

# Suspect Parameter Numbers (SPN) Codes on J1939 data link

The Suspect Parameter Number (SPN) is diagnostic fault code terminology found on some of our equipment using a J1939 CAN data link.

The Society of Automotive Engineers (SAE) developed the J1939 standards and SPN code terms have been assigned for specific parameters (component or system circuits) that diagnostic trouble codes (DTC) are associated with.

| <b>SPN Code</b> | <b>Description</b>                                      |
|-----------------|---------------------------------------------------------|
| 16              | Engine Fuel Filter (suction side) Differential Pressure |
| 18              | Engine Extended Range Fuel Pressure                     |
| 19              | Engine Extended Range Engine Oil Pressure               |
| 20              | Engine Extended Range Engine Coolant Pressure           |
| 21              | Engine ECU Temperature                                  |
| 22              | Engine Extended Crankcase Blow-by Pressure              |
| 23              | Generator Oil Pressure                                  |
| 24              | Generator Coolant Temperature                           |
| 27              | EGR #1 Valve Position                                   |
| 28              | Accelerator Pedal Position #3                           |
| 29              | Accelerator Pedal Position #2                           |
| 30              | Engine Crankcase Blowby Pressure                        |
| 31              | Transmission Range Position                             |
| 32              | Transmission Splitter Position                          |
| 33              | Clutch Cylinder Position                                |
| 36              | Clutch Plates                                           |
| 37              | Transmission Air Tank Pressure                          |
| 38              | Second Fuel Level                                       |

|    |                                         |
|----|-----------------------------------------|
| 39 | Tire Pressure Check Interval            |
| 46 | Pneumatic Supply Pressure               |
| 48 | Extended Range Barometric Pressure      |
| 51 | Engine Throttle Position                |
| 52 | Engine Intercooler Temperature          |
| 53 | Transmission Synchronizer Clutch Value  |
| 54 | Transmission Synchronizer Brake Value   |
| 59 | Transmission Shift Finger Gear Position |
| 60 | Transmission Shift Finger Rail Position |
| 64 | Transmission #2 Oil Temperature         |
| 69 | Two Speed Axle Switch                   |
| 70 | Parking Brake Switch                    |
| 72 | Engine Blower Bypass Valve Position     |
| 73 | Auxiliary Pump Pressure                 |
| 74 | Maximum Vehicle Speed Limit             |
| 75 | Steering Axle Temperature               |
| 76 | Axle Lift Air Pressure                  |
| 77 | Forward Rear Drive Axle Temperature     |
| 78 | Rear Rear Drive Axle Temperature        |
| 79 | Road Surface Temperature                |
| 80 | Washer Fluid Level                      |
| 81 | Engine Particulate Trap Inlet Pressure  |
| 82 | Engine Air Start Pressure               |
| 84 | Wheel-Based Vehicle Speed               |
|    |                                         |

|     |                                           |
|-----|-------------------------------------------|
| 86  | Cruise Control Set Speed                  |
| 87  | Cruise Control High Set Limit Speed       |
| 88  | Cruise Control Low Set Limit Speed        |
| 90  | Power Takeoff Oil Temperature             |
| 91  | Accelerator Pedal Position #1             |
| 92  | Engine Percent Load At Current Speed      |
| 93  | Engine Net Brake Torque                   |
| 94  | Engine Fuel Delivery Pressure             |
| 95  | Engine Fuel Filter Differential Pressure  |
| 96  | Fuel Level                                |
| 97  | Water In Fuel Indicator                   |
| 98  | Engine Oil Level                          |
| 99  | Engine Oil Filter Differential Pressure   |
| 100 | Engine Oil Pressure                       |
| 101 | Engine Crankcase Pressure                 |
| 102 | Engine Intake Manifold #1 Pressure        |
| 103 | Engine Turbocharger 1 Speed               |
| 104 | Engine Turbocharger Lube Oil Pressure 1   |
| 105 | Engine Intake Manifold #1 Temperature     |
| 106 | Engine Air Inlet Pressure                 |
| 107 | Engine Air Filter 1 Differential Pressure |
| 108 | Barometric Pressure                       |
| 109 | Engine Coolant Pressure                   |
| 110 | Engine Coolant Temperature                |
|     |                                           |

|     |                                                   |
|-----|---------------------------------------------------|
| 111 | Engine Coolant Level                              |
| 112 | Engine Coolant Filter Differential Pressure       |
| 113 | Engine Governor Droop                             |
| 114 | Net Battery Current                               |
| 115 | Alternator Current                                |
| 116 | Brake Application Pressure                        |
| 117 | Brake Primary Pressure                            |
| 118 | Brake Secondary Pressure                          |
| 119 | Hydraulic Retarder Pressure                       |
| 120 | Hydraulic Retarder Oil Temperature                |
| 122 | Engine Retarder Percent                           |
| 123 | Clutch Pressure                                   |
| 124 | Transmission Oil Level                            |
| 126 | Transmission Filter Differential Pressure         |
| 127 | Transmission Oil Pressure                         |
| 129 | Engine Injector Metering Rail #2 Pressure         |
| 130 | Engine Power Specific Fuel Economy                |
| 131 | Engine Exhaust Back Pressure                      |
| 132 | Engine Inlet Air Mass Flow Rate                   |
| 133 | Engine Average Fuel Rate                          |
| 135 | Engine Fuel Delivery Pressure                     |
| 136 | Auxiliary Vacuum Pressure Reading                 |
| 137 | Auxiliary Gage Pressure Reading 1                 |
| 138 | Auxiliary Absolute Pressure Reading               |
| 141 | Trailer, Tag Or Push Channel Tire Pressure Target |

|     |                                            |
|-----|--------------------------------------------|
| 142 | Drive Channel Tire Pressure Target         |
| 143 | Steer Channel Tire Pressure Target         |
| 144 | Trailer, Tag Or Push Channel Tire Pressure |
| 145 | Drive Channel Tire Pressure                |
| 146 | Steer Channel Tire Pressure                |
| 147 | Engine Average Fuel Economy                |
| 148 | Engine Instantaneous Fuel Economy          |
| 149 | Engine Mass Flow Rate                      |
| 152 | Number Of ECU Resets                       |
| 153 | Engine High Resolution Crankcase Pressure  |
| 156 | Engine Injector Timing Rail 1 Pressure     |
| 157 | Engine Injector Metering Rail #1 Pressure  |
| 158 | Keyswitch Battery Potential                |
| 159 | Engine Gas Supply Pressure                 |
| 160 | Main Shaft Speed                           |
| 161 | Transmission Input Shaft Speed             |
| 162 | Transmission Requested Range               |
| 163 | Transmission Current Range                 |
| 164 | Engine Injection Control Pressure          |
| 165 | Compass Bearing                            |
| 166 | Engine Rated Power                         |
| 167 | Charging System Potential                  |
| 168 | Battery Potential / Power Input #1         |
| 169 | Cargo Ambient Temperature                  |

|     |                                     |
|-----|-------------------------------------|
| 170 | Cab Interior Temperature            |
| 171 | Ambient Air Temperature             |
| 172 | Engine Air Inlet Temperature        |
| 173 | Engine Exhaust Gas Temperature      |
| 174 | Engine Fuel Temperature 1           |
| 175 | Engine Oil Temperature 1            |
| 176 | Engine Turbocharger Oil Temperature |
| 177 | Transmission Oil Temperature        |
| 178 | Front Axle Weight                   |
| 179 | Rear Axle Weight                    |
| 180 | Trailer Weight                      |
| 181 | Cargo Weight                        |
| 182 | Engine Trip Fuel                    |
| 183 | Engine Fuel Rate                    |
| 184 | Engine Instantaneous Fuel Economy   |
| 185 | Engine Average Fuel Economy         |
| 186 | Power Takeoff Speed                 |
| 187 | Power Takeoff Set Speed             |
| 188 | Engine Speed At Idle, Point 1       |
| 189 | Engine Rated Speed                  |
| 190 | Engine Speed                        |
| 191 | Transmission Output Shaft Speed     |
| 228 | Speed Sensor Calibration            |
| 229 | Total Fuel Used (Gaseous)           |
| 230 | Total Idle Fuel Used (Gaseous)      |

|     |                                         |
|-----|-----------------------------------------|
| 231 | Trip Fuel (Gaseous)                     |
| 232 | DGPS Differential Correction            |
| 233 | Unit Number                             |
| 234 | Software Identification                 |
| 235 | Engine Total Idle Hours                 |
| 236 | Engine Total Idle Fuel Used             |
| 237 | Vehicle Identification Number           |
| 238 | Velocity Vector                         |
| 241 | Tire Pressure                           |
| 242 | Tire Temperature                        |
| 244 | Trip Distance                           |
| 245 | Total Vehicle Distance                  |
| 246 | Total Vehicle Hours                     |
| 247 | Engine Total Hours of Operation         |
| 248 | Total Power Takeoff Hours               |
| 249 | Engine Total Revolutions                |
| 250 | Engine Total Fuel Used                  |
| 251 | Time                                    |
| 252 | Date                                    |
| 257 | Cold Restart Of Specific Component      |
| 258 | Warm Restart Of Specific Component      |
| 259 | Acknowledgement Of Warm Or Cold Restart |
| 354 | Relative Humidity                       |
| 355 | Engine Oil Life                         |
| 378 | Fare Collection Unit Status             |

|     |                                                        |
|-----|--------------------------------------------------------|
| 380 | Articulation Angle                                     |
| 383 | Vehicle Acceleration                                   |
| 411 | Engine Exhaust Gas Recirculation Differential Pressure |
| 412 | Engine Exhaust Gas Recirculation Temperature           |
| 430 | Engine Starter Solenoid Voltage                        |
| 441 | Auxiliary Temperature #1                               |
| 442 | Auxiliary Temperature #2                               |
| 443 | Auxiliary Gage Pressure Reading 2                      |
| 444 | Battery Potential / Power Input #2                     |
| 445 | Engine Cylinder Head Temperature Bank B                |
| 446 | Engine Cylinder Head Temperature Bank A                |
| 447 | Passenger Counter                                      |
| 501 | Signage Message                                        |
| 502 | Fare Collection Unit – Point Of Sale                   |
| 503 | Fare Collection Unit – Service Detail                  |
| 504 | Annunciator Voice Message                              |
| 505 | Vehicle Control Head Keyboard Message                  |
| 506 | Vehicle Control Head Display Message                   |
| 507 | Driver Identification                                  |
| 508 | Transit Route Identification                           |
| 509 | Milepost Identification                                |
| 512 | Driver's Demand Engine – Percent Torque                |
| 513 | Actual Engine – Percent Torque                         |
| 514 | Nominal Friction – Percent Torque                      |



|     |                                                       |
|-----|-------------------------------------------------------|
| 515 | Engine's Desired Operating Speed                      |
| 516 | Ground-Based Vehicle Speed                            |
| 517 | Navigation-Based Vehicle Speed                        |
| 518 | Engine Requested Torque/Torque Limit                  |
| 519 | Engine's Desired Operating Speed Asymmetry Adjustment |
| 520 | Actual Retarder – Percent Torque                      |
| 521 | Brake Pedal Position                                  |
| 522 | Percent Clutch Slip                                   |
| 523 | Transmission Current Gear                             |
| 524 | Transmission Selected Gear                            |
| 525 | Transmission Requested Gear                           |
| 526 | Transmission Actual Gear Ratio                        |
| 527 | Cruise Control States                                 |
| 528 | Engine Speed at Point 2                               |
| 529 | Engine Speed at Point 3                               |
| 530 | Engine Speed at Point 4                               |
| 531 | Engine Speed at Point 5                               |
| 532 | Engine Speed At High Idle, Point 6                    |
| 533 | Engine Maximum Momentary Override Speed, Point 7      |
| 534 | Engine Maximum Momentary Override Time Limit          |
| 535 | Engine Requested Speed Control Range Lower Limit      |
| 536 | Engine Requested Speed Control Range Upper Limit      |
| 537 | 'Engine Requested Torque Control Range Lower Limit    |
| 538 | Engine Requested Torque Control Range Upper Limit     |
|     |                                                       |

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|-----|-------------------------------------------|
| 539 | Engine Percent Torque At Idle, Point 1    |
| 540 | Engine Percent Torque at Point 2          |
| 541 | Engine Percent Torque at Point 3          |
| 542 | Engine Percent Torque at Point 4          |
| 543 | Engine Percent Torque at Point 5          |
| 544 | Engine Reference Torque                   |
| 545 | Engine Gain (Kp) Of The Endspeed Governor |
| 546 | Retarder Speed At Idle, Point 1           |
| 547 | Retarder Speed At Peak Torque, Point 5    |
| 548 | Maximum Retarder Speed, Point 2           |
| 549 | Retarder Speed at Point 3                 |
| 550 | Retarder Speed at Point 4                 |
| 551 | Percent Torque At Idle, Point 1           |
| 552 | Percent Torque At Maximum Speed, Point 2  |
| 553 | Percent Torque at Point 3                 |
| 554 | Percent Torque at Point 4                 |
| 555 | Percent Torque At Peak Torque, Point 5    |
| 556 | Reference Retarder Torque                 |
| 557 | Retarder Control Method                   |
| 558 | Accelerator Pedal #1 Low Idle Switch      |
| 559 | Accelerator Pedal Kickdown Switch         |
| 560 | Transmission Driveline Engaged            |
| 561 | TCS/ASR Engine Control Active             |
| 562 | TCS/ASR Brake Control Active              |
| 563 | Anti-Lock Braking (ABS) Active            |

|     |                                         |
|-----|-----------------------------------------|
| 564 | Differential Lock State – Central       |
| 565 | Differential Lock State – Central Front |
| 566 | Differential Lock State – Central Rear  |
| 567 | Differential Lock State – Front Axle 1  |
| 568 | Differential Lock State – Front Axle 2  |
| 569 | Differential Lock State – Rear Axle 1   |
| 570 | Differential Lock State – Rear Axle 2   |
| 571 | Retarder Enable – Brake Assist Switch   |
| 572 | Retarder Enable – Shift Assist Switch   |
| 573 | Torque Converter Lockup Engaged         |
| 574 | Transmission Shift In Process           |
| 575 | ABS Off-road Switch                     |
| 576 | ASR Off-road Switch                     |
| 577 | ASR “Hill Holder” Switch                |
| 578 | Drive Axle Temperature                  |
| 579 | Drive Axle Lift Air Pressure            |
| 580 | Altitude                                |
| 581 | Transmission Gear Ratio                 |
| 582 | Axle Weight                             |
| 583 | Pitch                                   |
| 584 | Latitude                                |
| 585 | Longitude                               |
| 586 | Make                                    |
| 587 | Model                                   |
| 588 | Serial Number                           |

|     |                                          |
|-----|------------------------------------------|
| 589 | Alternator Speed                         |
| 590 | Engine Idle Shutdown Timer State         |
| 591 | Engine Idle Shutdown Timer Function      |
| 592 | Engine Idle Shutdown Timer Override      |
| 593 | Engine Idle Shutdown has Shutdown Engine |
| 594 | Engine Idle Shutdown Driver Alert Mode   |
| 595 | Cruise Control Active                    |
| 596 | Cruise Control Enable Switch             |
| 597 | Brake Switch                             |
| 598 | Clutch Switch                            |
| 599 | Cruise Control Set Switch                |
| 600 | Cruise Control Coast (Decelerate) Switch |
| 601 | Cruise Control Resume Switch             |
| 602 | Cruise Control Accelerate Switch         |
| 603 | Brake Pedal Switch #2                    |
| 604 | Transmission Neutral Switch              |
| 605 | Refrigerant High Pressure Switch         |
| 606 | Engine Momentary Overspeed Enable        |
| 607 | Progressive Shift Disable                |
| 608 | J1587 (previously SAE J1708)             |
| 609 | Controller #2                            |
| 610 | Power Connect Device                     |
| 611 | System Diagnostic Code #1                |
| 612 | System Diagnostic Code #2                |
|     |                                          |

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|-----|----------------------------------------|
| 613 | System Diagnostic Code #3              |
| 614 | System Diagnostic Code #4              |
| 615 | System Diagnostic Code #5              |
| 616 | Auxiliary Analog Input #1              |
| 617 | Parking Brake On Actuator              |
| 618 | Parking Brake Off Actuator             |
| 619 | Parking Brake Actuator                 |
| 620 | 5 Volts DC Supply                      |
| 621 | Antenna Electronics                    |
| 622 | J1922                                  |
| 623 | Red Stop Lamp                          |
| 624 | Amber Warning Lamp                     |
| 625 | Proprietary Data Link                  |
| 626 | Engine Start Enable Device 1           |
| 627 | Power Supply                           |
| 628 | Program Memory                         |
| 629 | Controller #1                          |
| 630 | Calibration Memory                     |
| 631 | Calibration Module                     |
| 632 | Engine Fuel Shutoff Valve #1           |
| 633 | Engine Fuel Actuator 1 Control Command |
| 634 | Engine Throttle Bypass Valve           |
| 635 | Engine Timing Actuator #1              |
| 636 | Engine Position Sensor                 |
| 637 | Engine Timing Sensor                   |

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|-----|--------------------------------------------------------|
| 638 | Engine Fuel Rack Actuator                              |
| 639 | J1939 Network #1                                       |
| 640 | Engine External Protection Input                       |
| 641 | Engine Turbocharger Variable Geometry Actuator #1      |
| 642 | Engine Turbocharger Variable Geometry Actuator #2      |
| 643 | Engine External Fuel Command Input                     |
| 644 | Engine External Speed Command Input                    |
| 645 | Engine Tachometer Signal Output                        |
| 646 | Engine Turbocharger 1 Wastegate Drive                  |
| 647 | Engine Fan Clutch Output Device Driver                 |
| 648 | Engine Exhaust Back Pressure Sensor                    |
| 649 | Engine Exhaust Back Pressure Regulator Control Command |
| 650 | Electronic Drive Unit Power Relay                      |
| 651 | Engine Injector Cylinder #01                           |
| 652 | Engine Injector Cylinder #02                           |
| 653 | Engine Injector Cylinder #03                           |
| 654 | Engine Injector Cylinder #04                           |
| 655 | Engine Injector Cylinder #05                           |
| 656 | Engine Injector Cylinder #06                           |
| 657 | Engine Injector Cylinder #07                           |
| 658 | Engine Injector Cylinder #08                           |
| 659 | Engine Injector Cylinder #09                           |
| 660 | Engine Injector Cylinder #10                           |
| 661 | Engine Injector Cylinder #11                           |
| 662 | Engine Injector Cylinder #12                           |

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|-----|----------------------------------------------------|
| 663 | Engine Injector Cylinder #13                       |
| 664 | Engine Injector Cylinder #14                       |
| 665 | Engine Injector Cylinder #15                       |
| 666 | Engine Injector Cylinder #16                       |
| 667 | Engine Injector Cylinder #17                       |
| 668 | Engine Injector Cylinder #18                       |
| 669 | Engine Injector Cylinder #19                       |
| 670 | Engine Injector Cylinder #20                       |
| 671 | Engine Injector Cylinder #21                       |
| 672 | Engine Injector Cylinder #22                       |
| 673 | Engine Injector Cylinder #23                       |
| 674 | Engine Injector Cylinder #24                       |
| 675 | Engine Glow Plug Lamp                              |
| 676 | Engine Glow Plug Relay                             |
| 677 | Engine Starter Motor Relay                         |
| 678 | ECU 8 Volts DC Supply                              |
| 679 | Engine Injection Control Pressure Regulator        |
| 680 | Engine Valve Variable Swirl System                 |
| 681 | Transmission Gear Shift Inhibit Request            |
| 682 | Torque Converter Lockup Disable Request            |
| 683 | Disengage Driveline Request                        |
| 684 | Requested Percent Clutch Slip                      |
| 685 | Disengage Differential Lock Request – Front Axle 1 |
| 686 | Disengage Differential Lock Request – Front Axle 2 |
|     |                                                    |

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|-----|-----------------------------------------------------|
| 687 | Disengage Differential Lock Request – Rear Axle 1   |
| 688 | Disengage Differential Lock Request – Rear Axle 2   |
| 689 | Disengage Differential Lock Request – Central       |
| 690 | Disengage Differential Lock Request – Central Front |
| 691 | Disengage Differential Lock Request – Central Rear  |
| 692 | ABS Offroad Switch Request                          |
| 693 | ASR Offroad Switch Request                          |
| 694 | ASR “Hill Holder” Switch Request                    |
| 695 | Engine Override Control Mode                        |
| 696 | Engine Requested Speed Control Conditions           |
| 697 | Auxiliary PWM Driver #1                             |
| 698 | Auxiliary PWM Driver #2                             |
| 699 | Auxiliary PWM Driver #3                             |
| 700 | Auxiliary PWM Driver #4                             |
| 701 | Auxiliary I/O #01                                   |
| 702 | Auxiliary I/O #02                                   |
| 703 | Auxiliary I/O #03                                   |
| 704 | Auxiliary I/O #04                                   |
| 705 | Auxiliary I/O #05                                   |
| 706 | Auxiliary I/O #06                                   |
| 707 | Auxiliary I/O #07                                   |
| 708 | Auxiliary I/O #08                                   |
| 709 | Auxiliary I/O #09                                   |
| 710 | Auxiliary I/O #10                                   |
| 711 | Auxiliary I/O #11                                   |



|     |                                                    |
|-----|----------------------------------------------------|
| 712 | Auxiliary I/O #12                                  |
| 713 | Auxiliary I/O #13                                  |
| 714 | Auxiliary I/O #14                                  |
| 715 | Auxiliary I/O #15                                  |
| 716 | Auxiliary I/O #16                                  |
| 717 | Autoshift High Gear Actuator                       |
| 718 | Autoshift Low Gear Actuator                        |
| 719 | Autoshift Neutral Actuator                         |
| 720 | Autoshift Common Low Side                          |
| 721 | Prestroke Sensor                                   |
| 722 | Prestroke Actuator                                 |
| 723 | Engine Speed Sensor #2                             |
| 724 | Engine Oxygen Sensor Heated                        |
| 725 | Engine Ignition Control Mode Signal                |
| 726 | Engine Ignition Control Timing Signal              |
| 727 | Engine Turbocharger Secondary Inlet Pressure       |
| 728 | Engine After Cooler-Oil Cooler Coolant Temperature |
| 729 | Engine Inlet Air Heater Driver #1                  |
| 730 | Engine Inlet Air Heater Driver #2                  |
| 731 | Engine Knock Sensor                                |
| 732 | Engine Gas Metering Valve                          |
| 733 | Engine Rack Position Sensor                        |
| 734 | Transmission Range Clutch C1 Solenoid              |
| 735 | Transmission Range Clutch C2 Solenoid              |
| 736 | Transmission Range Clutch C3 Solenoid              |

|     |                                                 |
|-----|-------------------------------------------------|
| 737 | Transmission Range Clutch C4 Solenoid           |
| 738 | Transmission Range Clutch C5 Solenoid           |
| 739 | Transmission Range Clutch C6 Solenoid           |
| 740 | Transmission Lockup Clutch Actuator             |
| 741 | Transmission Forward Solenoid Valve             |
| 742 | Transmission Low Signal Solenoid Valve          |
| 743 | Retarder Enable Solenoid Valve                  |
| 744 | Retarder Modulation Solenoid Valve              |
| 745 | Retarder Response Solenoid Valve                |
| 746 | Differential Lock Solenoid Valve #1             |
| 747 | Engine/Transmission Match                       |
| 748 | Transmission Output Retarder                    |
| 749 | Transmission Neutral Start Output               |
| 750 | Transmission Turbine Speed Sensor               |
| 751 | Transmission Primary Shift Selector             |
| 752 | Transmission Secondary Shift Selector           |
| 753 | Transmission Special Function Inputs            |
| 754 | Transmission Range C1 Clutch Pressure Indicator |
| 755 | Transmission Range C2 Clutch Pressure Indicator |
| 756 | Transmission Range C3 Clutch Pressure Indicator |
| 757 | Transmission Range C4 Clutch Pressure Indicator |
| 758 | Transmission Range C5 Clutch Pressure Indicator |
| 759 | Transmission Range C6 Clutch Pressure Indicator |
| 760 | Transmission Lockup Clutch Pressure Indicator   |
|     |                                                 |

|     |                                                 |
|-----|-------------------------------------------------|
| 761 | Transmission Forward Range Pressure Indicator   |
| 762 | Transmission Neutral Range Pressure Indicator   |
| 763 | Transmission Reverse Range Pressure Indicator   |
| 764 | Retarder Response System Pressure Indicator     |
| 765 | Differential Lock Clutch Pressure Indicator     |
| 766 | Transmission Multiple Pressure Indicators       |
| 767 | Transmission Reverse Direction Switch           |
| 768 | Transmission Range High Actuator                |
| 769 | Transmission Range Low Actuator                 |
| 770 | Transmission Splitter Direct Actuator           |
| 771 | Transmission Splitter Indirect Actuator         |
| 772 | Transmission Shift Finger Rail Actuator 1       |
| 773 | Transmission Shift Finger Gear Actuator 1       |
| 774 | Transmission Upshift Request Switch             |
| 775 | Transmission Downshift Request Switch           |
| 776 | Torque Converter Interrupt Actuator             |
| 777 | Torque Converter Lockup Actuator                |
| 778 | Transmission High Range Sense Switch            |
| 779 | Transmission Low Range Sense Switch             |
| 780 | Transmission Shift Finger Neutral Indicator     |
| 781 | Transmission Shift Finger Engagement Indicator  |
| 782 | Transmission Shift Finger Center Rail Indicator |
| 783 | Transmission Shift Finger Rail Actuator 2       |
| 784 | Transmission Shift Finger Gear Actuator 2       |
| 785 | Transmission Hydraulic System                   |

|     |                                            |
|-----|--------------------------------------------|
| 786 | Transmission Defuel Actuator               |
| 787 | Transmission Inertia Brake Actuator        |
| 788 | Transmission Clutch Actuator               |
| 789 | Wheel Sensor ABS Axle 1 Left               |
| 790 | Wheel Sensor ABS Axle 1 Right              |
| 791 | Wheel Sensor ABS Axle 2 Left               |
| 792 | Wheel Sensor ABS Axle 2 Right              |
| 793 | Wheel Sensor ABS Axle 3 Left               |
| 794 | Wheel Sensor ABS Axle 3 Right              |
| 795 | Pressure Modulation Valve ABS Axle 1 Left  |
| 796 | Pressure Modulation Valve ABS Axle 1 Right |
| 797 | Pressure Modulation Valve ABS Axle 2 Left  |
| 798 | Pressure Modulation Valve ABS Axle 2 Right |
| 799 | Pressure Modulation Valve ABS Axle 3 Left  |
| 800 | Pressure Modulation Valve ABS Axle 3 Right |
| 801 | Retarder Control Relay                     |
| 802 | Relay Diagonal 1                           |
| 803 | Relay Diagonal 2                           |
| 804 | Mode Switch ABS                            |
| 805 | Mode Switch ASR                            |
| 806 | Dif 1 – ASR Valve                          |
| 807 | Dif 2 – ASR Valve                          |
| 808 | Pneumatic Engine Control                   |
| 809 | Electronic Engine Control                  |
| 810 | Speed Signal Input                         |

|     |                                                         |
|-----|---------------------------------------------------------|
| 811 | Warning Light Bulb                                      |
| 812 | ASR Light Bulb                                          |
| 813 | Wheel Sensor ABS Axle 1 Average                         |
| 814 | Wheel Sensor ABS Axle 2 Average                         |
| 815 | Wheel Sensor ABS Axle 3 Average                         |
| 816 | Pressure Modulator, Drive Axle Relay Valve              |
| 817 | Pressure Transducer, Drive Axle Relay Valve             |
| 818 | Master Control Relay                                    |
| 819 | Trailer Brake Slack Out Of Adjustment Forward Axle Left |
| 820 | Trailer Brake Slack Out Of Adjustment Forward Axle Left |
| 821 | Trailer Brake Slack Out Of Adjustment Rear Axle Left    |
| 822 | Trailer Brake Slack Out Of Adjustment Rear Axle Right   |
| 823 | Tractor Brake Slack Out Of Adjustment Axle 1 Left       |
| 824 | Tractor Brake Slack Out Of Adjustment Axle 1 Right      |
| 825 | Tractor Brake Slack Out Of Adjustment Axle 2 Left       |
| 826 | Tractor Brake Slack Out Of Adjustment Axle 2 Right      |
| 827 | Tractor Brake Slack Out Of Adjustment Axle 3 Left       |
| 828 | Tractor Brake Slack Out Of Adjustment Axle 3 Right      |
| 829 | Left Fuel Level Sensor                                  |
| 830 | Right Fuel Level Sensor                                 |
| 831 | Engine Fuel Feed Rate Sensor                            |
| 832 | Engine Fuel Return Rate Sensor                          |
| 833 | Fuel Rack Position Sensor                               |
| 834 | Fuel Rack Actuator                                      |
|     |                                                         |

