Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
Asea EP455 (2003-02)	12V Line	Over-voltage	VDS200x + AutoWave	5.10.1		•	
		Reverse polarity	VDS200x + AutoWave	5.10.3		•	
		Memory retention	VDS200x + AutoWave	5.10.5		•	
		Starting voltage	VDS200x + AutoWave	5.10.6		•	
		Power-up operational requirements	VDS200x + AutoWave	5.10.7		•	
		Accessory noise	VDS200x + AutoWave	5.11.1		•	
		Batteryless operation	VDS200x + AutoWave	5.11.3		•	
Audi Prüfkatalog (2005-10)	12V Line	Impulse 4	VDS200x	2		•	
		Impulse 4b	VDS200x	2		•	
		Impulse 4b Variation	VDS200x + AutoWave	2		•	
		Impulse 4 Ripple	VDS200x	2		•	
		Impulse 4b Ripple	VDS200x	2		•	
		Impulse 1	UCS200x, MPG200	3			
		Impulse 1b	UCS200x, MPG200	4			
		Impulse 2	UCS200x, MPG200	4			
		Impulse 3a	UCS200x, EFT200	4			
		Impulse 3b	UCS200x, EFT200	4			
		Sine-Sweep	VDS200x	6		•	
		Reset	VDS200x + AutoWave	8		•	
		Ramp VW	VDS200x + AutoWave	13		•	
		Ramp Fast	VDS200x	13		•	
		Overvoltage 26V	VDS200x	14		•	
		Overvoltage 17V	VDS200x	15		•	
		Prellen 1	VDS200x + AutoWave	17		•	
		Prellen 2	VDS200x + AutoWave	17		•	
		Prellen 3	VDS200x + AutoWave	17		•	
		Voltagedrop	VDS200x + AutoWave	18		•	
Audi Prüfkatalog (2006-06)	12V Line	Voltage Curve 1	VDS200x	2		•	
		Voltage Curve 1 (Variation	VDS200x + AutoWave	2		•	
		Voltage Curve 2	VDS200x	2		•	
		Voltage Curve 3	VDS200x	2		•	
		Voltage Curve 4	VDS200x	2		•	
		Voltage Curve 5	VDS200x	2		•	
		Impulse 1	UCS200x, MPG200	3			
		Impulse 6	UCS200x	4			
		Impulse 2	UCS200x, MPG200	4			
		Impulse 3a	UCS200x, EFT200	4			
		Impulse 3b	UCS200x, EFT200	4			
		Sine-Sweep	VDS200x	6		•	
		Reset	VDS200x + AutoWave	8		•	
		Ramp VW	VDS200x + AutoWave	13		•	
		Ramp Fast	VDS200x	13		•	
		Overvoltage 26V	VDS200x	14		•	
		Overvoltage 17V	VDS200x	15		•	
		Prellen 1	VDS200x + AutoWave	17		•	
		Prellen 2	VDS200x + AutoWave	17		•	
		Prellen 3	VDS200x + AutoWave	17		•	
		Voltagedrop	VDS200x + AutoWave	18		•	
Audi	12V Line	Spannungsbereich 1	VDS200x + AutoWave	2.1.1		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
Spannungsprüfungen (2003-08)		Spannungsbereich 2	VDS200x + AutoWave	2.1.2		•	
		Prüfimpuls 1	VDS200x + AutoWave	2.2.1		•	
		Prüfimpuls 2	VDS200x + AutoWave	2.2.2		•	
		Impulsfolge 1	VDS200x + AutoWave	2.2.3		•	
		Impulsfolge 2	VDS200x + AutoWave	2.2.4		•	
		Impulsfolge 3	VDS200x + AutoWave	2.2.5		•	
		Spannungsrampen	VDS200x + AutoWave	2.2.6		•	
		Treppenspannung	VDS200x + AutoWave	2.2.7		•	
		Spannungsschwellen	VDS200x + AutoWave	2.2.8		•	
		Resetverhalten	VDS200x + AutoWave	2.2.9		•	
		Zündungsimpuls	VDS200x + AutoWave	2.2.10		•	
		TL Impuls 4 - Prüfverlauf A	VDS200x + AutoWave	2.2.11		•	
		TL Impuls 4b - Prüfverlauf A	VDS200x + AutoWave	2.2.11		•	
		TL Impuls 4 - Prüfverlauf B	VDS200x + AutoWave	2.2.11		•	
		TL Impuls 4b - Prüfverlauf B	VDS200x + AutoWave	2.2.11		•	
		Motorstart (Startimpuls)	VDS200x + AutoWave	2.2.12		•	
		Prellen 1	VDS200x + AutoWave	2.2.13		•	
		Prellen 2	VDS200x + AutoWave	2.2.14		•	
		Prellen 3	VDS200x + AutoWave	2.2.15		•	
		Spannungsrampe 50mV	VDS200x + AutoWave	2.2.16		•	
		Spannungsrampe 14V-4V	VDS200x + AutoWave	2.2.17		•	
		Spannungsdips 12V-0V - Fall A	VDS200x + AutoWave	2.2.18.1		•	
		Spannungsdips 12V-0V - Fall B	VDS200x + AutoWave	2.2.18.1		•	
		Spannungsdips 12V-7V/1V - Fall A	VDS200x + AutoWave	2.2.18.2		•	
		Spannungsdips 12V-7V/1V - Fall B	VDS200x + AutoWave	2.2.18.2		•	
		Spannungsrampe 13V-23V-13V	VDS200x + AutoWave	2.2.19		•	
		Prüfimpuls 3	VDS200x + AutoWave	2.2.20		•	
BMW 600 13.0 (Part 1) (1998-06)	12V Line	Wobble	VDS200x + AutoWave	5.2.1.1	•		
		Ramp Down	VDS200x + AutoWave	5.2.1.2	•		
		Ramp Up	VDS200x + AutoWave	5.2.1.2	•		
		Pulse 4	VDS200x + AutoWave	5.2.1.3	•		
		Pulse 1	VDS200x + AutoWave	5.2.1.4	•		
		Pulse 2	VDS200x + AutoWave	5.2.1.5	•		
		Pulse 3	VDS200x + AutoWave	5.3.1	•		
		Pulse 5	LD200N Clip, LD200x + diode	5.3.2	•		
BMW 600 13.0 (Part 2) (1996-05)	12V Line	Pulse 1	UCS200x, MPG200	6.1.1	•		
		Pulse 2	UCS200x, MPG200	6.1.1	•		
		Pulse 3a	UCS200x, EFT200	6.1.1	•		
		Pulse 3b	UCS200x, EFT200	6.1.1	•		
		Pulse 4	VDS200x	6.1.1	•		
		Pulse 5	LD200N Clip, LD200x + diode	6.1.1	•		
		Wobble	VDS200x	6.5.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	6.1.1	•		
		Pulse 3b	UCS200x, EFT200	6.1.1	•		
BMW GS 95002 (1999-10)	12V Line	Pulse 1	UCS200x, MPG200	7.1.3	•		
		Pulse 2a	UCS200x, MPG200	7.1.3	•		
		Pulse 2b	VDS200x	7.1.3	•		
		Pulse 3a	UCS200x, EFT200	7.1.3	•		
		Pulse 3b	UCS200x, EFT200	7.1.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 4	VDS200x	7.1.3	•		
		Pulse 5a	LD200x	7.1.3	•		
		Pulse 5b	LD200N Clip, LD200x + diode	7.1.3	•		
		Wobble	VDS200x	7.5.2	•		
	12V I/O	Pulse 1	UCS200x, MPG200	7.1.3	•		
		Pulse 2	UCS200x, MPG200	7.1.3	•		
		Pulse 3a	UCS200x, EFT200	7.1.3	•		
		Pulse 3b	UCS200x, EFT200	7.1.3	•		
BMW GS 95002 (2001-10)	12V Line	Pulse 1	UCS200x, MPG200	7.1.3	•		
		Pulse 2a	UCS200x, MPG200	7.1.3	•		
		Pulse 2b	VDS200x	7.1.3	•		
		Pulse 3a	UCS200x, EFT200	7.1.3	•		
		Pulse 3b	UCS200x, EFT200	7.1.3	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	7.1.3	•		
		Pulse 3b	UCS200x, EFT200	7.1.3	•		
BMW GS 95002 (2004-10)	12V Line	Pulse 1	UCS200x, MPG200	7.2.1	•		
		Pulse 2a	UCS200x, MPG200	7.2.1	•		
		Pulse 3a	UCS200x, EFT200	7.2.1	•		
		Pulse 3b	UCS200x, EFT200	7.2.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	7.2.2	•		
		Pulse 3b	UCS200x, EFT200	7.2.2	•		
BMW GS 95002 (2010-06)	12V Line	Pulse 1	UCS200x, MPG200	7.2.1	•		
		Pulse 2a	UCS200x, MPG200	7.2.1	•		
		Pulse 3a	UCS200x, EFT200	7.2.1	•		
		Pulse 3b	UCS200x, EFT200	7.2.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	7.2.2	•		
		Pulse 3b	UCS200x, EFT200	7.2.2	•		
BMW GS 95002 -2 (2013-07)		Immunity to magnetic fields (DC)	AutoWave + AMP200N1.1, CWS500N3	5.6		•	•
		Immunity to magnetic fields (0.015 - 30kHz)	AutoWave + AMP200Nx, CWS500N3	5.6		•	•
		Immunity to magnetic fields (Verify H-Field)	AutoWave + AMP200Nx, CWS500N3	5.6		•	•
	12V Line	Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 1b	UCS200x, MPG200	5.7	•		
		Pulse 2a	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		
	24V Line	Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 1b	UCS200x, MPG200	5.7	•		
		Pulse 2a	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		
	48V Line	Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 1b	UCS200x, MPG200	5.7	•		
