Inlet Pressure | J1939-71 | 65177 | 1-2 | 16 | Gage pressure of the air entering the compressor side of the turbocharger. | | | |
| | 1177 | Engine Turbocharger 2 Compressor Inlet Pressure | J1939-71 | 65177 | 3-4 | 16 | Gage pressure of the air entering the compressor side of the turbocharger. | | | |
| | 1178 | Engine Turbocharger 3 Compressor Inlet Pressure | J1939-71 | 65177 | 5-6 | 16 | Gage pressure of the air entering the compressor side of the turbocharger. | | | |
| | 1179 | Engine Turbocharger 4 Compressor Inlet Pressure | J1939-71 | 65177 | 7-8 | 16 | Gage pressure of the air entering the compressor side of the turbocharger. | | | |
| | 1180 | Engine Turbocharger 1 Turbine Inlet Temperature | J1939-71 | 65176 | 1-2 | 16 | Temperature of the combustion by-products entering the turbine side of the turbocharger. | | | |
| | 1181 | Engine Turbocharger 2 Turbine Inlet Temperature | J1939-71 | 65176 | 3-4 | 16 | Temperature of the combustion by-products entering the turbine side of the turbocharger. | | | |
| | 1182 | Engine Turbocharger 3 Turbine Inlet Temperature | J1939-71 | 65176 | 5-6 | 16 | Temperature of the combustion by-products entering the turbine side of the turbocharger. | | | |
| | 1183 | Engine Turbocharger 4 Turbine Inlet Temperature | J1939-71 | 65176 | 7-8 | 16 | Temperature of the combustion by-products entering the turbine side of the turbocharger. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1184 | Engine Turbocharger 1 Turbine Outlet Temperature | J1939-71 | 65175 | 1-2 | 16 | Temperature of the combustion by-products exiting the turbine side of the turbocharger. | | | |
| | 1185 | Engine Turbocharger 2 Turbine Outlet Temperature | J1939-71 | 65175 | 3-4 | 16 | Temperature of the combustion by-products exiting the turbine side of the turbocharger. | | | |
| | 1186 | Engine Turbocharger 3 Turbine Outlet Temperature | J1939-71 | 65175 | 5-6 | 16 | Temperature of the combustion by-products exiting the turbine side of the turbocharger. | | | |
| | 1187 | Engine Turbocharger 4 Turbine Outlet Temperature | J1939-71 | 65175 | 7-8 | 16 | Temperature of the combustion by-products exiting the turbine side of the turbocharger. | | | |
| | 1188 | Engine Turbocharger 1 Wastegate Drive | J1939-71 | 65174 | 1 | 8 | Position of the wastegate drive. | | 128 | 32 |
| | 1189 | Engine Turbocharger 2 Wastegate Drive | J1939-71 | 65174 | 2 | 8 | Position of the wastegate drive. | | 128 | 88 |
| | 1190 | Engine Turbocharger 3 Wastegate Drive | J1939-71 | 65174 | 3 | 8 | Position of the wastegate drive. | | | |
| | 1191 | Engine Turbocharger 4 Wastegate Drive | J1939-71 | 65174 | 4 | 8 | Position of the wastegate drive. | | | |
| | 1192 | Engine Turbocharger Wastegate Actuator Control Air Pressure | J1939-71 | 65174 | 5 | 8 | Gage pressure of the air used to control the actuator which opens and closes the wastegate valve. | | | |
| | 1193 | Engine Operation Time Since Rebuild | J1939-71 | 65173 | 1-4 | 32 | The time in engine operation since the last engine rebuild. | | | |
| | 1194 | Anti-theft Encryption Seed Present Indicator | J1939-71 | 56320 | 1.1 | 2 | Indicates the presence of the encryption seed random number. | | | |
| | 1195 | Anti-theft Password Valid Indicator | J1939-71 | 56320 | 1.3 | 2 | Indicates the presence of a validated password. | | | 217 |
| | 1196 | Anti-theft Component Status States | J1939-71 | 56320 | 1.5 | 2 | Indicates whether or not the component can be started. | | | |
| | 1197 | Anti-theft Modify Password States | J1939-71 | 56320 | 1.7 | 2 | This parameter is used to indicate whether a password request was successfully performed, or if the request could not be perform due to system constraints or if the request was not a valid request. | | | |
| | 1198 | Anti-theft Random Number | J1939-71 | 56320 | 2-8 | 56 | A seven byte random numeric code provided by the component in response to an anti-theft request. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1199 | Anti-theft Encryption Indicator States | J1939-71 | 56576 | 1.2 | 2 | This parameter is used to indicate if a random number seed is being requested, or if an encrypted password is being provided to the component. | | | |
| | 1200 | Anti-theft Desired Exit Mode States | J1939-71 | 56576 | 1.4 | 2 | This parameter is used to specify the desired triggers that are to be used by the component in deciding when to transition to the Locked state. | | | |
| | 1201 | Anti-theft Command States | J1939-71 | 56576 | 1.6 | 3 | This parameter is used to identify the specific requests being sent to the component. | | | |
| | 1202 | Anti-theft Password Representation | J1939-71 | 56576 | 2 | 56 | This parameter is the seven byte numeric code (i.e., 'encrypted password' or 'key') that is generated based on the encryption algorithm, the password supplied by the end user, and the random number seed given by the component. | | | |
| | 1203 | Engine Auxiliary Coolant Pressure | J1939-71 | 65172 | 1 | 8 | Gage pressure of coolant found in the intercooler which is located after the turbocharger. | | | |
| | 1204 | Electrical Load | J1939-71 | 65171 | 1-2 | 16 | Electrical power delivered by the engine to the electrical system connected to the generator. | | | |
| | 1205 | Safety Wire Status | J1939-71 | 65171 | 3.1 | 2 | Status signal which indicates that the safety wire has been activated. When the safety wire is activated, the engine will not operate. This is used for maintenance purposes. | | | |
| | 1206 | Engine Turning Gear Engaged | J1939-71 | | | 2 | Status signal which indicates that the turning gear is engaged. The turning gear is used to turn the flywheel/crankshaft, for maintenance purposes, while the engine is not running. | | | |
| | 1207 | Engine ECU Temperature (OBSOLETE use SPN 1136) | J1939-71 | | | 16 | Temperature of the engine electronic control unit. | | | |
| | 1208 | Engine Pre-filter Oil Pressure | J1939-71 | 65170 | 1 | 8 | Gage pressure of the engine oil before the oil reaches the oil filter. | | | |
| | 1209 | Engine Exhaust Gas Pressure | J1939-71 | 65170 | 2-3 | 16 | Gage pressure of the exhaust gasses as measured at the turbine inlet of the turbocharger. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1210 | Engine Fuel Rack Position | J1939-71 | 65170 | 4 | 8 | Measured position of the engine fuel rack. | | | |
| | 1211 | Engine Build Hours Reset | J1939-71 | 56832 | 3.1 | 2 | Command signal used to reset the engine rebuild hours. | | | |
| | 1212 | Engine Auxiliary Coolant Temperature | J1939-71 | 65172 | 2 | 8 | Temperature of coolant found in the intercooler which is located after the turbocharger. | | | |
| | 1213 | Malfunction Indicator Lamp | J1939-73 | 65226 | 1.7 | 2 | | | | |
| | 1214 | Suspect Parameter Number | J1939-73 | 65226 | 3-4, 5.5 | | | | | |
| | 1215 | Failure Mode Identifier | J1939-73 | 65226 | 5.1 | | | | | |
| | 1216 | Occurrence Count | J1939-73 | 65226 | 6.1 | | | | | |
| | 1217 | Freeze Frame Length | J1939-73 | 65229 | 1 | | | | | |
| | 1218 | Active Trouble Codes | J1939-73 | 65230 | 1 | | | | | |
| | 1219 | Previously Active Trouble Codes | J1939-73 | 65230 | 2 | | | | | |
| | 1220 | OBD Compliance | J1939-73 | 65230 | 3 | | | | | |
| | 1221 | Continuously Monitored Systems Support/Status | J1939-73 | 65230 | 4 | | | | | |
| | 1222 | Non-continuously Monitored Systems Support | J1939-73 | 65230 | 5 | | | | | |
| | 1223 | Non-continuously Monitored Systems Status | J1939-73 | 65230 | 7 | | | | | |
| | 1224 | Test Identifier | J1939-73 | 58112 | 1 | | | | | |
| | 1225 | Test Type/Component Identifier | J1939-73 | 65232 | 2 | | | | | |
| | 1226 | Test Value | J1939-73 | 65232 | 3-4 | | | | | |
| | 1227 | Test Limit Maximum | J1939-73 | 65232 | 5-6 | | | | | |
| | 1228 | Test Limit Minimum | J1939-73 | 65232 | 7-8 | | | | | |
| | 1229 | Test Identifiers Supported | J1939-73 | 65234 | 1 | | | | | |
| | 1230 | Current Data Link | J1939-73 | 57088 | 1.7 | 2 | Identifies the action to be performed on the communications port that this parameter was received on. | | | |
| | 1231 | J1939 Network #2 | J1939-73 | 57088 | 2.7 | 2 | Identifies the action to be performed on the J1939 Network #2 communications port. | | | |
| | 1232 | ISO 9141 | J1939-73 | 57088 | 2.5 | 2 | Identifies the action to be performed on the ISO 9141 communications port. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1233 | J1850 | J1939-73 | 57088 | 2.3 | 2 | Identifies the action to be performed on the J1850 communications port. | | | |
| | 1234 | Other, Manufacturer Specified Port | J1939-73 | 57088 | 2.1 | 2 | Identifies the action to be performed on the “Other, Manufacture Specified Port” communications port. | | | |
| | 1235 | J1939 Network #3 | J1939-73 | 57088 | 3.7 | 2 | Identifies the action to be performed on the J1939 Network #3 communications port. | | | |
| | 1236 | Hold Signal | J1939-73 | 57088 | 4.5 | 4 | Indicator to all nodes that the communication ports that have been acted upon by the Stop Start Broadcast PGN are remaining in the modified state. | | | |
| | 1237 | Engine Shutdown Override Switch | J1939-71 | 65265 | 8.7 | 2 | Switch signal which indicates the position of the engine shutdown override switch. This switch function allows the operator to override an impending engine shutdown. | | | |
| | 1238 | Traction Control Override Switch | J1939-71 | 61441 | 3.7 | 2 | Switch signal which indicates the position of the traction control override switch. | | | |
| | 1239 | Engine Fuel Leakage 1 | J1939-71 | 65169 | 1.1 | 2 | Status signal which indicates fuel leakage in the fuel rail of the engine. Location can be either before or after the fuel pump. | | | |
| | 1240 | Engine Fuel Leakage 2 | J1939-71 | 65169 | 1.3 | 2 | Status signal which indicates fuel leakage in the fuel rail of the engine. Location can be either before or after the fuel pump. | | | |
| | 1241 | Engine Gas Mass Flow Rate 1 | J1939-71 | 65170 | 5-6 | 16 | Gas mass flow rate delivered to an engine through its first fuel control system. | | | |
| | 1242 | Instantaneous Estimated Brake Power | J1939-71 | 65170 | 7-8 | 16 | Estimate of the power developed by the engine. | | | |
| | 1243 | ABS Fully Operational | J1939-71 | 61441 | 6.1 | 2 | Signal which indicates whether an ABS system is fully operational or whether its functionality is reduced by a defect or by an intended action | | | |
| | 1244 | Engine Fuel Actuator 2 Control Command | J1939-71 | 61466 | 7-8 | 16 | The control command to fuel actuator 2 | | 128 | 18 |
| | 1245 | Engine Timing Actuator #2 | J1939 | | | | Timing actuator for rear time actuator. | | | 84 |
| | 1246 | Number of Engine Torque History Records | J1939-71 | 65168 | 01 | 8 | Number of torque history records contained in the engine torque history PGN. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1247 | Engine Power | J1939-71 | 65168 | 02-03 | 16 | Advertised engine power capability. Advertised power is what a customer will find on a sales sheet for an engine with a certain calibration. | | | |
| | 1248 | Engine Peak Torque 1 | J1939-71 | 65168 | 04-05 | 16 | Maximum torque output of the current ECU calibration when the engine operates on torque curve 1. | | | |
| | 1249 | Engine Peak Torque 2 | J1939-71 | 65168 | 06-07 | 16 | Maximum torque output of the current ECU calibration when the engine operates on torque curve 2. | | | |
| | 1250 | Calibration Record Start Month | J1939-71 | 65168 | 08 | 8 | Calendar month timestamp when an ECU record was established. | | | |
| | 1251 | Calibration Record Start Day | J1939-71 | 65168 | 09 | 8 | Calendar day timestamp when an ECU record was established. | | | |
| | 1252 | Calibration Record Start Year | J1939-71 | 65168 | 10 | 8 | Calendar year timestamp when an ECU record was established. | | | |
| | 1253 | Calibration Record Duration Time | J1939-71 | 65168 | 11-14 | 32 | Duration in hours for which the engine operated in the conditions captured in the current record. | | | |
| | 1254 | Torque Limiting Feature Status | J1939-71 | 65168 | 15.1 | 2 | Status of an ECU feature which limits the torque output of the engine. | | | |
| | 1255 | Transmission Gear Ratio 1 | J1939-71 | 65168 | 16-17 | 16 | Gear ratio value stored in the ECU that is used to define a range of transmission gears for which a limit is applied to the engine output torque. | | | |
| | 1256 | Engine Torque Limit 1, Transmission | J1939-71 | 65168 | 18-19 | 16 | Limit applied to the engine output torque during vehicle operation in transmission gear ratios numerically greater than transmission gear ratio 1 | | | |
| | 1257 | Transmission Gear Ratio 2 | J1939-71 | 65168 | 20-21 | 16 | Gear ratio value stored in the ECU that is used to define a range of transmission gears for which a limit is applied to the engine output torque. | | | |
| | 1258 | Engine Torque Limit 2, Transmission | J1939-71 | 65168 | 22-23 | 16 | Limit applied to the engine output torque during vehicle operation in transmission gear ratios numerically less than or equal to transmission gear ratio 1 and numerically greater than transmission gear ratio 2. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1259 | Transmission Gear Ratio 3 | J1939-71 | 65168 | 24-25 | 16 | Gear ratio value stored in the ECU that is used to define a range of transmission gears for which a limit is applied to the engine output torque. | | | |
| | 1260 | Engine Torque Limit 3, Transmission | J1939-71 | 65168 | 26-27 | 16 | Limit applied to the engine output torque during vehicle operation in transmission gear ratios numerically less than or equal to transmission gear ratio 2 and numerically greater than transmission gear ratio 3 | | | |
| | 1261 | Engine Torque Limit 4, Transmission | J1939-71 | 65168 | 28-29 | 16 | Limit applied to the engine output torque during vehicle operation in transmission gear ratios numerically less than or equal to transmission gear ratio 3 | | | |
| | 1262 | Engine Torque Limit 5, Switch | J1939-71 | 65168 | 30-31 | 16 | Limit applied to the engine output torque based on activation of an ECU switch input. | | | |
| | 1263 | Engine Torque Limit 6, Axle Input | J1939-71 | 65168 | 32-33 | 16 | Limit applied to the engine output torque based on the maximum allowable axle input torque. | | | |
| | 1264 | Engine Extended Crankcase Blow-by Pressure - duplicate (see SPN 22) | J1939-71 | | | 8 | Differential crankcase blow-by pressure as measured through a tube with a venturi. | 22 | | |
| | 1265 | Engine Oil Burn Valve | J1939 | | | | Valve to control the folow of oil to be burned off in the engine. | | | 85 |
| | 1266 | Engine Oil Replacement Valve | J1939 | | | | Valve to control the replacement oil to the engine. | | | 86 |
| | 1267 | Idle Shutdown Vehicle Accessories Relay Driver Circuit | J1939 | | | | When Idle Shutdown System is activated, the relay will shutdown off accessories. | | | 87 |
| | 1268 | Engine Ignition Coil #1 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1269 | Engine Ignition Coil #2 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1270 | Engine Ignition Coil #3 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1271 | Engine Ignition Coil #4 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1272 | Engine Ignition Coil #5 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1273 | Engine Ignition Coil #6 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1274 | Engine Ignition Coil #7 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1275 | Engine Ignition Coil #8 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1276 | Engine Ignition Coil #9 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1277 | Engine Ignition Coil #10 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1278 | Engine Ignition Coil #11 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1279 | Engine Ignition Coil #12 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1280 | Engine Ignition Coil #13 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1281 | Engine Ignition Coil #14 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1282 | Engine Ignition Coil #15 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1283 | Engine Ignition Coil #16 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1284 | Engine Ignition Coil #17 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1285 | Engine Ignition Coil #18 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1286 | Engine Ignition Coil #19 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1287 | Engine Ignition Coil #20 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1288 | Engine Ignition Coil #21 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1289 | Engine Ignition Coil #22 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1290 | Engine Ignition Coil #23 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1291 | Engine Ignition Coil #24 | J1939 | | | | Coil for high voltage spark plug in gas engines. | | | |
| | 1292 | Engine Ignition Control Module #1 | J1939 | | | | Electronic control unit for an ignition system. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1293 | Engine Ignition Control Module #2 | J1939 | | | | Electronic control unit for an ignition system. | | | |
| | 1294 | Engine Spark Plug 1 | J1939-71 | 64887 | 1-2 | 16 | The measured voltage of the spark event on Cylinder #1 | | | |
| | 1295 | Engine Spark Plug 2 | J1939-71 | 64887 | 3-4 | 16 | The measured voltage of the spark event on Cylinder #2 | | | |
| | 1296 | Engine Spark Plug 3 | J1939-71 | 64887 | 5-6 | 16 | The measured voltage of the spark event on Cylinder #3 | | | |
| | 1297 | Engine Spark Plug 4 | J1939-71 | 64887 | 7-8 | 16 | The measured voltage of the spark event on Cylinder #4 | | | |
| | 1298 | Engine Spark Plug 5 | J1939-71 | 64886 | 1-2 | 16 | The measured voltage of the spark event on Cylinder #5 | | | |
| | 1299 | Engine Spark Plug 6 | J1939-71 | 64886 | 3-4 | 16 | The measured voltage of the spark event on Cylinder #6 | | | |
| | 1300 | Engine Spark Plug 7 | J1939-71 | 64886 | 5-6 | 16 | The measured voltage of the spark event on Cylinder #7 | | | |
| | 1301 | Engine Spark Plug 8 | J1939-71 | 64886 | 7-8 | 16 | The measured voltage of the spark event on Cylinder #8 | | | |
| | 1302 | Engine Spark Plug 9 | J1939-71 | 64885 | 1-2 | 16 | The measured voltage of the spark event on Cylinder #9 | | | |
| | 1303 | Engine Spark Plug 10 | J1939-71 | 64885 | 3-4 | 16 | The measured voltage of the spark event on Cylinder #10 | | | |
| | 1304 | Engine Spark Plug 11 | J1939-71 | 64885 | 5-6 | 16 | The measured voltage of the spark event on Cylinder #11 | | | |
| | 1305 | Engine Spark Plug 12 | J1939-71 | 64885 | 7-8 | 16 | The measured voltage of the spark event on Cylinder #12 | | | |
| | 1306 | Engine Spark Plug 13 | J1939-71 | 64884 | 1-2 | 16 | The measured voltage of the spark event on Cylinder #13 | | | |
| | 1307 | Engine Spark Plug 14 | J1939-71 | 64884 | 3-4 | 16 | The measured voltage of the spark event on Cylinder #14 | | | |
| | 1308 | Engine Spark Plug 15 | J1939-71 | 64884 | 5-6 | 16 | The measured voltage of the spark event on Cylinder #15 | | | |
| | 1309 | Engine Spark Plug 16 | J1939-71 | 64884 | 7-8 | 16 | The measured voltage of the spark event on Cylinder #16 | | | |
| | 1310 | Engine Spark Plug 17 | J1939-71 | 64883 | 1-2 | 16 | The measured voltage of the spark event on Cylinder #17 | | | |
| | 1311 | Engine Spark Plug 18 | J1939-71 | 64883 | 3-4 | 16 | The measured voltage of the spark event on Cylinder #18 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1312 | Engine Spark Plug 19 | J1939-71 | 64883 | 5-6 | 16 | The measured voltage of the spark event on Cylinder #19 | | | |
| | 1313 | Engine Spark Plug 20 | J1939-71 | 64883 | 7-8 | 16 | The measured voltage of the spark event on Cylinder #20 | | | |
| | 1314 | Engine Spark Plug 21 | J1939-71 | 64882 | 1-2 | 16 | The measured voltage of the spark event on Cylinder #21 | | | |
| | 1315 | Engine Spark Plug 22 | J1939-71 | 64882 | 3-4 | 16 | The measured voltage of the spark event on Cylinder #22 | | | |
| | 1316 | Engine Spark Plug 23 | J1939-71 | 64882 | 5-6 | 16 | The measured voltage of the spark event on Cylinder #23 | | | |
| | 1317 | Engine Spark Plug 24 | J1939-71 | 64882 | 7-8 | 16 | The measured voltage of the spark event on Cylinder #24 | | | |
| | 1318 | Engine Exhaust Temperature Bank Imbalance | J1939 | | | | The imbalance between two banks of of exhaust port temperatures. | | | |
| | 1319 | Engine Intake Manifold Pressure Bank Imbalance | J1939 | | | | Imbalance between two banks of intake pressure manifolds | | | |
| | 1320 | Engine External Shutdown Air Supply Pressure | J1939-71 | 65167 | 1-2 | 16 | Pressure of the air used to shut off the fuel supply to the engine. | | | |
| | 1321 | Engine Starter Solenoid Lockout Relay Driver Circuit | J1939 | | | | This relay is in series with the engine starter moto relay and controled by engine ECM to prevent starter engagement | | | |
| | 1322 | Engine Misfire for Multiple Cylinders | J1939 | | | | When a misfire occurs in any one of the cylinders | | | |
| | 1323 | Engine Misfire Cylinder #1 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1324 | Engine Misfire Cylinder #2 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1325 | Engine Misfire Cylinder #3 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1326 | Engine Misfire Cylinder #4 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1327 | Engine Misfire Cylinder #5 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1328 | Engine Misfire Cylinder #6 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1329 | Engine Misfire Cylinder #7 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1330 | Engine Misfire Cylinder #8 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1331 | Engine Misfire Cylinder #9 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1332 | Engine Misfire Cylinder #10 | J1939 | | | | Engine misfire detected in cylinder | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1333 | Engine Misfire Cylinder #11 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1334 | Engine Misfire Cylinder #12 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1335 | Engine Misfire Cylinder #13 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1336 | Engine Misfire Cylinder #14 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1337 | Engine Misfire Cylinder #15 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1338 | Engine Misfire Cylinder #16 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1339 | Engine Misfire Cylinder #17 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1340 | Engine Misfire Cylinder #18 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1341 | Engine Misfire Cylinder #19 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1342 | Engine Misfire Cylinder #20 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1343 | Engine Misfire Cylinder #21 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1344 | Engine Misfire Cylinder #22 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1345 | Engine Misfire Cylinder #23 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1346 | Engine Misfire Cylinder #24 | J1939 | | | | Engine misfire detected in cylinder | | | |
| | 1347 | Engine Fuel Pump Pressurizing Assembly #1 | J1939 | | | | The pumping assembly of the fuel system | | | |
| | 1348 | Engine Fuel Pump Pressurizing Assembly #2 | J1939 | | | | The pumping assembly of the fuel system | | | |
| | 1349 | Engine Injector Metering Rail 2 Pressure | J1939-71 | 65243 | 7-8 | 16 | The gage pressure of fuel in the metering rail #2 as delivered from the supply pump to the injector metering inlet. | 129 | | |
| | 1350 | Time Since Last Service | J1939-71 | 65166 | 2-3 | 16 | The vehicle operation time since the last service was performed. | | | |
| | 1351 | Air Compressor Status | J1939-71 | 65198 | 7.1 | 2 | Indicates whether the air compressor is actively compressing air. | | | |
| | 1352 | Engine Cylinder 1 Knock Level | J1939-71 | 61463 | 1 | 8 | Used to indicate the level of knock for engine cylinder 1 (replaces 1352) | | | |
| | 1353 | Engine Cylinder 2 Knock Level | J1939-71 | 61463 | 2 | 8 | Used to indicate the level of knock for engine cylinder 2 | | | |
| | 1354 | Engine Cylinder 3 Knock Level | J1939-71 | 61463 | 3 | 8 | Used to indicate the level of knock for engine cylinder 3 | | | |
| | 1355 | Engine Cylinder 4 Knock Level | J1939-71 | 61463 | 4 | 8 | Used to indicate the level of knock for engine cylinder 4 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1356 | Engine Cylinder 5 Knock Level | J1939-71 | 61463 | 5 | 8 | Used to indicate the level of knock for engine cylinder 5 | | | |
| | 1357 | Engine Cylinder 6 Knock Level | J1939-71 | 61463 | 6 | 8 | Used to indicate the level of knock for engine cylinder 6 | | | |
| | 1358 | Engine Cylinder 7 Knock Level | J1939-71 | 61463 | 7 | 8 | Used to indicate the level of knock for engine cylinder 7 | | | |
| | 1359 | Engine Cylinder 8 Knock Level | J1939-71 | 61463 | 8 | 8 | Used to indicate the level of knock for engine cylinder 8 | | | |
| | 1360 | Engine Cylinder 9 Knock Level | J1939-71 | 61464 | 1 | 8 | Used to indicate the level of knock for engine cylinder 9 | | | |
| | 1361 | Engine Cylinder 10 Knock Level | J1939-71 | 61464 | 2 | 8 | Used to indicate the level of knock for engine cylinder 10 | | | |
| | 1362 | Engine Cylinder 11 Knock Level | J1939-71 | 61464 | 3 | 8 | Used to indicate the level of knock for engine cylinder 11 | | | |
| | 1363 | Engine Cylinder 12 Knock Level | J1939-71 | 61464 | 4 | 8 | Used to indicate the level of knock for engine cylinder 12 | | | |
| | 1364 | Engine Cylinder 13 Knock Level | J1939-71 | 61464 | 5 | 8 | Used to indicate the level of knock for engine cylinder 13 | | | |
| | 1365 | Engine Cylinder 14 Knock Level | J1939-71 | 61464 | 6 | 8 | Used to indicate the level of knock for engine cylinder 14 | | | |
| | 1366 | Engine Cylinder 15 Knock Level | J1939-71 | 61464 | 7 | 8 | Used to indicate the level of knock for engine cylinder 15 | | | |
| | 1367 | Engine Cylinder 16 Knock Level | J1939-71 | 61464 | 8 | 8 | Used to indicate the level of knock for engine cylinder 16 | | | |
| | 1368 | Engine Cylinder 17 Knock Level | J1939-71 | 61465 | 1 | 8 | Used to indicate the level of knock for engine cylinder 17 | | | |
| | 1369 | Engine Cylinder 18 Knock Level | J1939-71 | 61465 | 2 | 8 | Used to indicate the level of knock for engine cylinder 18 | | | |
| | 1370 | Engine Cylinder 19 Knock Level | J1939-71 | 61465 | 3 | 8 | Used to indicate the level of knock for engine cylinder 19 | | | |
| | 1371 | Engine Cylinder 20 Knock Level | J1939-71 | 61465 | 4 | 8 | Used to indicate the level of knock for engine cylinder 20 | | | |
| | 1372 | Engine Cylinder 21 Knock Level | J1939-71 | 61465 | 5 | 8 | Used to indicate the level of knock for engine cylinder 21 | | | |
| | 1373 | Engine Cylinder 22 Knock Level | J1939-71 | 61465 | 6 | 8 | Used to indicate the level of knock for engine cylinder 22 | | | |
| | 1374 | Engine Cylinder 23 Knock Level | J1939-71 | 61465 | 7 | 8 | Used to indicate the level of knock for engine cylinder 23 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1375 | Engine Cylinder 24 Knock Level | J1939-71 | 61465 | 8 | 8 | Used to indicate the level of knock for engine cylinder 24 | | | |
| | 1376 | Battery 2 Potential (Voltage) (duplicate - see also SPN 444) | J1939-71 | | | 16 | The voltage for isolated battery #2. | | | |
| | 1377 | Engine Synchronization Switch | J1939-71 | 64971 | 1.3 | 2 | This is the On/Off operation of the Multiple Unit Synchronization functionality. When it is enabled (i.e. On) the master engine will synchronize one or more slave engines to operate at the same speed. | | | |
| | 1378 | Engine Oil Change Interval | J1939 | | | | The engine oil change interval time has expired | | 128 | 115 |
| | 1379 | Service Component Identification | J1939-71 | 65166 | 1 | 8 | Identification of component needing service. | | | |
| | 1380 | Engine Oil Level Remote Reservoir | J1939-71 | 65130 | 1 | 8 | Ratio of current volume of engine oil in a remote reservoir to the maximum required volume. | 17 | | |
| | 1381 | Engine Fuel Supply Pump Inlet Pressure | J1939-71 | 65130 | 2 | 8 | Absolute pressure of fuel at the fuel supply pump inlet. | | | |
| | 1382 | Engine Fuel Filter (suction side) Differential Pressure | J1939-71 | 65130 | 3 | 8 | Differential pressure measured across the fuel filter located between the fuel tank and the supply pump. | 16 | | |
| | 1383 | Engine was Shut Down Hot | J1939 | | | | Abrupt engine shutdown when hot | | 128 | 116 |
| | 1384 | Engine has Been Shut Down from Data Link Information | J1939 | | | | Engine commanded to shutdown via the datalink | | 128 | 117 |
| | 1385 | Auxiliary Temperature #1 (duplicate see also SPN 441) | J1939-71 | | | 8 | Temperature measured by auxiliary temperature sensor #1 or #2. Not to be used in place of existing SPNs. | | | |
| | 1386 | Auxiliary Temperature #2 (duplicate see also SPN 442) | J1939-71 | | | 8 | Temperature measured by auxiliary temperature sensor #1 or #2. Not to be used in place of existing SPNs. | | | |
| | 1387 | Auxiliary Pressure #1 | J1939-71 | 65164 | 3 | 8 | Pressure measured by auxiliary pressure sensor #1. Not to be used in place of existing SPNs. | | | |
| | 1388 | Auxiliary Pressure #2 | J1939-71 | 65164 | 4 | 8 | Pressure measured by auxiliary pressure sensor #2. Not to be used in place of existing SPNs. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1389 | Engine Fuel Specific Gravity | J1939-71 | 65202 | 7-8 | 16 | This parameter conveys the specific gravity of the gaseous fuel being used by the engine. | | | |
| | 1390 | Engine Fuel Valve 1 Inlet Absolute Pressure | J1939-71 | 65163 | 1-2 | 16 | The absolute pressure of gas on the inlet side of the first system control valve. | | | |
| | 1391 | Engine Fuel Valve Differential Pressure | J1939-71 | 65163 | 3-4 | 16 | The differential pressure between the inlet and the outlet of a gaseous fuel valve. | | | |
| | 1392 | Engine Air to Fuel Differential Pressure | J1939-71 | 65163 | 5-6 | 16 | The differential pressure between the gaseous fuel and the air intake manifold. | | | |
| | 1393 | Engine Cylinder #1 Ignition Transformer Secondary Output | J1939-71 | 65160 | 1 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1394 | Engine Cylinder #2 Ignition Transformer Secondary Output | J1939-71 | 65160 | 2 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1395 | Engine Cylinder #3 Ignition Transformer Secondary Output | J1939-71 | 65160 | 3 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1396 | Engine Cylinder #4 Ignition Transformer Secondary Output | J1939-71 | 65160 | 4 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1397 | Engine Cylinder #5 Ignition Transformer Secondary Output | J1939-71 | 65160 | 5 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1398 | Engine Cylinder #6 Ignition Transformer Secondary Output | J1939-71 | 65160 | 6 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1399 | Engine Cylinder #7 Ignition Transformer Secondary Output | J1939-71 | 65160 | 7 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1400 | Engine Cylinder #8 Ignition Transformer Secondary Output | J1939-71 | 65160 | 8 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1401 | Engine Cylinder #9 Ignition Transformer Secondary Output | J1939-71 | 65161 | 1 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1402 | Engine Cylinder #10 Ignition Transformer Secondary Output | J1939-71 | 65161 | 2 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1403 | Engine Cylinder #11 Ignition Transformer Secondary Output | J1939-71 | 65161 | 3 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1404 | Engine Cylinder #12 Ignition Transformer Secondary Output | J1939-71 | 65161 | 4 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1405 | Engine Cylinder #13 Ignition Transformer Secondary Output | J1939-71 | 65161 | 5 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1406 | Engine Cylinder #14 Ignition Transformer Secondary Output | J1939-71 | 65161 | 6 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1407 | Engine Cylinder #15 Ignition Transformer Secondary Output | J1939-71 | 65161 | 7 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1408 | Engine Cylinder #16 Ignition Transformer Secondary Output | J1939-71 | 65161 | 8 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1409 | Engine Cylinder #17 Ignition Transformer Secondary Output | J1939-71 | 65162 | 1 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1410 | Engine Cylinder #18 Ignition Transformer Secondary Output | J1939-71 | 65162 | 2 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1411 | Engine Cylinder #19 Ignition Transformer Secondary Output | J1939-71 | 65162 | 3 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1412 | Engine Cylinder #20 Ignition Transformer Secondary Output | J1939-71 | 65162 | 4 | 8 | This parameter indicates the relative intensity of the secondary output voltage of the ignition transformer. | | | |
| | 1413 | Engine Cylinder #1 Ignition Timing | J1939-71 | 65154 | 1-2 | 16 | The ignition timing of the cylinder. | | | |
| | 1414 | Engine Cylinder #2 Ignition Timing | J1939-71 | 65154 | 3-4 | 16 | The ignition timing of the cylinder. | | | |
| | 1415 | Engine Cylinder #3 Ignition Timing | J1939-71 | 65154 | 5-6 | 16 | The ignition timing of the cylinder. | | | |
| | 1416 | Engine Cylinder #4 Ignition Timing | J1939-71 | 65154 | 7-8 | 16 | The ignition timing of the cylinder. | | | |
| | 1417 | Engine Cylinder #5 Ignition Timing | J1939-71 | 65155 | 1-2 | 16 | The ignition timing of the cylinder. | | | |
| | 1418 | Engine Cylinder #6 Ignition Timing | J1939-71 | 65155 | 3-4 | 16 | The ignition timing of the cylinder. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1419 | Engine Cylinder #7 Ignition Timing | J1939-71 | 65155 | 5-6 | 16 | The ignition timing of the cylinder. | | | |
| | 1420 | Engine Cylinder #8 Ignition Timing | J1939-71 | 65155 | 7-8 | 16 | The ignition timing of the cylinder. | | | |
| | 1421 | Engine Cylinder #9 Ignition Timing | J1939-71 | 65156 | 1-2 | 16 | The ignition timing of the cylinder. | | | |
| | 1422 | Engine Cylinder #10 Ignition Timing | J1939-71 | 65156 | 3-4 | 16 | The ignition timing of the cylinder. | | | |
| | 1423 | Engine Cylinder #11 Ignition Timing | J1939-71 | 65156 | 5-6 | 16 | The ignition timing of the cylinder. | | | |
| | 1424 | Engine Cylinder #12 Ignition Timing | J1939-71 | 65156 | 7-8 | 16 | The ignition timing of the cylinder. | | | |
| | 1425 | Engine Cylinder #13 Ignition Timing | J1939-71 | 65157 | 1-2 | 16 | The ignition timing of the cylinder. | | | |
| | 1426 | Engine Cylinder #14 Ignition Timing | J1939-71 | 65157 | 3-4 | 16 | The ignition timing of the cylinder. | | | |
| | 1427 | Engine Cylinder #15 Ignition Timing | J1939-71 | 65157 | 5-6 | 16 | The ignition timing of the cylinder. | | | |
| | 1428 | Engine Cylinder #16 Ignition Timing | J1939-71 | 65157 | 7-8 | 16 | The ignition timing of the cylinder. | | | |
| | 1429 | Engine Cylinder #17 Ignition Timing | J1939-71 | 65158 | 1-2 | 16 | The ignition timing of the cylinder. | | | |
| | 1430 | Engine Cylinder #18 Ignition Timing | J1939-71 | 65158 | 3-4 | 16 | The ignition timing of the cylinder. | | | |
| | 1431 | Engine Cylinder #19 Ignition Timing | J1939-71 | 65158 | 5-6 | 16 | The ignition timing of the cylinder. | | | |
| | 1432 | Engine Cylinder #20 Ignition Timing | J1939-71 | 65158 | 7-8 | 16 | The ignition timing of the cylinder. | | | |
| | 1433 | Engine Desired Ignition Timing #1 | J1939-71 | 65159 | 1-2 | 16 | A programmable timing value specific to the engine's application. Factors affecting this value include both fuel type and the nature of the load being driven. | | | |
| | 1434 | Engine Desired Ignition Timing #2 | J1939-71 | 65159 | 3-4 | 16 | A programmable timing value specific to the engine's application. Factors affecting this value include both fuel type and the nature of the load being driven. | | | |
| | 1435 | Engine Desired Ignition Timing #3 | J1939-71 | 65159 | 5-6 | 16 | A programmable timing value specific to the engine's application. Factors affecting this value include both fuel type and the nature of the load being driven. | | | |
| | 1436 | Engine Actual Ignition Timing | J1939-71 | 65159 | 7-8 | 16 | The actual ignition timing at the current engine conditions. This parameter may or may not be equal to one of the desired timing parameters (see SPNs 1433-1435), depending on the status of the engine. | | | |
| | 1437 | Road Speed Limit Status | J1939-71 | 61443 | 1.5 | 2 | Status (active or not active) of the system used to limit maximum vehicle velocity. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1438 | ABS/EBS Amber Warning Signal (Powered Vehicle) | J1939-71 | 61441 | 6.5 | 2 | This parameter commands the ABS/EBS amber/yellow optical warning signal | | | |
| | 1439 | EBS Red Warning Signal | J1939-71 | 61441 | 6.3 | 2 | This parameter commands the EBS red optical warning signal | | | |
| | 1440 | Engine Fuel Flow Rate 1 | J1939-71 | 65153 | 1-2 | 16 | The rate at which the fuel is flowing through a fuel valve. | | | |
| | 1441 | Engine Fuel Flow Rate 2 | J1939-71 | 65153 | 3-4 | 16 | The rate at which the fuel is flowing through a fuel valve. | | | |
| | 1442 | Engine Fuel Valve 1 Position | J1939-71 | 65153 | 5 | 8 | The position of a gaseous fuel valve that is metering the fuel flow to the engine. | | | |
| | 1443 | Engine Fuel Valve 2 Position | J1939-71 | 65153 | 6 | 8 | The position of a gaseous fuel valve that is metering the fuel flow to the engine. | | | |
| | 1444 | Engine Cylinder #1 Combustion Time | J1939-71 | 65147 | 1-2 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1445 | Engine Cylinder #2 Combustion Time | J1939-71 | 65147 | 3-4 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1446 | Engine Cylinder #3 Combustion Time | J1939-71 | 65147 | 5-6 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1447 | Engine Cylinder #4 Combustion Time | J1939-71 | 65147 | 7-8 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1448 | Engine Cylinder #5 Combustion Time | J1939-71 | 65148 | 1-2 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1449 | Engine Cylinder #6 Combustion Time | J1939-71 | 65148 | 3-4 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1450 | Engine Cylinder #7 Combustion Time | J1939-71 | 65148 | 5-6 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1451 | Engine Cylinder #8 Combustion Time | J1939-71 | 65148 | 7-8 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1452 | Engine Cylinder #9 Combustion Time | J1939-71 | 65149 | 1-2 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1453 | Engine Cylinder #10 Combustion Time | J1939-71 | 65149 | 3-4 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1454 | Engine Cylinder #11 Combustion Time | J1939-71 | 65149 | 5-6 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1455 | Engine Cylinder #12 Combustion Time | J1939-71 | 65149 | 7-8 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1456 | Engine Cylinder #13 Combustion Time | J1939-71 | 65150 | 1-2 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1457 | Engine Cylinder #14 Combustion Time | J1939-71 | 65150 | 3-4 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1458 | Engine Cylinder #15 Combustion Time | J1939-71 | 65150 | 5-6 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1459 | Engine Cylinder #16 Combustion Time | J1939-71 | 65150 | 7-8 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1460 | Engine Cylinder #17 Combustion Time | J1939-71 | 65151 | 1-2 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1461 | Engine Cylinder #18 Combustion Time | J1939-71 | 65151 | 3-4 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1462 | Engine Cylinder #19 Combustion Time | J1939-71 | 65151 | 5-6 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1463 | Engine Cylinder #20 Combustion Time | J1939-71 | 65151 | 7-8 | 16 | The amount of time from when the ignition of the fuel is initiated to when the fuel is completely ignited. | | | |
| | 1464 | Engine Desired Combustion Time | J1939-71 | 65152 | 1-2 | 16 | The desired combustion time based upon engine load and speed lookup maps. | | | |
| | 1465 | Engine Average Combustion Time | J1939-71 | 65152 | 3-4 | 16 | The average combustion time of all cylinders of an engine. | | | |
| | 1466 | Steer Channel Mode | J1939-71 | 65144 | 2.1 | 4 | Indicates the functional mode of steer channel of the tire pressure control system. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1467 | Trailer/tag Channel Mode | J1939-71 | 65144 | 3.1 | 4 | Indicates the functional mode of trailer/tag channel of the tire pressure control system. | | | |
| | 1468 | Drive Channel Mode | J1939-71 | 65144 | 3.5 | 4 | Indicates the functional mode of trailer/tag channel of the tire pressure control system. | | | |
| | 1469 | PCU Drive Solenoid Status | J1939-71 | 65144 | 4.1 | 2 | Current state of the drive solenoid used to implement a tire pressure control system in its pneumatic control unit (PCU). | | | |
| | 1470 | PCU Steer Solenoid Status | J1939-71 | 65144 | 4.3 | 2 | Current state of the steer solenoid used to implement a tire pressure control system in its pneumatic control unit (PCU). | | | |
| | 1471 | Tire Pressure Supply Switch Status | J1939-71 | 65144 | 4.5 | 2 | Current state of an open/closed type switch used to determine if adequate pressure exists for system implementation. | | | |
| | 1472 | PCU Deflate Solenoid Status | J1939-71 | 65144 | 5.1 | 2 | Current state of the deflate solenoid used to implement a tire pressure control system in its pneumatic control unit (PCU). | | | |
| | 1473 | PCU Control Solenoid Status | J1939-71 | 65144 | 5.3 | 2 | Current state of the control solenoid used to implement a tire pressure control system in its pneumatic control unit (PCU). | | | |
| | 1474 | PCU Supply Solenoid Status | J1939-71 | 65144 | 5.5 | 2 | Current state of the supply solenoid used to implement a tire pressure control system in its pneumatic control unit (PCU). | | | |
| | 1475 | PCU Trailer, Tag or Push Solenoid Status | J1939-71 | 65144 | 5.7 | 2 | Current state of the trailer, tag, or push solenoid used to implement a tire pressure control system in its pneumatic control unit (PCU). | | | |
| | 1476 | Engine Oil Specific Resistance | J1939 | | | 8 | Engine oil specific resistance used to describe the engine oil quality. | | | |
| | 1477 | Engine Oil Kinematic Viscosity | J1939 | | | 8 | Engine oil kinematic viscosity used to describe the engine oil quality. | | | |
| | 1478 | Engine Oil Relative Dielectricity | J1939 | | | 8 | Engine oil relative dielectricity used to describe the engine oil quality. | | | |
| | 1479 | Security Entity Type | J1939-73 | 54272 | 2.1 | | | | | |
| | 1480 | Source Address of Controlling Device for Retarder Control | J1939-71 | 61440 | 5 | 8 | The source address of the SAE J1939 device currently controlling the retarder. | | | |
| | 1481 | Source Address of Controlling Device for Brake Control | J1939-71 | 61441 | 7 | 8 | The source address of the SAE J1939 device currently controlling the brake system. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1482 | Source Address of Controlling Device for Transmission Control | J1939-71 | 61442 | 8 | 8 | The source address of the SAE J1939 device currently controlling the transmission. | | | |
| | 1483 | Source Address of Controlling Device for Engine Control | J1939-71 | 61444 | 6 | 8 | The source address of the SAE J1939 device currently controlling the engine. | | | |
| | 1484 | Other ECUs Have Reported Fault Codes Affecting Operation | J1939 | | | | Indication of fault codes for other devices | | 0 | 216 |
| | 1485 | ECM Main Relay | J1939 | | | | | | 0 | 218 |
| | 1486 | Concave Position | J1939 | | | | Combine Concave Clearance Measurement | | | |
| | 1487 | Illumination Brightness Percent | J1939-71 | 53248 | 1 | 8 | Commanded Backlight Brightness Level | | | |
| | 1488 | Thresher Speed | J1939-74 | | | 16 | Speed of the thresher such as found in a combine | | | |
| | 1489 | Cleaning Fan Speed | J1939-74 | | | 8 | The speed of the cleaning fan | | | |
| | 1490 | Header Backshaft Speed | J1939-74 | | | 16 | The speed of the feederhouse. The feederhouse is the entry point of crop into the combine | | | |
| | 1491 | Instrument Panel #1 Backlighting Driver | J1939 | | | | First Tailings Sensor circuit | | | |
| | 1492 | Instrument Panel #2 Backlighting Driver | J1939 | | | | Second Tailings Sensor circuit | | | |
| | 1493 | Tailings System | J1939 | | | | Tailings Elevator Paddles (e.g., missing) | | | |
| | 1494 | Tailings Sensor #1 | J1939 | | | | Drive circuit which engages the unloading auger system | | | |
| | 1495 | Tailings Sensor #2 | J1939 | | | | Drive circuit which engages the unloading header system | | | |
| | 1496 | Tailings Elevator Paddles | J1939 | | | | Drive circuit which engages the unloading separator system | | | |
| | 1497 | Unloading Auger Drive | J1939-74 | | | 2 | The mode of the unloading Auger driver | | | |
| | 1498 | Header Drive | J1939-74 | | | 2 | The mode of the Header driver | | | |
| | 1499 | Separator Drive | J1939-74 | | | 2 | The mode of the Separator driver | | | |
| | 1500 | Tachometer Module Switch Matrix | J1939 | | | | Switch input matrix that controls monitoring functions of the tachometer module | | | |
| | 1501 | Grain Loss Module Switch Matrix | J1939 | | | | Switch input matrix that controls monitoring functions of the grain loss module | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1502 | Automatic Header Control Switch Matrix | J1939 | | | | Switch input matrix that controls monitoring functions of the automatic header module | | | |
| | 1503 | Arm Rest Switch Matrix | J1939 | | | | Switch input matrix for the module located in the arm rest | | | |
| | 1504 | Operator Seat Switch | J1939 | | | 2 | This switch senses the presence of the operator in the seat | | | |
| | 1505 | Automatic Header Sensitivity Adjustment | J1939-74 | | | 8 | A control system parameter. This is the sensitivity adjustment to the automatic header control loop. | | | |
| | 1506 | Automatic Header Rate Adjustment Input | J1939-74 | | | 8 | An adjustment to the response rate of the automatic header control loop. | | | |
| | 1507 | Discharge Beater Speed Disable Adjustment | J1939 | | | | Input to adjust the discharge beater speed | | | |
| | 1508 | Hydraulic Reservoir Temperature | J1939-74 | | | 8 | The temperature of the hydraulic fluid, measured in the hydraulic reservoir. | | | |
| | 1509 | Thresher Separator Hydraulic Drive 1 Temperature | J1939-74 | | | 8 | The temperature of the hydraulic fluid in the Thresher Separator Hydraulic Drive #1 gear case | | | |
| | 1510 | Chopper Vane Angle Adjustment | J1939-74 | | | 8 | The control adjustment of the chopper vane angle | | | |
| | 1511 | Right side Cleaning Shoe Relative Grain Loss | J1939-74 | | | 8 | A scalar that represents an amount of grain loss exiting the right side of the cleaning shoe | | | |
| | 1512 | Left side Cleaning Shoe Relative Grain Loss | J1939-74 | | | 8 | A scalar that represents an amount of grain loss exiting the left side of the cleaning shoe | | | |
| | 1513 | Right side Separator Relative Grain Loss | J1939-74 | | | 8 | The amount of grain loss at the right side of the separator | | | |
| | 1514 | Left side Separator Relative Grain Loss | J1939-74 | | | 8 | The amount of grain loss at the left side of the separator | | | |
| | 1515 | Header Height System | J1939 | | | | General fault in the system that controls the header | | | |
| | 1516 | Header | J1939 | | | | Mechanical problem with the header system | | | |
| | 1517 | Header Lift Cylinder Pressure | J1939-74 | | | 8 | The pressure in the header lift cylinder | | | |
| | 1518 | Header Sensor Identification | J1939-74 | | | 8 | The system identification of the header sensor configuration. | | | |
| | 1519 | Header Raise Valve Drive | J1939-74 | | | 2 | The mode of the Header raise valve driver | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1520 | Header Lower Valve Drive | J1939-74 | | | 2 | The mode of the Header lower valve driver | | | |
| | 1521 | Header Tilt Left Valve Drive | J1939-74 | | | 2 | The mode of the Header tilt left valve driver | | | |
| | 1522 | Header Tilt Right Valve Drive | J1939-74 | | | 2 | The mode of the Header tilt right valve driver | | | |
| | 1523 | Header Lift Cylinder Pressure Diverted Valve Drive | J1939-74 | | | 2 | The mode of the diverted valve driver, related to the Header lift cylinder pressure | | | |
| | 1524 | Reel Position Forward Actuator | J1939-74 | | | 2 | The mode of the Reel position forward actuator | | | |
| | 1525 | Reel Position Aft Actuator | J1939-74 | | | 2 | The mode of the Reel position aft actuator | | | |
| | 1526 | Reel Position Raise Actuator | J1939-74 | | | 2 | The mode of the Reel position raise actuator | | | |
| | 1527 | Reel Position Lower Actuator | J1939-74 | | | 2 | The mode of the Reel position lower actuator | | | |
| | 1528 | Header Drop Rate Control Valve Drive | J1939-74 | | | 2 | The mode of the driver for the valve which controls the drop rate of the header | | | |
| | 1529 | Header Lift Cylinder Accumulator Shutoff Valve Drive | J1939-74 | | | 2 | The mode of the driver for the Header Lift Cylinder Accumulator Shutoff Valve | | | |
| | 1530 | Unloading auger flow bypass valve drive | J1939-74 | | | 2 | The mode of the driver for the unloading auger flow bypass valve | | | |
| | 1531 | Reel Drive Motor Speed Increase Valve Drive | J1939-74 | | | 2 | The mode of the driver for the reel drive motor speed increase valve. | | | |
| | 1532 | Reel Drive Motor Speed Decrease Valve Drive | J1939-74 | | | 2 | The mode of the driver for the reel drive motor speed decrease valve. | | | |
| | 1533 | Feederhouse Angle | J1939 | | | | Circuit and sensor for measuring the feederhouse angle parameter | | | |
| | 1534 | Header Leftmost Height | J1939-74 | | | 16 | Height of: Left (or left side of) header, measured relative to the ground | | | |
| | 1535 | Header Rightmost Height | J1939-74 | | | 16 | Height of: right (or right side of) header, measured relative to the ground | | | |
| | 1536 | Header Center Height | J1939-74 | | | 16 | Height of: center (or center of the) header, measured relative to the ground | | | |
| | 1537 | Reel Fore-Aft Position | J1939-74 | | | 8 | A mechanical range of adjustment to position the reel along this axis. 0% to be toward the rear of the machine, 100% toward the front end. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1538 | Reel Up-Down Position | J1939-74 | | | 8 | A mechanical range of adjustment to position the reel along this axis. 0% to be toward the ground & 100% will be in the vertical upward direction | | | |
| | 1539 | Header Lateral Tilt Angle | J1939-74 | | | 8 | The lateral tilt angle of the header (feederhouse) relative to the combine chassis. Negative angle is a CCW rotation from straight ahead. A Positive angle is CW from straight ahead | | | |
| | 1540 | Reel Speed Actuator Position | J1939-74 | | | 8 | The position of the Reel speed actuator. | | | |
| | 1541 | Reel Speed | J1939-74 | | | 16 | The rotational velocity of the Reel. The Reel is a device on the platform that pushes the crop onto the header. | | | |
| | 1542 | ECU Power Supply Voltage #2 (obsolete) | J1939 | | | | This SPN is obsolete. SPNs 3598 should be used instead. | | | |
| | 1543 | ECU Power Supply Voltage #3 (obsolete) | J1939 | | | | This SPN is obsolete. SPNs 3599 should be used instead. | | | |
| | 1544 | Hydro Handle Matrix Switch | J1939 | | | | Multi-function handle circuit | | | |
| | 1545 | Reserved for assignment | | | | | | | | |
| | 1546 | HVAC Coolant Valve Position Sensor | J1939 | | | | Circuit and sensor associated with providing the HVAC coolant valve position parameter | | | |
| | 1547 | A/C Evaporator Temperature | J1939 | | | | Circuit and sensor associated with providing the HVAC coolant valve position parameter | | | |
| | 1548 | HVAC Duct Temperature | J1939 | | | | Circuit and sensor associated with providing the HVAC duct temperature parameter | | | |
| | 1549 | HVAC Water Valve Drive | J1939 | | | | Output circuit that drives this valve | | | |
| | 1550 | Reserved for assignment | | | | | | | | |
| | 1551 | A/C Pressurizer Drive Circuit | J1939 | | | | Output circuit that drives this valve | | | |
| | 1552 | Operator Input device for Cab Climate Control | J1939 | | | | Circuit and sensor for measuring the HVAC temperature setpoint parameter | | | |
| | 1553 | HVAC Blower Motor Speed Adjustment | J1939 | | | | Circuit and sensor for measuring the HVAC blower motor speed adjustment parameter | | | |
| | 1554 | Clean Grain Elevator Speed | J1939-74 | | | 16 | The speed of the clean grain elevator | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1555 | Moisture Sensor Cell Frequency | J1939 | | | | Critical parameter of moisture sensor | | | |
| | 1556 | Datalog Memory Card | J1939 | | | | Removable memory pack | | | |
| | 1557 | Reserved for assignment | | | | | | | | |
| | 1558 | Programming Error, Device Refused to Enter Programming Mode | J1939 | | | | Device to be programmed is reporting that it cannot be programmed | | | |
| | 1559 | Programming Error, Device Timed Out While Entering the Programming Mode | J1939 | | | | Tool timed out waiting for device to enter program mode | | | |
| | 1560 | Programming Error, Device Timed Out While Erasing | J1939 | | | | Tool timed out waiting for device to erase | | | |
| | 1561 | Programming Error, Device Timed Out While Programming | J1939 | | | | Tool timed out waiting for device to program | | | |
| | 1562 | Programming Error, Device did not Accept Program Line | J1939 | | | | Device to be programmed reporting that it cannot accept program block | | | |
| | 1563 | Incompatible Monitor/Controller | J1939 | | | | An incompatible device has been detected on the network | | | |
| | 1564 | CCD Data Link | J1939 | | | | | | | |
| | 1565 | Armrest Status | J1939 | | | | Parameter associated with the armrest module status | | | |
| | 1566 | Armrest Rotary Inputs | J1939 | | | | Parameter associated with the armrest module rotary inputs | | | |
| | 1567 | Header Height Control Mode Selector Switches | J1939 | | | | Parameter associated with the header height control mode selector switches | | | |
| | 1568 | Engine Torque Curve Selection | J1939 | | | | The mechanism used to select different torque curves. This SPN would be used to indicate a problem has been encountered with the device that indicates the desired torque curve | | | |
| | 1569 | Engine Protection Torque Derate | J1939 | | | | Torque has been derated for protection of the engine | | | |
| | 1570 | Implement Disconnected | J1939 | | | | A previously connected implement is no longer connected | | | |
| | 1571 | Display Conflict | J1939 | | | | Multiple controllers contending for a display resource (region) | | | |
| | 1572 | Display Overload | J1939 | | | | Display not able to keep up with display commands | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1573 | LED Display Data #1 | J1939-71 | 65142 | 1 | 8 | Informs display devices how to display the current vertical position. | | | |
| | 1574 | Laser Strike Vertical Deviation | J1939-71 | 65141 | 1-2 | 16 | The calculated distance from the laser strike position to the current land leveling system reference point. | | | |
| | 1575 | Modify Leveling System Set Point | J1939-71 | 65140 | 1-2 | 16 | Used to control and coordinate the set point for the leveling system. | | | |