|     |                                          |
|-----|------------------------------------------|
| 835 | Oil Level Indicator Output               |
| 836 | Tachometer Drive Output                  |
| 837 | Speedometer Drive Output                 |
| 838 | PWM Input                                |
| 839 | Dead Reckoning Unit                      |
| 840 | Loran Receiver                           |
| 841 | Global Positioning System                |
| 842 | Integrated Navigation Unit               |
| 843 | Operator Control Panel                   |
| 844 | Pneumatic Control Unit                   |
| 845 | PCU Steer Solenoid                       |
| 846 | PCU Drive Solenoid                       |
| 847 | PCU Trailer, Tag, Or Push Solenoid       |
| 848 | PCU Supply Solenoid                      |
| 849 | PCU Control Solenoid                     |
| 850 | PCU Deflate Solenoid                     |
| 851 | Pneumatic – Steer Channel                |
| 852 | Pneumatic – Drive Channel                |
| 853 | Pneumatic – Trailer, Tag Or Push Channel |
| 854 | Heater Circuit #01                       |
| 855 | Heater Circuit #02                       |
| 856 | Heater Circuit #03                       |
| 857 | Heater Circuit #04                       |
| 858 | Heater Circuit #05                       |
| 859 | Heater Circuit #06                       |

|     |                                                     |
|-----|-----------------------------------------------------|
| 860 | Heater Circuit #07                                  |
| 861 | Heater Circuit #08                                  |
| 862 | Heater Circuit #09                                  |
| 863 | Heater Circuit #10                                  |
| 864 | Heater Circuit #11                                  |
| 865 | Heater Circuit #12                                  |
| 866 | Heater Circuit #13                                  |
| 867 | Heater Circuit #14                                  |
| 868 | Heater Circuit #15                                  |
| 869 | Heater Circuit #16                                  |
| 870 | Heater Regeneration System                          |
| 871 | Refrigerant Charge                                  |
| 872 | Refrigerant Moisture Level                          |
| 873 | Non-Condensable Gas In Refrigerant                  |
| 874 | Refrigerant Flow Control Solenoid                   |
| 875 | Refrigerant Low Pressure Switch                     |
| 876 | Compressor Clutch Circuit                           |
| 877 | Evaporator Thermostat Circuit                       |
| 878 | Clearance, Side Marker, Identification Lamp Circuit |
| 879 | Left Turn Lamp Circuit                              |
| 880 | Stop Lamp Circuit                                   |
| 881 | Right Turn Lamp Circuit                             |
| 882 | Tail Lamp/License Plate Lamp Circuit                |
| 883 | Auxiliary Lamp Circuit                              |
| 884 | Tractor Mounted Rear Axle Slider Control Unit       |

|     |                                               |
|-----|-----------------------------------------------|
| 885 | Trailer Mounted Rear Axle Slider Control Unit |
| 886 | Headway Controller Forward Antenna            |
| 887 | Headway Controller Brake Input Monitor        |
| 888 | Headway Controller Speaker Monitor            |
| 889 | Headway Controller Steering Sensor Monitor    |
| 890 | Headway Controller Speedometer Monitor        |
| 891 | Headway Controller Right Turn Signal Monitor  |
| 892 | Headway Controller Left Turn Signal Monitor   |
| 893 | Headway Controller Control Display Unit       |
| 894 | Headway Controller Right Side Sensor          |
| 895 | Headway Controller Left Side Sensor           |
| 896 | Headway Controller Rear Sensor                |
| 897 | Override Control Mode Priority                |
| 898 | Engine Requested Speed/Speed Limit            |
| 899 | Engine Torque Mode                            |
| 900 | Retarder Torque Mode                          |
| 901 | Retarder Type                                 |
| 902 | Retarder Location                             |
| 903 | Transmission Forward Direction Switch         |
| 904 | Front Axle Speed                              |
| 905 | Relative Speed; Front Axle, Left Wheel        |
| 906 | Relative Speed; Front Axle, Right Wheel       |
| 907 | Relative Speed; Rear Axle #1, Left Wheel      |
| 908 | Relative Speed; Rear Axle #1, Right Wheel     |
|     |                                               |



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|-----|----------------------------------------------------------|
| 909 | Relative Speed; Rear Axle #2, Left Wheel                 |
| 910 | Relative Speed; Rear Axle #2, Right Wheel                |
| 911 | Service Component Identification                         |
| 912 | Service Component Identification                         |
| 913 | Service Component Identification                         |
| 914 | Service Distance                                         |
| 915 | Service Delay/Calendar Time Based                        |
| 916 | Service Delay/Operational Time Based                     |
| 917 | High Resolution Total Vehicle Distance                   |
| 918 | High Resolution Trip Distance                            |
| 919 | Ambient Light Sensor                                     |
| 920 | Audible Alarm                                            |
| 921 | Green Lamp                                               |
| 922 | Ride Height Relay                                        |
| 923 | PWM Output                                               |
| 924 | Auxiliary Output #1                                      |
| 925 | Auxiliary Output #2                                      |
| 926 | Auxiliary Output #3                                      |
| 927 | Location                                                 |
| 928 | Axle Location                                            |
| 929 | Tire Location                                            |
| 930 | Drive Axle Location                                      |
| 931 | Engine Fuel Supply Pump Actuator                         |
| 932 | Brake System Hold Modulator Valve Solenoid Axle #1 Left  |
| 933 | Brake System Hold Modulator Valve Solenoid Axle #1 Right |

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|-----|----------------------------------------------------------|
| 934 | Brake System Hold Modulator Valve Solenoid Axle #2 Left  |
| 935 | Brake System Hold Modulator Valve Solenoid Axle #2 Right |
| 936 | Brake System Hold Modulator Valve Solenoid Axle #3 Left  |
| 937 | Brake System Hold Modulator Valve Solenoid Axle #3 Right |
| 938 | Brake System Dump Modulator Valve Solenoid Axle #1 Left  |
| 939 | Brake System Dump Modulator Valve Solenoid Axle #1 Right |
| 940 | Brake System Dump Modulator Valve Solenoid Axle #2 Left  |
| 941 | Brake System Dump Modulator Valve Solenoid Axle #2 Right |
| 942 | Brake System Dump Modulator Valve Solenoid Axle #3 Left  |
| 943 | Brake System Dump Modulator Valve Solenoid Axle #3 Right |
| 944 | Driver Air Bag Ignitor Loop                              |
| 945 | Passenger Air Bag Ignitor Loop                           |
| 946 | Left Belt Tensioner Ignitor Loop                         |
| 947 | Right Belt Tensioner Ignitor Loop                        |
| 948 | Safety Restraint System Lamp                             |
| 949 | Automotive Seat Occupancy Sensor – passenger side        |
| 950 | Side Collision Detector – Left                           |
| 951 | Side Bag Ignitor Loop 1 – Left                           |
| 952 | Side Bag Ignitor Loop 2 – Left                           |
| 953 | Side Collision Detector – Right                          |
| 954 | Side Bag Ignitor Loop 1 – Right                          |
| 955 | Side Bag Ignitor Loop 2 – Right                          |
| 956 | Rollover Sensor                                          |
| 957 | Number of Forward Gear Ratios                            |
| 958 | Number of Reverse Gear Ratios                            |

|     |                                                      |
|-----|------------------------------------------------------|
| 959 | Seconds                                              |
| 960 | Minutes                                              |
| 961 | Hours                                                |
| 962 | Day                                                  |
| 963 | Month                                                |
| 964 | Year                                                 |
| 965 | Number of Software Identification Fields             |
| 966 | Engine Test Mode Switch                              |
| 967 | Engine Idle Decrement Switch                         |
| 968 | Engine Idle Increment Switch                         |
| 969 | Remote Accelerator Enable Switch                     |
| 970 | Engine Auxiliary Engine Shutdown Switch              |
| 971 | Engine Derate Switch                                 |
| 972 | Accelerator Interlock Switch                         |
| 973 | Engine Retarder Selection                            |
| 974 | Remote Accelerator Pedal Position                    |
| 975 | Estimated Percent Fan Speed                          |
| 976 | PTO State                                            |
| 977 | Fan Drive State                                      |
| 978 | Engine Remote PTO Variable Speed Control Switch      |
| 979 | Engine Remote PTO Preprogrammed Speed Control Switch |
| 980 | Engine PTO Enable Switch                             |
| 981 | Engine PTO Accelerate Switch                         |
| 982 | Engine PTO Resume Switch                             |

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|------|-------------------------------------------|
| 983  | Engine PTO Coast/Decelerate Switch        |
| 984  | Engine PTO Set Switch                     |
| 985  | A/C High Pressure Fan Switch              |
| 986  | Requested Percent Fan Speed               |
| 987  | Protect Lamp                              |
| 988  | Trip Group 1                              |
| 989  | Trip Group 2 – Proprietary                |
| 990  | Total Compression Brake Distance          |
| 991  | Trip Compression Brake Distance           |
| 992  | Trip Service Brake Distance               |
| 993  | Trip Service Brake Applications           |
| 994  | Trip Fan On Time                          |
| 995  | Trip Fan On Time Due to the Engine System |
| 996  | Trip Fan On Time Due to a Manual Switch   |
| 997  | Trip Fan On Time Due to the A/C System    |
| 998  | Trip Distance on VSL                      |
| 999  | Trip Gear Down Distance                   |
| 1000 | Trip Distance in Top Gear                 |
| 1001 | Trip Drive Fuel Used                      |
| 1002 | Trip PTO Moving Fuel Used                 |
| 1003 | Trip PTO Non-moving Fuel Used             |
| 1004 | Trip Vehicle Idle Fuel Used               |
| 1005 | Trip Cruise Fuel Used                     |
| 1006 | Trip Drive Fuel Economy                   |
|      |                                           |

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|------|----------------------------------------|
| 1007 | Trip Drive Fuel Used                   |
| 1008 | Trip PTO Moving Fuel Used              |
| 1009 | Trip PTO Non-moving Fuel Used          |
| 1010 | Trip Vehicle Idle Fuel Used            |
| 1011 | Trip Cruise Fuel Used                  |
| 1012 | Trip Drive Fuel Economy                |
| 1013 | Trip Maximum Engine Speed              |
| 1014 | Trip Average Engine Speed              |
| 1015 | Trip Drive Average Load Factor         |
| 1016 | Total Drive Average Load Factor        |
| 1017 | Total Engine Cruise Time               |
| 1018 | Trip Maximum Vehicle Speed             |
| 1019 | Trip Cruise Distance                   |
| 1020 | Trip Number of Hot Shutdowns           |
| 1021 | Trip Number of Idle Shutdowns          |
| 1022 | Trip Number of Idle Shutdown Overrides |
| 1023 | Trip Sudden Decelerations              |
| 1024 | Trip Time in VSL                       |
| 1025 | Trip Time in Top Gear                  |
| 1026 | Trip Time in Gear Down                 |
| 1027 | Trip Time in Derate by Engine          |
| 1028 | Total Engine PTO Fuel Used             |
| 1029 | Trip Average Fuel Rate                 |
| 1030 | Total Engine PTO Fuel Used             |
| 1031 | Trip Average Fuel Rate                 |

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|------|-------------------------------------------|
| 1032 | Total ECU Distance                        |
| 1033 | Total ECU Run Time                        |
| 1034 | Trip Cruise Time                          |
| 1035 | Trip PTO Time                             |
| 1036 | Trip Engine Running Time                  |
| 1037 | Trip Idle Time                            |
| 1038 | Trip Air Compressor On Time               |
| 1039 | Trip Fuel                                 |
| 1040 | Total Fuel Used                           |
| 1041 | Start Signal Indicator                    |
| 1042 | Electronic Tractor/Trailer Interface      |
| 1043 | Internal Sensor Voltage Supply            |
| 1044 | Hydraulic Pump Motor                      |
| 1045 | Brake Light Switch #1                     |
| 1046 | Brake Light Switch #2                     |
| 1047 | Electronic Pressure Control Axle 1        |
| 1048 | Pneumatic Back-up Pressure Control Axle 1 |
| 1049 | Brake Pressure Sensing Axle #1            |
| 1050 | Electronic Pressure Control Axle 2        |
| 1051 | Pneumatic Back-up Pressure Control Axle 2 |
| 1052 | Brake Pressure Sensing Axle #2            |
| 1053 | Electronic Pressure Control Axle 3        |
| 1054 | Pneumatic Back-up Pressure Control Axle 3 |
| 1055 | Brake Pressure Sensing Axle #3            |
|      |                                           |

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|------|-----------------------------------------------------|
| 1056 | Electronic Pressure Control, Trailer Control        |
| 1057 | Pneumatic Back-up Pressure Control, Trailer Control |
| 1058 | Brake Pressure Sensing, Trailer Control             |
| 1059 | Axle Load Sensor                                    |
| 1060 | Lining Wear Sensor Axle 1 Left                      |
| 1061 | Lining Wear Sensor Axle 1 Right                     |
| 1062 | Lining Wear Sensor Axle 2 Left                      |
| 1063 | Lining Wear Sensor Axle 2 Right                     |
| 1064 | Lining Wear Sensor Axle 3 Left                      |
| 1065 | Lining Wear Sensor Axle 3 Right                     |
| 1066 | Brake Signal Transmitter                            |
| 1067 | Brake Signal Sensor #1                              |
| 1068 | Brake Signal Sensor #2                              |
| 1069 | Tire Dimension Supervision                          |
| 1070 | Vehicle Deceleration Control                        |
| 1071 | Cooling Fan Drive Output                            |
| 1072 | Engine (Compression) Brake Output #1                |
| 1073 | Engine (Compression) Brake Output #2                |
| 1074 | Engine (Exhaust) Brake Output                       |
| 1075 | Engine Electric Lift Pump for Engine Fuel Supply    |
| 1076 | Engine Fuel Injection Pump Fuel Control Valve       |
| 1077 | Engine Fuel Injection Pump Controller               |
| 1078 | Engine Fuel Injection Pump Speed/Position Sensor    |
| 1079 | Sensor Supply Voltage 1                             |
|      |                                                     |

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|------|------------------------------------------------------------------|
| 1080 | Sensor Supply Voltage 2                                          |
| 1081 | Engine Wait to Start Lamp                                        |
| 1082 | Engine Coolant Load Increase                                     |
| 1083 | Auxiliary I/O Channel #1                                         |
| 1084 | Auxiliary I/O Channel #2                                         |
| 1085 | Intended Retarder Percent Torque                                 |
| 1086 | Parking and/or Trailer Air Pressure                              |
| 1087 | Service Brake Air Pressure Circuit #1                            |
| 1088 | Service Brake Air Pressure Circuit #2                            |
| 1089 | Auxiliary Equipment Supply Pressure                              |
| 1090 | Air Suspension Supply Pressure                                   |
| 1091 | Brake Application Pressure High Range, Front Axle, Left Wheel    |
| 1092 | Brake Application Pressure High Range, Front Axle, Right Wheel   |
| 1093 | Brake Application Pressure High Range, Rear Axle #1, Left Wheel  |
| 1094 | Brake Application Pressure High Range, Rear Axle #1, Right Wheel |
| 1095 | Brake Application Pressure High Range, Rear Axle #2, Left Wheel  |
| 1096 | Brake Application Pressure High Range, Rear Axle #2, Right Wheel |
| 1097 | Brake Application Pressure High Range, Rear Axle #3, Left Wheel  |
| 1098 | Brake Application Pressure High Range, Rear Axle #3, Right Wheel |
| 1099 | Brake Lining Remaining, Front Axle, Left Wheel                   |
| 1100 | Brake Lining Remaining, Front Axle, Right Wheel                  |
| 1101 | Brake Lining Remaining, Rear Axle #1, Left Wheel                 |
| 1102 | Brake Lining Remaining, Rear Axle #1, Right Wheel                |
| 1103 | Brake Lining Remaining, Rear Axle #2, Left Wheel                 |
| 1104 | Brake Lining Remaining, Rear Axle #2, Right Wheel                |



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|------|---------------------------------------------------|
| 1105 | Brake Lining Remaining, Rear Axle #3, Left Wheel  |
| 1106 | Brake Lining Remaining, Rear Axle #3, Right Wheel |
| 1107 | Engine Protection System Timer State              |
| 1108 | Engine Protection System Timer Override           |
| 1109 | Engine Protection System Approaching Shutdown     |
| 1110 | Engine Protection System has Shutdown Engine      |
| 1111 | Engine Protection System Configuration            |
| 1112 | Engine (Compression) Brake Output #3              |
| 1113 | Recommended Gear                                  |
| 1114 | Lowest Possible Gear                              |
| 1115 | Highest Possible Gear                             |
| 1116 | Engine Gaseous Fuel Correction Factor             |
| 1117 | Engine Desired Rated Exhaust Oxygen               |
| 1118 | Engine Desired Exhaust Oxygen                     |
| 1119 | Engine Actual Exhaust Oxygen                      |
| 1120 | Articulation Angle                                |
| 1121 | EBS Brake Switch                                  |
| 1122 | Engine Alternator Bearing 1 Temperature           |
| 1123 | Engine Alternator Bearing 2 Temperature           |
| 1124 | Engine Alternator Winding 1 Temperature           |
| 1125 | Engine Alternator Winding 2 Temperature           |
| 1126 | Engine Alternator Winding 3 Temperature           |
| 1127 | Engine Turbocharger 1 Boost Pressure              |
| 1128 | Engine Turbocharger 2 Boost Pressure              |
|      |                                                   |

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|------|----------------------------------------|
| 1129 | Engine Turbocharger 3 Boost Pressure   |
| 1130 | Engine Turbocharger 4 Boost Pressure   |
| 1131 | Engine Intake Manifold #2 Temperature  |
| 1132 | Engine Intake Manifold #3 Temperature  |
| 1133 | Engine Intake Manifold #4 Temperature  |
| 1134 | Engine Intercooler Thermostat Opening  |
| 1135 | Engine Oil Temperature 2               |
| 1136 | Engine ECU Temperature                 |
| 1137 | Engine Exhaust Gas Port 1 Temperature  |
| 1138 | Engine Exhaust Gas Port 2 Temperature  |
| 1139 | Engine Exhaust Gas Port 3 Temperature  |
| 1140 | Engine Exhaust Gas Port 4 Temperature  |
| 1141 | Engine Exhaust Gas Port 5 Temperature  |
| 1142 | Engine Exhaust Gas Port 6 Temperature  |
| 1143 | Engine Exhaust Gas Port 7 Temperature  |
| 1144 | Engine Exhaust Gas Port 8 Temperature  |
| 1145 | Engine Exhaust Gas Port 9 Temperature  |
| 1146 | Engine Exhaust Gas Port 10 Temperature |
| 1147 | Engine Exhaust Gas Port 11 Temperature |
| 1148 | Engine Exhaust Gas Port 12 Temperature |
| 1149 | Engine Exhaust Gas Port 13 Temperature |
| 1150 | Engine Exhaust Gas Port 14 Temperature |
| 1151 | Engine Exhaust Gas Port 15 Temperature |
| 1152 | Engine Exhaust Gas Port 16 Temperature |
|      |                                        |

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|------|----------------------------------------------------|
| 1153 | Engine Exhaust Gas Port 17 Temperature             |
| 1154 | Engine Exhaust Gas Port 18 Temperature             |
| 1155 | Engine Exhaust Gas Port 19 Temperature             |
| 1156 | Engine Exhaust Gas Port 20 Temperature             |
| 1157 | Engine Main Bearing #1 Temperature                 |
| 1158 | Engine Main Bearing #2 Temperature                 |
| 1159 | Engine Main Bearing #3 Temperature                 |
| 1160 | Engine Main Bearing #4 Temperature                 |
| 1161 | Engine Main Bearing #5 Temperature                 |
| 1162 | Engine Main Bearing #6 Temperature                 |
| 1163 | Engine Main Bearing #7 Temperature                 |
| 1164 | Engine Main Bearing #8 Temperature                 |
| 1165 | Engine Main Bearing #9 Temperature                 |
| 1166 | Engine Main Bearing #10 Temperature                |
| 1167 | Engine Main Bearing #11 Temperature                |
| 1168 | Engine Turbocharger Lube Oil Pressure 2            |
| 1169 | Engine Turbocharger 2 Speed                        |
| 1170 | Engine Turbocharger 3 Speed                        |
| 1171 | Engine Turbocharger 4 Speed                        |
| 1172 | Engine Turbocharger 1 Compressor Inlet Temperature |
| 1173 | Engine Turbocharger 2 Compressor Inlet Temperature |
| 1174 | Engine Turbocharger 3 Compressor Inlet Temperature |
| 1175 | Engine Turbocharger 4 Compressor Inlet Temperature |
| 1176 | Engine Turbocharger 1 Compressor Inlet Pressure    |
| 1177 | Engine Turbocharger 2 Compressor Inlet Pressure    |

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|------|-------------------------------------------------------------|
| 1178 | Engine Turbocharger 3 Compressor Inlet Pressure             |
| 1179 | Engine Turbocharger 4 Compressor Inlet Pressure             |
| 1180 | Engine Turbocharger 1 Turbine Inlet Temperature             |
| 1181 | Engine Turbocharger 2 Turbine Inlet Temperature             |
| 1182 | Engine Turbocharger 3 Turbine Inlet Temperature             |
| 1183 | Engine Turbocharger 4 Turbine Inlet Temperature             |
| 1184 | Engine Turbocharger 1 Turbine Outlet Temperature            |
| 1185 | Engine Turbocharger 2 Turbine Outlet Temperature            |
| 1186 | Engine Turbocharger 3 Turbine Outlet Temperature            |
| 1187 | Engine Turbocharger 4 Turbine Outlet Temperature            |
| 1188 | Engine Turbocharger 1 Wastegate Drive                       |
| 1189 | Engine Turbocharger 2 Wastegate Drive                       |
| 1190 | Engine Turbocharger 3 Wastegate Drive                       |
| 1191 | Engine Turbocharger 4 Wastegate Drive                       |
| 1192 | Engine Turbocharger Wastegate Actuator Control Air Pressure |
| 1193 | Engine Operation Time Since Rebuild                         |
| 1194 | Anti-theft Encryption Seed Present Indicator                |
| 1195 | Anti-theft Password Valid Indicator                         |
| 1196 | Anti-theft Component Status States                          |
| 1197 | Anti-theft Modify Password States                           |
| 1198 | Anti-theft Random Number                                    |
| 1199 | Anti-theft Encryption Indicator States                      |
| 1200 | Anti-theft Desired Exit Mode States                         |
| 1201 | Anti-theft Command States                                   |
|      |                                                             |

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|------|-----------------------------------------------|
| 1202 | Anti-theft Password Representation            |
| 1203 | Engine Auxiliary Coolant Pressure             |
| 1204 | Electrical Load                               |
| 1205 | Safety Wire Status                            |
| 1207 | Engine ECU Temperature                        |
| 1208 | Engine Pre-filter Oil Pressure                |
| 1209 | Engine Exhaust Gas Pressure                   |
| 1210 | Engine Fuel Rack Position                     |
| 1211 | Engine Build Hours Reset                      |
| 1212 | Engine Auxiliary Coolant Temperature          |
| 1213 | Malfunction Indicator Lamp                    |
| 1214 | Suspect Parameter Number                      |
| 1215 | Failure Mode Identifier                       |
| 1216 | Occurrence Count                              |
| 1217 | Freeze Frame Length                           |
| 1218 | Active Trouble Codes                          |
| 1219 | Previously Active Trouble Codes               |
| 1220 | OBD Compliance                                |
| 1221 | Continuously Monitored Systems Support/Status |
| 1222 | Non-continuously Monitored Systems Support    |
| 1223 | Non-continuously Monitored Systems Status     |
| 1224 | Test Identifier                               |
| 1225 | Test Type/Component Identifier                |
| 1226 | Test Value                                    |
| 1227 | Test Limit Maximum                            |

|      |                                         |
|------|-----------------------------------------|
| 1228 | Test Limit Minimum                      |
| 1229 | Test Identifiers Supported              |
| 1230 | Current Data Link                       |
| 1231 | J1939 Network #2                        |
| 1232 | ISO 9141                                |
| 1233 | J1850                                   |
| 1234 | Other, Manufacturer Specified Port      |
| 1235 | J1939 Network #3                        |
| 1236 | Hold Signal                             |
| 1237 | Engine Shutdown Override Switch         |
| 1238 | Traction Control Override Switch        |
| 1239 | Engine Fuel Leakage 1                   |
| 1240 | Engine Fuel Leakage 2                   |
| 1241 | Engine Gas Mass Flow Rate #1            |
| 1242 | Instantaneous Estimated Brake Power     |
| 1243 | ABS Fully Operational                   |
| 1244 | Engine Fuel Actuator 2 Control Command  |
| 1245 | Engine Timing Actuator #2               |
| 1246 | Number of Engine Torque History Records |
| 1247 | Engine Power                            |
| 1248 | Engine Peak Torque 1                    |
| 1249 | Engine Peak Torque 2                    |
| 1250 | Calibration Record Start Month          |
| 1251 | Calibration Record Start Day            |
| 1252 | Calibration Record Start Year           |

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|------|--------------------------------------------------------|
| 1253 | Calibration Record Duration Time                       |
| 1254 | Torque Limiting Feature Status                         |
| 1255 | Transmission Gear Ratio 1                              |
| 1256 | Engine Torque Limit 1, Transmission                    |
| 1257 | Transmission Gear Ratio 2                              |
| 1258 | Engine Torque Limit 2, Transmission                    |
| 1259 | Transmission Gear Ratio 3                              |
| 1260 | Engine Torque Limit 3, Transmission                    |
| 1261 | Engine Torque Limit 4, Transmission                    |
| 1262 | Engine Torque Limit 5, Switch                          |
| 1263 | Engine Torque Limit 6, Axle Input                      |
| 1264 | Engine Extended Crankcase Blow-by Pressure             |
| 1265 | Engine Oil Burn Valve                                  |
| 1266 | Engine Oil Replacement Valve                           |
| 1267 | Idle Shutdown Vehicle Accessories Relay Driver Circuit |
| 1268 | Engine Ignition Coil #1                                |
| 1269 | Engine Ignition Coil #2                                |
| 1270 | Engine Ignition Coil #3                                |
| 1271 | Engine Ignition Coil #4                                |
| 1272 | Engine Ignition Coil #5                                |
| 1273 | Engine Ignition Coil #6                                |
| 1274 | Engine Ignition Coil #7                                |
| 1275 | Engine Ignition Coil #8                                |
| 1276 | Engine Ignition Coil #9                                |
|      |                                                        |

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|------|-----------------------------------|
| 1277 | Engine Ignition Coil #10          |
| 1278 | Engine Ignition Coil #11          |
| 1279 | Engine Ignition Coil #12          |
| 1280 | Engine Ignition Coil #13          |
| 1281 | Engine Ignition Coil #14          |
| 1282 | Engine Ignition Coil #15          |
| 1283 | Engine Ignition Coil #16          |
| 1284 | Engine Ignition Coil #17          |
| 1285 | Engine Ignition Coil #18          |
| 1286 | Engine Ignition Coil #19          |
| 1287 | Engine Ignition Coil #20          |
| 1288 | Engine Ignition Coil #21          |
| 1289 | Engine Ignition Coil #22          |
| 1290 | Engine Ignition Coil #23          |
| 1291 | Engine Ignition Coil #24          |
| 1292 | Engine Ignition Control Module #1 |
| 1293 | Engine Ignition Control Module #2 |
| 1294 | Engine Spark Plug #1              |
| 1295 | Engine Spark Plug #2              |
| 1296 | Engine Spark Plug #3              |
| 1297 | Engine Spark Plug #4              |
| 1298 | Engine Spark Plug #5              |
| 1299 | Engine Spark Plug #6              |
| 1300 | Engine Spark Plug #7              |
|      |                                   |