		Pulse 2a	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		
	12V I/O	CCC Fast a	UCS200x, EFT200	5.8	•		
		CCC Fast b	UCS200x, EFT200	5.8	•		
		ICC Slow pos.	UCS200x, MPG200	5.8	•		
		ICC Slow neg.	UCS200x, MPG200	5.8	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V I/O	CCC Fast a	UCS200x, EFT200	5.8	•		
		CCC Fast b	UCS200x, EFT200	5.8	•		
		ICC Slow pos.	UCS200x, MPG200	5.8	•		
		ICC Slow neg.	UCS200x, MPG200	5.8	•		
	48V I/O	CCC Fast a	UCS200x, EFT200	5.8	•		
		CCC Fast b	UCS200x, EFT200	5.8	•		
		ICC Slow pos.	UCS200x, MPG200	5.8	•		
		ICC Slow neg.	UCS200x, MPG200	5.8	•		
BMW GS 95003-2 (2000-03)	12V Line	Wobble	VDS200x	5.1.1.1	•		
		Ramp Down	VDS200x	5.1.1.2	•		
		Ramp Up	VDS200x	5.1.1.2	•		
		Pulse 4	VDS200x	5.1.1.3	•		
		Pulse 1	VDS200x	5.1.1.4	•		
		Pulse 2	VDS200x	5.1.1.5	•		
		Pulse 3	VDS200x	5.2.1	•		
		Pulse 5a	LD200x	5.2.2	•		
		Pulse 5b	LD200N Clip, LD200x + diode	5.2.2	•		
		Reversed Voltage	VDS200x	5.2.3	•		
BMW GS 95003-2 (2001-10)	12V Line	Wobble	VDS200x	5.1.1.1	•		
		Ramp Down	VDS200x	5.1.1.2	•		
		Ramp Up	VDS200x	5.1.1.2	•		
		Cranking	VDS200x	5.1.1.3	•		
		Pulse 1	VDS200x	5.1.1.4	•		
		Pulse 2	VDS200x	5.1.1.5	•		
		Switch	PFS200x, VDS200x + AutoWave	5.1.1.8b	•		
		Pulse 3	VDS200x	5.2.1	•		
		Pulse 5a	LD200x	5.2.2	•		
		Pulse 5b	LD200N Clip, LD200x + diode	5.2.2	•		
		Reversed Polarity	VDS200x	5.2.3	•		
BMW GS 95003-2 (2003-06)	12V Line	Wobble	VDS200x	5.1.1.1	•	•	
		Ramp Down	VDS200x	5.1.1.2	•	•	
		Ramp Up	VDS200x	5.1.1.2	•	•	
		Cranking	VDS200x	5.1.1.3	•	•	
		Pulse 1	VDS200x	5.1.1.4	•	•	
		Pulse 2	VDS200x	5.1.1.5	•	•	
		Switch	PFS200x, VDS200x + AutoWave	5.1.1.8b	•	•	
		Pulse 3	VDS200x	5.2.1	•	•	
		Pulse 5a	LD200x	5.2.2	•		
		Pulse 5b	LD200N Clip, LD200x + diode	5.2.2	•		
		Reversed Polarity	VDS200x	5.2.3	•	•	
BMW GS 95003-2 (2007-03)	12V Line	Overvoltage	VDS200x	5.2.1.1	•	•	
		Wobble	VDS200x	5.2.1.2	•	•	
		Decrease 1	VDS200x + AutoWave	5.2.1.3.1	•	•	
		Decrease 2	VDS200x + AutoWave	5.2.1.3.2	•	•	
		Voltage IGR	VDS200x	5.2.1.3.3	•	•	
		Cranking I, II, III	VDS200x	5.2.1.5	•	•	
		Cranking Ip	VDS200x + AutoWave	5.2.1.5	•	•	
		Cranking Iip	VDS200x + AutoWave	5.2.1.5	•	•	
		Very brief dip	VDS200x	5.2.1.6	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Brief dip 0.1s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.2s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.3s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.4s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.5s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 1s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 2s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 5s	VDS200x + AutoWave	5.2.1.7	•	•	
		Switch	PFS200x, VDS200x + AutoWave	5.1.1.8b	•	•	
		Jump Start	VDS200x	5.3.1	•	•	
		Loaddump	LD200x	5.3.2	•		
		Loadump Clip	LD200N Clip, LD200x + diode	5.3.2	•		
		Reverse 1	VDS200x	5.3.3.1	•	•	
		Reverse 2	VDS200x	5.3.3.2	•	•	
BMW GS 95003-2 (2010-01)	12V Line	Overvoltage	VDS200x	5.2.1.1	•	•	
		Wobble	VDS200x	5.2.1.2	•	•	
		Decrease 1	VDS200x + AutoWave	5.2.1.3.1	•	•	
		Decrease 2	VDS200x + AutoWave	5.2.1.3.2	•	•	
		Voltage IGR	VDS200x	5.2.1.3.3	•	•	
		Cranking I, II, III	VDS200x	5.2.1.5	•	•	
		Cranking Ip	VDS200x + AutoWave	5.2.1.5	•	•	
		Cranking Iip	VDS200x + AutoWave	5.2.1.5	•	•	
		Very brief dip	VDS200x	5.2.1.6	•	•	
		Brief dip 0.1s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.2s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.3s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.4s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 0.5s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 1s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 2s	VDS200x + AutoWave	5.2.1.7	•	•	
		Brief dip 5s	VDS200x + AutoWave	5.2.1.7	•	•	
		Switch	PFS200x, VDS200x + AutoWave	5.1.1.8b	•	•	
		Jump Start	VDS200x	5.3.1	•	•	
		Loaddump	LD200x	5.3.2	•		
		Loadump Clip	LD200N Clip, LD200x + diode	5.3.2	•		
		Reverse 1	VDS200x	5.3.3.1	•	•	
		Reverse 2	VDS200x	5.3.3.2	•	•	
BMW GS95024-2-1 (2010-01)	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Overvoltage 1	VDS200x + AutoWave	4.2	•	•	
		E-02 Overvoltage 2	VDS200x + AutoWave	4.2	•	•	
		E-03 Undervoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset - Test Case 1	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		E-10 Short Reset - Test Case 2	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 3	PFS200x + BSM200N100 + R-Box LV124, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	4.13	•		
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reset Voltage 1	VDS200x	4.15		•	
		E-15 Reset Voltage 2	VDS200x	4.15	•	•	
BMW GS95024-2-2 (2011-02)	12V Line	E-01 Longtime Voltage	VDS200x	8.1	•	•	
		E-02 Overvoltage 1	VDS200x + AutoWave	8.2	•	•	
		E-02 Overvoltage 2	VDS200x + AutoWave	8.2	•	•	
		E-03 Undervoltage	VDS200x + AutoWave	8.3	•	•	
		E-04 Jump Start	VDS200x	8.4	•	•	
		E-05 Load Dump	VDS200x	8.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	8.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	8.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	8.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	8.9	•	•	
		E-10 Short Reset - Test Case 1	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 2	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 3	PFS200x + BSM200N100 + R-Box LV124, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	8.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	8.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	8.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	8.11	•	•	
		E-12 Voltage Curve	VDS200x	8.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	4.13	•		
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reset Voltage 1	VDS200x	8.15	•	•	
		E-15 Reset Voltage 2	VDS200x	8.15	•	•	
		E-40 Very brief voltage drop	VDS200x	9.1	•	•	
		E-41 Brief off / on for bus nodes	AutoWave + PFM200Nx	9.2		•	
		E-42a Negative voltage impulse switched voltage - Pulse 2	AutoWave + VDS200x	9.3.1		•	
		E-42b Low-resistance voltage impulse on charge wire	PFS200x, VDS200x + AutoWave	9.3.2	•	•	
BMW	12V Line	5.1.1 EQ/TI_01 - Pulse 1	UCS200x, MPG200	5.1.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
GS95025-1 (2012-05)		5.1.1 EQ/TI_01 - Pulse 2a	UCS200x, MPG200	5.1.1	•		
		5.1.2 EQ/TI_02 - Pulse 1 bis neg.	UCS200x, MPG200	5.1.2	•		
		5.1.2 EQ/TI_02 - Pulse 1 bis pos.	UCS200x, MPG200	5.1.2	•		