| | 1576 | Mast Position | J1939-71 | 65139 | 1-2 | 16 | Used to monitor the position of the sensor attached to the land leveling mast. | | | |
| | 1577 | Blade Duration and Direction | J1939-71 | 65138 | 1-2 | 16 | Used to indicate the duration and direction that the land leveling system blade moves. | | | |
| | 1578 | Blade Control Mode | J1939-71 | 65138 | 3 | 8 | Allows the user to select the type of blade control for the land leveling system. | | | |
| | 1579 | Laser Tracer Target Deviation | J1939-71 | 65137 | 1-2 | 16 | The calculated distance for the laser target to the current laser tracer reference point. | | | |
| | 1580 | Laser Tracer Vertical Distance | J1939-71 | 65137 | 3-4 | 16 | The elevation of the laser tracer sensor in a laser leveling system. | | | |
| | 1581 | Laser Tracer Horizontal Deviation | J1939-71 | 65137 | 5 | 8 | The calculated percent deviation between the target distance and the center of the laser tracer. | | | |
| | 1582 | LED Display Data #2 | J1939-71 | 65137 | 6 | 8 | Informs display devices how to display the current position of the laser tracer. | | | |
| | 1583 | Laser Tracer Information | J1939-71 | 65137 | 7 | 8 | Provides the status of the laser tracer to the operator. | | | |
| | 1584 | Service Component Identification | J1939-71 | 56832 | 2 | 8 | Identification of component needing service. | | | |
| | 1585 | Powered Vehicle Weight | J1939-71 | 65136 | 1-2 | 16 | Total mass imposed by the tires of the powered vehicle on the road surface. Does not include the trailer. | | | |
| | 1586 | Speed of forward vehicle | J1939-71 | 65135 | 1 | 8 | Absolute velocity of the preceding vehicle situated within 250 m in the same lane and moving in the same direction. | | | |
| | 1587 | Distance to forward vehicle | J1939-71 | 65135 | 2 | 8 | Distance to the preceding vehicle situated within 250 m in the same lane and moving in the same direction. | | | |
| | 1588 | Adaptive Cruise Control Set Speed | J1939-71 | 65135 | 3 | 8 | Value of the desired (chosen) velocity of the adaptive cruise control system. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1589 | Adaptive cruise control set distance mode | J1939-71 | 65135 | 4.4 | 3 | Selected distance mode for adaptive cruise control. | | | |
| | 1590 | Adaptive Cruise Control Mode | J1939-71 | 65135 | 4.1 | 3 | This parameter is used to indicate the current state, or mode, of operation by the Adaptive Cruise Control (ACC) device. | | | |
| | 1591 | Road curvature | J1939-71 | 65135 | 5-6 | 16 | Estimated value of the current road curvature for use by the adaptive cruise control system. Positive values are used for left curves. Curvature is the inverse of the radius and is zero for straight roads. | | | |
| | 1592 | Front Axle, Left Wheel Speed | J1939-71 | 65134 | 1-2 | 16 | High resolution measurement of the speed of the left wheel on the front axle. | | | |
| | 1593 | Front axle, right wheel speed | J1939-71 | 65134 | 3-4 | 16 | High resolution measurement of the speed of the right wheel on the front axle. | | | |
| | 1594 | Rear axle, left wheel speed | J1939-71 | 65134 | 5-6 | 16 | High resolution measurement of the speed of the left wheel on the rear axle. | | | |
| | 1595 | Rear axle, right wheel speed | J1939-71 | 65134 | 7-8 | 16 | High resolution measurement of the speed of the right wheel on the rear axle. | | | |
| | 1596 | Security Entity Length | J1939-73 | 54272 | 1, 2.5 | | | | | |
| | 1597 | Data Security Parameter | J1939-73 | 54272 | 3 | | | | | |
| | 1598 | Reserved for assignment | | | | | | | | |
| | 1599 | Seed | J1939-73 | 55296 | 7-8 | | | | | |
| | 1600 | Reserved for assignment | | | | | | | | |
| | 1601 | Local minute offset | J1939-71 | 65254 | 7 | 8 | Local offset in minutes from a reference time. | | | |
| | 1602 | Local hour offset | J1939-71 | 65254 | 8 | 8 | Local offset in hours from a reference time | | | |
| | 1603 | Adjust seconds | J1939-71 | 54528 | 1 | 8 | Part of the parameter used to set the time. | | | |
| | 1604 | Adjust minutes | J1939-71 | 54528 | 2 | 8 | Part of the parameter used to set the time. | | | |
| | 1605 | Adjust hours | J1939-71 | 54528 | 3 | 8 | Part of the parameter used to set the time. | | | |
| | 1606 | Adjust month | J1939-71 | 54528 | 4 | 8 | Part of a parameter used to set a calendar date. | | | |
| | 1607 | Adjust day | J1939-71 | 54528 | 5 | 8 | Part of a parameter used to set a calendar date. | | | |
| | 1608 | Adjust year | J1939-71 | 54528 | 6 | 8 | Part of a parameter used to set a calendar date. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1609 | Adjust local minute offset | J1939-71 | 54528 | 7 | 8 | Used to set the local offset in minutes from a reference time. | | | |
| | 1610 | Adjust local hour offset | J1939-71 | 54528 | 8 | 8 | Used to set the local offset in hours from a reference time | | | |
| | 1611 | Vehicle motion | J1939-71 | 65132 | 1.7 | 2 | Indicates whether motion of the vehicle is detected or not. | | | |
| | 1612 | Driver 1 working state | J1939-71 | 65132 | 1.1 | 3 | State of work of the driver. | | | |
| | 1613 | Driver 2 working state | J1939-71 | 65132 | 1.4 | 3 | State of work of the driver. | | | |
| | 1614 | Vehicle Overspeed | J1939-71 | 65132 | 2.7 | 2 | Indicates whether the vehicle is exceeding the legal speed limit set in the tachograph. | | | |
| | 1615 | Driver card, driver 1 | J1939-71 | 65132 | 2.5 | 2 | Indicates the presence of a driver card | | | |
| | 1616 | Driver card, driver 2 | J1939-71 | 65132 | 3.5 | 2 | Indicates the presence of a driver card | | | |
| | 1617 | Driver 1 Time Related States | J1939-71 | 65132 | 2.1 | 4 | Indicates if the driver approaches or exceeds working time limits (or other limits). | | | |
| | 1618 | Driver 2 Time Related States | J1939-71 | 65132 | 3.1 | 4 | Indicates if the driver approaches or exceeds working time limits (or other limits). | | | |
| | 1619 | Direction indicator | J1939-71 | 65132 | 4.7 | 2 | Indicates the direction of the vehicle. | | | |
| | 1620 | Tachograph performance | J1939-71 | 65132 | 4.5 | 2 | Indicates the tachograph performance; including electronic or mechanical analysis, instrument analysis, speed sensor analysis, mass storage analysis, and printer analysis. | | | |
| | 1621 | Handling information | J1939-71 | 65132 | 4.3 | 2 | Indicates that handling information is present. | | | |
| | 1622 | System event | J1939-71 | 65132 | 4.1 | 2 | Indicates that a tachograph event has occurred. | | | |
| | 1623 | Tachograph output shaft speed | J1939-71 | 65132 | 5-6 | 16 | Calculated speed of the transmission output shaft. | | | |
| | 1624 | Tachograph vehicle speed | J1939-71 | 65132 | 7-8 | 16 | Speed of the vehicle registered by the tachograph. | | | |
| | 1625 | Driver 1 identification | J1939-71 | 65131 | 1-2 | 13824 | Used to obtain the driver identity. | | | |
| | 1626 | Driver 2 identification | J1939-71 | 65131 | 3-4 | 13824 | Used to obtain the driver identity. | | | |
| | 1627 | Reserved for Certification agency ID | J1939-73 | | | | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1628 | Reserved for Certification seed/key length | J1939-73 | | | | | | | |
| | 1629 | Reserved for Certification signature | J1939-73 | | | | | | | |
| | 1630 | Reserved for Certification public key | J1939-73 | | | | | | | |
| | 1631 | Reserved for Certification vehicle identification number | J1939-73 | | | | | | | |
| | 1632 | Engine Torque Limit Feature | J1939-71 | 65168 | 15.3 | 3 | Torque limit rating described in the current record | | | |
| | 1633 | Cruise Control Pause Switch | J1939-71 | 65265 | 1.5 | 2 | Switch signal which indicates the position of the Cruise Control Pause Switch used on Remote Cruise Control applications | | | |
| | 1634 | Calibration Verification Number | J1939-73 | 54016 | 1-4 | | Checksum of entire calibration, including code and data. Excludes RAM parameters, nonvolatile parameters that change during the life cycle of the module (hours of operation, freeze frame data, etc), or non emissions related parameters that may be changed | | | |
| | 1635 | Calibration Identification | J1939-73 | 54016 | 5-20 | | | | | |
| | 1636 | Engine Intake Manifold 1 Air Temperature (High Resolution) | J1939-71 | 65129 | 1-2 | 16 | Temperature of pre-combustion air found in intake manifold of engine air supply system. The higher resolution is required for control purposes. | | | |
| | 1637 | Engine Coolant Temperature (High Resolution) | J1939-71 | 65129 | 3-4 | 16 | Temperature of liquid found in engine cooling system. The higher resolution is required for control purposes. | | | |
| | 1638 | Hydraulic Temperature | J1939-71 | 65128 | 1 | 8 | Temperature of the hydraulic fluid. | | | |
| | 1639 | Fan Speed | J1939-71 | 65213 | 3-4 | 16 | The speed of the fan associated with engine coolant system. | | | |
| | 1640 | Length/Number Requested | J1939-73 | 55552 | 1, 2.6 | | | | | |
| | 1641 | Pointer Type | J1939-73 | 55552 | 2.5 | | | | | |
| | 1642 | Command | J1939-73 | 55552 | 2.1 | | | | | |
| | 1643 | Pointer Extension | J1939-73 | 55552 | 6 | | | | | |
| | 1644 | Pointer | J1939-73 | 55552 | 3-5 | | | | | |
| | 1645 | Key/User_Level | J1939-73 | 55552 | 7-8 | | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1646 | Status (for DM 15) | J1939-73 | 55296 | 2.5 | | | | | |
| | 1647 | EDCP Extension | J1939-73 | | | | | | | |
| | 1648 | Error Indicator/EDC Parameter | J1939-73 | 55296 | 3-5 | | | | | |
| | 1649 | Length/Number Allowed [1] | J1939-73 | 55296 | 1, 2.6 | | | | | |
| | 1649 | Length/Number Allowed [1] | J1939-73 | 55296 | 6 | | | | | |
| | 1650 | Number of Occurrences of Raw Binary Data | J1939-73 | 55040 | 1 | | | | | |
| | 1651 | Raw Binary Data | J1939-73 | 55040 | 2 | | | | | |
| | 1652 | Boot Load Data | J1939-73 | 54784 | 1-8 | | | | | |
| | 1653 | Vehicle Limiting Speed Governor Enable Switch | J1939-71 | 57344 | 5.7 | 2 | Switch signal which enables the Vehicle Limiting Speed Governor (VLSG) such that the vehicle speed may be either increased or decreased when the engine is off idle. | | | |
| | 1654 | Vehicle Limiting Speed Governor Increment Switch | J1939-71 | 57344 | 5.5 | 2 | Switch signal which increases the Vehicle Limiting Speed Governor (VLSG). | | | |
| | 1655 | Vehicle Limiting Speed Governor Decrement Switch | J1939-71 | 57344 | 5.3 | 2 | Switch signal which decreases the Vehicle Limiting Speed Governor (VLSG). | | | |
| | 1656 | Engine Automatic Start Enable Switch | J1939-71 | 57344 | 6.7 | 2 | Switch signal which enables the idle management system to be enabled. When this system is enabled with the engine in an idle mode and safe operating conditions existing, then the engine may be started or stopped automatically. | | | |
| | 1657 | Engine Injector Needle Lift Sensor #1 | J1939 | | | | The injector needle lift sensor used to detect the initial movement of the injector component which correlates the start of fuel injection #1 | | | |
| | 1658 | Engine Injector Needle Lift Sensor #2 | J1939 | | | | The injector needle lift sensor used to detect the initial movement of the injector component which correlates the start of fuel injection #2 | | | |
| | 1659 | Engine Coolant System Thermostat | J1939 | | | | Electronic thermostat that will divert the coolant to the radiator at the preset temperature. | | | |
| | 1660 | Engine Automatic Start Alarm | J1939 | | | | An audio alarm which is activated just before the Engine Automatic Start Feature is engaged | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1661 | Engine Automatic Start Lamp | J1939 | | | | A visible indication to the driver/operator that the Engine Automatic Start Feature is engaged | | | |
| | 1662 | Cab Interior Temperature Thermostat | J1939 | | | | Thermostat for driver/operator to set the desired cab temperature | | | |
| | 1663 | Engine Automatic Start Safety Interlock Circuit | J1939 | | | | Multiple inputs, e.g. hood and parking brake positions and neutral transmission switch, which determins whether Engine Automatic feature may be activated or not | | | |
| | 1664 | Engine Automatic Start Failed (Engine) | J1939 | | | | Conditions that prevent the engine from starting.e.g. Engine Automatic Start Safety Interlock Circuit | | | |
| | 1665 | Engine Turbocharger Oil Level Switch | J1939-71 | 65245 | 4.7 | 2 | Switch signal which indicates the presence of oil at the turbocharger | | | |
| | 1666 | Automatic Gear Shifting Enable Switch | J1939-71 | 57344 | 6.5 | 2 | | | | |
| | 1667 | Retarder Requesting Brake Light | J1939-71 | 61440 | 4.3 | 2 | Indicates that whether the retarder is requesting that the brake lights are illuminated. | | | |
| | 1668 | J1939 Network #4 | J1939 | | | | | | | |
| | 1669 | J1939 Network #5 | J1939 | | | | | | | |
| | 1670 | J1939 Network #6 | J1939 | | | | | | | |
| | 1671 | J1939 Network #7 | J1939 | | | | | | | |
| | 1672 | J1939 Network #8 | J1939 | | | | | | | |
| | 1673 | J1939 Network #9 | J1939 | | | | | | | |
| | 1674 | J1939 Network #10 | J1939 | | | | | | | |
| | 1675 | Engine Starter Mode | J1939-71 | 61444 | 7.1 | 4 | There are several phases in a starting action and different reasons, why a start cannot take place. | | | |
| | 1676 | Auxiliary Heater Water Pump Status | J1939-71 | 65133 | 5.1 | 2 | Parameter indicating whether the auxiliary heater water pump is running | | | |
| | 1677 | Auxiliary Heater Mode | J1939-71 | 65133 | 4.1 | 4 | State of the auxiliary heater | | | |
| | 1678 | Cab Ventilation | J1939-71 | 65133 | 5.3 | 2 | Indicates whether the cab is being ventilated or not. | | | |
| | 1679 | Engine Heating Zone | J1939-71 | 65133 | 5.5 | 2 | Parameter indicating whether the engine zone is being heated | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1680 | Cab Heating Zone | J1939-71 | 65133 | 5.7 | 2 | Parameter indicating whether the cab zone is being heated. | | | |
| | 1681 | Battery Main Switch Hold State | J1939-71 | 65126 | 1.1 | 2 | Indicating whether the battery main switch is held due to an external request or not | | | |
| | 1682 | Battery Main Switch Hold Request | J1939-71 | 57344 | 4.3 | 2 | Request to hold the battery main switch | | | |
| | 1683 | Auxiliary Heater Mode Request | J1939-71 | 57344 | 7.1 | 4 | Request to activate the auxiliary heater. | | | |
| | 1684 | Auxiliary Heater Coolant Pump Request | J1939-71 | 57344 | 4.1 | 2 | Indicates whether to activate the auxiliary heater coolant water pump. | | | |
| | 1685 | Request Engine Zone Heating | J1939-71 | 57344 | 7.5 | 2 | Request to activate engine zone heating | | | |
| | 1686 | Request Cab Zone Heating | J1939-71 | 57344 | 7.7 | 2 | Request to activate cab zone heating | | | |
| | 1687 | Auxiliary Heater Output Coolant Temperature | J1939-71 | 65133 | 1 | 8 | Temperature of the auxiliary heater output coolant (I.e. water in a water heater system.) | | | |
| | 1688 | Auxiliary Heater Input Air Temperature | J1939-71 | 65133 | 2 | 8 | Temperature of the input air in an auxiliary heater system. | | | |
| | 1689 | Auxiliary Heater Output Power Percent | J1939-71 | 65133 | 3 | 8 | Current auxiliary heater output power, relative to the auxiliary heater maximum output power. | | | |
| | 1690 | Auxiliary Heater Maximum Output Power | J1939-71 | 65127 | 1-2 | 16 | The maximum output power of the auxiliary heater. | | | |
| | 1691 | Cab Interior Temperature Command | J1939-71 | 57344 | 2-3 | 16 | Parameter used to command a certain cab interior temperature. | | | |
| | 1692 | Engine Desired Absolute Intake Manifold Pressure (Turbo Boost Limit) | J1939-71 | 65194 | 2-3 | 16 | The desired absolute intake manifold pressure of the engine. | | | |
| | 1693 | Engine Turbocharger Wastegate Valve Position | J1939-71 | 65194 | 4 | 8 | The position of the turbocharger wastegate valve (not the electronic wastegate control valve). | | | |
| | 1694 | Engine Gas Mass Flow Sensor Fueling Correction | J1939-71 | 65194 | 5 | 8 | The amount of fuel the Gas Mass Flow Sensor is sensing should be added or subtracted compared to the maximum amount of fuel the control system allows the sensor to add or subtract. | | | |
| | 1695 | Engine Exhaust Gas Oxygen Sensor Fueling Correction | J1939-71 | 65193 | 7 | 8 | The amount of fueling change required by the system based on the measured Exhaust Oxygen value | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1696 | Engine Exhaust Gas Oxygen Sensor Closed Loop Operation | J1939-71 | 65193 | 8.7 | 2 | Indicates whether the engine is using the Exhaust Gas Oxygen sensor to control the air/fuel ratio. | | | |
| | 1697 | CTI Wheel End Electrical Fault | J1939-71 | 65268 | 5.5 | 2 | Indicates the status of electrical fault on CTI wheel interface | | | |
| | 1698 | CTI Tire Status | J1939-71 | 65268 | 5.3 | 2 | Indicates the status of the tire | | | |
| | 1699 | CTI Wheel Sensor Status | J1939-71 | 65268 | 5.1 | 2 | Indicates whether the wheel is being monitored by the CTI controller. | | | |
| | 1700 | Lane Departure Imminent, Left Side | J1939-71 | 61447 | 1.7 | 2 | Indicates departure imminent on left side of lane. | | | |
| | 1701 | Lane Departure Imminent, Right Side | J1939-71 | 61447 | 1.5 | 2 | Indicates departure imminent on right side of lane | | | |
| | 1702 | Lane Departure Indication Enable Status | J1939-71 | 65115 | 1.7 | 2 | Indicates whether Lane departure indication is active | | | |
| | 1703 | Lane Tracking Speaker - Right Side | J1939 | | | | Lane tracking right side output diagnostic object | | | |
| | 1704 | Lane Tracking Speaker - Left Side | J1939 | | | | Lane tracking left side output diagnostic object | | | |
| | 1705 | Forward View Imager System | J1939 | | | | Forward Imager system condition | | | |
| | 1706 | SPN Conversion Method | J1939-73 | 65226 | 6.8 | | | | | |
| | 1709 | Transmission Controller Power Relay | J1939 | | | | | | | |
| | 1710 | Lane Tracking Status Left Side | J1939-71 | 65115 | 1.5 | 2 | Indicates whether left side is tracking lane | | | |
| | 1711 | Lane Tracking Status Right Side | J1939-71 | 65115 | 1.3 | 2 | Indicates whether right side is tracking lane. | | | |
| | 1712 | Engine Extended Range Requested Speed Control Range Upper Limit (Engine configuration) | J1939-71 | 65251 | 29-30 | 16 | The maximum engine speed regardless of load that the engine will allow when operating in a speed control/limit mode, excluding any maximum momentary engine override speed, if supported. | | | |
| | 1713 | Hydraulic Oil Filter Restriction Switch | J1939-71 | 65128 | 2.1 | 2 | This switch indicates whether hydraulic oil filter is clogged. This is not the transmission oil filter restriction switch, which is SPN 3359. | | | |
| | 1714 | Operator Seat Direction Switch | J1939-71 | 57344 | 4.5 | 2 | Senses whether the operator seat is in the forward driving position. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1715 | Drivers Demand Retarder - Percent Torque | J1939-71 | 61440 | 6 | 8 | The Drivers demand retarder – percent torque is the maximum torque selected by the driver when one or more modes are selected by the driver | | | |
| | 1716 | Retarder Selection, non-engine | J1939-71 | 61440 | 7 | 8 | The “Retarder Selection, non-engine” is the position of the driver’s selector for retarders that are not part of the engine system, expressed as percent and determined by the ratio of current position to the maximum possible position. | | | |
| | 1717 | Actual Maximum Available Retarder - Percent Torque | J1939-71 | 61440 | 8 | 8 | This is the maximum amount of torque that the retarder can immediately deliver. | | | |
| | 1718 | Damper Stiffness Request Front Axle | J1939-71 | 53760 | 4 | 8 | Demand value for the shock absorber control at the front axle. | | | |
| | 1719 | Damper Stiffness Request Rear Axle | J1939-71 | 53760 | 5 | 8 | Demand value for the shock absorber control at the rear axle. | | | |
| | 1720 | Damper Stiffness Request Lift / Tag Axle | J1939-71 | 53760 | 6 | 8 | Demand value for the shock absorber control at the lift or tag axle | | | |
| | 1721 | Relative Level Front Axle Left | J1939-71 | 65113 | 1-2 | 16 | Information of the height at the left side of the front axle referred to normal level 1 | | | |
| | 1722 | Relative Level Front Axle Right | J1939-71 | 65113 | 3-4 | 16 | Information of the height at the right side of the front axle referred to normal level 1 | | | |
| | 1723 | Relative Level Rear Axle Right | J1939-71 | 65113 | 7-8 | 16 | Information of the height at the left side of the rear axle referred to normal level 1 | | | |
| | 1724 | Relative Level Rear Axle Left | J1939-71 | 65113 | 5-6 | 16 | Information of the height at the left side of the rear axle referred to normal level 1 | | | |
| | 1725 | Bellow Pressure Front Axle Left | J1939-71 | 65112 | 1-2 | 16 | Information of the pressure of the air suspension bellow at the left side of the front axle | | | |
| | 1726 | Bellow Pressure Front Axle Right | J1939-71 | 65112 | 3-4 | 16 | Information of the pressure of the air suspension bellow at the right side of the front axle | | | |
| | 1727 | Bellow Pressure Rear Axle Left | J1939-71 | 65112 | 5-6 | 16 | Information of the pressure of the air suspension bellow at the left side of the rear axle | | | |
| | 1728 | Bellow Pressure Rear Axle Right | J1939-71 | 65112 | 7-8 | 16 | Information of the pressure of the air suspension bellow at the right side of the rear axle | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1729 | Damper Stiffness Front Axle | J1939-71 | 65111 | 1 | 8 | Damper stiffness information of the shock absorber control at the front axle | | | |
| | 1730 | Damper Stiffness Rear Axle | J1939-71 | 65111 | 2 | 8 | Damper stiffness information of the shock absorber control at the rear axle | | | |
| | 1731 | Damper Stiffness Lift / Tag Axle | J1939-71 | 65111 | 3 | 8 | Damper stiffness information of the shock absorber control at the lift of tag axle | | | |
| | 1732 | Level Preset Front Axle Left | J1939-71 | 53504 | 1-2 | 16 | Set value for nominal level 'preset level' at the left side of the front axle. This value is referred to 'Normal level 1'. | | | |
| | 1733 | Nominal Level Rear Axle | J1939-71 | 65114 | 1.5 | 4 | Signal which indicates the nominal (desired) height of the rear axle to be controlled by the suspension system. | | | |
| | 1734 | Nominal Level Front Axle | J1939-71 | 65114 | 1.1 | 4 | Signal which indicates the nominal (desired) height of the front axle to be controlled by the suspension system. | | | |
| | 1735 | Level Preset Rear Axle Right | J1939-71 | 53504 | 7-8 | 16 | Set value for nominal level 'preset level' at the right side of the rear axle. This value is referred to 'Normal level 1'. | | | |
| | 1736 | Above Nominal Level Rear Axle | J1939-71 | 65114 | 2.7 | 2 | Signal which indicates whether the actual height of the rear axle is above the nominal (desired) level of the rear axle. | | | |
| | 1737 | Above Nominal Level Front Axle | J1939-71 | 65114 | 2.5 | 2 | Signal which indicates whether the actual height of the front axle is above the nominal (desired) level of the front axle. | | | |
| | 1738 | Below Nominal Level Front Axle | J1939-71 | 65114 | 2.1 | 2 | Signal which indicates whether the actual height of the front axle is below the nominal (desired) level for the front axle. | | | |
| | 1739 | Lifting Control Mode Front Axle | J1939-71 | 65114 | 3.5 | 2 | Signal which indicates the actual lifting level change at the front axle | | | |
| | 1740 | Lowering Control Mode Front Axle | J1939-71 | 65114 | 3.1 | 2 | Signal which indicates the actual lowering level change at the front axle | | | |
| | 1741 | Level Control Mode | J1939-71 | 65114 | 4.5 | 4 | Signal which indicates the actual control mode of the air suspension system | | | |
| | 1742 | Kneeling Information | J1939-71 | 65114 | 4.1 | 4 | Signal which indicates the actual level change in case of kneeling function | | | |
| | 1743 | Lift Axle 1 Position | J1939-71 | 65114 | 5.7 | 2 | Signal which indicates the position / load condition of lift axle / tag axle #1. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1744 | Door Release | J1939-71 | 65114 | 5.5 | 2 | Signal which indicates that the doors may be opened. | | | |
| | 1745 | Vehicle Motion Inhibit | J1939-71 | 65114 | 5.3 | 2 | Signal which indicates whether vehicle motion is inhibited. | | | |
| | 1746 | Security Device | J1939-71 | 65114 | 5.1 | 2 | The signal which indicates the status of the security device. An example of a security device is a curbstone feeler installed beneath the doors of a bus. | | | |
| | 1747 | Kneeling Control Mode Request | J1939-71 | 53760 | 1.7 | 2 | Command signal to select the kneeling functionality | | | |
| | 1748 | Kneeling Request Right Side | J1939-71 | 53760 | 1.5 | 2 | Command signal to activate the kneeling functionality on the right side of the vehicle | | | |
| | 1749 | Kneeling Request Left Side | J1939-71 | 53760 | 1.3 | 2 | Command signal to activate the kneeling functionality on the left side of the vehicle | | | |
| | 1750 | Nominal Level Request Rear Axle | J1939-71 | 53760 | 2.5 | 4 | Command signal to activate a level of the rear axle programmed and/or memorized in the ECU | | | |
| | 1751 | Nominal Level Request Front Axle | J1939-71 | 53760 | 2.1 | 4 | Command signal to activate a level of the front axle programmed and/or memorized in the ECU | | | |
| | 1752 | Lift Axle 1 Position Command | J1939-71 | 53760 | 3.5 | 2 | Signal to command the position/load condition of lift/tag axle #1. | | | |
| | 1753 | Level Control Mode Request | J1939-71 | 53760 | 3.1 | 4 | Command signal to activate a level control mode | | | |
| | 1754 | Below Nominal Level Rear Axle | J1939-71 | 65114 | 2.3 | 2 | Signal which indicates whether the actual height of the rear axle is below the nominal (desired) level for the rear axle. | | | |
| | 1755 | Lowering Control Mode Rear Axle | J1939-71 | 65114 | 3.3 | 2 | Signal which indicates the actual lowering level change at the rear axle | | | |
| | 1756 | Lifting Control Mode Rear Axle | J1939-71 | 65114 | 3.7 | 2 | Signal which indicates the actual lifting level change at the rear axle | | | |
| | 1757 | Level Preset Front Axle Right | J1939-71 | 53504 | 3-4 | 16 | Set value for nominal level 'preset level' at the right side of the front axle. This value is referred to 'Normal level 1'. | | | |
| | 1758 | Level Preset Rear Axle Left | J1939-71 | 53504 | 5-6 | 16 | Set value for nominal level 'preset level' at the left side of the rear axle. This value is referred to 'Normal level 1'. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1759 | Blade Height Set Point - High Resolution | J1939-71 | 65140 | 3-6 | 32 | High resolution for the laser guided blade set point. The high resolution required for more accurate control and 'accurate' unit conversions. | | | |
| | 1760 | Gross Combination Vehicle Weight | J1939-71 | 65136 | 3-4 | 16 | The total weight of the truck and all attached trailers. | | | |
| | 1761 | Catalyst Tank Level | J1939-71 | 65110 | 1 | 8 | A special catalyst uses chemical substance to reach legal requirement for NOX emissions. Currently Indicates the level of the chemical substance within the catalyst tank. This substance is used to reduce NOX emissions. | | | |
| | 1762 | Hydraulic Pressure | J1939-71 | 61448 | 1-2 | 16 | Hydraulic pressure measured at the output of the hydraulic pump. | | | |
| | 1763 | Engine Hydraulic Pressure Governor Mode Indicator | J1939-71 | 61448 | 3.1 | 2 | Mode for governor operation is hydraulic pressure control | | | |
| | 1764 | Engine Hydraulic Pressure Governor Switch | J1939-71 | 61448 | 3.3 | 2 | Switch that sets the mode of hydraulic governor | | | |
| | 1765 | Engine Requested Fuel Valve 1 Position | J1939-71 | 65153 | 7 | 8 | The requested position of the fuel valve 1 that is metering the gaseous fuel flow. | | | |
| | 1766 | Engine Requested Fuel Valve 2 Position | J1939-71 | 65153 | 8 | 8 | The requested position of the fuel valve 2 that is metering the gaseous fuel flow as requested by the Engine Control Unit. | | | |
| | 1767 | Specific Heat Ratio | J1939-71 | 65109 | 1-2 | 16 | The specific heat ratio of the fuel. | | | |
| | 1768 | Engine Low Limit Threshold for Maximum RPM from Engine | J1939-71 | 65108 | 1 | 8 | Minimum allowable value for maximum continuous RPM from engine | | | |
| | 1769 | Engine High Limit Threshold for Minimum Continuous Engine RPM | J1939-71 | 65108 | 2 | 8 | Maximum allowable value for minimum continuous RPM from engine | | | |
| | 1770 | Engine Low Limit Threshold for Maximum Torque from Engine | J1939-71 | 65108 | 3 | 8 | Minimum allowable value for maximum continuous torque from engine | | | |
| | 1771 | Engine High Limit Threshold for Minimum Continuous Torque from Engine | J1939-71 | 65108 | 4 | 8 | Maximum allowable value for minimum continuous torque from engine | | | |
| | 1772 | Engine Maximum Continuous RPM | J1939-71 | 65108 | 5 | 8 | Applied limit for maximum continuous engine RPM | | | |
| | 1773 | Engine Minimum Continuous RPM | J1939-71 | 65108 | 6 | 8 | Applied limit for minimum continuous engine RPM | | | |
| | 1774 | Engine Maximum Continuous Torque | J1939-71 | 65108 | 7 | 8 | Applied limit for maximum continuous engine torque. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1775 | Engine Minimum Continuous Torque | J1939-71 | 65108 | 8 | 8 | Applied limit for minimum continuous engine torque | | | |
| | 1776 | Low Limit Threshold for Maximum RPM from Retarder | J1939-71 | 65107 | 1 | 8 | Minimum allowable value for maximum continuous retarder speed | | | |
| | 1777 | High Limit Threshold for Minimum Continuous RPM from Retarder | J1939-71 | 65107 | 2 | 8 | Maximum allowable value for minimum continuous retarder speed | | | |
| | 1778 | Low Limit Threshold for Maximum Torque from Retarder | J1939-71 | 65107 | 3 | 8 | Minimum allowable value for maximum continuous retarder torque. | | | |
| | 1779 | High Limit Threshold for Minimum Continuous Torque from Retarder | J1939-71 | 65107 | 4 | 8 | Maximum allowable value for minimum continuous retarder torque. | | | |
| | 1780 | Maximum Continuous Retarder Speed | J1939-71 | 65107 | 5 | 8 | Applied limit for maximum continuous retarder RPM | | | |
| | 1781 | Minimum Continuous Retarder Speed | J1939-71 | 65107 | 6 | 8 | Applied limit for minimum continuous retarder RPM | | | |
| | 1782 | Maximum Continuous Retarder Torque | J1939-71 | 65107 | 7 | 8 | Applied limit for maximum continuous retarder torque. | | | |
| | 1783 | Minimum Continuous Retarder Torque | J1939-71 | 65107 | 8 | 8 | Applied limit for minimum continuous retarder torque | | | |
| | 1784 | Engine Speed Limit Request - Minimum Continuous | J1939-71 | 52992 | 1 | 8 | Requested minimum continuous engine speed | | | |
| | 1785 | Engine Speed Limit Request - Maximum Continuous | J1939-71 | 52992 | 2 | 8 | Requested maximum continuous engine speed | | | |
| | 1786 | Engine Torque Limit Request - Minimum Continuous | J1939-71 | 52992 | 3 | 8 | Requested minimum continuous engine torque (operating range: 0 to 125%) | | | |
| | 1787 | Engine Torque Limit Request - Maximum Continuous | J1939-71 | 52992 | 4 | 8 | Requested maximum continuous engine torque (operating range: 0 to 125%) | | | |
| | 1788 | Minimum Continuous Retarder Speed Limit Request | J1939-71 | 52992 | 5 | 8 | Requested minimum continuous retarder speed | | | |
| | 1789 | Maximum Continuous Retarder Speed Limit Request | J1939-71 | 52992 | 6 | 8 | Requested maximum continuous retarder speed | | | |
| | 1790 | Minimum Continuous Retarder Torque Limit Request | J1939-71 | 52992 | 7 | 8 | Requested minimum continuous retarder torque (operating range: -125 to 0%) | | | |
| | 1791 | Maximum Continuous Retarder Torque Limit Request | J1939-71 | 52992 | 8 | 8 | Requested maximum continuous retarder torque (operating range: -125 to 0%) | | | |
| | 1792 | Tractor-Mounted Trailer ABS Warning Signal | J1939-71 | 61441 | 8.7 | 2 | This parameter commands the tractor-mounted trailer ABS optical warning signal. | | 137-139 | 23 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1793 | ATC/ASR Information Signal | J1939-71 | 61441 | 6.7 | 2 | This parameter commands the ATC/ASR driver information signal, for example a dash lamp. | | | |
| | 1794 | Engine Moment of Inertia | J1939-71 | 65251 | 31-32 | 16 | Moment of inertia for the engine, including items driven full-time by the engine such as fuel, oil and cooling pumps. | | | |
| | 1795 | Alternator Current (High Range/Resolution) | J1939-71 | 65106 | 1-2 | 16 | This parameter indicates the amount of electrical current output from the alternator of the main vehicle. | | | |
| | 1796 | ACC Distance Alert Signal | J1939-71 | 65135 | 7.5 | 2 | Signal to indicate to the operator that the ACC system is not able to maintain the distance to the target. | | | |
| | 1797 | ACC System Shutoff Warning | J1939-71 | 65135 | 7.3 | 2 | Signal to warn the driver of system deactivation due to non-driver actions. Example: Attempting to control vehicle speed below or above limits of ACC. This signal may be used to activate warning sounds or indicators. | | | |
| | 1798 | ACC Target Detected | J1939-71 | 65135 | 7.1 | 2 | Signal to indicate to the driver that the ACC system has detected a target. | | | |
| | 1799 | Requested ACC Distance Mode | J1939-71 | 65105 | 1.6 | 3 | The Requested Distance Control Mode to the ACC system from the operators interface. | | | |
| | 1800 | Battery 1 Temperature | J1939-71 | 65104 | 1 | 8 | Temperature of the battery 1. | | | |
| | 1801 | Battery 2 Temperature | J1939-71 | 65104 | 2 | 8 | Temperature of the battery 2. | | | |
| | 1802 | Engine Intake Manifold 5 Temperature | J1939-71 | 65189 | 4 | 8 | Temperature of pre-combustion air found in intake manifold number 5 of engine air supply system. | | | |
| | 1803 | Engine Intake Manifold 6 Temperature | J1939-71 | 65189 | 5 | 8 | Temperature of pre-combustion air found in intake manifold number 6 of engine air supply system. | | | |
| | 1804 | Engine Start Enable Device 2 | J1939-71 | 64966 | 1.3 | 2 | Devices that assist an engine in starting, e.g. intake heaters, ether, or an alternate/secondary starting aid. | | | |
| | 1805 | LED Display Mode Control | J1939-71 | 65142 | 2.1 | 4 | This parameter informs the system what the selected Display mode will be. | | | |
| | 1806 | LED Display Deadband Control | J1939-71 | 65142 | 2.5 | 4 | This parameter informs the system what the selected Display deadband will be. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1807 | Steering Wheel Angle | J1939-71 | 61449 | 1-2 | 16 | The main operator`s steering wheel angle (on the steering column, not the actual wheel angle). | | | |
| | 1808 | Yaw Rate | J1939-71 | 61449 | 4-5 | 16 | Indicates the rotation about the vertical axis. | | | |
| | 1809 | Lateral Acceleration | J1939-71 | 61449 | 6-7 | 16 | Indicates a lateral acceleration of the vehicle. | | | |
| | 1810 | Longitudinal Acceleration | J1939-71 | 61449 | 8 | 8 | Indicates the longitudinal acceleration of the vehicle. | | | |
| | 1811 | Steering Wheel Turn Counter | J1939-71 | 61449 | 3.1 | 6 | Indicates number of steering wheel turns, absolute position or relative position at ignition on. Positive values indicate left turns. | | | |
| | 1812 | Steering Wheel Angle Sensor Type | J1939-71 | 61449 | 3.7 | 2 | Indicates whether the steering wheel angle sensor is capable of absolute measuring of the number of steering wheel turns or not (relative measuring to position at ignition on). | | | |
| | 1813 | VDC Information Signal | J1939-71 | 65103 | 1.1 | 2 | This parameter commands the VDC information signal, for example a dash lamp. | | | |
| | 1814 | VDC Fully Operational | J1939-71 | 65103 | 1.3 | 2 | Signal that indicates whether VDC is fully operational or whether its functionality is reduced by a permanent or temporary (e.g. low voltage) defect | | | |
| | 1815 | VDC brake light request | J1939-71 | 65103 | 1.5 | 2 | Indicates whether VDC requests to turn the vehicle brake lights on | | | |
| | 1816 | ROP Engine Control active | J1939-71 | 65103 | 2.1 | 2 | State Signal which indicates that the Roll Over Prevention (ROP) has commanded engine control to be active. | | | |
| | 1817 | YC Engine Control active | J1939-71 | 65103 | 2.5 | 2 | State Signal which indicates that the Yaw Control (YC) has commanded engine control to be active. | | | |
| | 1818 | ROP Brake Control active | J1939-71 | 65103 | 2.3 | 2 | State signal which indicates that Roll over Prevention (ROP) has activated brake control. | | | |
| | 1819 | YC Brake Control active | J1939-71 | 65103 | 2.7 | 2 | State signal which indicates that Yaw Control (YC) has activated brake control. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1820 | Ramp / Wheel Chair Lift Position | J1939-71 | 65102 | 1.5 | 2 | Signal which indicates the actual position of the ramp / wheel chair lift | | | |
| | 1821 | Position of doors | J1939-71 | 65102 | 1.1 | 4 | Signal which indicates the actual position of the doors | | | |
| | 1822 | Lift Axle 2 Position | J1939-71 | 65114 | 6.7 | 2 | Signal which indicates the position / load condition of lift axle / tag axle #2. | | | |
| | 1823 | Rear Axle in Bumper Range | J1939-71 | 65114 | 6.3 | 2 | Signal which indicates that the vehicle height at the rear axle is within the bumper range | | | |
| | 1824 | Front Axle in Bumper Range | J1939-71 | 65114 | 6.1 | 2 | Signal which indicates that the vehicle height at the front axle is within the bumper range. | | | |
| | 1825 | Suspension Remote control 2 | J1939-71 | 65114 | 7.3 | 2 | Signal which indicates that the suspension system is controlled by remote control #2. Remote control is an external unit to operate the suspension system. | | | |
| | 1826 | Suspension Remote Control 1 | J1939-71 | 65114 | 7.1 | 2 | Signal which indicates that the suspension system is controlled by remote control #1. Remote control is an external unit to operate the suspension system. | | | |
| | 1827 | Suspension Control Refusal Information | J1939-71 | 65114 | 8.1 | 4 | Signal which indicates that the air suspension control cannot perform a request due to the operating conditions. It also provides a reason for the refusal. | | | |
| | 1828 | Lift Axle 2 Position Command | J1939-71 | 53760 | 3.7 | 2 | Signal to command the position / load condition of lift / tag axle #2. | | | |
| | 1829 | Kneeling Command - Rear Axle | J1939-71 | 53760 | 7.3 | 2 | Command signal to activate the kneeling functionality at the rear axle of the vehicle | | | |
| | 1830 | Kneeling Command - Front Axle | J1939-71 | 53760 | 7.1 | 2 | Command signal to activate the kneeling functionality at the front axle of the vehicle | | | |
| | 1831 | Electronic Shock Absorber Control Mode - Lift/Tag Axle | J1939-71 | 65111 | 4.5 | 2 | Signal which indicates the current mode of operation of the electronic shock absorber control at the lift/tag axle | | | |
| | 1832 | Electronic Shock Absorber Control Mode - Rear Axle | J1939-71 | 65111 | 4.3 | 2 | Signal which indicates the current mode of operation of the electronic shock absorber control at the rear axle | | | |
| | 1833 | Electronic Shock Absorber Control Mode - Front Axle | J1939-71 | 65111 | 4.1 | 2 | Signal which indicates the current mode of operation of the electronic shock absorber control at the front axle | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1834 | Engine Total Average Fuel Rate | J1939-71 | 65101 | 1-2 | 16 | Average fuel rate, equal to total fuel used divided by total engine hours, over the life of the engine | | | |
| | 1835 | Engine Total Average Fuel Economy | J1939-71 | 65101 | 3-4 | 16 | Average fuel economy, equal to total vehicle distance divided by total fuel used, over the life of the engine | | | |
| | 1836 | Trailer ABS Status | J1939-71 | 61441 | 8.5 | 2 | State signal which indicates that ABS in the trailer is actively controlling the brakes. | 209 | | |
| | 1837 | Convoy Driving Lamp Select | J1939-71 | 65100 | 1.7 | 2 | Black Out Convoy Driving Lamp Selection | | | |
| | 1838 | Convoy Lamp Select | J1939-71 | 65100 | 1.5 | 2 | Black Out Convoy Lamp Selection | | | |
| | 1839 | Front Black Out Marker Lamp Select | J1939-71 | 65100 | 1.3 | 2 | Front Black Out Marker Lamp Selection | | | |
| | 1840 | Rear Black Out Marker Select | J1939-71 | 65100 | 1.1 | 2 | Rear Black Out Marker Selection | | | |
| | 1841 | Black Out Brake/Stop Lamp Select | J1939-71 | 65100 | 3.7 | 2 | Black Out Brake/Stop Lamp Selection | | | |
| | 1842 | Black Out Work Lamp Select | J1939-71 | 65100 | 4.7 | 2 | Black Out Work Lamp Selection | | | |
| | 1843 | Night Vision Illuminator Select | J1939-71 | 65100 | 4.1 | 2 | Night Vision Illuminator Selection | | | |
| | 1844 | Operators Black Out Intensity Selection | J1939-71 | 65100 | 8 | 8 | Operators Selection of lamp intensity in black out mode | | | |
| | 1845 | Transmission Torque Limit | J1939-71 | 65099 | 1-2 | 16 | Parameter provided to the engine from the transmission as a torque limit to be invoked by the engine in the event that J1939 communication with the transmission is lost. | | | |
| | 1846 | Engine Default Torque Limit | J1939-71 | 65251 | 33-34 | 16 | This parameter is broadcast by the engine to verify reception of the Transmission Torque Limit parameter (SPN 1845). | | | |
| | 1849 | Transmission Requested Range Display Flash State | J1939-71 | 65098 | 1.7 | 2 | State signal indicating a transmission request for the display of the Transmission Requested Range parameter (SPN 162) to flash or not to flash. | | | |
| | 1850 | Transmission Requested Range Display Blank State | J1939-71 | 65098 | 1.5 | 2 | State signal indicating a transmission request for the display of the Transmission Requested Range parameter (SPN162) to be blanked or not blanked. | | | |
| | 1851 | Transmission Shift Inhibit Indicator | J1939-71 | 65098 | 2.7 | 2 | State signal indicating a transmission request for the Shift Inhibit Indicator to be active or inactive. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1852 | Transmission Mode 1 | J1939-71 | 256 | 6.1 | 2 | Indicates whether transmission mode 1 is enabled. | | | |
| | 1853 | Transmission Mode 2 | J1939-71 | 256 | 6.3 | 2 | Indicates whether transmission mode 2 is enabled. | | | |
| | 1854 | Transmission Mode 3 | J1939-71 | 256 | 6.5 | 2 | Indicates whether transmission mode 3 is enabled. | | | |
| | 1855 | Transmission Mode 4 | J1939-71 | 256 | 6.7 | 2 | Indicates whether transmission mode 4 is enabled. | | | |
| | 1856 | Seat Belt Switch | J1939-71 | 57344 | 4.7 | 2 | State of switch used to determine if Seat Belt is buckled | | | |
| | 1857 | Winch Oil Pressure Switch | J1939-71 | 65128 | 2.3 | 2 | State of switch used to determine if Winch Oil Pressure is above desired minimum | | | |
| | 1858 | Intermittent Wiper Control | J1939 | | | | Output driver for an intermittent windshield wiper motor | | | |
| | 1859 | Ground Based Implement Speed | ISO 11783-7 | 65097 | 1-2 | 16 | Actual ground speed of a machine, measured by a sensor such as RADAR. | | | |
| | 1860 | Ground Based Implement Distance | ISO 11783-7 | 65097 | 3-6 | 32 | Actual distance travelled by a machine based on measurements from a sensor such as RADAR | | | |
| | 1861 | Ground Based Direction | ISO 11783-7 | 65097 | 8.1 | 2 | A measured signal indicating either forward or reverse as the direction of travel. When speed is zero, indicate the last travel direction until a different direction is detected. | | | |
| | 1862 | Wheel Based Speed | ISO 11783-7 | 65096 | 1-2 | 16 | A value of the speed of a machine as calculated from the measured wheel or tail shaft speed. | | | |
| | 1863 | Wheel Based Distance | ISO 11783-7 | 65096 | 3-6 | 32 | The distance travelled by a machine as calculated from wheel or tail shaft speed. | | | |
| | 1864 | Wheel Based Direction | ISO 11783-7 | 65096 | 8.1 | 2 | A measured signal indicating either forward or reverse as the direction of travel. | | | |
| | 1865 | Key Switch NOT OFF | ISO 11783-7 | 65096 | 8.3 | 2 | Indicates the Key Switch of the tractor or power unit is NOT in the Off position. | | | |
| | 1866 | Maximum Time of Tractor Power | ISO 11783-7 | 65096 | 7 | 8 | The maximum time of remaining tractor or power unit supplied electrical power at the current load. | | | |
| | 1867 | Maintain ECU Power | ISO 11783-7 | 65095 | 1.7 | 2 | Request to the Tractor ECU to maintain ECU_PWR power for the next 2 seconds. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1868 | Maintain Acuator Power | ISO 11783-7 | 65095 | 1.5 | 2 | Request to the Tractor ECU to maintain PWR power for the next 2 seconds. | | | |
| | 1869 | Implement Transport State | ISO 11783-7 | 65095 | 2.7 | 2 | Indicates the transport state of an implement connected to a tractor or power unit. | | | |
| | 1870 | Implement Park State | ISO 11783-7 | 65095 | 2.5 | 2 | Indicates the state of an implement where it may be disconnected from a tractor or power unit. | | | |
| | 1871 | Implement Work State | ISO 11783-7 | 65095 | 2.3 | 2 | Indicates that an implement is connected to a tractor or power unit and is ready for work | | | |
| | 1872 | Front Hitch Position | ISO 11783-7 | 65094 | 1 | 8 | The measured position of the front three-point-hitch. | | | |
| | 1873 | Rear Hitch Position | ISO 11783-7 | 65093 | 1 | 8 | The measured position of the rear three-point-hitch. | | | |
| | 1874 | Front Hitch Position Command | ISO 11783-7 | 65090 | 1 | 8 | Command to allow the position of the front three-point-hitch to be set. | | | |
| | 1875 | Rear Hitch Position Command | ISO 11783-7 | 65090 | 2 | 8 | Command to allow the position of the rear three-point-hitch to be set. | | | |
| | 1876 | Front Hitch In-work Indication | ISO 11783-7 | 65094 | 2.7 | 2 | A measured signal indicating that the front hitch is positioned below (in-work) or above (out-of-work) an adjustable switching threshold. | | | |
| | 1877 | Rear Hitch In-work Indication | ISO 11783-7 | 65093 | 2.7 | 2 | A measured signal indicating that the rear hitch is positioned below (in-work) or above (out-of-work) an adjustable switching threshold. | | | |
| | 1878 | Front Draft | ISO 11783-7 | 65094 | 4-5 | 16 | The apparent horizontal force applied to the front hitch by an implement. | | | |
| | 1879 | Rear Draft | ISO 11783-7 | 65093 | 4-5 | 16 | The apparent horizontal force applied to the rear hitch by an implement. | | | |
| | 1880 | Front Nominal Lower Link Force | ISO 11783-7 | 65094 | 3 | 8 | This measurement provides an indication of draft at the lower links of the front three point hitch. | | | |
| | 1881 | Rear  Nominal Lower Link Force | ISO 11783-7 | 65093 | 3 | 8 | This measurement provides an indication of draft at the lower links of the front three point hitch. | | | |
| | 1882 | Front PTO output shaft speed | ISO 11783-7 | 65092 | 1-2 | 16 | The measured rotational speed of the front power take off (PTO) output shaft. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1883 | Rear PTO output shaft speed | ISO 11783-7 | 65091 | 1-2 | 16 | The measured rotational speed of the rear power take off (PTO) output shaft. | | | |
| | 1884 | Front PTO Output Shaft Speed Set Point | ISO 11783-7 | 65092 | 3-4 | 16 | The measured value of the set point of the rotational speed of the front power take off (PTO) output shaft. | | | |
| | 1885 | Rear PTO Output Shaft Speed Set Point | ISO 11783-7 | 65091 | 3-4 | 16 | The measured value of the set point of the rotational speed of the rear power take off (PTO) output shaft. | | | |
| | 1886 | Front PTO Output Shaft Speed Set Point Command | ISO 11783-7 | 65090 | 3-4 | 16 | The command to set the rotational speed of the front power take off (PTO) output shaft. | | | |
| | 1887 | Rear PTO Output Shaft Speed Set Point Command | ISO 11783-7 | 65090 | 5-6 | 16 | The command to set the rotational speed of the rear power take off (PTO) output shaft. | | | |
| | 1888 | Front Power Take Off Engagement | ISO 11783-7 | 65092 | 5.7 | 2 | A measured signal indicating that the front power take off is engaged or disengage. | | | |
| | 1889 | Front Power Take Off Mode | ISO 11783-7 | 65092 | 5.5 | 2 | A measured signal indicating that the front power take off mode is either 540 or 1000 rpm. | | | |
| | 1890 | Rear Power Take Off Mode | ISO 11783-7 | 65091 | 5.5 | 2 | A measured signal indicating that the rear power take off mode is either 540 or 1000 rpm. | | | |
| | 1891 | Front Power Take Off Economy Mode | ISO 11783-7 | 65092 | 5.3 | 2 | A measured signal indicating that the front power take off economy mode is engaged or disengaged. | | | |
| | 1892 | Rear Power Take Off Economy Mode | ISO 11783-7 | 65091 | 5.3 | 2 | A measured signal indicating that the rear power take off economy mode is engaged or disengaged. | | | |
| | 1893 | Front Power Take Off Engagement Command | ISO 11783-7 | 65090 | 7.7 | 2 | The command to engage or disengage the front power take off . | | | |
| | 1894 | Rear Power Take Off Engagement Command | ISO 11783-7 | 65090 | 7.5 | 2 | The command to engage or disengage the rear power take off . | | | |
| | 1895 | Front Power Take Off Mode Command | ISO 11783-7 | 65090 | 8.7 | 2 | The command to select the mode of the front power take off . | | | |
| | 1896 | Rear Power Take Off Mode Command | ISO 11783-7 | 65090 | 8.5 | 2 | The command to select the mode of the rear power take off . | | | |
| | 1897 | Front Power Take Off Economy Mode Command | ISO 11783-7 | 65090 | 8.3 | 2 | The command to engage or disengage the front power take off‘s economy mode. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1898 | Rear Power Take Off Economy Mode Command | ISO 11783-7 | 65090 | 8.1 | 2 | The command to engage or disengage the rear power take off's economy mode. | | | |
| | 1899 | Aux Valve 0 Extend Port Measured Flow | ISO 11783-7 | 65056 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1900 | Aux Valve 0 Retract Port Measured Flow | ISO 11783-7 | 65056 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1901 | Aux Valve 0 Extend Port Estimated Flow | ISO 11783-7 | 65040 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1902 | Aux Valve 0 Retract Port Estimated Flow | ISO 11783-7 | 65040 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1903 | Aux Valve 0 State | ISO 11783-7 | 65040 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1904 | Aux Valve 0 Extend Port Pressure | ISO 11783-7 | 65056 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1905 | Aux Valve 0 Retract Port Pressure | ISO 11783-7 | 65056 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1906 | Aux Valve 0 Return Port Pressure | ISO 11783-7 | 65056 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1907 | Aux Valve 0 Port Flow Command | ISO 11783-7 | 65072 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1908 | Aux Valve 0 State command | ISO 11783-7 | 65072 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1909 | Aux Valve 0 Fail Safe Mode Command | ISO 11783-7 | 65072 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1910 | Aux Valve 0 Fail Safe Mode | ISO 11783-7 | 65040 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1911 | Aux Valve 1 Extend Port Measured Flow | ISO 11783-7 | 65057 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1912 | Aux Valve 1 Retract Port Measured Flow | ISO 11783-7 | 65057 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1913 | Aux Valve 1 Extend Port Estimated Flow | ISO 11783-7 | 65041 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1914 | Aux Valve 1 Retract Port Estimated Flow | ISO 11783-7 | 65041 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1915 | Aux Valve 1 State | ISO 11783-7 | 65041 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1916 | Aux Valve 1 Extend Port Pressure | ISO 11783-7 | 65057 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1917 | Aux Valve 1 Retract Port Pressure | ISO 11783-7 | 65057 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1918 | Aux Valve 1 Return Port Pressure | ISO 11783-7 | 65057 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1919 | Aux Valve 1 Port Flow Command | ISO 11783-7 | 65073 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1920 | Aux Valve 1 State Command | ISO 11783-7 | 65073 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1921 | Aux Valve 1 Fail Safe Mode Command | ISO 11783-7 | 65073 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1922 | Aux Valve 1 Fail Safe Mode | ISO 11783-7 | 65041 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1923 | Aux Valve 2 Extend Port Measured Flow | ISO 11783-7 | 65058 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1924 | Aux Valve 2 Retract Port Measured Flow | ISO 11783-7 | 65058 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1925 | Aux Valve 2 Extend Port Estimated Flow | ISO 11783-7 | 65042 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1926 | Aux Valve 2 Retract Port Estimated Flow | ISO 11783-7 | 65042 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1927 | Aux Valve 2 State | ISO 11783-7 | 65042 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1928 | Aux Valve 2 Extend Port Pressure | ISO 11783-7 | 65058 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1929 | Aux Valve 2 Retract Port Pressure | ISO 11783-7 | 65058 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1930 | Aux Valve 2 Return Port Pressure | ISO 11783-7 | 65058 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1931 | Aux Valve 2 Port Flow Command | ISO 11783-7 | 65074 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1932 | Aux Valve 2 State Command | ISO 11783-7 | 65074 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1933 | Aux Valve 2 Fail Safe Mode Command | ISO 11783-7 | 65074 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1934 | Aux Valve 2 Fail Safe Mode | ISO 11783-7 | 65042 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1935 | Aux Valve 3 Extend Port Measured Flow | ISO 11783-7 | 65059 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1936 | Aux Valve 3 Retract Port Measured Flow | ISO 11783-7 | 65059 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1937 | Aux Valve 3 Extend Port Estimated Flow | ISO 11783-7 | 65043 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1938 | Aux Valve 3 Retract Port Estimated Flow | ISO 11783-7 | 65043 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1939 | Aux Valve 3 State | ISO 11783-7 | 65043 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1940 | Aux Valve 3 Extend Port Pressure | ISO 11783-7 | 65059 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1941 | Aux Valve 3 Retract Port Pressure | ISO 11783-7 | 65059 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1942 | Aux Valve 3 Return Port Pressure | ISO 11783-7 | 65059 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1943 | Aux Valve 3 Port Flow Command | ISO 11783-7 | 65075 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1944 | Aux Valve 3 State Command | ISO 11783-7 | 65075 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1945 | Aux Valve 3 Fail Safe Mode Command | ISO 11783-7 | 65075 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1946 | Aux Valve 3 Fail Safe Mode | ISO 11783-7 | 65043 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1947 | Aux Valve 4 Extend Port Measured Flow | ISO 11783-7 | 65060 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1948 | Aux Valve 4 Retract Port Measured Flow | ISO 11783-7 | 65060 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1949 | Aux Valve 4 Extend Port Estimated Flow | ISO 11783-7 | 65044 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1950 | Aux Valve 4 Retract Port Estimated Flow | ISO 11783-7 | 65044 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1951 | Aux Valve 4 State | ISO 11783-7 | 65044 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1952 | Aux Valve 4 Extend Port Pressure | ISO 11783-7 | 65060 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1953 | Aux Valve 4 Retract Port Pressure | ISO 11783-7 | 65060 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1954 | Aux Valve 4 Return Port Pressure | ISO 11783-7 | 65060 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1955 | Aux Valve 4 Port Flow Command | ISO 11783-7 | 65076 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1956 | Aux Valve 4 State Command | ISO 11783-7 | 65076 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1957 | Aux Valve 4 Fail Safe Mode Command | ISO 11783-7 | 65076 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1958 | Aux Valve 4 Fail Safe Mode | ISO 11783-7 | 65044 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1959 | Aux Valve 5 Extend Port Measured Flow | ISO 11783-7 | 65061 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1960 | Aux Valve 5 Retract Port Measured Flow | ISO 11783-7 | 65061 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1961 | Aux Valve 5 Extend Port Estimated Flow | ISO 11783-7 | 65045 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1962 | Aux Valve 5 Retract Port Estimated Flow | ISO 11783-7 | 65045 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1963 | Aux Valve 5 State | ISO 11783-7 | 65045 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1964 | Aux Valve 5 Extend Port Pressure | ISO 11783-7 | 65061 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1965 | Aux Valve 5 Retract Port Pressure | ISO 11783-7 | 65061 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1966 | Aux Valve 5 Return Port Pressure | ISO 11783-7 | 65061 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1967 | Aux Valve 5 Port Flow Command | ISO 11783-7 | 65077 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1968 | Aux Valve 5 State Command | ISO 11783-7 | 65077 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1969 | Aux Valve 5 Fail Safe Mode Command | ISO 11783-7 | 65077 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1970 | Aux Valve 5 Fail Safe Mode | ISO 11783-7 | 65045 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1971 | Aux Valve 6 Extend Port Measured Flow | ISO 11783-7 | 65062 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1972 | Aux Valve 6 Retract Port Measured Flow | ISO 11783-7 | 65062 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1973 | Aux Valve 6 Extend Port Estimated Flow | ISO 11783-7 | 65046 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1974 | Aux Valve 6 Retract Port Estimated Flow | ISO 11783-7 | 65046 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1975 | Aux Valve 6 State | ISO 11783-7 | 65046 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1976 | Aux Valve 6 Extend Port Pressure | ISO 11783-7 | 65062 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 1977 | Aux Valve 6 Retract Port Pressure | ISO 11783-7 | 65062 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1978 | Aux Valve 6 Return Port Pressure | ISO 11783-7 | 65062 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1979 | Aux Valve 6 Port Flow Command | ISO 11783-7 | 65078 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1980 | Aux Valve 6 State Command | ISO 11783-7 | 65078 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1981 | Aux Valve 6 Fail Safe Mode Command | ISO 11783-7 | 65078 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1982 | Aux Valve 6 Fail Safe Mode | ISO 11783-7 | 65046 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1983 | Aux Valve 7 Extend Port Measured Flow | ISO 11783-7 | 65063 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1984 | Aux Valve 7 Retract Port Measured Flow | ISO 11783-7 | 65063 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1985 | Aux Valve 7 Extend Port Estimated Flow | ISO 11783-7 | 65047 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1986 | Aux Valve 7 Retract Port Estimated Flow | ISO 11783-7 | 65047 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1987 | Aux Valve 7 State | ISO 11783-7 | 65047 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 1988 | Aux Valve 7 Extend Port Pressure | ISO 11783-7 | 65063 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 1989 | Aux Valve 7 Retract Port Pressure | ISO 11783-7 | 65063 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 1990 | Aux Valve 7 Return Port Pressure | ISO 11783-7 | 65063 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 1991 | Aux Valve 7 Port Flow Command | ISO 11783-7 | 65079 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1992 | Aux Valve 7 State command | ISO 11783-7 | 65079 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 1993 | Aux Valve 7 Fail Safe Mode Command | ISO 11783-7 | 65079 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 1994 | Aux Valve 7 Fail Safe Mode | ISO 11783-7 | 65047 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 1995 | Aux Valve 8 Extend Port Measured Flow | ISO 11783-7 | 65064 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1996 | Aux Valve 8 Retract Port Measured Flow | ISO 11783-7 | 65064 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 1997 | Aux Valve 8 Extend Port Estimated Flow | ISO 11783-7 | 65048 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1998 | Aux Valve 8 Retract Port Estimated Flow | ISO 11783-7 | 65048 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 1999 | Aux Valve 8 State | ISO 11783-7 | 65048 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2000 | Source Address 0 | J1939-21 | | | 8 | | | | |