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|------|------------------------------------------------------|
| 1301 | Engine Spark Plug #8                                 |
| 1302 | Engine Spark Plug #9                                 |
| 1303 | Engine Spark Plug #10                                |
| 1304 | Engine Spark Plug #11                                |
| 1305 | Engine Spark Plug #12                                |
| 1306 | Engine Spark Plug #13                                |
| 1307 | Engine Spark Plug #14                                |
| 1308 | Engine Spark Plug #15                                |
| 1309 | Engine Spark Plug #16                                |
| 1310 | Engine Spark Plug #17                                |
| 1311 | Engine Spark Plug #18                                |
| 1312 | Engine Spark Plug #19                                |
| 1313 | Engine Spark Plug #20                                |
| 1314 | Engine Spark Plug #21                                |
| 1315 | Engine Spark Plug #22                                |
| 1316 | Engine Spark Plug #23                                |
| 1317 | Engine Spark Plug #24                                |
| 1318 | Engine Exhaust Temperature Bank Imbalance            |
| 1319 | Engine Intake Manifold Pressure Bank Imbalance       |
| 1320 | Engine External Shutdown Air Supply Pressure         |
| 1321 | Engine Starter Solenoid Lockout Relay Driver Circuit |
| 1322 | Engine Misfire for Multiple Cylinders                |
| 1323 | Engine Misfire Cylinder #1                           |
| 1324 | Engine Misfire Cylinder #2                           |
| 1325 | Engine Misfire Cylinder #3                           |

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|------|-------------------------------------------|
| 1326 | Engine Misfire Cylinder #4                |
| 1327 | Engine Misfire Cylinder #5                |
| 1328 | Engine Misfire Cylinder #6                |
| 1329 | Engine Misfire Cylinder #7                |
| 1330 | Engine Misfire Cylinder #8                |
| 1331 | Engine Misfire Cylinder #9                |
| 1332 | Engine Misfire Cylinder #10               |
| 1333 | Engine Misfire Cylinder #11               |
| 1334 | Engine Misfire Cylinder #12               |
| 1335 | Engine Misfire Cylinder #13               |
| 1336 | Engine Misfire Cylinder #14               |
| 1337 | Engine Misfire Cylinder #15               |
| 1338 | Engine Misfire Cylinder #16               |
| 1339 | Engine Misfire Cylinder #17               |
| 1340 | Engine Misfire Cylinder #18               |
| 1341 | Engine Misfire Cylinder #19               |
| 1342 | Engine Misfire Cylinder #20               |
| 1343 | Engine Misfire Cylinder #21               |
| 1344 | Engine Misfire Cylinder #22               |
| 1345 | Engine Misfire Cylinder #23               |
| 1346 | Engine Misfire Cylinder #24               |
| 1347 | Engine Fuel Pump Pressurizing Assembly #1 |
| 1348 | Engine Fuel Pump Pressurizing Assembly #2 |
| 1349 | Engine Injector Metering Rail #2 Pressure |
|      |                                           |

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|------|---------------------------------|
| 1350 | Time Since Last Service         |
| 1351 | Air Compressor Status           |
| 1352 | Engine Cylinder #1 Knock Level  |
| 1353 | Engine Cylinder #2 Knock Level  |
| 1354 | Engine Cylinder #3 Knock Level  |
| 1355 | Engine Cylinder #4 Knock Level  |
| 1356 | Engine Cylinder #5 Knock Level  |
| 1357 | Engine Cylinder #6 Knock Level  |
| 1358 | Engine Cylinder #7 Knock Level  |
| 1359 | Engine Cylinder #8 Knock Level  |
| 1360 | Engine Cylinder #9 Knock Level  |
| 1361 | Engine Cylinder #10 Knock Level |
| 1362 | Engine Cylinder #11 Knock Level |
| 1363 | Engine Cylinder #12 Knock Level |
| 1364 | Engine Cylinder #13 Knock Level |
| 1365 | Engine Cylinder #14 Knock Level |
| 1366 | Engine Cylinder #15 Knock Level |
| 1367 | Engine Cylinder #16 Knock Level |
| 1368 | Engine Cylinder #17 Knock Level |
| 1369 | Engine Cylinder #18 Knock Level |
| 1370 | Engine Cylinder #19 Knock Level |
| 1371 | Engine Cylinder #20 Knock Level |
| 1372 | Engine Cylinder #21 Knock Level |
| 1373 | Engine Cylinder #22 Knock Level |
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|------|----------------------------------------------------------|
| 1374 | Engine Cylinder #23 Knock Level                          |
| 1375 | Engine Cylinder #24 Knock Level                          |
| 1376 | Battery #2 Potential (Voltage)                           |
| 1377 | Engine Synchronization Switch                            |
| 1378 | Engine Oil Change Interval                               |
| 1379 | Service Component Identification                         |
| 1380 | Engine Oil Level Remote Reservoir                        |
| 1381 | Engine Fuel Supply Pump Inlet Pressure                   |
| 1382 | Engine Fuel Filter (suction side) Differential Pressure  |
| 1383 | Engine was Shut Down Hot                                 |
| 1384 | Engine has Been Shut Down from Data Link Information     |
| 1385 | Auxiliary Temperature #1                                 |
| 1386 | Auxiliary Temperature #2                                 |
| 1387 | Auxiliary Pressure #1                                    |
| 1388 | Auxiliary Pressure #2                                    |
| 1389 | Engine Fuel Specific Gravity                             |
| 1390 | Engine Fuel Valve #1 Inlet Absolute Pressure             |
| 1391 | Engine Fuel Valve Differential Pressure                  |
| 1392 | Engine Air to Fuel Differential Pressure                 |
| 1393 | Engine Cylinder #1 Ignition Transformer Secondary Output |
| 1394 | Engine Cylinder #2 Ignition Transformer Secondary Output |
| 1395 | Engine Cylinder #3 Ignition Transformer Secondary Output |
| 1396 | Engine Cylinder #4 Ignition Transformer Secondary Output |
| 1397 | Engine Cylinder #5 Ignition Transformer Secondary Output |
| 1398 | Engine Cylinder #6 Ignition Transformer Secondary Output |

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|------|-----------------------------------------------------------|
| 1399 | Engine Cylinder #7 Ignition Transformer Secondary Output  |
| 1400 | Engine Cylinder #8 Ignition Transformer Secondary Output  |
| 1401 | Engine Cylinder #9 Ignition Transformer Secondary Output  |
| 1402 | Engine Cylinder #10 Ignition Transformer Secondary Output |
| 1403 | Engine Cylinder #11 Ignition Transformer Secondary Output |
| 1404 | Engine Cylinder #12 Ignition Transformer Secondary Output |
| 1405 | Engine Cylinder #13 Ignition Transformer Secondary Output |
| 1406 | Engine Cylinder #14 Ignition Transformer Secondary Output |
| 1407 | Engine Cylinder #15 Ignition Transformer Secondary Output |
| 1408 | Engine Cylinder #16 Ignition Transformer Secondary Output |
| 1409 | Engine Cylinder #17 Ignition Transformer Secondary Output |
| 1410 | Engine Cylinder #18 Ignition Transformer Secondary Output |
| 1411 | Engine Cylinder #19 Ignition Transformer Secondary Output |
| 1412 | Engine Cylinder #20 Ignition Transformer Secondary Output |
| 1413 | Engine Cylinder #1 Ignition Timing                        |
| 1414 | Engine Cylinder #2 Ignition Timing                        |
| 1415 | Engine Cylinder #3 Ignition Timing                        |
| 1416 | Engine Cylinder #4 Ignition Timing                        |
| 1417 | Engine Cylinder #5 Ignition Timing                        |
| 1418 | Engine Cylinder #6 Ignition Timing                        |
| 1419 | Engine Cylinder #7 Ignition Timing                        |
| 1420 | Engine Cylinder #8 Ignition Timing                        |
| 1421 | Engine Cylinder #9 Ignition Timing                        |
| 1422 | Engine Cylinder #10 Ignition Timing                       |

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|------|-------------------------------------|
| 1423 | Engine Cylinder #11 Ignition Timing |
| 1424 | Engine Cylinder #12 Ignition Timing |
| 1425 | Engine Cylinder #13 Ignition Timing |
| 1426 | Engine Cylinder #14 Ignition Timing |
| 1427 | Engine Cylinder #15 Ignition Timing |
| 1428 | Engine Cylinder #16 Ignition Timing |
| 1429 | Engine Cylinder #17 Ignition Timing |
| 1430 | Engine Cylinder #18 Ignition Timing |
| 1431 | Engine Cylinder #19 Ignition Timing |
| 1432 | Engine Cylinder #20 Ignition Timing |
| 1433 | Engine Desired Ignition Timing #1   |
| 1434 | Engine Desired Ignition Timing #2   |
| 1435 | Engine Desired Ignition Timing #3   |
| 1436 | Engine Actual Ignition Timing       |
| 1437 | Road Speed Limit Status             |
| 1438 | ABS/EBS Amber Warning Signal        |
| 1439 | EBS Red Warning Signal              |
| 1440 | Engine Fuel Flow Rate #1            |
| 1441 | Engine Fuel Flow Rate #2            |
| 1442 | Engine Fuel Valve #1 Position       |
| 1443 | Engine Fuel Valve #2 Position       |
| 1444 | Engine Cylinder #1 Combustion Time  |
| 1445 | Engine Cylinder #2 Combustion Time  |
| 1446 | Engine Cylinder #3 Combustion Time  |
|      |                                     |

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|------|-------------------------------------|
| 1447 | Engine Cylinder #4 Combustion Time  |
| 1448 | Engine Cylinder #5 Combustion Time  |
| 1449 | Engine Cylinder #6 Combustion Time  |
| 1450 | Engine Cylinder #7 Combustion Time  |
| 1451 | Engine Cylinder #8 Combustion Time  |
| 1452 | Engine Cylinder #9 Combustion Time  |
| 1453 | Engine Cylinder #10 Combustion Time |
| 1454 | Engine Cylinder #11 Combustion Time |
| 1455 | Engine Cylinder #12 Combustion Time |
| 1456 | Engine Cylinder #13 Combustion Time |
| 1457 | Engine Cylinder #14 Combustion Time |
| 1458 | Engine Cylinder #15 Combustion Time |
| 1459 | Engine Cylinder #16 Combustion Time |
| 1460 | Engine Cylinder #17 Combustion Time |
| 1461 | Engine Cylinder #18 Combustion Time |
| 1462 | Engine Cylinder #19 Combustion Time |
| 1463 | Engine Cylinder #20 Combustion Time |
| 1464 | Engine Desired Combustion Time      |
| 1465 | Engine Average Combustion Time      |
| 1466 | Steer Channel Mode                  |
| 1467 | Trailer/tag Channel Mode            |
| 1468 | Drive Channel Mode                  |
| 1469 | PCU Drive Solenoid Status           |
| 1470 | PCU Steer Solenoid Status           |
| 1471 | Tire Pressure Supply Switch Status  |

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|------|---------------------------------------------------------------|
| 1472 | PCU Deflate Solenoid Status                                   |
| 1473 | PCU Control Solenoid Status                                   |
| 1474 | PCU Supply Solenoid Status                                    |
| 1475 | PCU Trailer, Tag or Push Solenoid Status                      |
| 1476 | Engine Oil Specific Resistance                                |
| 1477 | Engine Oil Kinematic Viscosity                                |
| 1478 | Engine Oil Relative Dielectricity                             |
| 1479 | Security Entity Type                                          |
| 1480 | Source Address of Controlling Device for Retarder Control     |
| 1481 | Source Address of Controlling Device for Brake Control        |
| 1482 | Source Address of Controlling Device for Transmission Control |
| 1483 | Source Address of Controlling Device for Engine Control       |
| 1484 | Other ECUs Have Reported Fault Codes Affecting Operation      |
| 1485 | ECM Main Relay                                                |
| 1486 | Concave Position                                              |
| 1487 | Illumination Brightness Percent                               |
| 1488 | Thresher Speed                                                |
| 1489 | Cleaning Fan Speed                                            |
| 1490 | Header Backshaft Speed                                        |
| 1491 | Instrument Panel #1 Backlighting Driver                       |
| 1492 | Instrument Panel #2 Backlighting Driver                       |
| 1493 | Tailings System                                               |
| 1494 | Tailings Sensor #1                                            |
| 1495 | Tailings Sensor #2                                            |



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|------|--------------------------------------------------|
| 1496 | Tailings Elevator Paddles                        |
| 1497 | Unloading Auger Drive                            |
| 1498 | Header Drive                                     |
| 1499 | Separator Drive                                  |
| 1500 | Tachometer Module Switch Matrix                  |
| 1501 | Grain Loss Module Switch Matrix                  |
| 1502 | Automatic Header Control Switch Matrix           |
| 1503 | Arm Rest Switch Matrix                           |
| 1504 | Operator Seat Switch                             |
| 1505 | Automatic Header Sensitivity Adjustment          |
| 1506 | Automatic Header Rate Adjustment Input           |
| 1507 | Discharge Beater Speed Disable Adjustment        |
| 1508 | Hydraulic Reservoir Temperature                  |
| 1509 | Thresher Separator Hydraulic Drive 1 Temperature |
| 1510 | Chopper Vane Adjustment                          |
| 1511 | Right side Cleaning Shoe Relative Grain Loss     |
| 1512 | Left side Cleaning Shoe Relative Grain Loss      |
| 1513 | Right side Separator Relative Grain Loss         |
| 1514 | Left side Separator Relative Grain Loss          |
| 1515 | Header Height System                             |
| 1516 | Header                                           |
| 1517 | Header Lift Cylinder Pressure                    |
| 1518 | Header Sensor Identification                     |
| 1519 | Header Raise Valve Drive                         |
|      |                                                  |

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|------|------------------------------------------------------|
| 1520 | Header Lower Valve Drive                             |
| 1521 | Header Tilt Left Valve Drive                         |
| 1522 | Header Tilt Right Valve Drive                        |
| 1523 | Header Lift Cylinder Pressure Diverted Valve Drive   |
| 1524 | Reel Position Forward Actuator                       |
| 1525 | Reel Position Aft Actuator                           |
| 1526 | Reel Position Raise Actuator                         |
| 1527 | Reel Position Lower Actuator                         |
| 1528 | Header Drop Rate Control Valve Drive                 |
| 1529 | Header Lift Cylinder Accumulator Shutoff Valve Drive |
| 1530 | Unloading auger flow bypass valve drive              |
| 1531 | Reel Drive Motor Speed Increase Valve Drive          |
| 1532 | Reel Drive Motor Speed Decrease Valve Drive          |
| 1533 | Feederhouse Angle                                    |
| 1534 | Header Leftmost Height                               |
| 1535 | Header Rightmost Height                              |
| 1536 | Header Center Height                                 |
| 1537 | Reel Fore-Aft Position                               |
| 1538 | Reel Up-Down Position                                |
| 1539 | Header Lateral Tilt Angle                            |
| 1540 | Reel Speed Actuator Position                         |
| 1541 | Reel Speed                                           |
| 1542 | ECU Power Supply Voltage #2                          |
| 1543 | ECU Power Supply Voltage #3                          |
| 1544 | Hydro Handle Matrix Switch                           |

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|------|-------------------------------------------------------------------------|
| 1545 | Not used – reserved                                                     |
| 1546 | HVAC Coolant Valve Position Sensor                                      |
| 1547 | A/C Evaporator Temperature                                              |
| 1548 | HVAC Duct Temperature                                                   |
| 1549 | HVAC Water Valve Drive                                                  |
| 1550 | Not used – reserved                                                     |
| 1551 | A/C Pressurizer Drive Circuit                                           |
| 1552 | Operator Input device for Cab Climate Control                           |
| 1553 | HVAC Blower Motor Speed Adjustment                                      |
| 1554 | Clean Grain Elevator Speed                                              |
| 1555 | Moisture Sensor Cell Frequency                                          |
| 1556 | Datalog Memory card                                                     |
| 1557 | Not used – reserved                                                     |
| 1558 | Programming Error, Device Refused to Enter Programming Mode             |
| 1559 | Programming Error, Device Timed Out While Entering the Programming Mode |
| 1560 | Programming Error, Device Timed Out While Erasing                       |
| 1561 | Programming Error, Device Timed Out While Programming                   |
| 1562 | Programming Error, Device did not Accept Program Line                   |
| 1563 | Incompatible Monitor/Controller                                         |
| 1564 | CCD Data Link                                                           |
| 1565 | Armrest Status                                                          |
| 1566 | Armrest Rotary Inputs                                                   |
| 1567 | Header Height Control Mode Selector Switches                            |
| 1568 | Engine Torque Curve Selection                                           |
| 1569 | Engine Protection Torque Derate                                         |

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|------|-------------------------------------------|
| 1570 | Implement Disconnected                    |
| 1571 | Display Conflict                          |
| 1572 | Display Overload                          |
| 1573 | LED Display Data #1                       |
| 1574 | Laser Strike Vertical Deviation           |
| 1575 | Modify Set Point                          |
| 1576 | Mast Position                             |
| 1577 | Blade Duration and Direction              |
| 1578 | Blade Control Mode                        |
| 1579 | Laser Tracer Target Deviation             |
| 1580 | Laser Tracer Vertical Distance            |
| 1581 | Laser Tracer Horizontal Deviation         |
| 1582 | LED Display Data #2                       |
| 1583 | Laser Tracer Information                  |
| 1584 | Service Component Identification          |
| 1585 | Powered Vehicle Weight                    |
| 1586 | Speed of forward vehicle                  |
| 1587 | Distance to forward vehicle               |
| 1588 | Adaptive Cruise Control Set Speed         |
| 1589 | Adaptive Cruise Control Set Distance Mode |
| 1590 | Adaptive Cruise Control Mode              |
| 1591 | Road curvature                            |
| 1592 | Front Axle, Left Wheel Speed              |
| 1593 | Front axle, right wheel speed             |
|      |                                           |

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|------|---------------------------------------|
| 1594 | Rear axle, left wheel speed           |
| 1595 | Rear axle, right wheel speed          |
| 1596 | Security Entity Length                |
| 1597 | Data Security Parameter               |
| 1598 | PGN of message to be authenticated    |
| 1599 | Seed                                  |
| 1600 | Authentication message data parameter |
| 1601 | Local minute offset                   |
| 1602 | Local hour offset                     |
| 1603 | Adjust seconds                        |
| 1604 | Adjust minutes                        |
| 1605 | Adjust hours                          |
| 1606 | Adjust month                          |
| 1607 | Adjust day                            |
| 1608 | Adjust year                           |
| 1609 | Adjust local minute offset            |
| 1610 | Adjust local hour offset              |
| 1611 | Drive recognize                       |
| 1612 | Driver 1 working state                |
| 1613 | Driver 2 working state                |
| 1614 | Overspeed                             |
| 1615 | Driver card, driver 1                 |
| 1616 | Driver card, driver 2                 |
| 1617 | Driver 1 Time Related States          |
| 1618 | Driver 2 Time Related States          |

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|------|----------------------------------------------------------|
| 1619 | Direction indicator                                      |
| 1620 | Tachograph performance                                   |
| 1621 | Handling information                                     |
| 1622 | System event                                             |
| 1623 | Tachograph output shaft speed                            |
| 1624 | Tachograph vehicle speed                                 |
| 1625 | Driver 1 identification                                  |
| 1626 | Driver 2 identification                                  |
| 1627 | Reserved for Certification agency ID                     |
| 1628 | Reserved for Certification seed/key length               |
| 1629 | Reserved for Certification signature                     |
| 1630 | Reserved for Certification public key                    |
| 1631 | Reserved for Certification vehicle identification number |
| 1632 | Engine Torque Limit Feature                              |
| 1633 | Cruise Control Pause Switch                              |
| 1634 | Calibration Verification Number                          |
| 1635 | Calibration Identification                               |
| 1636 | Engine Intake Manifold #1 Air Temperature                |
| 1637 | Engine Coolant Temperature                               |
| 1638 | Hydraulic Temperature                                    |
| 1639 | Fan Speed                                                |
| 1640 | Length/Number Requested                                  |
| 1641 | Pointer Type                                             |
| 1642 | Command                                                  |
| 1643 | Pointer Extension                                        |

|      |                                                  |
|------|--------------------------------------------------|
| 1644 | Pointer                                          |
| 1645 | Key/User_Level                                   |
| 1646 | Status                                           |
| 1647 | EDCP Extension                                   |
| 1648 | Error Indicator/EDC Parameter 1                  |
| 1649 | Length/Number Allowed                            |
| 1650 | Number of Occurrences of Raw Binary Data         |
| 1651 | Raw Binary Data                                  |
| 1652 | Boot Load Data                                   |
| 1653 | Vehicle Limiting Speed Governor Enable Switch    |
| 1654 | Vehicle Limiting Speed Governor Increment Switch |
| 1655 | Vehicle Limiting Speed Governor Decrement Switch |
| 1656 | Engine Automatic Start Enable Switch             |
| 1657 | Engine Injector Needle Lift Sensor #1            |
| 1658 | Engine Injector Needle Lift Sensor #2            |
| 1659 | Engine Coolant System Thermostat                 |
| 1660 | Engine Automatic Start Alarm                     |
| 1661 | Engine Automatic Start Lamp                      |
| 1662 | Cab Interior Temperature Thermostat              |
| 1663 | Engine Automatic Start Safety Interlock Circuit  |
| 1664 | Engine Automatic Start Failed                    |
| 1665 | Engine Turbocharger Oil Level Switch             |
| 1666 | Automatic Gear Shifting Enable Switch            |
| 1667 | Retarder Requesting Brake Light                  |

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|------|---------------------------------------------|
| 1668 | J1939 Network #4                            |
| 1669 | J1939 Network #5                            |
| 1670 | J1939 Network #6                            |
| 1671 | J1939 Network #7                            |
| 1672 | J1939 Network #8                            |
| 1673 | J1939 Network #9                            |
| 1674 | J1939 Network #10                           |
| 1675 | Engine Starter Mode                         |
| 1676 | Auxiliary Heater Water Pump Status          |
| 1677 | Auxiliary Heater Mode                       |
| 1678 | Cab Ventilation                             |
| 1679 | Engine Heating Zone                         |
| 1680 | Cab Heating Zone                            |
| 1681 | Battery Main Switch Hold State              |
| 1682 | Battery Main Switch Hold Request            |
| 1683 | Auxiliary Heater Mode Request               |
| 1684 | Auxiliary Heater Coolant Pump Request       |
| 1685 | Request Engine Zone Heating                 |
| 1686 | Request Cab Zone Heating                    |
| 1687 | Auxiliary Heater Output Coolant Temperature |
| 1688 | Auxiliary Heater Input Air Temperature      |
| 1689 | Auxiliary Heater Output Power Percent       |
| 1690 | Auxiliary Heater Maximum Output Power       |
| 1691 | Cab Interior Temperature Command            |
|      |                                             |



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|------|-----------------------------------------------------------------|
| 1692 | Engine Desired Absolute Intake Manifold Pressure                |
| 1693 | Engine Turbocharger Wastegate Valve Position                    |
| 1694 | Engine Gas Mass Flow Sensor Fueling Correction                  |
| 1695 | Engine Exhaust Gas Oxygen Sensor Fueling Correction             |
| 1696 | Engine Exhaust Gas Oxygen Sensor Closed Loop Operation          |
| 1697 | CTI Wheel End Electrical Fault                                  |
| 1698 | CTI Tire Status                                                 |
| 1699 | CTI Wheel Sensor Status                                         |
| 1700 | Lane Departure Imminent, Left Side                              |
| 1701 | Lane Departure Imminent, Right Side                             |
| 1702 | Lane Departure Indication Enable Status                         |
| 1703 | Lane Tracking Speaker – Right Side                              |
| 1704 | Lane Tracking Speaker                                           |
| 1705 | Forward View Imager System                                      |
| 1706 | SPN Conversion Method                                           |
| 1709 | Transmission Controller Power Relay                             |
| 1710 | Lane Tracking Status Left Side                                  |
| 1711 | Lane Tracking Status Right Side                                 |
| 1712 | Engine Extended Range Requested Speed Control Range Upper Limit |
| 1713 | Hydraulic Oil Filter Restriction Switch                         |
| 1714 | Operator Seat Direction Switch                                  |
| 1715 | Drivers Demand Retarder – Percent Torque                        |
| 1716 | Retarder Selection, non-engine                                  |
| 1717 | Actual Maximum Available Retarder – Percent Torque              |
| 1718 | Damper Stiffness Request Front Axle                             |

|      |                                          |
|------|------------------------------------------|
| 1719 | Damper Stiffness Request Rear Axle       |
| 1720 | Damper Stiffness Request Lift / Tag Axle |
| 1721 | Relative Level Front Axle Left           |
| 1722 | Relative Level Front Axle Right          |
| 1723 | Relative Level Rear Axle Right           |
| 1724 | Relative Level Rear Axle Left            |
| 1725 | Bellow Pressure Front Axle Left          |
| 1726 | Bellow Pressure Front Axle Right         |
| 1727 | Bellow Pressure Rear Axle Left           |
| 1728 | Bellow Pressure Rear Axle Right          |
| 1729 | Damper Stiffness Front Axle              |
| 1730 | Damper Stiffness Rear Axle               |
| 1731 | Damper Stiffness Lift / Tag Axle         |
| 1732 | Level Preset Front Axle Left             |
| 1733 | Nominal Level Rear Axle                  |
| 1734 | Nominal Level Front Axle                 |
| 1735 | Level Preset Rear Axle Right             |
| 1736 | Above Nominal Level Rear Axle            |
| 1737 | Above Nominal Level Front Axle           |
| 1738 | Below Nominal Level Front Axle           |
| 1739 | Lifting Control Mode Front Axle          |
| 1740 | Lowering Control Mode Front Axle         |
| 1741 | Level Control Mode                       |
| 1742 | Kneeling Information                     |
|      |                                          |

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|------|---------------------------------------------------|
| 1743 | Lift Axle 1 Position                              |
| 1744 | Door Release                                      |
| 1745 | Vehicle Motion Inhibit                            |
| 1746 | Security Device                                   |
| 1747 | Kneeling Control Mode Request                     |
| 1748 | Kneeling Request Right Side                       |
| 1749 | Kneeling Request Left Side                        |
| 1750 | Nominal Level Request Rear Axle                   |
| 1751 | Nominal Level Request Front Axle                  |
| 1752 | Lift Axle 1 Position Command                      |
| 1753 | Level Control Mode Request                        |
| 1754 | Below Nominal Level Rear Axle                     |
| 1755 | Lowering Control Mode Rear Axle                   |
| 1756 | Lifting Control Mode Rear Axle                    |
| 1757 | Level Preset Front Axle Right                     |
| 1758 | Level Preset Rear Axle Left                       |
| 1759 | Blade Height Set Point – High Resolution          |
| 1760 | Gross Combination Vehicle Weight                  |
| 1761 | Aftertreatment 1 Diesel Exhaust Fluid Tank Level  |
| 1762 | Hydraulic Pressure                                |
| 1763 | Engine Hydraulic Pressure Governor Mode Indicator |
| 1764 | Engine Hydraulic Pressure Governor Switch         |
| 1765 | Engine Requested Fuel Valve 1 Position            |
| 1766 | Engine Requested Fuel Valve 2 Position            |
|      |                                                   |

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|------|-----------------------------------------------------------------------|
| 1767 | Specific Heat Ratio                                                   |
| 1768 | Engine Low Limit Threshold for Maximum RPM from Engine                |
| 1769 | Engine High Limit Threshold for Minimum Continuous Engine RPM         |
| 1770 | Engine Low Limit Threshold for Maximum Torque from Engine             |
| 1771 | Engine High Limit Threshold for Minimum Continuous Torque from Engine |
| 1772 | Engine Maximum Continuous RPM                                         |
| 1773 | Engine Minimum Continuous RPM                                         |
| 1774 | Engine Maximum Continuous Torque                                      |
| 1775 | Engine Minimum Continuous Torque                                      |
| 1776 | Low Limit Threshold for Maximum RPM from Retarder                     |
| 1777 | High Limit Threshold for Minimum Continuous RPM from Retarder         |
| 1778 | Low Limit Threshold for Maximum Torque from Retarder                  |
| 1779 | High Limit Threshold for Minimum Continuous Torque from Retarder      |
| 1780 | Maximum Continuous Retarder Speed                                     |
| 1781 | Minimum Continuous Retarder Speed                                     |
| 1782 | Maximum Continuous Retarder Torque                                    |
| 1783 | Minimum Continuous Retarder Torque                                    |
| 1784 | Engine Speed Limit Request – Minimum Continuous                       |
| 1785 | Engine Speed Limit Request – Maximum Continuous                       |
| 1786 | Engine Torque Limit Request – Minimum Continuous                      |
| 1787 | Engine Torque Limit Request – Maximum Continuous                      |
| 1788 | Minimum Continuous Retarder Speed Limit Request                       |
| 1789 | Maximum Continuous Retarder Speed Limit Request                       |
| 1790 | Minimum Continuous Retarder Torque Limit Request                      |
| 1791 | Maximum Continuous Retarder Torque Limit Request                      |