		5.1.3 EQ/TI_03 - Pulse 3a	UCS200x, EFT200	5.1.3	•		
		5.1.3 EQ/TI_03 - Pulse 3b	UCS200x, EFT200	5.1.3	•		
	12V I/O	5.1.4 EQ/TI_04 - Pulse 3a	UCS200x, EFT200	5.1.4	•		
		5.1.4 EQ/TI_04 - Pulse 3b	UCS200x, EFT200	5.1.4	•		
		5.3.2 EQ/RI_02 : Immunity to low frequency magnetic fields (DC)	AutoWave + AMP200N1.1, CWS500N3	5.3.2		•	•
		5.3.2 EQ/RI_02 : Immunity to low frequency magnetic fields	AutoWave + AMP200Nx, CWS500N3	5.3.2		•	•
BMW GS95026 (2011-10)	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-07 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	3.8		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200N100, AutoWave + PFM200Nx	3.10	•	•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200N / VDS200	3.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200N / VDS200	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
BMW GS95026 (2013-10)	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200N100, AutoWave + PFM200Nx	3.10	•	•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200N / VDS200	3.11		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		E48-10 Start Impulses - Cold start Severe)	VDS200N / VDS200	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
BMW GS95027 (2011-10)	12V Line	4.3.3 Reverse Polarity	VDS200x	4.3.3	•	•	
		4.3.4 Superimposed Voltage	VDS200x + AutoWave	4.3.4	•	•	
		4.3.5 Startimpuls - Cold Cranking (Normal)	VDS200x	4.3.5	•	•	
		4.3.5 Startimpuls - Cold Cranking (Severe)	VDS200x + AutoWave	4.3.5	•	•	
		4.3.5 Startimpuls - Warm Cranking (Short)	VDS200x + AutoWave	4.3.5	•	•	
		4.3.5 Startimpuls - Warm Cranking (Long)	VDS200x + AutoWave	4.3.5	•	•	
		4.3.7.10 Pulse 1	UCS200x, MPG200	4.3.7.10	•		
		4.3.7.10 Pulse 1b	UCS200x, MPG200	4.3.7.10	•		
		4.3.7.10 Pulse 2a	UCS200x, MPG200	4.3.7.10	•		
		4.3.7.10 Pulse 2b	VDS200x	4.3.7.10	•	•	
		4.3.7.10 Pulse 3a	UCS200x, EFT200	4.3.7.10	•		
		4.3.7.10 Pulse 3b	UCS200x, EFT200	4.3.7.10	•		
	12V I/O	4.3.7,11 Fast a (CCC)	UCS200x, EFT200	4.3.7.11	•		
		4.3.7,11 Fast b (CCC)	UCS200x, EFT200	4.3.7.11	•		
		4.3.7.11 DCC Slow pos.	UCS200x, MPG200	4.3.7.11	•		
		4.3.7.11 DCC Slow neg.	UCS200x, MPG200	4.3.7.11	•		
BMW QV 65013 (2010-06)	12V Line	6.2.1.1 Startcurve - Standard	VDS200x	6.2.1.1	•	•	
		6.2.1.2 Startcurve 1 (E63)	VDS200x + AutoWave	6.2.1.2		•	
		6.2.1.3 Startcurve 2 (E83)	VDS200x + AutoWave	6.2.1.3		•	
		6.2.1.4 Startcurve 3 (E85)	VDS200x + AutoWave	6.2.1.4		•	
		6.2.1.5 Startcurve 4 (E87)	VDS200x + AutoWave	6.2.1.5		•	
		6.2.1.6 Startcurve 5 (E90)	VDS200x + AutoWave	6.2.1.6		•	
		6.2.1.7 Startcurve 6 (R56)	VDS200x + AutoWave	6.2.1.7		•	
		6.2.1.8 Motor - Start/Stop - Automatic KSopt	VDS200x + AutoWave	6.2.1.8		•	
		6.2.1.9 Motor - Start/Stop - Automatic SGR	VDS200x + AutoWave	6.2.1.9		•	
		6.2.2 U_Dip - 1ms Disturbance	VDS200x + AutoWave	6.2.2		•	
		6.2.3 U_Dip for 100ms - Impulse 1	VDS200x + AutoWave	6.2.3		•	
		6.2.4 U_Dip for 150ms	VDS200x + AutoWave	6.2.4		•	
		6.2.5 U_Dip for 5s	VDS200x + AutoWave	6.2.5		•	
		6.2.6 U_Dip Cyclic for 228us	PFM200N100.1	6.2.6		•	
		6.2.7 U_Dip Cyclic for 500ms	VDS200x + AutoWave	6.2.7		•	
		6.2.8 U_Break 50-250ms cyclic	VDS200x + AutoWave	6.2.8		•	
		6.2.9 Voltage Break - Autarky 150ms	VDS200x + AutoWave	6.2.9		•	
		6.2.10 U_Ramp 0-16V	VDS200x + AutoWave	6.2.10		•	
		6.2.11 U_Lowering in 0.5 Steps	VDS200x	6.2.11	•	•	
		6.2.12 U_Stair Static	VDS200x + AutoWave	6.2.12		•	
		6.2.13 U_Stair Sweep	VDS200x + AutoWave	6.2.13		•	
		6.2.14 U_6-10V	VDS200x + AutoWave	6.2.14		•	
		6.2.15 U_9-16V	VDS200x + AutoWave	6.2.15		•	
		6.2.16 U_Main Power Supply - U_sin superimposed (Wobbeln)	VDS200x	6.2.16	•	•	
		6.2.18 Fast Loading Device (Jump Start)	VDS200x	6.2.18	•	•	
		6.2.19 Load Dump Impulse	LD200x	6.2.19	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		6.2.20 Inverse-polarity Protection - general	VDS200x	6.2.20	•	•	
		6.2.21 F_Overvoltage	VDS200x + AutoWave	6.2.21		•	
		6.2.22 F_Undervoltage Detection	VDS200x + AutoWave	6.2.22		•	
		6.2.27 Pulse 1	UCS200x, MPG200	6.2.25	•		
		6.2.29 Pulse 2	UCS200x, MPG200	6.2.26	•		
		6.2.29 Pulse 3a	UCS200x, EFT200	6.2.27	•		
		6.2.29 Pulse 3b	UCS200x, EFT200	6.2.28	•		
		6.2.30 On-Off-Test with communication start	VDS200x + AutoWave	6.2.30		•	
		6.2.31 On-Off-Test cyclic 0.5s - 15s	VDS200x + AutoWave	6.2.31		•	
		6.2.32 On-Off-Test OC3	VDS200x + AutoWave	6.2.31		•	
BMW QV 65013 (2012-06)	12V Line	6.2.1.1 Startcurve - Standard	VDS200x	6.2.1.1	•	•	
		6.2.1.1.2 Startcurve - Coldstart	VDS200x + AutoWave	6.2.1.1.2	•	•	
		6.2.1.1.3 Startcurve - Warmstart	VDS200x + AutoWave	6.2.1.1.3	•	•	
		6.2.1.2 Startcurve 1 (E63)	VDS200x + AutoWave	6.2.1.2		•	
		6.2.1.3 Startcurve 2 (E83)	VDS200x + AutoWave	6.2.1.3		•	
		6.2.1.4 Startcurve 3 (E85)	VDS200x + AutoWave	6.2.1.4		•	
		6.2.1.5 Startcurve 4 (E87)	VDS200x + AutoWave	6.2.1.5		•	
		6.2.1.6 Startcurve 5 (E90)	VDS200x + AutoWave	6.2.1.6		•	
		6.2.1.7 Startcurve 6 (R56)	VDS200x + AutoWave	6.2.1.7		•	
		6.2.1.8 Motor - Start/Stop - Automatic KSopt	VDS200x + AutoWave	6.2.1.8		•	
		6.2.1.9 Motor - Start/Stop - Automatic SGR	VDS200x + AutoWave	6.2.1.9		•	
		6.2.2 U_Dip - 1ms Disturbance	VDS200x + AutoWave	6.2.2		•	
		6.2.3 U_Dip for 100ms - Impulse 1	VDS200x + AutoWave	6.2.3		•	
		6.2.4 U_Dip for 150ms	VDS200x + AutoWave	6.2.4		•	
		6.2.5 U_Dip for 5s	VDS200x + AutoWave	6.2.5		•	
		6.2.6 U_Dip Cyclic for 228us	PFM200N100.1	6.2.6		•	
		6.2.7 U_Dip Cyclic for 500ms	VDS200x + AutoWave	6.2.7		•	
		6.2.8 U_Break 50-250ms cyclic	VDS200x + AutoWave	6.2.8		•	
		6.2.9 Voltage Break - Autarky 150ms	VDS200x + AutoWave	6.2.9		•	
		6.2.10 U_Ramp 0-16V	VDS200x + AutoWave	6.2.10		•	
		6.2.11 U_Lowering in 0.5 Steps	VDS200x	6.2.11	•	•	
		6.2.12 U_Stair Static	VDS200x + AutoWave	6.2.12		•	
		6.2.13 U_Stair Sweep	VDS200x + AutoWave	6.2.13		•	
		6.2.14 U_6-10V	VDS200x + AutoWave	6.2.14		•	
		6.2.15 U_9-16V	VDS200x + AutoWave	6.2.15		•	
		6.2.16 U_Main Power Supply - U_sin superimposed (Wobbeln)	VDS200x + AutoWave	6.2.16	•	•	
		6.2.18 Fast Loading Device (Jump Start)	VDS200x	6.2.18	•	•	
		6.2.19 Load Dump Impulse	VDS200x	6.2.19		•	
		6.2.20 Inverse-polarity Protection - general	VDS200x	6.2.20	•	•	
		6.2.21 F_Overvoltage	VDS200x + AutoWave	6.2.21		•	
		6.2.22 F_Undervoltage Detection	VDS200x + AutoWave	6.2.22		•	
		6.2.27 Pulse 1	UCS200x, MPG200	6.2.25	•		