| | 2001 | Source Address 1 | J1939-21 | | | 8 | | | | |
| | 2002 | Source Address 2 | J1939-21 | | | 8 | | | | |
| | 2003 | Source Address 3 | J1939-21 | | | 8 | | | | |
| | 2004 | Source Address 4 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2005 | Source Address 5 | J1939-21 | | | 8 | | | | |
| | 2006 | Source Address 6 | J1939-21 | | | 8 | | | | |
| | 2007 | Source Address 7 | J1939-21 | | | 8 | | | | |
| | 2008 | Source Address 8 | J1939-21 | | | 8 | | | | |
| | 2009 | Source Address 9 | J1939-21 | | | 8 | | | | |
| | 2010 | Source Address 10 | J1939-21 | | | 8 | | | | |
| | 2011 | Source Address 11 | J1939-21 | | | 8 | | | | |
| | 2012 | Source Address 12 | J1939-21 | | | 8 | | | | |
| | 2013 | Source Address 13 | J1939-21 | | | 8 | | | | |
| | 2014 | Source Address 14 | J1939-21 | | | 8 | | | | |
| | 2015 | Source Address 15 | J1939-21 | | | 8 | | | | |
| | 2016 | Source Address 16 | J1939-21 | | | 8 | | | | |
| | 2017 | Source Address 17 | J1939-21 | | | 8 | | | | |
| | 2018 | Source Address 18 | J1939-21 | | | 8 | | | | |
| | 2019 | Source Address 19 | J1939-21 | | | 8 | | | | |
| | 2020 | Source Address 20 | J1939-21 | | | 8 | | | | |
| | 2021 | Source Address 21 | J1939-21 | | | 8 | | | | |
| | 2022 | Source Address 22 | J1939-21 | | | 8 | | | | |
| | 2023 | Source Address 23 | J1939-21 | | | 8 | | | | |
| | 2024 | Source Address 24 | J1939-21 | | | 8 | | | | |
| | 2025 | Source Address 25 | J1939-21 | | | 8 | | | | |
| | 2026 | Source Address 26 | J1939-21 | | | 8 | | | | |
| | 2027 | Source Address 27 | J1939-21 | | | 8 | | | | |
| | 2028 | Source Address 28 | J1939-21 | | | 8 | | | | |
| | 2029 | Source Address 29 | J1939-21 | | | 8 | | | | |
| | 2030 | Source Address 30 | J1939-21 | | | 8 | | | | |
| | 2031 | Source Address 31 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2032 | Source Address 32 | J1939-21 | | | 8 | | | | |
| | 2033 | Source Address 33 | J1939-21 | | | 8 | | | | |
| | 2034 | Source Address 34 | J1939-21 | | | 8 | | | | |
| | 2035 | Source Address 35 | J1939-21 | | | 8 | | | | |
| | 2036 | Source Address 36 | J1939-21 | | | 8 | | | | |
| | 2037 | Source Address 37 | J1939-21 | | | 8 | | | | |
| | 2038 | Source Address 38 | J1939-21 | | | 8 | | | | |
| | 2039 | Source Address 39 | J1939-21 | | | 8 | | | | |
| | 2040 | Source Address 40 | J1939-21 | | | 8 | | | | |
| | 2041 | Source Address 41 | J1939-21 | | | 8 | | | | |
| | 2042 | Source Address 42 | J1939-21 | | | 8 | | | | |
| | 2043 | Source Address 43 | J1939-21 | | | 8 | | | | |
| | 2044 | Source Address 44 | J1939-21 | | | 8 | | | | |
| | 2045 | Source Address 45 | J1939-21 | | | 8 | | | | |
| | 2046 | Source Address 46 | J1939-21 | | | 8 | | | | |
| | 2047 | Source Address 47 | J1939-21 | | | 8 | | | | |
| | 2048 | Source Address 48 | J1939-21 | | | 8 | | | | |
| | 2049 | Source Address 49 | J1939-21 | | | 8 | | | | |
| | 2050 | Source Address 50 | J1939-21 | | | 8 | | | | |
| | 2051 | Source Address 51 | J1939-21 | | | 8 | | | | |
| | 2052 | Source Address 52 | J1939-21 | | | 8 | | | | |
| | 2053 | Source Address 53 | J1939-21 | | | 8 | | | | |
| | 2054 | Source Address 54 | J1939-21 | | | 8 | | | | |
| | 2055 | Source Address 55 | J1939-21 | | | 8 | | | | |
| | 2056 | Source Address 56 | J1939-21 | | | 8 | | | | |
| | 2057 | Source Address 57 | J1939-21 | | | 8 | | | | |
| | 2058 | Source Address 58 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2059 | Source Address 59 | J1939-21 | | | 8 | | | | |
| | 2060 | Source Address 60 | J1939-21 | | | 8 | | | | |
| | 2061 | Source Address 61 | J1939-21 | | | 8 | | | | |
| | 2062 | Source Address 62 | J1939-21 | | | 8 | | | | |
| | 2063 | Source Address 63 | J1939-21 | | | 8 | | | | |
| | 2064 | Source Address 64 | J1939-21 | | | 8 | | | | |
| | 2065 | Source Address 65 | J1939-21 | | | 8 | | | | |
| | 2066 | Source Address 66 | J1939-21 | | | 8 | | | | |
| | 2067 | Source Address 67 | J1939-21 | | | 8 | | | | |
| | 2068 | Source Address 68 | J1939-21 | | | 8 | | | | |
| | 2069 | Source Address 69 | J1939-21 | | | 8 | | | | |
| | 2070 | Source Address 70 | J1939-21 | | | 8 | | | | |
| | 2071 | Source Address 71 | J1939-21 | | | 8 | | | | |
| | 2072 | Source Address 72 | J1939-21 | | | 8 | | | | |
| | 2073 | Source Address 73 | J1939-21 | | | 8 | | | | |
| | 2074 | Source Address 74 | J1939-21 | | | 8 | | | | |
| | 2075 | Source Address 75 | J1939-21 | | | 8 | | | | |
| | 2076 | Source Address 76 | J1939-21 | | | 8 | | | | |
| | 2077 | Source Address 77 | J1939-21 | | | 8 | | | | |
| | 2078 | Source Address 78 | J1939-21 | | | 8 | | | | |
| | 2079 | Source Address 79 | J1939-21 | | | 8 | | | | |
| | 2080 | Source Address 80 | J1939-21 | | | 8 | | | | |
| | 2081 | Source Address 81 | J1939-21 | | | 8 | | | | |
| | 2082 | Source Address 82 | J1939-21 | | | 8 | | | | |
| | 2083 | Source Address 83 | J1939-21 | | | 8 | | | | |
| | 2084 | Source Address 84 | J1939-21 | | | 8 | | | | |
| | 2085 | Source Address 85 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2086 | Source Address 86 | J1939-21 | | | 8 | | | | |
| | 2087 | Source Address 87 | J1939-21 | | | 8 | | | | |
| | 2088 | Source Address 88 | J1939-21 | | | 8 | | | | |
| | 2089 | Source Address 89 | J1939-21 | | | 8 | | | | |
| | 2090 | Source Address 90 | J1939-21 | | | 8 | | | | |
| | 2091 | Source Address 91 | J1939-21 | | | 8 | | | | |
| | 2092 | Source Address 92 | J1939-21 | | | 8 | | | | |
| | 2093 | Source Address 93 | J1939-21 | | | 8 | | | | |
| | 2094 | Source Address 94 | J1939-21 | | | 8 | | | | |
| | 2095 | Source Address 95 | J1939-21 | | | 8 | | | | |
| | 2096 | Source Address 96 | J1939-21 | | | 8 | | | | |
| | 2097 | Source Address 97 | J1939-21 | | | 8 | | | | |
| | 2098 | Source Address 98 | J1939-21 | | | 8 | | | | |
| | 2099 | Source Address 99 | J1939-21 | | | 8 | | | | |
| | 2100 | Source Address 100 | J1939-21 | | | 8 | | | | |
| | 2101 | Source Address 101 | J1939-21 | | | 8 | | | | |
| | 2102 | Source Address 102 | J1939-21 | | | 8 | | | | |
| | 2103 | Source Address 103 | J1939-21 | | | 8 | | | | |
| | 2104 | Source Address 104 | J1939-21 | | | 8 | | | | |
| | 2105 | Source Address 105 | J1939-21 | | | 8 | | | | |
| | 2106 | Source Address 106 | J1939-21 | | | 8 | | | | |
| | 2107 | Source Address 107 | J1939-21 | | | 8 | | | | |
| | 2108 | Source Address 108 | J1939-21 | | | 8 | | | | |
| | 2109 | Source Address 109 | J1939-21 | | | 8 | | | | |
| | 2110 | Source Address 110 | J1939-21 | | | 8 | | | | |
| | 2111 | Source Address 111 | J1939-21 | | | 8 | | | | |
| | 2112 | Source Address 112 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2113 | Source Address 113 | J1939-21 | | | 8 | | | | |
| | 2114 | Source Address 114 | J1939-21 | | | 8 | | | | |
| | 2115 | Source Address 115 | J1939-21 | | | 8 | | | | |
| | 2116 | Source Address 116 | J1939-21 | | | 8 | | | | |
| | 2117 | Source Address 117 | J1939-21 | | | 8 | | | | |
| | 2118 | Source Address 118 | J1939-21 | | | 8 | | | | |
| | 2119 | Source Address 119 | J1939-21 | | | 8 | | | | |
| | 2120 | Source Address 120 | J1939-21 | | | 8 | | | | |
| | 2121 | Source Address 121 | J1939-21 | | | 8 | | | | |
| | 2122 | Source Address 122 | J1939-21 | | | 8 | | | | |
| | 2123 | Source Address 123 | J1939-21 | | | 8 | | | | |
| | 2124 | Source Address 124 | J1939-21 | | | 8 | | | | |
| | 2125 | Source Address 125 | J1939-21 | | | 8 | | | | |
| | 2126 | Source Address 126 | J1939-21 | | | 8 | | | | |
| | 2127 | Source Address 127 | J1939-21 | | | 8 | | | | |
| | 2128 | Source Address 128 | J1939-21 | | | 8 | | | | |
| | 2129 | Source Address 129 | J1939-21 | | | 8 | | | | |
| | 2130 | Source Address 130 | J1939-21 | | | 8 | | | | |
| | 2131 | Source Address 131 | J1939-21 | | | 8 | | | | |
| | 2132 | Source Address 132 | J1939-21 | | | 8 | | | | |
| | 2133 | Source Address 133 | J1939-21 | | | 8 | | | | |
| | 2134 | Source Address 134 | J1939-21 | | | 8 | | | | |
| | 2135 | Source Address 135 | J1939-21 | | | 8 | | | | |
| | 2136 | Source Address 136 | J1939-21 | | | 8 | | | | |
| | 2137 | Source Address 137 | J1939-21 | | | 8 | | | | |
| | 2138 | Source Address 138 | J1939-21 | | | 8 | | | | |
| | 2139 | Source Address 139 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2140 | Source Address 140 | J1939-21 | | | 8 | | | | |
| | 2141 | Source Address 141 | J1939-21 | | | 8 | | | | |
| | 2142 | Source Address 142 | J1939-21 | | | 8 | | | | |
| | 2143 | Source Address 143 | J1939-21 | | | 8 | | | | |
| | 2144 | Source Address 144 | J1939-21 | | | 8 | | | | |
| | 2145 | Source Address 145 | J1939-21 | | | 8 | | | | |
| | 2146 | Source Address 146 | J1939-21 | | | 8 | | | | |
| | 2147 | Source Address 147 | J1939-21 | | | 8 | | | | |
| | 2148 | Source Address 148 | J1939-21 | | | 8 | | | | |
| | 2149 | Source Address 149 | J1939-21 | | | 8 | | | | |
| | 2150 | Source Address 150 | J1939-21 | | | 8 | | | | |
| | 2151 | Source Address 151 | J1939-21 | | | 8 | | | | |
| | 2152 | Source Address 152 | J1939-21 | | | 8 | | | | |
| | 2153 | Source Address 153 | J1939-21 | | | 8 | | | | |
| | 2154 | Source Address 154 | J1939-21 | | | 8 | | | | |
| | 2155 | Source Address 155 | J1939-21 | | | 8 | | | | |
| | 2156 | Source Address 156 | J1939-21 | | | 8 | | | | |
| | 2157 | Source Address 157 | J1939-21 | | | 8 | | | | |
| | 2158 | Source Address 158 | J1939-21 | | | 8 | | | | |
| | 2159 | Source Address 159 | J1939-21 | | | 8 | | | | |
| | 2160 | Source Address 160 | J1939-21 | | | 8 | | | | |
| | 2161 | Source Address 161 | J1939-21 | | | 8 | | | | |
| | 2162 | Source Address 162 | J1939-21 | | | 8 | | | | |
| | 2163 | Source Address 163 | J1939-21 | | | 8 | | | | |
| | 2164 | Source Address 164 | J1939-21 | | | 8 | | | | |
| | 2165 | Source Address 165 | J1939-21 | | | 8 | | | | |
| | 2166 | Source Address 166 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2167 | Source Address 167 | J1939-21 | | | 8 | | | | |
| | 2168 | Source Address 168 | J1939-21 | | | 8 | | | | |
| | 2169 | Source Address 169 | J1939-21 | | | 8 | | | | |
| | 2170 | Source Address 170 | J1939-21 | | | 8 | | | | |
| | 2171 | Source Address 171 | J1939-21 | | | 8 | | | | |
| | 2172 | Source Address 172 | J1939-21 | | | 8 | | | | |
| | 2173 | Source Address 173 | J1939-21 | | | 8 | | | | |
| | 2174 | Source Address 174 | J1939-21 | | | 8 | | | | |
| | 2175 | Source Address 175 | J1939-21 | | | 8 | | | | |
| | 2176 | Source Address 176 | J1939-21 | | | 8 | | | | |
| | 2177 | Source Address 177 | J1939-21 | | | 8 | | | | |
| | 2178 | Source Address 178 | J1939-21 | | | 8 | | | | |
| | 2179 | Source Address 179 | J1939-21 | | | 8 | | | | |
| | 2180 | Source Address 180 | J1939-21 | | | 8 | | | | |
| | 2181 | Source Address 181 | J1939-21 | | | 8 | | | | |
| | 2182 | Source Address 182 | J1939-21 | | | 8 | | | | |
| | 2183 | Source Address 183 | J1939-21 | | | 8 | | | | |
| | 2184 | Source Address 184 | J1939-21 | | | 8 | | | | |
| | 2185 | Source Address 185 | J1939-21 | | | 8 | | | | |
| | 2186 | Source Address 186 | J1939-21 | | | 8 | | | | |
| | 2187 | Source Address 187 | J1939-21 | | | 8 | | | | |
| | 2188 | Source Address 188 | J1939-21 | | | 8 | | | | |
| | 2189 | Source Address 189 | J1939-21 | | | 8 | | | | |
| | 2190 | Source Address 190 | J1939-21 | | | 8 | | | | |
| | 2191 | Source Address 191 | J1939-21 | | | 8 | | | | |
| | 2192 | Source Address 192 | J1939-21 | | | 8 | | | | |
| | 2193 | Source Address 193 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2194 | Source Address 194 | J1939-21 | | | 8 | | | | |
| | 2195 | Source Address 195 | J1939-21 | | | 8 | | | | |
| | 2196 | Source Address 196 | J1939-21 | | | 8 | | | | |
| | 2197 | Source Address 197 | J1939-21 | | | 8 | | | | |
| | 2198 | Source Address 198 | J1939-21 | | | 8 | | | | |
| | 2199 | Source Address 199 | J1939-21 | | | 8 | | | | |
| | 2200 | Source Address 200 | J1939-21 | | | 8 | | | | |
| | 2201 | Source Address 201 | J1939-21 | | | 8 | | | | |
| | 2202 | Source Address 202 | J1939-21 | | | 8 | | | | |
| | 2203 | Source Address 203 | J1939-21 | | | 8 | | | | |
| | 2204 | Source Address 204 | J1939-21 | | | 8 | | | | |
| | 2205 | Source Address 205 | J1939-21 | | | 8 | | | | |
| | 2206 | Source Address 206 | J1939-21 | | | 8 | | | | |
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| | 2208 | Source Address 208 | J1939-21 | | | 8 | | | | |
| | 2209 | Source Address 209 | J1939-21 | | | 8 | | | | |
| | 2210 | Source Address 210 | J1939-21 | | | 8 | | | | |
| | 2211 | Source Address 211 | J1939-21 | | | 8 | | | | |
| | 2212 | Source Address 212 | J1939-21 | | | 8 | | | | |
| | 2213 | Source Address 213 | J1939-21 | | | 8 | | | | |
| | 2214 | Source Address 214 | J1939-21 | | | 8 | | | | |
| | 2215 | Source Address 215 | J1939-21 | | | 8 | | | | |
| | 2216 | Source Address 216 | J1939-21 | | | 8 | | | | |
| | 2217 | Source Address 217 | J1939-21 | | | 8 | | | | |
| | 2218 | Source Address 218 | J1939-21 | | | 8 | | | | |
| | 2219 | Source Address 219 | J1939-21 | | | 8 | | | | |
| | 2220 | Source Address 220 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2221 | Source Address 221 | J1939-21 | | | 8 | | | | |
| | 2222 | Source Address 222 | J1939-21 | | | 8 | | | | |
| | 2223 | Source Address 223 | J1939-21 | | | 8 | | | | |
| | 2224 | Source Address 224 | J1939-21 | | | 8 | | | | |
| | 2225 | Source Address 225 | J1939-21 | | | 8 | | | | |
| | 2226 | Source Address 226 | J1939-21 | | | 8 | | | | |
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| | 2228 | Source Address 228 | J1939-21 | | | 8 | | | | |
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| | 2230 | Source Address 230 | J1939-21 | | | 8 | | | | |
| | 2231 | Source Address 231 | J1939-21 | | | 8 | | | | |
| | 2232 | Source Address 232 | J1939-21 | | | 8 | | | | |
| | 2233 | Source Address 233 | J1939-21 | | | 8 | | | | |
| | 2234 | Source Address 234 | J1939-21 | | | 8 | | | | |
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| | 2237 | Source Address 237 | J1939-21 | | | 8 | | | | |
| | 2238 | Source Address 238 | J1939-21 | | | 8 | | | | |
| | 2239 | Source Address 239 | J1939-21 | | | 8 | | | | |
| | 2240 | Source Address 240 | J1939-21 | | | 8 | | | | |
| | 2241 | Source Address 241 | J1939-21 | | | 8 | | | | |
| | 2242 | Source Address 242 | J1939-21 | | | 8 | | | | |
| | 2243 | Source Address 243 | J1939-21 | | | 8 | | | | |
| | 2244 | Source Address 244 | J1939-21 | | | 8 | | | | |
| | 2245 | Source Address 245 | J1939-21 | | | 8 | | | | |
| | 2246 | Source Address 246 | J1939-21 | | | 8 | | | | |
| | 2247 | Source Address 247 | J1939-21 | | | 8 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2248 | Source Address 248 | J1939-21 | | | 8 | | | | |
| | 2249 | Source Address 249 | J1939-21 | | | 8 | | | | |
| | 2250 | Source Address 250 | J1939-21 | | | 8 | | | | |
| | 2251 | Source Address 251 | J1939-21 | | | 8 | | | | |
| | 2252 | Source Address 252 | J1939-21 | | | 8 | | | | |
| | 2253 | Source Address 253 | J1939-21 | | | 8 | | | | |
| | 2254 | Source Address 254 | J1939-21 | | | 8 | | | | |
| | 2255 | Source Address 255 | J1939-21 | | | 8 | | | | |
| | 2256 | Aux Valve 8 Extend Port Pressure | ISO 11783-7 | 65064 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2257 | Aux Valve 8 Retract Port Pressure | ISO 11783-7 | 65064 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2258 | Aux Valve 8 Return Port Pressure | ISO 11783-7 | 65064 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2259 | Aux Valve 8 Port Flow Command | ISO 11783-7 | 65080 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2260 | Aux Valve 8 State Command | ISO 11783-7 | 65080 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2261 | Aux Valve 8 Fail Safe Mode Command | ISO 11783-7 | 65080 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2262 | Aux Valve 8 Fail Safe Mode | ISO 11783-7 | 65048 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2263 | Aux Valve 9 Extend Port Measured Flow | ISO 11783-7 | 65065 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2264 | Aux Valve 9 Retract Port Measured Flow | ISO 11783-7 | 65065 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2265 | Aux Valve 9 Extend Port Estimated Flow | ISO 11783-7 | 65049 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2266 | Aux Valve 9 Retract Port Estimated Flow | ISO 11783-7 | 65049 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2267 | Aux Valve 9 State | ISO 11783-7 | 65049 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2268 | Aux Valve 9 Extend Port Pressure | ISO 11783-7 | 65065 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2269 | Aux Valve 9 Retract Port Pressure | ISO 11783-7 | 65065 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2270 | Aux Valve 9 Return Port Pressure | ISO 11783-7 | 65065 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2271 | Aux Valve 9 Port Flow Command | ISO 11783-7 | 65081 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2272 | Aux Valve 9 State Command | ISO 11783-7 | 65081 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2273 | Aux Valve 9 Fail Safe Mode Command | ISO 11783-7 | 65081 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2274 | Aux Valve 9 Fail Safe Mode | ISO 11783-7 | 65049 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2275 | Aux Valve 10 Extend Port Measured Flow | ISO 11783-7 | 65066 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2276 | Aux Valve 10 Retract Port Measured Flow | ISO 11783-7 | 65066 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2277 | Aux Valve 10 Extend Port Estimated Flow | ISO 11783-7 | 65050 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2278 | Aux Valve 10 Retract Port Estimated Flow | ISO 11783-7 | 65050 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2279 | Aux Valve 10 State | ISO 11783-7 | 65050 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2280 | Aux Valve 10 Extend Port Pressure | ISO 11783-7 | 65066 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2281 | Aux Valve 10 Retract Port Pressure | ISO 11783-7 | 65066 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2282 | Aux Valve 10 Return Port Pressure | ISO 11783-7 | 65066 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2283 | Aux Valve 10 Port Flow Command | ISO 11783-7 | 65082 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2284 | Aux Valve 10 State Command | ISO 11783-7 | 65082 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2285 | Aux Valve 10 Fail Safe Mode Command | ISO 11783-7 | 65082 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2286 | Aux Valve 10 Fail Safe Mode | ISO 11783-7 | 65050 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2287 | Aux Valve 11 Extend Port Measured Flow | ISO 11783-7 | 65067 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2288 | Aux Valve 11 Retract Port Measured Flow | ISO 11783-7 | 65067 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2289 | Aux Valve 11 Extend Port Estimated Flow | ISO 11783-7 | 65051 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2290 | Aux Valve 11 Retract Port Estimated Flow | ISO 11783-7 | 65051 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2291 | Aux Valve 11 State | ISO 11783-7 | 65051 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2292 | Aux Valve 11 Extend Port Pressure | ISO 11783-7 | 65067 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2293 | Aux Valve 11 Retract Port Pressure | ISO 11783-7 | 65067 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2294 | Aux Valve 11 Return Port Pressure | ISO 11783-7 | 65067 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2295 | Aux Valve 11 Port Flow Command | ISO 11783-7 | 65083 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2296 | Aux Valve 11 State Command | ISO 11783-7 | 65083 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2297 | Aux Valve 11 Fail Safe Mode Command | ISO 11783-7 | 65083 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2298 | Aux Valve 11 Fail Safe Mode | ISO 11783-7 | 65051 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2299 | Aux Valve 12 Extend Port Measured Flow | ISO 11783-7 | 65068 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2300 | Aux Valve 12 Retract Port Measured Flow | ISO 11783-7 | 65068 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2301 | Aux Valve 12 Extend Port Estimated Flow | ISO 11783-7 | 65052 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2302 | Aux Valve 12 Retract Port Estimated Flow | ISO 11783-7 | 65052 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2303 | Aux Valve 12 State | ISO 11783-7 | 65052 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2304 | Aux Valve 12 Extend Port Pressure | ISO 11783-7 | 65068 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2305 | Aux Valve 12 Retract Port Pressure | ISO 11783-7 | 65068 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2306 | Aux Valve 12 Return Port Pressure | ISO 11783-7 | 65068 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2307 | Aux Valve 12 Port Flow Command | ISO 11783-7 | 65084 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2308 | Aux Valve 12 State Command | ISO 11783-7 | 65084 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2309 | Aux Valve 12 Fail Safe Mode Command | ISO 11783-7 | 65084 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2310 | Aux Valve 12 Fail Safe Mode | ISO 11783-7 | 65052 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2311 | Aux Valve 13 Extend Port Measured Flow | ISO 11783-7 | 65069 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2312 | Aux Valve 13 Retract Port Measured Flow | ISO 11783-7 | 65069 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2313 | Aux Valve 13 Extend Port Estimated Flow | ISO 11783-7 | 65053 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2314 | Aux Valve 13 Retract Port Estimated Flow | ISO 11783-7 | 65053 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2315 | Aux Valve 13 State | ISO 11783-7 | 65053 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2316 | Aux Valve 13 Extend Port Pressure | ISO 11783-7 | 65069 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2317 | Aux Valve 13 Retract Port Pressure | ISO 11783-7 | 65069 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2318 | Aux Valve 13 Return Port Pressure | ISO 11783-7 | 65069 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2319 | Aux Valve 13 Port Flow Command | ISO 11783-7 | 65085 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2320 | Aux Valve 13 State Command | ISO 11783-7 | 65085 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2321 | Aux Valve 13 Fail Safe Mode Command | ISO 11783-7 | 65085 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2322 | Aux Valve 13 Fail Safe Mode | ISO 11783-7 | 65053 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2323 | Aux Valve 14 Extend Port Measured Flow | ISO 11783-7 | 65070 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2324 | Aux Valve 14 Retract Port Measured Flow | ISO 11783-7 | 65070 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2325 | Aux Valve 14 Extend Port Estimated Flow | ISO 11783-7 | 65054 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2326 | Aux Valve 14 Retract Port Estimated Flow | ISO 11783-7 | 65054 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2327 | Aux Valve 14 State | ISO 11783-7 | 65054 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2328 | Aux Valve 14 Extend Port Pressure | ISO 11783-7 | 65070 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2329 | Aux Valve 14 Retract Port Pressure | ISO 11783-7 | 65070 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2330 | Aux Valve 14 Return Port Pressure | ISO 11783-7 | 65070 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2331 | Aux Valve 14 Port Flow Command | ISO 11783-7 | 65086 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2332 | Aux Valve 14 State Command | ISO 11783-7 | 65086 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2333 | Aux Valve 14 Fail Safe Mode Command | ISO 11783-7 | 65086 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |
| | 2334 | Aux Valve 14 Fail Safe Mode | ISO 11783-7 | 65054 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2335 | Aux Valve 15 Extend Port Measured Flow | ISO 11783-7 | 65071 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2336 | Aux Valve 15 Retract Port Measured Flow | ISO 11783-7 | 65071 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2337 | Aux Valve 15 Extend Port Estimated Flow | ISO 11783-7 | 65055 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2338 | Aux Valve 15 Retract Port Estimated Flow | ISO 11783-7 | 65055 | 2 | 8 | The value reported by the controller of flow through the retract port of an auxiliary valve of a tractor which could be based on the commanded position of the valve. | | | |
| | 2339 | Aux Valve 15 State | ISO 11783-7 | 65055 | 3.1 | 4 | The measured state of the auxiliary valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2340 | Aux Valve 15 Extend Port Pressure | ISO 11783-7 | 65071 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor. | | | |
| | 2341 | Aux Valve 15 Retract Port Pressure | ISO 11783-7 | 65071 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor. | | | |
| | 2342 | Aux Valve 15 Return Port Pressure | ISO 11783-7 | 65071 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor. | | | |
| | 2343 | Aux Valve 15 Port Flow Command | ISO 11783-7 | 65087 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor, expressed as a percentage of full flow. | | | |
| | 2344 | Aux Valve 15 State Command | ISO 11783-7 | 65087 | 3.1 | 4 | Command for setting the auxiliary valve state. | | | |
| | 2345 | Aux Valve 15 Fail Safe Mode Command | ISO 11783-7 | 65087 | 3.7 | 2 | Command for setting the fail safe mode of an auxiliary valve. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2346 | Aux Valve 15 Fail Safe Mode | ISO 11783-7 | 65055 | 3.7 | 2 | The measured state the fail safe mode of an auxiliary valve. | | | |
| | 2347 | High Beam Head Light Command | J1939-71 | 65089 | 1.7 | 2 | Command to activate or de-activate the tractor high beam head light lamps. | | | |
| | 2348 | High Beam Head Light Data | J1939-71 | 65088 | 1.7 | 2 | This parameter provides measured data from the tractor high beam head light lamps. | | | |
| | 2349 | Low Beam Head Light Command | J1939-71 | 65089 | 1.5 | 2 | Command to activate or de-activate the tractor low beam head light lamps. | | | |
| | 2350 | Low Beam Head Light Data | J1939-71 | 65088 | 1.5 | 2 | This parameter provides measured data from the tractor low beam head light lamps. | | | |
| | 2351 | Alternate Beam Head Light Command | J1939-71 | 65089 | 1.3 | 2 | Command to activate or de-activate the tractor alternate head lights (only low beam is available on alternate head lights). | | | |
| | 2352 | Alternate Beam Head Light Data | J1939-71 | 65088 | 1.3 | 2 | This parameter provides measured data from the tractor alternate beam head light lamps. | | | |
| | 2353 | Tractor Front Low Mounted Work Lights Command | J1939-71 | 65089 | 6.5 | 2 | Command to activate or de-activate the tractor front low mounted work lights. | | | |
| | 2354 | Tractor Front Low Mounted Work Lights | J1939-71 | 65088 | 6.5 | 2 | This parameter provides measured data from the tractor front low mounted work lights. | | | |
| | 2355 | Tractor Front High Mounted Work Lights Command | J1939-71 | 65089 | 6.7 | 2 | Command to activate or de-activate the tractor front high mounted work lights. | | | |
| | 2356 | Tractor Front High Mounted Work Lights | J1939-71 | 65088 | 6.7 | 2 | This parameter provides measured data from the tractor front high mounted work lights. | | | |
| | 2357 | Tractor Underside Mounted Work Lights Command | J1939-71 | 65089 | 5.3 | 2 | Command to activate or de-activate the tractor underside mounted work lights. | | | |
| | 2358 | Tractor Underside Mounted Work Lights | J1939-71 | 65088 | 5.3 | 2 | This parameter provides measured data from the tractor underside mounted work lights. | | | |
| | 2359 | Tractor Rear Low Mounted Work Lights Command | J1939-71 | 65089 | 5.5 | 2 | Command to activate or de-activate the tractor rear low mounted work lights. | | | |
| | 2360 | Tractor Rear Low Mounted Work Lights | J1939-71 | 65088 | 5.5 | 2 | This parameter provides measured data from the tractor rear low mounted work lights. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2361 | Tractor Rear High Mounted Work Lights Command | J1939-71 | 65089 | 5.7 | 2 | Command to activate or de-activate the tractor rear high mounted work lights. | | | |
| | 2362 | Tractor Rear High Mounted Work Lights | J1939-71 | 65088 | 5.7 | 2 | This parameter provides measured data from the tractor rear high mounted work lights. | | | |
| | 2363 | Tractor Side Low Mounted Work Lights Command | J1939-71 | 65089 | 6.1 | 2 | Command to activate or de-activate the tractor side low mounted work lights. | | | |
| | 2364 | Tractor Side Low Mounted Work Lights | J1939-71 | 65088 | 6.1 | 2 | This parameter provides measured data from the tractor side low mounted work lights. | | | |
| | 2365 | Tractor Side High Mounted Work Lights Command | J1939-71 | 65089 | 6.3 | 2 | Command to activate or de-activate the tractor side high mounted work lights. | | | |
| | 2366 | Tractor Side High Mounted Work Lights | J1939-71 | 65088 | 6.3 | 2 | This parameter provides measured data from the tractor side high mounted work lights. | | | |
| | 2367 | Left Turn Signal Lights Command | J1939-71 | 65089 | 2.7 | 2 | Command to activate or de-activate left turn signal lights on the tractor and all connected implements | | | |
| | 2368 | Left Turn Signal Lights | J1939-71 | 65088 | 2.7 | 2 | This parameter provides measured data from the tractor and attached implement left turn signal lights. | | | |
| | 2369 | Right Turn Signal Lights Command | J1939-71 | 65089 | 2.5 | 2 | Command to activate or de-activate right turn signal lights on the tractor and all connected implements | | | |
| | 2370 | Right Turn Signal Lights | J1939-71 | 65088 | 2.5 | 2 | This parameter provides measured data from the tractor and attached implement right turn signal lights. | | | |
| | 2371 | Left Stop Light Command | J1939-71 | 65089 | 3.7 | 2 | Command to activate or de-activate the tractor and implement left stop lights | | | |
| | 2372 | Left Stop Light | J1939-71 | 65088 | 3.7 | 2 | This parameter provides measured data from the tractor and attached implement left stop lights. | | | |
| | 2373 | Right Stop Light Command | J1939-71 | 65089 | 3.5 | 2 | Command to activate or de-activate the tractor and implement right stop light | | | |
| | 2374 | Right Stop Light | J1939-71 | 65088 | 3.5 | 2 | This parameter provides measured data from the tractor and attached implement right stop lights. | | | |
| | 2375 | Center Stop Light Command | J1939-71 | 65089 | 3.3 | 2 | Command to activate or de-activate the tractor and implement center stop light | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2376 | Center Stop Light | J1939-71 | 65088 | 3.3 | 2 | This parameter provides measured data from the tractor and attached implement center stop lights. | | | |
| | 2377 | Tractor Marker Light Command | J1939-71 | 65089 | 4.7 | 2 | Command to activate or de-activate tractor and implement front position lights, rear red tail lights, side amber running lights, license plate lights and instrument and switch back lights. | | | |
| | 2378 | Tractor Marker Light | J1939-71 | 65088 | 4.7 | 2 | This parameter provides measured data from the tractor and attached implement marker lights, including front position lights, rear tail lights, side running lights, license plate lights and instruments and switch back lights. | | | |
| | 2379 | Implement Marker Light Command | J1939-71 | 65089 | 4.5 | 2 | Command to activate or de-activate implement front position lights, rear red tail lights, side amber running lights, license plate lights and instrument and switch back lights. | | | |
| | 2380 | Implement Marker Light | J1939-71 | 65088 | 4.5 | 2 | This parameter provides measured data from an attached implement marker lights, including front position lights, rear tail lights, side running lights, license plate lights and instruments and switch back lights. | | | |
| | 2381 | Tractor Clearance Light Command | J1939-71 | 65089 | 4.3 | 2 | Command to activate or de-activate the tractor high mounted clearance and center ID lights | | | |
| | 2382 | Tractor Clearance Light | J1939-71 | 65088 | 4.3 | 2 | This parameter provides measured data from the tractor high mounted clearance and center ID lights. | | | |
| | 2383 | Implement Clearance Light Command | J1939-71 | 65089 | 4.1 | 2 | Command to activate or de-activate the implement high mounted clearance and lights. | | | |
| | 2384 | Implement Clearance Light | J1939-71 | 65088 | 4.1 | 2 | This parameter provides measured data from an attached implement high mounted clearance lights. | | | |
| | 2385 | Rotating Beacon Light Command | J1939-71 | 65089 | 2.3 | 2 | Command to activate or de-activate slow moving vehicle indicator lights on tractor and/or implements. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2386 | Rotating Beacon Light | J1939-71 | 65088 | 2.3 | 2 | This parameter provides measured data from the beacon light on tractor or attached implements. | | | |
| | 2387 | Tractor Front Fog Lights Command | J1939-71 | 65089 | 2.1 | 2 | Command to activate or de-activate tractor front fog lights | | | |
| | 2388 | Tractor Front Fog Lights | J1939-71 | 65088 | 2.1 | 2 | This parameter provides measured data from the tractor front fog lights. | | | |
| | 2389 | Rear Fog Light Command | J1939-71 | 65089 | 5.1 | 2 | Command to activate or de-activate tractor or implement rear fog lights. | | | |
| | 2390 | Rear Fog Lights | J1939-71 | 65088 | 5.1 | 2 | This parameter provides measured data from the tractor and/or implement rear fog lights. | | | |
| | 2391 | Back Up Light and Alarm Horn Command | J1939-71 | 65089 | 3.1 | 2 | Command to activate or de-activate the back up lights and/ or associated alarm if required. | | | |
| | 2392 | Back Up Light and Alarm Horn | J1939-71 | 65088 | 3.1 | 2 | This parameter provides measured data from the back up lights and/ or associated alarm. | | | |
| | 2393 | Lighting Data Request Command | J1939-71 | 65089 | 8.1 | 2 | Command to provide a response of the light state | | | |
| | 2394 | Implement Rear Work Light | J1939-71 | 65088 | 8.7 | 2 | This parameter provides measured data from the implement rear work lamps. | | | |
| | 2395 | Implement OEM Option 1 Light Command | J1939-71 | 65089 | 7.3 | 2 | Command to activate or de-activate an implement OEM option 1 light. This is provided to meet special needs on implements, such as tank inspection or filling lights. | | | |
| | 2396 | Implement OEM Option 1 Light | J1939-71 | 65088 | 7.3 | 2 | This parameter provides measured data from the implement OEM option 1 light. | | | |
| | 2397 | Implement OEM Option 2 Light Command | J1939-71 | 65089 | 7.1 | 2 | Command to activate or de-activate an implement OEM option 2 light. This is provided to meet special needs on implements, such as tank inspection or filling lights. | | | |
| | 2398 | Implement OEM Option 2 Light | J1939-71 | 65088 | 7.1 | 2 | This parameter provides measured data from the implement OEM option 2 light. | | | |
| | 2399 | Implement Left Forward Work Light Command | J1939-71 | 65089 | 8.5 | 2 | Command to activate or de-activate the forward facing work lights toward the left end of the implement. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2400 | Implement Left Forward Work Light | J1939-71 | 65088 | 8.5 | 2 | This parameter provides measured data from the forward facing work lights toward the left end of the implement. | | | |
| | 2401 | Implement Right Forward Work Light Command | J1939-71 | 65089 | 8.3 | 2 | Command to activate or de-activate the forward facing work lights toward the right end of the implement. | | | |
| | 2402 | Implement Right Forward Work Light | J1939-71 | 65088 | 8.3 | 2 | This parameter provides measured data from the forward facing work lights toward the right end of the implement. | | | |
| | 2403 | Running Light Command | J1939-71 | 65089 | 1.1 | 2 | Command to activate or de-activate the tractor or powered vehicle running lights. Usually only used for on road vehicles. | | | |
| | 2404 | Running Light | J1939-71 | 65088 | 1.1 | 2 | This parameter provides measured data from the vehicle's running lights. | | | |
| | 2405 | Implement Rear Work Light Command | J1939-71 | 65089 | 8.7 | 2 | Command to activate or de-activate implement rear work lights. (This is also the same as Reversing Lights for truck applications.) | | | |
| | 2406 | Implement Right Facing Work Light Command | J1939-71 | 65089 | 7.5 | 2 | Command to activate or de-activate work lights mounted on an implement to illuminate beyond right end of the implement. | | | |
| | 2407 | Implement Right Facing Work Light | J1939-71 | 65088 | 7.5 | 2 | This parameter provides measured data from the work lights mounted on an implement to illuminate beyond right end of the implement. | | | |
| | 2408 | Rear Power Take Off Engagement | ISO 11783-7 | 65091 | 5.7 | 2 | A measured signal indicating that the rear power take off is engaged or disengage. | | | |
| | 2409 | Number of Members in Working Set [1] | J1939-81 | 64975 | 1 | 8 | The number of members in a particular Working Set. | | | |
| | 2409 | Number of Members in Working Set [1] | J1939-81 | 65037 | 1 | 8 | The number of members in a particular Working Set. | | | |
| | 2410 | Language Code Command | ISO 11783-7 | 65039 | 1-2 | 16 | Command sent to all ECUs which specifies the operator's desired language of information. ISO 11783 shall use the 2-character string country codes in ISO 639. | | | |
| | 2411 | Decimal Symbol Command | ISO 11783-7 | 65039 | 3.7 | 2 | Command sent to all ECUs which specifies that a decimal point or Comma should be displayed. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2412 | Date Command | ISO 11783-7 | 65039 | 4 | 8 | Command sent to all ECUs which specifies the displayed order of the date. | | | |
| | 2413 | Time Command | ISO 11783-7 | 65039 | 3.5 | 2 | Command sent to all ECUs which specifies the displayed format of the time | | | |
| | 2414 | Distance Unit Command | ISO 11783-7 | 65039 | 5.7 | 2 | Command to specify the distance units | | | |
| | 2415 | Area Unit Command | ISO 11783-7 | 65039 | 5.5 | 2 | Command to specify the area units | | | |
| | 2416 | Volume Unit Command | ISO 11783-7 | 65039 | 5.3 | 2 | Command to specify the volume units | | | |
| | 2417 | Mass Unit Command | ISO 11783-7 | 65039 | 5.1 | 2 | Command to specify the mass units | | | |
| | 2418 | Repetition Rate Parameter [1] | ISO 11783-7 | 52224 | 4-5 | 16 | This parameter defines the repetition rate of the specified PGN. | | | |
| | 2418 | Repetition Rate Parameter [1] | ISO 11783-7 | 65038 | 4-5 | 16 | This parameter defines the repetition rate of the specified PGN. | | | |
| | 2419 | Data Format/Error Condition [1] | ISO 11783-7 | 51968 | 1.6 | 2 | This 2 bit parameter that indicates the format or availability of the data in the following Process Data Parameter. | | | |
| | 2419 | Data Format/Error Condition [1] | ISO 11783-7 | 52224 | 6.6 | 2 | This 2 bit parameter that indicates the format or availability of the data in the following Process Data Parameter. | | | |
| | 2419 | Data Format/Error Condition [1] | ISO 11783-7 | 65038 | 6.6 | 2 | This 2 bit parameter that indicates the format or availability of the data in the following Process Data Parameter. | | | |
| | 2420 | Process Data Type [1] | ISO 11783-7 | 51968 | 1.4 | 2 | This 2 bit parameter indicates what the data in the following Process Data Parameters is to be used for. | | | |
| | 2420 | Process Data Type [1] | ISO 11783-7 | 52224 | 6.4 | 2 | This 2 bit parameter indicates what the data in the following Process Data Parameters is to be used for. | | | |
| | 2420 | Process Data Type [1] | ISO 11783-7 | 65038 | 6.4 | 2 | This 2 bit parameter indicates what the data in the following Process Data Parameters is to be used for. | | | |
| | 2421 | Process Data Modifier [1] | ISO 11783-7 | 51968 | 1.1 | 3 | This 3 bit parameter that indicates how the data in the following Process Data Parameters is to be used when combined with the Process Data Type parameter. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2421 | Process Data Modifier [1] | ISO 11783-7 | 52224 | 6.1 | 3 | This 3 bit parameter that indicates how the data in the following Process Data Parameters is to be used when combined with the Process Data Type parameter. | | | |
| | 2421 | Process Data Modifier [1] | ISO 11783-7 | 65038 | 6.1 | 3 | This 3 bit parameter that indicates how the data in the following Process Data Parameters is to be used when combined with the Process Data Type parameter. | | | |
| | 2422 | Count Number | ISO 11783-7 | 51968 | 2 | 8 | This parameter indicates which member of the set of possible entities is being referenced. The means of generating this Count Number is explained in the following clause. | | | |
| | 2423 | Group Number | ISO 11783-7 | | | 8 | This parameter is used by software within the Management Computer, in combination with Element Number, to produce a unique Count Number for each member of a particular set of entities that are on an Implement. Refer to ISO 11783-10[3]. | | | |
| | 2424 | Element Number | ISO 11783-7 | | | 8 | This parameter is used by software within the Management Computer, in combination with Group Number, to produce a unique Count Number for each member of a particular set of entities that are on an Implement. Refer to ISO 11783-10[3]. | | | |
| | 2425 | Implement Type [1] | ISO 11783-7 | 51968 | 3.5 | 4 | This 4 bit parameter indicates which data dictionary page is to be used to locate the identity of the following data. | | | |
| | 2425 | Implement Type [1] | ISO 11783-7 | 52224 | 7.5 | 4 | This 4 bit parameter indicates which data dictionary page is to be used to locate the identity of the following data. | | | |
| | 2425 | Implement Type [1] | ISO 11783-7 | 65038 | 7.5 | 4 | This 4 bit parameter indicates which data dictionary page is to be used to locate the identity of the following data. | | | |
| | 2426 | Implement Position [1] | ISO 11783-7 | 51968 | 3.1 | 4 | This 4 bit parameter of this message will indicate which Implement is referenced within a set of identical Implements. | | | |
| | 2426 | Implement Position [1] | ISO 11783-7 | 52224 | 7.1 | 4 | This 4 bit parameter of this message will indicate which Implement is referenced within a set of identical Implements. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2426 | Implement Position [1] | ISO 11783-7 | 65038 | 7.1 | 4 | This 4 bit parameter of this message will indicate which Implement is referenced within a set of identical Implements. | | | |
| | 2427 | Data Dictionary Row [1] | ISO 11783-7 | 51968 | 4.5 | 4 | This 4 bit parameter indicates the Row that is to be used within the specific Data Dictionary Table identified by the Implement Type. This is the Group (GRUP) in LBS documents. | | | |
| | 2427 | Data Dictionary Row [1] | ISO 11783-7 | 52224 | 8.5 | 4 | This 4 bit parameter indicates the Row that is to be used within the specific Data Dictionary Table identified by the Implement Type. This is the Group (GRUP) in LBS documents. | | | |
| | 2427 | Data Dictionary Row [1] | ISO 11783-7 | 65038 | 8.5 | 4 | This 4 bit parameter indicates the Row that is to be used within the specific Data Dictionary Table identified by the Implement Type. This is the Group (GRUP) in LBS documents. | | | |
| | 2428 | Data Dictionary Column [1] | ISO 11783-7 | 51968 | 4.1 | 4 | This 4 bit parameter indicates the Column that is to be used within the specific Data Dictionary Table identified by the Implement Type. This is the Instance (INST) in LBS documents. | | | |
| | 2428 | Data Dictionary Column [1] | ISO 11783-7 | 52224 | 8.1 | 4 | This 4 bit parameter indicates the Column that is to be used within the specific Data Dictionary Table identified by the Implement Type. This is the Instance (INST) in LBS documents. | | | |
| | 2428 | Data Dictionary Column [1] | ISO 11783-7 | 65038 | 8.1 | 4 | This 4 bit parameter indicates the Column that is to be used within the specific Data Dictionary Table identified by the Implement Type. This is the Instance (INST) in LBS documents. | | | |
| | 2429 | Process Variable Value | ISO 11783-7 | 51968 | 5-8 | 32 | This 4 byte parameter contains the actual data for the Process Data Message. | | | |
| | 2430 | Engine Coolant Level - Main Radiator | J1939 | | | | Indicator of coolant level in main radiator or engine. | | | |
| | 2431 | Engine Oil Rail High Pressure Leakage | J1939 | | | | Indicates oil leakage in the high pressure oil rail of the engine. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2432 | Engine Demand – Percent Torque | J1939-71 | 61444 | 8 | 8 | The requested torque output of the engine by all dynamic internal inputs, including smoke control, noise control and low and high speed governing. | | | |
| | 2433 | Engine Exhaust Gas Temperature - Right Manifold | J1939-71 | 65031 | 1-2 | 16 | Temperature of combustion byproducts within the right engine exhaust manifold. | | | |
| | 2434 | Engine Exhaust Gas Temperature - Left Manifold | J1939-71 | 65031 | 3-4 | 16 | Temperature of combustion byproducts within the left engine exhaust manifold. | | | |
| | 2435 | Sea Water Pump Outlet Pressure | J1939-71 | 65172 | 3 | 8 | Gauge pressure of liquid found at outlet of sea water pump in sea water cooling system. | | | |
| | 2436 | Generator Average AC Frequency | J1939-75 | 65030 | 5-6 | 16 | Average AC frequency measured at the generator output. | | | |
| | 2437 | Generator Phase A AC Frequency | J1939-75 | 65027 | 5-6 | 16 | AC frequency measured at the generator phase A output. | | | |
| | 2438 | Generator Phase B AC Frequency | J1939-75 | 65024 | 5-6 | 16 | AC frequency measured at the generator phase B output. | | | |
| | 2439 | Generator Phase C AC Frequency | J1939-75 | 65021 | 5-6 | 16 | AC frequency measured at the generator phase C output. | | | |
| | 2440 | Generator Average Line-Line AC RMS Voltage | J1939-75 | 65030 | 1-2 | 16 | Average Line to Line RMS voltage measured at the generator output. | | | |
| | 2441 | Generator Phase AB Line-Line AC RMS Voltage | J1939-75 | 65027 | 1-2 | 16 | Line to Line RMS voltage measured at the generator phase AB output. | | | |
| | 2442 | Generator Phase BC Line-Line AC RMS Voltage | J1939-75 | 65024 | 1-2 | 16 | Line to Line RMS voltage measured at the generator phase BC output. | | | |
| | 2443 | Generator Phase CA Line-Line AC RMS Voltage | J1939-75 | 65021 | 1-2 | 16 | Line to Line RMS voltage measured at the generator phase CA output. | | | |
| | 2444 | Generator Average Line-Neutral AC RMS Voltage | J1939-75 | 65030 | 3-4 | 16 | The average Line to Neutral AC RMS voltage measured at the Generator output. | | | |
| | 2445 | Generator Phase A Line-Neutral AC RMS Voltage | J1939-75 | 65027 | 3-4 | 16 | Line to Neutral RMS voltage measured at the generator phase A output. | | | |
| | 2446 | Generator Phase B Line-Neutral AC RMS Voltage | J1939-75 | 65024 | 3-4 | 16 | Line to Neutral RMS voltage measured at the generator phase B output. | | | |
| | 2447 | Generator Phase C Line-Neutral AC RMS Voltage | J1939-75 | 65021 | 3-4 | 16 | Line to Neutral RMS voltage measured at the generator phase C output. | | | |
| | 2448 | Generator Average AC RMS Current | J1939-75 | 65030 | 7-8 | 16 | Average RMS current measured at the generator output. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2449 | Generator Phase A AC RMS Current | J1939-75 | 65027 | 7-8 | 16 | RMS current measured at the generator phase A output. | | | |
| | 2450 | Generator Phase B AC RMS Current | J1939-75 | 65024 | 7-8 | 16 | RMS current measured at the generator phase B output. | | | |
| | 2451 | Generator Phase C AC RMS Current | J1939-75 | 65021 | 7-8 | 16 | RMS current measured at the generator phase C output. | | | |
| | 2452 | Generator Total Real Power | J1939-75 | 65029 | 1-4 | 32 | Total real power delivered by the generator. | | | |
| | 2453 | Generator Phase A Real Power | J1939-75 | 65026 | 1-4 | 32 | The real power delivered by phase A of the generator. | | | |
| | 2454 | Generator Phase B Real Power | J1939-75 | 65023 | 1-4 | 32 | The real power delivered by phase B of the generator. | | | |
| | 2455 | Generator Phase C Real Power | J1939-75 | 65020 | 1-4 | 32 | The real power delivered by phase C of the generator. | | | |
| | 2456 | Generator Total Reactive Power | J1939-75 | 65028 | 1-4 | 32 | The total reactive power delivered by the generator | | | |
| | 2457 | Generator Phase A Reactive Power | J1939-75 | 65025 | 1-4 | 32 | The reactive power delivered by phase A of the generator | | | |
| | 2458 | Generator Phase B Reactive Power | J1939-75 | 65022 | 1-4 | 32 | The reactive power delivered by phase B of the generator | | | |
| | 2459 | Generator Phase C Reactive Power | J1939-75 | 65019 | 1-4 | 32 | The reactive power delivered by phase C of the generator | | | |
| | 2460 | Generator Total Apparent Power | J1939-75 | 65029 | 5-8 | 32 | The total apparent power delivered by the generator. | | | |
| | 2461 | Generator Phase A Apparent Power | J1939-75 | 65026 | 5-8 | 32 | The apparent power delivered by phase A of the generator. | | | |
| | 2462 | Generator Phase B Apparent Power | J1939-75 | 65023 | 5-8 | 32 | The apparent power delivered by phase B of the generator. | | | |
| | 2463 | Generator Phase C Apparent Power | J1939-75 | 65020 | 5-8 | 32 | The apparent power delivered by phase C of the generator. | | | |
| | 2464 | Generator Overall Power Factor | J1939-75 | 65028 | 5-6 | 16 | The average power factor of the generator. | | | |