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|------|--------------------------------------------|
| 1792 | Tractor-Mounted Trailer ABS Warning Signal |
| 1793 | ATC/ASR Information Signal                 |
| 1794 | Engine Moment of Inertia                   |
| 1795 | Alternator Current                         |
| 1796 | ACC Distance Alert Signal                  |
| 1797 | ACC System Shutoff Warning                 |
| 1798 | ACC Target Detected                        |
| 1799 | Requested ACC Distance Mode                |
| 1800 | Battery #1 Temperature                     |
| 1801 | Battery #2 Temperature                     |
| 1802 | Engine Intake Manifold #5 Temperature      |
| 1803 | Engine Intake Manifold #6 Temperature      |
| 1804 | Engine Start Enable Device 2               |
| 1805 | LED Display Mode Control                   |
| 1806 | LED Display Deadband Control               |
| 1807 | Steering Wheel Angle                       |
| 1808 | Yaw Rate                                   |
| 1809 | Lateral Acceleration                       |
| 1810 | Longitudinal Acceleration                  |
| 1811 | Steering Wheel Turn Counter                |
| 1812 | Steering Wheel Angle Sensor Type           |
| 1813 | VDC Information Signal                     |
| 1814 | VDC Fully Operational                      |
| 1815 | VDC brake light request                    |

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|------|--------------------------------------------------------|
| 1816 | ROP Engine Control active                              |
| 1817 | YC Engine Control active                               |
| 1818 | ROP Brake Control active                               |
| 1819 | YC Brake Control active                                |
| 1820 | Ramp / Wheel Chair Lift Position                       |
| 1821 | Position of doors                                      |
| 1822 | Lift Axle 2 Position                                   |
| 1823 | Rear Axle in Bumper Range                              |
| 1824 | Front Axle in Bumper Range                             |
| 1825 | Suspension Remote control 2                            |
| 1826 | Suspension Remote Control 1                            |
| 1827 | Suspension Control Refusal Information                 |
| 1828 | Lift Axle 2 Position Command                           |
| 1829 | Kneeling Command – Rear Axle                           |
| 1830 | Kneeling Command – Front Axle                          |
| 1831 | Electronic Shock Absorber Control Mode – Lift/Tag Axle |
| 1832 | Electronic Shock Absorber Control Mode – Rear Axle     |
| 1833 | Electronic Shock Absorber Control Mode – Front Axle    |
| 1834 | Engine Total Average Fuel Rate                         |
| 1835 | Engine Total Average Fuel Economy                      |
| 1836 | Trailer ABS Status                                     |
| 1837 | Convoy Driving Lamp Select                             |
| 1838 | Convoy Lamp Select                                     |
| 1839 | Front Black Out Marker Lamp Select                     |
| 1840 | Rear Black Out Marker Select                           |

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|------|--------------------------------------------------|
| 1841 | Black Out Brake/Stop Lamp Select                 |
| 1842 | Black Out Work Lamp Select                       |
| 1843 | Night Vision Illuminator Select                  |
| 1844 | Operators Black Out Intensity Selection          |
| 1845 | Transmission Torque Limit                        |
| 1846 | Engine Default Torque Limit                      |
| 1849 | Transmission Requested Range Display Flash State |
| 1850 | Transmission Requested Range Display Blank State |
| 1851 | Transmission Shift Inhibit Indicator             |
| 1852 | Transmission Mode 1                              |
| 1853 | Transmission Mode 2                              |
| 1854 | Transmission Mode 3                              |
| 1855 | Transmission Mode 4                              |
| 1856 | Seat Belt Switch                                 |
| 1857 | Winch Oil Pressure Switch                        |
| 1858 | Intermittent Wiper Control                       |
| 1859 | Ground Based Implement Speed                     |
| 1860 | Ground Based Implement Distance                  |
| 1861 | Ground Based Direction                           |
| 1862 | Wheel Based Speed                                |
| 1863 | Wheel Based Distance                             |
| 1864 | Wheel Based Direction                            |
| 1865 | Key Switch NOT OFF                               |
| 1866 | Maximum Time of Tractor Power                    |
| 1867 | Maintain ECU Power                               |

|      |                                                 |
|------|-------------------------------------------------|
| 1868 | Maintain Actuator Power                         |
| 1869 | Implement Transport State                       |
| 1870 | Implement Park State                            |
| 1871 | Implement Work State                            |
| 1872 | Front Hitch Position                            |
| 1873 | Rear Hitch Position                             |
| 1874 | Front Hitch Position Command                    |
| 1875 | Rear Hitch Position Command                     |
| 1876 | Front Hitch In-work Indication                  |
| 1877 | Rear Hitch In-work Indication                   |
| 1878 | Front Draft                                     |
| 1879 | Rear Draft                                      |
| 1880 | Front Nominal Lower Link Force                  |
| 1881 | Rear Nominal Lower Link Force                   |
| 1882 | Front PTO output shaft speed                    |
| 1883 | Rear PTO output shaft speed                     |
| 1884 | Front PTO Output Shaft Speed Set Point          |
| 1885 | Rear PTO Output Shaft Speed Set Point           |
| 1886 | Front PTO Output Shaft Speed Set Point Command  |
| 1887 | Rear PTO Output Shaft Speed Set Point Command 1 |
| 1888 | Front Power Takeoff Engagement                  |
| 1889 | Front Power Takeoff Mode                        |
| 1890 | Rear Power Takeoff Mode                         |
| 1891 | Front Power Takeoff Economy Mode                |
|      |                                                 |



|      |                                          |
|------|------------------------------------------|
| 1892 | Rear Power Takeoff Economy Mode          |
| 1893 | Front Power Takeoff Engagement Command   |
| 1894 | Rear Power Takeoff Engagement Command    |
| 1895 | Front Power Takeoff Mode Command         |
| 1896 | Rear Power Takeoff Mode Command          |
| 1897 | Front Power Takeoff Economy Mode Command |
| 1898 | Rear Power Takeoff Economy Mode Command  |
| 1899 | Aux Valve 0 Extend Port Measured Flow    |
| 1900 | Aux Valve 0 Retract Port Measured Flow   |
| 1901 | Aux Valve 0 Extend Port Estimated Flow   |
| 1902 | Aux Valve 0 Retract Port Estimated Flow  |
| 1903 | Aux Valve 0 State                        |
| 1904 | Aux Valve 0 Extend Port Pressure         |
| 1905 | Aux Valve 0 Retract Port Pressure        |
| 1906 | Aux Valve 0 Return Port Pressure         |
| 1907 | Aux Valve 0 Port Flow Command            |
| 1908 | Aux Valve 0 State command                |
| 1909 | Aux Valve 0 Fail Safe Mode Command       |
| 1910 | Aux Valve 0 Fail Safe Mode               |
| 1911 | Aux Valve 1 Extend Port Measured Flow    |
| 1912 | Aux Valve 1 Retract Port Measured Flow   |
| 1913 | Aux Valve 1 Extend Port Estimated Flow   |
| 1914 | Aux Valve 1 Retract Port Estimated Flow  |
| 1915 | Aux Valve 1 State                        |

|      |                                         |
|------|-----------------------------------------|
| 1916 | Aux Valve 1 Extend Port Pressure        |
| 1917 | Aux Valve 1 Retract Port Pressure       |
| 1918 | Aux Valve 1 Return Port Pressure        |
| 1919 | Aux Valve 1 Port Flow Command           |
| 1920 | Aux Valve 1 State Command               |
| 1921 | Aux Valve 1 Fail Safe Mode Command      |
| 1922 | Aux Valve 1 Fail Safe Mode              |
| 1923 | Aux Valve 2 Extend Port Measured Flow   |
| 1924 | Aux Valve 2 Retract Port Measured Flow  |
| 1925 | Aux Valve 2 Extend Port Estimated Flow  |
| 1926 | Aux Valve 2 Retract Port Estimated Flow |
| 1927 | Aux Valve 2 State                       |
| 1928 | Aux Valve 2 Extend Port Pressure        |
| 1929 | Aux Valve 2 Retract Port Pressure       |
| 1930 | Aux Valve 2 Return Port Pressure        |
| 1931 | Aux Valve 2 Port Flow Command           |
| 1932 | Aux Valve 2 State Command               |
| 1933 | Aux Valve 2 Fail Safe Mode Command      |
| 1934 | Aux Valve 2 Fail Safe Mode              |
| 1935 | Aux Valve 3 Extend Port Measured Flow   |
| 1936 | Aux Valve 3 Retract Port Measured Flow  |
| 1937 | Aux Valve 3 Extend Port Estimated Flow  |
| 1938 | Aux Valve 3 Retract Port Estimated Flow |
| 1939 | Aux Valve 3 State                       |
|      |                                         |

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|------|-----------------------------------------|
| 1940 | Aux Valve 3 Extend Port Pressure        |
| 1941 | Aux Valve 3 Retract Port Pressure 1     |
| 1942 | Aux Valve 3 Return Port Pressure        |
| 1943 | Aux Valve 3 Port Flow Command           |
| 1944 | Aux Valve 3 State Command               |
| 1945 | Aux Valve 3 Fail Safe Mode Command      |
| 1946 | Aux Valve 3 Fail Safe Mode              |
| 1947 | Aux Valve 4 Extend Port Measured Flow   |
| 1948 | Aux Valve 4 Retract Port Measured Flow  |
| 1949 | Aux Valve 4 Extend Port Estimated Flow  |
| 1950 | Aux Valve 4 Retract Port Estimated Flow |
| 1951 | Aux Valve 4 State                       |
| 1952 | Aux Valve 4 Extend Port Pressure        |
| 1953 | Aux Valve 4 Retract Port Pressure       |
| 1954 | Aux Valve 4 Return Port Pressure        |
| 1955 | Aux Valve 4 Port Flow Command           |
| 1956 | Aux Valve 4 State Command               |
| 1957 | Aux Valve 4 Fail Safe Mode Command      |
| 1958 | Aux Valve 4 Fail Safe Mode              |
| 1959 | Aux Valve 5 Extend Port Measured Flow   |
| 1960 | Aux Valve 5 Retract Port Measured Flow  |
| 1961 | Aux Valve 5 Extend Port Estimated Flow  |
| 1962 | Aux Valve 5 Retract Port Estimated Flow |
| 1963 | Aux Valve 5 State                       |
| 1964 | Aux Valve 5 Extend Port Pressure        |

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|------|-----------------------------------------|
| 1965 | Aux Valve 5 Retract Port Pressure       |
| 1966 | Aux Valve 5 Return Port Pressure        |
| 1967 | Aux Valve 5 Port Flow Command           |
| 1968 | Aux Valve 5 State Command               |
| 1969 | Aux Valve 5 Fail Safe Mode Command      |
| 1970 | Aux Valve 5 Fail Safe Mode              |
| 1971 | Aux Valve 6 Extend Port Measured Flow   |
| 1972 | Aux Valve 6 Retract Port Measured Flow  |
| 1973 | Aux Valve 6 Extend Port Estimated Flow  |
| 1974 | Aux Valve 6 Retract Port Estimated Flow |
| 1975 | Aux Valve 6 State                       |
| 1976 | Aux Valve 6 Extend Port Pressure        |
| 1977 | Aux Valve 6 Retract Port Pressure       |
| 1978 | Aux Valve 6 Return Port Pressure        |
| 1979 | Aux Valve 6 Port Flow Command           |
| 1980 | Aux Valve 6 State Command               |
| 1981 | Aux Valve 6 Fail Safe Mode Command      |
| 1982 | Aux Valve 6 Fail Safe Mode              |
| 1983 | Aux Valve 7 Extend Port Measured Flow   |
| 1984 | Aux Valve 7 Retract Port Measured Flow  |
| 1985 | Aux Valve 7 Extend Port Estimated Flow  |
| 1986 | Aux Valve 7 Retract Port Estimated Flow |
| 1987 | Aux Valve 7 State                       |
| 1988 | Aux Valve 7 Extend Port Pressure        |
|      |                                         |

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|------|-----------------------------------------|
| 1989 | Aux Valve 7 Retract Port Pressure       |
| 1990 | Aux Valve 7 Return Port Pressure        |
| 1991 | Aux Valve 7 Port Flow Command           |
| 1992 | Aux Valve 7 State command               |
| 1993 | Aux Valve 7 Fail Safe Mode Command      |
| 1994 | Aux Valve 7 Fail Safe Mode              |
| 1995 | Aux Valve 8 Extend Port Measured Flow   |
| 1996 | Aux Valve 8 Retract Port Measured Flow  |
| 1997 | Aux Valve 8 Extend Port Estimated Flow  |
| 1998 | Aux Valve 8 Retract Port Estimated Flow |
| 1999 | Aux Valve 8 State                       |
| 2000 | Source Address 0                        |
| 2001 | Source Address 1                        |
| 2002 | Source Address 2                        |
| 2003 | Source Address 3                        |
| 2004 | Source Address 4                        |
| 2005 | Source Address 5                        |
| 2006 | Source Address 6                        |
| 2007 | Source Address 7                        |
| 2008 | Source Address 8                        |
| 2009 | Source Address 9                        |
| 2010 | Source Address 10                       |
| 2011 | Source Address 11                       |
| 2012 | Source Address 12                       |
| 2013 | Source Address 13                       |

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| 2014 | Source Address 14 |
| 2015 | Source Address 15 |
| 2016 | Source Address 16 |
| 2017 | Source Address 17 |
| 2018 | Source Address 18 |
| 2019 | Source Address 19 |
| 2020 | Source Address 20 |
| 2021 | Source Address 21 |
| 2022 | Source Address 22 |
| 2023 | Source Address 23 |
| 2024 | Source Address 24 |
| 2025 | Source Address 25 |
| 2026 | Source Address 26 |
| 2027 | Source Address 27 |
| 2028 | Source Address 28 |
| 2029 | Source Address 29 |
| 2030 | Source Address 30 |
| 2031 | Source Address 31 |
| 2032 | Source Address 32 |
| 2033 | Source Address 33 |
| 2034 | Source Address 34 |
| 2035 | Source Address 35 |
| 2036 | Source Address 36 |
| 2037 | Source Address 37 |
| 2038 | Source Address 38 |

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| 2039 | Source Address 39 |
| 2040 | Source Address 40 |
| 2041 | Source Address 41 |
| 2042 | Source Address 42 |
| 2043 | Source Address 43 |
| 2044 | Source Address 44 |
| 2045 | Source Address 45 |
| 2046 | Source Address 46 |
| 2047 | Source Address 47 |
| 2048 | Source Address 48 |
| 2049 | Source Address 49 |
| 2050 | Source Address 50 |
| 2051 | Source Address 51 |
| 2052 | Source Address 52 |
| 2053 | Source Address 53 |
| 2054 | Source Address 54 |
| 2055 | Source Address 55 |
| 2056 | Source Address 56 |
| 2057 | Source Address 57 |
| 2058 | Source Address 58 |
| 2059 | Source Address 59 |
| 2060 | Source Address 60 |
| 2061 | Source Address 61 |
| 2062 | Source Address 62 |
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| 2063 | Source Address 63 |
| 2064 | Source Address 64 |
| 2065 | Source Address 65 |
| 2066 | Source Address 66 |
| 2067 | Source Address 67 |
| 2068 | Source Address 68 |
| 2069 | Source Address 69 |
| 2070 | Source Address 70 |
| 2071 | Source Address 71 |
| 2072 | Source Address 72 |
| 2073 | Source Address 73 |
| 2074 | Source Address 74 |
| 2075 | Source Address 75 |
| 2076 | Source Address 76 |
| 2077 | Source Address 77 |
| 2078 | Source Address 78 |
| 2079 | Source Address 79 |
| 2080 | Source Address 80 |
| 2081 | Source Address 81 |
| 2082 | Source Address 82 |
| 2083 | Source Address 83 |
| 2084 | Source Address 84 |
| 2085 | Source Address 85 |
| 2086 | Source Address 86 |
| 2087 | Source Address 87 |



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| 2088 | Source Address 88  |
| 2089 | Source Address 89  |
| 2090 | Source Address 90  |
| 2091 | Source Address 91  |
| 2092 | Source Address 92  |
| 2093 | Source Address 93  |
| 2094 | Source Address 94  |
| 2095 | Source Address 95  |
| 2096 | Source Address 96  |
| 2097 | Source Address 97  |
| 2098 | Source Address 98  |
| 2099 | Source Address 99  |
| 2100 | Source Address 100 |
| 2101 | Source Address 101 |
| 2102 | Source Address 102 |
| 2103 | Source Address 103 |
| 2104 | Source Address 104 |
| 2105 | Source Address 105 |
| 2106 | Source Address 106 |
| 2107 | Source Address 107 |
| 2108 | Source Address 108 |
| 2109 | Source Address 109 |
| 2110 | Source Address 110 |
| 2111 | Source Address 111 |
| 2112 | Source Address 112 |

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| 2113 | Source Address 113 |
| 2114 | Source Address 114 |
| 2115 | Source Address 115 |
| 2116 | Source Address 116 |
| 2117 | Source Address 117 |
| 2118 | Source Address 118 |
| 2119 | Source Address 119 |
| 2120 | Source Address 120 |
| 2121 | Source Address 121 |
| 2122 | Source Address 122 |
| 2123 | Source Address 123 |
| 2124 | Source Address 124 |
| 2125 | Source Address 125 |
| 2126 | Source Address 126 |
| 2127 | Source Address 127 |
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| 2131 | Source Address 131 |
| 2132 | Source Address 132 |
| 2133 | Source Address 133 |
| 2134 | Source Address 134 |
| 2135 | Source Address 135 |
| 2136 | Source Address 136 |
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| 2137 | Source Address 137 |
| 2138 | Source Address 138 |
| 2139 | Source Address 139 |
| 2140 | Source Address 140 |
| 2141 | Source Address 141 |
| 2142 | Source Address 142 |
| 2143 | Source Address 143 |
| 2144 | Source Address 144 |
| 2145 | Source Address 145 |
| 2146 | Source Address 146 |
| 2147 | Source Address 147 |
| 2148 | Source Address 148 |
| 2149 | Source Address 149 |
| 2150 | Source Address 150 |
| 2151 | Source Address 151 |
| 2152 | Source Address 152 |
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| 2154 | Source Address 154 |
| 2155 | Source Address 155 |
| 2156 | Source Address 156 |
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| 2158 | Source Address 158 |
| 2159 | Source Address 159 |
| 2160 | Source Address 160 |
| 2161 | Source Address 161 |

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| 2162 | Source Address 162 |
| 2163 | Source Address 163 |
| 2164 | Source Address 164 |
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| 2171 | Source Address 171 |
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| 2180 | Source Address 180 |
| 2181 | Source Address 181 |
| 2182 | Source Address 182 |
| 2183 | Source Address 183 |
| 2184 | Source Address 184 |
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| 2186 | Source Address 186 |

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| 2187 | Source Address 187 |
| 2188 | Source Address 188 |
| 2189 | Source Address 189 |
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| 2197 | Source Address 197 |
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| 2199 | Source Address 199 |
| 2200 | Source Address 200 |
| 2201 | Source Address 201 |
| 2202 | Source Address 202 |
| 2203 | Source Address 203 |
| 2204 | Source Address 204 |
| 2205 | Source Address 205 |
| 2206 | Source Address 206 |
| 2207 | Source Address 207 |
| 2208 | Source Address 208 |
| 2209 | Source Address 209 |
| 2210 | Source Address 210 |

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| 2211 | Source Address 211 |
| 2212 | Source Address 212 |
| 2213 | Source Address 213 |
| 2214 | Source Address 214 |
| 2215 | Source Address 215 |
| 2216 | Source Address 216 |
| 2217 | Source Address 217 |
| 2218 | Source Address 218 |
| 2219 | Source Address 219 |
| 2220 | Source Address 220 |
| 2221 | Source Address 221 |
| 2222 | Source Address 222 |
| 2223 | Source Address 223 |
| 2224 | Source Address 224 |
| 2225 | Source Address 225 |
| 2226 | Source Address 226 |
| 2227 | Source Address 227 |
| 2228 | Source Address 228 |
| 2229 | Source Address 229 |
| 2230 | Source Address 230 |
| 2231 | Source Address 231 |
| 2232 | Source Address 232 |
| 2233 | Source Address 233 |
| 2234 | Source Address 234 |

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| 2235 | Source Address 235                |
| 2236 | Source Address 236                |
| 2237 | Source Address 237                |
| 2238 | Source Address 238                |
| 2239 | Source Address 239                |
| 2240 | Source Address 240                |
| 2241 | Source Address 241                |
| 2242 | Source Address 242                |
| 2243 | Source Address 243                |
| 2244 | Source Address 244                |
| 2245 | Source Address 245                |
| 2246 | Source Address 246                |
| 2247 | Source Address 247                |
| 2248 | Source Address 248                |
| 2249 | Source Address 249                |
| 2250 | Source Address 250                |
| 2251 | Source Address 251                |
| 2252 | Source Address 252                |
| 2253 | Source Address 253                |
| 2254 | Source Address 254                |
| 2255 | Source Address 255                |
| 2256 | Aux Valve 8 Extend Port Pressure  |
| 2257 | Aux Valve 8 Retract Port Pressure |
| 2258 | Aux Valve 8 Return Port Pressure  |
| 2259 | Aux Valve 8 Port Flow Command     |

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|------|------------------------------------------|
| 2260 | Aux Valve 8 State Command                |
| 2261 | Aux Valve 8 Fail Safe Mode Command       |
| 2262 | Aux Valve 8 Fail Safe Mode               |
| 2263 | Aux Valve 9 Extend Port Measured Flow    |
| 2264 | Aux Valve 9 Retract Port Measured Flow   |
| 2265 | Aux Valve 9 Extend Port Estimated Flow   |
| 2266 | Aux Valve 9 Retract Port Estimated Flow  |
| 2267 | Aux Valve 9 State                        |
| 2268 | Aux Valve 9 Extend Port Pressure         |
| 2269 | Aux Valve 9 Retract Port Pressure        |
| 2270 | Aux Valve 9 Return Port Pressure         |
| 2271 | Aux Valve 9 Port Flow Command            |
| 2272 | Aux Valve 9 State Command                |
| 2273 | Aux Valve 9 Fail Safe Mode Command       |
| 2274 | Aux Valve 9 Fail Safe Mode               |
| 2275 | Aux Valve 10 Extend Port Measured Flow   |
| 2276 | Aux Valve 10 Retract Port Measured Flow  |
| 2277 | Aux Valve 10 Extend Port Estimated Flow  |
| 2278 | Aux Valve 10 Retract Port Estimated Flow |
| 2279 | Aux Valve 10 State                       |
| 2280 | Aux Valve 10 Extend Port Pressure        |
| 2281 | Aux Valve 10 Retract Port Pressure       |
| 2282 | Aux Valve 10 Return Port Pressure        |
| 2283 | Aux Valve 10 Port Flow Command           |
|      |                                          |



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|------|------------------------------------------|
| 2284 | Aux Valve 10 State Command               |
| 2285 | Aux Valve 10 Fail Safe Mode Command      |
| 2286 | Aux Valve 10 Fail Safe Mode              |
| 2287 | Aux Valve 11 Extend Port Measured Flow   |
| 2288 | Aux Valve 11 Retract Port Measured Flow  |
| 2289 | Aux Valve 11 Extend Port Estimated Flow  |
| 2290 | Aux Valve 11 Retract Port Estimated Flow |
| 2291 | Aux Valve 11 State                       |
| 2292 | Aux Valve 11 Extend Port Pressure        |
| 2293 | Aux Valve 11 Retract Port Pressure       |
| 2294 | Aux Valve 11 Return Port Pressure        |
| 2295 | Aux Valve 11 Port Flow Command           |
| 2296 | Aux Valve 11 State Command               |
| 2297 | Aux Valve 11 Fail Safe Mode Command      |
| 2298 | Aux Valve 11 Fail Safe Mode              |
| 2299 | Aux Valve 12 Extend Port Measured Flow   |
| 2300 | Aux Valve 12 Retract Port Measured Flow  |
| 2301 | Aux Valve 12 Extend Port Estimated Flow  |
| 2302 | Aux Valve 12 Retract Port Estimated Flow |
| 2303 | Aux Valve 12 State                       |
| 2304 | Aux Valve 12 Extend Port Pressure        |
| 2305 | Aux Valve 12 Retract Port Pressure       |
| 2306 | Aux Valve 12 Return Port Pressure        |
| 2307 | Aux Valve 12 Port Flow Command           |
| 2308 | Aux Valve 12 State Command               |

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| 2309 | Aux Valve 12 Fail Safe Mode Command      |
| 2310 | Aux Valve 12 Fail Safe Mode              |
| 2311 | Aux Valve 13 Extend Port Measured Flow   |
| 2312 | Aux Valve 13 Retract Port Measured Flow  |
| 2313 | Aux Valve 13 Extend Port Estimated Flow  |
| 2314 | Aux Valve 13 Retract Port Estimated Flow |
| 2315 | Aux Valve 13 State                       |
| 2316 | Aux Valve 13 Extend Port Pressure        |
| 2317 | Aux Valve 13 Retract Port Pressure       |
| 2318 | Aux Valve 13 Return Port Pressure        |
| 2319 | Aux Valve 13 Port Flow Command           |
| 2320 | Aux Valve 13 State Command               |
| 2321 | Aux Valve 13 Fail Safe Mode Command      |
| 2322 | Aux Valve 13 Fail Safe Mode              |
| 2323 | Aux Valve 14 Extend Port Measured Flow   |
| 2324 | Aux Valve 14 Retract Port Measured Flow  |
| 2325 | Aux Valve 14 Extend Port Estimated Flow  |
| 2326 | Aux Valve 14 Retract Port Estimated Flow |
| 2327 | Aux Valve 14 State                       |
| 2328 | Aux Valve 14 Extend Port Pressure        |
| 2329 | Aux Valve 14 Retract Port Pressure       |
| 2330 | Aux Valve 14 Return Port Pressure        |
| 2331 | Aux Valve 14 Port Flow Command           |
| 2332 | Aux Valve 14 State Command               |
|      |                                          |

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|------|------------------------------------------------|
| 2333 | Aux Valve 14 Fail Safe Mode Command            |
| 2334 | Aux Valve 14 Fail Safe Mode                    |
| 2335 | Aux Valve 15 Extend Port Measured Flow         |
| 2336 | Aux Valve 15 Retract Port Measured Flow        |
| 2337 | Aux Valve 15 Extend Port Estimated Flow        |
| 2338 | Aux Valve 15 Retract Port Estimated Flow       |
| 2339 | Aux Valve 15 State                             |
| 2340 | Aux Valve 15 Extend Port Pressure              |
| 2341 | Aux Valve 15 Retract Port Pressure             |
| 2342 | Aux Valve 15 Return Port Pressure              |
| 2343 | Aux Valve 15 Port Flow Command                 |
| 2344 | Aux Valve 15 State Command                     |
| 2345 | Aux Valve 15 Fail Safe Mode Command            |
| 2346 | Aux Valve 15 Fail Safe Mode                    |
| 2347 | High Beam Head Light Command                   |
| 2348 | High Beam Head Light Data                      |
| 2349 | Low Beam Head Light Command                    |
| 2350 | Low Beam Head Light Data                       |
| 2351 | Alternate Beam Head Light Command              |
| 2352 | Alternate Beam Head Light Data                 |
| 2353 | Tractor Front Low Mounted Work Lights Command  |
| 2354 | Tractor Front Low Mounted Work Lights          |
| 2355 | Tractor Front High Mounted Work Lights Command |
| 2356 | Tractor Front High Mounted Work Lights         |
| 2357 | Tractor Underside Mounted Work Lights Command  |