		6.2.29 Pulse 2	UCS200x, MPG200	6.2.26	•		
		6.2.29 Pulse 3a	UCS200x, EFT200	6.2.27	•		
		6.2.29 Pulse 3b	UCS200x, EFT200	6.2.28	•		
		6.2.30 On-Off-Test with communication start	VDS200x + AutoWave	6.2.30		•	
		6.2.31 On-Off-Test cyclic	VDS200x + AutoWave	6.2.31		•	
		6.2.32 On-Off-Test OC3	VDS200x + AutoWave	6.2.31		•	
BMW	12V Line	Cranking 1	VDS200x	4.1.1	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
Airbag-Steuergeräte (Rev.2, 2004-02)		Cranking 2	VDS200x	4.1.1	•	•	
		Cranking E83-1	VDS200x + AutoWave	4.1.2	•	•	
		Cranking E83-2	VDS200x + AutoWave	4.1.2	•	•	
		Cranking E87-1	VDS200x + AutoWave	4.1.3	•	•	
		Cranking E87-2	VDS200x + AutoWave	4.1.3	•	•	
		V_Drop 1ms	VDS200x + AutoWave	4.1.4	•	•	
		V_Drop 100ms	VDS200x + AutoWave	4.1.5	•	•	
		V_Drop 150ms	VDS200x + AutoWave	4.1.6	•	•	
		V_Drop 5s	VDS200x + AutoWave	4.1.7	•	•	
		V_Drop 500ms	VDS200x + AutoWave	4.1.9	•	•	
		V_Break 50-250ms	VDS200x + AutoWave	4.1.10	•	•	
		Autarkie 150ms	VDS200x + AutoWave	4.1.11	•	•	
		U_Rampe 0-16V	VDS200x + AutoWave	4.1.12	•	•	
		U_Voltagedrop	VDS200x	4.1.13	•	•	
		U_Step Static	VDS200x + AutoWave	4.1.14	•	•	
		U_Step Sweep	VDS200x + AutoWave	4.1.15	•	•	
		U_6-10V	VDS200x + AutoWave	4.1.16	•	•	
		U_9-16V	VDS200x + AutoWave	4.1.17	•	•	
		U_Bordnetz Wobbe	VDS200x	4.1.18	•	•	
		Jump Start	VDS200x	4.1.20	•	•	
		Load Dump Impulse	LD200x	4.1.21	•		
		Reverse Polarity	VDS200x	4.1.22	•	•	
		F_Overvoltage	VDS200x + AutoWave	4.1.23	•	•	
		F_Undervoltage	VDS200x + AutoWave	4.1.24	•	•	
		Pulse 1	UCS200x, MPG200	4.1.27	•		
		Pulse 2	UCS200x, MPG200	4.1.28	•		
		Pulse 3a	UCS200x, EFT200	41.29	•		
		Pulse 3b	UCS200x, EFT200	4.1.30	•		
		On-Off-Test	VDS200x + AutoWave	4.1.32	•	•	
Case New Holland ENS0310 (Rev. E, 2006-01)	12V Line	Overvoltage	VDS200x	9.6.1.5	•	•	
		Rev. Polarity	VDS200x	9.6.1.6	•	•	
		Ramp Up	VDS200x	9.6.1.11		•	
		Noise	VDS200x	9.6.2.4	•	•	
		Batteryless	VDS200x + AutoWave	9.6.2.5		•	
		Inductive Load	UCS200x, MPG200	9.6.2.6	•		
		Inductance	UCS200x, MPG200	9.6.2.7	•		
		Neg. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Pos. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Cranking	VDS200x	9.6.2.9	•	•	
		Loaddump	LD200x	9.6.2.10	•		
	24V Line	Overvoltage	VDS200x	9.6.1.5	•	•	
		Rev. Polarity	VDS200x	9.6.1.6	•	•	
		Ramp Up	VDS200x	9.6.1.11		•	
		Noise	VDS200x	9.6.2.4	•	•	
		Batteryless	VDS200x + AutoWave	9.6.2.5		•	
		Inductive Load	UCS200x, MPG200	9.6.2.6	•		
		Inductance	UCS200x, MPG200	9.6.2.7	•		
		Neg. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Pos. Coupling	UCS200x, EFT200	9.6.2.8	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Cranking	VDS200x	9.6.2.9	•	•	
		Loaddump	LD200x	9.6.2.10	•		
Case New Holland ENS0310 (Rev. F, 2009-03)	12V Line	Overvoltage	VDS200x	9.6.1.5	•	•	
		Rev. Polarity	VDS200x	9.6.1.6	•	•	
		Ramp Up	VDS200x	9.6.1.11		•	
		Noise	VDS200x	9.6.2.4	•	•	
		Batteryless	VDS200x + AutoWave	9.6.2.5		•	
		Inductive Load	UCS200x, MPG200	9.6.2.6	•		
		Inductance 2a	UCS200x, MPG200	9.6.2.7	•		
		Inductance 2b	VDS200x	9.6.2.7	•		
		Neg. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Pos. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Cranking	VDS200x	9.6.2.9	•	•	
		Loaddump	LD200x	9.6.2.10	•		
	24V Line	Overvoltage	VDS200x	9.6.1.5	•	•	
		Rev. Polarity	VDS200x	9.6.1.6	•	•	
		Ramp Up	VDS200x	9.6.1.11		•	
		Noise	VDS200x	9.6.2.4	•	•	
		Batteryless	VDS200x + AutoWave	9.6.2.5		•	
		Inductive Load	UCS200x, MPG200	9.6.2.6	•		
		Inductance 2a	UCS200x, MPG200	9.6.2.7	•		
		Inductance 2b	VDS200x	9.6.2.7	•		
		Neg. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Pos. Coupling	UCS200x, EFT200	9.6.2.8	•		
		Cranking	VDS200x	9.6.2.9	•	•	
		Loaddump	LD200x	9.6.2.10	•		
Case New Holland ENS0310 (Rev. G, 2010-01)	12V Line	Overvoltage	VDS200x	9.6.5	•	•	
		Rev. Polarity	VDS200x	9.6.6	•	•	
		Ramp Up	VDS200x	9.6.11		•	
		Noise	VDS200x	9.7.2	•	•	
		Batteryless	VDS200x + AutoWave	9.7.3		•	
		Inductive Load	UCS200x, MPG200	9.7.4	•		
		Inductance 2a	UCS200x, MPG200	9.7.5	•		
		Inductance 2b	VDS200x	9.7.5	•		
		Neg. Coupling	UCS200x, EFT200	9.7.6	•		
		Pos. Coupling	UCS200x, EFT200	9.7.6	•		
		Cranking	VDS200x	9.7.7	•	•	
		Loaddump	LD200x	9.7.8	•		
	24V Line	Overvoltage	VDS200x	9.6.5	•	•	
		Rev. Polarity	VDS200x	9.6.6	•	•	
		Ramp Up	VDS200x	9.6.11		•	
		Noise	VDS200x	9.7.2	•	•	
		Batteryless	VDS200x + AutoWave	9.7.3		•	
		Inductive Load	UCS200x, MPG200	9.7.4	•		
		Inductance 2a	UCS200x, MPG200	9.7.5	•		
		Inductance 2b	VDS200x	9.7.5	•		
		Neg. Coupling	UCS200x, EFT200	9.7.6	•		
		Pos. Coupling	UCS200x, EFT200	9.7.6	•		
		Cranking	VDS200x	9.7.7	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Loaddump	LD200x	9.7.8	•		
Case New Holland ENS0310 (Rev. J, 2012-12)	12V Line	Overvoltage	VDS200x	9.6.5	•	•	
		Rev. Polarity	VDS200x	9.6.6	•	•	
		Ramp Up	VDS200x	9.6.11		•	
		Noise	VDS200x	9.7.2	•	•	
		Batteryless	VDS200x + AutoWave	9.7.3		•	
		Inductive Load	UCS200x, MPG200	9.7.4	•		
		Inductance 2a	UCS200x, MPG200	9.7.5	•		
		Inductance 2b	VDS200x	9.7.5	•		
		Neg. Coupling	UCS200x, EFT200	9.7.6	•		
		Pos. Coupling	UCS200x, EFT200	9.7.6	•		
		Cranking	VDS200x	9.7.7	•	•	
		Loaddump	LD200x	9.7.8	•		
	24V Line	Overvoltage	VDS200x	9.6.5	•	•	
		Rev. Polarity	VDS200x	9.6.6	•	•	
		Ramp Up	VDS200x	9.6.11		•	
		Noise	VDS200x	9.7.2	•	•	
		Batteryless	VDS200x + AutoWave	9.7.3		•	
		Inductive Load	UCS200x, MPG200	9.7.4	•		
		Inductance 2a	UCS200x, MPG200	9.7.5	•		
		Inductance 2b	VDS200x	9.7.5	•		
		Neg. Coupling	UCS200x, EFT200	9.7.6	•		
		Pos. Coupling	UCS200x, EFT200	9.7.6	•		
		Cranking	VDS200x	9.7.7	•	•	
		Loaddump	LD200x	9.7.8	•		
Case New Holland ENS0310 (Rev K, 2013-12)	12V Line	13.3.2 Reverse Polarity Test	VDS200x	13.3.2	•	•	
		13.3.3 Over Voltage Test	VDS200x	13.3.3	•	•	
		13.3.4 Jump Start	VDS200x	13.3.4	•	•	
		13.7.2 Power Up Operational Requirements	VDS200x	13.7.2	•	•	
		13.7.5 Superimposed Alternating Voltage on Supply lines	AutoWave + VDS200x	13.7.5	•	•	
		13.7.6 Start Cycle	VDS200x	13.7.6	•	•	
		13.7.7 Sinusoid Changes of Supply Voltage	VDS200x	13.7.7	•	•	
		13.7.8 Slow Decrease and Increase of Supply Voltage	AutoWave + VDS200x	13.7.8	•	•	
		13.7.9.2 Discontinuties in Voltage Supply - Procedure 1	VDS200x	13.7.9.2	•	•	
		13.7.9.3 Discontinuties in Voltage Supply - Procedure 2	PFS200x, VDS200x + AutoWave	13.7.9.3	•	•	
		13.7.9.4 Discontinuties in Voltage Supply - Procedure 3	VDS200x	13.7.9.4	•	•	