| | 2465 | Generator Phase A Power Factor | J1939-75 | 65025 | 5-6 | 16 | The power factor of phase A of the generator. | | | |
| | 2466 | Generator Phase B Power Factor | J1939-75 | 65022 | 5-6 | 16 | The power factor of phases B of the generator. | | | |
| | 2467 | Generator Phase C Power Factor | J1939-75 | 65019 | 5-6 | 16 | The power factor of phases C of the generator. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2468 | Generator Total kW Hours Export | J1939-75 | 65018 | 1-4 | 32 | The total kilowatt-hours that have been exported by the generator. | | | |
| | 2469 | Generator Total kW Hours Import | J1939-75 | 65018 | 5-8 | 32 | The total kilowatt-hours that have been imported by the generator. | | | |
| | 2470 | Utility Average AC Frequency | J1939-75 | 65017 | 5-6 | 16 | Average AC frequency measured at the utility incomer. | | | |
| | 2471 | Utility Phase A AC Frequency | J1939-75 | 65014 | 5-6 | 16 | AC frequency measured at the utility incomer phase A. | | | |
| | 2472 | Utility Phase B AC Frequency | J1939-75 | 65011 | 5-6 | 16 | AC frequency measured at the utility incomer phase B. | | | |
| | 2473 | Utility Phase C AC Frequency | J1939-75 | 65008 | 5-6 | 16 | AC frequency measured at the utility incomer phase C. | | | |
| | 2474 | Utility Average Line-Line AC RMS Voltage | J1939-75 | 65017 | 1-2 | 16 | Average Line to Line RMS voltage measured at the utility incomer . | | | |
| | 2475 | Utility Phase AB Line-Line AC RMS Voltage | J1939-75 | 65014 | 1-2 | 16 | Line to Line RMS voltage measured at the utility incomer phase AB. | | | |
| | 2476 | Utility Phase BC Line-Line AC RMS Voltage | J1939-75 | 65011 | 1-2 | 16 | Line to Line RMS voltage measured at the utility incomer phase BC. | | | |
| | 2477 | Utility Phase CA Line-Line AC RMS Voltage | J1939-75 | 65008 | 1-2 | 16 | Line to Line RMS voltage measured at the utility incomer phase CA. | | | |
| | 2478 | Utility Average Line-Neutral AC RMS Voltage | J1939-75 | 65017 | 3-4 | 16 | The average Line to Neutral AC RMS voltage measured at the utility incomer . | | | |
| | 2479 | Utility Phase A Line-Neutral AC RMS Voltage | J1939-75 | 65014 | 3-4 | 16 | Line to Neutral RMS voltage measured at the utility incomer phase A. | | | |
| | 2480 | Utility Phase B Line-Neutral AC RMS Voltage | J1939-75 | 65011 | 3-4 | 16 | Line to Neutral RMS voltage measured at the utility incomer phase B. | | | |
| | 2481 | Utility Phase C Line-Neutral AC RMS Voltage | J1939-75 | 65008 | 3-4 | 16 | Line to Neutral RMS voltage measured at the utility incomer phase C. | | | |
| | 2482 | Utility Average AC RMS Current | J1939-75 | 65017 | 7-8 | 16 | Average RMS current measured at the utility incomer. | | | |
| | 2483 | Utility Phase A AC RMS Current | J1939-75 | 65014 | 7-8 | 16 | RMS current measured at the utility incomer phase A. | | | |
| | 2484 | Utility Phase B AC RMS Current | J1939-75 | 65011 | 7-8 | 16 | RMS current measured at the utility incomer phase B. | | | |
| | 2485 | Utility Phase C AC RMS Current | J1939-75 | 65008 | 7-8 | 16 | RMS current measured at the utility incomer phase C. | | | |
| | 2486 | Utility Total Real Power | J1939-75 | 65016 | 1-4 | 32 | Total real power delivered by the utility incomer. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2487 | Utility Phase A Real Power | J1939-75 | 65013 | 1-4 | 32 | The real power delivered by phase A of the utility incomer. | | | |
| | 2488 | Utility Phase B Real Power | J1939-75 | 65010 | 1-4 | 32 | The real power delivered by phase B of the utility incomer. | | | |
| | 2489 | Utility Phase C Real Power | J1939-75 | 65007 | 1-4 | 32 | The real power delivered by phase C of the utility incomer. | | | |
| | 2490 | Utility Total Reactive Power | J1939-75 | 65015 | 1-4 | 32 | The total reactive power delivered by the utility incomer | | | |
| | 2491 | Utility Phase A Reactive Power | J1939-75 | 65012 | 1-4 | 32 | The reactive power delivered by phase A of the utility incomer | | | |
| | 2492 | Utility Phase B Reactive Power | J1939-75 | 65009 | 1-4 | 32 | The reactive power delivered by phase B of the utility incomer | | | |
| | 2493 | Utility Phase C Reactive Power | J1939-75 | 65006 | 1-4 | 32 | The reactive power delivered by phase C of the utility incomer | | | |
| | 2494 | Utility Total Apparent Power | J1939-75 | 65016 | 5-8 | 32 | The total apparent power delivered by the utility incomer. | | | |
| | 2495 | Utility Phase A Apparent Power | J1939-75 | 65013 | 5-8 | 32 | The apparent power delivered by phase A of the utility incomer. | | | |
| | 2496 | Utility Phase B Apparent Power | J1939-75 | 65010 | 5-8 | 32 | The apparent power delivered by phase B of the utility incomer. | | | |
| | 2497 | Utility Phase C Apparent Power | J1939-75 | 65007 | 5-8 | 32 | The apparent power delivered by phase C of the utility incomer. | | | |
| | 2498 | Utility Overall Power Factor | J1939-75 | 65015 | 5-6 | 16 | The average power factor of the utility incomer. | | | |
| | 2499 | Utility Phase A Power Factor | J1939-75 | 65012 | 5-6 | 16 | The power factor of phase A of the utility incomer. | | | |
| | 2500 | Utility Phase B Power Factor | J1939-75 | 65009 | 5-6 | 16 | The power factor of phases B of the utility incomer. | | | |
| | 2501 | Utility Phase C Power Factor | J1939-75 | 65006 | 5-6 | 16 | The power factor of phases C of the utility incomer. | | | |
| | 2502 | Utility Total kW Hours Export | J1939-75 | 65005 | 1-4 | 32 | The total kilowatt-hours that have been exported by the utility incomer. | | | |
| | 2503 | Utility Total kW Hours Import | J1939-75 | 65005 | 5-8 | 32 | The total kilowatt-hours that have been imported by the utility incomer. | | | |
| | 2504 | Bus #1 Average AC Frequency | J1939-75 | 65004 | 5-6 | 16 | Average AC frequency measured at bus #1. | | | |
| | 2505 | Bus #1 Phase A AC Frequency | J1939-75 | 65003 | 5-6 | 16 | AC frequency measured at bus #1 phase A. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2506 | Bus #1 Phase B AC Frequency | J1939-75 | 65002 | 5-6 | 16 | AC frequency measured at bus #1 phase B. | | | |
| | 2507 | Bus #1 Phase C AC Frequency | J1939-75 | 65001 | 5-6 | 16 | AC frequency measured at bus #1 phase C. | | | |
| | 2508 | Bus #1 Average Line-Line AC RMS Voltage | J1939-75 | 65004 | 1-2 | 16 | Average Line to Line RMS voltage measured at bus #1 . | | | |
| | 2509 | Bus #1 Phase AB Line-Line AC RMS Voltage | J1939-75 | 65003 | 1-2 | 16 | Line to Line RMS voltage measured at bus #1 phase AB. | | | |
| | 2510 | Bus #1 Phase BC Line-Line AC RMS Voltage | J1939-75 | 65002 | 1-2 | 16 | Line to Line RMS voltage measured at bus #1 phase BC. | | | |
| | 2511 | Bus #1 Phase CA Line-Line AC RMS Voltage | J1939-75 | 65001 | 1-2 | 16 | Line to Line RMS voltage measured at bus #1 phase CA. | | | |
| | 2512 | Bus #1 Average Line-Neutral AC RMS Voltage | J1939-75 | 65004 | 3-4 | 16 | The average Line to Neutral AC RMS voltage measured at bus #1 . | | | |
| | 2513 | Bus #1 Phase A Line-Neutral AC RMS Voltage | J1939-75 | 65003 | 3-4 | 16 | Line to Neutral RMS voltage measured at bus #1 phase A. | | | |
| | 2514 | Bus #1 Phase B Line-Neutral AC RMS Voltage | J1939-75 | 65002 | 3-4 | 16 | Line to Neutral RMS voltage measured at bus #1 phase B. | | | |
| | 2515 | Bus #1 Phase C Line-Neutral AC RMS Voltage | J1939-75 | 65001 | 3-4 | 16 | Line to Neutral RMS voltage measured at bus #1 phase C. | | | |
| | 2516 | Bus #1/Generator AC Phase Difference | J1939-75 | 65000 | 3-4 | 16 | The phase difference between the Bus #1 voltage and Generator voltage. | | | |
| | 2517 | Bus #1/Utility AC Phase Difference | J1939-75 | 64999 | 3-4 | 16 | The phase difference between the Bus #1 voltage and Utility voltage. | | | |
| | 2518 | Generator Overall Power Factor Lagging | J1939-75 | 65028 | 7.1 | 2 | Lead/lag status for generator average power factor. | | | |
| | 2519 | Generator Phase A Power Factor Lagging | J1939-75 | 65025 | 7.1 | 2 | Lead/lag status for generator phase A power factor. | | | |
| | 2520 | Generator Phase B Power Factor Lagging | J1939-75 | 65022 | 7.1 | 2 | Lead/lag status for generator phase B power factor. | | | |
| | 2521 | Generator Phase C Power Factor Lagging | J1939-75 | 65019 | 7.1 | 2 | Lead/lag status for generator phase C power factor. | | | |
| | 2522 | Utility Overall Power Factor Lagging | J1939-75 | 65015 | 7.1 | 2 | Lead/lag status for utility incomer average power factor. | | | |
| | 2523 | Utility Phase A Power Factor Lagging | J1939-75 | 65012 | 7.1 | 2 | Lead/lag status for utility incomer phase A power factor. | | | |
| | 2524 | Utility Phase B Power Factor Lagging | J1939-75 | 65009 | 7.1 | 2 | Lead/lag status for utility incomer phase B power factor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2525 | Utility Phase C Power Factor Lagging | J1939-75 | 65006 | 7.1 | 2 | Lead/lag status for utility incomer phase C power factor. | | | |
| | 2526 | Bus #1/Generator Phase Match | J1939-75 | 65000 | 1.3 | 2 | Indicator of whether phase difference between Bus #1 and Generator is adequate for paralleling. This indicator will be based on the measured AC phase difference qualified using parameters such as Phase Tolerance and Dwell Time. | | | |
| | 2527 | Bus #1/Generator Voltage Match | J1939-75 | 65000 | 1.7 | 2 | Indicator of whether voltage difference between Bus #1 and Generator is adequate for paralleling. This indicator will be based on the measured AC voltages qualified using parameters such as Voltage Tolerance. | | | |
| | 2528 | Bus #1/Generator Frequency Match | J1939-75 | 65000 | 1.5 | 2 | Indicator of whether frequency difference between Bus #1 and Generator is adequate for paralleling. This indicator will be based on the measured AC frequencies qualified using parameters such as Frequency Tolerance, Phase Tolerance, and Dwell Time. | | | |
| | 2529 | Bus #1/Generator In Sync | J1939-75 | 65000 | 2.1 | 2 | Indicator of whether Bus #1 and Generator are properly synchronized for paralleling. This indicator will be based on parameters such as Voltage Match, Frequency Match, and Phase Match. | | | |
| | 2530 | Bus #1/Generator Dead Bus | J1939-75 | 65000 | 1.1 | 2 | Indicator of whether Bus #1 is considered dead for closing to the generator. This indicator will be based on parameters such as Bus #1 Voltage and dead bus threshold values. | | | |
| | 2531 | Bus #1/Utility Phase Match | J1939-75 | 64999 | 1.3 | 2 | Indicator of whether phase difference between Bus #1 and Utility is adequate for paralleling. This indicator will be based on the measured AC phase difference qualified using parameters such as Phase Tolerance and Dwell Time. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2532 | Bus #1/Utility Voltage Match | J1939-75 | 64999 | 1.7 | 2 | Indicator of whether voltage difference between Bus #1 and Utility is adequate for paralleling. This indicator will be based on the measured AC voltages qualified using parameters such as Voltage Tolerance. | | | |
| | 2533 | Bus #1/Utility Frequency Match | J1939-75 | 64999 | 1.5 | 2 | Indicator of whether frequency difference between Bus #1 and Utility is adequate for paralleling. This indicator will be based on the measured AC frequencies qualified using parameters such as Frequency Tolerance, Phase Tolerance, and Dwell Time. | | | |
| | 2534 | Bus #1/Utility In Sync | J1939-75 | 64999 | 2.1 | 2 | Indicator of whether Bus #1 and Utility are properly synchronized for paralleling. This indicator will be based on parameters such as Voltage Match, Frequency Match, and Phase Match. | | | |
| | 2535 | Bus #1/Utility Dead Bus | J1939-75 | 64999 | 1.1 | 2 | Indicator of whether Bus #1 is considered dead for closing to the utility. This indicator will be based on parameters such as Bus #1 Voltage and dead bus threshold values. | | | |
| | 2536 | Transmission Mode 1 Indicator | J1939-71 | 65098 | 3.7 | 2 | This state signal is the transmission's indication that it is operating under transmission mode 1 | | | |
| | 2537 | Transmission Mode 2 Indicator | J1939-71 | 65098 | 3.5 | 2 | This state signal is the transmission's indication that it is operating under transmission mode 2 | | | |
| | 2538 | Transmission Mode 3 Indicator | J1939-71 | 65098 | 3.3 | 2 | This state signal is the transmission's indication that it is operating under transmission mode 3 | | | |
| | 2539 | Transmission Mode 4 Indicator | J1939-71 | 65098 | 3.1 | 2 | This state signal is the transmission's indication that it is operating under transmission mode 4 | | | |
| | 2540 | Parameter Group Number (RQST) | J1939-21 | 59904 | 1-3 | 24 | Whenever it is necessary to identify a Parameter Group Number in the data field of a CAN data frame, it will be expressed in 24 bits. | | | |
| | 2541 | Control Byte (ACKM) | J1939-21 | 59392 | 1 | 8 | Indicates the acknowledgement response. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2542 | Group Function Value (ACK) | J1939-21 | 59392 | 0x00;2 | 8 | Positive Acknowledgement Group Function value | | | |
| | 2543 | Parameter Group Number (ACK) | J1939-21 | 59392 | 0x00;6-8 | 24 | Parameter Group Number associated with positive acknowledgement. | | | |
| | 2544 | Group Function Value (NACK) | J1939-21 | 59392 | 0x01;2 | 8 | Negative Acknowledgement Group Function value | | | |
| | 2545 | Parameter Group Number (NACK) | J1939-21 | 59392 | 0x01;6-8 | 24 | Parameter Group Number associated with negative acknowledgement. | | | |
| | 2546 | Group Function Value (NACK_AD) | J1939-21 | 59392 | 0x02;2 | 8 | Indicates the acknowledgement response. | | | |
| | 2547 | Parameter Group Number (NACK_AD) | J1939-21 | 59392 | 0x02;6-8 | 24 | Parameter Group Number associated with PGN supported but security is denying access. | | | |
| | 2548 | Group Function Value (NACK_Busy) | J1939-21 | 59392 | 0x03;2 | 8 | Indicates the acknowledgement response. | | | |
| | 2549 | Parameter Group Number (NACK_Busy) | J1939-21 | 59392 | 0x03;6-8 | 24 | Parameter Group Number associated with PGN supported, but ECU can not currently respond to request. | | | |
| | 2550 | Manufacturer Specific Information (PropA_PDU1) | J1939-21 | 61184 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65280 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65281 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65282 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65283 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65284 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65285 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65286 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65287 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65288 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65289 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65290 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65291 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65292 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65293 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65294 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65295 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65296 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65297 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65298 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65299 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65300 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65301 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65302 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65303 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65304 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65305 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65306 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65307 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65308 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65309 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65310 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65311 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65312 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65313 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65314 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65315 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65316 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65317 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65318 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65319 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65320 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65321 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65322 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65323 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65324 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65325 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65326 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65327 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65328 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65329 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65330 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65331 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65332 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65333 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65334 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65335 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65336 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65337 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65338 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65339 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65340 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65341 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65342 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65343 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65344 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65345 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65346 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65347 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65348 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65349 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65350 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65351 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65352 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65353 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65354 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65355 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65356 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65357 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65358 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65359 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65360 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65361 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65362 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65363 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65364 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65365 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65366 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65367 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65368 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65369 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65370 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65371 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65372 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65373 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65374 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65375 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65376 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65377 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65378 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65379 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65380 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65381 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65382 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65383 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65384 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65385 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65386 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65387 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65388 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65389 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65390 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65391 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65392 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65393 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65394 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65395 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65396 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65397 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65398 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65399 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65400 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65401 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65402 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65403 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65404 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65405 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65406 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65407 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65408 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65409 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65410 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65411 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65412 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65413 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65414 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65415 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65416 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65417 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65418 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65419 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65420 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65421 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65422 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65423 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65424 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65425 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65426 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65427 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65428 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65429 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65430 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65431 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65432 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65433 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65434 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65435 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65436 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65437 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65438 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65439 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65440 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65441 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65442 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65443 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65444 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65445 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65446 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65447 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65448 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65449 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65450 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65451 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65452 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65453 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65454 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65455 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65456 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65457 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65458 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65459 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65460 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65461 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65462 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65463 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65464 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65465 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65466 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65467 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65468 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65469 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65470 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65471 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65472 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65473 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65474 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65475 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65476 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65477 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65478 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65479 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65480 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65481 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65482 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65483 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65484 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65485 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65486 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65487 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65488 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65489 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65490 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65491 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65492 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65493 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65494 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65495 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65496 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65497 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65498 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65499 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65500 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65501 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65502 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65503 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65504 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65505 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65506 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65507 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65508 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65509 | 1-8 | 14280 | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65510 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65511 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65512 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65513 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65514 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65515 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65516 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65517 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65518 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65519 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65520 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65521 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65522 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65523 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65524 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65525 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65526 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65527 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65528 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65529 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65530 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65531 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65532 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65533 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65534 | 1-8 | 14280 | | | | |
| | 2551 | Manufacturer Defined Usage (PropB_PDU2) [1] | J1939-21 | 65535 | 1-8 | 14280 | | | | |
| | 2552 | Parameter Group Number of Requested Information (XFER) | J1939-21 | 51712 | 1-3 | 24 | PGN associated with this transfer message | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2553 | Length of data for the reported PGN (XFER) | J1939-21 | 51712 | 4 | 8 | Length of data reported with the associated PGN via the Transfer PGN. | | | |
| | 2554 | Short Name of Actual Reporting Device | J1939-21 | 51712 | 5-8 | 24 | Short name of reporting device of the requested PGN via the Transfer PGN. | | | |
| | 2555 | Transfer Data | J1939-21 | 51712 | 9-x | 14216 | Relevant data for this PGNs unique use. | | | |
| | 2556 | Control Byte (TP.CM) | J1939-21 | 60416 | 1 | 8 | Control byte (I.e. Group Function) associated with the Transport Protocol - Connection Management (PGN 60,416) | | | |
| | 2557 | Total Message Size (TP.CM_RTS) [1] | J1939-21 | 60416 | 0x10;2-3 | 16 | Total message size (in bytes) for RTS/CTS message. | | | |
| | 2557 | Total Message Size (TP.CM_RTS) [1] | J1939-21 | 60416 | 0x13;2-3 | 16 | Total message size (in bytes) for RTS/CTS message. | | | |
| | 2558 | Total Number of Packets (TP.CM_RTS) | J1939-21 | 60416 | 0x10;4 | 8 | Total number of packets for RTS/CTS message. | | | |
| | 2559 | Maximum Number of Packets (TP.CM_RTS) | J1939-21 | 60416 | 0x10;5 | 8 | Maximum number of packets for RTS/CTS message. | | | |
| | 2560 | Parameter Group Number of the packeted message (TP.CM_RTS) | J1939-21 | 60416 | 0x10;6-8 | 24 | Requested PGN in the TP.CM_RTS message | | | |
| | 2561 | Number of Packets that can be sent (TP.CM_CTS) | J1939-21 | 60416 | 0x11;2 | 8 | Number of Packets that can be sent (TP.CM_CTS) | | | |
| | 2562 | Next Packet Number to be sent (TP.CM_CTS) | J1939-21 | 60416 | 0x11;3 | 8 | Next Packet Number to be sent (TP.CM_CTS) | | | |
| | 2563 | Parameter Group Number of the packeted message (TP.CM_CTS) | J1939-21 | 60416 | 0x11;6-8 | 24 | PGN of requested information in the TP.CM_CTS message | | | |
| | 2564 | Total Message Size (TP.CM_EndofMsgACK) | J1939-21 | 60416 | 0x13;2-3 | 16 | Total message size (in bytes) received for RTS/CTS message. | | | |
| | 2565 | Total Number of Packets (TP.CM_EndofMsgACK) | J1939-21 | 60416 | 0x13;4 | 8 | Total number of packets received for RTS/CTS message. | | | |
| | 2566 | Parameter Group Number of the packeted message (TP.CM_EndofMsgACK) | J1939-21 | 60416 | 0x13;6-8 | 24 | Requested PGN in the TP.CM_RTS message | | | |
| | 2567 | Total Message Size (TP.CM_BAM) | J1939-21 | 60416 | 0x20;2-3 | 16 | Total message size (in bytes) for BAM message. | | | |
| | 2568 | Total Number of Packets (TP.CM_BAM) | J1939-21 | 60416 | 0x20;4 | 8 | Total number of packets for BAM message. | | | |
| | 2569 | Parameter Group Number of the packeted message (TP.CM_BAM) | J1939-21 | 60416 | 0x20;6-8 | 24 | Requested PGN in the TP.CM_BAM message | | | |
| | 2570 | Connection Abort Reason | J1939-21 | 60416 | 0xFF;2 | 8 | Reason for connection abort message. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2571 | Parameter Group Number of packeted message (TP.CM_Conn_Abort) | J1939-21 | 60416 | 0xFF;6-8 | 24 | Requested PGN in the TP.CM_Conn_Abort message | | | |
| | 2572 | Sequence Number (TP.DT) | J1939-21 | 60160 | 1 | 8 | Sequence Number (TP.DT) | | | |
| | 2573 | Packetized Data (TP.DT) | J1939-21 | 60160 | 2-x | 14272 | Relevant data for this PGNs unique use. | | | |
| | 2574 | Parameter Group Number (RQST2) | J1939-21 | 51456 | 1-3 | 24 | PGN which is requested by Request2 message | | | |
| | 2575 | Use Transfer Mode | J1939-21 | 51456 | 4.1 | 2 | Requester is to respond via the Transfer PGN | | | |
| | 2576 | Laser Receiver Type | J1939-71 | 65141 | 3 | 8 | Identifies which type of Laser Receiver transmitted the message. | | | |
| | 2577 | Display Deadbands | J1939-71 | 65142 | 3.5 | 4 | Sets Display Deadbands mode. | | | |
| | 2578 | LED Pattern Control | J1939-71 | 65142 | 3.1 | 4 | Sets LED Pattern control mode on laser leveling systems. | | | |
| | 2579 | Net Battery Current (High Range/Resolution) | J1939-71 | 65106 | 3-4 | 16 | Net flow of electrical current into/out-of the battery or batteries. | | | |
| | 2580 | Hydraulic Brake Pressure Circuit 1 | J1939-71 | 64998 | 1 | 8 | Gage hydraulic pressure in circuit 1 of the hydraulic brake system | | | |
| | 2581 | Hydraulic Brake Pressure Circuit 2 | J1939-71 | 64998 | 2 | 8 | Gage hydraulic pressure in circuit 2 of the hydraulic brake system | | | |
| | 2582 | Hydraulic Brake Pressure Supply State Circuit 1 | J1939-71 | 64998 | 3.5 | 2 | Signal which indicates whether the hydraulic brake pressure supply of circuit 1 is reliable. | | | |
| | 2583 | Hydraulic Brake Pressure Supply State Circuit 2 | J1939-71 | 64998 | 3.7 | 2 | Signal which indicates whether the hydraulic brake pressure supply of circuit 2 is reliable. | | | |
| | 2584 | Hydraulic Brake Pressure Warning State Circuit 1 | J1939-71 | 64998 | 3.1 | 2 | Signal which indicates whether the hydraulic brake pressure of circuit 1 is below the warning level | | | |
| | 2585 | Hydraulic Brake Pressure Warning State Circuit 2 | J1939-71 | 64998 | 3.3 | 2 | Signal which indicates whether the hydraulic brake pressure of circuit 2 is below the warning level | | | |
| | 2586 | Tire Air Leakage Rate | J1939-71 | 65268 | 6-7 | 16 | The pressure loss rate of a tire. | | | |
| | 2587 | Tire Pressure Threshold Detection | J1939-71 | 65268 | 8.6 | 3 | Signal indicating the pressure level of the tire. | | | |
| | 2588 | Maximum Vehicle Speed Limit 1 | J1939-71 | 64997 | 1 | 8 | The lowest Maximum Vehicle Speed Limit. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2589 | Maximum Vehicle Speed Limit 2 | J1939-71 | 64997 | 2 | 8 | The highest of the two lowest vehicle speed limits | | | |
| | 2590 | Maximum Vehicle Speed Limit 3 | J1939-71 | 64997 | 3 | 8 | The highest of the three lowest vehicle speed limits | | | |
| | 2591 | Maximum Vehicle Speed Limit 4 | J1939-71 | 64997 | 4 | 8 | The highest of the four lowest vehicle speed limits | | | |
| | 2592 | Maximum Vehicle Speed Limit 5 | J1939-71 | 64997 | 5 | 8 | The highest of the five lowest vehicle speed limits | | | |
| | 2593 | Maximum Vehicle Speed Limit 6 | J1939-71 | 64997 | 6 | 8 | The highest of the six lowest vehicle speed limits | | | |
| | 2594 | Maximum Vehicle Speed Limit 7 | J1939-71 | 64997 | 7 | 8 | The highest of the seven lowest vehicle speed limits | | | |
| | 2595 | Applied Vehicle Speed Limit | J1939-71 | 64997 | 8 | 8 | The vehicle speed limit in effect. | | | |
| | 2596 | Selected Maximum Vehicle Speed Limit | J1939-71 | 57344 | 8 | 8 | User selected maximum vehicle speed | | | |
| | 2597 | Implement Left Facing Work Light Command | J1939-71 | 65089 | 7.7 | 2 | Command to activate or de-activate work lights mounted on an implement to illuminate beyond left end of the implement. | | | |
| | 2598 | Implement Left Facing Work Light | J1939-71 | 65088 | 7.7 | 2 | This parameter provides measured data from the work lights mounted on an implement to illuminate beyond left end of the implement. | | | |
| | 2599 | Fire Apparatus Pump Engagement | J1939-71 | 61448 | 3.5 | 2 | The measured status of the pump used to provide water in fire fighting apparatus. | | | |
| | 2600 | Payload Percentage | J1939-71 | 64996 | 1 | 8 | The current payload of the equipment, reported as a percentage of the equipment's rated payload limit. | | | |
| | 2601 | Travel Velocity Control Position | J1939-71 | 64995 | 1 | 8 | The position of the travel velocity control component reported as a percentage of the control's full displacement in each direction respectively | | | |
| | 2602 | Hydraulic Oil Level | J1939-71 | 65128 | 3 | 8 | This parameter indicates the level of the hydraulic fluid in tank as a ratio of current volume to total tank volume. | | | |
| | 2603 | Pneumatic Supply Pressure Request | J1939-71 | 64994 | 1 | 8 | Command signal to influence the pneumatic pressure in the main reservoir. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2604 | Parking and/or Trailer Air Pressure Request | J1939-71 | 64994 | 2 | 8 | Command signal to influence the pneumatic pressure in the circuit or reservoir for the parking brake and/or the trailer supply. | | | |
| | 2605 | Service Brake Air Pressure Request, Circuit #1 | J1939-71 | 64994 | 3 | 8 | Command signal to influence the pneumatic pressure in the service brake circuit or reservoir #1. | | | |
| | 2606 | Service Brake Air Pressure Request, Circuit #2 | J1939-71 | 64994 | 4 | 8 | Command signal to influence the pneumatic pressure in the service brake circuit or reservoir #2. | | | |
| | 2607 | Auxiliary Equipment Supply Pressure Request | J1939-71 | 64994 | 5 | 8 | Command signal to influence the pneumatic pressure in the auxiliary circuit. | | | |
| | 2608 | Air Suspension Supply Pressure Request | J1939-71 | 64994 | 6 | 8 | Command signal to influence the pneumatic pressure in the circuit for the electronically controlled air suspension system. | | | |
| | 2609 | Cab A/C Refrigerant Compressor Outlet Pressure | J1939-71 | 64993 | 1 | 8 | This is the gage pressure at the compressor outlet in the cab air conditioning system. | | | |
| | 2610 | Solar Intensity Percent | J1939-71 | 64992 | 1 | 8 | This is the solar radiation (power density) falling on the vehicle in percent of the maximum sensor value. Currently this is in the infra-red spectrum. | | | |
| | 2611 | Solar Sensor Maximum | J1939-71 | 64992 | 2 | 8 | This is the maximum value which can be reported by the sensor for the solar intensity. (This is a configuration parameter) | | | |
| | 2612 | Front Wheel Drive Actuator Status | J1939-71 | 64991 | 1.1 | 2 | Feedback on the front wheel drive actuator. | | | |
| | 2613 | Drive Axle Lube Pressure | J1939-71 | 65273 | 5 | 8 | The drive axle lubricant pressure with location determined by Drive Axle Location (SPN 930). | | | |
| | 2614 | Steering Axle Lube Pressure | J1939-71 | 65273 | 8 | 8 | The steering axle lubricant pressure. | | | |
| | 2615 | Engine Throttle Synchronization Mode Status | J1939-71 | 64988 | 1.1 | 4 | The status of the Throttle Synchronization Mode. | | | |
| | 2616 | Trolling Mode Status | J1939-71 | 64988 | 1.5 | 2 | The status of the Trolling Mode. | | | |
| | 2617 | Slow Vessel Mode Status | J1939-71 | 64988 | 1.7 | 2 | The status of the Slow Vessel Mode. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2618 | Suspend Signal | J1939-73 | 57088 | 4.1 | 4 | Indicator to all nodes that the current communication port broadcast messages are being suspended | | | |
| | 2619 | Suspend Duration | J1939-73 | 57088 | 5-6 | 16 | Indicates the duration of a suspension of broadcast messages when that duration is known by the transmitting device. | | | |
| | 2620 | Brake Lining Display | J1939 | | | | Driver/operator information device for brake lining wear | | | |
| | 2621 | Pneumatic Brake Pressure Limitation Valve Front Axle | J1939 | | | | Pneumatic valve limiting the maximum brake pressure at the front axle | | | |
| | 2622 | Hillholder system | J1939 | | | | System for short time substitute of parking brake by activation of service brake. | | | |
| | 2623 | Accelerator Pedal #1 Channel 2 | J1939 | | | | Sensor output 2 for the accelerator pedal #1 position when using a redundant-style sensor. | | | |
| | 2624 | Accelerator Pedal #1 Channel 3 | J1939 | | | | Sensor output 3 for the accelerator pedal #1 position when using a redundant-style sensor. | | | |
| | 2625 | Accelerator Pedal #2 Channel 2 | J1939 | | | | Sensor output 2 for the accelerator pedal #2 position when using a redundant-style sensor. | | | |
| | 2626 | Accelerator Pedal #2 Channel 3 | J1939 | | | | Sensor output 3 for the accelerator pedal #2 position when using a redundant-style sensor. | | | |
| | 2627 | Engine Gaseous Fuel Shutoff Valve - High Pressure | J1939 | | | | The gaseous fuel shutoff valve located at the tank. This valve blocks the flow of fuel away from the tank. | | | |
| | 2628 | Engine Gaseous Fuel Shutoff Valve - Low Pressure | J1939 | | | | The gaseous fuel shutoff valve located after the pressure regulator. This valve blocks the flow of the pressure regulated fuel. | | | |
| | 2629 | Engine Turbocharger 1 Compressor Outlet Temperature | J1939-71 | 64979 | 1-2 | 16 | Temperature of the air exiting the turbocharger 1 compressor outlet | | | |
| | 2630 | Engine Charge Air Cooler Outlet Temperature | J1939-71 | 65129 | 7-8 | 16 | Temperature of combustion air after it exits from the Charge Air Cooler but before any mixing of Recirculated Exhaust Gas. | | | |
| | 2631 | Engine Charge Air Cooler Outlet Pressure | J1939-71 | 64938 | 8 | 8 | Measures pressure of air at outlet from charge air cooler | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2632 | Engine Charge Air Cooler Bypass | J1939 | | | | Controls whether combustion air passes through the charge air cooler | | | |
| | 2633 | Engine Variable Geometry Turbocharger (VGT) 1 Nozzle Position | J1939 | | | | Measures the position of the nozzles or vanes in variable geometry turbocharger #1 | | 0 | 216 |
| | 2634 | Power Relay | J1939 | | | | Used to control power to other devices on the vehicle | | 0 | 216 |
| | 2635 | "Neutral Only" Power Relay | J1939 | | | | Provides power to accessories ONLY when transmission is in neutral | | | |
| | 2636 | Windshield Wiper Motor ON/OFF | J1939 | | | | Activates the windshield wipers | | | |
| | 2637 | Windshield Wiper Motor Speed | J1939 | | | | Selects the windshield wiper speed | | | |
| | 2638 | Differential Lock Control Valve #2 | J1939 | | | | Operates the second Differential Lock | | | |
| | 2639 | Cab Door "Lock" Control | J1939 | | | | Commands the door mechanism to Lock | | | |
| | 2640 | Cab Door "Unlock" Control | J1939 | | | | Commands the door mechanism to Unlock | | | |
| | 2641 | Horn | J1939 | | | | Activates the vehicle horn | | | |
| | 2642 | Mirror 1 Heater | J1939 | | | | Mirror 1 Heater defrosts the first rear view mirror, alternatively all rear view mirrors. | | | |
| | 2643 | Battery Monitor Load #1 | J1939 | | | | Activates the #1 electrical load to monitor battery condition | | | |
| | 2644 | Battery Monitor Load #2 | J1939 | | | | Activates the #2 electrical load to monitor battery condition | | | |
| | 2645 | ECU "Wake Up" Control | J1939 | | | | Sends a signal to cause other ECUs to begin operation | | | |
| | 2646 | Auxiliary Output #4 | J1939 | | | | Dynamically configurable, no permanent name | | | |
| | 2647 | Auxiliary Output #5 | J1939 | | | | Dynamically configurable, no permanent name | | | |
| | 2648 | Maintenance Lamp | J1939 | | | | Indicates that vehicle maintenance is due | | | |
| | 2649 | Low Air Pressure | J1939 | | | | Activates the Low Air Pressure warning | | | |
| | 2650 | Fan Override Indicator | J1939 | | | | Indicates that the driver has requested manual fan operation | | | |
| | 2651 | Interior Lamps | J1939 | | | | Activates the cab interior lights | | | |
| | 2652 | Switch Diagnostic Enable | J1939 | | | | Provides power to diagnose dashboard switch problems | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2653 | Headlamp Low Beam Left #1 | J1939 | | | | Activates the left headlamp low beam filament (driver #1) | | | |
| | 2654 | Headlamp Low Beam Left #2 | J1939 | | | | Activates the left headlamp low beam filament (driver #2) | | | |
| | 2655 | Headlamp Low Beam Right #1 | J1939 | | | | Activates the right headlamp low beam filament (driver #1) | | | |
| | 2656 | Headlamp Low Beam Right #2 | J1939 | | | | Activates the right headlamp low beam filament (driver #2) | | | |
| | 2657 | Engine Auxiliary Cooling System | J1939 | | | | Activates a secondary engine cooling system | | | |
| | 2658 | Engine Inlet Air Precleaner | J1939 | | | | Activates a pre-cleaning system for the engine inlet air | | | |
| | 2659 | Engine Exhaust Gas Recirculation (EGR) Mass Flow Rate | J1939-71 | 61450 | 1-2 | 16 | Flow rate of gas through the EGR system | | | |
| | 2660 | Joystick 1 X-Axis Position | J1939-71 | 64982 | 1.7-2 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2661 | Joystick 1 Y-Axis Position | J1939-71 | 64982 | 3.7-4 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2662 | Joystick 1 Grip X-Axis Position | J1939-71 | 64983 | 1.7-2 | 10 | The position of the joystick grip in the relative motion of travel from the neutral position. | | | |
| | 2663 | Joystick 1 Grip Y-Axis Position | J1939-71 | 64983 | 3.7-4 | 10 | The position of the joystick grip in the relative motion of travel from the neutral position. | | | |
| | 2664 | Joystick 1 Theta-Axis Position | J1939-71 | 64983 | 5.7-6 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2665 | Joystick 1 X-Axis Lever Right Positive Position Status | J1939-71 | 64982 | 1.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2666 | Joystick 1 Y-Axis Lever Forward Positive Position Status | J1939-71 | 64982 | 3.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2667 | Joystick 1 Grip X-Axis Lever Right Positive Position Status | J1939-71 | 64983 | 1.5 | 2 | Reports when the current joystick grip position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2668 | Joystick 1 Grip Y-Axis Lever Forward Positive Position Status | J1939-71 | 64983 | 3.5 | 2 | Reports when the current joystick grip position is on the positive travel side (forward, right, clockwise, up) | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2669 | Joystick 1 Theta-Axis Clockwise Positive Position Status | J1939-71 | 64983 | 5.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2670 | Joystick 1 X-Axis Lever Left Negative Position Status | J1939-71 | 64982 | 1.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2671 | Joystick 1 Y-Axis Lever Back Negative Position Status | J1939-71 | 64982 | 3.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2672 | Joystick 1 Grip X-Axis Lever Left Negative Position Status | J1939-71 | 64983 | 1.3 | 2 | Reports when the current joystick grip position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2673 | Joystick 1 Grip Y-Axis Lever Back Negative Position Status | J1939-71 | 64983 | 3.3 | 2 | Reports when the current joystick grip position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2674 | Joystick 1 Theta-Axis Counter Clockwise Negative Position Status | J1939-71 | 64983 | 5.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2675 | Joystick 1 X-Axis Neutral Position Status | J1939-71 | 64982 | 1.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2676 | Joystick 1 Y-Axis Neutral Position Status | J1939-71 | 64982 | 3.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2677 | Joystick 1 Grip X-Axis Neutral Position Status | J1939-71 | 64983 | 1.1 | 2 | Reports when the current joystick grip position is in the neutral position for that axis of travel. | | | |
| | 2678 | Joystick 1 Grip Y-Axis Neutral Position Status | J1939-71 | 64983 | 3.1 | 2 | Reports when the current joystick grip position is in the neutral position for that axis of travel. | | | |
| | 2679 | Joystick 1 Theta-Axis Neutral Position Status | J1939-71 | 64983 | 5.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2680 | Joystick 1 X-Axis Detent Position Status | J1939-71 | 64982 | 5.7 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2681 | Joystick 1 Y-Axis Detent Position Status | J1939-71 | 64982 | 5.5 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2682 | Joystick 1 Grip X-Axis Detent Position Status | J1939-71 | 64983 | 7.7 | 2 | Reports when the current joystick grip position is in the detent position for that axis of travel. | | | |
| | 2683 | Joystick 1 Grip Y-Axis Detent Position Status | J1939-71 | 64983 | 7.5 | 2 | Reports when the current joystick grip position is in the detent position for that axis of travel. | | | |
| | 2684 | Joystick 1 Theta-Axis Detent Position Status | J1939-71 | 64983 | 7.3 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2685 | Joystick 1 Button 1 Pressed Status | J1939-71 | 64982 | 6.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2686 | Joystick 1 Button 2 Pressed Status | J1939-71 | 64982 | 6.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2687 | Joystick 1 Button 3 Pressed Status | J1939-71 | 64982 | 6.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2688 | Joystick 1 Button 4 Pressed Status | J1939-71 | 64982 | 6.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2689 | Joystick 1 Button 5 Pressed Status | J1939-71 | 64982 | 7.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2690 | Joystick 1 Button 6 Pressed Status | J1939-71 | 64982 | 7.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2691 | Joystick 1 Button 7 Pressed Status | J1939-71 | 64982 | 7.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2692 | Joystick 1 Button 8 Pressed Status | J1939-71 | 64982 | 7.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2693 | Joystick 1 Button 9 Pressed Status | J1939-71 | 64982 | 8.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2694 | Joystick 1 Button 10 Pressed Status | J1939-71 | 64982 | 8.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2695 | Joystick 1 Button 11 Pressed Status | J1939-71 | 64982 | 8.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2696 | Joystick 1 Button 12 Pressed Status | J1939-71 | 64982 | 8.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2697 | Joystick 2 X-Axis Position | J1939-71 | 64984 | 1.7-2 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2698 | Joystick 2 Y-Axis Position | J1939-71 | 64984 | 3.7-4 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2699 | Joystick 2 Grip X-Axis Position | J1939-71 | 64985 | 1.7-2 | 10 | The position of the joystick grip in the relative motion of travel from the neutral position. | | | |
| | 2700 | Joystick 2 Grip Y-Axis Position | J1939-71 | 64985 | 3.7-4 | 10 | The position of the joystick grip in the relative motion of travel from the neutral position. | | | |
| | 2701 | Joystick 2 Theta-Axis Position | J1939-71 | 64985 | 5.7-6 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2702 | Joystick 2 X-Axis Lever Right Positive Position Status | J1939-71 | 64984 | 1.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2703 | Joystick 2 Y-Axis Lever Forward Positive Position Status | J1939-71 | 64984 | 3.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2704 | Joystick 2 Grip X-Axis Lever Right Positive Position Status | J1939-71 | 64985 | 1.5 | 2 | Reports when the current joystick grip position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2705 | Joystick 2 Grip Y-Axis Lever Forward Positive Position Status | J1939-71 | 64985 | 3.5 | 2 | Reports when the current joystick grip position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2706 | Joystick 2 Theta-Axis Clockwise Positive Position Status | J1939-71 | 64985 | 5.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2707 | Joystick 2 X-Axis Lever Left Negative Position Status | J1939-71 | 64984 | 1.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2708 | Joystick 2 Y-Axis Lever Back Negative Position Status | J1939-71 | 64984 | 3.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2709 | Joystick 2 Grip X-Axis Lever Left Negative Position Status | J1939-71 | 64985 | 1.3 | 2 | Reports when the current joystick grip position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2710 | Joystick 2 Grip Y-Axis Lever Back Negative Position Status | J1939-71 | 64985 | 3.3 | 2 | Reports when the current joystick grip position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2711 | Joystick 2 Theta-Axis Counter Clockwise Negative Position Status | J1939-71 | 64985 | 5.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2712 | Joystick 2 X-Axis Neutral Position Status | J1939-71 | 64984 | 1.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2713 | Joystick 2 Y-Axis Neutral Position Status | J1939-71 | 64984 | 3.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2714 | Joystick 2 Grip X-Axis Neutral Position Status | J1939-71 | 64985 | 1.1 | 2 | Reports when the current joystick grip position is in the neutral position for that axis of travel. | | | |
| | 2715 | Joystick 2 Grip Y-Axis Neutral Position Status | J1939-71 | 64985 | 3.1 | 2 | Reports when the current joystick grip position is in the neutral position for that axis of travel. | | | |
| | 2716 | Joystick 2 Theta-Axis Neutral Position Status | J1939-71 | 64985 | 5.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2717 | Joystick 2 X-Axis Detent Position Status | J1939-71 | 64984 | 5.7 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2718 | Joystick 2 Y-Axis Detent Position Status | J1939-71 | 64984 | 5.5 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2719 | Joystick 2 Grip X-Axis Detent Position Status | J1939-71 | 64985 | 7.7 | 2 | Reports when the current joystick grip position is in the detent position for that axis of travel. | | | |
| | 2720 | Joystick 2 Grip Y-Axis Detent Position Status | J1939-71 | 64985 | 7.5 | 2 | Reports when the current joystick grip position is in the detent position for that axis of travel. | | | |
| | 2721 | Joystick 2 Theta-Axis Detent Position Status | J1939-71 | 64985 | 7.3 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2722 | Joystick 2 Button 1 Pressed Status | J1939-71 | 64984 | 6.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2723 | Joystick 2 Button 2 Pressed Status | J1939-71 | 64984 | 6.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2724 | Joystick 2 Button 3 Pressed Status | J1939-71 | 64984 | 6.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2725 | Joystick 2 Button 4 Pressed Status | J1939-71 | 64984 | 6.1 | 2 | Reports when the joystick button has been pressed. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2726 | Joystick 2 Button 5 Pressed Status | J1939-71 | 64984 | 7.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2727 | Joystick 2 Button 6 Pressed Status | J1939-71 | 64984 | 7.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2728 | Joystick 2 Button 7 Pressed Status | J1939-71 | 64984 | 7.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2729 | Joystick 2 Button 8 Pressed Status | J1939-71 | 64984 | 7.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2730 | Joystick 2 Button 9 Pressed Status | J1939-71 | 64984 | 8.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2731 | Joystick 2 Button 10 Pressed Status | J1939-71 | 64984 | 8.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2732 | Joystick 2 Button 11 Pressed Status | J1939-71 | 64984 | 8.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2733 | Joystick 2 Button 12 Pressed Status | J1939-71 | 64984 | 8.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2734 | Joystick 3 X-Axis Position | J1939-71 | 64986 | 1.7-2 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2735 | Joystick 3 Y-Axis Position | J1939-71 | 64986 | 3.7-4 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2736 | Joystick 3 Grip X-Axis Position | J1939-71 | 64987 | 1.7-2 | 10 | The position of the joystick grip in the relative motion of travel from the neutral position. | | | |