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| 2358 | Tractor Underside Mounted Work Lights         |
| 2359 | Tractor Rear Low Mounted Work Lights Command  |
| 2360 | Tractor Rear Low Mounted Work Lights          |
| 2361 | Tractor Rear High Mounted Work Lights Command |
| 2362 | Tractor Rear High Mounted Work Lights         |
| 2363 | Tractor Side Low Mounted Work Lights Command  |
| 2364 | Tractor Side Low Mounted Work Lights          |
| 2365 | Tractor Side High Mounted Work Lights Command |
| 2366 | Tractor Side High Mounted Work Lights         |
| 2367 | Left Turn Signal Lights Command               |
| 2368 | Left Turn Signal Lights                       |
| 2369 | Right Turn Signal Lights Command              |
| 2370 | Right Turn Signal Lights                      |
| 2371 | Left Stop Light Command                       |
| 2372 | Left Stop Light                               |
| 2373 | Right Stop Light Command                      |
| 2374 | Right Stop Light                              |
| 2375 | Center Stop Light Command                     |
| 2376 | Center Stop Light                             |
| 2377 | Tractor Marker Light Command                  |
| 2378 | Tractor Marker Light                          |
| 2379 | Implement Marker Light Command                |
| 2380 | Implement Marker Light                        |
| 2381 | Tractor Clearance Light Command               |
| 2382 | Tractor Clearance Light                       |

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|------|--------------------------------------------|
| 2383 | Implement Clearance Light Command          |
| 2384 | Implement Clearance Light                  |
| 2385 | Rotating Beacon Light Command              |
| 2386 | Rotating Beacon Light                      |
| 2387 | Tractor Front Fog Lights Command           |
| 2388 | Tractor Front Fog Lights                   |
| 2389 | Rear Fog Light Command                     |
| 2390 | Rear Fog Lights                            |
| 2391 | Back Up Light and Alarm Horn Command       |
| 2392 | Back Up Light and Alarm Horn               |
| 2393 | Lighting Data Request Command              |
| 2394 | Implement Rear Work Light                  |
| 2395 | Implement OEM Option 1 Light Command       |
| 2396 | Implement OEM Option 1 Light               |
| 2397 | Implement OEM Option 2 Light Command       |
| 2398 | Implement OEM Option 2 Light               |
| 2399 | Implement Left Forward Work Light Command  |
| 2400 | Implement Left Forward Work Light          |
| 2401 | Implement Right Forward Work Light Command |
| 2402 | Implement Right Forward Work Light         |
| 2403 | Running Light Command                      |
| 2404 | Running Light                              |
| 2405 | Implement Rear Work Light Command          |
| 2406 | Implement Right Facing Work Light Command  |
|      |                                            |

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|------|---------------------------------------|
| 2407 | Implement Right Facing Work Light     |
| 2408 | Rear Power Takeoff Engagement         |
| 2409 | Number of Members in Working Set 1    |
| 2410 | Language Code Command                 |
| 2411 | Decimal Symbol Command                |
| 2412 | Date Command                          |
| 2413 | Time Command                          |
| 2414 | Distance Unit Command                 |
| 2415 | Area Unit Command                     |
| 2416 | Volume Unit Command                   |
| 2417 | Mass Unit Command 1                   |
| 2418 | Repetition Rate Parameter 1           |
| 2419 | Data Format/Error Condition 1         |
| 2420 | Process Data Type 1                   |
| 2421 | Process Data Modifier 1               |
| 2422 | Count Number                          |
| 2423 | Group Number                          |
| 2424 | Element Number                        |
| 2425 | Implement Type 1                      |
| 2426 | Implement Position 1                  |
| 2427 | Data Dictionary Row 1                 |
| 2428 | Data Dictionary Column 1              |
| 2429 | Process Variable Value                |
| 2430 | Engine Coolant Level – Main Radiator  |
| 2431 | Engine Oil Rail High Pressure Leakage |

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|------|---------------------------------------------------------|
| 2432 | Engine Demand Percent Torque                            |
| 2433 | Engine Exhaust Exhaust Gas Temperature – Right Manifold |
| 2434 | Engine Exhaust Exhaust Gas Temperature -Left Manifold   |
| 2435 | Seawater Pump Outlet Pressure                           |
| 2436 | Generator Average AC Frequency                          |
| 2437 | Generator Phase A AC Frequency                          |
| 2438 | Generator Phase B AC Frequency                          |
| 2439 | Generator Phase C AC Frequency                          |
| 2440 | Generator Average Line-Line AC RMS Voltage              |
| 2441 | Generator Phase AB Line-Line AC RMS Voltage             |
| 2442 | Generator Phase BC Line-Line AC RMS Voltage             |
| 2443 | Generator Phase CA Line-Line AC RMS Voltage             |
| 2444 | Generator Average Line-Neutral AC RMS Voltage           |
| 2445 | Generator Phase A Line-Neutral AC RMS Voltage           |
| 2446 | Generator Phase B Line-Neutral AC RMS Voltage           |
| 2447 | Generator Phase C Line-Neutral AC RMS Voltage           |
| 2448 | Generator Average AC RMS Current                        |
| 2449 | Generator Phase A AC RMS Current                        |
| 2450 | Generator Phase B AC RMS Current                        |
| 2451 | Generator Phase C AC RMS Current                        |
| 2452 | Generator Total Real Power                              |
| 2453 | Generator Phase A Real Power                            |
| 2454 | Generator Phase B Real Power                            |
| 2455 | Generator Phase C Real Power                            |
| 2456 | Generator Total Reactive Power                          |

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| 2457 | Generator Phase A Reactive Power            |
| 2458 | Generator Phase B Reactive Power            |
| 2459 | Generator Phase C Reactive Power            |
| 2460 | Generator Total Apparent Power              |
| 2461 | Generator Phase A Apparent Power            |
| 2462 | Generator Phase B Apparent Power            |
| 2463 | Generator Phase C Apparent Power            |
| 2464 | Generator Overall Power Factor              |
| 2465 | Generator Phase A Power Factor              |
| 2466 | Generator Phase B Power Factor              |
| 2467 | Generator Phase C Power Factor              |
| 2468 | Generator Total kW Hours Export             |
| 2469 | Generator Total kW Hours Import             |
| 2470 | Utility Average AC Frequency                |
| 2471 | Utility Phase A AC Frequency                |
| 2472 | Utility Phase B AC Frequency                |
| 2473 | Utility Phase C AC Frequency                |
| 2474 | Utility Average Line-Line AC RMS Voltage    |
| 2475 | Utility Phase AB Line-Line AC RMS Voltage   |
| 2476 | Utility Phase BC Line-Line AC RMS Voltage   |
| 2477 | Utility Phase CA Line-Line AC RMS Voltage   |
| 2478 | Utility Average Line-Neutral AC RMS Voltage |
| 2479 | Utility Phase A Line-Neutral AC RMS Voltage |
| 2480 | Utility Phase B Line-Neutral AC RMS Voltage |



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|------|---------------------------------------------|
| 2481 | Utility Phase C Line-Neutral AC RMS Voltage |
| 2482 | Utility Average AC RMS Current              |
| 2483 | Utility Phase A AC RMS Current              |
| 2484 | Utility Phase B AC RMS Current              |
| 2485 | Utility Phase C AC RMS Current              |
| 2486 | Utility Total Real Power                    |
| 2487 | Utility Phase A Real Power                  |
| 2488 | Utility Phase B Real Power                  |
| 2489 | Utility Phase C Real Power                  |
| 2490 | Utility Total Reactive Power                |
| 2491 | Utility Phase A Reactive Power              |
| 2492 | Utility Phase B Reactive Power              |
| 2493 | Utility Phase C Reactive Power              |
| 2494 | Utility Total Apparent Power                |
| 2495 | Utility Phase A Apparent Power              |
| 2496 | Utility Phase B Apparent Power              |
| 2497 | Utility Phase C Apparent Power              |
| 2498 | Utility Overall Power Factor                |
| 2499 | Utility Phase A Power Factor                |
| 2500 | Utility Phase B Power Factor                |
| 2501 | Utility Phase C Power Factor                |
| 2502 | Utility Total kW Hours Export               |
| 2503 | Utility Total kW Hours Import               |
| 2504 | Bus #1 Average AC Frequency                 |
|      |                                             |

|      |                                            |
|------|--------------------------------------------|
| 2505 | Bus #1 Phase A AC Frequency                |
| 2506 | Bus #1 Phase B AC Frequency                |
| 2507 | Bus #1 Phase C AC Frequency                |
| 2508 | Bus #1 Average Line-Line AC RMS Voltage    |
| 2509 | Bus #1 Phase AB Line-Line AC RMS Voltage   |
| 2510 | Bus #1 Phase BC Line-Line AC RMS Voltage   |
| 2511 | Bus #1 Phase CA Line-Line AC RMS Voltage   |
| 2512 | Bus #1 Average Line-Neutral AC RMS Voltage |
| 2513 | Bus #1 Phase A Line-Neutral AC RMS Voltage |
| 2514 | Bus #1 Phase B Line-Neutral AC RMS Voltage |
| 2515 | Bus #1 Phase C Line-Neutral AC RMS Voltage |
| 2516 | Bus #1/Generator AC Phase Difference       |
| 2517 | Bus #1/Utility AC Phase Difference         |
| 2518 | Generator Overall Power Factor Lagging     |
| 2519 | Generator Phase A Power Factor Lagging     |
| 2520 | Generator Phase B Power Factor Lagging     |
| 2521 | Generator Phase C Power Factor Lagging     |
| 2522 | Utility Overall Power Factor Lagging       |
| 2523 | Utility Phase A Power Factor Lagging       |
| 2524 | Utility Phase B Power Factor Lagging       |
| 2525 | Utility Phase C Power Factor Lagging       |
| 2526 | Bus #1/Generator Phase Match               |
| 2527 | Bus #1/Generator Voltage Match             |
| 2528 | Bus #1/Generator Frequency Match           |
|      |                                            |

|      |                                                 |
|------|-------------------------------------------------|
| 2529 | Bus #1/Generator In Sync                        |
| 2530 | Bus #1/Generator Dead Bus                       |
| 2531 | Bus #1/Utility Phase Match                      |
| 2532 | Bus #1/Utility Voltage Match                    |
| 2533 | Bus #1/Utility Frequency Match                  |
| 2534 | Bus #1/Utility In Sync                          |
| 2535 | Bus #1/Utility Dead Bus                         |
| 2536 | Transmission Mode 1 Indicator                   |
| 2537 | Transmission Mode 2 Indicator                   |
| 2538 | Transmission Mode 3 Indicator                   |
| 2539 | Transmission Mode 4 Indicator                   |
| 2540 | Parameter Group Number                          |
| 2541 | Control Byte                                    |
| 2542 | Group Function Value                            |
| 2543 | Parameter Group Number                          |
| 2544 | Group Function Value                            |
| 2545 | Parameter Group Number                          |
| 2546 | Group Function Value                            |
| 2547 | Parameter Group Number                          |
| 2548 | Group Function Value                            |
| 2549 | Parameter Group Number                          |
| 2550 | Manufacturer Specific Information               |
| 2551 | Manufacturer Defined Usage (PropB_PDU2) 1       |
| 2552 | Parameter Group Number of Requested Information |
|      |                                                 |

|      |                                                |
|------|------------------------------------------------|
| 2553 | Length of data for the reported PGN            |
| 2554 | Short Name of Actual Reporting Device          |
| 2555 | Transfer Data                                  |
| 2556 | Control Byte                                   |
| 2557 | Total Message Size (TP.CM_RTS) 1               |
| 2558 | Total Number of Packets                        |
| 2559 | Maximum Number of Packets                      |
| 2560 | Parameter Group Number of the packeted message |
| 2561 | Number of Packets that can be sent             |
| 2562 | Next Packet Number to be sent                  |
| 2563 | Parameter Group Number of the packeted message |
| 2564 | Total Message Size                             |
| 2565 | Total Number of Packets                        |
| 2566 | Parameter Group Number of the packeted message |
| 2567 | Total Message Size                             |
| 2568 | Total Number of Packets                        |
| 2569 | Parameter Group Number of the packeted message |
| 2570 | Connection Abort Reason                        |
| 2571 | Parameter Group Number of packeted message     |
| 2572 | Sequence Number                                |
| 2573 | Packetized Data                                |
| 2574 | Parameter Group Number                         |
| 2575 | Use Transfer Mode                              |
| 2576 | Laser Receiver Type                            |
| 2577 | Display Deadbands                              |

|      |                                                  |
|------|--------------------------------------------------|
| 2578 | LED Pattern Control                              |
| 2579 | Net Battery Current                              |
| 2580 | Hydraulic Brake Pressure Circuit 1               |
| 2581 | Hydraulic Brake Pressure Circuit 2               |
| 2582 | Hydraulic Brake Pressure Supply State Circuit 1  |
| 2583 | Hydraulic Brake Pressure Supply State Circuit 2  |
| 2584 | Hydraulic Brake Pressure Warning State Circuit 1 |
| 2585 | Hydraulic Brake Pressure Warning State Circuit 2 |
| 2586 | Tire Air Leakage Rate                            |
| 2587 | Tire Pressure Threshold Detection                |
| 2588 | Maximum Vehicle Speed Limit 1                    |
| 2589 | Maximum Vehicle Speed Limit 2                    |
| 2590 | Maximum Vehicle Speed Limit 3                    |
| 2591 | Maximum Vehicle Speed Limit 4                    |
| 2592 | Maximum Vehicle Speed Limit 5                    |
| 2593 | Maximum Vehicle Speed Limit 6                    |
| 2594 | Maximum Vehicle Speed Limit 7                    |
| 2595 | Applied Vehicle Speed Limit                      |
| 2596 | Selected Maximum Vehicle Speed Limit             |
| 2597 | Implement Left Facing Work Light Command         |
| 2598 | Implement Left Facing Work Light                 |
| 2599 | Fire Apparatus Pump Engagement                   |
| 2600 | Payload Percentage                               |
| 2601 | Travel Velocity Control Position                 |
|      |                                                  |

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|------|------------------------------------------------------|
| 2602 | Hydraulic Oil Level                                  |
| 2603 | Pneumatic Supply Pressure Request                    |
| 2604 | Parking and/or Trailer Air Pressure Request          |
| 2605 | Service Brake Air Pressure Request, Circuit #1       |
| 2606 | Service Brake Air Pressure Request, Circuit #2       |
| 2607 | Auxiliary Equipment Supply Pressure Request          |
| 2608 | Air Suspension Supply Pressure Request               |
| 2609 | Cab A/C Refrigerant Compressor Outlet Pressure       |
| 2610 | Solar Intensity Percent                              |
| 2611 | Solar Sensor Maximum                                 |
| 2612 | Front Wheel Drive Actuator Status                    |
| 2613 | Drive Axle Lube Pressure                             |
| 2614 | Steering Axle Lube Pressure                          |
| 2615 | Engine Throttle Synchronization Mode Status          |
| 2616 | Trolling Mode Status                                 |
| 2617 | Slow Vessel Mode Status                              |
| 2618 | Suspend Signal                                       |
| 2619 | Suspend Duration                                     |
| 2620 | Brake Lining Display                                 |
| 2621 | Pneumatic Brake Pressure Limitation Valve Front Axle |
| 2622 | Hillholder system                                    |
| 2623 | Accelerator Pedal #1 Channel #2                      |
| 2624 | Accelerator Pedal #1 Channel #3                      |
| 2625 | Accelerator Pedal #2 Channel #2                      |
| 2626 | Accelerator Pedal #2 Channel #3                      |

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|------|---------------------------------------------------------------|
| 2627 | Engine Gaseous Fuel Shutoff Valve – High Pressure             |
| 2628 | Engine Gaseous Fuel Shutoff Valve – Low Pressure              |
| 2629 | Engine Turbocharger 1 Compressor Outlet Temperature           |
| 2630 | Engine Charge Air Cooler Outlet Temperature                   |
| 2631 | Engine Charge Air Cooler Outlet Pressure                      |
| 2632 | Engine Charge Air Cooler Bypass                               |
| 2633 | Engine Variable Geometry Turbocharger (VGT) 1 Nozzle Position |
| 2634 | Power Relay                                                   |
| 2635 | Neutral Only Power Relay                                      |
| 2636 | Windshield Wiper Motor ON/OFF                                 |
| 2637 | Windshield Wiper Motor Speed                                  |
| 2638 | Differential Lock Control Valve #2                            |
| 2639 | Cab Door “Lock” Control                                       |
| 2640 | Cab Door “Unlock” Control                                     |
| 2641 | Horn                                                          |
| 2642 | Mirror Heater                                                 |
| 2643 | Battery Monitor Load #1                                       |
| 2644 | Battery Monitor Load #2                                       |
| 2645 | ECU “Wake Up” Control                                         |
| 2646 | Auxiliary Output #4                                           |
| 2647 | Auxiliary Output #5                                           |
| 2648 | Maintenance Lamp                                              |
| 2649 | Low Air Pressure                                              |
| 2650 | Fan Override Indicator                                        |

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|------|-----------------------------------------------------------------|
| 2651 | Interior Lamps                                                  |
| 2652 | Switch Diagnostic Enable                                        |
| 2653 | Headlamp Low Beam Left #1                                       |
| 2654 | Headlamp Low Beam Left #2                                       |
| 2655 | Headlamp Low Beam Right #1                                      |
| 2656 | Headlamp Low Beam Right #2                                      |
| 2657 | Engine Auxiliary Cooling System                                 |
| 2658 | Engine Inlet Air Precleaner                                     |
| 2659 | Engine Exhaust Gas Recirculation (EGR) Mass Flow Rate           |
| 2660 | Joystick 1 X-Axis Position                                      |
| 2661 | Joystick 1 Y-Axis Position                                      |
| 2662 | Joystick 1 Grip X-Axis Position                                 |
| 2663 | Joystick 1 Grip Y-Axis Position                                 |
| 2664 | Joystick 1 Theta-Axis Position                                  |
| 2665 | Joystick 1 X-Axis Lever Right Positive Position Status          |
| 2666 | Joystick 1 Y-Axis Lever Forward Positive Position Status        |
| 2667 | Joystick 1 Grip X-Axis Lever Right Positive Position Status     |
| 2668 | Joystick 1 Grip Y-Axis Lever Forward Positive Position Status   |
| 2669 | Joystick 1 Theta-Axis Clockwise Positive Position Status        |
| 2670 | Joystick 1 X-Axis Lever Left Negative Position Status           |
| 2671 | Joystick 1 Y-Axis Lever Back Negative Position Status           |
| 2672 | Joystick 1 Grip X-Axis Lever Left Negative Position Status      |
| 2673 | Joystick 1 Grip Y-Axis Lever Back Negative Position Status      |
| 2674 | Joystick 1 Theta-Axis Counterclockwise Negative Position Status |
| 2675 | Joystick 1 X-Axis Neutral Position Status                       |



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|------|------------------------------------------------|
| 2676 | Joystick 1 Y-Axis Neutral Position Status      |
| 2677 | Joystick 1 Grip X-Axis Neutral Position Status |
| 2678 | Joystick 1 Grip Y-Axis Neutral Position Status |
| 2679 | Joystick 1 Theta-Axis Neutral Position Status  |
| 2680 | Joystick 1 X-Axis Detent Position Status       |
| 2681 | Joystick 1 Y-Axis Detent Position Status       |
| 2682 | Joystick 1 Grip X-Axis Detent Position Status  |
| 2683 | Joystick 1 Grip Y-Axis Detent Position Status  |
| 2684 | Joystick 1 Theta-Axis Detent Position Status   |
| 2685 | Joystick 1 Button 1 Pressed Status             |
| 2686 | Joystick 1 Button 2 Pressed Status             |
| 2688 | Joystick 1 Button 4 Pressed Status             |
| 2689 | Joystick 1 Button 5 Pressed Status             |
| 2690 | Joystick 1 Button 6 Pressed Status             |
| 2691 | Joystick 1 Button 7 Pressed Status             |
| 2692 | Joystick 1 Button 8 Pressed Status             |
| 2693 | Joystick 1 Button 9 Pressed Status             |
| 2694 | Joystick 1 Button 10 Pressed Status            |
| 2695 | Joystick 1 Button 11 Pressed Status            |
| 2696 | Joystick 1 Button 12 Pressed Status            |
| 2697 | Joystick 2 X-Axis Position                     |
| 2698 | Joystick 2 Y-Axis Position                     |
| 2699 | Joystick 2 Grip X-Axis Position                |
| 2700 | Joystick 2 Grip Y-Axis Position                |

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|------|-----------------------------------------------------------------|
| 2701 | Joystick 2 Theta-Axis Position                                  |
| 2702 | Joystick 2 X-Axis Lever Right Positive Position Status          |
| 2703 | Joystick 2 Y-Axis Lever Forward Positive Position Status        |
| 2704 | Joystick 2 Grip X-Axis Lever Right Positive Position Status     |
| 2705 | Joystick 2 Grip Y-Axis Lever Forward Positive Position Status   |
| 2706 | Joystick 2 Theta-Axis Clockwise Positive Position Status        |
| 2707 | Joystick 2 X-Axis Lever Left Negative Position Status           |
| 2708 | Joystick 2 Y-Axis Lever Back Negative Position Status           |
| 2709 | Joystick 2 Grip X-Axis Lever Left Negative Position Status      |
| 2710 | Joystick 2 Grip Y-Axis Lever Back Negative Position Status      |
| 2711 | Joystick 2 Theta-Axis Counterclockwise Negative Position Status |
| 2712 | Joystick 2 X-Axis Neutral Position Status                       |
| 2713 | Joystick 2 Y-Axis Neutral Position Status                       |
| 2714 | Joystick 2 Grip X-Axis Neutral Position Status                  |
| 2715 | Joystick 2 Grip Y-Axis Neutral Position Status                  |
| 2716 | Joystick 2 Theta-Axis Neutral Position Status                   |
| 2717 | Joystick 2 X-Axis Detent Position Status                        |
| 2718 | Joystick 2 Y-Axis Detent Position Status                        |
| 2719 | Joystick 2 Grip X-Axis Detent Position Status                   |
| 2720 | Joystick 2 Grip Y-Axis Detent Position Status                   |
| 2721 | Joystick 2 Theta-Axis Detent Position Status                    |
| 2722 | Joystick 2 Button 1 Pressed Status                              |
| 2723 | Joystick 2 Button 2 Pressed Status                              |
| 2724 | Joystick 2 Button 3 Pressed Status                              |
| 2725 | Joystick 2 Button 4 Pressed Status                              |

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|------|-----------------------------------------------------------------|
| 2726 | Joystick 2 Button 5 Pressed Status                              |
| 2727 | Joystick 2 Button 6 Pressed Status                              |
| 2728 | Joystick 2 Button 7 Pressed Status                              |
| 2729 | Joystick 2 Button 8 Pressed Status                              |
| 2730 | Joystick 2 Button 9 Pressed Status                              |
| 2731 | Joystick 2 Button 10 Pressed Status                             |
| 2732 | Joystick 2 Button 11 Pressed Status                             |
| 2733 | Joystick 2 Button 12 Pressed Status                             |
| 2734 | Joystick 3 X-Axis Position                                      |
| 2735 | Joystick 3 Y-Axis Position                                      |
| 2736 | Joystick 3 Grip X-Axis Position                                 |
| 2737 | Joystick 3 Grip Y-Axis Position                                 |
| 2738 | Joystick 3 Theta-Axis Position                                  |
| 2739 | Joystick 3 X-Axis Lever Right Positive Position Status          |
| 2740 | Joystick 3 Y-Axis Lever Forward Positive Position Status        |
| 2741 | Joystick 3 Grip X-Axis Lever Right Positive Position Status     |
| 2742 | Joystick 3 Grip Y-Axis Lever Forward Positive Position Status   |
| 2743 | Joystick 3 Theta-Axis Clockwise Positive Position Status        |
| 2744 | Joystick 3 X-Axis Lever Left Negative Position Status           |
| 2745 | Joystick 3 Y-Axis Lever Back Negative Position Status           |
| 2746 | Joystick 3 Grip X-Axis Lever Left Negative Position Status      |
| 2747 | Joystick 3 Grip Y-Axis Lever Back Negative Position Status      |
| 2748 | Joystick 3 Theta-Axis Counterclockwise Negative Position Status |
| 2749 | Joystick 3 X-Axis Neutral Position Status                       |
|      |                                                                 |

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|------|------------------------------------------------|
| 2750 | Joystick 3 Y-Axis Neutral Position Status      |
| 2751 | Joystick 3 Grip X-Axis Neutral Position Status |
| 2752 | Joystick 3 Grip Y-Axis Neutral Position Status |
| 2753 | Joystick 3 Theta-Axis Neutral Position Status  |
| 2754 | Joystick 3 X-Axis Detent Position Status       |
| 2755 | Joystick 3 Y-Axis Detent Position Status       |
| 2756 | Joystick 3 Grip X-Axis Detent Position Status  |
| 2757 | Joystick 3 Grip Y-Axis Detent Position Status  |
| 2758 | Joystick 3 Theta-Axis Detent Position Status   |
| 2759 | Joystick 3 Button 1 Pressed Status             |
| 2760 | Joystick 3 Button 2 Pressed Status             |
| 2761 | Joystick 3 Button 3 Pressed Status             |
| 2762 | Joystick 3 Button 4 Pressed Status             |
| 2763 | Joystick 3 Button 5 Pressed Status             |
| 2764 | Joystick 3 Button 6 Pressed Status             |
| 2765 | Joystick 3 Button 7 Pressed Status             |
| 2766 | Joystick 3 Button 8 Pressed Status             |
| 2767 | Joystick 3 Button 9 Pressed Status             |
| 2768 | Joystick 3 Button 10 Pressed Status            |
| 2769 | Joystick 3 Button 11 Pressed Status            |
| 2770 | Joystick 3 Button 12 Pressed Status            |
| 2771 | Reserved for assignment                        |
| 2772 | Reserved for assignment                        |
| 2773 | Reserved for assignment                        |
| 2774 | Reserved for assignment                        |

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|------|-----------------------------------------------------------------------|
| 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            |
| 2790 | Engine Turbocharger 1 Calculated Turbine Outlet Temperature           |
| 2791 | Engine Exhaust Gas Recirculation (EGR) Valve Control                  |
| 2792 | Engine Variable Geometry Turbocharger (VGT) Air Control Shutoff Valve |
| 2793 | Laser Strike Data Latency                                             |
| 2794 | Absolute Laser Strike Position                                        |
| 2795 | Engine Variable Geometry Turbocharger (VGT) 1 Actuator Position       |
| 2796 | Transfer Case Selector Switch                                         |
| 2797 | Engine Injector Group 1                                               |
| 2798 | Engine Injector Group 2                                               |
|      |                                                                       |

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|------|------------------------------------------------------------------|
| 2799 | Engine Turbocharger 2 Compressor Outlet Temperature              |
| 2800 | Engine Turbocharger 3 Compressor Outlet Temperature              |
| 2801 | Engine Turbocharger 4 Compressor Outlet Temperature              |
| 2802 | Data Memory Usage                                                |
| 2803 | Keep-Alive Battery Consumption                                   |
| 2804 | FMS-standard Diagnostics Supported                               |
| 2805 | FMS-standard Requests Supported                                  |
| 2806 | FMS-standard SW-version supported                                |
| 2807 | Engine Fuel Shutoff Valve #2                                     |
| 2808 | Keypad                                                           |
| 2809 | Engine Air Filter 2 Differential Pressure                        |
| 2810 | Engine Air Filter 3 Differential Pressure                        |
| 2811 | Engine Air Filter 4 Differential Pressure                        |
| 2812 | Engine Overspeed Test                                            |
| 2813 | Engine Air Shutoff Command Status                                |
| 2814 | Engine Alarm Output Command Status                               |
| 2815 | Engine Alarm Acknowledge                                         |
| 2816 | Simultaneous Upshift and Downshift                               |
| 2817 | Operator Using Clutch Pedal During Non- Recoverable Clutch Fault |
| 2818 | Operators Rear PTO Switch On with Operator Not Present           |
| 2819 | Park Interlock Error                                             |
| 2820 | Operator Not Present During Reverser Command                     |
| 2821 | Reverser Lever Neutral and Power Signals Conflict                |
| 2822 | Reverser Lever Neither Forward or Reverse                        |
|      |                                                                  |