		13.7.9.5 Discontinuties in Voltage Supply - Procedure 4	PFS200x, VDS200x + AutoWave	13.7.9.5	•	•	
		13.7.10.2 Load Dump - Procedure 1	LD200x	13.7.10.2	•		
		13.7.10.3 Load Dump - Procedure 2	LD200N Clip, LD200x + diode	13.7.10.3	•		
		13.7.11.1 Accessory Noise Test	VDS200x	13.7.11.1	•	•	
		13.7.11.2 Battery less Operation Test	VDS200x + AutoWave	13.7.11.2	•	•	
		14.7.2.1 Inductive Load Switching (negative spikes)	UCS200x, MPG200	14.7.2.1	•		
		14.7.2.2.2 Positive Inductance Transient Tests - Procedure 1		14.7.2.2.2	•		
		14.7.2.2.3 Positive Inductance Transient Tests - Procedure 2	VDS200x	14.7.2.2.3	•	•	
		14.7.2.3.2 Positive and Negative Burst Coupling - Procedure 1	UCS200x, EFT200	14.7.2.3.2	•		
		14.7.2.3.3 Positive and Negative Burst Coupling - Procedure 2	UCS200x, EFT200	14.7.2.3.3	•		
		14.7.2.3.4 Positive and Negative Burst Coupling - Procedure 3	VDS200x	14.7.2.3.4	•	•	
		14.7.6 Magnetic Field Immunity Test	AutoWave + AMP200Nx + CN200N1, CWS500N3	14.7.6		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V Line	13.3.2 Reverse Polarity Test	VDS200x	13.3.2	•	•	
		13.3.3 Over Voltage Test	VDS200x	13.3.3	•	•	
		13.3.4 Jump Start	VDS200x	13.3.4	•	•	
		13.7.2 Power Up Operational Requirements	VDS200x	13.7.2	•	•	
		13.7.5 Superimposed Alternating Voltage on Supply lines	AutoWave + VDS200x	13.7.5	•	•	
		13.7.6 Start Cycle	VDS200x	13.7.6	•	•	
		13.7.7 Sinusoid Changes of Supply Voltage	VDS200x	13.7.7	•	•	
		13.7.8 Slow Decrease and Increase of Supply Voltage	AutoWave + VDS200x	13.7.8	•	•	
		13.7.9.2 Discontinuties in Voltage Supply - Procedure 1	VDS200x	13.7.9.2	•	•	
		13.7.9.3 Discontinuties in Voltage Supply - Procedure 2	PFS200x, VDS200x + AutoWave	13.7.9.3	•	•	
		13.7.9.4 Discontinuties in Voltage Supply - Procedure 3	VDS200x	13.7.9.4	•	•	
		13.7.9.5 Discontinuties in Voltage Supply - Procedure 4	PFS200x, VDS200x + AutoWave	13.7.9.5	•	•	
		13.7.10.2 Load Dump - Procedure 1	LD200x	13.7.10.2	•		
		13.7.10.3 Load Dump - Procedure 2	LD200N Clip, LD200x + diode	13.7.10.3	•		
		13.7.11.1 Accessory Noise Test	VDS200x	13.7.11.1	•	•	
		13.7.11.2 Battery less Operation Test	VDS200x + AutoWave	13.7.11.2	•	•	
		14.7.2.1 Inductive Load Switching (negative spikes)	UCS200x, MPG200	14.7.2.1	•		
		14.7.2.2.2 Positive Inductance Transient Tests - Procedure 1		14.7.2.2.2	•		
		14.7.2.2.3 Positive Inductance Transient Tests - Procedure 2	VDS200x	14.7.2.2.3	•	•	
		14.7.2.3.2 Positive and Negative Burst Coupling - Procedure 1	UCS200x, EFT200	14.7.2.3.2	•		
		14.7.2.3.3 Positive and Negative Burst Coupling - Procedure 2	UCS200x, EFT200	14.7.2.3.3	•		
		14.7.2.3.4 Positive and Negative Burst Coupling - Procedure 3	VDS200x	14.7.2.3.4	•	•	
		14.7.6 Magnetic Field Immunity Test	AutoWave + AMP200Nx + CN200N1, CWS500N3	14.7.6		•	
	12V I/O	14.7.1 CCC Fast a	UCS200x, EFT200	14.7.1	•		
		14.7.1 CCC Fast b	UCS200x, EFT200	14.7.1	•		
		14.7.1 DCC Fast a	UCS200x, EFT200	14.7.1	•		
		14.7.1 DCC Fast b	UCS200x, EFT200	14.7.1	•		
		14.7.1 DCC Slow pos.	UCS200x, MPG200	14.7.1	•		
		14.7.1 DCC Slow neg.	UCS200x, MPG200	14.7.1	•		
		14.7.1 ICC Slow pos.	UCS200x, MPG200	14.7.1	•		
		14.7.1 ICC Slow neg.	UCS200x, MPG200	14.7.1	•		
	24V I/O	14.7.1 CCC Fast a	UCS200x, EFT200	14.7.1	•		
		14.7.1 CCC Fast b	UCS200x, EFT200	14.7.1	•		
		14.7.1 DCC Fast a	UCS200x, EFT200	14.7.1	•		
		14.7.1 DCC Fast b	UCS200x, EFT200	14.7.1	•		
		14.7.1 DCC Slow pos.	UCS200x, MPG200	14.7.1	•		
		14.7.1 DCC Slow neg.	UCS200x, MPG200	14.7.1	•		
		14.7.1 ICC Slow pos.	UCS200x, MPG200	14.7.1	•		
		14.7.1 ICC Slow neg.	UCS200x, MPG200	14.7.1	•		
Chrysler PF 9326 (Rev. C, 1998-01)	12V Line	Volt Extremes	VDS200x	3.4.2	•		
		Reverse Voltage	VDS200x	3.4.2	•		
		Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2	UCS200x, MPG200	3.5.2	•		
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		
		Pulse 5a	LD200xB1	3.5.3	•		
		Pulse 5b	LD200N Clip, LD200x + diode	3.5.3	•		
		Dips	PFS200x + RDS200	3.5.5	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Dropouts	PFS200x	3.5.5	•		
		Ramp Up	VDS200x	3.5.6	•		
		Ramp Down	VDS200x + AutoWave / Arb2714	3.5.7	•		
		Cranking	VDS200x	3.5.8	•		
	12V I/O	Pulse 2 neg	UCS200x, MPG200	3.6.3	•		
		Pulse 2 pos	UCS200x, MPG200	3.6.3	•		
		Pulse 3a	UCS200x, EFT200	3.6.3	•		
		Pulse 3b	UCS200x, EFT200	3.6.3	•		
		Mech. Swit. 1	PFS200x	3.6.2	•		
		Mech. Swit. 2	PFS200x	3.6.2	•		
Chrysler LLC PF 9236 (Rev. D, 2001-07)	12V Line	Volt Extremes	VDS200x	3.4.2	•		
		Reverse Voltage	VDS200x	3.4.2	•		
		Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2	UCS200x, MPG200	3.5.2	•		
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		
		Pulse 5a Ramp	LD200N, LD200B1	3.5.3	•		
		Pulse 5a	LD200N, LD200B1	3.5.3	•		
		Pulse 5b Ramp	LD200N Clip, LD200x + diode	3.5.3	•		
		Pulse 5b	LD200N Clip, LD200x + diode	3.5.3	•		
		Dips	PFS200x + RDS200	3.5.5	•		
		Dropouts	PFS200x	3.5.5	•		
		Ramp Up	VDS200x	3.5.6	•		
		Ramp Down	VDS200x + AutoWave / Arb2714	3.5.7	•		
		Cranking	VDS200x	3.5.8	•		
	12V I/O	Pulse 2 neg	UCS200x, MPG200	3.6.3	•		
		Pulse 2 pos	UCS200x, MPG200	3.6.3	•		
		Pulse 3a	UCS200x, EFT200	3.6.3	•		
		Pulse 3b	UCS200x, EFT200	3.6.3	•		
Chrysler LLC DC-10615 (Rev. E, 2007-12)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	7.1		•	•
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	7.1		•	•
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	7.2	•	•	
		Voltage Dips	PFS200x + RDS200, VDS200 + AutoWave	7.3	•	•	
		Cold Cranking	VDS200x	7.4	•	•	
		Warm Cranking	VDS200x + AutoWave / Arb2714	7.4	•	•	
		Ramp Up	VDS200x + AutoWave / Arb2714	7.6	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	7.7	•	•	
		Defective Regulation	VDS200x	8.1	•	•	
		Jump Start	VDS200x	8.2	•	•	
		Load Dump	VDS200N, VDS200B	8.3	•	•	
		Transient Overvoltage	VDS200N, VDS200B	8.4	•	•	
		Reverse Supply Voltage	VDS200x	8.5	•	•	
		Operating and Voltage Stress	VDS200x	10.1		•	
Chrysler LLC DC-11224 (Rev. A, Addendum) (2008-04)		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	8.0		•	•
		Magnetic Field Immunity (Verify H-Field)	AutoWave + AMP200Nx, CWS500N3	8.0		•	•
	12V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1b	UCS200x, MPG200	9.1.4.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	24V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1b	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	42V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	12V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