| | 2737 | Joystick 3 Grip Y-Axis Position | J1939-71 | 64987 | 3.7-4 | 10 | The position of the joystick grip in the relative motion of travel from the neutral position. | | | |
| | 2738 | Joystick 3 Theta-Axis Position | J1939-71 | 64987 | 5.7-6 | 10 | The position of the joystick in the relative motion of travel from the neutral position. | | | |
| | 2739 | Joystick 3 X-Axis Lever Right Positive Position Status | J1939-71 | 64986 | 1.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2740 | Joystick 3 Y-Axis Lever Forward Positive Position Status | J1939-71 | 64986 | 3.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2741 | Joystick 3 Grip X-Axis Lever Right Positive Position Status | J1939-71 | 64987 | 1.5 | 2 | Reports when the current joystick grip position is on the positive travel side (forward, right, clockwise, up) | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2742 | Joystick 3 Grip Y-Axis Lever Forward Positive Position Status | J1939-71 | 64987 | 3.5 | 2 | Reports when the current joystick grip position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2743 | Joystick 3 Theta-Axis Clockwise Positive Position Status | J1939-71 | 64987 | 5.5 | 2 | Reports when the current joystick position is on the positive travel side (forward, right, clockwise, up) | | | |
| | 2744 | Joystick 3 X-Axis Lever Left Negative Position Status | J1939-71 | 64986 | 1.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2745 | Joystick 3 Y-Axis Lever Back Negative Position Status | J1939-71 | 64986 | 3.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2746 | Joystick 3 Grip X-Axis Lever Left Negative Position Status | J1939-71 | 64987 | 1.3 | 2 | Reports when the current joystick grip position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2747 | Joystick 3 Grip Y-Axis Lever Back Negative Position Status | J1939-71 | 64987 | 3.3 | 2 | Reports when the current joystick grip position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2748 | Joystick 3 Theta-Axis Counter Clockwise Negative Position Status | J1939-71 | 64987 | 5.3 | 2 | Reports when the current joystick position is on the negative travel side (back, left, counterclockwise, down) | | | |
| | 2749 | Joystick 3 X-Axis Neutral Position Status | J1939-71 | 64986 | 1.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2750 | Joystick 3 Y-Axis Neutral Position Status | J1939-71 | 64986 | 3.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2751 | Joystick 3 Grip X-Axis Neutral Position Status | J1939-71 | 64987 | 1.1 | 2 | Reports when the current joystick grip position is in the neutral position for that axis of travel. | | | |
| | 2752 | Joystick 3 Grip Y-Axis Neutral Position Status | J1939-71 | 64987 | 3.1 | 2 | Reports when the current joystick grip position is in the neutral position for that axis of travel. | | | |
| | 2753 | Joystick 3 Theta-Axis Neutral Position Status | J1939-71 | 64987 | 5.1 | 2 | Reports when the current joystick position is in the neutral position for that axis of travel. | | | |
| | 2754 | Joystick 3 X-Axis Detent Position Status | J1939-71 | 64986 | 5.7 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2755 | Joystick 3 Y-Axis Detent Position Status | J1939-71 | 64986 | 5.5 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2756 | Joystick 3 Grip X-Axis Detent Position Status | J1939-71 | 64987 | 7.7 | 2 | Reports when the current joystick grip position is in the detent position for that axis of travel. | | | |
| | 2757 | Joystick 3 Grip Y-Axis Detent Position Status | J1939-71 | 64987 | 7.5 | 2 | Reports when the current joystick grip position is in the detent position for that axis of travel. | | | |
| | 2758 | Joystick 3 Theta-Axis Detent Position Status | J1939-71 | 64987 | 7.3 | 2 | Reports when the current joystick position is in the detent position for that axis of travel. | | | |
| | 2759 | Joystick 3 Button 1 Pressed Status | J1939-71 | 64986 | 6.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2760 | Joystick 3 Button 2 Pressed Status | J1939-71 | 64986 | 6.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2761 | Joystick 3 Button 3 Pressed Status | J1939-71 | 64986 | 6.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2762 | Joystick 3 Button 4 Pressed Status | J1939-71 | 64986 | 6.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2763 | Joystick 3 Button 5 Pressed Status | J1939-71 | 64986 | 7.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2764 | Joystick 3 Button 6 Pressed Status | J1939-71 | 64986 | 7.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2765 | Joystick 3 Button 7 Pressed Status | J1939-71 | 64986 | 7.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2766 | Joystick 3 Button 8 Pressed Status | J1939-71 | 64986 | 7.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2767 | Joystick 3 Button 9 Pressed Status | J1939-71 | 64986 | 8.7 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2768 | Joystick 3 Button 10 Pressed Status | J1939-71 | 64986 | 8.5 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2769 | Joystick 3 Button 11 Pressed Status | J1939-71 | 64986 | 8.3 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2770 | Joystick 3 Button 12 Pressed Status | J1939-71 | 64986 | 8.1 | 2 | Reports when the joystick button has been pressed. | | | |
| | 2771 | Reserved for assignment | | | | | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2772 | Reserved for assignment | | | | | | | | |
| | 2773 | Reserved for assignment | | | | | | | | |
| | 2774 | Reserved for assignment | | | | | | | | |
| | 2775 | Reserved for assignment | | | | | | | | |
| | 2776 | Reserved for assignment | | | | | | | | |
| | 2777 | Reserved for assignment | | | | | | | | |
| | 2778 | Reserved for assignment | | | | | | | | |
| | 2779 | Reserved for assignment | | | | | | | | |
| | 2780 | Reserved for assignment | | | | | | | | |
| | 2781 | Reserved for assignment | | | | | | | | |
| | 2782 | Reserved for assignment | | | | | | | | |
| | 2783 | Reserved for assignment | | | | | | | | |
| | 2784 | Reserved for assignment | | | | | | | | |
| | 2785 | Reserved for assignment | | | | | | | | |
| | 2786 | Reserved for assignment | | | | | | | | |
| | 2787 | Reserved for assignment | | | | | | | | |
| | 2788 | Reserved for assignment | | | | | | | | |
| | 2789 | Engine Turbocharger 1 Calculated Turbine Inlet Temperature | J1939-71 | 64981 | 1-2 | 16 | Calculated value of turbine inlet temperature based on engine operating conditions | | | |
| | 2790 | Engine Turbocharger 1 Calculated Turbine Outlet Temperature | J1939-71 | 64981 | 3-4 | 16 | Calculated value of turbocharger compressor outlet air temperature. | | | |
| | 2791 | Engine Exhaust Gas Recirculation (EGR) Valve Control | J1939-71 | 64981 | 5-6 | 16 | Desired percentage of maximum Exhaust Gas Recirculation (EGR) valve opening. | | | |
| | 2792 | Engine Variable Geometry Turbocharger (VGT) Air Control Shutoff Valve | J1939-71 | 64981 | 7.1 | 2 | This valve prevents vehicle air from bleeding off through the VGT Control Valve when engine is not in use. | | | |
| | 2793 | Laser Strike Data Latency | J1939-71 | 65141 | 4-5 | 16 | Time from laser strike to CAN message transmission. | | | |
| | 2794 | Absolute Laser Strike Position | J1939-71 | 65141 | 6-7 | 16 | Laser Strike location on the survey type laser receiver. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2795 | Engine Variable Geometry Turbocharger (VGT) 1 Actuator Position | J1939-71 | 64981 | 8 | 8 | Sensor that measures the position of the variable geometry turbocharger actuator. | | | |
| | 2796 | Transfer Case Selector Switch | J1939-71 | 64980 | 1.1 | 3 | Operator switch to select the condition of the transfer case. | | | |
| | 2797 | Engine Injector Bank 1 | J1939 | | | | A collection of fuel injectors circuits that are grouped together as bank 1. | | | |
| | 2798 | Engine Injector Bank 2 | J1939 | | | | A collection of fuel injectors circuits that are grouped together as bank 2. | | | |
| | 2799 | Engine Turbocharger 2 Compressor Outlet Temperature | J1939-71 | 64979 | 3-4 | 16 | Temperature of the air exiting the turbocharger 2 compressor outlet | | | |
| | 2800 | Engine Turbocharger 3 Compressor Outlet Temperature | J1939-71 | 64979 | 5-6 | 16 | Temperature of the air exiting the turbocharger 3 compressor outlet | | | |
| | 2801 | Engine Turbocharger 4 Compressor Outlet Temperature | J1939-71 | 64979 | 7-8 | 16 | Temperature of the air exiting the turbocharger 4 compressor outlet | | | |
| | 2802 | Data Memory Usage | J1939-71 | 64978 | 3 | 8 | The used storage capacity of the data buffer memory internal to an ECU, such as a data logger. | | | |
| | 2803 | Keep-Alive Battery Consumption | J1939-71 | 64978 | 1-2 | 16 | The capacity consumed from the direct battery connection since the key was last turned off. | | | |
| | 2804 | FMS-standard Diagnostics Supported | J1939-71 | 64977 | 1.1 | 2 | Status signal which indicates if the FMS Vehicle Interface (FMS Gateway) supports the handling of diagnostic messages from the vehicle network onto the FMS network. | | | |
| | 2805 | FMS-standard Requests Supported | J1939-71 | 64977 | 1.3 | 2 | Status signal which indicates if the FMS Vehicle Interface (FMS Gateway) will respond to requests from the FMS device for the PGNs listed in the FMS Interface Specification. | | | |
| | 2806 | FMS-standard SW-version supported. | J1939-71 | 64977 | 2-5 | 32 | Information that identifies which issue level of the FMS-standard document the software included in the FMS gateway supports. | | | |
| | 2807 | Engine Fuel Shutoff 2 Control | J1939-71 | 64914 | 4.5 | 2 | Control setting for fuel shutoff 2. | | 128 | 17 |
| | 2808 | Keypad | J1939 | | | | Keypad associated with controller application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2809 | Engine Air Filter 2 Differential Pressure | J1939-71 | 64976 | 1 | 8 | Change in engine air system pressure, measured across the second air filter, due to the filter and any accumulation of solid foreign matter on or in the filter. | | | |
| | 2810 | Engine Air Filter 3 Differential Pressure | J1939-71 | 64976 | 2 | 8 | Change in engine air system pressure, measured across the third air filter, due to the filter and any accumulation of solid foreign matter on or in the filter. | | | |
| | 2811 | Engine Air Filter 4 Differential Pressure | J1939-71 | 64976 | 3 | 8 | Change in engine air system pressure, measured across the fourth air filter, due to the filter and any accumulation of solid foreign matter on or in the filter. | | | |
| | 2812 | Engine Overspeed Test | J1939-71 | 65252 | 7.7 | 2 | The engine overspeed test signal as measured by the reporting ECM. Engine Overspeed Test is a mechanism to simulate engine overspeed situations, while operating the engine within the engine's safe operating range. | | | |
| | 2813 | Engine Air Shutoff Command Status | J1939-71 | 65252 | 7.5 | 2 | State signal which indicates when the Air Shutoff driver output is being driven. Disabled means controller wants air flowing to the engine. Status of the airflow shutoff as being commanded by the ECU. | | | |
| | 2814 | Engine Alarm Output Command Status | J1939-71 | 65252 | 7.3 | 2 | State signal which indicates when the Alarm driver output is being driven. Not active means the Controller has no alarm level conditions. | | | |
| | 2815 | Engine Alarm Acknowledge | J1939-71 | 65252 | 7.1 | 2 | The Engine Alarm Acknowledge input signal as measured by the reporting ECM. The Engine Alarm Acknowledge is a mechanism for external acknowledgement of the SPN 2814, Engine Alarm Output Command. | | | |
| | 2816 | Simultaneous Upshift and Downshift | J1939 | | | | Simultaneous upshift and downshift request being indicated. | | | |
| | 2817 | Operator Using Clutch Pedal During Non-Recoverable Clutch Fault | J1939 | | | | The operator is still trying to use the clutch pedal even though a fault with the clutch system was already reported. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2818 | Operators Rear PTO Switch On with Operator Not Present | J1939 | | | | The operators Rear PTO ON/OFF switch is on with the operator presence detection indicating the operator is NOT present. | | | |
| | 2819 | Park Interlock Error | J1939 | | | | A park interlock is not as expected by a controlling system. | | | |
| | 2820 | Operator Not Present During Reverser Command | J1939 | | | | The operators reverser control has changed with the operator presence detection indicating the operator is NOT present. | | | |
| | 2821 | Reverser Lever Neutral and Power Signals Conflict | J1939 | | | | There is a conflict between the Neutral and Neutral Power Interlock switches within the reverser lever. | | | |
| | 2822 | Reverser Lever Neither Forward or Reverse | J1939 | | | | Neither Forward or Reverse Switch indicated by Reverser Lever. | | | |
| | 2823 | Reverser Lever Simultaneous Forward and Reverse | J1939 | | | | Forward and Reverse Switches are indicated concurrently by the reverser lever. | | | |
| | 2824 | Reverser Lever Motion Interlock Conflict | J1939 | | | | Two Interlocking switches within the reverser lever are conflicting while the lever is moving. | | | |
| | 2825 | Reverser Lever | J1939 | | | | Reverser Lever is an operator direction control lever that is mounted separately from the shift lever/controls but still operable from the normal operators station. This may contain park and/or neutral as well as direction. | | | |
| | 2826 | Reverser Lever Multiple Switch Conflicts | J1939 | | | | Multiple switches within the reverser lever are conflicting. | | | |
| | 2827 | Power Up Without Neutral | J1939 | | | | Controller has powered-up to find shift lever/control not in either park or neutral. | | | |
| | 2828 | Reverser Lever In Power Zero/Direction Transition Too Long | J1939 | | | | The transition time between the Neutral Power Interlock and the Direction switches on a Reverser Lever was too long. | | | |
| | 2829 | Reverser Lever in Neutral/Park Transition Too Long | J1939 | | | | The transition time between Neutral and Park on a Reverser Lever was too long. | | | |
| | 2830 | Reversing Ratio Rationality Fault | J1939 | | | | The ratio between the operator entered speed set point values for forward and reverse is incorrect/not possible. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2831 | No Carrier Speed at Start-up | J1939 | | | | The speed of the first identified carrier within a transmission was not detected following engine start. | | | |
| | 2832 | Operator Not in Operating Station | J1939 | | | | The Operator Presence Detection System indicates the operator is not in the correct operating station. | | | |
| | 2833 | Motion with Park Brake Engaged | J1939 | | | | Unexpected motion with Park Brake engaged. | | | |
| | 2834 | No Hydrostatic Unit Speed at Start-up | J1939 | | | | Rotation of the hydrostatic unit was not detected following engine start. | | | |
| | 2835 | Neutral to Gear Command Conflict | J1939 | | | | During neutral to Gear movement of the shift controls,improper switch transitions were detected. | | | |
| | 2836 | Battery 1 Potential 2 (Voltage), Switched (obsolete) | J1939 | | | | Electrical potential of the second circuit powered by the primary battery (battery 1) as measured at the input of the electronic control unit supplied through a switching device.This SPN is obsolete. Use SPN 158, 168 or 444. | | | |
| | 2837 | Identity Number | J1939-81 | | | 21 | This field should be unique and non-varying with removal of power. This field is necessary to resolve any address contention. The manufacturer must provide this uniqueness among products. | | | |
| | 2838 | Manufacturer Code | J1939-81 | | | 11 | The Manufacturer Code is an 11-bit field that indicates which company was responsible for the production of the electronic control module for which this NAME is being referenced. | | | |
| | 2839 | Function Instance | J1939-81 | | | 5 | The Function Instance is a 5-bit field that identifies the particular occurrence of a Function on the same Vehicle System on a given network. | | | |
| | 2840 | ECU Instance | J1939-81 | | | 3 | The ECU Instance is a 3-bit field that indicates which one of a group of electronic control modules associated with a given Function is being referenced. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2841 | Function | J1939-81 | | | 8 | A capability of a vehicle system having one or more ECUs that are connected to a SAE J1939 bus segment of a Vehicle System. The function value is used in the 8-bit Function field in the 64-bit NAME entity. | | | |
| | 2842 | Vehicle System | J1939-81 | | | 3 | A subcomponent of a vehicle that includes one or more SAE J1939 segments. A Vehicle System may be made up of one or more Functions, which have ECU's that are connected to a SAE J1939 segment of the Vehicle System. | | | |
| | 2843 | Vehicle System Instance | J1939-81 | | | 4 | Vehicle System Instance is a 4-bit field that is used to identify a particular occurrence of a particular Vehicle System within a connected network. | | | |
| | 2844 | Arbitrary Address Capable | J1939-81 | | | 1 | Indicates whether a CA is both self-configurable and can use an arbitrary source address to resolve an address claim conflict. | | | |
| | 2845 | NAME of Working Set Member | J1939-81 | 64974 | 1-8 | 64 | The identifier of the particular CA that is a member of the Working Set identified by the source address of this message. | | | |
| | 2846 | Industry Group | J1939-81 | | | 3 | The Industry Group field identifies NAMEs associated with a particular industry that uses SAE J1939, for example: On-Highway Equipment, or Agricultural Equipment. | | | |
| | 2847 | Address Assignment (new source address) | J1939-81 | 65240 | 9 | 8 | The source address that is to be assigned to the CA that has the NAME corresponding to the one conveyed in the first eight bytes of this Commanded Address message. | | | |
| | 2848 | NAME of Controller Application (for address claimed) | J1939-81 | 60928 | 1-8 | 64 | Identifies a particular communications function within the ECU. | | | |
| | 2849 | NAME of Commanded Address Target | J1939-81 | 65240 | 1-8 | 64 | NAME used to identify Controller Application in a Commanded Address Message to associate the Controller application with an address. | | | |
| | 2850 | Communications Antenna | J1939 | | | | A failure in the antenna system of a communications unit. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2851 | Communications Service Personal Identification Number | J1939 | | | | The Personal Identification Number (PIN) is incorrect or has been blocked. | | | |
| | 2852 | Communications Service Subscriber Identification Module | J1939 | | | | The hardware key, know as a Subscriber Identification Module (SIM), is either missing or incorrect. | | | |
| | 2853 | Communications Connection | J1939 | | | | A communications unit has established connection but no data exchanged has occurred (no other knowledge of why). | | | |
| | 2854 | Communications Carrier | J1939 | | | | The communications unit has suffered carrier loss. | | | |
| | 2855 | Communications Bit Error Rate | J1939 | | | | The data failure rate is too high for communications to keep working at the specified error rate within the specific communications unit in use. | | | |
| | 2856 | Communications Data Upload | J1939 | | | | A failure has occurred while sending data using a communications unit from the mobile machine to the fixed base. | | | |
| | 2857 | Communications Data Download | J1939 | | | | A failure has occurred while sending data using a communications unit from the fixed base to the mobile machine. | | | |
| | 2858 | Machine Data Configuration 1 | J1939 | | | | There is a problem involving the parameter list (along with the parameter locating information) for the data structure for configuring operations within the Controller Application being communicated with. | | | |
| | 2859 | Machine Data Configuration 2 | J1939 | | | | There is a problem involving one (or more) of the PGN(s) within the parameter list for the data structure for configuring operations within the Controller Application being communicated with. | | | |
| | 2860 | Machine Data Configuration 3 | J1939 | | | | There is a problem involving the first output control list for the data structure for configuring operations within the Controller Application being communicated with. | | | |
| | 2861 | Machine Data Configuration 4 | J1939 | | | | There is a problem involving the second output control list for the data structure for configuring operations within the Controller Application being communicated with. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2862 | Machine Data Configuration 5 | J1939 | | | | There is a problem involving the third output control list for the data structure for configuring operations within the Controller Application being communicated with. | | | |
| | 2863 | Front Operator Wiper Switch | J1939-71 | 64973 | 1.5 | 4 | State of operation selected by operator switch for the Wiper in front of the operator position. | | | |
| | 2864 | Front Non-operator Wiper Switch | J1939-71 | 64973 | 1.1 | 4 | State of operation selected by operator switch for the front wiper not in front of the operator position. | | | |
| | 2865 | Rear Wiper Switch | J1939-71 | 64973 | 2.5 | 4 | State of operation selected by operator switch for the rear wiper. | | | |
| | 2866 | Front Operator Washer Switch | J1939-71 | 64973 | 6.6 | 3 | State of operation selected by operator switch for the washer in front of the operator position. | | | |
| | 2867 | Front Non-operator Washer Switch | J1939-71 | 64973 | 6.3 | 3 | State of operation selected by operator switch for the front washer not in front of the operator position. | | | |
| | 2868 | Rear Washer Function | J1939-71 | 64973 | 7.6 | 3 | State of operation selected by operator switch for the rear washer. | | | |
| | 2869 | Front Operator Wiper Delay Control | J1939-71 | 64973 | 3 | 8 | Time between cycles of the front operator side wiper (i.e. from end of cycle 'n' to start of cycle 'n+1') as selected by the operator control (switch, etc.) in percentage of position with maximum position corresponding to maximum delay selectable. | | | |
| | 2870 | Front Non-operator Wiper Delay Control | J1939-71 | 64973 | 4 | 8 | Time between cycles of the front non-operator side wiper (i.e. from end of cycle 'n' to start of cycle 'n+1') as selected by the operator control (switch, etc.) in percentage of position with maximum position corresponding to maximum delay selectable. | | | |
| | 2871 | Rear Wiper Delay Control | J1939-71 | 64973 | 5 | 8 | Time between cycles of the rear wiper (i.e. from end of cycle 'n' to start of cycle 'n+1') as selected by the operator control (switch, etc.) in percentage of position with maximum position corresponding to maximum delay selectable. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2872 | Main Light Switch | J1939-71 | 64972 | 1.5 | 4 | A 4 bit parameter to indicate the selected position of the operator's main light switch. | | | |
| | 2873 | Work Light Switch | J1939-71 | 64972 | 1.1 | 4 | A 4 bit parameter to indicate the selected position of the operator's work light switch. | | | |
| | 2874 | High-Low Beam Switch | J1939-71 | 64972 | 2.7 | 2 | A 2 bit parameter to indicate the selected position of the operator's high/low beam select switch. | | | |
| | 2875 | Hazard Light Switch | J1939-71 | 64972 | 2.5 | 2 | A 2 bit parameter to indicate the selected position of the operator's hazard light switch. | | | |
| | 2876 | Turn Signal Switch | J1939-71 | 64972 | 2.1 | 4 | A 4 bit parameter to indicate the selected position of the operator's turn signal switch. | | | |
| | 2877 | Operators Desired - Delayed Lamp Off Time | J1939-71 | 64972 | 4-5 | 16 | This parameter indicates the time the operator wishes to have elapse following the Main Light switch being placed in Delayed Off position before the defined lights turn back off. | | | |
| | 2878 | Operators Desired Back-light | J1939-71 | 64972 | 3 | 8 | A 8 bit parameter to indicate the level of back lighting the operator has selected for displays. | | | |
| | 2879 | Engine Alternate Droop Accelerator 2 Select | J1939-71 | 64971 | 3.5 | 4 | In many applications, it is desirable that more than one droop setting be available across the range of operation. This parameter allows the selection of one to 13 droop selections. | | | |
| | 2880 | Engine Operator Primary Intermediate Speed Select | J1939-71 | 64970 | 1.1 | 4 | Allows the operator to select one of 13 preprogrammed Intermediate Speed Control settings. If no speed setting is requested, the engine operates normally. | | | |
| | 2881 | Engine Alternate Droop Accelerator 1 Select | J1939-71 | 64971 | 3.1 | 4 | In some applications, it may be desirable to have multiple droop settings across the range of engine operation. This parameter allows the selection of one to 13 droop selections. | | | |
| | 2882 | Engine Alternate Rating Select | J1939-71 | 64971 | 2 | 8 | In some off-highway applications it may be desirable to have multiple engine ratings available for selection by the operator. | | | |
| | 2883 | Engine Alternate Low Idle Switch | J1939-71 | 64971 | 1.5 | 2 | Operator switch which selects between two low idle speeds, default and alternate. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2884 | Engine Auxiliary Governor Switch | J1939-71 | 64971 | 1.1 | 2 | This is the On/Off operation of the Auxiliary Governor feature switch. This feature is used to allow engine speed to be controlled by an auxiliary input such as pressure or tailshaft speed. | | | |
| | 2885 | Engine Alternate Droop Auxiliary Input Select | J1939-71 | 64971 | 4.5 | 4 | In some applications, it may be desirable to have multiple droop settings across the range of engine operation. This parameter allows the selection of one to 13 droop selections. | | | |
| | 2886 | Engine Alternate Droop Remote Accelerator Select | J1939-71 | 64971 | 4.1 | 4 | In some applications, it may be desirable to have multiple droop settings across the range of engine operation. This parameter allows the selection of one to 13 droop selections. | | | |
| | 2887 | Total Count of Configuration Changes Made | J1939-71 | 64969 | 1-2 | 16 | Total number of times changes have been made to any of the configurable parameters. | | | |
| | 2888 | Engine Alternate Rating Select State | J1939-71 | 64967 | 2 | 8 | This parameter reflects the control state that has been achieved based on the input from the SPN xxx. In some off-highway applications it may be desirable to have multiple engine ratings available for selection by the operator. | | | |
| | 2889 | Engine Alternate Droop Accelerator 1 Select State | J1939-71 | 64967 | 3.1 | 4 | This parameter indicates which state has been selected by the controlling ECM, one to 13 droop selection states. In some off-highway applications it may be desirable to have multiple droop settings available across the range of engine operation. | | | |
| | 2890 | Engine Multi-Unit Sync State | J1939-71 | 64967 | 1.3 | 2 | A master engine will “synchronize” one or more slave engines to operate at the same speed. This feature is requested by an operator switch, this parameter indictes the state of the feature as determined by the controlling ECM. | | | |
| | 2891 | Engine Alternate Low Idle Select State | J1939-71 | 64967 | 1.5 | 2 | Feedback from controller on the alternate low idle select state, default and alternate. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2892 | Engine Operator Primary Intermediate Speed Select State | J1939-71 | 64968 | 1.1 | 4 | Allows the operator to select one of 13 preprogrammed Intermediate Speed Control settings. This parameter indicates which state has been selected by the controlling ECM, one to 13 ISC setting states. | | | |
| | 2893 | Engine Alternate Droop Accelerator 2 Select State | J1939-71 | 64967 | 3.5 | 4 | This parameter indicates which state has been selected by the controlling ECM, one to 13 droop selection states. In some off-highway applications it may be desirable to have multiple droop settings available across the range of engine operation. | | | |
| | 2894 | Engine Alternate Droop Remote Accelerator Select State | J1939-71 | 64967 | 4.1 | 4 | This parameter indicates which state has been selected by the controlling ECM, one to 13 droop selection states. In some off-highway applications it may be desirable to have multiple droop settings available across the range of engine operation. | | | |
| | 2895 | Engine Alternate Droop Auxiliary Input Select State | J1939-71 | 64967 | 4.5 | 4 | This parameter indicates which state has been selected by the controlling ECM, one to 13 droop selection states. In some off-highway applications it may be desirable to have multiple droop settings available across the range of engine operation. | | | |
| | 2896 | Engine Auxiliary Governor State | J1939-71 | 64967 | 1.1 | 2 | This is the Engine Auxiliary Governor feature. This feature is requested by an operator switch, this parameter indicates the state of the feature as determined by the controlling ECM. | | | |
| | 2897 | Operator PTO Memory Select Switch | J1939-71 | 65264 | 8.1 | 2 | The mesured switch state of the Operator PTO memory select switch. | | | |
| | 2898 | Engine Start Enable Device 2 Configuration | J1939-71 | 64966 | 2.5 | 4 | This parameter indicates the start enable device type installed for start enable device 2. | | | |
| | 2899 | Engine Start Enable Device 1 Configuration | J1939-71 | 64966 | 2.1 | 4 | This parameter indicates the start enable device type installed for start enable device 1. | | | |
| | 2900 | Transmission Engine Crank Enable | J1939-71 | 65098 | 2.5 | 2 | State signal from the transmission indicating if the transmission's status is such that engine cranking is allowed. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2901 | ECU Part Number | J1939-71 | 64965 | a | 1600 | The part number of the physical ECU. | | | |
| | 2902 | ECU Serial Number | J1939-71 | 64965 | b | 1600 | The serial number of the physical ECU. | | | |
| | 2903 | ECU Location | J1939-71 | 64965 | c | 1600 | The location of the ECU within a network. | | | |
| | 2904 | ECU Type | J1939-71 | 64965 | d | 1600 | The type of ECU. One example of a use of the ECU type could be for classifying ECU capabilities, such as I/O. | | | |
| | 2905 | Transmission Range Clutch #C7 Solenoid | J1939 | | | | Transmission range clutch #C7 solenoid | | | |
| | 2906 | Transmission Range Clutch #C8 Solenoid | J1939 | | | | Transmission range clutch #C8 solenoid | | | |
| | 2907 | Transmission Axle Disconnect Clutch Valve Actuator | J1939 | | | | The axle disconnect clutch disconnects the front axle from the transmission. It is located within the transmission housing. | | | |
| | 2908 | Transmission Boost Pressure Valve Actuator | J1939 | | | | Transmission boost pressure valve actuator. | | | |
| | 2909 | Torque Converter Modulating Clutch Valve Actuator | J1939 | | | | The torque converter modulating clutch limits torque to converter circuit and transmission. It is located between the engine and transmission. | | | |
| | 2910 | Transmission PTO Clutch Valve Actuator | J1939 | | | | Transmission PTO clutch valve actuator controls the on/off condition of PTO Clutch Valve. | | | |
| | 2911 | Halt brake switch | J1939-71 | 61441 | 8.3 | 2 | Switch signal which indicates the position of the halt brake switch. | | | |
| | 2912 | Hill holder mode | J1939-71 | 64964 | 1.6 | 3 | Signal which indicates the current mode of the hill holder function. | | | |
| | 2913 | Halt brake mode | J1939-71 | 64964 | 1.3 | 3 | Signal which indicates the current mode of the halt brake function. | | | |
| | 2914 | XBR EBI Mode | J1939-71 | 1024 | 3.1 | 2 | The XBR EBI (Endurance Brake Integration) Mode is used as an input for the brake system to prescribe the use of endurance brakes like retarders or engine brakes. | | | |
| | 2915 | XBR Priority | J1939-71 | 1024 | 3.3 | 2 | The XBR Priority is used as an input to the brake system to manage the priority of overlapping external and internal requests. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2916 | XBR Control Mode | J1939-71 | 1024 | 3.5 | 2 | The XBR Control Mode is used as an input to the brake system and defines how the external acceleration demand has to be realized. | | | |
| | 2917 | XBR System State | J1939-71 | 64964 | 2.3 | 2 | This parameter indicates which external brake control is allowed. | | | |
| | 2918 | XBR Active Control Mode | J1939-71 | 64964 | 2.5 | 4 | This parameter indicates which XBR Control Mode is executed by the brake system. | | | |
| | 2919 | Foundation Brake Use | J1939-71 | 64964 | 2.1 | 2 | This parameter indicates if the brake system presently uses the foundation brakes. | | | |
| | 2920 | External Acceleration Demand | J1939-71 | 1024 | 1-2 | 16 | The acceleration which the brake system is expected to realize. It is specified as an absolute acceleration in reference to the road. | | | |
| | 2921 | XBR Acceleration Limit | J1939-71 | 64964 | 3 | 8 | The brake system may temporarily or generally limit the maximum brake performance available for external systems. | | | |
| | 2922 | Steerable Lift Axle Lowering Inhibit | J1939-71 | 61451 | 4.5 | 2 | A signal which indicates if lowering of lifted axle is allowed or inhibited. | | | |
| | 2923 | Status of Steering Axle | J1939-71 | 61451 | 4.1 | 4 | A signal which indicates different states of the steering axle | | | |
| | 2924 | Steering Type | J1939-71 | 61451 | 5.1 | 4 | Indicates the different types of steering systems (ref. ECE Regulation 79 paragraph 2.5) | | | |
| | 2925 | Type of Steering Forces | J1939-71 | 61451 | 5.5 | 4 | Type of Steering Forces (Ref. ECE Regulation 79 paragraph 2.5) | | | |
| | 2926 | Type of Steering Transmission | J1939-71 | 61451 | 6.1 | 4 | Type of Steering Transmission (Ref. ECE Regulation 79 paragraph 2.6) | | | |
| | 2927 | Actual Inner wheel steering angle | J1939-71 | 61451 | 1-2 | 16 | Signal which indicates the actual inner wheel steering angle. | | | |
| | 2928 | Axle Location | J1939-71 | 61451 | 3 | 8 | To identify to which of several similar devices (such as tires or fuel tanks) the information applies. | | | |
| | 2930 | Hydraulic Brake System Audible Warning Command | J1939-71 | 64998 | 4.1 | 2 | Signal which commands an audible warning by the hydraulic braking system. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2931 | Hydraulic Brake Fluid Level Switch | J1939-71 | 64998 | 4.3 | 2 | Signal which indicates whether the hydraulic fluid level in the reservoir(s) is sufficient. | | | |
| | 2932 | Valve State | ISO 11783-7 | 50688 | 3.1 | 4 | The measured state of the general purpose valve. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2933 | Valve State Command | ISO 11783-7 | | | 4 | Command for setting the general purpose valve state. With float enabled, hydraulic fluid may flow to or from the tractor as driven by the implement. | | | |
| | 2934 | Valve Fail Safe Mode | ISO 11783-7 | 50688 | 3.7 | 2 | Command for setting the fail safe mode of a general purpose valve. | | | |
| | 2935 | Valve Fail Safe Mode Command | ISO 11783-7 | | | 2 | The measured state the fail safe mode of a general purpose valve. | | | |
| | 2936 | General Purpose Valve Number | ISO 11783-7 | | | 4 | A numeric identification of general hydraulic valve instance within a Device identified by a NAME | | | |
| | 2937 | Extend Port Measured Flow | ISO 11783-7 | 50432 | 1 | 8 | The measured flow through the extend port of an auxiliary valve of a tractor | | | |
| | 2938 | Retract Port Measured Flow | ISO 11783-7 | 50432 | 2 | 8 | The measured flow through the retract port of an auxiliary valve of a tractor | | | |
| | 2939 | Extend Port Estimated Flow | ISO 11783-7 | 50688 | 1 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor | | | |
| | 2940 | Retract Port Estimated Flow | ISO 11783-7 | 50688 | 2 | 8 | The value reported by the controller of flow through the extend port of an auxiliary valve of a tractor | | | |
| | 2941 | Extend Port Pressure | ISO 11783-7 | 50432 | 3-4 | 16 | The measured nominal pressure at the extend port of an auxiliary valve of a tractor | | | |
| | 2942 | Retract Port Pressure | ISO 11783-7 | 50432 | 5-6 | 16 | The measured nominal pressure at the retract port of an auxiliary valve of a tractor | | | |
| | 2943 | Return Port Pressure | ISO 11783-7 | 50432 | 7 | 8 | The measured nominal pressure at the return port of an auxiliary valve of a tractor | | | |
| | 2944 | Port Flow Command | ISO 11783-7 | 50176 | 1 | 8 | The command to set the flow through the extend or retract port of an auxiliary valve of a tractor | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2945 | Active Shift Console Indicator | J1939-71 | 65098 | 2.3 | 2 | Signal from transmission control unit indicating which shift console (primary or secondary) it currently considers as the active shift selector input. | | | |
| | 2946 | Engine Mixer Inlet Relative Humidity | J1939 | | | | Measurement of the relative humidity of air after the aftercooler and before the mixer. | | 128 | 307 |
| | 2947 | Engine Fuel Rack Position #2 | J1939 | | | | Position of the fuel rack #2. | | 128 | 308 |
| | 2948 | Engine Intake Valve Actuation System Oil Pressure | J1939-71 | 64961 | 1-2 | 16 | The gage pressure of the oil in the hydraulic system that powers the engine intake valve actuation system | | | |
| | 2949 | Engine Intake Valve Actuation System Oil Pressure Control Valve | J1939 | | | | The valve that controls the pressure of the oil being supplied to the engine intake valve actuation system. | | | |
| | 2950 | Engine Intake Valve Actuator #1 | J1939 | | | | The first instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2951 | Engine Intake Valve Actuator #2 | J1939 | | | | The second instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2952 | Engine Intake Valve Actuator #3 | J1939 | | | | The third instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2953 | Engine Intake Valve Actuator #4 | J1939 | | | | The fourth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2954 | Engine Intake Valve Actuator #5 | J1939 | | | | The fifth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2955 | Engine Intake Valve Actuator #6 | J1939 | | | | The sixth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2956 | Engine Intake Valve Actuator #7 | J1939 | | | | The seventh instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2957 | Engine Intake Valve Actuator #8 | J1939 | | | | The eighth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2958 | Engine Intake Valve Actuator #9 | J1939 | | | | The ninth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2959 | Engine Intake Valve Actuator #10 | J1939 | | | | The tenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2960 | Engine Intake Valve Actuator #11 | J1939 | | | | The eleventh instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2961 | Engine Intake Valve Actuator #12 | J1939 | | | | The twelveth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2962 | Engine Intake Valve Actuator #13 | J1939 | | | | The thirteenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2963 | Engine Intake Valve Actuator #14 | J1939 | | | | The fourteenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2964 | Engine Intake Valve Actuator #15 | J1939 | | | | The fifteenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2965 | Engine Intake Valve Actuator #16 | J1939 | | | | The sixteenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2966 | Engine Intake Valve Actuator #17 | J1939 | | | | The seventeenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2967 | Engine Intake Valve Actuator #18 | J1939 | | | | The eighteenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2968 | Engine Intake Valve Actuator #19 | J1939 | | | | The nineteenth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2969 | Engine Intake Valve Actuator #20 | J1939 | | | | The twentieth instance of an actuator that controls or alters the control of the engine intake valve(s). | | | |
| | 2970 | Accelerator Pedal 2 Low Idle Switch | J1939-71 | 61443 | 1.7 | 2 | Switch signal which indicates the state of the accelerator pedal 2 low idle switch. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2971 | Accelerator Pedal 3 Low Idle Switch | J1939 | | | 2 | Switch signal which indicates the state of the accelerator pedal 3 low idle switch. | | | |
| | 2972 | Accelerator Pedal Position 1 Output 2 | J1939 | | | | Second output for accelerator pedal position 1 | | | |
| | 2973 | Accelerator Pedal Position 1 Output 3 | J1939 | | | | Third output for accelerator pedal position 1 | | | |
| | 2974 | Accelerator Pedal Position 2 Output 2 | J1939 | | | | Second output for accelerator pedal position 2 | | | |
| | 2975 | Accelerator Pedal Position 2 Output 3 | J1939 | | | | Third output for accelerator pedal position 2 | | | |
| | 2976 | Accelerator Pedal Position 3 Output 2 | J1939 | | | | Second output for accelerator pedal position 3 | | | |
| | 2977 | Accelerator Pedal Position 3 Output 3 | J1939 | | | | Third output for accelerator pedal position 3 | | | |
| | 2978 | Estimated Engine Parasitic Losses - Percent Torque | J1939-71 | 65247 | 5 | 8 | The calculated torque that indicates the estimated amount of torque loss due to engine parasitics, such as cooling fan, air compressor, air conditioning, etc. | | | |
| | 2979 | Vehicle Acceleration Rate Limit Status | J1939-71 | 61443 | 6.1 | 2 | Status (active or not active) of the system used to limit maximum forward vehicle acceleration. | | | |
| | 2980 | Engine Fuel Valve 1 Outlet Absolute Pressure | J1939-71 | 65163 | 7-8 | 16 | Absolute Pressure of gas on outlet side of the first or only fuel system control valve. | | | |
| | 2981 | Engine Coolant Loop 2 Pressure | J1939 | | | | This is the pressure of the low temp (secondary circuit) coolant loop. | | | |
| | 2982 | Engine Coolant Loop 2 Temperature | J1939 | | | | This is the temperature of the low temp (secondary circuit) coolant loop. | | | |
| | 2983 | Clutch Life Remaining | J1939-71 | 65195 | 4 | 8 | Signal which indicates the actual clutch life remaining in percent. One hundred percent means the clutch is brand new and zero percent means the clutch is at the end of its life. | | | |
| | 2984 | Automatic traction help (load transfer) | J1939-71 | 53760 | 1.1 | 2 | This signal enables the traction help (load transfer) in case of an active ASR function | | | |
| | 2985 | Transmission Shift Selector Display Mode Switch | J1939-71 | 256 | 7.7 | 2 | Status of the operator’s switch used to ‘toggle’ through multiple display modes of a shift selector display. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 2986 | Engine Intake Valve Actuation System Oil Temperature | J1939-71 | 65129 | 5-6 | 16 | The temperature of the oil in the hydraulic system that powers the intake valve actuation system. | | | |
| | 2987 | Engine will not start, pre-lube system issue | J1939 | | | | The engine is not allowed to start due to pre-lube system issues. | | | |
| | 2988 | Engine Coolant Diverter Valve | J1939 | | | | A valve other than the engine coolant thermostat that changes the flow of coolant in an engine. | | | |
| | 2989 | Combine separator speed | J1939-74 | | | 16 | Speed of the Combine separator. | | | |
| | 2990 | Reserved for assignment | | | | | | | | |
| | 2991 | Tailings volume | J1939-74 | | | 8 | Tailings Elevator Volume measurement (as a percent of full). | | | |
| | 2992 | Move reel forward | J1939-74 | | | 2 | Move the platform reel toward the forward part of the machine. | | | |
| | 2993 | Move reel aft | J1939-74 | | | 2 | Move the platform reel toward the back part of the machine | | | |
| | 2994 | Reel raise | J1939-74 | | | 2 | Raise the platform reel. | | | |
| | 2995 | Reel lower | J1939-74 | | | 2 | Lower the platform reel. | | | |
| | 2996 | Header raise slow | J1939-74 | | | 2 | Raise the header (slow speed mode). | | | |
| | 2997 | Header lower slow | J1939-74 | | | 2 | Lower the header (slow speed mode). | | | |
| | 2998 | Header raise fast | J1939-74 | | | 2 | Raise the header (fast speed mode). | | | |
| | 2999 | Header lower fast | J1939-74 | | | 2 | Lower the header (fast speed mode). | | | |
| | 3000 | Tilt header left | J1939-74 | | | 2 | Tilt the header down to the left. | | | |
| | 3001 | Tilt header right | J1939-74 | | | 2 | Tilt the header down to the right. | | | |
| | 3002 | Header fold | J1939-74 | | | 2 | Fold the header in. | | | |
| | 3003 | Header unfold | J1939-74 | | | 2 | Unfold the header | | | |
| | 3004 | Draper speed increment | J1939-74 | | | 2 | Increase speed of the draper. | | | |
| | 3005 | Draper speed decrement | J1939-74 | | | 2 | Decrease speed of the draper. | | | |
| | 3006 | Reel speed increment | J1939-74 | | | 2 | Increase the platform reel speed. | | | |
| | 3007 | Reel speed decrement | J1939-74 | | | 2 | Decrease the platform reel speed. | | | |
| | 3008 | Threshing clearance increment | J1939-74 | | | 2 | Increase threshing clearance. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3009 | Threshing clearance decrement | J1939-74 | | | 2 | Decrease threshing clearance. | | | |
| | 3010 | Threshing speed increment | J1939-74 | | | 2 | Increase threshing speed. | | | |
| | 3011 | Threshing speed decrement | J1939-74 | | | 2 | Decrease threshing speed. | | | |
| | 3012 | Product fan speed increment | J1939-74 | | | 2 | Increase Product fan speed.The Product may be either the harvested crop material or the material being applied or handled. | | | |
| | 3013 | Product fan speed decrement | J1939-74 | | | 2 | Decrease Product fan speed. The Product may be either the harvested crop material or the material being applied or handled. | | | |
| | 3015 | Implement fold down | J1939-74 | | | 2 | Move the implement down from travel to work position | | | |
| | 3016 | Implement fold up | J1939-74 | | | 2 | Move the implement up from work to travel position. | | | |
| | 3017 | RH header raise | J1939-74 | | | 2 | Raise the right hand header of the system. | | | |
| | 3018 | LH header raise | J1939-74 | | | 2 | Raise the left hand header of the system. | | | |
| | 3019 | Product fan engage mode | J1939-74 | | | 2 | Engage/disengage the (harvested or applied) Product fan. The Product may be either the harvested crop material or the material being applied or handled. | | | |
| | 3020 | Augers engage mode | J1939-74 | | | 2 | Engage/disengage all the augers. | | | |
| | 3021 | Product basket fill state | J1939-74 | | | 2 | The state of the capacity of the Product storage basket. | | | |
| | 3022 | Augers enable mode | J1939-74 | | | 2 | Enable/disable all the augers. | | | |
| | 3023 | Header height control mode | J1939-74 | | | 2 | Header height controller engaged/disengaged. | | | |
| | 3024 | Header remote tether control mode | J1939-74 | | | 2 | Tether control mode of the Product Handling system. Used for remote operator control of the headers. | | | |
| | 3025 | Lubrication control mode | J1939-74 | | | 2 | Lubrication control of the Product Handling system. | | | |
| | 3026 | Transmission Oil Level Measurement Status | J1939-71 | 65272 | 8.5 | 4 | Indicates if conditions are acceptable to obtain a valid transmission oil level measurement as conveyed in SPN 124 Transmission Oil Level or SPN new Transmission Oil Level High / Low. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3027 | Transmission Oil Level High / Low | J1939-71 | 65272 | 7 | 8 | Amount of current volume of transmission sump oil compared to recommended volume. | | | |
| | 3028 | Transmission Oil Level Countdown Timer | J1939-71 | 65272 | 8.1 | 4 | This parameter indicates how much of the required settling time remains. | | | |
| | 3029 | Engine Start Inhibited, Pre-lube System Issue | J1939 | | | | The engine oil pre-lube system will not allow the engine to start. | | | |
| | 3030 | Transmission Torque Converter Ratio | J1939-71 | 61452 | 1-2 | 16 | Ratio of the transmission torque converter output torque to torque converter input torque at current speed. | | | |
| | 3031 | Catalyst Tank Temperature | J1939-71 | 65110 | 2 | 8 | Temperature of the reagent in the storage tank. | | | |
| | 3032 | Right Brake Pedal Position | J1939-74 | | | 8 | Ratio of the right brake pedal position to maximum right brake pedal position. For applications with only one brake pedal use SPN 521. | | | |
| | 3033 | Left Brake Pedal Position | J1939-74 | | | 8 | Ratio of the left brake pedal position to maximum left brake pedal position. For applications with only one brake pedal use SPN 521. | | | |
| | 3034 | DM22 Control Byte - Individual DTC Clear/Reset Control Byte | J1939-73 | 49920 | 1 | 8 | DM22 Control byte is used to identify the function being performed by this message. | | | |
| | 3035 | DM22 - Negative Acknowledge Indicator For Individual DTC Clear | J1939-73 | 49920 | 2 | 8 | DM22 parameter which is the Negative Acknowledge Indicator For Individual DTC Clear. | | | |
| | 3036 | DM22 - DTC SPN Clear | J1939-73 | 49920 | 6-8.6 | 19 | DM22 the SPN of the DTC to Clear. | | | |
| | 3037 | DM22 - DTC FMI to Clear | J1939-73 | 49920 | 8.1 | 5 | DM22 the FMI of the DTC to Clear. | | | |
| | 3038 | Flash Malfunction Indicator Lamp (MIL) | J1939-73 | 65226 | 2.7 | 2 | This parameter provides the capability to flash the MIL | | | |
| | 3039 | Flash Red Stop Lamp (RSL) | J1939-73 | 65226 | 2.5 | 2 | This parameter provides the capability to flash the RSL | | | |
| | 3040 | Flash Amber Warning Lamp (AWL) | J1939-73 | 65226 | 2.3 | 2 | This parameter provides the capability to flash the AWL | | | |
| | 3041 | Flash Protect Lamp | J1939-73 | 65226 | 2.1 | 2 | This parameter provides the capability to flash the engine protect lamp | | | |
| | 3042 | Requested Wheel Speed | J1939-74 | | | 16 | When at rated engine speed, this is the wheel speed that the transmission will attempt to attain. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3043 | Type of Passenger Count | J1939-71 | 64960 | 1 | 8 | Used to notify transit link devices of the type of passenger counting system used in the vehicle. | | | |
| | 3044 | Silent Alarm Status | J1939-71 | 64960 | 3.1 | 2 | Used to report silent alarm push button status. | | | |
| | 3045 | Vehicle Use Status | J1939-71 | 64960 | 3.3 | 2 | Used to indicate the proper or unauthorized use of the vehicle. | | | |
| | 3046 | Transit Run Status | J1939-71 | 64960 | 3.5 | 2 | Status of the run switch for the vehicle | | | |
| | 3047 | Patron Count | J1939-71 | 64960 | 2 | 8 | Count of the number of passengers on a transit vehicle. | | | |
| | 3048 | Ignition Cycle Counter | J1939-73 | 49664 | 01-02 | 16 | Count of the number of ignition cycles. | | | |
| | 3049 | OBD Monitoring Conditions Encountered Counts | J1939-73 | 49664 | 03-04 | 16 | Count the number of times that the vehicle has been operated in the specified OBD monitoring conditions. | | | |
| | 3050 | Catalyst 1 System Monitor | J1939-73 | | | | Monitors Catalyst 1 System | | | |
| | 3051 | Catalyst 2 System Monitor | J1939-73 | | | | Monitors Catalyst 2 System | | | |
| | 3052 | Engine Misfire Monitor | J1939-73 | | | | Monitors Engine Misfires | | | |
| | 3053 | Engine Evaporative System Monitor | J1939-73 | | | | Monitors Engine Evaporation System | | | |
| | 3054 | Engine Secondary Air System Monitor (AIR Monitor) | J1939-73 | | | | Monitors engine secondary air system. | | | |
| | 3055 | Engine Fuel System Monitor | J1939-73 | | | | Monitors the Fuel System | | | |
| | 3056 | Engine Oxygen Sensor 1 Monitor | J1939-73 | | | | Monitors Engine Oxygen Sensor 1 | | | |
| | 3057 | Engine Oxygen Sensor 2 Monitor | J1939-73 | | | | Monitors Engine Oxygen Sensor 2 | | | |
| | 3058 | Engine Exhaust Gas Recirculation (EGR) System Monitor | J1939-73 | | | | Monitors EGR | | | |
| | 3059 | Engine Positive Crankcase Ventilation System Monitor | J1939-73 | | | | Monitors Engine Positive Crankcase Ventilation System | | | |
| | 3060 | Engine Cooling System Monitor | J1939-73 | | | | Monitors Engine Cooling System | | | |
| | 3061 | Engine Cold Start Emission Reduction Strategy System Monitor | J1939-73 | | | | Monitors Engine Cold Start Emission Reduction Strategy | | | |
| | 3062 | Air Conditioning System Component Monitor | J1939-73 | | | | Monitors Air Conditioning Component | | | |
| | 3063 | Direct Ozone Reduction Monitor | J1939-73 | | | | Monitors Direct Ozone Reduction | | | |
| | 3064 | Particulate Matter Trap Monitor | J1939-73 | | | | Monitors Particulate Matter Trap | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3065 | Comprehensive Component Monitor | J1939-73 | | | | Monitors Comprehensive Component Monitor | | | |
| | 3066 | SPN of Applicable System Monitor | J1939-73 | 49664 | 05-07 | 19 | Idenifies the SPN of the system monitor for which Monitor ratio is being reported. | | | |
| | 3067 | Applicable System Monitor Numerator | J1939-73 | 49664 | 08-09 | 16 | Idenitifes the number of times the vehicle has been operated such that all conditions necessary for the Applicable System Monitor to detect a malfunction have been encountered. | | | |
| | 3068 | Applicable System Monitor Denominator | J1939-73 | 49664 | 10-11 | 16 | Identifies the number of times a vehicle has been operated that constitues a driving cycle where the Applicable System Monitor could be operated per regulatory requirements. | | | |
| | 3069 | Distance Travelled While MIL is Activated | J1939-73 | 49408 | 1 | 16 | The kilometers accumulated while the MIL is activated. | | | |
| | 3070 | Number of bytes in the Milepost Identification | J1939-71 | 64959 | 1 | 8 | Number of bytes in the Milepost Identification | | | |
| | 3071 | Number of bytes in the Transit Assigned Route Identity | J1939-71 | 64958 | 2 | 8 | Number of bytes in the Transit Assigned Route Identity | | | |
| | 3072 | Number of bytes in the Transit Assigned Run Identity | J1939-71 | 64958 | 3 | 8 | Number of bytes in the Transit Assigned Run Identity | | | |
| | 3073 | Number of bytes in the Transit Assigned Block Identity | J1939-71 | 64958 | 4 | 8 | Number of bytes in the Transit Assigned Block Identity | | | |
| | 3074 | Transit Assigned Route Identity | J1939-71 | 64958 | 5 to A | 800 | Identifies the transit route assigned to a specific vehicle | | | |
| | 3075 | Transit Assigned Run Identity | J1939-71 | 64958 | A+1 to B | 800 | Identifies the transit run assigned to a specific vehicle | | | |
| | 3076 | Transit Assigned Block Identity | J1939-71 | 64958 | B+1 to C | 800 | Identifies the transit block assigned to a specific vehicle | | | |
| | 3078 | Agency | J1939-71 | 64958 | 1 | 8 | The identity of the agency involved in this transaction | | | |
| | 3079 | Intersection Preemption Request/Response | J1939-71 | 64957 | 1.7 | 2 | Status of the intersection signal preemption | | | |
| | 3080 | Transit Route ID Usage | J1939-71 | 64957 | 1.5 | 2 | Transit route ID usage | | | |