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|------|------------------------------------------------------------|
| 2823 | Reverser Lever Simultaneous Forward and Reverse            |
| 2824 | Reverser Lever Motion Interlock Conflict                   |
| 2825 | Reverser Lever                                             |
| 2826 | Reverser Lever Multiple Switch Conflicts                   |
| 2827 | Power Up Without Neutral                                   |
| 2828 | Reverser Lever In Power Zero/Direction Transition Too Long |
| 2829 | Reverser Lever in Neutral/Park Transition Too Long         |
| 2830 | Reversing Ratio Rationality Fault                          |
| 2831 | No Carrier Speed at Start-up                               |
| 2832 | Operator Not in Operating Station                          |
| 2833 | Motion with Park Brake Engaged                             |
| 2834 | No Hydrostatic Unit Speed at Start-up                      |
| 2835 | Neutral to Gear Command Conflict                           |
| 2836 | Battery #1 Potential 2 (Voltage), Switched                 |
| 2837 | Identity Number                                            |
| 2838 | Manufacturer Code                                          |
| 2839 | Function Instance                                          |
| 2840 | ECU Instance                                               |
| 2841 | Function                                                   |
| 2842 | Vehicle System                                             |
| 2843 | Vehicle System Instance                                    |
| 2844 | Arbitrary Address Capable                                  |
| 2845 | NAME of Working Set Member                                 |
| 2846 | Industry Group                                             |
| 2847 | Address Assignment                                         |

|      |                                                         |
|------|---------------------------------------------------------|
| 2848 | NAME of Controller Application                          |
| 2849 | NAME of Commanded Address Target                        |
| 2850 | Communications Antenna                                  |
| 2851 | Communications Service Personal Identification Number   |
| 2852 | Communications Service Subscriber Identification Module |
| 2853 | Communications Connection                               |
| 2854 | Communications Carrier                                  |
| 2855 | Communications Bit Error Rate                           |
| 2856 | Communications Data Upload                              |
| 2857 | Communications Data Download                            |
| 2858 | Machine Data Configuration 1                            |
| 2859 | Machine Data Configuration 2                            |
| 2860 | Machine Data Configuration 3                            |
| 2861 | Machine Data Configuration 4                            |
| 2862 | Machine Data Configuration 5                            |
| 2863 | Front Operator Wiper Switch                             |
| 2864 | Front Non-operator Wiper Switch                         |
| 2865 | Rear Wiper Switch                                       |
| 2866 | Front Operator Washer Switch                            |
| 2867 | Front Non-operator Washer Switch                        |
| 2868 | Rear Washer Function                                    |
| 2869 | Front Operator Wiper Delay Control                      |
| 2870 | Front Non-operator Wiper Delay Control                  |
| 2871 | Rear Wiper Delay Control                                |
| 2872 | Main Light Switch                                       |



|      |                                                         |
|------|---------------------------------------------------------|
| 2873 | Work Light Switch                                       |
| 2874 | High-Low Beam Switch                                    |
| 2875 | Hazard Light Switch                                     |
| 2876 | Turn Signal Switch                                      |
| 2877 | Operators Desired – Delayed Lamp Off Time               |
| 2878 | Operators Desired Back-light                            |
| 2879 | Engine Alternate Droop Accelerator 2 Select             |
| 2880 | Engine Operator Primary Intermediate Speed Select       |
| 2881 | Engine Alternate Droop Accelerator 1 Select             |
| 2882 | Engine Alternate Rating Select                          |
| 2883 | Engine Alternate Low Idle Switch                        |
| 2884 | Engine Auxiliary Governor Switch                        |
| 2885 | Engine Alternate Droop Auxiliary Input Select           |
| 2886 | Engine Alternate Droop Remote Accelerator Select        |
| 2887 | Total Count of Configuration Changes Made               |
| 2888 | Engine Alternate Rating Select State                    |
| 2889 | Engine Alternate Droop Accelerator 1 Select State       |
| 2890 | Engine Multi-Unit Sync State                            |
| 2891 | Engine Alternate Low Idle Select State                  |
| 2892 | Engine Operator Primary Intermediate Speed Select State |
| 2893 | Engine Alternate Droop Accelerator 2 Select State       |
| 2894 | Engine Alternate Droop Remote Accelerator Select State  |
| 2895 | Engine Alternate Droop Auxiliary Input Select State     |
| 2896 | Engine Auxiliary Governor State                         |
|      |                                                         |

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|------|----------------------------------------------------|
| 2897 | Operator PTO Memory Select Switch                  |
| 2898 | Engine Start Enable Device 2 Configuration         |
| 2899 | Engine Start Enable Device 1 Configuration         |
| 2900 | Transmission Engine Crank Enable                   |
| 2901 | ECU Part Number                                    |
| 2902 | ECU Serial Number                                  |
| 2903 | ECU Location                                       |
| 2904 | ECU Type                                           |
| 2905 | Transmission Range Clutch C7 Solenoid              |
| 2906 | Transmission Range Clutch C8 Solenoid              |
| 2907 | Transmission Axle Disconnect Clutch Valve Actuator |
| 2908 | Transmission Boost Pressure Valve Actuator         |
| 2909 | Torque Converter Modulating Clutch Valve Actuator  |
| 2910 | Transmission PTO Clutch Valve Actuator             |
| 2911 | Halt brake switch                                  |
| 2912 | Hill holder mode                                   |
| 2913 | Halt brake mode                                    |
| 2914 | XBR EBI Mode                                       |
| 2915 | XBR Priority                                       |
| 2916 | XBR Control Mode                                   |
| 2917 | XBR System State                                   |
| 2918 | XBR Active Control Mode                            |
| 2919 | Foundation Brake Use                               |
| 2920 | External Acceleration Demand                       |
| 2921 | XBR Acceleration Limit                             |

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|------|------------------------------------------------|
| 2922 | Steerable Lift Axle Lowering Inhibit           |
| 2923 | Status of Steering Axle                        |
| 2924 | Steering Type                                  |
| 2925 | Type of Steering Forces                        |
| 2926 | Type of Steering Transmission                  |
| 2927 | Actual Inner wheel steering angle              |
| 2928 | Axle Location                                  |
| 2930 | Hydraulic Brake System Audible Warning Command |
| 2931 | Hydraulic Brake Fluid Level Switch             |
| 2932 | Valve State                                    |
| 2933 | Valve State Command                            |
| 2934 | Valve Fail Safe Mode                           |
| 2935 | Valve Fail Safe Mode Command                   |
| 2936 | General Purpose Valve Number                   |
| 2937 | Extend Port Measured Flow                      |
| 2938 | Retract Port Measured Flow                     |
| 2939 | Extend Port Estimated Flow                     |
| 2940 | Retract Port Estimated Flow                    |
| 2941 | Extend Port Pressure                           |
| 2942 | Retract Port Pressure                          |
| 2943 | Return Port Pressure                           |
| 2944 | Port Flow Command                              |
| 2945 | Active Shift Console Indicator                 |
| 2946 | Engine Mixer Inlet Relative Humidity           |
|      |                                                |

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|------|-----------------------------------------------------------------|
| 2947 | Engine Fuel Rack Position #2                                    |
| 2948 | Engine Intake Valve Actuation System Oil Pressure               |
| 2949 | Engine Intake Valve Actuation System Oil Pressure Control Valve |
| 2950 | Engine Intake Valve Actuator #1                                 |
| 2951 | Engine Intake Valve Actuator #2                                 |
| 2952 | Engine Intake Valve Actuator #3                                 |
| 2953 | Engine Intake Valve Actuator #4                                 |
| 2954 | Engine Intake Valve Actuator #5                                 |
| 2955 | Engine Intake Valve Actuator #6                                 |
| 2956 | Engine Intake Valve Actuator #7                                 |
| 2957 | Engine Intake Valve Actuator #8                                 |
| 2958 | Engine Intake Valve Actuator #9                                 |
| 2959 | Engine Intake Valve Actuator #10                                |
| 2960 | Engine Intake Valve Actuator #11                                |
| 2961 | Engine Intake Valve Actuator #12                                |
| 2962 | Engine Intake Valve Actuator #13                                |
| 2963 | Engine Intake Valve Actuator #14                                |
| 2964 | Engine Intake Valve Actuator #15                                |
| 2965 | Engine Intake Valve Actuator #16                                |
| 2966 | Engine Intake Valve Actuator #17                                |
| 2967 | Engine Intake Valve Actuator #18                                |
| 2968 | Engine Intake Valve Actuator #19                                |
| 2969 | Engine Intake Valve Actuator #20                                |
| 2970 | Accelerator Pedal #2 Low Idle Switch                            |
| 2971 | Accelerator Pedal #3 Low Idle Switch                            |

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|------|------------------------------------------------------|
| 2972 | Accelerator Pedal Position #1 Output #2              |
| 2973 | Accelerator Pedal Position #1 Output #3              |
| 2974 | Accelerator Pedal Position #2 Output #2              |
| 2975 | Accelerator Pedal Position #2 Output #3              |
| 2976 | Accelerator Pedal Position #3 Output #2              |
| 2977 | Accelerator Pedal Position #3 Output #3              |
| 2978 | Estimated Engine Parasitic Losses – Percent Torque   |
| 2979 | Vehicle Acceleration Rate Limit Status               |
| 2980 | Engine Fuel Valve #1 Outlet Absolute Pressure        |
| 2981 | Engine Coolant Loop 2 Pressure                       |
| 2982 | Engine Coolant Loop 2 Temperature                    |
| 2983 | Clutch Life Remaining                                |
| 2984 | Automatic traction help                              |
| 2985 | Transmission Shift Selector Display Mode Switch      |
| 2986 | Engine Intake Valve Actuation System Oil Temperature |
| 2987 | Engine will not start, pre-lube system issue         |
| 2988 | Engine Coolant Diverter Valve                        |
| 2989 | Combine separator speed                              |
| 2990 | Reserved by SAE                                      |
| 2991 | Tailings volume                                      |
| 2992 | Move reel forward                                    |
| 2993 | Move reel aft                                        |
| 2994 | Reel raise                                           |
| 2995 | Reel lower                                           |

|      |                               |
|------|-------------------------------|
| 2996 | Header raise slow             |
| 2997 | Header lower slow             |
| 2998 | Header raise fast             |
| 2999 | Header lower fast             |
| 3000 | Tilt header left              |
| 3001 | Tilt header right             |
| 3002 | Header fold                   |
| 3003 | Header unfold                 |
| 3004 | Draper speed increment        |
| 3005 | Draper speed decrement        |
| 3006 | Reel speed increment          |
| 3007 | Reel speed decrement          |
| 3008 | Threshing clearance increment |
| 3009 | Threshing clearance decrement |
| 3010 | Threshing speed increment     |
| 3011 | Threshing speed decrement     |
| 3012 | Product fan speed increment   |
| 3013 | Product fan speed decrement   |
| 3015 | Implement fold down           |
| 3016 | Implement fold up             |
| 3017 | RH header raise               |
| 3018 | LH header raise               |
| 3019 | Product fan engage mode       |
| 3020 | Augers engage mode            |
|      |                               |

|      |                                                                |
|------|----------------------------------------------------------------|
| 3021 | Product basket fill state                                      |
| 3022 | Augers enable mode                                             |
| 3023 | Header height control mode                                     |
| 3024 | Header remote tether control mode                              |
| 3025 | Lubrication control mode                                       |
| 3026 | Transmission Oil Level Measurement Status                      |
| 3027 | Transmission Oil Level High / Low                              |
| 3028 | Transmission Oil Level Countdown Timer                         |
| 3029 | Engine start inhibited, pre-lube system issue                  |
| 3030 | Transmission Torque Converter Ratio                            |
| 3031 | Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature         |
| 3032 | Right Brake Pedal Position                                     |
| 3033 | Left Brake Pedal Position                                      |
| 3034 | DM22 Control Byte – Individual DTC Clear/Reset Control Byte    |
| 3035 | DM22 – Negative Acknowledge Indicator For Individual DTC Clear |
| 3036 | DM22 – DTC SPN Clear                                           |
| 3037 | DM22 – DTC FMI to Clear                                        |
| 3038 | Flash Malfunction Indicator Lamp                               |
| 3039 | Flash Red Stop Lamp                                            |
| 3040 | Flash Amber Warning Lamp                                       |
| 3041 | Flash Protect Lamp                                             |
| 3042 | Requested Wheel Speed                                          |
| 3043 | Type of Passenger Count                                        |
| 3044 | Silent Alarm Status                                            |
| 3045 | Vehicle Use Status                                             |

|      |                                                              |
|------|--------------------------------------------------------------|
| 3046 | Transit Run Status                                           |
| 3047 | Patron Count                                                 |
| 3048 | Ignition Cycle Counter                                       |
| 3049 | OBD Monitoring Conditions Encountered Counts                 |
| 3050 | Catalyst 1 System Monitor                                    |
| 3051 | Catalyst 2 System Monitor                                    |
| 3052 | Engine Misfire Monitor                                       |
| 3053 | Engine Evaporative System Monitor                            |
| 3054 | Engine Secondary Air System Monitor                          |
| 3055 | Engine Fuel System Monitor                                   |
| 3056 | Engine Oxygen Sensor 1 Monitor                               |
| 3057 | Engine Oxygen Sensor 2 Monitor                               |
| 3058 | Engine Exhaust Gas Recirculation (EGR) System Monitor        |
| 3059 | Engine Positive Crankcase Ventilation System Monitor         |
| 3060 | Engine Cooling System Monitor                                |
| 3061 | Engine Cold Start Emission Reduction Strategy System Monitor |
| 3062 | Air Conditioning System Component Monitor                    |
| 3063 | Direct Ozone Reduction Monitor                               |
| 3064 | Particulate Matter Trap Monitor                              |
| 3065 | Comprehensive Component Monitor                              |
| 3066 | SPN of Applicable System Monitor                             |
| 3067 | Applicable System Monitor Numerator                          |
| 3068 | Applicable System Monitor Denominator                        |
| 3069 | Distance Traveled While MIL is Activated                     |
|      |                                                              |



|      |                                                        |
|------|--------------------------------------------------------|
| 3070 | Number of bytes in the Milepost Identification         |
| 3071 | Number of bytes in the Transit Assigned Route Identity |
| 3072 | Number of bytes in the Transit Assigned Run Identity   |
| 3073 | Number of bytes in the Transit Assigned Block Identity |
| 3074 | Transit Assigned Route Identity                        |
| 3075 | Transit Assigned Run Identity                          |
| 3076 | Transit Assigned Block Identity                        |
| 3078 | Agency                                                 |
| 3079 | Intersection Preemption Request/Response               |
| 3080 | Transit Route ID Usage                                 |
| 3081 | Range Code Enable                                      |
| 3082 | Strobe Activation Control Status                       |
| 3083 | Transit Door Enable                                    |
| 3084 | Priority of Response Sent by Emitter                   |
| 3085 | Vehicle ID                                             |
| 3086 | Transmission Ready for Brake Release                   |
| 3087 | Auxiliary Level                                        |
| 3088 | Header height vertical rate control                    |
| 3089 | Header height sensitivity control                      |
| 3090 | Header height setpoint change                          |
| 3091 | Header height setpoint change sequence number          |
| 3092 | Header platform height                                 |
| 3093 | Header platform height maximum                         |
| 3094 | Reserved – available to assign                         |
| 3095 | Reserved – available to assign                         |

|      |                                  |
|------|----------------------------------|
| 3096 | Header float pressure            |
| 3097 | Header float pressure maximum    |
| 3098 | Header position percent          |
| 3099 | Header position percent maximum  |
| 3100 | Reserved – available to assign   |
| 3101 | Reserved – available to assign   |
| 3102 | Unloading Auger swing out        |
| 3103 | Unloading auger swing in         |
| 3104 | Unloading auger swing out-auto : |
| 3105 | Unloading auger swing in-auto    |
| 3106 | Side hill left tilt              |
| 3107 | Side hill right tilt             |
| 3108 | Spreader speed increment         |
| 3109 | Spreader speed decrement         |
| 3110 | Precleaner open                  |
| 3111 | Precleaner close                 |
| 3112 | Open chaffer                     |
| 3113 | Close chaffer                    |
| 3114 | Open sieve                       |
| 3115 | Close sieve                      |
| 3116 | Move chopper vane left           |
| 3117 | Move chopper vane right          |
| 3118 | Quick stop switch                |
| 3119 | Unloading auger engage/disengage |
|      |                                  |

|      |                                               |
|------|-----------------------------------------------|
| 3120 | Unloading auger fold                          |
| 3121 | Unloading auger unfold                        |
| 3122 | Max allowable cleaning shoe travel            |
| 3123 | Right hand header height setpoint             |
| 3124 | Left hand header height setpoint              |
| 3125 | Left hand header height                       |
| 3126 | Right hand header height                      |
| 3127 | Header control response rate setpoint         |
| 3128 | Header control response rate maximum setpoint |
| 3129 | Header control response rate minimum setpoint |
| 3130 | Product system tank water level               |
| 3131 | Product fan speed                             |
| 3132 | Product system manifold pressure              |
| 3133 | Product system pump discharge pressure        |
| 3134 | Product fan hours                             |
| 3135 | Right hand header height max setpoint         |
| 3136 | Right hand header height min setpoint         |
| 3137 | Left hand header height min setpoint          |
| 3138 | Left hand header height max setpoint          |
| 3139 | Right hand header unit speed                  |
| 3140 | Left hand header unit speed                   |
| 3141 | GPS differential corrections license          |
| 3142 | Method, GNSS                                  |
| 3143 | Differential source                           |
| 3144 | Differential source, Secondary                |

|      |                                       |
|------|---------------------------------------|
| 3145 | DGNSS fix                             |
| 3146 | PGN of message being configured       |
| 3147 | Parameter being included              |
| 3148 | Position of configured parameter      |
| 3149 | Message will be used proprietarily    |
| 3150 | Message will use transport protocol   |
| 3151 | First parameter only being identified |
| 3152 | Number of parameters included         |
| 3153 | Starting bit for this parameter       |
| 3154 | Parameter to be located               |
| 3155 | Parameter locate command              |
| 3156 | Blade Control Mode Switch             |
| 3157 | Desired Grade Offset Switch           |
| 3158 | Blade Auto Mode Command               |
| 3159 | Trip Number                           |
| 3160 | Assigned Route                        |
| 3161 | Pattern Number                        |
| 3162 | Assigned Run                          |
| 3163 | Assigned Block                        |
| 3164 | Driver's farebox security code        |
| 3165 | Fare Validity                         |
| 3166 | Pass Category                         |
| 3167 | Initial Fare Agency                   |
| 3168 | Transfer Sold                         |
| 3169 | Route Number                          |

|      |                                                          |
|------|----------------------------------------------------------|
| 3170 | Transaction Type                                         |
| 3171 | Passenger Type                                           |
| 3172 | Type of Service                                          |
| 3173 | Transfer Type                                            |
| 3174 | Trip Direction                                           |
| 3175 | Fare Presets                                             |
| 3176 | Type of Fare                                             |
| 3177 | Payment Details                                          |
| 3178 | Farebox Service Status                                   |
| 3179 | Farebox Emergency Status                                 |
| 3180 | Trip Status                                              |
| 3181 | Farebox Alarm Identifier                                 |
| 3182 | Transmission Retarder Enable Solenoid Valve              |
| 3183 | Transmission Retarder Modulation Solenoid Valve          |
| 3184 | Transmission Lockup Clutch Pressure Indicator            |
| 3185 | Transmission Differential Lock Solenoid Valve            |
| 3186 | Transmission Differential Lock Clutch Pressure Indicator |
| 3187 | Transmission Shift Console Data Link                     |
| 3188 | XBR Message Checksum                                     |
| 3189 | XBR Message Counter                                      |
| 3190 | Tire Location                                            |
| 3191 | Reference Tire Pressure                                  |
| 3192 | Tire Location                                            |
| 3193 | Reference Tire Pressure Setting                          |

|      |                                                      |
|------|------------------------------------------------------|
| 3194 | Control Byte                                         |
| 3195 | Number of Ports                                      |
| 3196 | Uptime since last power-on reset                     |
| 3197 | Average Messages Filtered per Second                 |
| 3198 | Average Messages Forwarded per Second                |
| 3199 | Average Messages Received per Second                 |
| 3200 | Number of Messages with Excessive Transit Delay Time |
| 3201 | Number of Messages lost due to Buffer Overflow       |
| 3202 | Average Transit Delay Time                           |
| 3203 | Maximum Transit Delay Time                           |
| 3204 | Maximum Messages Filtered per Second                 |
| 3205 | Maximum Messages Forwarded per Second                |
| 3206 | Maximum Messages Received per Second                 |
| 3207 | Number of Filter Database Entries                    |
| 3208 | Maximum Filter Database Size                         |
| 3209 | Buffer Size                                          |
| 3210 | Parameter Number :                                   |
| 3211 | SA_List                                              |
| 3212 | PGN_List                                             |
| 3213 | Filter_Mode                                          |
| 3214 | Port_Pair                                            |
| 3215 | Prohibit air suspension control                      |
| 3216 | Aftertreatment #1 Intake NOx                         |
| 3217 | Aftertreatment #1 Intake O2                          |
| 3218 | Aftertreatment #1 Intake Gas Sensor Power In Range   |

|      |                                                       |
|------|-------------------------------------------------------|
| 3219 | Aftertreatment #1 Intake Gas Sensor at Temperature    |
| 3220 | Aftertreatment #1 Intake NOx Reading Stable           |
| 3221 | Aftertreatment #1 Intake Wide-Range O2 Reading Stable |
| 3222 | Aftertreatment #1 Intake Gas Sensor Heater            |
| 3223 | Aftertreatment #1 Intake Gas Sensor Heater Control    |
| 3224 | Aftertreatment #1 Intake NOx Sensor                   |
| 3225 | Aftertreatment #1 Intake Oxygen Sensor                |
| 3226 | Aftertreatment #1 Outlet NOx                          |
| 3227 | Aftertreatment #1 Outlet O2                           |
| 3228 | Aftertreatment #1 Outlet Gas Sensor Power In Range    |
| 3229 | Aftertreatment #1 Outlet Gas Sensor at Temperature    |
| 3230 | Aftertreatment #1 Outlet NOx Reading Stable           |
| 3231 | Aftertreatment #1 Outlet Wide-Range O2 Reading Stable |
| 3232 | Aftertreatment #1 Outlet Gas Sensor Heater            |
| 3233 | Aftertreatment #1 Outlet Gas Sensor Heater Control    |
| 3234 | Aftertreatment #1 Outlet NOx Sensor                   |
| 3235 | Aftertreatment #1 Outlet Oxygen Sensor                |
| 3236 | Exhaust Gas Mass                                      |
| 3237 | Aftertreatment Intake Dew Point Message               |
| 3238 | Aftertreatment Exhaust Dew Point Message              |
| 3239 | Aftertreatment Intake Dew Point Message               |
| 3240 | Aftertreatment Exhaust Dew Point Message              |
| 3241 | Exhaust Gas Temperature 1                             |
| 3242 | Aftertreatment #1 DPF Intake Gas Temperature          |

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|------|--------------------------------------------------------|
| 3245 | Exhaust Gas Temperature 3                              |
| 3246 | Aftertreatment #1 DPF Outlet Gas Temperature           |
| 3249 | Exhaust Gas Temperature 2                              |
| 3250 | Particulate Trap Intermediate Gas Temperature          |
| 3251 | Aftertreatment #1 DPF Trap Differential Pressure       |
| 3255 | Aftertreatment #2 Intake NOx                           |
| 3256 | Aftertreatment #2 Intake %O2                           |
| 3257 | Aftertreatment #2 Intake Gas Sensor Power In Range     |
| 3258 | Aftertreatment #2 Intake Gas Sensor at Temperature     |
| 3259 | Aftertreatment #2 Intake NOx Reading Stable            |
| 3260 | Aftertreatment #2 Intake Wide-Range %O2 Reading Stable |
| 3262 | Aftertreatment #2 Intake Gas Sensor Heater Control     |
| 3265 | Aftertreatment #2 Outlet NOx                           |
| 3266 | Aftertreatment #2 Outlet %O2                           |
| 3267 | Aftertreatment #2 Outlet Gas Sensor Power In Range     |
| 3268 | Aftertreatment #2 Outlet Gas Sensor at Temperature     |
| 3269 | Aftertreatment #2 Outlet NOx Reading Stable            |
| 3270 | Aftertreatment #2 Outlet Wide-Range %O2 Reading Stable |
| 3272 | Aftertreatment #2 Outlet Gas Sensor Heater Control     |
| 3275 | Aftertreatment #2 Exhaust Gas Temperature 1            |
| 3276 | Particulate Trap Intake Gas Temperature (bank 2)       |
| 3279 | Exhaust Gas Temperature 3                              |
| 3280 | Particulate Trap Outlet Gas Temperature (bank 2)       |
| 3283 | Exhaust Gas Temperature 2                              |
| 3284 | Particulate Trap Intermediate Gas Temperature          |