		LED Transient Test a	UCS200x, EFT200		•		
		LED Transient Test b	UCS200x, EFT200		•		
	24V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
Chrysler LLC CS-11809 (2009-05)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	4.1.3		•	•
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	4.1.3		•	•
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	4.2.2	•	•	
		Voltage Dips	PFS200x + RDS200, VDS200 + AutoWave	4.2.3	•	•	
		Cold Cranking	VDS200x	4.2.4	•	•	
		Warm Cranking	VDS200x + AutoWave / Arb2714	4.2.5	•	•	
		Ramp Up	VDS200x + AutoWave / Arb2714	4.2.6	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	4.27	•	•	
		Defective Regulation	VDS200x	4.3.1	•	•	
		Jump Start	VDS200x	4.3.2	•	•	
		Load Dump	VDS200N, VDS200B	4.3.3	•	•	
		Transient Overvoltage	VDS200N, VDS200B	4.3.4	•	•	
		Reverse Supply Voltage	VDS200x	4.3.5	•	•	
		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	6.3		•	•
		Magnetic Field Immunity (Verify H-Field)	AutoWave + AMP200Nx, CWS500N3	6.3		•	•
		Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
	24V Line	Pulse 1	UCS200x, MPG200	6.4.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
	12V I/O	Pulse a	UCS200x, EFT200	6.4.2	•		
		Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
	24V I/O	Pulse a	UCS200x, EFT200	6.4.2	•		
		Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
Chrysler LLC CS-11979 (Change A, 2010-04)	12V Line	Supply Voltage Ripple	VDS200x + AutoWave	4.1.3	•	•	
		Supply Voltage Ripple (Verify Source Impedance)	VDS200x	4.1.3	•	•	
		Supply Voltage Drop Out	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.2.2	•	•	
		Reset Behavior at Voltage Drop	VDS200x + AutoWave	4.2.4	•	•	
		Supply Voltage Dips	PFS200x	4.2.5	•	•	
		Cold Cranking	VDS200x	4.2.6	•	•	
		Warm Cranking	VDS200x	4.2.7	•	•	
		Slow decrease and increase	VDS200x	4.2.8	•	•	
		Defective Regulation	VDS200x	4.3.1	•	•	
		Jump Start	VDS200x	4.3.1	•	•	
		Reverse Voltage	VDS200x	4.3.2	•	•	
		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	6.3		•	•
		Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.4.1	•		
	24V Line	Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.4.1	•		
	12V I/O	Fast Pulse a	UCS200x, EFT200	6.4.2	•		
		Fast Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V I/O	Fast Pulse a	UCS200x, EFT200	6.4.2	•		
		Fast Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
China Motor Company ES-X82010 (Rev. O, 2005-10)	12V Line	Electric Load 1	VDS200x + AutoWave / Arb2714	4.2.1	•	•	
		Electric Load 2	VDS200x	4.2.1	•	•	
		Electric Load 3	VDS200x	4.2.1	•	•	
		Engine Start 1	VDS200x + AutoWave / Arb2714	4.2.2	•	•	
		Engine Start 2	VDS200x	4.2.2	•	•	
		Engine Start 3	VDS200x	4.2.3	•	•	
		Chattering	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.3	•	•	
		Key Switch	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.3	•	•	
		Inverse Polarity	VDS200x	4.4	•	•	
		Overvoltage A	VDS200x	4.5	•	•	
		Overvoltage B	VDS200x	4.5	•	•	
		Interruption	VDS200x	4.6	•	•	
		Pulse 1	UCS200x, MPG200	4.7.1	•		
		Pulse 2	UCS200x, MPG200	4.7.1	•		
		Pulse 3a	UCS200x, EFT200	4.7.1	•		
		Pulse 3b	UCS200x, EFT200	4.7.1	•		
		Pulse 5	LD200x	4.7.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	4.7.2	•		
		Pulse 3b	UCS200x, EFT200	4.7.2	•		
Claas CN 05 0215 (2004-12)	12V Line	Overvoltage	VDS200x	4.1.1	•	•	
		Jumpstart	VDS200x	4.1.1	•	•	
		Reversed Polarity	VDS200x	4.1.1	•	•	
		Slow decrease	VDS200x	4.1.2	•	•	
		Slow increase	VDS200x	4.1.2	•	•	
		Voltage Drop	VDS200x	4.1.3	•	•	
		Superimp. Voltage	VDS200x	4.1.6	•	•	
		Pulse 1	UCS200x, MPG200	4.5.1	•		
		Pulse 2	UCS200x, MPG200	4.5.1	•		
		Pulse 3a	UCS200x, EFT200	4.5.1	•		
		Pulse 3b	UCS200x, EFT200	4.5.1	•		
		Pulse 4	VDS200x	4.5.1	•		
		Pulse 5 Clip.	LD200x	4.5.1	•		
		Pulse 5	LD200x	4.5.1	•		
	24V Line	Overvoltage	VDS200x	4.2.2	•	•	
		Jumpstart	VDS200x	4.1.1	•	•	
		Reversed Polarity	VDS200x	4.1.1	•	•	
		Slow decrease	VDS200x	4.1.2	•	•	
		Slow increase	VDS200x	4.1.2	•	•	
		Voltage Drop	VDS200x	4.1.3	•	•	
		Superimp. Voltage	VDS200x	4.1.6	•	•	
		Pulse 1	UCS200x, MPG200	4.5.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 2	UCS200x, MPG200	4.5.1	•		
		Pulse 3a	UCS200x, EFT200	4.5.1	•		
		Pulse 3b	UCS200x, EFT200	4.5.1	•		
		Pulse 4	VDS200x	4.5.1	•		
		Pulse 5 Clip.	LD200x	4.5.1	•		
		Pulse 5	LD200x	4.5.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
Cummins 14269 (982022-026)	12V Line	Overvoltage	VDS200x	4.1	•	•	
		Reverse Voltage	VDS200x	4.2	•	•	
		Power Interrups	PFS200N, VDS200x + AutoWave	4.5	•	•	
		Key Switch Decay	VDS200x + AutoWave	4.6	•	•	
		Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 2	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		
		Pulse 4	VDS200x	5.7	•	•	
		Pulse 5	LD200x	5.7	•		
		Pulse 6	UCS200x S5, MPG200	5.7	•		
		Pulse 7	LD200x	5.7	•		
		Key Switch A	UCS200x, MPG200	5.8	•		
		Key Switch B	UCS200x, MPG200	5.8	•		
	24V Line	Overvoltage	VDS200x	4.1	•	•	
		Reverse Voltage	VDS200x	4.2	•	•	
		Power Interrupts	PFS200x, VDS200x + AutoWave	4.5	•	•	
		Key Switch Decay	VDS200x + AutoWave	4.6	•	•	
		Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 1b	UCS200x, MPG200	5.7	•		
		Pulse 2	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		
		Pulse 4	VDS200x	5.7	•	•	
		Pulse 5	LD200x	5.7	•		
		Pulse 6	UCS200x S5, MPG200	5.7	•		
		Pulse 7	LD200x	5.7	•		
		Key Switch A	UCS200x, MPG200	5.8	•		
		Key Switch B	UCS200x, MPG200	5.8	•		
	I/O	Pulse 1	UCS200x, MPG200 S15	5.9	•		
		Pulse 2	UCS200x, MPG200 S15	5.9	•		
Cummins 14269 (982022-028)	12V Line	Overvoltage	VDS200x	4.1	•	•	
		Reverse Voltage	VDS200x	4.2	•	•	
		Power Interrups	PFS200N, PFM100N100.1	4.5	•	•	
		Key Switch Decay	VDS200x + AutoWave	4.6	•	•	
		Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 2	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 4	VDS200x	5.7	•	•	
		Pulse 5	LD200x	5.7	•		
		Pulse 6	UCS200x S5, MPG200	5.7	•		
		Pulse 7	LD200x	5.7	•		
		Key Switch A	UCS200x, MPG200	5.8	•		
		Key Switch B	UCS200x, MPG200	5.8	•		
	24V Line	Overvoltage	VDS200x	4.1	•	•	
		Reverse Voltage	VDS200x	4.2	•	•	
		Power Interrupts	PFS200x, PFM200N100.1	4.5	•	•	
		Key Switch Decay	VDS200x + AutoWave	4.6	•	•	
		Pulse 1	UCS200x, MPG200	5.7	•		
		Pulse 1b	UCS200x, MPG200	5.7	•		
		Pulse 2	UCS200x, MPG200	5.7	•		