| | 3081 | Range Code Enable | J1939-71 | 64957 | 1.3 | 2 | Range code enable | | | |
| | 3082 | Strobe Activation Control Status | J1939-71 | 64957 | 2.7 | 2 | Strobe activation control status | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3083 | Transit Door Enable | J1939-71 | 64957 | 2.5 | 2 | Transit door enable | | | |
| | 3084 | Priority of Response Sent by Emitter | J1939-71 | 64957 | 2.1 | 4 | Priority of response sent by emitter | | | |
| | 3085 | Vehicle ID | J1939-71 | 64957 | 3,4 | 16 | Numerical designation of the vehicle | | | |
| | 3086 | Transmission Ready for Brake Release | J1939-71 | 65098 | 2.1 | 2 | This parameter indicates that enough torque / motive force is available at the transmission output shaft to release all the brakes without a risk of unintentional movement in the opposite direction. | | | |
| | 3087 | Auxiliary Level | J1939-71 | 65164 | 5-6 | 16 | Level measured by a sensor. | | | |
| | 3088 | Header height vertical rate control | J1939-74 | | | 8 | Setting for the header height raise/lower control speed rate | | | |
| | 3089 | Header height sensitivity control | J1939-74 | | | 8 | Control setting for the header height system's sensitivity to ground contour changes | | | |
| | 3090 | Header height setpoint change | J1939-74 | | | 8 | Number of clicks of the encoder used for header height setting since last transmitted CAN message | | | |
| | 3091 | Header height setpoint change sequence number | J1939-74 | | | 8 | Sequence number of the Header Height Setpoint Change | | | |
| | 3092 | Header platform height | J1939-74 | | | 16 | Height of the cutting platform | | | |
| | 3093 | Header platform height maximum | J1939-74 | | | 16 | Maximum height of the cutting platform. | | | |
| | 3094 | Reserved for assignment | | | | | | | | |
| | 3095 | Reserved for assignment | | | | | | | | |
| | 3096 | Header float pressure | J1939-74 | | | 8 | Pressure of the header height system lift cylinders. | | | |
| | 3097 | Header float pressure maximum | J1939-74 | | | 8 | Maximum pressure of the header height system lift cylinders | | | |
| | 3098 | Header position percent | J1939-74 | | | 8 | Header height position, as a percent of maximum | | | |
| | 3099 | Header position percent maximum | J1939-74 | | | 8 | Maximum mechanically allowable header height as a percentage of the allowed display height. | | | |
| | 3101 | Reserved for assignment | | | | | | | | |
| | 3102 | Unloading Auger swing out | J1939-74 | | | 2 | Swing the unloading auger out, away from vehicle | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3103 | Unloading auger swing in | J1939-74 | | | 2 | Swing the unloading auger in, toward the vehicle | | | |
| | 3104 | Unloading auger swing out-auto | J1939-74 | | | 2 | Swing the unloading auger out, away from the vehicle, auto mode | | | |
| | 3105 | Unloading auger swing in-auto | J1939-74 | | | 2 | Swing the unloading auger in, toward the vehicle, auto mode | | | |
| | 3106 | Side hill left tilt | J1939-74 | | | 2 | Tilt the machine chassis down to the left | | | |
| | 3107 | Side hill right tilt | J1939-74 | | | 2 | Tilt the machine chassis down to the right | | | |
| | 3108 | Spreader speed increment | J1939-74 | | | 2 | Increase the speed of the spreader | | | |
| | 3109 | Spreader speed decrement | J1939-74 | | | 2 | Decrease the speed of the spreader | | | |
| | 3110 | Precleaner open | J1939-74 | | | 2 | Open the precleaner | | | |
| | 3111 | Precleaner close | J1939-74 | | | 2 | Close the precleaner | | | |
| | 3112 | Open chaffer | J1939-74 | | | 2 | Open the chaffer | | | |
| | 3113 | Close chaffer | J1939-74 | | | 2 | Close the chaffer | | | |
| | 3114 | Open sieve | J1939-74 | | | 2 | Open the sieve | | | |
| | 3115 | Close sieve | J1939-74 | | | 2 | Close the sieve | | | |
| | 3116 | Move chopper vane left | J1939-74 | | | 2 | Move the chopper vane towards the left side of the machine | | | |
| | 3117 | Move chopper vane right | J1939-74 | | | 2 | Move the chopper vane towards the right side of the vehicle | | | |
| | 3118 | Quick stop switch | J1939-74 | | | 2 | Master quick stop switch for stopping the product related systems on the vehicle. | | | |
| | 3119 | Unloading auger engage/disengage | J1939-74 | | | 2 | Engage or disengage the (single) unloading auger | | | |
| | 3120 | Unloading auger fold | J1939-74 | | | 2 | Fold the unloading auger | | | |
| | 3121 | Unloading auger unfold | J1939-74 | | | 2 | Unfold the unloading auger | | | |
| | 3122 | Max allowable cleaning shoe travel | J1939-74 | | | 8 | Max cleaning shoe travel allowed | | | |
| | 3123 | Right hand header height setpoint | J1939-74 | | | 8 | Setpoint for the machine to control to. | | | |
| | 3124 | Left hand header height setpoint | J1939-74 | | | 8 | Setpoint for the machine to control to. | | | |
| | 3125 | Left hand header height | J1939-74 | | | 8 | Height of the Left hand header. | | | |
| | 3126 | Right hand header height | J1939-74 | | | 8 | Height of the Right hand header. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3127 | Header control response rate setpoint | J1939-74 | | | 8 | Setpoint for the machine to control to. Rate of response to header control command changes | | | |
| | 3128 | Header control response rate maximum setpoint | J1939-74 | | | 8 | Header control response rate maximum setpoint. Limits are usually determined by calibration process. | | | |
| | 3129 | Header control response rate minimum setpoint | J1939-74 | | | 8 | Header control response rate minimum setpoint. Limits are usually determined by calibration process. | | | |
| | 3130 | Product system tank water level | J1939-74 | | | 16 | Product system tank water level | | | |
| | 3131 | Product fan speed | J1939-74 | | | 16 | Product fan speed | | | |
| | 3132 | Product system manifold pressure | J1939-74 | | | 8 | Pressure of the liquid in the product system as measured at the manifold or main distribution point. | | | |
| | 3133 | Product system pump discharge pressure | J1939-74 | | | 16 | Pressure of the liquid in the product system as measured at the pump discharge | | | |
| | 3134 | Product fan hours | J1939-74 | | | 16 | Total Product fan running hours | | | |
| | 3135 | Right hand header height max setpoint | J1939-74 | | | 8 | Maximum setpoint measured during calibration. Used to set max limit of control range. | | | |
| | 3136 | Right hand header height min setpoint | J1939-74 | | | 8 | Minimum setpoint measured during calibration. Used to set min limit of control range. | | | |
| | 3137 | Left hand header height min setpoint | J1939-74 | | | 8 | Minimum setpoint measured during calibration. Used to set min limit of control range. | | | |
| | 3138 | Left hand header height max setpoint | J1939-74 | | | 8 | Maximum setpoint measured during calibration. Used to set max limit of control range. | | | |
| | 3139 | Right hand header unit speed | J1939-74 | | | 16 | Right hand header unit speed | | | |
| | 3140 | Left hand header unit speed | J1939-74 | | | 16 | Left hand header unit speed | | | |
| | 3141 | GPS differential corrections license | NMEA 2000 | | | | The license bought for use by a differential correction GPS device (from the signal supplier). | | | |
| | 3142 | Method, GNSS | NMEA 2000 | | | | The "Method" or "Quality" of the GPS signal. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3143 | Differential source | NMEA 2000 | | | | The source of a differential correction signal used by the GPS system used to calculate ECU position | | | |
| | 3144 | Differential source, Secondary | NMEA 2000 | | | | The secondary source of a differential correction signal used by the GPS system used to calculate ECU position | | | |
| | 3145 | DGNSS fix | NMEA 2000 | | | | This represents the point in the GPS signal flow process at which the GPS signal is determined after differential correction has been applied | | | |
| | 3146 | PGN of message being configured | J1939-74 | | | | The PGN of the Proprietarily Configurable Message (PCM) whose configuration is being identified by this Configuration Identification Message. | | | |
| | 3147 | Parameter being included | J1939-74 | | | | The SPN of the parameter whose location is presently being identified for grouping into the message whose PGN is in this Configuration Identification Message. | | | |
| | 3148 | Position of configured parameter | J1939-74 | | | | The number identifying a particular parameter's position within a configured message | | | |
| | 3149 | Message will be used proprietarily | J1939-74 | | | | Flag used to indicate that the message being configured is a member of the set of destination specific proprietarily configurable messages | | | |
| | 3150 | Message will use transport protocol | J1939-74 | | | | Flag used to indicate whether the message being configured is one that will use transport protocol. | | | |
| | 3151 | First parameter only being identified | J1939-74 | | | | Flag which is used to identify whether only the first parameter that will be sent within one of the Configurable Messages is being identified with a Configuration Identification Message | | | |
| | 3152 | Number of parameters included | J1939-74 | | | | The number of parameters, which will be grouped into the message whose PGN is in this Configuration Identification Message. | | | |
| | 3153 | Starting bit for this parameter | J1939-74 | | | | The bit position that the LSB of the data for the parameter is to occupy within the configurable message being identified by the PGN. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3154 | Parameter to be located | J1939-74 | | | | The parameter, identified by SPN, that it is desired to locate or to initiate the transmission | | | |
| | 3155 | Parameter locate command | J1939-74 | | | | Used to identify the particular command that the Parameter Locate message is presently being used for. | | | |
| | 3156 | Blade Control Mode Switch | J1939-71 | 61453 | 1.1 | 4 | Indicates the blade control mode switch state the user has set for the land leveling system. | | | |
| | 3157 | Desired Grade Offset Switch | J1939-71 | 61453 | 1.5 | 4 | Indicates the grade offset switch state the user has set for the land leveling system | | | |
| | 3158 | Blade Auto Mode Command | J1939-71 | 61453 | 2.1 | 4 | Allows other controllers to command to the primary control system what they think is the appropriate auto control mode to be engaged in, based on the information they have available to them. | | | |
| | 3159 | Trip Number | J1939-71 | 64956 | 04-05 | 16 | The identity number assigned to this trip. | | | |
| | 3160 | Assigned Route | J1939-71 | 64956 | 08-09 | 16 | The identity number assigned to this route. | | | |
| | 3161 | Pattern Number | J1939-71 | 64956 | 06-07 | 16 | The agency defined pattern number for this trip | | | |
| | 3162 | Assigned Run | J1939-71 | 64956 | 10-11 | 16 | The agency defined run number for this trip | | | |
| | 3163 | Assigned Block | J1939-71 | 64956 | 12-13 | 16 | The agency defined block number for this trip | | | |
| | 3164 | Driver's farebox security code | J1939-71 | 64956 | 14-15 | 16 | Security code for the farebox, numerical only. | | | |
| | 3165 | Fare Validity | J1939-71 | 64955 | 3.1 | 4 | Agency defined value indicating validity of this fare | | | |
| | 3166 | Pass Category | J1939-71 | 64955 | 3.5 | 4 | Agency defined value indicating the category of the passenger associated with this fare | | | |
| | 3167 | Initial Fare Agency | J1939-71 | 64955 | 4.1 | 5 | Identifies where the initial fare is paid | | | |
| | 3168 | Transfer Sold | J1939-71 | 64955 | 8 | 8 | Indicates that a transfer was sold or issued on this transaction including its type and/or restrictions. | | | |
| | 3169 | Route Number | J1939-71 | 64955 | 6, 7.1 | 12 | The route number issuing the transfer | | | |
| | 3170 | Transaction Type | J1939-71 | 64955 | 1.1 | 4 | Enumerated value representing the type of transaction completed | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3171 | Passenger Type | J1939-71 | 64955 | 1.5 | 4 | Enumerated value representing the type/class of passenger | | | |
| | 3172 | Type of Service | J1939-71 | 64955 | 5.1 | 3 | The type of service provided | | | |
| | 3173 | Transfer Type | J1939-71 | 64955 | 5.4 | 5 | The kind of transfer used | | | |
| | 3174 | Trip Direction | J1939-71 | 64956 | 02.1 | 4 | The general direction of travel for this trip. | | | |
| | 3175 | Fare Presets | J1939-71 | 64956 | 03 | 8 | Fare Presets | | | |
| | 3176 | Type of Fare | J1939-71 | 64955 | 2.1 | 4 | Type of Fare | | | |
| | 3177 | Payment Details | J1939-71 | 64955 | 2.5 | 4 | Payment details. | | | |
| | 3178 | Farebox Service Status | J1939-71 | 64956 | 01.1 | 2 | Indicates if the farebox is in or out of service. | | | |
| | 3179 | Farebox Emergency Status | J1939-71 | 64954 | 1.1 | 2 | Indicates if a farebox emergency condition exists. | | | |
| | 3180 | Trip Status | J1939-71 | 64956 | 01.3 | 3 | Trip Status | | | |
| | 3181 | Farebox Alarm Identifier | J1939-71 | 64954 | 2.1 | 7 | Indicates the nature of the farebox alarm condition. | | | |
| | 3182 | Transmission Retarder Enable Solenoid Valve | J1939 | | | | Valve that makes hydraulic fluid available for retarder use. | | | |
| | 3183 | Transmission Retarder Modulation Solenoid Valve | J1939 | | | | Valve used to control hydraulic retarder application. | | | |
| | 3184 | Transmission Lockup Clutch Pressure Indicator | J1939 | | | | Pressure being applied to the torque converter lockup clutch. | | | |
| | 3185 | Transmission Differential Lock Solenoid Valve | J1939 | | | | Valve used to apply pressure to differential lock. | | | |
| | 3186 | Transmission Differential Lock Clutch Pressure Indicator | J1939 | | | | Indicates pressure applied to differential lock clutch. | | | |
| | 3187 | Transmission Shift Console Data Link | J1939 | | | | Communication link between transmission and shift selector. | | | |
| | 3188 | XBR Message Checksum | J1939-71 | 1024 | 8.5 | 4 | The XBR message checksum is used to verify the signal path from the demanding device to the brake controller on electronic brake systems. | | | |
| | 3189 | XBR Message Counter | J1939-71 | 1024 | 8.1 | 4 | The XBR message counter is to verify the signal path from the demanding device to the brake controller on electronic brake systems. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3190 | Tire Location | J1939-71 | 64953 | 1 | 8 | Identifies which tire is associated with the parametric data in this PGN. | | | |
| | 3191 | Reference Tire Pressure | J1939-71 | 64953 | 2 | 8 | Reference value of the tire pressure as basis for the tire pressure monitoring | | | |
| | 3192 | Tire Location | J1939-71 | 44544 | 1 | 8 | Identifies which tire is associated with the parametric data in this PGN. | | | |
| | 3193 | Reference Tire Pressure Setting | J1939-71 | 44544 | 2 | 8 | Reference value of the tire pressure setting as basis for the tire pressure monitoring | | | |
| | 3194 | Control Byte | J1939-31 | | | | Control byte used to identify the type of request or response for the Network message. | | | |
| | 3195 | Number of Ports | J1939-31 | | | | Number of ports in this NIECU | | | |
| | 3196 | Uptime since last power-on reset | J1939-31 | | | | Uptime (in seconds) since last power on reset. | | | |
| | 3197 | Average Messages Filtered per Second | J1939-31 | | | | Average number of messages filtered per second | | | |
| | 3198 | Average Messages Forwarded per Second | J1939-31 | | | | Average number of messages forwarded per second | | | |
| | 3199 | Average Messages Received per Second | J1939-31 | | | | Average number of messages received per second | | | |
| | 3200 | Number of Messages with Excessive Transit Delay Time | J1939-31 | | | | Number of messages with an excessive transit delay time | | | |
| | 3201 | Number of Messages lost due to Buffer Overflow | J1939-31 | | | | Number of message lost due to buffer overflow | | | |
| | 3202 | Average Transit Delay Time | J1939-31 | | | | Average transit delay time (in milliseconds). | | | |
| | 3203 | Maximum Transit Delay Time | J1939-31 | | | | Maximum transit delay time (in milliseconds). | | | |
| | 3204 | Maximum Messages Filtered per Second | J1939-31 | | | | Maximum number of messages filtered per second | | | |
| | 3205 | Maximum Messages Forwarded per Second | J1939-31 | | | | Maximum number of messages forwarded per second | | | |
| | 3206 | Maximum Messages Received per Second | J1939-31 | | | | Maximum number of messages received per second | | | |
| | 3207 | Number of Filter Database Entries | J1939-31 | | | | Number of filter database entries | | | |
| | 3208 | Maximum Filter Database Size | J1939-31 | | | | Maximum filter database size (in bytes) | | | |
| | 3209 | Buffer Size | J1939-31 | | | | Buffer size (in bytes) | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3210 | Parameter Number | J1939-31 | | | | The ordinal number of a filter database parameter | | | |
| | 3211 | SA_List | J1939-31 | | | | A list of source addresses of ECUs that an NIECU "sees" in the segment beyond a port | | | |
| | 3212 | PGN_List | J1939-31 | | | | A list of parameter group numbers for filtering | | | |
| | 3213 | Filter_Mode | J1939-31 | | | | The method of filtering for a particular Port_pair: Pass (list) or Block (list) | | | |
| | 3214 | Port_Pair | J1939-31 | | | | An ordered pair of ports. | | | |
| | 3215 | Prohibit air suspension control | J1939-71 | 53760 | 7.5 | 2 | This parameter is an external request to the air suspension control system to prohibit all air suspension control. | | | |
| | 3216 | Aftertreatment 1 Intake NOx | J1939-71 | 61454 | 1 | 16 | The amount of combined NO and NO2 in the exhaust entering the aftertreatment system measured by a NOx sensor at the aftertreatment intake, represented in NOx molecule parts per million non-NOx molecules in exhaust bank 1. | | | |
| | 3217 | Aftertreatment 1 Intake %O2 | J1939-71 | 61454 | 3 | 16 | The actual oxidation factor (%O2) of the gas within the exhaust stream. This value is measured by a sensor at the aftertreatment intake in exhaust bank 1. | | | |
| | 3218 | Aftertreatment 1 Intake Gas Sensor Power In Range | J1939-71 | 61454 | 5.1 | 2 | Indicates that the power supplied to the aftertreatment intake gas sensor, either NOx or O2, is within the manufacturer's specification in exhaust bank 1. | | | |
| | 3219 | Aftertreatment 1 Intake Gas Sensor at Temperature | J1939-71 | 61454 | 5.3 | 2 | Indicates that the heater element of the aftertreatment intake gas sensor, either NOx or O2, is within the manufacturer's specified range for accurate measurements in exhaust bank 1. | | | |
| | 3220 | Aftertreatment 1 Intake NOx Reading Stable | J1939-71 | 61454 | 5.5 | 2 | Indicates that the NOx reading of the aftertreatment intake NOx sensor is stable as determined by the manufacturer's control software in exhaust bank 1. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3221 | Aftertreatment 1 Intake Wide-Range % O2 Reading Stable | J1939-71 | 61454 | 5.7 | 2 | Indicates that the %O2 reading of the aftertreatment intake gas sensor, either NOx or O2, is stable as determined by the manufacturer's control software in exhaust bank 1. | | | |
| | 3222 | Aftertreatment 1 Intake Gas Sensor Heater Preliminary FMI | J1939-71 | 61454 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the heater of the intake exhaust gas sensor, either NOx or O2, by the manufacturer’s sensor control software in exhaust bank 1. | | | |
| | 3223 | Aftertreatment 1 Intake Gas Sensor Heater Control | J1939-71 | 61454 | 6.6 | 2 | Indicates the heater status in the warm-up process. Upon receiving a power-up command, the gas sensor ramps up according to a manufacturer defined profile. | | | |
| | 3224 | Aftertreatment 1 Intake NOx Sensor Preliminary FMI | J1939-71 | 61454 | 7.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment intake NOx sensor by the manufacturer’s sensor control software in exhaust bank 1. | | | |
| | 3225 | Aftertreatment 1 Intake Oxygen Sensor Preliminary FMI | J1939-71 | 61454 | 8.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment intake oxygen sensor by the manufacturer’s sensor control software in exhaust bank 1. | | | |
| | 3226 | Aftertreatment 1 Outlet NOx | J1939-71 | 61455 | 1 | 16 | The amount of combined NO and NO2 in the exhaust entering the aftertreatment system measured by a NOx sensor at the aftertreatment outlet, represented in NOx molecule parts per million non-NOx molecules in exhaust bank 1. | | | |
| | 3227 | Aftertreatment 1 Outlet %O2 | J1939-71 | 61455 | 3 | 16 | The actual oxidation factor (%O2) of the gas within the exhaust stream. This value is measured by a sensor at the aftertreatment outlet in exhaust bank 1. | | | |
| | 3228 | Aftertreatment 1 Outlet Gas Sensor Power In Range | J1939-71 | 61455 | 5.1 | 2 | Indicates that the power supplied to the aftertreatment outlet gas sensor, either NOx or O2, is within the manufacturer’s specification in exhaust bank 1. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3229 | Aftertreatment 1 Outlet Gas Sensor at Temperature | J1939-71 | 61455 | 5.3 | 2 | Indicates that the heater element of the aftertreatment outlet gas sensor, either NOx or O2, is within the manufacturer's specified range for accurate measurements in exhaust bank 1. | | | |
| | 3230 | Aftertreatment 1 Outlet NOx Reading Stable | J1939-71 | 61455 | 5.5 | 2 | Indicates that the NOx reading of the aftertreatment outlet NOx sensor is stable as determined by the manufacturer's control software in exhaust bank 1. | | | |
| | 3231 | Aftertreatment 1 Outlet Wide-Range %O2 Reading Stable | J1939-71 | 61455 | 5.7 | 2 | Indicates that the %O2 reading of the aftertreatment outlet gas sensor, either NOx or O2, is stable as determined by the manufacturer's control software in exhaust bank 1. | | | |
| | 3232 | Aftertreatment 1 Outlet Gas Sensor Heater Preliminary FMI | J1939-71 | 61455 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the heater of the outlet exhaust gas sensor, either NOx or O2, by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3233 | Aftertreatment 1 Outlet Gas Sensor Heater Control | J1939-71 | 61455 | 6.6 | 2 | Indicates the heater status in the warm-up process. Upon receiving a power-up command, the gas sensor ramps up according to a manufacturer defined profile. | | | |
| | 3234 | Aftertreatment 1 Outlet NOx Sensor Preliminary FMI | J1939-71 | 61455 | 7.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment outlet NOx sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3235 | Aftertreatment 1 Outlet Oxygen Sensor Preliminary FMI | J1939-71 | 61455 | 8.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment outlet oxygen sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3236 | Aftertreatment 1 Exhaust Gas Mass Flow | J1939-71 | 65247 | 6-7 | 16 | Measured/calculated exhaust gas mass upstream of the aftertreatment system in exhaust bank 1 and 2. | | | |
| | 3237 | Aftertreatment 1 Intake Dew Point | J1939-71 | 65247 | 8.1 | 2 | Indicates that the temperature on the intake side of the aftertreatment system has exceeded the dew point, as estimated by the ECM in exhaust bank 1. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3238 | Aftertreatment 1 Exhaust Dew Point | J1939-71 | 65247 | 8.3 | 2 | Indicates that the temperature on the exhaust side of the aftertreatment has exceeded the dew point, as estimated by the ECM in exhaust bank 1. | | | |
| | 3239 | Aftertreatment 2 Intake Dew Point | J1939-71 | 65247 | 8.5 | 2 | Indicates that the temperature on the intake side of the aftertreatment system has exceeded the dew point, as estimated by the ECM in exhaust bank 2. | | | |
| | 3240 | Aftertreatment 2 Exhaust Dew Point | J1939-71 | 65247 | 8.7 | 2 | Indicates that the temperature on the exhaust side of the aftertreatment has exceeded the dew point, as estimated by the ECM in exhaust bank 2. | | | |
| | 3241 | Aftertreatment 1 Exhaust Gas Temperature 1 | J1939-71 | 64948 | 1 | 16 | The reading from the exhaust gas temperature sensor located farthest upstream in the aftertreatment system in exhaust bank 1. | | | |
| | 3242 | Aftertreatment 1 Particulate Trap Intake Gas Temperature | J1939-71 | 64948 | 3 | 16 | Temperature of engine combustion byproducts entering the particulate trap in exhaust bank 1. | | | |
| | 3243 | Aftertreatment 1 Exhaust Gas Temperature 1 Preliminary FMI | J1939-71 | 64948 | 5.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the exhaust gas temperature 1 sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3244 | Aftertreatment 1 Particulate Trap Intake Gas Temperature Preliminary FMI | J1939-71 | 64948 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap intake gas temperature sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3245 | Aftertreatment 1 Exhaust Gas Temperature 3 | J1939-71 | 64947 | 1 | 16 | The reading from the exhaust gas temperature sensor located farthest downstream in the aftertreatment system in exhaust bank 1. | | | |
| | 3246 | Aftertreatment 1 Particulate Trap Outlet Gas Temperature | J1939-71 | 64947 | 3 | 16 | Temperature of engine combustion byproducts leaving the particulate trap exhaust in exhaust bank 1. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3247 | Aftertreatment 1 Exhaust Gas Temperature 3 Preliminary FMI | J1939-71 | 64947 | 5.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the exhaust gas temperature 3 sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3248 | Aftertreatment 1 Particulate Trap Outlet Exhaust Gas Temperature Preliminary FMI | J1939-71 | 64947 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap outlet gas temperature sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3249 | Aftertreatment 1 Exhaust Gas Temperature 2 | J1939-71 | 64946 | 1 | 16 | The reading from the exhaust gas temperature sensor located midstream of the other two temperature sensors in the aftertreatment system in exhaust bank 1. | | | |
| | 3250 | Aftertreatment 1 Particulate Trap Intermediate Gas Temperature | J1939-71 | 64946 | 3 | 16 | Temperature of engine combustion byproducts at a mid-point in the particulate trap in exhaust bank 1. | | | |
| | 3251 | Aftertreatment 1 Particulate Trap Differential Pressure | J1939-71 | 64946 | 5 | 16 | Exhaust differential pressure measured between the intake and exhaust of a particulate trap in exhaust bank 1. | | | |
| | 3252 | Aftertreatment 1 Exhaust Gas Temperature 2 Preliminary FMI | J1939-71 | 64946 | 7.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the exhaust gas temperature 2 sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3253 | Aftertreatment 1 Particulate Trap Delta Pressure Preliminary FMI | J1939-71 | 64946 | 7.6 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap differential pressure sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |
| | 3254 | Aftertreatment 1 Particulate Trap Intermediate Gas Temperature Preliminary FMI | J1939-71 | 64946 | 8.3 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap intermediate gas temperature sensor by the manufacturer's sensor control software in exhaust bank 1. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3255 | Aftertreatment 2 Intake NOx | J1939-71 | 61456 | 1 | 16 | The amount of combined NO and NO2 in the exhaust entering the aftertreatment system measured by a NOx sensor at the aftertreatment intake, represented in NOx molecule parts per million non-NOx molecules in exhaust bank 2 | | | |
| | 3256 | Aftertreatment 2 Intake %O2 | J1939-71 | 61456 | 3 | 16 | The actual oxidation factor (%O2) of the gas within the exhaust stream. This value is measured by a sensor at the aftertreatment intake in exhaust bank 2. | | | |
| | 3257 | Aftertreatment 2 Intake Gas Sensor Power In Range | J1939-71 | 61456 | 5.1 | 2 | Indicates that the power supplied to the aftertreatment intake gas sensor, either NOx or O2, is within the manufacturer's specification in exhaust bank 2. | | | |
| | 3258 | Aftertreatment 2 Intake Gas Sensor at Temperature | J1939-71 | 61456 | 5.3 | 2 | Indicates that the heater element of the aftertreatment intake gas sensor, either NOx or O2, is within the manufacturer's specified range for accurate measurements in exhaust bank 2. | | | |
| | 3259 | Aftertreatment 2 Intake NOx Reading Stable | J1939-71 | 61456 | 5.5 | 2 | Indicates that the NOx reading of the aftertreatment intake NOx sensor is stable as determined by the manufacturer's control software in exhaust bank 2. | | | |
| | 3260 | Aftertreatment 2 Intake Wide-Range % O2 Reading Stable | J1939-71 | 61456 | 5.7 | 2 | Indicates that the %O2 reading of the aftertreatment intake gas sensor, either NOx or O2, is stable as determined by the manufacturer's control software in exhaust bank 2. | | | |
| | 3261 | Aftertreatment 2 Intake Gas Sensor Heater Preliminary FMI | J1939-71 | 61456 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the heater of the intake exhaust gas sensor, either NOx or O2, by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3262 | Aftertreatment 2 Intake Gas Sensor Heater Control | J1939-71 | 61456 | 6.6 | 2 | Indicates the heater status in the warm-up process. Upon receiving a power-up command, the gas sensor ramps up according to a manufacturer defined profile in exhaust bank 2. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3263 | Aftertreatment 2 Intake NOx Sensor Preliminary FMI | J1939-71 | 61456 | 7.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment intake NOx sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3264 | Aftertreatment 2 Intake Oxygen Sensor Preliminary FMI | J1939-71 | 61456 | 8.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment intake oxygen sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3265 | Aftertreatment 2 Outlet NOx | J1939-71 | 61457 | 1-2 | 16 | The amount of combined NO and NO2 in the exhaust entering the aftertreatment system measured by a NOx sensor at the aftertreatment outlet, represented in NOx molecule parts per million non-NOx molecules in exhaust bank 2. | | | |
| | 3266 | Aftertreatment 2 Outlet %O2 | J1939-71 | 61457 | 3-4 | 16 | The actual oxidation factor (%O2) of the gas within the exhaust stream. This value is measured by a sensor at the aftertreatment outlet in exhaust bank 2. | | | |
| | 3267 | Aftertreatment 2 Outlet Gas Sensor Power In Range | J1939-71 | 61457 | 5.1 | 2 | Indicates that the power supplied to the aftertreatment outlet gas sensor, either NOx or O2, is within the manufacturer's specification in exhaust bank 2. | | | |
| | 3268 | Aftertreatment 2 Outlet Gas Sensor at Temperature | J1939-71 | 61457 | 5.3 | 2 | Indicates that the heater element of the aftertreatment outlet gas sensor, either NOx or O2, is within the manufacturer's specified range for accurate measurements in exhaust bank 2. | | | |
| | 3269 | Aftertreatment 2 Outlet NOx Reading Stable | J1939-71 | 61457 | 5.5 | 2 | Indicates that the NOx reading of the aftertreatment outlet NOx sensor is stable as determined by the manufacturer's control software in exhaust bank 2. | | | |
| | 3270 | Aftertreatment 2 Outlet Wide-Range % O2 Reading Stable | J1939-71 | 61457 | 5.7 | 2 | Indicates that the %O2 reading of the aftertreatment outlet gas sensor, either NOx or O2, is stable as determined by the manufacturer's control software in exhaust bank 2. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3271 | Aftertreatment 2 Outlet Gas Sensor Heater Preliminary FMI | J1939-71 | 61457 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the heater of the outlet exhaust gas sensor, either NOx or O2, by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3272 | Aftertreatment 2 Outlet Gas Sensor Heater Control | J1939-71 | 61457 | 6.6 | 2 | Indicates the heater status in the warm-up process. Upon receiving a power-up command, the gas sensor ramps up according to a manufacturer defined profile in exhaust bank 2. | | | |
| | 3273 | Aftertreatment 2 Outlet NOx Sensor Preliminary FMI | J1939-71 | 61457 | 7.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment outlet NOx sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3274 | Aftertreatment 2 Outlet Oxygen Sensor Preliminary FMI | J1939-71 | 61457 | 8.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the aftertreatment outlet oxygen sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3275 | Aftertreatment 2 Exhaust Gas Temperature 1 | J1939-71 | 64945 | 1 | 16 | The reading from the exhaust gas temperature sensor located farthest upstream in the aftertreatment system in exhaust bank 2. (For a single exhaust bank system, refer to parameters in PGNs ATI1, ATO1, EEC3, ATI2, ATO2 and ATM1.) | | | |
| | 3276 | Aftertreatment 2 Particulate Trap Intake Gas Temperature | J1939-71 | 64945 | 3 | 16 | Temperature of engine combustion byproducts entering the particulate trap in exhaust bank 2. (For a single exhaust bank system, refer to parameters in PGNs ATI1, ATO1, EEC3, ATI2, ATO2 and ATM1.) | | | |
| | 3277 | Aftertreatment 2 Exhaust Gas Temperature 1 Preliminary FMI | J1939-71 | 64945 | 5.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the exhaust gas temperature 1 sensor by the manufacturer's sensor control software in exhaust bank 2 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3278 | Aftertreatment 2 Particulate Trap Intake Gas Temperature Preliminary FMI | J1939-71 | 64945 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap intake gas temperature sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3279 | Aftertreatment 2 Exhaust Gas Temperature 3 | J1939-71 | 64944 | 1 | 16 | The reading from the exhaust gas temperature sensor located farthest downstream in the aftertreatment system in exhaust bank 2. (For a single exhaust bank system, refer to parameters in PGNs ATI1, ATO1, EEC3, ATI2, ATO2 and ATM1.) | | | |
| | 3280 | Aftertreatment 2 Particulate Trap Outlet Gas Temperature | J1939-71 | 64944 | 3 | 16 | Temperature of engine combustion byproducts leaving the particulate trap exhaust in exhaust bank 2. (For a single exhaust bank system, refer to parameters in PGNs ATI1, ATO1, EEC3, ATI2, ATO2 and ATM1.) | | | |
| | 3281 | Aftertreatment 2 Exhaust Gas Temperature 3 Preliminary FMI | J1939-71 | 64944 | 5.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the exhaust gas temperature 3 sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3282 | Aftertreatment 2 Particulate Trap Exhaust Gas Temperature Preliminary FMI | J1939-71 | 64944 | 6.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap outlet gas temperature sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3283 | Aftertreatment 2 Exhaust Gas Temperature 2 | J1939-71 | 64943 | 1 | 16 | The reading from the exhaust gas temperature sensor located midstream of the other two temperature sensors in the aftertreatment system in exhaust bank 2. | | | |
| | 3284 | Aftertreatment 2 Particulate Trap Intermediate Gas Temperature | J1939-71 | 64943 | 3 | 16 | Temperature of engine combustion byproducts at a mid-point in the particulate trap in exhaust bank 2. (For a single exhaust bank system, refer to parameters in PGNs ATI1, ATO1, EEC3, ATI2, ATO2 and ATM1.) | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3285 | Aftertreatment 2 Particulate Trap Differential Pressure | J1939-71 | 64943 | 5 | 16 | Exhaust differential pressure measured between the intake and exhaust of a particulate trap in exhaust bank 2. (For a single exhaust bank system, refer to parameters in PGNs ATI1, ATO1, EEC3, ATI2, ATO2 and ATM1.) | | | |
| | 3286 | Aftertreatment 2 Exhaust Gas Temperature 2 Preliminary FMI | J1939-71 | 64943 | 7.1 | 5 | Used to identify the applicable J1939-73 FMI detected in the exhaust gas temperature 2 sensor by the manufacturer's sensor control software in exhaust bank 2 | | | |
| | 3287 | Aftertreatment 2 Particulate Trap Delta Pressure Preliminary FMI | J1939-71 | 64943 | 7.6 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap differential pressure sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3288 | Aftertreatment 2 Particulate Trap Intermediate Gas Temperature Preliminary FMI | J1939-71 | 64943 | 8.3 | 5 | Used to identify the applicable J1939-73 FMI detected in the particulate trap intermediate gas temperature sensor by the manufacturer's sensor control software in exhaust bank 2. | | | |
| | 3289 | Transmission Requested Gear Feedback | J1939-71 | 65098 | 4 | 8 | Feedback of the SPN 525 Transmission Requested Gear input as received from the shift selector, ABS or engine via PGN 256, Transmission Control #1 (TC1) | | | |
| | 3290 | Address Acknowledged | J1939-21 | | | | Address of the device being acknowledged | | | |
| | 3291 | Address Negative Acknowledgement | J1939-21 | | | | Address of the device being negatively acknowledged | | | |
| | 3292 | Address Access Denied | J1939-21 | | | | Address of the device being told access is denied | | | |
| | 3293 | Address Busy | J1939-21 | | | | Address of the device being told the responder is busy | | | |
| | 3294 | Distance Since Diagnostic Trouble Codes Cleared | J1939-73 | 49408 | 3 | 16 | Distance accumulated since DTCs were cleared (via an external test equipment or possibly, a battery disconnect). | | | |
| | 3295 | Minutes Run by Engine While MIL Activated | J1939-73 | 49408 | 5 | 16 | Accumulated count (in minutes) if the MIL is activated (on). | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3296 | Time Since Diagnostic Trouble Codes Cleared | J1939-73 | 49408 | 7 | 16 | Time accumulated since DTCs were cleared (via an external test equipment or possibly, a battery disconnect). | | | |
| | 3297 | SPN Supported | J1939-73 | 64950 | 1 | 19 | This parameter defines the SPN(s) that is/are supported for the freeze frame and/or data stream information. | | | |
| | 3298 | SPN Support Type | J1939-73 | 64950 | 3.1 | 2 | This parameter defines whether the applicable parameter (that is the SPN) is supported in the freeze frame, the data stream or both the freeze frame and data stream. | | | |
| | 3299 | SPN Data Length | J1939-73 | 64950 | 4 | 8 | The number of data bytes associated with the SPN in the Freeze Frame. | | | |
| | 3300 | Expanded Freeze Frame Length | J1939-73 | 64951 | 1 | 8 | The Freeze Frame Length is the length plus the number of bytes to convey the data of all parameters (SPNs) in Freeze Frame. | | | |
| | 3301 | Time Since Engine Start | J1939-73 | 64952 | 1 | 16 | RUNTM shall increment while the engine is running. It shall freeze if the engine stalls. RUNTM shall be reset to zero during every control module power-up and when entering the key-on, engine off position. | | | |
| | 3302 | Number of Warm-Ups Since DTCs Cleared | J1939-73 | 64952 | 3 | 8 | Number of warm-up cycles since all DTCs were cleared (via an external test equipment or possibly, a battery disconnect). | | | |
| | 3303 | Continuously Monitored Systems Enabled/Completed Status | J1939-73 | 64952 | 4 | | This parameter identifies the continuously monitored system enable/completed support and status. | | | |
| | 3304 | Non-Continuously Monitored Systems Enabled Status | J1939-73 | 64952 | 5 | | Enable status of non-continuous monitors this monitoring cycle. | | | |
| | 3305 | Non-Continuously Monitored Systems Complete Status | J1939-73 | 64952 | 7 | | Completion status of non-continuous monitors this monitoring cycle. Each bit identifies whether a particular test is complete for a given controller. | | | |
| | 3306 | Variable Valve Timing and/or Control (VVT) | J1939-73 | | | | A system used to influence the intake and outlet of gases to and from a cylinder. | | | |
| | 3307 | Fifth Wheel Error Status | J1939-71 | 64942 | 1.1 | 4 | Fifth wheel error state. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3308 | Fifth Wheel Vertical Force | J1939-71 | 61458 | 1 | 16 | The amount of load being applied to the fifth wheel by the trailer. | | | |
| | 3309 | Fifth Wheel Drawbar Force | J1939-71 | 61458 | 3 | 16 | Fifth wheel drawbar force, with the trailer held stationary a positive force is generated by the vehicle pulling forward. | | | |
| | 3310 | Fifth Wheel Roll Moment | J1939-71 | 61458 | 5 | 16 | Fifth Wheel Roll Moment bipolar force. | | | |
| | 3311 | Fifth Wheel Slider Position | J1939-71 | 64942 | 2 | 8 | Slider position measurement. Zero equals fully back position. | | | |
| | 3312 | Fifth Wheel Lock Ready to Couple Indicator | J1939-71 | 64942 | 1.5 | 2 | Indicator - lock open and ready to couple | | | |
| | 3313 | Fifth Wheel Lock Couple Status Indicator | J1939-71 | 64942 | 1.7 | 2 | Indicator - Safe couple or Unsafe/Unknown | | | |
| | 3314 | Fifth Wheel Release Control | J1939-71 | 64980 | 2.1 | 2 | Forward Release Control, solenoid open or closed. | | | |
| | 3315 | Fifth Wheel Release Control Security Lockout | J1939-71 | 64980 | 2.3 | 2 | Security Lockout enabled. | | | |
| | 3316 | Fifth Wheel Slider Lock Indicator | J1939-71 | 64942 | 3.1 | 2 | Slider Lock Indicator showing locked. | | | |
| | 3317 | Fifth Wheel Roll Warning Indicator | J1939-71 | 61458 | 7.1 | 2 | Binary indicator triggered by Roll greater than preset limit | | | |
| | 3318 | Pitch Angle | J1939-71 | 61459 | 1 | 16 | The angle between the vehicle x-axis and the ground plane. | | | |
| | 3319 | Roll Angle | J1939-71 | 61459 | 3 | 16 | The angle between the vehicle y-axis and the ground plane. | | | |
| | 3322 | Pitch Rate | J1939-71 | 61459 | 5 | 16 | Pitch rate is the rate-of-change of the pitch angle over time, where the pitch angle vector is in the direction of travel of the vehicle. | | | |
| | 3323 | Pitch Angle Figure of Merit | J1939-71 | 61459 | 7.1 | 2 | Figure of merit for pitch angle measurement. | | | |
| | 3324 | Roll Angle Figure of Merit | J1939-71 | 61459 | 7.3 | 2 | Figure of merit for roll angle measurement. | | | |
| | 3325 | Pitch Rate Figure of Merit | J1939-71 | 61459 | 7.5 | 2 | Figure of merit for the pitch rate measurement. | | | |
| | 3326 | Pitch and Roll Compensated | J1939-71 | 61459 | 7.7 | 2 | Compensated mode for the pitch and roll measurements. Compensation is the use of multiple sensors together to enhance the output of pitch and roll measurements. | | | |
| | 3327 | Roll and Pitch Measurement Latency | J1939-71 | 61459 | 8 | 8 | The estimated measurement latency of the measurement. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3328 | Manufacturer Specific Information (PropA2_PDU1) | J1939-21 | 126720 | 1-8 | 14280 | | | | |
| | 3329 | Message Selection Control | J1939-74 | 64941 | 1 | 8 | Used to identify all configurable messages. | | | |
| | 3330 | PGN of Configurable Message Desired | J1939-74 | 64941 | 2-4 | 24 | To identify the configurable message whose configuration is being requested. | | | |
| | 3331 | Blade Rotation Angle | J1939-71 | 61460 | 3-4 | 16 | The blade rotation angle measurement around the yaw (z-axis). | | | |
| | 3332 | Blade Rotation Angle Figure of Merit | J1939-71 | 61460 | 6.3 | 2 | Figure of merit for blade rotation measurement. | | | |
| | 3333 | Feederhouse Height | J1939-74 | | | 16 | The height of the Feederhouse as measured from the ground to the bottom of the Feederhouse | | | |
| | 3334 | Left Blade Control Mode Operator Control | J1939-71 | 61453 | 2.5 | 4 | This parameter indicates the left blade control mode operator control state the user has set for the land leveling system | | | |
| | 3335 | Right Blade Control Mode Operator Control | J1939-71 | 61453 | 3.1 | 4 | This parameter indicates the right blade control mode operator control state the user has set for the land leveling system | | | |
| | 3336 | Left Desired Blade Offset Operator Control | J1939-71 | 61453 | 3.5 | 4 | This parameter indicates the left blade offset operator control state the user has set for the land leveling system. | | | |
| | 3337 | Right Desired Blade Offset Operator Control | J1939-71 | 61453 | 4.1 | 4 | This parameter indicates the right blade offset operator control state the user has set for the land leveling system. | | | |
| | 3338 | Side-shift Blade Control Mode Operator Control | J1939-71 | 61453 | 4.5 | 4 | This parameter indicates the side-shift blade control mode operator control state the user has set for the land leveling system. | | | |
| | 3339 | Side-shift Desired Blade Offset Operator Control | J1939-71 | 61453 | 5.1 | 4 | This parameter indicates the side-shift blade control mode operator control state the user has set for the land leveling system. | | | |
| | 3340 | Engine Charge Air Cooler 1 Inlet Pressure | J1939-71 | 64938 | 1 | 8 | Pressure of air at inlet to 1st or only charge air cooler, from multiple first stage turbochargers being cooled and feeding multiple second stage turbochargers. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3341 | Engine Charge Air Cooler 2 Inlet Pressure | J1939-71 | 64938 | 2 | 8 | Pressure of air at inlet to 2nd charge air cooler, from multiple first stage turbochargers being cooled and feeding multiple second stage turbochargers. | | | |
| | 3342 | Engine Coolant Pump Differential Pressure | J1939-71 | 64938 | 3 | 8 | The differential pressure measured across the input and output of the engine coolant pump. | | | |
| | 3343 | Engine Centrifugal Oil Filter speed | J1939-71 | 64938 | 4-5 | 16 | The speed of a rotating (centrifugal) engine oil filter. | | | |
| | 3344 | Support Variable Rate TSC1 Message | J1939-71 | 65251 | 35 | 8 | This parameter indicates which TSC1 transmission rates are supported by the engine ECU in addition to the required 10ms transmission rate for temporary powertrain control purposes. | | | |
| | 3345 | Support TSC1 Control Purpose Group 1 | J1939-71 | 65251 | 36 | 8 | This parameter indicates which TSC1 control purposes are supported in Group 1 of 4. | | | |
| | 3346 | Support TSC1 Control Purpose Group 2 | J1939-71 | 65251 | 37 | 8 | This parameter indicates which TSC1 control purposes are supported in Group 2 of 4. | | | |
| | 3347 | Support TSC1 Control Purpose Group 3 | J1939-71 | 65251 | 38 | 8 | This parameter indicates which TSC1 control purposes are supported in Group 3 of 4. | | | |
| | 3348 | Support TSC1 Control Purpose Group 4 | J1939-71 | 65251 | 39 | 8 | This parameter indicates which TSC1 control purposes are supported in Group 4 of 4. | | | |
| | 3349 | TSC1 Transmission Rate | J1939-71 | 0 | 5.1 | 3 | Indicates the transmission rate at which the sending device will transmit the TSC1 message | | | |
| | 3350 | TSC1 Control Purpose | J1939-71 | 0 | 5.4 | 5 | State signal which indicates which control mode the sending device is using to generate the TSC1 command. | | | |
| | 3351 | Engine Exhaust Pressure Regulator Vent Valve Control | J1939 | | | | Exhaust Pressure Regulator Vent Valve Control is the output that is used to control the valve position . | | | |
| | 3352 | Engine Exhaust Pressure Regulator Vent Valve Position | J1939 | | | | Provides feedback to the Regulator Vent Valve Exhaust Pressure Position. | | | |
| | 3353 | Alternator 1 Status | J1939-71 | 65237 | 3.1 | 2 | Alternator 1 operational status. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3354 | Alternator 2 Status | J1939-71 | 65237 | 3.3 | 2 | Alternator 2 operational status. | | | |
| | 3355 | Alternator 3 Status | J1939-71 | 65237 | 3.5 | 2 | Alternator 3 operational status. | | | |
| | 3356 | Alternator 4 Status | J1939-71 | 65237 | 3.7 | 2 | Alternator 4 operational status. | | | |
| | 3357 | Actual Maximum Available Engine - Percent Torque | J1939-71 | 61443 | 7 | 8 | This is the maximum amount of torque that the engine can immediately deliver as a percentage of the reference engine torque (SPN 544). | | | |
| | 3358 | Engine Exhaust Gas Recirculation Inlet Pressure | J1939-71 | 64961 | 3 | 8 | EGR inlet gage pressure is measured after the EGR cooler and before the EGR valve. | | | |
| | 3359 | Transmission Oil Filter Restriction Switch | J1939-71 | 64917 | 1.1 | 2 | This switch indicates whether the transmission oil filter is clogged. | | | |
| | 3360 | Catalyst Tank Controller | J1939 | | | | The catalyst tank controller has the ability to read attributes of the catalyst reagent such as the catalyst reagent level ,catalyst reagent temperature and catalyst reagent quality | | | |
| | 3361 | Catalyst Dosing Unit | J1939 | | | | The catalyst dosing unit is a device that mixes the catalyst reagent and air, and delivers a metered quantity of this mixture to the exhaust stream | | | |
| | 3362 | Catalyst Dosing Unit Input Lines | J1939 | | | | The catalyst dosing unit is a device that mixes the catalyst reagent and air, such that it contains an input line from the air tank and an input line from the catalyst reagent tank. | | | |
| | 3363 | Catalyst Tank Heater | J1939 | | | | The catalyst tank heater warms the catalyst reagent in the catalyst tank example: ensures the reagent is above freezing point. | | | |
| | 3364 | Catalyst Tank Reagent Quality | J1939 | | | | Measures the quality of the catalyst reagent in the catalyst tank | | | |
| | 3365 | Relative Blade Height | J1939-71 | 61460 | 1-2 | 16 | The measured vertical distance from a fixed location on the machine blade to a ground-based reference | | | |
| | 3366 | Relative Blade Height and Blade Rotation Angle Measurement Latency | J1939-71 | 61460 | 5 | 8 | The estimated measurement latency of the measurement. | | | |
| | 3367 | Relative Blade Height Figure of Merit | J1939-71 | 61460 | 6.1 | 2 | Figure of merit for blade height measurement. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3368 | Network Transceiver Status 1 | J1939-71 | 64937 | 1 | 8 | Indicates the status of the transceiver for the wireless communications network type | | | |
| | 3369 | Network Service Status 1 | J1939-71 | 64937 | 2 | 8 | Indicates the status of the Service for the wireless communications network type | | | |
| | 3370 | Network Antenna Status 1 | J1939-71 | 64937 | 3 | 8 | Indicates the status of the antenna for the wireless communications network type | | | |
| | 3371 | Network Signal Strength 1 | J1939-71 | 64937 | 4 | 8 | Indicates the signal strength for the wireless communications network type. | | | |
| | 3372 | Wireless Communication Network Type 1 | J1939-71 | 64937 | 5 | 8 | Type of Wireless Communication Network | | | |
| | 3374 | Generator Excitation Ripple Current | J1939 | | | | Reports excessive generator exitation ripple current | | | |
| | 3375 | Voltage Regulator Load Compensation Mode | J1939-75 | 64935 | 1.1 | 3 | State signal indicating the voltage regulator load compensation mode. | | | |
| | 3376 | Voltage Regulator VAr/Power Factor operating mode | J1939-75 | 64935 | 1.4 | 3 | State signal indicating the operating mode for the Voltage regulator VAr/Power Factor | | | |
| | 3377 | Voltage Regulator Underfrequency Compensation enabled | J1939-75 | 64935 | 1.7 | 2 | State signal indicating the operating mode for underfrequency compensation. | | | |
| | 3378 | Voltage Regulator Soft Start State | J1939-75 | 64935 | 2.1 | 2 | State signal indicating the mode of the Voltage regulator soft start function | | | |
| | 3379 | Voltage Regulator Enabled | J1939-75 | 64935 | 2.3 | 2 | State signal indicating the Voltage Regulator is enabled | | | |
| | 3380 | Generator Excitation Field Voltage | J1939-75 | 64934 | 1-2 | 16 | Measured signal that represents the generator excitation field voltage. | | | |
| | 3381 | Generator Excitation Field Current | J1939-75 | 64934 | 3-4 | 16 | Measured signal that represents the generator excitation field current. | | | |
| | 3382 | Generator Output Voltage Bias Percentage | J1939-75 | 64934 | 5-6 | 16 | Measured signal that represents the voltage bias percentage of the generator output voltage being requested by external to the voltage regulator | | | |
| | 3383 | Requested Generator Total AC Reactive Power | J1939-75 | 61461 | 1-4 | 32 | The total reactive power requested to be delivered by the generator | | | |
| | 3384 | Requested Generator Overall Power Factor | J1939-75 | 61461 | 5-6 | 16 | The requested average power factor of the generator. | | | |
| | 3385 | Requested Generator Overall Power Factor Lagging | J1939-75 | 61461 | 7.1 | 2 | The requested lead/lag status for the generator average AC power factor | | | |
| | 3386 | Requested Generator Average Line-Line AC RMS Voltage | J1939-75 | 61468 | 1-4 | 32 | The requested average AC RMS voltage to be delivered by the generator | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3387 | Engine Cylinder 1 Combustion Status | J1939-71 | 61462 | 1.1 | 2 | This parameter is used to indicate state of combustion in engine cylinder #1 | | | |
| | 3388 | Engine Cylinder 2 Combustion Status | J1939-71 | 61462 | 1.3 | 2 | This parameter is used to indicate state of combustion in engine cylinder #2 | | | |
| | 3389 | Engine Cylinder 3 Combustion Status | J1939-71 | 61462 | 1.5 | 2 | This parameter is used to indicate state of combustion in engine cylinder #3 | | | |
| | 3390 | Engine Cylinder 4 Combustion Status | J1939-71 | 61462 | 1.7 | 2 | This parameter is used to indicate state of combustion in engine cylinder #4 | | | |
| | 3391 | Engine Cylinder 5 Combustion Status | J1939-71 | 61462 | 2.1 | 2 | This parameter is used to indicate state of combustion in engine cylinder #5 | | | |
| | 3392 | Engine Cylinder 6 Combustion Status | J1939-71 | 61462 | 2.3 | 2 | This parameter is used to indicate state of combustion in engine cylinder #6 | | | |
| | 3393 | Engine Cylinder 7 Combustion Status | J1939-71 | 61462 | 2.5 | 2 | This parameter is used to indicate state of combustion in engine cylinder #7 | | | |
| | 3394 | Engine Cylinder 8 Combustion Status | J1939-71 | 61462 | 2.7 | 2 | This parameter is used to indicate state of combustion in engine cylinder #8 | | | |
| | 3395 | Engine Cylinder 9 Combustion Status | J1939-71 | 61462 | 3.1 | 2 | This parameter is used to indicate state of combustion in engine cylinder #9 | | | |
| | 3396 | Engine Cylinder 10 Combustion Status | J1939-71 | 61462 | 3.3 | 2 | This parameter is used to indicate state of combustion in engine cylinder #10 | | | |
| | 3397 | Engine Cylinder 11 Combustion Status | J1939-71 | 61462 | 3.5 | 2 | This parameter is used to indicate state of combustion in engine cylinder #11 | | | |
| | 3398 | Engine Cylinder 12 Combustion Status | J1939-71 | 61462 | 3.7 | 2 | This parameter is used to indicate state of combustion in engine cylinder #12 | | | |
| | 3399 | Engine Cylinder 13 Combustion Status | J1939-71 | 61462 | 4.1 | 2 | This parameter is used to indicate state of combustion in engine cylinder #13 | | | |
| | 3400 | Engine Cylinder 14 Combustion Status | J1939-71 | 61462 | 4.3 | 2 | This parameter is used to indicate state of combustion in engine cylinder #14 | | | |
| | 3401 | Engine Cylinder 15 Combustion Status | J1939-71 | 61462 | 4.5 | 2 | This parameter is used to indicate state of combustion in engine cylinder #15 | | | |
| | 3402 | Engine Cylinder 16 Combustion Status | J1939-71 | 61462 | 4.7 | 2 | This parameter is used to indicate state of combustion in engine cylinder #16 | | | |
| | 3403 | Engine Cylinder 17 Combustion Status | J1939-71 | 61462 | 5.1 | 2 | This parameter is used to indicate state of combustion in engine cylinder #17 | | | |
| | 3404 | Engine Cylinder 18 Combustion Status | J1939-71 | 61462 | 5.3 | 2 | This parameter is used to indicate state of combustion in engine cylinder #18 | | | |
| | 3405 | Engine Cylinder 19 Combustion Status | J1939-71 | 61462 | 5.5 | 2 | This parameter is used to indicate state of combustion in engine cylinder #19 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3406 | Engine Cylinder 20 Combustion Status | J1939-71 | 61462 | 5.7 | 2 | This parameter is used to indicate state of combustion in engine cylinder #20 | | | |