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|------|---------------------------------------------------------|
| 3285 | Particulate Trap Differential Pressure (bank 2)         |
| 3289 | Transmission Requested Gear Feedback                    |
| 3290 | Address Acknowledged                                    |
| 3291 | Address Negative Acknowledgement                        |
| 3292 | Address Access Denied                                   |
| 3293 | Address Busy                                            |
| 3294 | Distance Since Diagnostic Trouble Codes Cleared         |
| 3295 | Minutes Run by Engine While MIL Activated               |
| 3296 | Time Since Diagnostic Trouble Codes Cleared             |
| 3297 | SPN Supported                                           |
| 3298 | SPN Support Type                                        |
| 3299 | SPN Data Length                                         |
| 3300 | Expanded Freeze Frame Length                            |
| 3301 | Time Since Engine Start                                 |
| 3302 | Number of Warmups Since DTCs Cleared                    |
| 3303 | Continuously Monitored Systems Enabled/Completed Status |
| 3304 | Non-Continuously Monitored Systems Enabled Status       |
| 3305 | Non-Continuously Monitored Systems Complete Status      |
| 3306 | Variable Valve Timing and/or Control                    |
| 3307 | Fifth Wheel Error Status                                |
| 3308 | Fifth Wheel Vertical Force                              |
| 3309 | Fifth Wheel Drawbar Force                               |
| 3310 | Fifth Wheel Roll Moment                                 |
| 3311 | Fifth Wheel Slider Position                             |
|      |                                                         |

|      |                                                |
|------|------------------------------------------------|
| 3312 | Fifth Wheel Lock Ready to Couple Indicator     |
| 3313 | Fifth Wheel Lock Couple Status Indicator       |
| 3314 | Fifth Wheel Release Control                    |
| 3315 | Fifth Wheel Release Control Security Lockout   |
| 3316 | Fifth Wheel Slider Lock Indicator              |
| 3317 | Fifth Wheel Roll Warning Indicator             |
| 3318 | Pitch Angle                                    |
| 3319 | Roll Angle                                     |
| 3322 | Pitch Rate                                     |
| 3323 | Pitch Angle Figure of Merit                    |
| 3324 | Roll Angle Figure of Merit                     |
| 3325 | Pitch Rate Figure of Merit                     |
| 3326 | Pitch and Roll Compensated                     |
| 3327 | Roll and Pitch Measurement Latency             |
| 3328 | Manufacturer Specific Information              |
| 3329 | Message Selection Control                      |
| 3330 | PGN of Configurable Message Desired            |
| 3331 | Blade Rotation Angle                           |
| 3332 | Blade Rotation Angle Figure of Merit           |
| 3333 | Feederhouse Height                             |
| 3334 | Left Blade Control Mode Operator Control       |
| 3335 | Right Blade Control Mode Operator Control      |
| 3336 | Left Desired Blade Offset Operator Control     |
| 3337 | Right Desired Blade Offset Operator Control    |
| 3338 | Side-shift Blade Control Mode Operator Control |

|      |                                                               |
|------|---------------------------------------------------------------|
| 3339 | Side-shift Desired Blade Offset Operator Control              |
| 3340 | Engine Charge Air Cooler 1 Inlet Pressure                     |
| 3341 | Engine Charge Air Cooler 2 Inlet Pressure                     |
| 3342 | Engine Coolant Pump Differential Pressure                     |
| 3343 | Engine Centrifugal Oil Filter speed                           |
| 3344 | Support Variable Rate TSC1 Message                            |
| 3345 | Support TSC1 Control Purpose Group 1 of 4                     |
| 3346 | Support TSC1 Control Purpose Group 2 of 4                     |
| 3347 | Support TSC1 Control Purpose Group 3 of 4                     |
| 3348 | Support TSC1 Control Purpose Group 4 of 4                     |
| 3349 | TSC1 Transmission Rate                                        |
| 3350 | TSC1 Control Purpose                                          |
| 3351 | Engine Exhaust Pressure Regulator Vent Valve Control          |
| 3352 | Engine Exhaust Pressure Regulator Vent Valve Position         |
| 3353 | Alternator 1 Status                                           |
| 3354 | Alternator 2 Status                                           |
| 3355 | Alternator 3 Status                                           |
| 3356 | Alternator 4 Status                                           |
| 3357 | Actual Maximum Available Engine – Percent Torque              |
| 3358 | Engine Exhaust Gas Recirculation Inlet Pressure               |
| 3359 | Transmission Oil Filter Restriction Switch                    |
| 3360 | Aftertreatment 1 Diesel Exhaust Fluid Controller              |
| 3361 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit             |
| 3362 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Input Lines |
|      |                                                               |

|      |                                                                    |
|------|--------------------------------------------------------------------|
| 3363 | Aftertreatment 1 Diesel Exhaust Fluid Tank Heater                  |
| 3364 | Aftertreatment 1 Diesel Exhaust Fluid Tank Quality                 |
| 3365 | Relative Blade Height                                              |
| 3366 | Relative Blade Height and Blade Rotation Angle Measurement Latency |
| 3367 | Relative Blade Height Figure of Merit                              |
| 3368 | Network Transceiver Status 1                                       |
| 3369 | Network Service Status 1                                           |
| 3370 | Network Antenna Status 1                                           |
| 3371 | Network Signal Strength 1                                          |
| 3372 | Wireless Communication Network Type 1                              |
| 3374 | Generator Excitation Ripple Current                                |
| 3375 | Voltage Regulator Load Compensation Mode                           |
| 3376 | Voltage Regulator VAr/Power Factor operating mode                  |
| 3377 | Voltage Regulator Underfrequency Compensation enabled              |
| 3378 | Voltage Regulator Soft Start State                                 |
| 3379 | Voltage Regulator Enabled                                          |
| 3380 | Generator Excitation Field Voltage                                 |
| 3381 | Generator Excitation Field Current                                 |
| 3382 | Generator Output Voltage Bias Percentage                           |
| 3383 | Requested Generator Total AC Reactive Power                        |
| 3384 | Requested Generator Overall Power Factor                           |
| 3385 | Requested Generator Overall Power Factor Lagging                   |
| 3386 | Requested Generator Average Line-Line AC RMS Voltage               |
| 3387 | Engine Cylinder 1 Combustion Status                                |
| 3388 | Engine Cylinder 2 Combustion Status                                |

|      |                                      |
|------|--------------------------------------|
| 3389 | Engine Cylinder 3 Combustion Status  |
| 3390 | Engine Cylinder 4 Combustion Status  |
| 3391 | Engine Cylinder 5 Combustion Status  |
| 3392 | Engine Cylinder 6 Combustion Status  |
| 3393 | Engine Cylinder 7 Combustion Status  |
| 3394 | Engine Cylinder 8 Combustion Status  |
| 3395 | Engine Cylinder 9 Combustion Status  |
| 3396 | Engine Cylinder 10 Combustion Status |
| 3397 | Engine Cylinder 11 Combustion Status |
| 3398 | Engine Cylinder 12 Combustion Status |
| 3399 | Engine Cylinder 13 Combustion Status |
| 3400 | Engine Cylinder 14 Combustion Status |
| 3401 | Engine Cylinder 15 Combustion Status |
| 3402 | Engine Cylinder 16 Combustion Status |
| 3403 | Engine Cylinder 17 Combustion Status |
| 3404 | Engine Cylinder 18 Combustion Status |
| 3405 | Engine Cylinder 19 Combustion Status |
| 3406 | Engine Cylinder 20 Combustion Status |
| 3407 | Engine Cylinder 21 Combustion Status |
| 3408 | Engine Cylinder 22 Combustion Status |
| 3409 | Engine Cylinder 23 Combustion Status |
| 3410 | Engine Cylinder 24 Combustion Status |
| 3411 | Status 2 of doors                    |
| 3412 | Lock Status of Door 1                |
| 3413 | Open Status of Door 1                |

|      |                         |
|------|-------------------------|
| 3414 | Enable Status of Door 1 |
| 3415 | Lock Status of Door 2   |
| 3416 | Open Status of Door 2   |
| 3417 | Enable Status of Door 2 |
| 3418 | Lock Status of Door 3   |
| 3419 | Open Status of Door 3   |
| 3420 | Enable Status of Door 3 |
| 3421 | Lock Status of Door 4   |
| 3422 | Open Status of Door 4   |
| 3423 | Enable Status of Door 4 |
| 3424 | Lock Status of Door 5   |
| 3425 | Open Status of Door 5   |
| 3426 | Enable Status of Door 5 |
| 3427 | Lock Status of Door 6   |
| 3428 | Open Status of Door 6   |
| 3429 | Enable Status of Door 6 |
| 3430 | Lock Status of Door 7   |
| 3431 | Open Status of Door 7   |
| 3432 | Enable Status of Door 7 |
| 3433 | Lock Status of Door 8   |
| 3434 | Open Status of Door 8   |
| 3435 | Enable Status of Door 8 |
| 3436 | Lock Status of Door 9   |
| 3437 | Open Status of Door 9   |
|      |                         |

|      |                                                   |
|------|---------------------------------------------------|
| 3438 | Enable Status of Door 9                           |
| 3439 | Lock Status of Door 10                            |
| 3440 | Open Status of Door 10                            |
| 3441 | Enable Status of Door 10                          |
| 3442 | Network Transceiver Status 2                      |
| 3443 | Network Service Status 2                          |
| 3444 | Network Antenna Status 2                          |
| 3445 | Network Signal Strength 2                         |
| 3446 | Wireless Communication Network Type 2             |
| 3447 | Remote PTO preprogrammed speed control switch #2  |
| 3448 | Auxiliary Input Ignore Switch                     |
| 3451 | Engine Multiple Cylinder Spark Voltage            |
| 3452 | Enable Switch Transmission input shaft PTO 1      |
| 3453 | Enable Switch Transmission input shaft PTO 2      |
| 3454 | Enable Switch Transmission output shaft PTO       |
| 3455 | Enable Switch Transfer case output shaft PTO      |
| 3456 | Engagement Consent Transmission input shaft PTO 1 |
| 3457 | Engagement Consent Transmission input shaft PTO 2 |
| 3458 | Engagement Consent Transmission output shaft PTO  |
| 3459 | Engagement Consent Transfer case output shaft PTO |
| 3460 | Engagement Status Transmission input shaft PTO 1  |
| 3461 | Engagement Status Transmission input shaft PTO 2  |
| 3462 | Engagement Status Transmission output shaft PTO   |
| 3463 | Engagement Status Transfer case output shaft PTO  |
| 3464 | Engine Throttle Actuator 1 Control Command        |

|      |                                                  |
|------|--------------------------------------------------|
| 3465 | Engine Throttle Actuator 2 Control Command       |
| 3466 | Engine Fuel Valve #2 Inlet Absolute Pressure     |
| 3467 | Engine Gas Mass Flow Rate #2                     |
| 3468 | Engine Fuel Temperature 2                        |
| 3469 | Engine Fuel Valve #2 Outlet Absolute Pressure    |
| 3470 | Engine Turbocharger Compressor Control           |
| 3471 | Aftertreatment #1 Fuel Pressure Control Actuator |
| 3472 | Aftertreatment #1 Air Pressure Control Actuator  |
| 3473 | Aftertreatment #1 Failed to Ignite               |
| 3474 | Aftertreatment #1 Loss of Combustion             |
| 3475 | Aftertreatment #2 Fuel Pressure Control Actuator |
| 3476 | Aftertreatment #2 Air Pressure Control Actuator  |
| 3477 | Aftertreatment #2 Failed to Ignite               |
| 3478 | Aftertreatment #2 Loss of Ignition               |
| 3479 | Aftertreatment #1 Fuel Pressure Control          |
| 3480 | Aftertreatment #1 Fuel Pressure #1               |
| 3481 | Aftertreatment #1 Fuel Rate                      |
| 3482 | Aftertreatment #1 Fuel Enable Actuator           |
| 3483 | Aftertreatment #1 Regeneration Status            |
| 3484 | Aftertreatment #1 Ignition                       |
| 3485 | Aftertreatment #1 Supply Air Pressure            |
| 3486 | Aftertreatment #1 Purge Air Pressure             |
| 3487 | Aftertreatment #1 Air Pressure Control           |
| 3488 | Aftertreatment #1 Air Pressure Actuator Position |
| 3489 | Aftertreatment #1 Air Enable Actuator            |



|      |                                                  |
|------|--------------------------------------------------|
| 3490 | Aftertreatment #1 Purge Air Actuator             |
| 3491 | Aftertreatment #1 Atomization Air Actuator       |
| 3492 | Aftertreatment #1 Air System Relay               |
| 3493 | Aftertreatment #2 Fuel Pressure Control          |
| 3494 | Aftertreatment #2 Fuel Pressure                  |
| 3495 | Aftertreatment #2 Fuel Rate                      |
| 3496 | Aftertreatment #2 Fuel Enable Actuator           |
| 3497 | Aftertreatment #2 Regeneration Status            |
| 3498 | Aftertreatment #2 Ignition                       |
| 3499 | Aftertreatment #2 Supply Air Pressure            |
| 3500 | Aftertreatment #2 Purge Air Pressure             |
| 3501 | Aftertreatment #2 Air Pressure Control           |
| 3502 | Aftertreatment #2 Air Pressure Actuator Position |
| 3503 | Aftertreatment #2 Air Enable Actuator            |
| 3504 | Aftertreatment #2 Purge Air Actuator             |
| 3505 | Aftertreatment #2 Atomization Air Actuator       |
| 3506 | Aftertreatment #2 Air System Relay               |
| 3507 | TECU ECU_PWR relay                               |
| 3508 | TECU PWR Relay                                   |
| 3509 | Sensor Supply Voltage 1                          |
| 3510 | Sensor Supply Voltage 2                          |
| 3511 | Sensor Supply Voltage 3                          |
| 3512 | Sensor Supply Voltage 4                          |
| 3513 | Sensor Supply Voltage 5                          |

|      |                                                                     |
|------|---------------------------------------------------------------------|
| 3514 | Sensor Supply Voltage 6                                             |
| 3515 | Aftertreatment 1 Diesel Exhaust Fluid Temperature 2                 |
| 3516 | Aftertreatment 1 Diesel Exhaust Fluid Concentration                 |
| 3517 | Aftertreatment 1 Diesel Exhaust Fluid Tank Level 2                  |
| 3518 | Aftertreatment 1 Diesel Exhaust Fluid Conductivity                  |
| 3519 | Aftertreatment 1 Diesel Exhaust Fluid Temperature 2 Preliminary FMI |
| 3520 | Aftertreatment 1 Diesel Exhaust Fluid Properties Preliminary FMI    |
| 3521 | Aftertreatment 1 Diesel Exhaust Fluid Property                      |
| 3522 | Aftertreatment 1 Diesel Exhaust Fluid Tank Level Preliminary        |
| 3522 | Aftertreatment #1 Total Fuel Used                                   |
| 3523 | Aftertreatment #1 Total Regeneration Time                           |
| 3524 | Aftertreatment #1 Total Disabled Time                               |
| 3525 | Aftertreatment #1 Total Number of Active Regenerations              |
| 3526 | Aftertreatment #2 Total Fuel Used                                   |
| 3527 | Aftertreatment #2 Total Regeneration Time                           |
| 3528 | Aftertreatment #2 Total Disabled Time                               |
| 3529 | Aftertreatment #2 Total Number of Active Regenerations              |
| 3530 | Aftertreatment #1 Regeneration Manually Disabled                    |
| 3531 | Aftertreatment #2 Regeneration Manually Disabled                    |
| 3532 | Aftertreatment 1 Diesel Exhaust Fluid Tank Level Preliminary FMI    |
| 3542 | Requested Engine Control Mode                                       |
| 3543 | Engine Operating State                                              |
| 3544 | Time Remaining in Engine Operating State                            |
| 3545 | Generator Circuit Breaker Status                                    |
| 3546 | Utility Circuit Breaker Status                                      |

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|------|-----------------------------------------------------|
| 3547 | Automatic Transfer Switch Status                    |
| 3549 | Engine Oil Filter Outlet Pressure                   |
| 3550 | Engine Oil Priming Pump Switch                      |
| 3551 | Engine Oil Priming State                            |
| 3554 | Engine Ventilation Status                           |
| 3556 | Aftertreatment Fuel Injector #1                     |
| 3563 | Engine Intake Manifold #1 Absolute Pressure         |
| 3567 | Generator Control Not in Automatic Start State      |
| 3568 | Generator Not Ready to Automatically Parallel State |
| 3569 | Earth Fault                                         |
| 3570 | Earth Leakage                                       |
| 3571 | Generator Breaker Failure to Open                   |
| 3572 | Generator Breaker Failure to Close                  |
| 3573 | Utility Breaker Failure to Open                     |
| 3574 | Utility Breaker Failure to Close                    |
| 3575 | Utility to Generator Transfer Failure               |
| 3576 | Generator to Utility Transfer Failure               |
| 3577 | Loss of Utility                                     |
| 3578 | Generator to Bus Synchronization Failure            |
| 3579 | Generator-Bus Phase Sequence Mismatch Warning       |
| 3580 | Generator Soft Unload Failure                       |
| 3581 | SCADA Data Link                                     |
| 3587 | Ether Hold Relay                                    |
| 3588 | Ether Start Relay                                   |

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|------|---------------------------------------------------------|
| 3589 | Pre-Lube Relay                                          |
| 3607 | Engine Emergency Shutdown Indication                    |
| 3609 | DPF #1 Intake Pressure                                  |
| 3659 | Engine Injector Cylinder #1 Actuator #2                 |
| 3660 | Engine Injector Cylinder #2 Actuator #2                 |
| 3661 | Engine Injector Cylinder #3 Actuator #2                 |
| 3662 | Engine Injector Cylinder #4 Actuator #2                 |
| 3663 | Engine Injector Cylinder #5 Actuator #2                 |
| 3664 | Engine Injector Cylinder #6 Actuator #2                 |
| 3665 | Engine Injector Cylinder #7 Actuator #2                 |
| 3666 | Engine Injector Cylinder #8 Actuator #2                 |
| 3667 | Engine Air Shutoff Status                               |
| 3668 | Engine Intercooler Coolant Level                        |
| 3669 | Engine Rotation Direction                               |
| 3670 | Maximum Crank Attempts per Start Attempt                |
| 3671 | Crank Attempt Count on Present Start Attempt            |
| 3675 | Engine Turbocharger Compressor Bypass Actuator Position |
| 3676 | Engine Aftercooler Coolant Level                        |
| 3677 | Generator Unavailable to Start/Run                      |
| 3695 | Particulate Trap Regeneration Inhibit Switch            |
| 3696 | Particulate Trap Regeneration Force Switch              |
| 3697 | Particulate Trap Lamp Command                           |
| 3698 | Exhaust System High Temperature Lamp Command            |
| 3700 | DPF Active Regeneration Status                          |
| 3701 | DPF Status                                              |

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|------|-----------------------------------------------------------------------------------|
| 3702 | Particulate Trap Active Regeneration Inhibited Status                             |
| 3703 | DPF Active Regeneration Inhibited Due to Inhibit Switch                           |
| 3707 | DPF Active Regeneration Inhibited Due to Accelerator Pedal Off Idle               |
| 3708 | DPF Active Regeneration Inhibited Due to Out of Neutral                           |
| 3710 | DPF Active Regeneration Inhibited Due to Parking Brake Not Set                    |
| 3711 | Particulate Trap Active Regeneration Inhibited Due to Low Exhaust Gas Temperature |
| 3712 | DPF Active Regeneration Inhibited Due to System Fault Active                      |
| 3713 | DPF Active Regeneration Inhibited Due to System Timeout                           |
| 3714 | Particulate Trap Active Regeneration Inhibited Due to Temporary System Lockout    |
| 3715 | Particulate Trap Active Regeneration Inhibited Due to Permanent System Lockout    |
| 3716 | DPF Active Regeneration Inhibited Due to Engine Not Warmed Up                     |
| 3719 | Particulate Trap #1 Soot Load Percent                                             |
| 3720 | Particulate Trap #1 Ash Load Percent                                              |
| 3721 | DPF #1 Time Since Last Active Regeneration                                        |
| 3723 | Particulate Trap #2 Ash Load Percent                                              |
| 3750 | DPF #1 Conditions Not Met for Active Regeneration                                 |
| 3783 | Inlet Manifold Charge Combustion                                                  |
| 3785 | Tractor Brake Stroke Axle 1 Left                                                  |
| 3786 | Tractor Brake Stroke Axle 1 Right                                                 |
| 3787 | Tractor Brake Stroke Axle 2 Left                                                  |
| 3788 | Tractor Brake Stroke Axle 2 Right                                                 |
| 3789 | Tractor Brake Stroke Axle 3 Left                                                  |
| 3790 | Tractor Brake Stroke Axle 3 Right                                                 |
| 3791 | Tractor Brake Stroke Axle 4 Left                                                  |
| 3792 | Tractor Brake Stroke Axle 4 Right                                                 |

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| 3793 | Tractor Brake Stroke Axle 5 Left   |
| 3794 | Tractor Brake Stroke Axle 5 Right  |
| 3795 | Trailer Brake Stroke Axle 1 Left   |
| 3796 | Trailer Brake Stroke Axle 1 Right  |
| 3797 | Trailer Brake Stroke Axle 2 Left   |
| 3798 | Trailer Brake Stroke Axle 2 Right  |
| 3799 | Trailer Brake Stroke Axle 3 Left   |
| 3800 | Trailer Brake Stroke Axle 3 Right  |
| 3801 | Trailer Brake Stroke Axle 4 Left   |
| 3802 | Trailer Brake Stroke Axle 4 Right  |
| 3803 | Trailer Brake Stroke Axle 5 Left   |
| 3804 | Trailer Brake Stroke Axle 5 Right  |
| 3805 | Tractor Brake Stroke Alert Monitor |
| 3806 | Trailer Brake Stroke Alert Monitor |
| 3807 | Park Brake Release Inhibit Request |
| 3808 | Park Brake Release Inhibit Status  |
| 3809 | Transmission Oil Level Request     |
| 3810 | Retract Status of ramp 1           |
| 3811 | Enable status of ramp 1            |
| 3812 | Movement status of ramp 1          |
| 3813 | Retract Status of ramp 2           |
| 3814 | Enable status of ramp 2            |
| 3815 | Movement status of ramp 2          |
| 3816 | Retract Status of ramp 3           |
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|------|-----------------------------------------------------------------|
| 3817 | Enable status of ramp 3                                         |
| 3818 | Movement status of ramp 3                                       |
| 3819 | Front axle group engagement status                              |
| 3820 | Rear axle group engagement status                               |
| 3821 | Engine Exhaust Gas Recirculation (EGR) Valve 2 Control          |
| 3822 | Engine Exhaust Gas Recirculation Valve 2 Position               |
| 3823 | Transmission Torque Converter Oil Outlet Temperature            |
| 3824 | Transmission Gear Latch Actuator                                |
| 3825 | Transmission Output Speed 2                                     |
| 3826 | Aftertreatment 1 Diesel Exhaust Fluid Average Consumption       |
| 3828 | Aftertreatment 1 SCR Commanded Diesel Exhaust Fluid Consumption |
| 3829 | EPS Supplying Load                                              |
| 3830 | Aftertreatment #1 Secondary Air Differential Pressure           |
| 3831 | Aftertreatment #1 Secondary Air Temperature                     |
| 3832 | Aftertreatment #1 Secondary Air Mass Flow                       |
| 3833 | Aftertreatment #2 Secondary Air Differential Pressure           |
| 3834 | Aftertreatment #2 Secondary Air Temperature                     |
| 3835 | Aftertreatment #2 Secondary Air Mass Flow                       |
| 3837 | Aftertreatment #1 Secondary Air Pressure                        |
| 3838 | Aftertreatment #2 Secondary Air Pressure                        |
| 3839 | Brake Temperature Warning                                       |
| 3840 | Auxiliary I/O #17                                               |
| 3841 | Auxiliary I/O #18                                               |
| 3842 | Auxiliary I/O #19                                               |
| 3843 | Auxiliary I/O #20                                               |

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| 3844 | Auxiliary I/O #21 |
| 3845 | Auxiliary I/O #22 |
| 3846 | Auxiliary I/O #23 |
| 3847 | Auxiliary I/O #24 |
| 3848 | Auxiliary I/O #25 |
| 3849 | Auxiliary I/O #26 |
| 3850 | Auxiliary I/O #27 |
| 3851 | Auxiliary I/O #28 |
| 3852 | Auxiliary I/O #29 |
| 3853 | Auxiliary I/O #30 |
| 3854 | Auxiliary I/O #31 |
| 3855 | Auxiliary I/O #32 |
| 3856 | Auxiliary I/O #33 |
| 3857 | Auxiliary I/O #34 |
| 3858 | Auxiliary I/O #35 |
| 3859 | Auxiliary I/O #36 |
| 3860 | Auxiliary I/O #37 |
| 3861 | Auxiliary I/O #38 |
| 3862 | Auxiliary I/O #39 |
| 3863 | Auxiliary I/O #40 |
| 3864 | Auxiliary I/O #41 |
| 3865 | Auxiliary I/O #42 |
| 3866 | Auxiliary I/O #43 |
| 3867 | Auxiliary I/O #44 |
| 3868 | Auxiliary I/O #45 |



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| 3869 | Auxiliary I/O #46 |
| 3870 | Auxiliary I/O #47 |
| 3871 | Auxiliary I/O #48 |
| 3872 | Auxiliary I/O #49 |
| 3873 | Auxiliary I/O #50 |
| 3874 | Auxiliary I/O #51 |
| 3875 | Auxiliary I/O #52 |
| 3876 | Auxiliary I/O #53 |
| 3877 | Auxiliary I/O #54 |
| 3878 | Auxiliary I/O #55 |
| 3879 | Auxiliary I/O #56 |
| 3880 | Auxiliary I/O #57 |
| 3881 | Auxiliary I/O #58 |
| 3882 | Auxiliary I/O #59 |
| 3883 | Auxiliary I/O #60 |
| 3884 | Auxiliary I/O #61 |
| 3885 | Auxiliary I/O #62 |
| 3886 | Auxiliary I/O #63 |
| 3887 | Auxiliary I/O #64 |
| 3888 | Auxiliary I/O #65 |
| 3889 | Auxiliary I/O #66 |
| 3890 | Auxiliary I/O #67 |
| 3891 | Auxiliary I/O #68 |
| 3892 | Auxiliary I/O #69 |
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| 3893 | Auxiliary I/O #70 |
| 3894 | Auxiliary I/O #71 |
| 3895 | Auxiliary I/O #72 |
| 3896 | Auxiliary I/O #73 |
| 3897 | Auxiliary I/O #74 |
| 3898 | Auxiliary I/O #75 |
| 3899 | Auxiliary I/O #76 |
| 3900 | Auxiliary I/O #77 |
| 3901 | Auxiliary I/O #78 |
| 3902 | Auxiliary I/O #79 |
| 3903 | Auxiliary I/O #80 |
| 3904 | Auxiliary I/O #81 |
| 3905 | Auxiliary I/O #82 |
| 3906 | Auxiliary I/O #83 |
| 3907 | Auxiliary I/O #84 |
| 3908 | Auxiliary I/O #85 |
| 3909 | Auxiliary I/O #86 |
| 3910 | Auxiliary I/O #87 |
| 3911 | Auxiliary I/O #88 |
| 3912 | Auxiliary I/O #89 |
| 3913 | Auxiliary I/O #90 |
| 3914 | Auxiliary I/O #91 |
| 3915 | Auxiliary I/O #92 |
| 3916 | Auxiliary I/O #93 |
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| 3917 | Auxiliary I/O #94                               |
| 3918 | Auxiliary I/O #95                               |
| 3919 | Auxiliary I/O #96                               |
| 3920 | Auxiliary I/O #97                               |
| 3921 | Auxiliary I/O #98                               |
| 3922 | Auxiliary I/O #99                               |
| 3923 | Auxiliary I/O #100                              |
| 3924 | Auxiliary I/O #101                              |
| 3925 | Auxiliary I/O #102                              |
| 3926 | Auxiliary I/O #103                              |
| 3927 | Auxiliary I/O #104                              |
| 3928 | Auxiliary I/O #105                              |
| 3929 | Auxiliary I/O #106                              |
| 3930 | Auxiliary I/O #107                              |
| 3931 | Auxiliary I/O #108                              |
| 3932 | Auxiliary I/O #109                              |
| 3933 | Auxiliary I/O #110                              |
| 3934 | Auxiliary I/O #111                              |
| 3935 | Auxiliary I/O #112                              |
| 3936 | Aftertreatment Diesel Particulate Filter System |
| 4000 | Engine Exhaust Brake Enable Switch              |
| 4043 | Transfer Case Front Driveline Actuator          |
| 4044 | Transfer Case High Range Actuator               |
| 4045 | Transfer Case Low Range Actuator                |

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| 4046 | Transfer Case Neutral Actuator                        |
| 4047 | Transfer Case Output Shaft PTO Actuator               |
| 4049 | Transfer Case Rear Driveline Actuator                 |
| 4077 | Aftertreatment #1 Fuel Pressure #2                    |
| 4082 | Fuel Pump Primer Control                              |
| 4151 | Engine Exhaust Gas Temperature Average                |
| 4152 | Engine Exhaust Gas Temperature Average – Bank #2      |
| 4153 | Engine Exhaust Gas Temperature Average – Bank #1      |
| 4157 | Auxiliary I/O Channel #4                              |
| 4158 | Auxiliary I/O Channel #3                              |
| 4193 | Engine Coolant Pump Outlet Temperature                |
| 4194 | Engine Coolant Thermostat Opening                     |
| 4195 | Engine Coolant Thermostat Mode                        |
| 4196 | Desired Engine Coolant Engine Pump Outlet Temperature |
| 4197 | Desired Engine Coolant Thermostat Opening             |
| 4198 | Aftercooler Coolant Thermostat Mode                   |
| 4199 | Desired Aftercooler Coolant Inlet Temperature         |
| 4200 | Desired Aftercooler Coolant Thermostat Opening        |
| 4201 | Engine Speed Sensor #1                                |
| 4202 | Engine Speed Sensor #3                                |
| 4203 | Engine Speed Sensor 1 Timing Pattern Status           |
| 4204 | Engine Speed Sensor 2 Timing Pattern Status           |
| 4205 | Engine Speed Sensor 3 Timing Pattern Status           |
| 4209 | Engine Crank Without Pre-lube                         |
| 4210 | Engine Pre-lube Drive                                 |

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| 4211 | Hydraulic Fan Motor Pressure                                           |
| 4212 | Fan Drive Bypass Command Status                                        |
| 4213 | Engine Crank Without Fuel Injection                                    |
| 4214 | Engine Fan Reverse Actuator                                            |
| 4215 | Ground-Level Shutdown Activated                                        |
| 4216 | Transmission Reverse Solenoid Valve                                    |
| 4217 | Transmission Shift Modulation Solenoid Valve                           |
| 4218 | Transmission Shift Rail 1 Position                                     |
| 4219 | Transmission Shift Rail 2 Position                                     |
| 4220 | Transmission Shift Rail 3 Position                                     |
| 4221 | High Speed Directional Shift                                           |
| 4240 | Engine Exhaust Gas Oxygen Sensor Closed Loop Operation, Bank #1        |
| 4241 | Engine Exhaust Gas Oxygen Sensor Closed Loop Operation, Bank #2        |
| 4244 | Engine Run Relay                                                       |
| 4245 | Fuel Energy Content                                                    |
| 4256 | Cranking Voltage                                                       |
| 4265 | Aftertreatment #1 Transformer Secondary Output                         |
| 4289 | Aftertreatment #1 Three Way Catalytic Converter Intake Gas Temperature |
| 4290 | Aftertreatment #1 Three Way Catalytic Converter Outlet Gas Temperature |
| 4291 | Aftertreatment #1 Three Way Catalytic Converter Differential Pressure  |
| 4301 | Aftertreatment #1 Fuel Injector #1 Heater Control                      |
| 4331 | Aftertreatment 1 Diesel Exhaust Fluid Actual Dosing Quantity           |
| 4332 | Aftertreatment #1 SCR System State                                     |
| 4333 | Aftertreatment 1 Diesel Exhaust Fluid Actual Quantity of Integrator    |
| 4334 | Aftertreatment 1 Diesel Exhaust Fluid Doser Absolute Pressure          |