		Pulse 3a	UCS200x, EFT200	5.7	•		
		Pulse 3b	UCS200x, EFT200	5.7	•		
		Pulse 4	VDS200x	5.7	•	•	
		Pulse 5	LD200x	5.7	•		
		Pulse 6	UCS200x S5, MPG200	5.7	•		
		Pulse 7	LD200x	5.7	•		
		Key Switch A	UCS200x, MPG200	5.8	•		
		Key Switch B	UCS200x, MPG200	5.8	•		
	I/O	Pulse 1	UCS200x, MPG200 S15	5.9	•		
		Pulse 2	UCS200x, MPG200 S15	5.9	•		
DAF BSL 0006-100 (2006-07)	24V Line	Damage level or Jump start	VDS200x	2.2	•	•	
		Voltage drain	VDS200x + AutoWave	2.3		•	
		Reversing polarity	VDS200x	4.1	•	•	
		Pulse 1	UCS200x, MPG200	5.1	•		
		Pulse 2A	UCS200x, MPG200	5.1	•		
		Pulse 2B	VDS200x	5.1	•	•	
		Pulse 3A	UCS200x, EFT200	5.1	•		
		Pulse 3B	UCS200x, EFT200	5.1	•		
		Pulse 4	VDS200x	5.1	•	•	
		Pulse 5B	LD200N Clip, LD200x + diode	5.1	•		
	I/O	Pulse A	UCS200x, EFT200	4.7.2	•		
		Pulse B	UCS200x, EFT200	4.7.2	•		
DAF BSL 0006-100 (2009-04)	24V Line	Damage level or Jump start	VDS200x	2.2	•	•	
		Voltage drain	VDS200x + AutoWave	2.3		•	
		Reversing polarity	VDS200x	4.1	•	•	
		Pulse 1	UCS200x, MPG200	5.1	•		
		Pulse 2A	UCS200x, MPG200	5.1	•		
		Pulse 2B	VDS200x	5.1	•	•	
		Pulse 3B	UCS200x, EFT200	5.1	•		
		Pulse 3A	UCS200x, EFT200	5.1	•		
		Pulse 4	VDS200x	5.1	•	•	
		Pulse 5A	LD200x	5.1	•		
		Pulse 5B	LD200N Clip, LD200x + diode	5.1	•		
	I/O	Pulse A	UCS200x, EFT200	4.7.2	•		
		Pulse B	UCS200x, EFT200	4.7.2	•		
DIN	12V Line	Overvoltage 1	VDS200x	4.2.1.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
72300-2 (1998-10)		Overvoltage 2	VDS200x	4.2.1.2	•		
		Wobble	VDS200x	4.3	•		
		Ramp Down	VDS200x	4.4	•		
		Ramp Up	VDS200x	4.4	•		
		Drop	VDS200x	4.5.1	•		
		Dips	VDS200x	4.5.2	•		
		Start	VDS200x	4.5.3	•		
		Reversed Voltage	VDS200x	4.6.1	•		
	24V Line	Overvoltage	VDS200x	4.2.2	•		
		Wobble	VDS200x	4.3	•		
		Ramp Down	VDS200x	4.4	•		
		Ramp Up	VDS200x	4.4	•		
		Start	VDS200x	4.5.3	•		
		Reversed Voltage	VDS200x	4.6.2	•		
DIN 72300-2 (2000-07)	12V Line	Overvoltage 1	VDS200x	5.3.1.1	•	•	
		Overvoltage 2	VDS200x	5.3.1.2	•	•	
		Wobble	VDS200x	5.4	•	•	
		Ramp Down	VDS200x	5.5	•	•	
		Ramp Up	VDS200x	5.5	•	•	
		Start	VDS200x	5.6.1	•	•	
		Dips	VDS200x	5.6.2	•	•	
		Drop	VDS200x	5.6.3	•	•	
		Reversed Voltage	VDS200x	5.7	•	•	
	24V Line	Overvoltage	VDS200x	5.3.2	•	•	
		Wobble	VDS200x	5.4	•	•	
		Ramp Down	VDS200x	5.5	•	•	
		Ramp Up	VDS200x	5.5	•	•	
		Start	VDS200x	5.6.1	•	•	
		Dips	VDS200x	5.6.2	•	•	
		Reversed Voltage	VDS200x	5.7	•	•	
DaimlerChrysler PF-10540 (Rev. A, 2003-10)	12V Line	Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2	UCS200x, MPG200	3.5.2	•		
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		
		Pulse 5a Ramp	LD200xB1	3.5.3	•		
		Pulse 5a	LD200xB1	3.5.3	•		
		Pulse 5b Ramp	LD200N Clip, LD200x + diode	3.5.3	•		
		Pulse 5b	LD200N Clip, LD200x + diode	3.5.3	•		
	12V I/O	Pulse 2 neg	UCS200x, MPG200	3.6.3	•		
		Pulse 2 pos	UCS200x, MPG200	3.6.3	•		
		Pulse 3a	UCS200x, EFT200	3.6.3	•		
		Pulse 3b	UCS200x, EFT200	3.6.3	•		
DaimlerChrysler PF-10541 (Rev. A, 2003-12)	12V Line	Ramp Up	VDS200x	3.4.2	•	•	
		Voltage Extremes	VDS200x	3.4.2	•	•	
		Reverse Voltage	VDS200x	3.4.2	•	•	
		Dips	PFS200x + RDS200, VDS200 + AutoWave	3.5.5	•	•	
		Dropouts	PFS200x	3.5.5	•		
		Ramp Up	VDS200x	3.5.6	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	3.5.7	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Cranking	VDS200x	3.5.8	•	•	
DaimlerChrysler DC-10614 (2002-09)	12V Line	Pulse 1 Ramp	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	24V Line	Pulse 1 Ramp	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	42V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	12V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
	24V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
DaimlerChrysler DC-10614 (Rev. A, 2004-01)		Magnetic Field Immunity	CWS500N3	8.0			•
	12V Line	Pulse 1 Ramp	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	24V Line	Pulse 1 Ramp	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	42V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	12V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
	24V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
DaimlerChrysler DC-10614 (Rev. B, 2005-03)	12V Line	Pulse 1 Ramp	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	24V Line	Pulse 1 Ramp	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	42V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2 Ramp	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b Ramp	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	12V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
	24V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse a	UCS200x, EFT200	9.2.5.1	•		
		Pulse b	UCS200x, EFT200	9.2.5.1	•		
DaimlerChrysler DC-10615 (2002-11)	12V Line	Reverse Battery	VDS200x	6.4	•		
		Drop Out	PFS200x	7.1	•		
		Switch On	VDS200x + AutoWave / Arb2714	7.2.2	•		
		Voltage Dips	PFS200x + RDS200	7.3	•		
		Memory Test	VDS200x	7.4.1	•		
		Cranking	VDS200x	7.4.2	•		
		Initialisation	VDS200x	7.4.3	•		
		Ramp Up	VDS200x	7.5	•		
		Ramp Down	VDS200x	7.6	•		
		Defective Regulation	VDS200x	8.1	•		
		Jump Start	VDS200x	8.2	•		
		Load Dump	VDS200N, VDS200B	8.3	•		
DaimlerChrysler DC-10615 (Rev. A, 2003-05)	12V Line	Drop Out	PFS200x	7.2	•		
		Voltage Dips	PFS200x + RDS200, VDS200 + AutoWave	7.3	•		
		Low Voltage	VDS200x	7.4	•		
		Ramp Up	VDS200x	7.5	•		
		Ramp Down	VDS200x	7.6	•		
		Defective Regulation	VDS200x	8.1	•		
		Jump Start	VDS200N, VDS200B	8.2	•		
		Load Dump	VDS200 B	8.3	•		
		Reverse Battery	VDS200x	8.4	•		
DaimlerChrysler DC-10615 (Rev. B, 2004-08)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	•
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	•
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	7.2	•	•	
		Voltage Dips	PFS200x + RDS200, VDS200 + AutoWave	7.3	•	•	
		Low Voltage	VDS200x	7.4	•	•	
		Ramp Up	VDS200x	7.5	•	•	
		Ramp Down	VDS200x	7.6	•	•	
		Defective Regulation	VDS200x	8.1	•	•	
		Jump Start	VDS200N, VDS200B	8.2	•	•	
		Load Dump	VDS200N, VDS200B	8.3	•	•	
		Reverse Battery	VDS200x	8.4	•	•	
		Operating and Voltage Stress	VDS200x	10.1		•	
DaimlerChrysler DC-10615	12V Line	Supply Voltage Ripple	CWS500N3	6.3			•
		Supply Voltage Ripple (Verify Source Impedance)	CWS500N3	6.3			•

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
(Rev. C, 2006-04)		Drop Out	PFS200x	7.2	•		
		Voltage Dips	PFS200x + RDS200	7.3	•		
		Low Voltage	VDS200x	7.4	•		