| | 3407 | Engine Cylinder 21 Combustion Status | J1939-71 | 61462 | 6.1 | 2 | This parameter is used to indicate state of combustion in engine cylinder #21 | | | |
| | 3408 | Engine Cylinder 22 Combustion Status | J1939-71 | 61462 | 6.3 | 2 | This parameter is used to indicate state of combustion in engine cylinder #22 | | | |
| | 3409 | Engine Cylinder 23 Combustion Status | J1939-71 | 61462 | 6.5 | 2 | This parameter is used to indicate state of combustion in engine cylinder #23 | | | |
| | 3410 | Engine Cylinder 24 Combustion Status | J1939-71 | 61462 | 6.7 | 2 | This parameter is used to indicate state of combustion in engine cylinder #24 | | | |
| | 3411 | Status 2 of doors | J1939-71 | 65102 | 1.7 | 2 | Composite indication of all bus door statuses. Enabled means the bus doors are able to be automatically opened or closed. | | | |
| | 3412 | Lock Status of Door 1 | J1939-71 | 64933 | 1.1 | 2 | Lock status of bus door 1 | | | |
| | 3413 | Open Status of Door 1 | J1939-71 | 64933 | 1.3 | 2 | Open status of bus door 1 | | | |
| | 3414 | Enable Status of Door 1 | J1939-71 | 64933 | 1.5 | 2 | Enable status of bus door 1 | | | |
| | 3415 | Lock Status of Door 2 | J1939-71 | 64933 | 1.7 | 2 | Lock status of bus door 2 | | | |
| | 3416 | Open Status of Door 2 | J1939-71 | 64933 | 2.1 | 2 | Open status of bus door 2 | | | |
| | 3417 | Enable Status of Door 2 | J1939-71 | 64933 | 2.3 | 2 | Enable status of bus door 2 | | | |
| | 3418 | Lock Status of Door 3 | J1939-71 | 64933 | 2.5 | 2 | Lock status of bus door 3 | | | |
| | 3419 | Open Status of Door 3 | J1939-71 | 64933 | 2.7 | 2 | Open status of bus door 3 | | | |
| | 3420 | Enable Status of Door 3 | J1939-71 | 64933 | 3.1 | 2 | Enable status of bus door 3 | | | |
| | 3421 | Lock Status of Door 4 | J1939-71 | 64933 | 3.3 | 2 | Lock status of bus door 4 | | | |
| | 3422 | Open Status of Door 4 | J1939-71 | 64933 | 3.5 | 2 | Open status of bus door 4 | | | |
| | 3423 | Enable Status of Door 4 | J1939-71 | 64933 | 3.7 | 2 | Enable status of bus door 4 | | | |
| | 3424 | Lock Status of Door 5 | J1939-71 | 64933 | 4.1 | 2 | Lock status of bus door 5 | | | |
| | 3425 | Open Status of Door 5 | J1939-71 | 64933 | 4.3 | 2 | Open status of bus door 5 | | | |
| | 3426 | Enable Status of Door 5 | J1939-71 | 64933 | 4.5 | 2 | Enable status of bus door 5 | | | |
| | 3427 | Lock Status of Door 6 | J1939-71 | 64933 | 4.7 | 2 | Lock status of bus door 6 | | | |
| | 3428 | Open Status of Door 6 | J1939-71 | 64933 | 5.1 | 2 | Open status of bus door 6 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3429 | Enable Status of Door 6 | J1939-71 | 64933 | 5.3 | 2 | Enable status of bus door 6 | | | |
| | 3430 | Lock Status of Door 7 | J1939-71 | 64933 | 5.5 | 2 | Lock status of bus door 7 | | | |
| | 3431 | Open Status of Door 7 | J1939-71 | 64933 | 5.7 | 2 | Open status of bus door 7 | | | |
| | 3432 | Enable Status of Door 7 | J1939-71 | 64933 | 6.1 | 2 | Enable status of bus door 7 | | | |
| | 3433 | Lock Status of Door 8 | J1939-71 | 64933 | 6.3 | 2 | Lock status of bus door 8 | | | |
| | 3434 | Open Status of Door 8 | J1939-71 | 64933 | 6.5 | 2 | Open status of bus door 8 | | | |
| | 3435 | Enable Status of Door 8 | J1939-71 | 64933 | 6.7 | 2 | Enable status of bus door 8 | | | |
| | 3436 | Lock Status of Door 9 | J1939-71 | 64933 | 7.1 | 2 | Lock status of bus door 9 | | | |
| | 3437 | Open Status of Door 9 | J1939-71 | 64933 | 7.3 | 2 | Open status of bus door 9 | | | |
| | 3438 | Enable Status of Door 9 | J1939-71 | 64933 | 7.5 | 2 | Enable status of bus door 9 | | | |
| | 3439 | Lock Status of Door 10 | J1939-71 | 64933 | 7.7 | 2 | Lock status of bus door 10 | | | |
| | 3440 | Open Status of Door 10 | J1939-71 | 64933 | 8.1 | 2 | Open status of bus door 10 | | | |
| | 3441 | Enable Status of Door 10 | J1939-71 | 64933 | 8.3 | 2 | Enable status of bus door 10 | | | |
| | 3442 | Network Transceiver Status 2 | J1939-71 | 64936 | 1 | 8 | Indicates the status of the transceiver for the wireless communications network type | | | |
| | 3443 | Network Service Status 2 | J1939-71 | 64936 | 2 | 8 | Indicates the status of the Service for the wireless communications network type | | | |
| | 3444 | Network Antenna Status 2 | J1939-71 | 64936 | 3 | 8 | Indicates the status of the antenna for the wireless communications network type | | | |
| | 3445 | Network Signal Strength 2 | J1939-71 | 64936 | 4 | 8 | Indicates the signal strength for the wireless communications network type. | | | |
| | 3446 | Wireless Communication Network Type 2 | J1939-71 | 64936 | 5 | 8 | Type of Wireless Communication Network | | | |
| | 3447 | Remote PTO preprogrammed speed control switch #2 | J1939-71 | 65264 | 8.3 | 2 | Switch signal which indicates that the remote PTO toggle switch #2 is in the enabled (ON) position. | | | |
| | 3448 | Auxiliary Input Ignore Switch | J1939-71 | 65264 | 8.5 | 2 | Switch signal which overrides other switch input's ability to disable an engine's operating condition. | | | |
| | 3451 | Engine Multiple Cylinder Spark Voltage | J1939 | | | | The spark voltage of a spark event measured on multiple cylinders. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3452 | Enable Switch – Transmission input shaft PTO 1 | J1939-71 | 64932 | 1.7 | 2 | Status of the operator's switch or other input which indicates the desire for engaging the first PTO drive mounted on the transmission case. | | | |
| | 3453 | Enable Switch – Transmission input shaft PTO 2 | J1939-71 | 64932 | 1.5 | 2 | Status of the operator's switch or other input which indicates the desire for engaging the second PTO drive mounted on the transmission case. | | | |
| | 3454 | Enable Switch – Transmission output shaft PTO | J1939-71 | 64932 | 1.3 | 2 | Status of the operator's switch or other input which indicates the desire for engaging the PTO drive mounted on the transmission output shaft. | | | |
| | 3455 | Enable Switch – Transfer case output shaft PTO | J1939-71 | 64932 | 1.1 | 2 | Status of the operator's switch or other input which indicates the desire for engaging the PTO drive mounted on the output shaft of the transfer case. | | | |
| | 3456 | Engagement Consent – Transmission input shaft PTO 1 | J1939-71 | 64932 | 3.7 | 2 | Status of the transmission controller's consent to engage the first or sole PTO drive mounted on the transmission case. | | | |
| | 3457 | Engagement Consent – Transmission input shaft PTO 2 | J1939-71 | 64932 | 3.5 | 2 | Status of the transmission controller's consent to engage the second PTO drive mounted on the transmission case. | | | |
| | 3458 | Engagement Consent – Transmission output shaft PTO | J1939-71 | 64932 | 3.3 | 2 | Status of the transmission controller's consent to engage the PTO drive connected to the transmission output shaft. | | | |
| | 3459 | Engagement Consent – Transfer case output shaft PTO | J1939-71 | 64932 | 3.1 | 2 | Status of the transmission controller's consent to engage the PTO drive connected to the transfer case output shaft. | | | |
| | 3460 | Engagement Status – Transmission input shaft PTO 1 | J1939-71 | 64932 | 5.7 | 2 | Reports if this specific PTO drive is engaged. | | | |
| | 3461 | Engagement Status – Transmission input shaft PTO 2 | J1939-71 | 64932 | 5.5 | 2 | Reports if this specific PTO drive is engaged. | | | |
| | 3462 | Engagement Status – Transmission output shaft PTO | J1939-71 | 64932 | 5.3 | 2 | Reports if this specific PTO drive is engaged. | | | |
| | 3463 | Engagement Status – Transfer case output shaft PTO | J1939-71 | 64932 | 5.1 | 2 | Reports if this specific PTO drive is engaged. | | | |
| | 3464 | Engine Throttle Actuator 1 Control Command | J1939-71 | 61466 | 1-2 | 16 | The control command to throttle actuator 1 | | | |
| | 3465 | Engine Throttle Actuator 2 Control Command | J1939-71 | 61466 | 3-4 | 16 | The control command to throttle actuator 2 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3466 | Engine Fuel Valve 2 Inlet Absolute Pressure | J1939-71 | 64930 | 1-2 | 16 | Absolute pressure of gas on inlet side of the second fuel system control valve. | | | |
| | 3467 | Engine Gas 2 Mass Flow Rate | J1939-71 | 64930 | 3-4 | 16 | Gas mass flow rate delivered to an engine through its second fuel control system | | | |
| | 3468 | Engine Fuel Temperature 2 | J1939-71 | 64930 | 5-6 | 8 | Temperature 2 of fuel (or gas). | | | |
| | 3469 | Engine Fuel Valve 2 Outlet Absolute Pressure | J1939-71 | 64930 | 7-8 | 16 | Absolute pressure of gas on outlet side of the second fuel system control valve. | | | |
| | 3470 | Engine Turbocharger Compressor Control | J1939-71 | 64931 | 1-2 | 16 | The control command to a compressor bypass actuator. | | | |
| | 3471 | Aftertreatment 1 Fuel Pressure Control Actuator | J1939 | | | | Diagnostic SPN for the actuator controlling aftertreatment 1 fuel pressure | | | |
| | 3472 | Aftertreatment 1 Air Pressure Control Actuator | J1939 | | | | Diagnostic SPN for the actuator controlling aftertreatment 1 air pressure | | | |
| | 3473 | Aftertreatment 1 Failed to Ignite | J1939 | | | | Indicates that aftertreatment 1 has failed to ignite enough times to warrant triggering a diagnostic event. | | | |
| | 3474 | Aftertreatment 1 Loss of Ignition | J1939 | | | | Indicates that aftertreatment 1 has lost ignition enough times to warrant triggering a diagnostic event. | | | |
| | 3475 | Aftertreatment 2 Fuel Pressure Control Actuator | J1939 | | | | Diagnostic SPN for the actuator controlling aftertreatment 2 fuel pressure | | | |
| | 3476 | Aftertreatment 2 Air Pressure Control Actuator | J1939 | | | | Diagnostic SPN for the actuator controlling aftertreatment 2 air pressure | | | |
| | 3477 | Aftertreatment 2 Failed to Ignite | J1939 | | | | Indicates that aftertreatment 2 has failed to ignite enough times to warrant triggering a diagnostic event. | | | |
| | 3478 | Aftertreatment 2 Loss of Ignition | J1939 | | | | Indicates that aftertreatment 2 has lost ignition enough times to warrant triggering a diagnostic event. | | | |
| | 3479 | Aftertreatment 1 Fuel Pressure Control | J1939-71 | 64929 | 5-6 | 16 | Position that the controller is commanding the aftertreatment 1 fuel pressure control to maintain. | | | |
| | 3480 | Aftertreatment 1 Fuel Pressure 1 | J1939-71 | 64929 | 1-2 | 16 | First fuel pressure measurement for the aftertreatment 1 system | | | |
| | 3481 | Aftertreatment 1 Fuel Rate | J1939-71 | 64929 | 3-4 | 16 | Rate of fuel being delivered to aftertreatment 1 for regeneration | | | |
| | 3482 | Aftertreatment 1 Fuel Enable Actuator | J1939-71 | 64929 | 7.7 | 2 | Indicates whether aftertreatment 1 fuel enable actuator is on or off | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3483 | Aftertreatment 1 Regeneration Status | J1939-71 | 64929 | 7.5 | 2 | Indicates whether regeneration is active or inactive in aftertreatment 1 | | | |
| | 3484 | Aftertreatment 1 Ignition | J1939-71 | 64929 | 7.3 | 2 | Indicates whether aftertreatment 1 ignition circuit is energized by the ECM. | | | |
| | 3485 | Aftertreatment 1 Supply Air Pressure | J1939-71 | 64927 | 1-2 | 16 | Pressure of the supply air for aftertreatment 1 | | | |
| | 3486 | Aftertreatment 1 Purge Air Pressure | J1939-71 | 64927 | 3-4 | 16 | Pressure of the purge air supply for aftertreatment 1 | | | |
| | 3487 | Aftertreatment 1 Air Pressure Control | J1939-71 | 64927 | 5-6 | 16 | Position that the controller is commanding the aftertreatment 1 air pressure control to maintain. | | | |
| | 3488 | Aftertreatment 1 Air Pressure Actuator Position | J1939-71 | 64927 | 7.1 | 8 | Position of the aftertreatment 1 air pressure actuator as measured by a position feedback sensor. | | | |
| | 3489 | Aftertreatment 1 Air Enable Actuator | J1939-71 | 64927 | 8.7 | 2 | Indicates whether aftertreatment 1 air enable actuator is on or off | | | |
| | 3490 | Aftertreatment 1 Purge Air Actuator | J1939-71 | 64927 | 8.5 | 2 | Indicates whether aftertreatment 1 purge air actuator is on or off | | | |
| | 3491 | Aftertreatment 1 Atomization Air Actuator | J1939-71 | 64927 | 8.3 | 2 | Indicates whether aftertreatment 1 atomization air actuator is on or off | | | |
| | 3492 | Aftertreatment 1 Air System Relay | J1939-71 | 64927 | 8.1 | 2 | Indicates whether aftertreatment 1 air system relay is on or off | | | |
| | 3493 | Aftertreatment 2 Fuel Pressure Control | J1939-71 | 64928 | 5-6 | 16 | Position that the controller is commanding the aftertreatment 2 fuel pressure control to maintain. | | | |
| | 3494 | Aftertreatment 2 Fuel Pressure | J1939-71 | 64928 | 1-2 | 16 | Pressure of the fuel for Aftertreatment 2. | | | |
| | 3495 | Aftertreatment 2 Fuel Rate | J1939-71 | 64928 | 3-4 | 16 | Rate of fuel being delivered to aftertreatment 2 for regeneration | | | |
| | 3496 | Aftertreatment 2 Fuel Enable Actuator | J1939-71 | 64928 | 7.7 | 2 | Indicates whether aftertreatment 2 fuel enable actuator is on or off | | | |
| | 3497 | Aftertreatment 2 Regeneration Status | J1939-71 | 64928 | 7.5 | 2 | Indicates whether regeneration is active or inactive in aftertreatment 2 | | | |
| | 3498 | Aftertreatment 2 Ignition | J1939-71 | 64928 | 7.3 | 2 | Indicates whether aftertreatment 2 ignition circuit is energized by the ECM. | | | |
| | 3499 | Aftertreatment 2 Supply Air Pressure | J1939-71 | 64926 | 1-2 | 16 | Pressure of the supply air for aftertreatment 2 | | | |
| | 3500 | Aftertreatment 2 Purge Air Pressure | J1939-71 | 64926 | 3-4 | 16 | Pressure of the purge air supply for aftertreatment 2 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3501 | Aftertreatment 2 Air Pressure Control | J1939-71 | 64926 | 5-6 | 16 | Position that the controller is commanding the aftertreatment 2 air pressure control to maintain. | | | |
| | 3502 | Aftertreatment 2 Air Pressure Actuator Position | J1939-71 | 64926 | 7.1 | 8 | Position of the aftertreatment 2 air pressure actuator as measured by a position feedback sensor. | | | |
| | 3503 | Aftertreatment 2 Air Enable Actuator | J1939-71 | 64926 | 8.7 | 2 | Indicates whether aftertreatment 2 air enable actuator is on or off | | | |
| | 3504 | Aftertreatment 2 Purge Air Actuator | J1939-71 | 64926 | 8.5 | 2 | Indicates whether aftertreatment 2 purge air actuator is on or off | | | |
| | 3505 | Aftertreatment 2 Atomization Air Actuator | J1939-71 | 64926 | 8.3 | 2 | Indicates whether aftertreatment 2 atomization air actuator is on or off | | | |
| | 3506 | Aftertreatment 2 Air System Relay | J1939-71 | 64926 | 8.1 | 2 | Indicates whether aftertreatment 2 air system relay is on or off | | | |
| | 3507 | TECU ECU_PWR relay | J1939 | | | | The high current ECU PWR relay for the ECU PWR distribution on the Implement bus as controlled by the Tractor ECU (TECU). | | | |
| | 3508 | TECU PWR Relay | J1939 | | | | The high current PWR relay for the PWR distribution on the Implement bus as controlled by the Tractor ECU (TECU). | | | |
| | 3509 | Sensor supply voltage 1 | J1939-71 | 64925 | 1-2 | 16 | Sensor ECU supply voltage 1 | | | |
| | 3510 | Sensor supply voltage 2 | J1939-71 | 64925 | 3-4 | 16 | Sensor ECU supply voltage 2 | | | |
| | 3511 | Sensor supply voltage 3 | J1939-71 | 64925 | 5-6 | 16 | Sensor ECU supply voltage 3 | | | |
| | 3512 | Sensor supply voltage 4 | J1939-71 | 64925 | 7-8 | 16 | Sensor ECU supply voltage 4 | | | |
| | 3513 | Sensor supply voltage 5 | J1939-71 | 64924 | 1-2 | 16 | Sensor ECU supply voltage 5 | | | |
| | 3514 | Sensor supply voltage 6 | J1939-71 | 64924 | 3-4 | 16 | Sensor ECU supply voltage 6 | | | |
| | 3515 | Catalyst Reagent Temperature 2 | J1939-71 | 64923 | 1 | 8 | Temperature of the catalyst reagent at the device measuring reagent quality | | | |
| | 3516 | Catalyst Reagent Concentration | J1939-71 | 64923 | 2 | 8 | A measure of the concentration of urea in water. | | | |
| | 3517 | Catalyst Tank Level 2 | J1939-71 | 65110 | 3-4 | 16 | The measure of the reagent level in the catalyst tank. | | | |
| | 3518 | Catalyst Reagent Conductivity | J1939-71 | 64923 | 3 | 8 | A measure of the conductivity of the reagent or fluid at the sensor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3519 | Catalyst Reagent Temperature 2 Preliminary FMI | J1939-71 | 64923 | 4.1 | 5 | Used to identify the applicable J1939-73 FMI that applies to the most significant failure of the catalyst temperature sensor. | | | |
| | 3520 | Catalyst Reagent Properties Preliminary FMI | J1939-71 | 64923 | 5.1 | 5 | Used to identify the applicable J1939-73 FMI that applies to the most significant failure of the catalyst reagent properties sensor. | | | |
| | 3521 | Catalyst Reagent Type | J1939-71 | 64923 | 6.1 | 4 | This parameter indicates what reagent is in the tank. | | | |
| | 3522 | Aftertreatment 1 Total Fuel Used | J1939-71 | 64920 | 01-04 | 32 | Total amount of fuel used by aftertreatment device 1 over the lifetime of the device. | | | |
| | 3523 | Aftertreatment 1 Total Regeneration Time | J1939-71 | 64920 | 05-08 | 32 | Total amount of time that aftertreatment device 1 has been regenerating over the lifetime of the device. | | | |
| | 3524 | Aftertreatment 1 Total Disabled Time | J1939-71 | 64920 | 09-12 | 32 | Total amount of time that aftertreatment 1 regeneration has been manually disabled. | | | |
| | 3525 | Aftertreatment 1 Total Number of Active Regenerations | J1939-71 | 64920 | 13-16 | 32 | Total number of active regenerations by aftertreatment device 1 over the lifetime of the device. | | | |
| | 3526 | Aftertreatment 2 Total Fuel Used | J1939-71 | 64921 | 01-04 | 32 | Total amount of fuel used by aftertreatment device 2 over the lifetime of the device. | | | |
| | 3527 | Aftertreatment 2 Total Regeneration Time | J1939-71 | 64921 | 05-08 | 32 | Total amount of time that aftertreatment device 2 has been regenerating over the lifetime of the device. | | | |
| | 3528 | Aftertreatment 2 Total Disabled Time | J1939-71 | 64921 | 09-12 | 32 | Total amount of time that aftertreatment 2 regeneration has been manually disabled. | | | |
| | 3529 | Aftertreatment 2 Total Number of Active Regenerations | J1939-71 | 64921 | 13-16 | 32 | Total number of active regenerations by aftertreatment device 2 over the lifetime of the device. | | | |
| | 3530 | Aftertreatment 1 Regeneration Manually Disabled | J1939 | | | | Indicates that aftertreatment device 1 has been manually disabled by a service technician. | | | |
| | 3531 | Aftertreatment 2 Regeneration Manually Disabled | J1939 | | | | Indicates that aftertreatment device 2 has been manually disabled by a service technician. | | | |
| | 3532 | Catalyst Tank Level Preliminary FMI | J1939-71 | 65110 | 5.1 | 5 | Used to identify the applicable J1939-73 FMI that applies to the most significant failure of the catalyst tank level sensor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3533 | Transmission Oil Level Switch | J1939-71 | 64917 | 1.3 | 2 | This switch indicates whether transmission oil level is full or empty. | | | |
| | 3534 | Brake Torque Output Axle 1 Left | J1939 | | | | Brake torque output on wheel brake axle 1 left | | | |
| | 3535 | Brake Torque Output Axle 1 Right | J1939 | | | | Brake torque output on wheel brake axle 1 right | | | |
| | 3536 | Brake Torque Output Axle 2 Left | J1939 | | | | Brake torque output on wheel brake axle 2 left | | | |
| | 3537 | Brake Torque Output Axle 2 Right | J1939 | | | | Brake torque output on wheel brake axle 2 right | | | |
| | 3538 | Brake Torque Output Axle 3 Left | J1939 | | | | Brake torque output on wheel brake axle 3 left | | | |
| | 3539 | Brake Torque Output Axle 3 Right | J1939 | | | | Brake torque output on wheel brake axle 3 right | | | |
| | 3540 | Reference Ground Connection | J1939 | | | | The reference ground is an additional ground connection in order to supervise the main ground connection | | | |
| | 3541 | Brake Light Relay | J1939 | | | | Relay to control the brake lights. | | | |
| | 3542 | Requested Engine Control Mode | J1939-75 | 64915 | 1.1 | 4 | This parameter is used to request a change to the engine control mode. This is a status parameter. | | | |
| | 3543 | Engine Operating State | J1939-71 | 64914 | 1.1 | 4 | This parameter is used to indicate the current state, or mode, of operation by the engine. Such as, engine stopped, pre-start, starting, etc. | | | |
| | 3544 | Time Remaining in Engine Operating State | J1939-71 | 64914 | 2-3 | 16 | This parameter is used to indicate the time remaining in the current engine operating state, based on the state defined in the SPN "Engine Operating State". For the states in which time remaining is not applicable, use 65535 ($FFFF). | | | |
| | 3545 | Generator Circuit Breaker Status | J1939-75 | 64913 | 1.1 | 3 | This parameter indicates the measured state of the generator circuit breaker. | | | |
| | 3546 | Utility Circuit Breaker Status | J1939-75 | 64913 | 1.4 | 3 | This parameter indicates the measured state of the utility circuit breaker. | | | |
| | 3547 | Automatic Transfer Switch Status | J1939-75 | 64913 | 2.1 | 3 | This parameter indicates the measured state of the automatic transfer switch. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3548 | Engine Waste Oil Reservoir Level | J1939-71 | 65130 | 4 | 8 | Level of crankcase blowby emulsion collected by a container. Normalized to percent, 0% represents completely empty and 100% represents completely full. | | 128 | 310 |
| | 3549 | Engine Oil-Filter Outlet Pressure | J1939-71 | 65130 | 5 | 8 | Oil pressure (gauge) measured just downstream of oil filter.Used in conjunction with SPN1208 (pre-filter oil pressure) to determine oil filter health. | | | |
| | 3550 | Engine Oil Priming Pump Switch | J1939-71 | 65130 | 6.1 | 2 | Switch input for activating the engine oil priming pump. | | | |
| | 3551 | Engine Oil Priming State | J1939-71 | 65130 | 6.3 | 2 | Determination of whether or not the engine is (or has recently been) sufficiently lubricated for starting purposes. | | | |
| | 3552 | Engine Oil Pre-Heated State | J1939-71 | 65130 | 6.5 | 2 | Indicates whether the engine oil pre-heated sufficiently for starting purposes. | | | |
| | 3553 | Engine Coolant Pre-heated State | J1939-71 | 65130 | 6.7 | 2 | Indicates whether the engine coolant is pre-heated sufficiently for starting purposes. | | | |
| | 3554 | Engine Ventilation Status | J1939-71 | 65130 | 7.1 | 3 | Engine ventilation control states. | | | |
| | 3555 | Ambient Air Density | J1939 | | | | The density of the ambient air | | | |
| | 3556 | Aftertreatment Fuel Injector 1 | J1939 | | | | The injector/doser used to inject fuel into the aftertreatment system | | | |
| | 3557 | Parking Brake Red Warning Signal | J1939-71 | 65274 | 4.3 | 2 | This parameter commands the Parking Brake red optical warning signal. | | | |
| | 3558 | AETC Data Collection Standard | J1939-71 | 64912 | 1.1 | 4 | Indicates the standardized method by which torque data was obtained for the Advertised Engine Torque Curve (AETC). | | | |
| | 3559 | Number of AETC data points | J1939-71 | 64912 | 1.5 | 4 | Indicates the number of speed / torque data points contained in the Advertised Engine Torque Curve broadcast (AETC). | | | |
| | 3560 | AETC Speed Value | J1939-71 | 64912 | a | 16 | Engine speed value of the data points in PGN 64912 – Advertised Engine Torque Curve (AETC). | | | |
| | 3561 | AETC Torque value | J1939-71 | 64912 | b | 16 | Engine torque value of the data points in PGN 64912 – Advertised Engine Torque Curve (AETC). | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3562 | Engine Intake Manifold #2 Pressure | J1939-71 | 64976 | 4 | 8 | The gage pressure measurement of the air intake manifold for bank #2 or the second air intake manifold. | | | |
| | 3563 | Engine Intake Manifold #1 Absolute Pressure | J1939-71 | 64976 | 5 | 8 | The absolute pressure measurement of the air intake manifold. | | | |
| | 3564 | Lane Departure Warning Enable Command | J1939-71 | 43264 | 1.1 | 2 | Command to enable/disable Lane Departure Indication | | | |
| | 3565 | Lane Departure Left | J1939-71 | 61447 | 1.1 | 2 | Indicates that the middle of vehicle departs the lane on the left side. The parameter indicates that the vehicle is changing the lane to the left. | | | |
| | 3566 | Lane Departure Right | J1939-71 | 61447 | 1.3 | 2 | Indicates that the middle of vehicle departs the lane on the right side. The parameter indicates that the vehicle is changing the lane to the right. | | | |
| | 3567 | Generator Control Not In Automatic Start State | J1939-75 | 64915 | 1.5 | 2 | This parameter indicates whether or not the generator set is in a condition to automatically start up and provide power. If not, this status parameter is in the ACTIVE state. | | | |
| | 3568 | Generator Not Ready to Automatically Parallel State | J1939-75 | 64915 | 1.7 | 2 | This parameter indicates whether or not all systems required to start the engine and close to the bus are prepared to operate automatically. If not, the generator is not ready to automatically parallel, and the status parameter is in the ACTIVE state. | | | |
| | 3569 | Generator Neutral Earth Fault | J1939 | | | | Some means identifies that an imbalance between the current in the live phase(s) and neutral from the generator exceeds a threshold. | | | |
| | 3570 | Generator Load Neutral Earth Leakage | J1939 | | | | Some means identifies that an imbalance between the current in the live phase(s) and neutral from the load has exceeded a threshold. | | | |
| | 3571 | Generator Circuit Breaker Opening Time | J1939 | | | | As determined by the genset control, it will attempt to close or open a circuit breaker depending on the operational mode and system status. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3572 | Generator Circuit Breaker Closing Time | J1939 | | | | As determined by the genset control, it will attempt to close or open a circuit breaker depending on the operational mode and system status. | | | |
| | 3573 | Utility Circuit Breaker Opening Time | J1939 | | | | As determined by the genset control, it will attempt to close or open a circuit breaker depending on the operational mode and system status. | | | |
| | 3574 | Utility Circuit Breaker Closing Time | J1939 | | | | As determined by the genset control, it will attempt to close or open a circuit breaker depending on the operational mode and system status. | | | |
| | 3575 | Utility to Generator Transfer Time | J1939 | | | | When the genset control commands the generator(s) to pick up load, it transfers the load from the utility to the generator(s). | | | |
| | 3576 | Generator to Utility Transfer Time | J1939 | | | | When the genset control commands the generator(s) to drop load, it transfers the load to the utility, and then it disconnects. | | | |
| | 3577 | Loss of Electric Utility Grid | J1939 | | | | When the voltage drops below a predetermined level for a specified amount of time, this condition becomes active. | | | |
| | 3578 | Generator to Bus Synchronization Time | J1939 | | | | This parameter indicates the time between the command to synchronize to the bus being issued and successful synchronization. | | | |
| | 3579 | Generator to Bus Phase Sequence Mismatch | J1939 | | | | This parameter indicates a phase sequence mismatch between the generator and the bus. | | | |
| | 3580 | Generator Soft Unload Time | J1939 | | | | This parameter indicates the time between the command to soft unload and the completion of the ramp down to an unloaded condition. | | | |
| | 3581 | Modbus Data Link | J1939 | | | | Identifies the action to be performed on the Modbus communications port. | | | |
| | 3582 | Utility Power Supply | J1939 | | | | 110/120V (60Hz) or 220/240V (50Hz) alternating current power supply for engine AC auxiliary devices. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3583 | Common AC Auxiliaries Breaker | J1939 | | | | This parameter covers designs where several independent AC auxiliary control devices each have their own breakers, but the controlling ECM only receives a single breaker tripped feedback indication if any one of these breakers is tripped. | | | |
| | 3584 | Fire Detected | J1939 | | | | A sensor has detected the presence of a fire at or near the engine. | | | |
| | 3585 | Engine Emergency Shutdown Switch | J1939 | | | | An emergency shutdown switch that is activated by the operator for immediate engine shutdown. | | | |
| | 3587 | Ether Hold Control | J1939 | | | | This control circuit is used to hold the ether valve in the open position, causing ether injection to continue. | | | |
| | 3588 | Ether Start Control | J1939 | | | | This control circuit is used to initially open the ether valve and begin ether flow. | | | |
| | 3589 | Engine Oil Priming Pump Control | J1939-71 | 64914 | 5.1 | 2 | This control is used to activate a pump that lubricates the engine, particularly prior to initial engine startup. | | | |
| | 3590 | Generator Total Percent kW | J1939-75 | 64911 | 1-2 | 16 | This parameter reports the generator total AC power, as a percentage of rated power. | | | |
| | 3591 | Generator Total Percent kVA | J1939-75 | 64911 | 3-4 | 16 | This parameter reports the generator total AC apparent power, as a percentage of rated power. | | | |
| | 3592 | Generator Total Percent kVAr | J1939-75 | 64911 | 5-6 | 16 | This parameter reports the generator total AC reactive power, as a percentage of rated power. | | | |
| | 3593 | Generator Total kVAr Hours Export | J1939-75 | 64910 | 1-4 | 32 | This parameter reports the cumulative total AC reactive energy exported from the generator. | | | |
| | 3594 | Generator Total kVAr Hours Import | J1939-75 | 64910 | 5-8 | 32 | This parameter reports the cumulative total AC reactive energy imported to the generator. | | | |
| | 3595 | Utility Total kVAr Hours Export | J1939-75 | 64909 | 1-4 | 32 | This parameter reports the cumulative total AC reactive energy exported from the utility. | | | |
| | 3596 | Utility Total kVAr Hours Import | J1939-75 | 64909 | 5-8 | 32 | This parameter reports the cumulative total AC reactive energy imported to the utility. | | | |
| | 3597 | ECU Power Output Supply Voltage #1 | J1939-71 | 65165 | 3-4 | 16 | The first power output from an ECM | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3598 | ECU Power Output Supply Voltage #2 | J1939-71 | 65165 | 5-6 | 16 | The second power output from an ECM. | | | |
| | 3599 | ECU Power Output Supply Voltage #3 | J1939-71 | 65165 | 7-8 | 16 | The third power output from an ECM. | | | |
| | 3600 | Steering Straight Ahead Position Reset | J1939-71 | 56832 | 3.3 | 2 | Used to reset the straight ahead position for a steering sensor in the steering column or a steering controller's straight ahead position on any steerable axle. | | | |
| | 3601 | Engine Fuel Shutoff Valve Leak Test Control | J1939-71 | 64914 | 4.7 | 2 | Control setting for fuel shutoff valve proving system test. | | | |
| | 3602 | Engine Oil Pre-heater Control | J1939-71 | 64914 | 5.3 | 2 | Control setting for an electrically actuated oil pre-heating device. | | | |
| | 3603 | Engine Electrical System Power Conservation Control | J1939-71 | 64914 | 5.5 | 2 | Control setting for cutting power to various devices when the engine is not in use. | | | |
| | 3604 | Engine Block / Coolant Pre-heater Control | J1939-71 | 64914 | 5.7 | 2 | Control setting for an electrically actuated engine block or coolant pre-heating device. | | | |
| | 3605 | Engine Coolant Circulating Pump Control | J1939-71 | 64914 | 6.1 | 2 | Control setting for an electrically actuated engine coolant circulating pump. | | | |
| | 3606 | Engine Controlled Shutdown Request | J1939-71 | 64914 | 6.3 | 2 | A signal issued by the engine control system to a user or external system requesting for a controlled shutdown. | | | |
| | 3607 | Engine Emergency (Immediate) Shutdown Indication | J1939-71 | 64914 | 6.5 | 2 | A signal issued by the engine control system to a user or external system indicating that it is immediately shutting the engine down. | | | |
| | 3608 | Engine Fuel Shutoff Vent Control | J1939-71 | 64914 | 4.1 | 2 | Control setting for a fuel shutoff vent. | | | |
| | 3609 | Particulate Trap Intake Pressure 1 | J1939-71 | 64908 | 1-2 | 16 | This parameter indicates the particulate trap intake pressure 1 | | | |
| | 3610 | Particulate Trap Outlet Pressure 1 | J1939-71 | 64908 | 3-4 | 16 | This parameter indicates the particulate trap outlet pressure 1 | | | |
| | 3611 | Particulate Trap Intake Pressure 2 | J1939-71 | 64907 | 1-2 | 16 | This parameter indicates the particulate trap intake pressure 2 | | | |
| | 3612 | Particulate Trap Outlet Pressure 2 | J1939-71 | 64907 | 3-4 | 16 | This parameter indicates the particulate trap outlet pressure 2 | | | |
| | 3613 | Text Display Instructions | J1939-71 | 43008 | 1.1 | 4 | This parameter describes the status for the display how to show the information. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3614 | Text Display Index | J1939-71 | 43008 | 3 | 8 | Used for overwriting consecutive bytes of a displayed string when byte 1 "Text Display Instructions" state is set for "overwrite substring" mode. | | | |
| | 3615 | Text Display Character | J1939-71 | 43008 | 4 to n | 1600 | From 1 up to 200 characters to be presented on a display | | | |
| | 3618 | SAE J2012 DTC Presence | J1939 | | | | A J1939 controller has one or more SAE J2012 format DTCs. FMI 31 shall be used with this SPN. | | | |
| | 3619 | Number of J2012 DTCs | J1939-71 | 64906 | 1 | 8 | The number J2012 DTCs being conveyed in PGN 64906. | | | |
| | 3620 | J2012 DTC | J1939-71 | 64906 | 2-6 | 40 | Five character ASCII SAE J2012 DTC, sent most significant byte first. | | | |
| | 3621 | J2012 DTC Status | J1939-71 | 64906 | 7.1 | 1 | Indicates if the respective SAE J2012 DTC is active or previously active. | | | |
| | 3622 | J2012 DTC Occurrence Count | J1939-71 | 64906 | 7.2 | 7 | Number of occurrences of the respective SAE J2012 DTC being conveyed. | | | |
| | 3623 | Vehicle Roll | J1939-71 | 64905 | 1-2 | 16 | This parameter indicates the roll in degrees from level. | | | |
| | 3624 | Engine Intake Valve Actuation Oil Pressure for Cylinder #1 | J1939-71 | 64904 | 1-2 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #1. | | | |
| | 3625 | Engine Intake Valve Actuation Oil Pressure for Cylinder #2 | J1939-71 | 64904 | 3-4 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #2. | | | |
| | 3626 | Engine Intake Valve Actuation Oil Pressure for Cylinder #3 | J1939-71 | 64904 | 5-6 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #3. | | | |
| | 3627 | Engine Intake Valve Actuation Oil Pressure for Cylinder #4 | J1939-71 | 64904 | 7-8 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #4. | | | |
| | 3628 | Engine Intake Valve Actuation Oil Pressure for Cylinder #5 | J1939-71 | 64903 | 1-2 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #5. | | | |
| | 3629 | Engine Intake Valve Actuation Oil Pressure for Cylinder #6 | J1939-71 | 64903 | 3-4 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #6. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3630 | Engine Intake Valve Actuation Oil Pressure for Cylinder #7 | J1939-71 | 64903 | 5-6 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #7. | | | |
| | 3631 | Engine Intake Valve Actuation Oil Pressure for Cylinder #8 | J1939-71 | 64903 | 7-8 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #8. | | | |
| | 3632 | Engine Intake Valve Actuation Oil Pressure for Cylinder #9 | J1939-71 | 64902 | 1-2 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #9. | | | |
| | 3633 | Engine Intake Valve Actuation Oil Pressure for Cylinder #10 | J1939-71 | 64902 | 3-4 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #10. | | | |
| | 3634 | Engine Intake Valve Actuation Oil Pressure for Cylinder #11 | J1939-71 | 64902 | 5-6 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #11. | | | |
| | 3635 | Engine Intake Valve Actuation Oil Pressure for Cylinder #12 | J1939-71 | 64902 | 7-8 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #12. | | | |
| | 3636 | Engine Intake Valve Actuation Oil Pressure for Cylinder #13 | J1939-71 | 64901 | 1-2 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #13. | | | |
| | 3637 | Engine Intake Valve Actuation Oil Pressure for Cylinder #14 | J1939-71 | 64901 | 3-4 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #14. | | | |
| | 3638 | Engine Intake Valve Actuation Oil Pressure for Cylinder #15 | J1939-71 | 64901 | 5-6 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #15. | | | |
| | 3639 | Engine Intake Valve Actuation Oil Pressure for Cylinder #16 | J1939-71 | 64901 | 7-8 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #16. | | | |
| | 3640 | Engine Intake Valve Actuation Oil Pressure for Cylinder #17 | J1939-71 | 64900 | 1-2 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #17. | | | |
| | 3641 | Engine Intake Valve Actuation Oil Pressure for Cylinder #18 | J1939-71 | 64900 | 3-4 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #18. | | | |
| | 3642 | Engine Intake Valve Actuation Oil Pressure for Cylinder #19 | J1939-71 | 64900 | 5-6 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #19. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3643 | Engine Intake Valve Actuation Oil Pressure for Cylinder #20 | J1939-71 | 64900 | 7-8 | 16 | The gage pressure of the oil in the hydraulic accumulator that powers the engine intake valve for cylinder #20. | | | |
| | 3644 | Engine Derate Request | J1939-71 | 64914 | 8 | 8 | This parameter is a derate request made from the engine control system to an external system, where the engine is requesting an external device to reduce the load being applied. | | | |
| | 3645 | Transfer case status | J1939-71 | 64899 | 1.1 | 3 | This parameter describes the feedback from the transfer case controller. | | | |
| | 3646 | Transmission Park Selector | J1939 | | | | The Transmission Park Selector is a device (switch, button, lever position) that indicates the vehicle should be in or change to the Park transmission mode. | | | |
| | 3647 | Transmission Reverse Selector | J1939 | | | | The Transmission Reverse Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Reverse transmission mode. | | | |
| | 3648 | Transmission Neutral Selector | J1939 | | | | The Transmission Neutral Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Neutral transmission mode. | | | |
| | 3649 | Transmission Drive Selector | J1939 | | | | The Transmission Drive Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Drive transmission mode. | | | |
| | 3650 | Transmission Low Selector | J1939 | | | | The Transmission Low Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Low transmission mode. | | | |
| | 3651 | Transmission Primary Manual Selector | J1939 | | | | The Transmission Primary Manual Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Manual transmission mode. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3652 | Transmission Primary Shift Up Selector | J1939 | | | | The Transmission Primary Shift Up Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Shift Up transmission mode. | | | |
| | 3653 | Transmission Primary Shift Down Selector | J1939 | | | | The Transmission Primary Shift Down Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Shift Down transmission mode. | | | |
| | 3654 | Transmission Secondary Manual Selector | J1939 | | | | The Transmission Secondary Manual Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Manual transmission mode. | | | |
| | 3655 | Transmission Secondary Shift Up Selector | J1939 | | | | The Transmission Secondary Shift Up Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Shift Up transmission mode.ould be in or change to the Shift Up transmission mode. | | | |
| | 3656 | Transmission Secondary Shift Down Selector | J1939 | | | | The Transmission Secondary Shift Down Selector is a device (switch, button, lever position) that indicates the vehicle/transmission should be in or change to the Shift Down transmission mode. | | | |
| | 3657 | Steering Wheel Mounted Shift Controls Decoder | J1939 | | | | The Steering Wheel Mounted Shift Controls Decoder of the hardware circuitry that reads and monitors the Steering Wheel Mounted Shift Controls. | | | |
| | 3658 | Steering Wheel Mounted Shift Controls Input | J1939 | | | | The Steering Wheel Mounted Shift Controls Input is the input to the device that reads and monitors the Steering Wheel Mounted Shift Controls. | | | |
| | 3659 | Engine Injector Cylinder #1 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #1 | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3660 | Engine Injector Cylinder #2 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #2 | | | |
| | 3661 | Engine Injector Cylinder #3 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #3 | | | |
| | 3662 | Engine Injector Cylinder #4 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #4 | | | |
| | 3663 | Engine Injector Cylinder #5 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #5 | | | |
| | 3664 | Engine Injector Cylinder #6 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #6 | | | |
| | 3665 | Engine Injector Cylinder #7 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #7 | | | |
| | 3666 | Engine Injector Cylinder #8 Actuator 2 | J1939 | | | | This is the second valve actuator on Engine Injector Cylinder #8 | | | |
| | 3667 | Engine Air Shutoff Status | J1939-71 | 65252 | 8.1 | 2 | State signal which indicates the actual measured position of the Air Shutoff. | | | |
| | 3668 | Engine Intercooler Coolant Level | J1939-71 | 64938 | 6 | 8 | Ratio of volume of liquid found in an engine intercooler cooling system to total engine intercooler cooling system volume. | | | |
| | 3669 | Engine Rotation Direction | J1939-71 | 65214 | 5.1 | 2 | Direction of engine rotation, as reported by the engine. | | | |
| | 3670 | Maximum Crank Attempts per Start Attempt | J1939-71 | 64895 | 1 | 8 | The number of cranking cycles that will be performed before ending the start attempt. | | | |
| | 3671 | Crank Attempt Count on Present Start Attempt | J1939-71 | 65214 | 6 | 8 | Reports the number of cranking cycles undergone during the present start attempt. | | | |
| | 3672 | EGR Cooler Bypass Actuator Postion | J1939-71 | 64897 | 1 | 8 | The parameter gives the % open of the EGR Cooler Bypass Actuator. | | | |
| | 3673 | Engine Throttle 2 Position | J1939-71 | 65266 | 8 | 8 | The sensed position feedback of the valve, coming from a second electrical actuator for a second throttle plate, used to regulate the supply of a fluid, usually air or fuel//air mixture. | | | |
| | 3675 | Engine Turbocharger Compressor Bypass Actuator Position | J1939-71 | 64931 | 4 | 8 | Measures the position of the turbocharger compressor bypass actuator, where 0% represents bypass fully closed and 100% represents bypass fully open. | | | |
| | 3676 | Engine Aftercooler Coolant Level | J1939-71 | 64938 | 7 | 8 | Ratio of aftercooler coolant system volume of liquid to total cooling system volume. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3677 | Generator Unavailable to Start / Run | J1939 | | | | Indicates that the generator is not available to start up and run. This may indicate that a shutdown condition is present, or simply that the system has been manually placed into a STOP state. | | | |
| | 3678 | EPS Unavailable to Accept Load | J1939 | | | | Indicates that the Emergency Power System (EPS) is not prepared to accept load. This implies that the EPS is not in a state that will allow for a quick synchronization and connection to the load bus. | | | |
| | 3680 | Transmission Master Valve | J1939 | | | | The transmission master valve is in series with a common supply for other transmission valves that control individual functions. | | | |
| | 3681 | Power Conversion Enable Signal | J1939 | | | | The power conversion function needs a power conversion enable signal from the microcontroller so that it may power down the power conversion independent of the vehicle's power down. | | | |
| | 3682 | Transmission Air Pressure Regulator Valve | J1939 | | | | The valve used to regulate the air supply pressure for the transmission. | | | |
| | 3683 | Steering Wheel Angle | J1939-71 | 61469 | 1 | 16 | The main operator`s steering wheel angle (on the steering column, not the actual wheel angle). | | | |
| | 3684 | Steering Wheel Angle Range Counter | J1939-71 | 61469 | 3.1 | 6 | The signal indicates the number of steering wheel angle range overflows if the operating range of steering wheel is greater than the measuring range of sensor element. | | | |
| | 3685 | Steering Wheel Angle Range Counter Type | J1939-71 | 61469 | 3.7 | 2 | The signal indicates whether the steering wheel angle sensor is capable of absolute measuring of the number of steering wheel angle ranges or not. | | | |
| | 3686 | Steering Wheel Angle Range | J1939-71 | 61469 | 5-6 | 16 | The signal indicates the range of the steering wheel angle the sensor element is capable to measure. | | | |
| | 3687 | Steering Angle Sensor Active Mode | J1939-71 | 61469 | 7.1 | 2 | This signal indicates the operational mode of the steering angle sensor. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3688 | Steering Angle Sensor Calibrated | J1939-71 | 61469 | 7.3 | 2 | This signal indicates the calibration status of the steering angle sensor. | | | |
| | 3689 | Message Counter | J1939-71 | 61469 | 8.1 | 4 | The message counter is to verify the signal path from the demanding device to the steering controller. | | | |
| | 3690 | Message Checksum | J1939-71 | 61469 | 8.5 | 4 | The message checksum is used to verify the signal path from the demanding device to the steering controller. | | | |
| | 3691 | Left Headlamp Dynamic Bending Light | J1939-71 | 64894 | 1.1 | 3 | This parameter indicates whether the dynamic bending light of the left headlamp is working properly. | | | |
| | 3692 | Right Headlamp Dynamic Bending Light | J1939-71 | 64894 | 1.4 | 3 | This parameter indicates whether the dynamic bending light of the left headlamp is working properly. | | | |
| | 3693 | Left Headlamp Light Distribution | J1939-71 | 64894 | 2.1 | 4 | This parameter indicates what kind of light distribution is set by the AFS system for the left headlamp. | | | |
| | 3694 | Right Headlamp Light Distribution | J1939-71 | 64894 | 2.5 | 4 | This parameter indicates what kind of light distribution is set by the AFS system for the right headlamp. | | | |
| | 3695 | Particulate Trap Regeneration Inhibit Switch | J1939-71 | 57344 | 6.1 | 2 | Indicates the state of a switch available to the operator that inhibits particulate trap regeneration. | | | |
| | 3696 | Particulate Trap Regeneration Force Switch | J1939-71 | 57344 | 6.3 | 2 | Indicates the state of a switch available to the operator that forces particulate trap regeneration. | | | |
| | 3697 | Particulate Trap Lamp Command | J1939-71 | 64892 | 1.1 | 3 | Command to control the particulate trap lamp. | | | |
| | 3698 | Exhaust System High Temperature Lamp Command | J1939-71 | 64892 | 7.3 | 3 | Command to control the exhaust system high temperature lamp. | | | |
| | 3699 | Particulate Trap Passive Regeneration Status | J1939-71 | 64892 | 2.1 | 2 | Indicates the state of particulate trap passive regeneration. | | | |
| | 3700 | Particulate Trap Active Regeneration Status | J1939-71 | 64892 | 2.3 | 2 | Indicates the state of particulate trap active regeneration. | | | |
| | 3701 | Particulate Trap Status | J1939-71 | 64892 | 2.5 | 3 | Indicates the state of the particulate trap regeneration need and urgency. | | | |
| | 3702 | Particulate Trap Active Regeneration Inhibited Status | J1939-71 | 64892 | 3.1 | 2 | Indicates the state of particulate trap active regeneration inhibition. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3703 | Particulate Trap Active Regeneration Inhibited Due to Inhibit Switch | J1939-71 | 64892 | 3.3 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the Particulate Trap Regeneration Inhibit Switch. | | | |
| | 3704 | Particulate Trap Active Regeneration Inhibited Due to Clutch Disengaged | J1939-71 | 64892 | 3.5 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the clutch being disengaged. | | | |
| | 3705 | Particulate Trap Active Regeneration Inhibited Due to Service Brake Active | J1939-71 | 64892 | 3.7 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the service brake being active. | | | |
| | 3706 | Particulate Trap Active Regeneration Inhibited Due to PTO Active | J1939-71 | 64892 | 4.1 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the PTO being active. | | | |
| | 3707 | Particulate Trap Active Regeneration Inhibited Due to Accelerator Pedal Off Idle | J1939-71 | 64892 | 4.3 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the accelerator pedal being off idle. | | | |
| | 3708 | Particulate Trap Active Regeneration Inhibited Due to Out of Neutral | J1939-71 | 64892 | 4.5 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the transmission being out of neutral. | | | |
| | 3709 | Particulate Trap Active Regeneration Inhibited Due to Vehicle Speed Above Allowed Speed | J1939-71 | 64892 | 4.7 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the vehicle speed being above an allowed limit. | | | |
| | 3710 | Particulate Trap Active Regeneration Inhibited Due to Parking Brake Not Set | J1939-71 | 64892 | 5.1 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the parking brake being not set. | | | |
| | 3711 | Particulate Trap Active Regeneration Inhibited Due to Low Exhaust Gas Temperature | J1939-71 | 64892 | 5.3 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the exhaust gas temperature being too low. | | | |
| | 3712 | Particulate Trap Active Regeneration Inhibited Due to System Fault Active | J1939-71 | 64892 | 5.5 | 2 | Indicates the state of particulate trap active regeneration inhibition due to a system fault being active. | | | |
| | 3713 | Particulate Trap Active Regeneration Inhibited Due to System Timeout | J1939-71 | 64892 | 5.7 | 2 | Indicates the state of particulate trap active regeneration inhibition due to a system timeout. | | | |
| | 3714 | Particulate Trap Active Regeneration Inhibited Due to Temporary System Lockout | J1939-71 | 64892 | 6.1 | 2 | Indicates the state of particulate trap active regeneration inhibition due to a temporary system lockout. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3715 | Particulate Trap Active Regeneration Inhibited Due to Permanent System Lockout | J1939-71 | 64892 | 6.3 | 2 | Indicates the state of particulate trap active regeneration inhibition due to a permanent system lockout. | | | |
| | 3716 | Particulate Trap Active Regeneration Inhibited Due to Engine Not Warmed Up | J1939-71 | 64892 | 6.5 | 2 | Indicates the state of particulate trap active regeneration inhibition due to the engine not being warmed up. | | | |
| | 3717 | Particulate Trap Active Regeneration Inhibited Due to Vehicle Speed Below Allowed Speed | J1939-71 | 64892 | 6.7 | 2 | Indicates the state of particulate trap active regeneration inhibition due to vehicle speed being less than the allowed vehicle speed. | | | |
| | 3718 | Particulate Trap Automatic Active Regeneration Initiation Configuration | J1939-71 | 64892 | 7.1 | 2 | Indicates the configuration of particulate trap active regeneration automatic initiation. | | | |
| | 3719 | Particulate Trap 1 Soot Load Percent | J1939-71 | 64891 | 1 | 8 | Indicates the soot load percent of particulate trap 1. | | | |
| | 3720 | Particulate Trap 1 Ash Load Percent | J1939-71 | 64891 | 2 | 8 | Indicates the ash load percent of particulate trap 1. | | | |
| | 3721 | Particulate Trap 1 Time Since Last Active Regeneration | J1939-71 | 64891 | 3-6 | 32 | Indicates the time since the last active regeneration event of particulate trap 1. | | | |
| | 3722 | Particulate Trap 2 Soot Load Percent | J1939-71 | 64890 | 1 | 8 | Indicates the soot load percent of particulate trap 2. | | | |
| | 3723 | Particulate Trap 2 Ash Load Percent | J1939-71 | 64890 | 2 | 8 | Indicates the ash load percent of particulate trap 2. | | | |
| | 3724 | Particulate Trap 2 Time Since Last Active Regeneration | J1939-71 | 64890 | 3-6 | 32 | Indicates the time since the last active regeneration event of particulate trap 2. | | | |
| | 3725 | Aftertreatment 1 Total Passive Regeneration Time | J1939-71 | 64920 | 17-20 | 32 | Total amount of time that aftertreatment device 1 has been in passive regeneration over the lifetime of the device. | | | |
| | 3726 | Aftertreatment 1 Total Number of Passive Regenerations | J1939-71 | 64920 | 21-24 | 32 | Total number of passive regenerations by aftertreatment device 1 over the lifetime of the device. | | | |
| | 3727 | Aftertreatment 1 Total Number of Active Regeneration Inhibit Requests | J1939-71 | 64920 | 25-28 | 32 | Total number of aftertreatment device 1 active regeneration inhibit requests by the operator over the lifetime of the device. | | | |
| | 3728 | Aftertreatment 1 Total Number of Active Regeneration Manual Requests | J1939-71 | 64920 | 29-32 | 32 | Total number of aftertreatment device 1 active regeneration manual requests by the operator over the lifetime of the device. | | | |
| | 3729 | Aftertreatment 2 Total Passive Regeneration Time | J1939-71 | 64921 | 17-20 | 32 | Total amount of time that Aftertreatment device 2 has been in passive regeneration over the lifetime of the device. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3730 | Aftertreatment 2 Total Number of Passive Regenerations | J1939-71 | 64921 | 21-24 | 32 | Total number of passive regenerations by Aftertreatment device 2 over the lifetime of the device. | | | |
| | 3731 | Aftertreatment 2 Total Number of Active Regeneration Inhibit Requests | J1939-71 | 64921 | 25-28 | 32 | Total number of Aftertreatment device 2 active regeneration inhibit requests by the operator over the lifetime of the device. | | | |
| | 3732 | Aftertreatment 2 Total Number of Active Regeneration Manual Requests | J1939-71 | 64921 | 29-32 | 32 | Total number of Aftertreatment device 2 active regeneration manual requests by the operator over the lifetime of the device. | | | |
| | 3733 | Aftertreatment 1 Trip Fuel Used | J1939-71 | 64889 | 01-04 | 32 | Total amount of fuel used by aftertreatment device 1 during the current trip period. | | | |
| | 3734 | Aftertreatment 1 Trip Active Regeneration Time | J1939-71 | 64889 | 05-08 | 32 | Total amount of time that aftertreatment device 1 has been in active regeneration during the current trip period. | | | |
| | 3735 | Aftertreatment 1 Trip Disabled Time | J1939-71 | 64889 | 09-12 | 32 | Total amount of time that aftertreatment 1 regeneration has been manually disabled during the current trip period. | | | |
| | 3736 | Aftertreatment 1 Trip Number of Active Regenerations | J1939-71 | 64889 | 13-16 | 32 | Total number of active regenerations by Aftertreatment device 1 during the current trip period. | | | |
| | 3737 | Aftertreatment 1 Trip Passive Regeneration Time | J1939-71 | 64889 | 17-20 | 32 | Total amount of time that aftertreatment device 1 has been in passive regeneration during the current trip period. | | | |
| | 3738 | Aftertreatment 1 Trip Number of Passive Regenerations | J1939-71 | 64889 | 21-24 | 32 | Total number of passive regenerations by Aftertreatment device 1 during the current trip period. | | | |
| | 3739 | Aftertreatment 1 Trip Number of Active Regeneration Inhibit Requests | J1939-71 | 64889 | 25-28 | 32 | Total number of aftertreatment device 1 active regeneration inhibit requests by the operator during the current trip period. | | | |
| | 3740 | Aftertreatment 1 Trip Number of Active Regeneration Manual Requests | J1939-71 | 64889 | 29-32 | 32 | Total number of Aftertreatment device 1 active regeneration manual requests by the operator during the current trip period. | | | |