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| 4335 | Aftertreatment #1 SCR Dosing Air Assist Absolute Pressure                |
| 4336 | Aftertreatment #1 SCR Dosing Air Assist Valve                            |
| 4337 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Temperature                 |
| 4338 | Aftertreatment #1 SCR Dosing Valve Exhaust Temperature Reduction Request |
| 4340 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 State                |
| 4341 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 Preliminary FMI      |
| 4342 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 State                |
| 4343 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 Preliminary FMI      |
| 4344 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 3 State                |
| 4345 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 3 Preliminary FMI      |
| 4346 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 4 State                |
| 4347 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 4 Preliminary FMI      |
| 4348 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Requested Quantity          |
| 4350 | Aftertreatment 1 Diesel Exhaust Fluid Requested Quantity of Integrator   |
| 4352 | Aftertreatment 1 Diesel Exhaust Fluid Doser Fault Suppression Request    |
| 4353 | Aftertreatment 1 Diesel Exhaust Fluid Doser Heating Mode Request         |
| 4354 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1                      |
| 4355 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2                      |
| 4356 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 3                      |
| 4357 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 4                      |
| 4365 | Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Temperature Preliminary FMI |
| 4366 | Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater Preliminary FMI      |
| 4367 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Level                       |
| 4368 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Temperature                 |

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| 4369 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Level 2                     |
| 4370 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Level Preliminary FMI       |
| 4371 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Temperature Preliminary FMI |
| 4372 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Heater                      |
| 4373 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Heater Preliminary FMI      |
| 4358 | Aftertreatment #1 SCR Catalyst Exhaust Gas Differential Pressure         |
| 4360 | Aftertreatment #1 SCR Catalyst Intake Gas Temperature                    |
| 4363 | Aftertreatment #1 SCR Catalyst Outlet Gas Temperature                    |
| 4364 | Aftertreatment #1 SCR Catalyst Conversion Efficiency                     |
| 4374 | Aftertreatment 1 Diesel Exhaust Fluid Pump Motor Speed                   |
| 4375 | Aftertreatment 1 Diesel Exhaust Fluid Pump Drive Percentage              |
| 4376 | Aftertreatment 1 Diesel Exhaust Fluid Return Valve                       |
| 4384 | Aftertreatment 2 Diesel Exhaust Fluid Actual Dosing Quantity             |
| 4386 | Aftertreatment 2 Diesel Exhaust Fluid Actual Quantity of Integrator      |
| 4387 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Absolute Pressure           |
| 4390 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Temperature                 |
| 4393 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 1 State                |
| 4394 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 1 Preliminary FMI      |
| 4395 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 2 State                |
| 4396 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 2 Preliminary FMI      |
| 4397 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 3 State                |
| 4398 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 3 Preliminary FMI      |
| 4399 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 4 State                |
| 4400 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 4 Preliminary FMI      |
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| 4401 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Requested Quantity          |
| 4403 | Aftertreatment 2 Diesel Exhaust Fluid Requested Quantity of Integrator   |
| 4405 | Aftertreatment 2 Diesel Exhaust Fluid Doser Fault Suppression Request    |
| 4406 | Aftertreatment 2 Diesel Exhaust Fluid Doser Heating Mode Request         |
| 4407 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 1                      |
| 4408 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 2                      |
| 4409 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 3                      |
| 4410 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 4                      |
| 4417 | Aftertreatment 2 Diesel Exhaust Fluid Average Consumption                |
| 4418 | Aftertreatment 2 SCR Commanded Diesel Exhaust Fluid Consumption          |
| 4420 | Aftertreatment 2 Diesel Exhaust Fluid Temperature 2                      |
| 4421 | Aftertreatment 2 Diesel Exhaust Fluid Concentration                      |
| 4422 | Aftertreatment 2 Diesel Exhaust Fluid Conductivity                       |
| 4423 | Aftertreatment 2 Diesel Exhaust Fluid Temperature 2 Preliminary FMI      |
| 4424 | Aftertreatment 2 Diesel Exhaust Fluid Properties Preliminary FMI         |
| 4425 | Aftertreatment 2 Diesel Exhaust Fluid Type                               |
| 4426 | Aftertreatment 2 Diesel Exhaust Fluid Tank Level                         |
| 4427 | Aftertreatment 2 Diesel Exhaust Fluid Tank Temperature                   |
| 4428 | Aftertreatment 2 Diesel Exhaust Fluid Tank Level 2                       |
| 4429 | Aftertreatment 2 Diesel Exhaust Fluid Tank Level Preliminary FMI         |
| 4430 | Aftertreatment 2 Diesel Exhaust Fluid Tank 1 Temperature Preliminary FMI |
| 4431 | Aftertreatment 2 Diesel Exhaust Fluid Tank Heater                        |
| 4432 | Aftertreatment 2 Diesel Exhaust Fluid Tank 1 Heater Preliminary FMI      |
| 4433 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Level                       |
| 4434 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Temperature                 |



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| 4435 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Level 2                     |
| 4436 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Level Preliminary FMI       |
| 4437 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Temperature Preliminary FMI |
| 4438 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Heater                      |
| 4439 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Heater Preliminary FMI      |
| 4440 | Aftertreatment 2 Diesel Exhaust Fluid Pump Motor Speed                   |
| 4441 | Aftertreatment 2 Diesel Exhaust Fluid Pump Drive Percentage              |
| 4442 | Aftertreatment 2 Diesel Exhaust Fluid Return Valve                       |
| 4450 | Aftertreatment 2 Diesel Exhaust Fluid Controller                         |
| 4451 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Unit                        |
| 4452 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Unit Input Lines            |
| 4453 | Aftertreatment 2 Diesel Exhaust Fluid Tank Quality                       |
| 4765 | Aftertreatment #1 Diesel Oxidation Catalyst Intake Gas Temperature       |
| 4766 | Aftertreatment #1 Diesel Oxidation Catalyst Outlet Gas Temperature       |
| 4767 | Aftertreatment #1 Diesel Oxidation Catalyst Differential Pressure        |
| 4779 | Aftertreatment #1 Three Way Catalyst Differential Gas Temperature        |
| 4781 | DPF #1 Soot Mass                                                         |
| 4783 | DPF #1 Mean Soot Signal                                                  |
| 4785 | DPF #1 Soot Sensor                                                       |
| 4792 | Aftertreatment #1 SCR Catalyst System                                    |
| 4817 | Engine Intake Manifold #1 Absolute Pressure                              |
| 4998 | Magnet Boost Time                                                        |
| 4999 | Magnet Rated Power                                                       |
| 5000 | Generator Overheat Status                                                |

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|------|-------------------------------------------|
| 5001 | Genset System Output Voltage Range Status |
| 5002 | Reverse Current Range Setting             |
| 5003 | Grapple/Magnet Selection Switch           |
| 5004 | Genset Softstart Active                   |
| 5005 | Genset Enable Active                      |
| 5006 | Voltage Monitor Active                    |
| 5007 | Generator Duty Cycle Exceeded Status      |
| 5008 | Magnet Forward Current                    |
| 5009 | Magnet Reverse Current                    |
| 5010 | Material Lift Switch                      |
| 5011 | Material Drop Switch                      |
| 5012 | Generator Current Boost Active Status     |
| 5013 | Material Lift Active Status               |
| 5014 | Material Drop Active                      |
| 5019 | EGR Outlet Pressure                       |
| 5055 | Engine Oil Viscosity                      |
| 5057 | Cab Noise Control State                   |
| 5059 | Cab Noise Control Status                  |
| 5060 | Cab Noise Control Tuning Status           |
| 5061 | Noise Controller                          |
| 5062 | Noise Control Microphone 1                |
| 5063 | Noise Control Microphone 2                |
| 5064 | Noise Control Microphone 3                |
| 5065 | Noise Control Microphone 4                |

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| 5066 | Noise Control Microphone 5                                          |
| 5067 | Noise Control Microphone 6                                          |
| 5068 | Noise Control Output 1                                              |
| 5069 | Noise Control Output 2                                              |
| 5070 | Noise Control Output 3                                              |
| 5071 | Noise Control Output 4                                              |
| 5072 | Noise Control Output 5                                              |
| 5073 | Noise Control Output 6                                              |
| 5074 | Noise Control Feed Forward Sensor 1                                 |
| 5075 | Noise Control Feed Forward Sensor 2                                 |
| 5077 | Engine Protect Lamp Command                                         |
| 5099 | Engine Oil Pressure Low Lamp Data                                   |
| 5137 | Aftertreatment 1 Diesel Exhaust Fluid Tank Heater Command           |
| 5138 | Aftertreatment 2 Diesel Exhaust Fluid Tank Heater Command           |
| 5246 | Aftertreatment SCR Operator Inducement Severity                     |
| 5272 | Unexpected Engine Shutdown                                          |
| 5273 | Crank Terminate Relay                                               |
| 5276 | Engine Exhaust Manifold Bank #1 Flow Balance Valve Actuator Control |
| 5357 | Engine Fuel Injection Quantity Error for Multiple Cylinders         |
| 5370 | Engine Desired Turbocharger Wastegate Actuator #1 Position          |
| 5374 | Engine Desired Throttle Valve #1 Position                           |
| 5376 | Engine Throttle Valve #1 Temperature Status                         |
| 5381 | Engine Fuel Valve #1 Temperature Status                             |
| 5392 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Loss of Prime     |
| 5394 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 1                |

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| 5404 | PTO Shutdown has Shutdown Engine                                           |
| 5414 | Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Heater Command                |
| 5415 | Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Heater Command                |
| 5417 | Fuel Filter (Suction Side) Intake Pressure                                 |
| 5418 | Engine Fuel Actuator #1                                                    |
| 5419 | Engine Throttle Actuator #1                                                |
| 5420 | Engine Turbocharger Compressor Bypass Actuator #1                          |
| 5421 | Engine Turbocharger Wastegate Actuator #1                                  |
| 5422 | Engine Intake Manifold #2 Absolute Pressure                                |
| 5423 | Aftertreatment #1 Fuel Pump Relay Control                                  |
| 5424 | Aftertreatment #1 Fuel Flow Diverter Valve Control                         |
| 5425 | Aftertreatment #1 Fuel Pressure #2 Actuator Control                        |
| 5430 | EGR #1 Intake Pressure (absolute)                                          |
| 5434 | Aftertreatment 1 Diesel Exhaust Fluid Tank Fill Valve Command              |
| 5435 | Aftertreatment 1 Diesel Exhaust Fluid Pump State                           |
| 5436 | Aftertreatment 1 Diesel Exhaust Fluid Tank Drain Valve Command             |
| 5437 | Aftertreatment 2 Diesel Exhaust Fluid Tank Fill Valve Command              |
| 5438 | Aftertreatment 2 Diesel Exhaust Fluid Pump State                           |
| 5439 | Aftertreatment 2 Diesel Exhaust Fluid Tank Drain Valve Command             |
| 5478 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Loss of Prime (obsolete) |
| 5480 | Aftertreatment 1 Diesel Exhaust Fluid Controller Temperature               |
| 5485 | Aftertreatment 1 Diesel Exhaust Fluid Pump Orifice Flow                    |
| 5488 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater 5 State                  |
| 5489 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 5 Preliminary FMI        |
| 5490 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater 5                        |

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| 5491 | Aftertreatment 1 Diesel Exhaust Fluid Line Heater Relay           |
| 5495 | Aftertreatment #1 DPF Soot Mean Calibration Offset                |
| 5499 | Intake Valve Actuation System Oil Pressure Solenoid Status        |
| 5506 | Hydrocarbon (HC) Doser Status                                     |
| 5557 | Supplemental Fan Direction Status                                 |
| 5559 | Supplemental Fan Controller Temperature Status                    |
| 5562 | Supplemental Fan Speed                                            |
| 5569 | DPF #1 Soot Sensor ECU Internal Temperature                       |
| 5571 | High Pressure Common Rail Fuel Pressure Relief Valve              |
| 5576 | Aftertreatment #1 Identification                                  |
| 5577 | Aftertreatment #2 Identification                                  |
| 5578 | Engine Fuel Delivery Absolute Pressure                            |
| 5579 | Engine Filtered Fuel Delivery Pressure                            |
| 5580 | Engine Filtered Fuel Delivery Absolute Pressure                   |
| 5584 | Engine Fuel Filter Degradation                                    |
| 5585 | Engine Injector Metering Rail #1 Cranking Pressure                |
| 5587 | Engine Intake Manifold Temperatures Inconsistent                  |
| 5589 | Aftertreatment #1 Secondary Air Absolute Pressure                 |
| 5591 | Aftertreatment #1 DPF Air Control Module                          |
| 5625 | Engine Exhaust Back Pressure Regulator Position                   |
| 5629 | DPF Active Regeneration Inhibited Due to Low Exhaust Gas Pressure |
| 5631 | Engine Throttle Valve Differential Pressure                       |
| 5686 | Engine Exhaust Gas Port #1 Difference from Average Temperature    |
| 5687 | Engine Exhaust Gas Port #2 Difference from Average Temperature    |
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| 5688 | Engine Exhaust Gas Port #3 Difference from Average Temperature  |
| 5689 | Engine Exhaust Gas Port #4 Difference from Average Temperature  |
| 5690 | Engine Exhaust Gas Port # 5 Difference from Average Temperature |
| 5691 | Engine Exhaust Gas Port #6 Difference from Average Temperature  |
| 5692 | Engine Exhaust Gas Port #7 Difference from Average Temperature  |
| 5693 | Engine Exhaust Gas Port # 8 Difference from Average Temperature |
| 5694 | Engine Exhaust Gas Port # 9 Difference from Average Temperature |
| 5695 | Engine Exhaust Gas Port #10 Difference from Average Temperature |
| 5696 | Engine Exhaust Gas Port #11 Difference from Average Temperature |
| 5697 | Engine Exhaust Gas Port #12 Difference from Average Temperature |
| 5698 | Engine Exhaust Gas Port #13 Difference from Average Temperature |
| 5699 | Engine Exhaust Gas Port #14 Difference from Average Temperature |
| 5700 | Engine Exhaust Gas Port #15 Difference from Average Temperature |
| 5701 | Engine Exhaust Gas Port #16 Difference from Average Temperature |
| 5702 | Engine Exhaust Gas Port #17 Difference from Average Temperature |
| 5703 | Engine Exhaust Gas Port #18 Difference from Average Temperature |
| 5704 | Engine Exhaust Gas Port #19 Difference from Average Temperature |
| 5705 | Engine Exhaust Gas Port #20 Difference from Average Temperature |
| 5706 | Aftertreatment 1 Diesel Exhaust Fluid Pump Heater               |
| 5707 | Aftertreatment 1 Diesel Exhaust Fluid Pump Heater Command       |
| 5708 | Engine Coolant Pressure #2                                      |
| 5826 | Emission Control System Operator Inducement Severity            |
| 5837 | Fuel Type                                                       |
| 5745 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Heater        |
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| 5746 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Heater Relay       |
| 5748 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Unit Loss of Prime      |
| 5798 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Heater Temperature |
| 5839 | Diesel Exhaust Fluid Consumption Malfunction                         |
| 5840 | Diesel Exhaust Fluid Dosing Malfunction                              |
| 5841 | Diesel Exhaust Fluid Quality Malfunction                             |
| 5925 | Engine Oil Temperature #3                                            |
| 5963 | Aftertreatment 1 Total Diesel Exhaust Fluid Used                     |
| 5964 | Aftertreatment 2 Total Diesel Exhaust Fluid Used                     |
| 5965 | Aftertreatment 1 Diesel Exhaust Fluid Control Module Relay Control   |
| 5966 | Aftertreatment 1 Diesel Exhaust Fluid Control Module Power Supply    |
| 5967 | Aftertreatment 2 Diesel Exhaust Fluid Control Module Relay Control   |
| 5968 | Aftertreatment 2 Diesel Exhaust Fluid Control Module Power Supply    |
| 5969 | Engine Exhaust Manifold Bank #2 Temperature #2                       |
| 5970 | Engine Exhaust Manifold Bank #1 Temperature #2                       |
| 5971 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Unit Heater             |
| 5972 | Aftertreatment 2 Diesel Exhaust Fluid Doser Absolute Pressure        |
| 5973 | Aftertreatment 2 Diesel Exhaust Fluid Line Heater Relay              |
| 5974 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Valve 1                 |
| 5978 | Aftertreatment #1 DPF Time to Next Active Regeneration               |
| 6161 | Engine Cylinder 1 Pressure                                           |
| 6162 | Engine Cylinder 2 Pressure                                           |
| 6163 | Engine Cylinder 3 Pressure                                           |
| 6164 | Engine Cylinder 4 Pressure                                           |
| 6165 | Engine Cylinder 5 Pressure                                           |

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| 6166 | Engine Cylinder 6 Pressure            |
| 6167 | Engine Cylinder 7 Pressure            |
| 6168 | Engine Cylinder 8 Pressure            |
| 6169 | Engine Cylinder 9 Pressure            |
| 6170 | Engine Cylinder 10 Pressure           |
| 6171 | Engine Cylinder 11 Pressure           |
| 6172 | Engine Cylinder 12 Pressure           |
| 6173 | Engine Cylinder 13 Pressure           |
| 6174 | Engine Cylinder 14 Pressure           |
| 6175 | Engine Cylinder 15 Pressure           |
| 6176 | Engine Cylinder 16 Pressure           |
| 6177 | Engine Cylinder 17 Pressure           |
| 6178 | Engine Cylinder 18 Pressure           |
| 6179 | Engine Cylinder 19 Pressure           |
| 6180 | Engine Cylinder 20 Pressure           |
| 6181 | Engine Cylinder #1 Gaseous Fuel Valve |
| 6182 | Engine Cylinder #2 Gaseous Fuel Valve |
| 6183 | Engine Cylinder #3 Gaseous Fuel Valve |
| 6184 | Engine Cylinder #4 Gaseous Fuel Valve |
| 6185 | Engine Cylinder #5 Gaseous Fuel Valve |
| 6186 | Engine Cylinder #6 Gaseous Fuel Valve |
| 6187 | Engine Cylinder #7 Gaseous Fuel Valve |
| 6188 | Engine Cylinder #8 Gaseous Fuel Valve |
| 6189 | Engine Cylinder #9 Gaseous Fuel Valve |
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| 6190 | Engine Cylinder #10 Gaseous Fuel Valve                              |
| 6191 | Engine Cylinder #11 Gaseous Fuel Valve                              |
| 6192 | Engine Cylinder #12 Gaseous Fuel Valve                              |
| 6193 | Engine Cylinder #13 Gaseous Fuel Valve                              |
| 6194 | Engine Cylinder #14 Gaseous Fuel Valve                              |
| 6195 | Engine Cylinder #15 Gaseous Fuel Valve                              |
| 6196 | Engine Cylinder #16 Gaseous Fuel Valve                              |
| 6197 | Engine Cylinder #17 Gaseous Fuel Valve                              |
| 6198 | Engine Cylinder #18 Gaseous Fuel Valve                              |
| 6199 | Engine Cylinder #19 Gaseous Fuel Valve                              |
| 6200 | Engine Cylinder #20 Gaseous Fuel Valve                              |
| 6201 | Engine Turbocharger Compressor Blowoff Actuator #1 Command          |
| 6205 | Engine Control Module #1 Ready for Use Lamp Command                 |
| 6206 | Engine Control Module #2 Ready for Use Lamp Command                 |
| 6207 | Engine Control Module #3 Ready for Use Lamp Command                 |
| 6309 | Aftertreatment 1 Diesel Exhaust Fluid Control Module Power Supply 2 |
| 6310 | Aftertreatment 2 Diesel Exhaust Fluid Control Module Power Supply 2 |
| 6317 | Requested Fuel Type                                                 |
| 6319 | Engine Total Hours of Gaseous Fuel Operation                        |
| 6320 | Engine Total Hours of Diesel Fuel Operation                         |
| 6321 | Engine Extended Range Oil Filter Differential Pressure              |
| 6322 | Aftertreatment #1 SCR Desulfation Too Frequent                      |
| 6324 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 2                |
| 6325 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Valve 2                |
| 6326 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 1 Heater         |

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| 6327 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 2 Heater |
| 6328 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Valve 1 Heater |
| 6329 | Aftertreatment 2 Diesel Exhaust Fluid Dosing Valve 2 Heater |
| 6334 | Engine Timing Actuator #1 Requested Position                |
| 6335 | Engine Timing Actuator #2 Requested Position                |
| 6336 | Engine Timing Actuator #1 Position Command                  |
| 6337 | Engine Timing Actuator #2 Position Command                  |
| 6386 | Engine Gas Fuel Percentage Command                          |
| 6387 | Engine Cylinder Gas Mass Flow Rate Command                  |
| 6388 | Engine Cylinder Diesel Mass Flow Rate Command               |
| 6389 | Engine Cylinder Torque                                      |
| 6390 | Engine Cylinder Pressure Monitor #1 Preliminary FMI         |
| 6391 | Engine Cylinder Pressure Monitor #2 Preliminary FMI         |
| 6398 | Engine Cylinder #1 Knock Level                              |
| 6399 | Engine Cylinder #1 Pressure Sensor Preliminary FMI          |
| 6402 | Engine Cylinder #2 Knock Level                              |
| 6403 | Engine Cylinder #2 Pressure Sensor Preliminary FMI          |
| 6406 | Engine Cylinder #3 Knock Level                              |
| 6407 | Engine Cylinder #3 Pressure Sensor Preliminary FMI          |
| 6410 | Engine Cylinder #4 Knock Level                              |
| 6410 | Engine Cylinder #4 Knock Level                              |
| 6414 | Engine Cylinder #5 Knock Level                              |
| 6414 | Engine Cylinder #5 Pressure Sensor Preliminary FMI          |
| 6418 | Engine Cylinder #6 Knock Level                              |
| 6419 | Engine Cylinder #6 Pressure Sensor Preliminary FMI          |

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| 6422 | Engine Cylinder #7 Knock Level                      |
| 6423 | Engine Cylinder #7 Pressure Sensor Preliminary FMI  |
| 6426 | Engine Cylinder #8 Knock Level                      |
| 6427 | Engine Cylinder #8 Pressure Sensor Preliminary FMI  |
| 6430 | Engine Cylinder #9 Knock Level                      |
| 6431 | Engine Cylinder #9 Pressure Sensor Preliminary FMI  |
| 6434 | Engine Cylinder #10 Knock Level                     |
| 6435 | Engine Cylinder #10 Pressure Sensor Preliminary FMI |
| 6438 | Engine Cylinder #11 Knock Level                     |
| 6439 | Engine Cylinder #11 Pressure Sensor Preliminary FMI |
| 6442 | Engine Cylinder #12 Knock Level                     |
| 6443 | Engine Cylinder #12 Pressure Sensor Preliminary FMI |
| 6446 | Engine Cylinder #13 Knock Level                     |
| 6447 | Engine Cylinder #13 Pressure Sensor Preliminary FMI |
| 6450 | Engine Cylinder #14 Knock Level                     |
| 6451 | Engine Cylinder #14 Pressure Sensor Preliminary FMI |
| 6454 | Engine Cylinder #15 Knock Level                     |
| 6455 | Engine Cylinder #15 Pressure Sensor Preliminary FMI |
| 6458 | Engine Cylinder #16 Knock Level                     |
| 6459 | Engine Cylinder #16 Pressure Sensor Preliminary FMI |
| 6462 | Engine Cylinder #17 Knock Level                     |
| 6463 | Engine Cylinder #17 Pressure Sensor Preliminary FMI |
| 6466 | Engine Cylinder #18 Knock Level                     |
| 6467 | Engine Cylinder #18 Pressure Sensor Preliminary FMI |
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| 6470 | Engine Cylinder #19 Knock Level                                              |
| 6471 | Engine Cylinder #19 Pressure Sensor Preliminary FMI                          |
| 6474 | Engine Cylinder #20 Knock Level                                              |
| 6475 | Engine Cylinder #20 Pressure Sensor Preliminary FMI                          |
| 6476 | Aftertreatment Diesel Exhaust Fluid Doser Cooldown Interrupt Count           |
| 6477 | Aftertreatment Diesel Exhaust Fluid Doser Purge Interrupt Count              |
| 6478 | Aftertreatment Diesel Exhaust Fluid Doser Cooldown Complete This Cycle       |
| 6479 | Aftertreatment Diesel Exhaust Fluid Doser Cooldown Complete Last Cycle       |
| 6480 | Aftertreatment Diesel Exhaust Fluid Doser Purge Complete This Cycle          |
| 6481 | Aftertreatment Diesel Exhaust Fluid Doser Purge Complete Last Cycle          |
| 6564 | Engine Cylinder Pressure Monitor 1                                           |
| 6565 | Engine Cylinder Pressure Monitor 2                                           |
| 6571 | Engine Main Chamber Fuel Absolute Pressure                                   |
| 6572 | Engine Main Chamber Fuel Desired Absolute Pressure                           |
| 6573 | Engine Prechamber Fuel Absolute Pressure                                     |
| 6574 | Engine Prechamber Fuel Desired Absolute Pressure                             |
| 6575 | Engine Main Chamber Air Fuel Ratio                                           |
| 6576 | Engine Main Chamber Desired Air Fuel Ratio                                   |
| 6577 | Engine Prechamber Air Fuel Ratio                                             |
| 6578 | Engine Prechamber Desired Air Fuel Ratio                                     |
| 6579 | Engine Exhaust NOx                                                           |
| 6580 | Engine Exhaust Desired NOx                                                   |
| 6581 | Aftertreatment #1 Hydrocarbon Doser #2                                       |
| 6588 | Operator Shutdown With High Exhaust Temperature                              |
| 6593 | Aftertreatment 1 Diesel Exhaust Fluid Dosing Requested Quantity (High Range) |

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| 6594   | Aftertreatment 2 Diesel Exhaust Fluid Dosing Requested Quantity (High Range) |
| 6595   | Aftertreatment 1 Diesel Exhaust Fluid Actual Dosing Quantity (High Range)    |
| 6596   | Aftertreatment 2 Diesel Exhaust Fluid Actual Dosing Quantity (High Range)    |
| 520192 | CGI Mass Flow                                                                |
| 520193 | CGI Gas Temperature                                                          |
| 520194 | CGI Control Valve                                                            |
| 520196 | CGI Differential Pressure                                                    |
| 520197 | CGI Absolute Pressure                                                        |
| 523523 | Engine Injector Cylinder #1 and Cylinder #4                                  |
| 523524 | Engine Injector Cylinder #2 and Cylinder #3                                  |
| 523525 | Engine Injector Charge Capacitor Supply Voltage                              |
| 523527 | ECU CPU                                                                      |
| 523535 | Engine Injector Charge Voltage                                               |
| 523536 | EGR Response                                                                 |
| 523537 | EGR Motor Temperature Sensor                                                 |
| 523538 | Engine Injector Code                                                         |
| 523539 | Fuel Pump Pressure                                                           |
| 523540 | Fuel Pump Pressure                                                           |
| 523541 | EGR Lift Sensor                                                              |
| 523543 | Accelerator Pedal Position Sensor                                            |
| 523544 | Engine Start Aid                                                             |
| 523547 | CAN Data Link                                                                |
| 523548 | CAN Data Link                                                                |
| 523572 | EGR Position Sensor                                                          |
| 523574 | EGR Actuator Coil Low Side Driver                                            |

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| 523575 | EGR Actuator                                              |
| 523576 | EGR Actuator Temperature                                  |
| 523577 | EGR Actuator Temperature Sensor                           |
| 523578 | EGR Actuator Data Link                                    |
| 523580 | Intake Throttle                                           |
| 523582 | Intake Throttle Lift Sensor                               |
| 523589 | Engine Coolant Temperature during Stationary Regeneration |
| 523590 | Stationary Regeneration Duration                          |
| 523591 | CAN Data Link                                             |
| 523591 | CAN Data Link                                             |
| 523591 | CAN Data Link                                             |
| 523592 | CAN Data Link                                             |
| 523593 | CAN Data Link                                             |
| 523594 | CAN Data Link                                             |
| 523595 | CAN Data Link                                             |
| 523596 | CAN Data Link                                             |
| 523598 | CAN Data Link                                             |
| 523599 | All Exhaust Gas Temperature Sensors Failure               |
| 523600 | Fuel Pump Calibration Not Completed                       |
| 523601 | Exhaust Gas Temperature                                   |
| 523602 | Aftertreatment Regeneration Frequency                     |
| 523603 | Engine Coolant Temperature                                |
| 523604 | CAN Data Link                                             |
| 523700 | EEPROM Checksum                                           |