| | 3741 | Aftertreatment 2 Trip Fuel Used | J1939-71 | 64888 | 01-04 | 32 | Total amount of fuel used by aftertreatment device 2 during the current trip period. | | | |
| | 3742 | Aftertreatment 2 Trip Active Regeneration Time | J1939-71 | 64888 | 05-08 | 32 | Total amount of time that aftertreatment device 2 has been in active regeneration during the current trip period. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3743 | Aftertreatment 2 Trip Disabled Time | J1939-71 | 64888 | 09-12 | 32 | Total amount of time that aftertreatment 2 regeneration has been manually disabled during the current trip period. | | | |
| | 3744 | Aftertreatment 2 Trip Number of Active Regenerations | J1939-71 | 64888 | 13-16 | 32 | Total number of active regenerations by aftertreatment device 2 during the current trip period. | | | |
| | 3745 | Aftertreatment 2 Trip Passive Regeneration Time | J1939-71 | 64888 | 17-20 | 32 | Total amount of time that aftertreatment device 2 has been in passive regeneration during the current trip period. | | | |
| | 3746 | Aftertreatment 2 Trip Number of Passive Regenerations | J1939-71 | 64888 | 21-24 | 32 | Total number of passive regenerations by aftertreatment device 2 during the current trip period. | | | |
| | 3747 | Aftertreatment 2 Trip Number of Active Regeneration Inhibit Requests | J1939-71 | 64888 | 25-28 | 32 | Total number of aftertreatment device 2 active regeneration inhibit requests by the operator during the current trip period. | | | |
| | 3748 | Aftertreatment 2 Trip Number of Active Regeneration Manual Requests | J1939-71 | 64888 | 29-32 | 32 | Total number of aftertreatment device 2 active regeneration manual requests by the operator during the current trip period. | | | |
| | 3749 | Engine Overcooled | J1939 | | | | Indicates that the engine has been overcooled enough to warrant triggering a diagnostic event. | | | |
| | 3750 | Particulate Trap 1 Conditions Not Met for Active Regeneration | J1939 | | | | Indicates that particulate trap 1 is not able to begin or continue an active regenerate event at the current engine operating conditions. | | | |
| | 3751 | Particulate Trap 2 Conditions Not Met for Active Regeneration | J1939 | | | | Indicates that particulate trap 2 is not able to begin or continue an active regenerate event at the current engine operating conditions. | | | |
| | 3752 | Wrapping Arm Fast Speed Rotation Actuator | J1939 | | | | The actuator for the wrapping arm fast speed rotation function. The wrapper is used to apply the wrapping material around the bale. | | | |
| | 3753 | Wrapping Arm Reverse Rotation Actuator | J1939 | | | | The actuator for the wrapping arm reverse rotation function. The wrapper is used to apply the wrapping material around the bale. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3754 | Wrapping Arm Regular Speed Rotation Actuator | J1939 | | | | The actuator for the wrapping arm regular speed rotation. The wrapper is used to apply the wrapping material around the bale. | | | |
| | 3755 | Bale Rotational Speed | J1939 | | | | The measured rotational speed of the bale inside the chamber. | | | |
| | 3756 | Wrapper Knife Close Actuator | J1939 | | | | The close actuator for the knives used on the wrapper. The knives are used to cut the end of the wrapping material after it is on the bale. | | | |
| | 3757 | Wrapper Knife Open Actuator | J1939 | | | | The open actuator for the knives used on the wrapper. The knives are used to cut the end of the wrapping material after it is on the bale. | | | |
| | 3758 | Baler Gate Actuator | J1939 | | | | The actuator used to operate the gate on the back of the baler. | | | |
| | 3759 | Transfer Table Backward Actuator | J1939 | | | | The backward actuator for the baler transfer table control which delivers the bale to the wrapper. This backs up the table to move the bale away from the wrapper if needed. | | | |
| | 3760 | Transfer Table Forward Actuator | J1939 | | | | The forward actuator for the baler transfer table control which delivers the bale to the wrapper. | | | |
| | 3761 | Precutter Reverser Actuator | J1939 | | | | The actuator for the part of the baler precutter system that can reverse the flow of the crop to remove a plug. | | | |
| | 3762 | Precutter Knives Actuator | J1939 | | | | The crop precutting knives that process the crop before loading into the machine. | | | |
| | 3763 | Baler Pickup Actuator | J1939 | | | | The actuator for the pickup system mechanism that gathers the crop from the field. | | | |
| | 3764 | Baler Net Actuator Mode | J1939 | | | | The baler net actuator mechanism response to commands. | | | |
| | 3765 | Baler Net Actuator | J1939 | | | | The actuator mechanism that ties the net or wrapping material around the bale. | | | |
| | 3766 | Baler Tying Actuator Mode | J1939 | | | | The baler tying actuator mechanism response to commands. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3767 | Baler Tying Actuator | J1939 | | | | The actuator mechanism that ties the twine or net around the bale. | | | |
| | 3768 | Wrapping Table Position 2 | J1939 | | | | The second position monitor of the wrapping table. | | | |
| | 3769 | Wrapping Arms Home Position | J1939 | | | | The home, or initialized position of the baler wrapping arms. | | | |
| | 3770 | Transfer Table Home Position | J1939 | | | | The home, or initialized position of the baler transfer table. | | | |
| | 3771 | Wrapping Table Position 1 | J1939 | | | | The first position monitor of the wrapping table. | | | |
| | 3772 | Wrapping Area Barrier | J1939 | | | | The barrier, or flap position used to keep people away from the wrapping area. | | | |
| | 3773 | Wrapping Material Dispensing | J1939 | | | | The state of the baler film or wrapping material & its dispenser. | | | |
| | 3774 | Baler Rear Gate Position Control | J1939 | | | | Baler rear gate position control. | | | |
| | 3775 | Wrapping Arm Speed Sensing | J1939 | | | | The speed of the baler wrapping arms. | | | |
| | 3776 | Bale Presence | J1939 | | | | Used to monitor the bale presence, such as on the transfer table. | | | |
| | 3777 | Baler Transfer Table Motion Sensing | J1939 | | | | Senses the motion of the baler transfer table. | | | |
| | 3778 | Chopper Knives Position | J1939 | | | | Used to monitor the position of the chopper knives which process the crop. | | | |
| | 3779 | Bale Oversize State | J1939 | | | | Used to monitor the maximum bale size before it can damage the machine. | | | |
| | 3780 | Baler Right Gate position | J1939 | | | | The position of the Baler right side gate. | | | |
| | 3781 | Net Cutting | J1939 | | | | After the net tying operation is completed, this is the function of cutting the net. | | | |
| | 3782 | Twine Sensor | J1939 | | | | The monitoring sensor for the twine that is used to tie up the bales. | | | |
| | 3783 | Intake Manifold Charge Combustion | J1939 | | | | This parameter provides diagnostics on a charge combustion event within the engine intake manifold, which is commonly called spit-back or intake manifold backfire | | | |
| | 3784 | Reserved for assignment | | | | | | | | |
| | 3785 | Tractor Brake Stroke Axle 1 Left | J1939-71 | 64881 | 1.1 | 3 | Brake stroke status for left brake actuator on tractor axle 1. | | 253 | 1 |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3786 | Tractor Brake Stroke Axle 1 Right | J1939-71 | 64881 | 1.4 | 3 | Brake stroke status for right brake actuator on tractor axle 1. | | 253 | 2 |
| | 3787 | Tractor Brake Stroke Axle 2 Left | J1939-71 | 64881 | 1.7-2.1 | 3 | Brake stroke status for left brake actuator on tractor axle 2. | | 253 | 3 |
| | 3788 | Tractor Brake Stroke Axle 2 Right | J1939-71 | 64881 | 2.2 | 3 | Brake stroke status for right brake actuator on tractor axle 2. | | 253 | 4 |
| | 3789 | Tractor Brake Stroke Axle 3 Left | J1939-71 | 64881 | 2.5 | 3 | Brake stroke status for left brake actuator on tractor axle 3. | | 253 | 5 |
| | 3790 | Tractor Brake Stroke Axle 3 Right | J1939-71 | 64881 | 2.8-3.2 | 3 | Brake stroke status for right brake actuator on tractor axle 3. | | 253 | 6 |
| | 3791 | Tractor Brake Stroke Axle 4 Left | J1939-71 | 64881 | 3.3 | 3 | Brake stroke status for left brake actuator on tractor axle 4. | | 253 | 7 |
| | 3792 | Tractor Brake Stroke Axle 4 Right | J1939-71 | 64881 | 3.6 | 3 | Brake stroke status for right brake actuator on tractor axle 4. | | 253 | 8 |
| | 3793 | Tractor Brake Stroke Axle 5 Left | J1939-71 | 64881 | 4.1 | 3 | Brake stroke status for left brake actuator on tractor axle 5. | | | |
| | 3794 | Tractor Brake Stroke Axle 5 Right | J1939-71 | 64881 | 4.4 | 3 | Brake stroke status for right brake actuator on tractor axle 5. | | | |
| | 3795 | Trailer Brake Stroke Axle 1 Left | J1939-71 | 64881 | 4.7-5.1 | 3 | Brake stroke status for left brake actuator on trailer axle 1. | | 253 | 37 |
| | 3796 | Trailer Brake Stroke Axle 1 Right | J1939-71 | 64881 | 5.2 | 3 | Brake stroke status for right brake actuator on trailer axle 1. | | 253 | 38 |
| | 3797 | Trailer Brake Stroke Axle 2 Left | J1939-71 | 64881 | 5.5 | 3 | Brake stroke status for left brake actuator on trailer axle 2. | | 253 | 39 |
| | 3798 | Trailer Brake Stroke Axle 2 Right | J1939-71 | 64881 | 5.8-6.2 | 3 | Brake stroke status for right brake actuator on trailer axle 2. | | 253 | 40 |
| | 3799 | Trailer Brake Stroke Axle 3 Left | J1939-71 | 64881 | 6.3 | 3 | Brake stroke status for left brake actuator on trailer axle 3. | | 253 | 41 |
| | 3800 | Trailer Brake Stroke Axle 3 Right | J1939-71 | 64881 | 6.6 | 3 | Brake stroke status for right brake actuator on trailer axle 3. | | 253 | 42 |
| | 3801 | Trailer Brake Stroke Axle 4 Left | J1939-71 | 64881 | 7.1 | 3 | Brake stroke status for left brake actuator on trailer axle 4. | | 253 | 43 |
| | 3802 | Trailer Brake Stroke Axle 4 Right | J1939-71 | 64881 | 7.4 | 3 | Brake stroke status for right brake actuator on trailer axle 4. | | 253 | 44 |
| | 3803 | Trailer Brake Stroke Axle 5 Left | J1939-71 | 64881 | 7.7-8.1 | 3 | Brake stroke status for left brake actuator on trailer axle 5. | | | |
| | 3804 | Trailer Brake Stroke Axle 5 Right | J1939-71 | 64881 | 8.2 | 3 | Brake stroke status for right brake actuator on trailer axle 5. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3805 | Tractor Brake Stroke Alert Monitor | J1939 | | | | Tractor Brake Stroke Alert System Status | | 253 | 9 |
| | 3806 | Trailer Brake Stroke Alert Monitor | J1939 | | | | Trailer Brake Stroke Alert System Status | | 253 | 45 |
| | 3807 | Park Brake Release Inhibit Request | J1939-71 | 65265 | 1.7 | 2 | Park Brake Release Inhibit Request signals the desire that an applied park brake remain applied and limit the ability of the vehicle to be moved. | | | |
| | 3808 | Park Brake Release Inhibit Status | J1939-71 | 65274 | 4.5 | 2 | This parameter provides reports on the status of the Park Brake Release Inhibit function. | | | |
| | 3809 | Transmission Oil Level Request | J1939-71 | 64980 | 3.1 | 2 | Conveys operator or vehicle system desire for a transmission oil level reading to be taken. | | | |
| | 3810 | Retract Status of ramp 1 | J1939-71 | 64880 | 1.1 | 2 | Retract status of ramp at doorway 1, counting from front to back on the vehicle. | | | |
| | 3811 | Enable status of ramp 1 | J1939-71 | 64880 | 1.3 | 2 | Enable status of ramp at doorway 1, counting from front to back on the vehicle. | | | |
| | 3812 | Movement status of ramp 1 | J1939-71 | 64880 | 1.5 | 2 | Movement status of ramp at doorway 1, counting from front to back on the vehicle. | | | |
| | 3813 | Retract Status of ramp 2 | J1939-71 | 64880 | 2.1 | 2 | Retract status of ramp at doorway 2, counting from front to back on the vehicle. | | | |
| | 3814 | Enable status of ramp 2 | J1939-71 | 64880 | 2.3 | 2 | Enable status of ramp at doorway 2, counting from front to back on the vehicle. | | | |
| | 3815 | Movement status of ramp 2 | J1939-71 | 64880 | 2.5 | 2 | Movement status of ramp at doorway 2, counting from front to back on the vehicle. | | | |
| | 3816 | Retract Status of ramp 3 | J1939-71 | 64880 | 3.1 | 2 | Retract status of ramp at doorway 3, counting from front to back on the vehicle. | | | |
| | 3817 | Enable status of ramp 3 | J1939-71 | 64880 | 3.3 | 2 | Enable status of ramp at doorway 3, counting from front to back on the vehicle. | | | |
| | 3818 | Movement status of ramp 3 | J1939-71 | 64880 | 3.5 | 2 | Movement status of ramp at doorway 3, counting from front to back on the vehicle. | | | |
| | 3819 | Front axle group engagement status | J1939-71 | 61446 | 4.1 | 2 | Front axle group engagement status | | | |
| | 3820 | Rear axle group engagement status | J1939-71 | 61446 | 4.3 | 2 | Rear axle group engagement status | | | |
| | 3821 | Engine Exhaust Gas Recirculation (EGR) Valve 2 Control | J1939-71 | 64879 | 1 | 16 | Desired percentage of maximum Exhaust Gas Recirculation (EGR) valve opening for valve 2. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3822 | Engine Exhaust Gas Recirculation Valve 2 Position | J1939-71 | 64916 | 3 | 16 | The position of the second exhaust gas recirculation valve expressed as a percentage of full travel. | | | |
| | 3823 | Transmission Torque Converter Oil Outlet Temperature | J1939-71 | 64917 | 2-3 | 16 | Temperature of transmission torque converter outlet oil. | | | |
| | 3824 | Transmission Gear Latch Actuator | J1939 | | | | The actuator allows the transmission to hold a gear (i.e. gear latch) until the vehicle slows down when power is lost to the engine and/or transmission ECUs. | | | |
| | 3825 | Transmission Output Speed 2 | J1939 | | | | Second sensor to measure transmission output speed. | | | |
| | 3826 | Average Catalyst Reagent Consumption | J1939-71 | 64878 | 1-2 | 16 | Measured use of reagent by a Selective Catalytic Reduction system for exhaust emission control, averaged over the previous 15 hours of engine operation. | | | |
| | 3827 | Reserved for assignment | | | | | | | | |
| | 3828 | Commanded Catalyst Reagent Consumption | J1939-71 | 64878 | 3-4 | 16 | This parameter transmits the amount of reagent that the emissions control system has requested to be used, averaged over the past 15 hours of engine operation. | | | |
| | 3829 | EPS Supplying Load | J1939 | | | | The generator set controller indicates that the Emergency Power System (generator set) can supply load when the genset is actually supplying load and enabled to supply load. | | | |
| | 3830 | Aftertreatment 1 Secondary Air Differential Pressure | J1939-71 | 64877 | 1-2 | 16 | Indicates the secondary air differential pressure for aftertreatment 1. | | 128 | 373 |
| | 3831 | Aftertreatment 1 Secondary Air Temperature | J1939-71 | 64877 | 3-4 | 16 | Indicates the secondary air temperature for aftertreatment 1. | | 128 | 375 |
| | 3832 | Aftertreatment 1 Secondary Air Mass Flow | J1939-71 | 64877 | 5-6 | 16 | Indicates the secondary air mass flow for aftertreatment 1. | | | |
| | 3833 | Aftertreatment 2 Secondary Air Differential Pressure | J1939-71 | 64876 | 1-2 | 16 | Indicates the secondary air differential pressure for aftertreatment 2. | | 128 | 374 |
| | 3834 | Aftertreatment 2 Secondary Air Temperature | J1939-71 | 64876 | 3-4 | 16 | Indicates the secondary air temperature for aftertreatment 2. | | 128 | 376 |
| | 3835 | Aftertreatment 2 Secondary Air Mass Flow | J1939-71 | 64876 | 5-6 | 16 | Indicates the secondary air mass flow for aftertreatment 2. | | | |
| | 3836 | Reserved for assignment | | | | | | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3837 | Aftertreatment 1 Secondary Air Pressure | J1939-71 | 64877 | 7-8 | 16 | Pressure of the secondary air for aftertreatment 1 | | 128 | 377 |
| | 3838 | Aftertreatment 2 Secondary Air Pressure | J1939-71 | 64876 | 7-8 | 16 | Pressure of the secondary air for aftertreatment 2 | | 128 | 378 |
| | 3839 | Brake Temperature Warning | J1939-71 | 64964 | 1.1 | 2 | This parameter indicates if the temperature in the service brakes exceeds a certain value. It can be used for a warning information for the driver. | | | |
| | 3840 | Auxiliary I/O #17 | J1939-71 | 42752 | 1.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3841 | Auxiliary I/O #18 | J1939-71 | 42752 | 1.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3842 | Auxiliary I/O #19 | J1939-71 | 42752 | 1.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3843 | Auxiliary I/O #20 | J1939-71 | 42752 | 1.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3844 | Auxiliary I/O #21 | J1939-71 | 42752 | 2.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3845 | Auxiliary I/O #22 | J1939-71 | 42752 | 2.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3846 | Auxiliary I/O #23 | J1939-71 | 42752 | 2.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3847 | Auxiliary I/O #24 | J1939-71 | 42752 | 2.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3848 | Auxiliary I/O #25 | J1939-71 | 42752 | 3.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3849 | Auxiliary I/O #26 | J1939-71 | 42752 | 3.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3850 | Auxiliary I/O #27 | J1939-71 | 42752 | 3.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3851 | Auxiliary I/O #28 | J1939-71 | 42752 | 3.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3852 | Auxiliary I/O #29 | J1939-71 | 42752 | 4.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3853 | Auxiliary I/O #30 | J1939-71 | 42752 | 4.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3854 | Auxiliary I/O #31 | J1939-71 | 42752 | 4.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3855 | Auxiliary I/O #32 | J1939-71 | 42752 | 4.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3856 | Auxiliary I/O #33 | J1939-71 | 42752 | 5.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3857 | Auxiliary I/O #34 | J1939-71 | 42752 | 5.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3858 | Auxiliary I/O #35 | J1939-71 | 42752 | 5.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3859 | Auxiliary I/O #36 | J1939-71 | 42752 | 5.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3860 | Auxiliary I/O #37 | J1939-71 | 42752 | 6.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3861 | Auxiliary I/O #38 | J1939-71 | 42752 | 6.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3862 | Auxiliary I/O #39 | J1939-71 | 42752 | 6.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3863 | Auxiliary I/O #40 | J1939-71 | 42752 | 6.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3864 | Auxiliary I/O #41 | J1939-71 | 42752 | 7.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3865 | Auxiliary I/O #42 | J1939-71 | 42752 | 7.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3866 | Auxiliary I/O #43 | J1939-71 | 42752 | 7.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3867 | Auxiliary I/O #44 | J1939-71 | 42752 | 7.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3868 | Auxiliary I/O #45 | J1939-71 | 42752 | 8.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3869 | Auxiliary I/O #46 | J1939-71 | 42752 | 8.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3870 | Auxiliary I/O #47 | J1939-71 | 42752 | 8.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3871 | Auxiliary I/O #48 | J1939-71 | 42752 | 8.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3872 | Auxiliary I/O #49 | J1939-71 | 42496 | 1.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3873 | Auxiliary I/O #50 | J1939-71 | 42496 | 1.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3874 | Auxiliary I/O #51 | J1939-71 | 42496 | 1.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3875 | Auxiliary I/O #52 | J1939-71 | 42496 | 1.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3876 | Auxiliary I/O #53 | J1939-71 | 42496 | 2.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3877 | Auxiliary I/O #54 | J1939-71 | 42496 | 2.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3878 | Auxiliary I/O #55 | J1939-71 | 42496 | 2.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3879 | Auxiliary I/O #56 | J1939-71 | 42496 | 2.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3880 | Auxiliary I/O #57 | J1939-71 | 42496 | 3.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3881 | Auxiliary I/O #58 | J1939-71 | 42496 | 3.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3882 | Auxiliary I/O #59 | J1939-71 | 42496 | 3.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3883 | Auxiliary I/O #60 | J1939-71 | 42496 | 3.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3884 | Auxiliary I/O #61 | J1939-71 | 42496 | 4.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3885 | Auxiliary I/O #62 | J1939-71 | 42496 | 4.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3886 | Auxiliary I/O #63 | J1939-71 | 42496 | 4.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3887 | Auxiliary I/O #64 | J1939-71 | 42496 | 4.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3888 | Auxiliary I/O #65 | J1939-71 | 42496 | 5.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3889 | Auxiliary I/O #66 | J1939-71 | 42496 | 5.5. | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3890 | Auxiliary I/O #67 | J1939-71 | 42496 | 5.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3891 | Auxiliary I/O #68 | J1939-71 | 42496 | 5.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3892 | Auxiliary I/O #69 | J1939-71 | 42496 | 6.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3893 | Auxiliary I/O #70 | J1939-71 | 42496 | 6.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3894 | Auxiliary I/O #71 | J1939-71 | 42496 | 6.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3895 | Auxiliary I/O #72 | J1939-71 | 42496 | 6.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3896 | Auxiliary I/O #73 | J1939-71 | 42496 | 7.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3897 | Auxiliary I/O #74 | J1939-71 | 42496 | 7.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3898 | Auxiliary I/O #75 | J1939-71 | 42496 | 7.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3899 | Auxiliary I/O #76 | J1939-71 | 42496 | 7.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3900 | Auxiliary I/O #77 | J1939-71 | 42496 | 8.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3901 | Auxiliary I/O #78 | J1939-71 | 42496 | 8.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3902 | Auxiliary I/O #79 | J1939-71 | 42496 | 8.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3903 | Auxiliary I/O #80 | J1939-71 | 42496 | 8.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3904 | Auxiliary I/O #81 | J1939-71 | 42240 | 1.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3905 | Auxiliary I/O #82 | J1939-71 | 42240 | 1.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3906 | Auxiliary I/O #83 | J1939-71 | 42240 | 1.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3907 | Auxiliary I/O #84 | J1939-71 | 42240 | 1.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3908 | Auxiliary I/O #85 | J1939-71 | 42240 | 2.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3909 | Auxiliary I/O #86 | J1939-71 | 42240 | 2.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3910 | Auxiliary I/O #87 | J1939-71 | 42240 | 2.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3911 | Auxiliary I/O #88 | J1939-71 | 42240 | 2.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3912 | Auxiliary I/O #89 | J1939-71 | 42240 | 3.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3913 | Auxiliary I/O #90 | J1939-71 | 42240 | 3.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3914 | Auxiliary I/O #91 | J1939-71 | 42240 | 3.3. | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3915 | Auxiliary I/O #92 | J1939-71 | 42240 | 3.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3916 | Auxiliary I/O #93 | J1939-71 | 42240 | 4.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3917 | Auxiliary I/O #94 | J1939-71 | 42240 | 4.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3918 | Auxiliary I/O #95 | J1939-71 | 42240 | 4.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3919 | Auxiliary I/O #96 | J1939-71 | 42240 | 4.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3920 | Auxiliary I/O #97 | J1939-71 | 42240 | 5.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3921 | Auxiliary I/O #98 | J1939-71 | 42240 | 5.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3922 | Auxiliary I/O #99 | J1939-71 | 42240 | 5.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3923 | Auxiliary I/O #100 | J1939-71 | 42240 | 5.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3924 | Auxiliary I/O #101 | J1939-71 | 42240 | 6.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3925 | Auxiliary I/O #102 | J1939-71 | 42240 | 6.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3926 | Auxiliary I/O #103 | J1939-71 | 42240 | 6.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3927 | Auxiliary I/O #104 | J1939-71 | 42240 | 6.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3928 | Auxiliary I/O #105 | J1939-71 | 42240 | 7.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3929 | Auxiliary I/O #106 | J1939-71 | 42240 | 7.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3930 | Auxiliary I/O #107 | J1939-71 | 42240 | 7.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3931 | Auxiliary I/O #108 | J1939-71 | 42240 | 7.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3932 | Auxiliary I/O #109 | J1939-71 | 42240 | 8.7 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3933 | Auxiliary I/O #110 | J1939-71 | 42240 | 8.5 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3934 | Auxiliary I/O #111 | J1939-71 | 42240 | 8.3 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3935 | Auxiliary I/O #112 | J1939-71 | 42240 | 8.1 | 2 | Identifies the current status of auxiliary input/output functions that are configured uniquely per application. | | | |
| | 3936 | Aftertreatment Diesel Particulate Filter System | | | | | Indicates non-specific failures of the aftertreatment diesel particulate filter system. | | | |
| | 3937 | Reserved for assignment | | | | | | | | |
| | 3938 | Generator Governing Bias | J1939-75 | 61470 | 1-2 | 16 | Control signal used to govern the genset's speed or load (depending on isochronous or utility parallel operation, respectively) | | | |
| | 3939 | Enable Switch - PTO Engine Flywheel | J1939-71 | 64932 | 2.1 | 2 | Status of the PTO Engine Flywheel enable switch | | | |
| | 3940 | Engagement Consent - PTO Engine Flywheel | J1939-71 | 64932 | 4.1 | 2 | Engagement Consent status for the PTO Engine Flywheel | | | |
| | 3941 | Engagement Status - PTO Engine Flywheel | J1939-71 | 64932 | 6.1 | 2 | Engagement status of the PTO Engine Flywheel | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3942 | Enable Switch - PTO Engine Accessory Drive 1 | J1939-71 | 64932 | 2.3 | 2 | Status of the PTO engine accessory drive 1 enable switch | | | |
| | 3943 | Engagement Consent - PTO Engine Accessory Drive 1 | J1939-71 | 64932 | 4.3 | 2 | Engagement consent status for the PTO engine accessory drive 1 | | | |
| | 3944 | Engagement Status - PTO Engine Accessory Drive 1 | J1939-71 | 64932 | 6.3 | 2 | Engagement status of the PTO engine accessory drive 1 | | | |
| | 3945 | Enable Switch - PTO Engine Accessory Drive 2 | J1939-71 | 64932 | 2.5 | 2 | Status of the PTO engine accessory drive 2 enable switch | | | |
| | 3946 | Engagement Consent - PTO Engine Accessory Drive 2 | J1939-71 | 64932 | 4.5 | 2 | Engagement Consent status for the PTO engine accessory drive 2 | | | |
| | 3947 | Engagement Status - PTO Engine Accessory Drive 2 | J1939-71 | 64932 | 6.5 | 2 | Engagement status of the PTO engine accessory drive 2 | | | |
| | 3948 | At least one PTO engaged | J1939-71 | 64932 | 7.1 | 2 | Indicates that at least one PTO is engaged | | | |
| | 3949 | AC Power Voltage, 120V, 60 Hz | J1939 | | | | The electrical potential of an alternating current power supply at 120 Volts, 60 Hz. | | | |
| | 3950 | Air Horn | J1939 | | | | The air horn is the operator’s externally mounted, pneumatically operated, signal device. | | | |
| | 3951 | Air Horn Switch | J1939 | | | | The air horn switch conveys the operator's demand to sound the air horn. | | | |
| | 3952 | Air Shield Light | J1939 | | | | The air shield light is the backlight for a lighted sign in the air fairing over the cab | | | |
| | 3953 | Auxiliary Gauge Package | J1939 | | | | The auxiliary gauge package incorporates non-standard gauges into a single physical package. | | | |
| | 3954 | Auxiliary Gauge Package Gauge 1 | J1939 | | | | The first gauge of an auxiliary gauge package, numbered left to right, top to bottom. | | | |
| | 3955 | Auxiliary Gauge Package Gauge 2 | J1939 | | | | The second gauge of an auxiliary gauge package, numbered left to right, top to bottom. | | | |
| | 3956 | Auxiliary Gauge Package Gauge 3 | J1939 | | | | The third gauge of an auxiliary gauge package, numbered left to right, top to bottom. | | | |
| | 3957 | Auxiliary Transmission Constant Supply Actuator | J1939 | | | | The auxiliary transmission constant supply actuator energizes the supply port of an auxiliary transmission | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3958 | Auxiliary Transmission High Range Actuator | J1939 | | | | The auxiliary transmission high range actuator energizes the high range port of an auxiliary transmission, demanding the high range of the auxiliary transmission. | | | |
| | 3959 | Auxiliary Transmission Neutral Actuator | J1939 | | | | The auxiliary transmission neutral actuator energizes the neutral port of an auxiliary transmission demanding a shift to neutral. | | | |
| | 3960 | Auxiliary Transmission Range Switch | J1939 | | | | The auxiliary transmission range switch indicates the desired range of an auxiliary transmission. | | | |
| | 3961 | Body Equipment Hydraulic Power Auxiliary Pump Inhibit Switch | J1939 | | | | The body equipment hydraulic power auxiliary pump Inhibit signal prevents the operation of an auxiliary pump that supplies hydraulic power when the vehicle's PTO driven pump is not operating. | | | |
| | 3962 | Bus Amber Signal Light 1 | J1939 | | | | Bus amber signal light 1 illuminates the left front bus amber signal lamp. When mounted on a school bus, bus amber signal lights will comply with SAE J887, except that the lens will be amber. | | | |
| | 3963 | Bus Amber Signal Light 2 | J1939 | | | | The bus amber signal light 2 illuminates the right front bus amber signal lamp. | | | |
| | 3964 | Bus Amber Signal Light 3 | J1939 | | | | The bus amber signal light 3 illuminates the left rear bus amber signal lamp | | | |
| | 3965 | Bus Amber Signal Light 4 | J1939 | | | | The bus amber signal light 4 illuminates the right rear bus amber signal lamp | | | |
| | 3966 | Bus Crossing Gate | J1939 | | | | The bus crossing gate extends a rod that encourages passengers to stay within the driver’s forward view when crossing in front of a bus. | | | |
| | 3967 | Bus Passenger Door Close Relay | J1939 | | | | The bus passenger d/oor close relay energizes the closing actuator of a bus passenger entrance door. | | | |
| | 3968 | Bus Passenger Door Control Switch 1 | J1939 | | | | The bus door control switch 1 requests that the passenger entrance door be opened or closed. | | | |
| | 3969 | Bus Passenger Door Control Switch 2 | J1939 | | | | The bus door control switch 2 provides an alternate switch signal for requesting the passenger entrance door to open or close. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3970 | Bus Passenger Door Open Relay | J1939 | | | | The bus passenger door open relay energizes the device that opens the passenger entrance door | | | |
| | 3971 | Bus Red Signal Light 1 | J1939 | | | | The bus red signal light 1 is the left front bus red signal lamp. When mounted on a school bus, these lamps comply with SAE J887. | | | |
| | 3972 | Bus Red Signal Light 2 | J1939 | | | | The bus red signal light 2 is the right front school bus red signal lamp. | | | |
| | 3973 | Bus Red Signal Light 3 | J1939 | | | | The bus red signal light 3 is the left rear school bus red signal lamp. | | | |
| | 3974 | Bus Red Signal Light 4 | J1939 | | | | The bus red signal light 4 is the right rear school bus red signal lamp. | | | |
| | 3975 | Bus Stop Arm | J1939 | | | | The bus stop arm signals oncoming traffic to stop to permit passengers to cross the road. | | | |
| | 3976 | Cab Dome Light 1 | J1939 | | | | The cab dome light 1 is the forwardmost interior light mounted on the ceiling of the cab behind the driver's shoulders. Typically, the cab dome light 1 will illuminate when the driver's or passenger's door is open. | | | |
| | 3977 | Cab Dome Light 2 | J1939 | | | | The cab dome light 2 is the second forwardmost interior light mounted on the ceiling of the cab behind the driver's shoulders. Typically, the cab dome light 2 will illuminate when a rear passenger door is open. | | | |
| | 3978 | Cab Dome Light 2 Switch | J1939 | | | | The cab dome light 2 switch controls the operation of the second dome light in the cab or sleeping berth. | | | |
| | 3979 | Cab Floor Light | J1939 | | | | The cab floor light illuminates the cab's floor | | | |
| | 3980 | Cab Floor Light Switch | J1939 | | | | The cab floor light switch initiates cab floor illumination. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3981 | Cab HVAC Mode Control Actuator | J1939 | | | | The cab HVAC mode control actuator selects which ducts convey conditioned air into the cabin of the vehicle. The actuator directs the air through the ducts [e.g. floor, defrost, dash, or a combination], based on the position of the operator's control. | | | |
| | 3982 | Cab HVAC Rear Blower Speed Control Switch | J1939 | | | | The cab HVAC rear blower speed control switch controls the blower speed of the second (rear) or sleeper HVAC system in the cab. | | | |
| | 3983 | Cab HVAC Rear Temperature Control Switch | J1939 | | | | The cab HVAC rear temperature control switch controls the temperature of the second (rear) or sleeper HVAC system | | | |
| | 3984 | Cab HVAC Recirculation Door Control Actuator | J1939 | | | | The cab HVAC recirculation door control actuator positions the door in the HVAC module that controls the amount of outside air drawn into the HVAC system. | | | |
| | 3985 | Cab HVAC System Controller | J1939 | | | | The cab HVAC system controller provides the operator controls and logic for operating the cabin's heating ventilation and cooling (HVAC) system. | | | |
| | 3986 | CAB HVAC Temperature Control Actuator | J1939 | | | | The cab HVAC temperature control actuator controls the door in the HVAC system to bypass the heater core, producing a balance between heating and cooling. | | | |
| | 3987 | Compression Brake Enable Switch Indicator Lamp | J1939 | | | | The compression brake switch indicator signals the status of the compression brake enable switch to the operator. | | | |
| | 3988 | Door 1 Control Module | J1939 | | | | The status of the first door control module. Doors are numbered left to right, front to back. | | | |
| | 3989 | Door 1 Window Motor | J1939 | | | | The window motor in door 1. Doors are numbered left to right, front to back. | | | |
| | 3990 | Door 2 Control Module | J1939 | | | | The status of the second door control module. Doors are numbered left to right, front to back. | | | |
| | 3991 | Door 2 Window Motor | J1939 | | | | The window motor in door 2. Doors are numbered left to right, front to back. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 3992 | Door 3 Control Module | J1939 | | | | The status of the third door control module. Doors are numbered left to right, front to back. | | | |
| | 3993 | Door 3 Window Motor | J1939 | | | | The window motor in door 3. Doors are numbered left to right, front to back. | | | |
| | 3994 | Door 4 Control Module | J1939 | | | | The status of the fourth door control module. Doors are numbered left to right, front to back. | | | |
| | 3995 | Door 4 Window Motor | J1939 | | | | The window motor in door 4. Doors are numbered left to right, front to back. | | | |
| | 3996 | Electrical Accessory Power | J1939 | | | | Electrical accessory power identifies that the ignition keyswitch is in the accessory state. | | | |
| | 3997 | Electrical Accessory Power Relay | J1939 | | | | The electrical accessory power relay energizes the vehicle's accessory bus (or portion thereof) | | | |
| | 3998 | Electrical Load Shed OFF | J1939 | | | | The electrical load shed OFF deactivates the system that saves power by selectively disabling the power supplied to individual devices or circuits of the vehicle during low battery charge. | | | |
| | 3999 | Electrical Load Shed ON | J1939 | | | | Electrical load shed ON activates the system that saves power by selectively disabling the power supplied to individual devices or circuits of the vehicle during low battery charge | | | |
| | 4000 | Engine Exhaust Brake Enable Switch | J1939 | | | | The exhaust brake enable switch permits or inhibits the engine exhaust brake function. | | | |
| | 4001 | Engine Exhaust Brake Enable Switch Indicator | J1939 | | | | The engine exhaust brake enable switch indicator signals the status of the engine exhaust brake enable switch | | | |
| | 4002 | Engine Remote Start | J1939 | | | | Engine remote start initiates an engine start from an alternate operator's station or sleeping berth. | | | |
| | 4003 | Engine Remote Stop | J1939 | | | | Engine remote stop stops the engine from an alternate operator's location or sleeping berth | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4004 | Exterior Lamp Check Switch | J1939 | | | | The exterior lamp check switch requests activation or deactivation of the exterior lamp check function. | | | |
| | 4005 | Fifth Wheel Lock Actuator | J1939 | | | | The fifth wheel lock actuator operates the fifth wheel lock that secures the king pin in the fifth wheel. | | | |
| | 4006 | Fifth Wheel Slider Lock Actuator | J1939 | | | | The fifth wheel slide latch solenoid clock actuator operates the latch that permits the fifth wheel to slide forward or aft of its current location. | | | |
| | 4007 | Fifth Wheel Slider Lock Switch | J1939 | | | | Fifth wheel slider lock switch provides operator input to the fifth wheel slider lock actuator. | | | |
| | 4008 | Fog Light 2 | J1939 | | | | Fog light 2 is second (or right) fog lamp mounted facing forward on the vehicle. | | | |
| | 4009 | Fuel Filter Fuel Heater Relay | J1939 | | | | The fuel filter fuel heater relay energizes the heating element in the fuel filter, which typically is self regulating when energized. | | | |
| | 4010 | Fuel Tank Transfer Pump | J1939 | | | | The fuel tank transfer pump transfers fuel from the secondary fuel tank to the primary fuel tank | | | |
| | 4011 | Headlamp 1 High Beam | J1939 | | | | The headlamp 1 high beam provides the high beam function of the left headlamp. | | | |
| | 4012 | Headlamp 2 High Beam | J1939 | | | | The headlamp 2 high beam provides the high beam function of the right headlamp. | | | |
| | 4013 | Headlight Interrupt Switch | J1939 | | | | The headlight interrupt switch signals that the head lights are to be turned off for a limited interval of time. This switch allows drivers to extinguish DRL or other headlight features, such as when in line at a weigh station. | | | |
| | 4014 | High Current Auxiliary Load Switch 1 | J1939 | | | | The high current auxiliary load switch 1 requests the operation of the first auxiliary high current load relay to power a high current auxiliary bus. | | | |
| | 4015 | High Current Auxiliary Load Switch 2 | J1939 | | | | The high current auxiliary load switch 2 requests the operation of the second auxiliary high current load relay to power a high current auxiliary bus. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4016 | High Current Auxiliary Power Relay 1 | J1939 | | | | The high current auxiliary relay 1 switches power to the first high current auxiliary bus. | | | |
| | 4017 | High Current Auxiliary Power Relay 2 | J1939 | | | | The high current auxiliary relay 2 switches power to the second high current auxiliary bus. | | | |
| | 4018 | Lift Axle Lower Actuator | J1939 | | | | The lift axle lower actuator unstows a lift axle and lowers it to the roadway. | | | |
| | 4019 | Lift Axle Lower Switch | J1939 | | | | The lift axle lower switch requests that a lift axle be unstowed and lowered to the roadway. | | | |
| | 4020 | Lift Axle Raise Actuator | J1939 | | | | The lift axle raise actuator raises and stows a lift axle from the roadway. | | | |
| | 4021 | Lift Axle Raise Switch | J1939 | | | | The lift axle raise switch requests that a lift axle be raised from the roadway and stowed. | | | |
| | 4022 | Lift Gate Power Control Enable | J1939 | | | | The lift gate power control enable permits operation of the lift gate through the lift gate power control switch. | | | |
| | 4023 | Lift Gate Power Control Switch | J1939 | | | | The lift gate power control switch requests that power is supplied to an electric lift gate motor attached to the vehicle's body. | | | |
| | 4024 | Marker Light Interrupt Switch | J1939 | | | | The marker light interrupt switch requests that the marker lights be toggled (turned off if on or turned on if off) | | | |
| | 4026 | Mirror 2 Heater | J1939 | | | | Mirror 2 heater defrosts the second rear view mirror | | | |
| | 4027 | Power Inverter Enable Switch | J1939 | | | | Switch used to enable or disable the vehicle AC bus | | | |
| | 4028 | Service Brake Circuit 1 Air Tank Drain Valve | J1939 | | | | The service brake circuit 1 air tank drain valve purges condensed moisture from the primary air tank when opened. | | | |
| | 4029 | Service Brake Circuit 1 Air Tank Drain Valve Switch | J1939 | | | | The service brake circuit 1 air tank drain valve switch allows the primary air tank drain valve to cycle and purge condensed moisture from the secondary air tank. | | | |
| | 4030 | Service Brake Circuit 2 Air Tank Drain Valve | J1939 | | | | The service brake circuit 2 air tank drain valve switch allows the secondary air tank drain valve to cycle and purge condensed moisture from the secondary air tank. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4031 | Service Brake Supply Air Tank Drain Valve | J1939 | | | | The service brake supply air tank drain valve actuator opens the valve that purges the supply air tank of collected condensation. | | | |
| | 4032 | Service Brake Supply Air Tank Drain Valve Switch | J1939 | | | | The service brake supply air tank drain valve switch operates the supply air tank drain valve to purge the air tank of collected condensation. | | | |
| | 4033 | Engine Remote Start/Stop Enable | J1939 | | | | Engine remote start/stop enable activates the engine's remote start/stop function from alternate equipment operating stations or sleeping berth of the vehicle. | | | |
| | 4034 | Snow Plow High Beam Light 1 | J1939 | | | | The snow plow high beam light 1 activates or de-activates the left headlamp high beam light mounted above a snow plow | | | |
| | 4035 | Snow Plow High Beam Light 2 | J1939 | | | | The snow plow high beam light 2 activates or de-activates the right headlamp high beam light mounted above a snow plow | | | |
| | 4036 | Snow Plow Low Beam Light 1 | J1939 | | | | The snow plow low beam light 1 provides the left headlamp mounted above a snow plow blade. | | | |
| | 4037 | Snow Plow Low Beam Light 2 | J1939 | | | | The snow plow low beam light 2 provides the right headlamp mounted above a snow plow blade. | | | |
| | 4038 | Snow Plow Forward Lighting Relay 2 | J1939 | | | | The snow plow forward lighting relay 2 switches the forward lights from the normal headlamps to the lamps mounted above the snow plow blade. The snow plow forward lighting relay 2 controls the right headlamp if lighting control is divided left from right. | | | |
| | 4039 | Snow Plow Forward Lighting Relay 1 | J1939 | | | | The snow plow forward lighting relay 1 switches the forward lights from the normal headlamps to the lamps mounted above the snow plow blade. The snow plow forward lighting relay 1 controls the left headlamp if lighting control is divided left from right. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4040 | Snow Plow Lighting Mode Switch | J1939 | | | | The snow plow lighting mode switch directs that the forward illumination switch to snow plow mode from normal mode. | | | |
| | 4041 | Software Loop Time Exceeded | J1939 | | | | Software loop time exceeded is reported should a device detect that the maximum loop execution time has been exceeded. | | | |
| | 4042 | Trailer Auxiliary Power Switch | J1939 | | | | The trailer auxiliary power switch controls the supply of power to the trailer's auxiliary power circuit. | | | |
| | 4043 | Transfer Case Front Driveline Actuator | J1939 | | | | The transfer case front driveline actuator engages the driveline output of a transfer case to provide power to the vehicle's front axle. | | | |
| | 4044 | Transfer Case High Range Actuator | J1939 | | | | The transfer case high range actuator engages the high range of the transfer case. | | | |
| | 4045 | Transfer Case Low Range Actuator | J1939 | | | | The transfer case low range actuator engages the low range of the transfer case. | | | |
| | 4046 | Transfer Case Neutral Actuator | J1939 | | | | The transfer case neutral actuator commands the transfer case to neutral. | | | |
| | 4047 | Transfer Case Output Shaft PTO Actuator | J1939 | | | | Actuator that engages the output shaft PTO drive of the transfer case. | | | |
| | 4048 | Transfer Case Range Switch | J1939 | | | | The transfer case range switch signals the operator's desire to operate in high range, low range or neutral (if available). | | | |
| | 4049 | Transfer Case Rear Driveline Actuator | J1939 | | | | Commands the driveline output of a transfer case to be engaged to provide power to the vehicle's rear axle(s). | | | |
| | 4050 | Transmission Secondary Mode Switch | J1939 | | | | The transmission secondary mode switch signals the transmission to operate in a secondary mode (e.g, the most fuel efficient manner possible) | | | |
| | 4051 | Transmission Input Shaft PTO 1 Actuator | J1939 | | | | Actuator which engages the PTO of the first transmission input shaft PTO drive mounted on the transmission. | | | |
| | 4052 | Transmission Input Shaft PTO 1 Retention Actuator | J1939 | | | | Actuator which locks the PTO of the first transmission input shaft PTO drive retention device in place. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4053 | Transmission Input Shaft PTO 2 Actuator | J1939 | | | | Actuator which engages the PTO of the second transmission input shaft PTO drive mounted on the transmission. | | | |
| | 4054 | Transmission Input Shaft PTO 2 Retention Actuator | J1939 | | | | Actuator which locks the PTO of the second transmission input shaft PTO drive retention device in place. | | | |
| | 4055 | Transmission Retarder Enable Switch | J1939 | | | | The transmission retarder enable switch indicates whether the operator allows the transmission to engage its integral retarder when indicated by vehicle operating conditions. | | | |
| | 4056 | Two Speed Axle Actuator | J1939 | | | | Identifies the status of the actuator for the two-speed axle | | | |
| | 4057 | Wiper Motor | J1939 | | | | Motor which operates the windshield wiper system | | | |
| | 4058 | Cab Dome Light 1 Switch | J1939 | | | | The cab dome light 1 switch controls the operation of the dome lights in the vehicle. | | | |
| | 4059 | Steer Axle Group Weight Available | J1939-71 | 64875 | 1.1 | 2 | Indicates the availability of the steer axle group for purposes of weight measurement | | | |
| | 4060 | Lift Axle Group Weight Available | J1939-71 | 64875 | 1.3 | 2 | Indicates the availability of the lift axle group for purposes of weight measurement | | | |
| | 4061 | Drive Axle Group Weight Available | J1939-71 | 64875 | 1.5 | 2 | Indicates the availability of the drive axle group for purposes of weight measurement | | | |
| | 4062 | Tag Axle Group Weight Available | J1939-71 | 64875 | 1.7 | 2 | Indicates the availability of the tag axle group for purposes of weight measurement | | | |
| | 4063 | Additional Tractor Axle Group Weight Available | J1939-71 | 64875 | 2.1 | 2 | Indicates the availability of the additional tractor axle group for purposes of weight measurement | | | |
| | 4064 | Trailer A Axle Group Weight Available | J1939-71 | 64875 | 2.3 | 2 | Indicates the availability of the trailer A axle group for purposes of weight measurement | | | |
| | 4065 | Trailer B Axle Group Weight Available | J1939-71 | 64875 | 2.5 | 2 | Indicates the availability of the trailer B axle group for purposes of weight measurement | | | |
| | 4066 | Trailer C Axle Group Weight Available | J1939-71 | 64875 | 2.7 | 2 | Indicates the availability of the trailer C axle group for purposes of weight measurement | | | |
| | 4067 | Trailer D Axle Group Weight Available | J1939-71 | 64875 | 3.1 | 2 | Indicates the availability of the trailer D axle group for purposes of weight measurement | | | |
| | 4068 | Trailer E Axle Group Weight Available | J1939-71 | 64875 | 3.3 | 2 | Indicates the availability of the trailer E axle group for purposes of weight measurement | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
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| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4069 | Trailer F Axle Group Weight Available | J1939-71 | 64875 | 3.5 | 2 | Indicates the availability of the trailer F axle group for purposes of weight measurement | | | |
| | 4070 | Trailer G Axle Group Weight Available | J1939-71 | 64875 | 3.7 | 2 | Indicates the availability of the trailer G axle group for purposes of weight measurement | | | |
| | 4071 | Trailer H Axle Group Weight Available | J1939-71 | 64875 | 4.1 | 2 | Indicates the availability of the trailer H axle group for purposes of weight measurement | | | |
| | 4072 | Additional Trailer Axle Group Weight Available | J1939-71 | 64875 | 4.3 | 2 | Indicates the availability of the additional trailer axle group for purposes of weight measurement | | | |
| | 4073 | Axle Group Location | J1939-71 | 64874 | 1.1 | 4 | Specific axle group used in conjunction with and when communicating the axle group weight | | | |
| | 4074 | Axle Group Location | J1939-71 | 64873 | 1.1 | 4 | Specific axle group used in conjunction with and when communicating the axle group calibration | | | |
| | 4075 | Zero Net Vehicle Weight Change | J1939-71 | 64871 | 1.1 | 2 | Zero Net Vehicle Weight Change command | | | |
| | 4076 | Engine coolant temperature 2 | J1939-71 | 64870 | 1 | 8 | Second temperature of liquid found in the engine cooling system. | | | |
| | 4077 | Aftertreatment 1 Fuel Pressure 2 | J1939-71 | 64869 | 1-2 | 16 | Second fuel pressure measurement for the aftertreatment 1 system | | | |
| | 4078 | Generator Alternator Efficiency | J1939-75 | 64915 | 2-3 | 16 | Measured, calculated, and/or estimated operating efficiency of the generator alternator. | | | |
| | 4079 | Generator Governing Speed Command | J1939-75 | 64915 | 4.1 | 2 | Command from user and/or generator control system for the genset (engine) to govern to low idle or rated base speed setpoints. | | | |
| | 4080 | Generator Frequency Selection | J1939-75 | 64915 | 4.3 | 4 | Command from user and/or generator control system for the genset (engine) to target operations for 50 Hz, 60 Hz, or 400 Hz. | | | |
| | 4081 | Oil Recovery Pump | J1939 | | | | Electronically actuated pump that recovers oil vapor condensation for the crankcase filter and returns it to the crankcase. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4082 | Fuel Pump Primer Control | J1939-71 | 64914 | 1.5 | 2 | Parameter used to activate or deactivate a priming system on the fuel transfer system. The fuel priming system is a system that purges air in the fuel lines and may assist fuel delivery to a second pump at lower speeds. | | | |
| | 4083 | Fuel Pump Primer Status | J1939-71 | 65130 | 7.4 | 2 | Parameter used to transmit the actual status of the fuel priming system. The fuel priming system is a system that purges air in the fuel lines and may assist fuel delivery to a second pump at lower speeds. | | | |
| | 4084 | General Purpose Valve Spool | J1939 | | | | The internal hydraulic spool associated with a general purpose valve. Flow from a general purpose valve is determined by the movement of an internal spool. | | | |
| | 4085 | General Purpose Valve | J1939 | | | | A hydraulic valve, such as used on an implement control system, that offers flows of extend, retract, neutral, and float. | | | |
| | 4086 | Valve Load Sense Pressure | J1939-71 | 1792 | 1-2 | 16 | The maximum of the currently measured pressures of a valve's work port A and work port B. | | | |
| | 4087 | Valve Pilot Pressure | J1939-71 | 1792 | 3 | 8 | Pressure of a valve's pilot supply port. | | | |
| | 4088 | Valve Assembly Load sense Pressure | J1939-71 | 1792 | 4-5 | 16 | The maximum pressure of a valve assembly's current collective load sense pressures where a valve assembly can consist of two or more valves. | | | |
| | 4089 | Valve Assembly Supply Pressure | J1939-71 | 1792 | 6-7 | 16 | Pressure of the hydraulic supply port to a valve assembly. | | | |
| | 4090 | NOx limits exceeded, root cause unknown | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded, but the root cause cannot be determined by the OBD system. | | | |
| | 4091 | NOx limits exceeded due to Deactivation of EGR | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded due to deactivation of EGR. | | | |

| J1939 Reference | | | | | | | | J1587 Reference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rev | SPN | SPN Name | SPN Doc | PGN Number | Pos in PG | Bit Size | SPN Description | PID | MID | SID |
| | 4092 | NOx limits exceeded due to Incorrect EGR flow | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded due to incorrect EGR flow. | | | |
| | 4093 | NOx limits exceeded due to Low Reagent Consumption | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded due to low reagent consumption. | | | |
| | 4094 | NOx limits exceeded due to Insufficient Reagent Quality | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded due to an insufficient reagent quality. | | | |
| | 4095 | NOx limits exceeded due to Interrupted Reagent Dosing | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded due to an Interruption in reagent dosing activity. | | | |
| | 4096 | NOx limits exceeded due to Empty Reagent Tank | J1939 | | | | Indicates that On-Board Diagnostics has determined that the limits for NOx in the exhaust stream have been exceeded due to the reagent tank being empty. | | | |
| | 4097 | Aftertreatment 1 Fuel Drain Actuator | J1939-71 | 64929 | 7.1 | 2 | Indicates whether aftertreatment 1 fuel drain actuator is on or off | | | |
| | 4098 | Aftertreatment 2 Fuel Drain Actuator | J1939-71 | 64928 | 7.1 | 2 | Indicates whether aftertreatment 2 fuel drain actuator is on or off | | | |
| | 4099 | XBR urgency | J1939-71 | 1024 | 4 | 8 | The idea of the urgency value is to adjust the endurance brake integration behavior in the EBS system according to the traffic situation. | | | |
| | 520192 | Manufacturer Assignable SPN (first entry) | J1939-73 | | | 19 | | | | |
| | 524287 | Manufacturer Assignable SPN (last entry) | J1939-73 | | | 19 | | | | |

Note: While most SPNs can only be found in at most one PGN, there are exceptions. SPNs marked with a superscript 1 ([1]) (for example, SPN 2419) are used in multiple PGNs.