		Ramp Up	VDS200x	7.5	•		
		Ramp Down	VDS200x	7.6	•		
		Defective Regulation	VDS200x	8.1	•		
		Jump Start	VDS200x	8.2	•		
		Load Dump	VDS200N, VDS200B	8.3	•		
		Reverse Battery	VDS200x	8.4	•		
DaimlerChrysler DC-10615 (Rev. D, 2007-05)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	•
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	•
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	7.2	•	•	
		Voltage Dips	PFS200x + RDS200, VDS200 + AutoWave	7.3	•	•	
		Cold Cranking	VDS200x	7.4	•	•	
		Warm Cranking	VDS200x + AutoWave / Arb2714	7.4	•	•	
		Ramp Up	VDS200x + AutoWave / Arb2714	7.6	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	7.7	•	•	
		Defective Regulation	VDS200x	8.1	•	•	
		Jump Start	VDS200x	8.2	•	•	
		Load Dump	VDS200N, VDS200B	8.3	•	•	
		Transient Overvoltage	VDS200N, VDS200B	8.4	•	•	
		Reverse Supply Voltage	VDS200x	8.5	•	•	
		Operating and Voltage Stress	VDS200x	10.1		•	
DaimlerChrysler DC-11224 (2006-10)	12V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1b	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	24V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1b	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	42V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	12V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
	24V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
DaimlerChrysler		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	8.0		•	•
DC-11224		Magnetic Field Immunity (Verify H-Field)	AutoWave + AMP200Nx, CWS500N3	8.0		•	•
(Rev A, 2007-05)	12V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1b	UCS200x, MPG200	9.1.4.2	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	24V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 1b	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	42V Line	Pulse 1	UCS200x, MPG200	9.1.4.1	•		
		Pulse 2	UCS200x, MPG200	9.1.4.2	•		
		Pulse 3a	UCS200x, EFT200	9.1.4.3	•		
		Pulse 3b	UCS200x, EFT200	9.1.4.3	•		
	12V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
	24V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
	42V I/O	Pulse 2 pos	UCS200x, MPG200	9.2.5	•		
		Pulse 2 neg	UCS200x, MPG200	9.2.5	•		
		Pulse 3a	UCS200x, EFT200	9.2.5.1	•		
		Pulse 3b	UCS200x, EFT200	9.2.5.1	•		
DaimlerChrysler	12V Line	Overvoltage	VDS200x	4.3.1	•	•	
DC-10842		Series Changing	VDS200x	4.3.2	•	•	
(2003-12)		Wobble	VDS200x + AutoWave	4.4	•	•	
		Drop Out	PFS200x	4.5.2	•		
		Dips	VDS200x	4.5.3	•		
		Start	VDS200x	4.5.4	•		
		Reversed Voltage	VDS200x	4.6	•		
		Ramp Up	VDS200x	4.12	•		
		Ramp Down	VDS200x	4.13	•		
		Load Dump 1	VDS200x	4.14.1	•		
		Load Dump 2	LD200N, LD200 S2	4.14.2	•		
	24V Line	Overvoltage	VDS200x	4.3.1	•	•	
		Series Changing	VDS200x	4.3.2	•	•	
		Wobble	VDS200x	4.4	•	•	
		Drop Out	PFS200x	4.5.2	•		
		Dips	VDS200x	4.5.3	•		
		Start	VDS200x	4.5.4	•		
		Ramp Up	VDS200x	4.12	•		
		Ramp Down	VDS200x	4.13	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Load Dump 1	VDS200x	4.14.1	•		
		Load Dump 2	LD200N, LD200 S2	4.14.2	•		
ECE R10 (Rev 4, 2012-03)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•	•	
	24V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•	•	
ECE R10 (Rev 5, 2014-10)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•	•	
	24V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•	•	
ETS 300 329 (1994-06)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 7	LD200x		•		
	24V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
ETS 300 340 (1994-06)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 7	LD200x		•		
	24V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 4	VDS200x		•		
ETS 300 342-1 (1994-06)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 7	LD200x		•		
	24V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
ETSI EN 301 489-1 (2002-04)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 7	LD200x		•		
	24V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
EN prEN 50498 (2008-03)	12V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2a	UCS200x, MPG200	4.6.2	•		
		Pulse 2b	VDS200x	4.6.2	•	•	
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
		Pulse 4	VDS200x	4.6.4	•	•	
	24V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2a	UCS200x, MPG200	4.6.2	•		
		Pulse 2b	VDS200x	4.6.2	•		
		Pulse 3a	UCS200x, EFT200	4.6.3	•	•	
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
		Pulse 4	VDS200x	4.6.4	•	•	
FAW Diesel ECU MY06.0 (Rev.7)	12V Line	Pulse 1	UCS200x	6.8	•		
		Pulse 2a	UCS200x	6.8	•		
		Pulse 3a	UCS200x	6.8	•		
		Pulse 3b	UCS200x	6.8	•		
		Pulse 4	VDS200x	6.8	•	•	
		Pulse 5	LD200N, LD200M	6.8	•		
		Pulse 7	LD200N, LD200M	6.8	•		
		Reverse Voltage	VDS200x	6.11	•	•	
		Overvoltage	VDS200x	6.12	•	•	
		Open Circuits	VDS200x	6.13	•	•	
		Keyswitch Decay	VDS200x + AutoWave	6.14	•	•	
		Power Interruption	VDS200x + AutoWave	6.15	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V Line	Pulse 1a	UCS200x	6.8	•		
		Pulse 1b	UCS200x	6.8	•		
		Pulse 2a	UCS200x	6.8	•		
		Pulse 3a	UCS200x	6.8	•		
		Pulse 3b	UCS200x	6.8	•		
		Pulse 4	VDS200x	6.8	•	•	
		Pulse 5	LD200x	6.8	•		
		Pulse 7	LD200N, LD200M	6.8	•		
		Keyswitch 1	UCS200x	6.8	•		
		Reverse Voltage	VDS200x	6.11	•	•	
		Overvoltage	VDS200x	6.12	•	•	
		Open Circuits	VDS200x	6.13	•	•	
		Keyswitch Decay	VDS200x + AutoWave	6.14	•	•	
		Power Interruption	VDS200x + AutoWave	6.15	•	•	
	24V I/O	Pulse 1	UCS200x	6.9	•		
		Pulse 2	UCS200x	6.9	•		
FCA CS.00054 (2015-01)	12V Line	Supply Voltage Range	VDS200x	5.2.1	•	•	
		Supply Voltage Ripple (Superimposed Alternating Voltage)	VDS200x + AutoWave	5.2.3	•	•	
		Supply Voltage Drop Out	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	5.3.2	•	•	
		Reset Behavior at Voltage Drop	VDS200x + AutoWave	5.3.4	•	•	
		Supply Voltage Dips	PFS200x	5.3.5	•	•	
		Engine Cranking Low Voltage - Resembling Cold Cranking	VDS200x	5.3.6	•	•	
		Engine Cranking Low Voltage - Warm cranking /Stop - Start	VDS200x	5.3.7	•	•	
		Slow decrease and increase	VDS200x	5.3.8	•	•	
		Defective Regulation	VDS200x	5.4.1	•	•	
		Jump Start	VDS200x	5.4.1	•	•	
		Reverse Voltage	VDS200x	5.4.2	•	•	
		Motor Stall	AutoWave + VDS200x	5.5.4		•	
		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	5.8.3		•	
		Pulse 1	UCS200x, MPG200	5.9.1	•		
		Pulse 1b	UCS200x, MPG200	5.9.1	•		
		Pulse 2	UCS200x, MPG200	5.9.1	•		
		Pulse 3a	UCS200x, EFT200	5.9.1	•		
		Pulse 3b	UCS200x, EFT200	5.9.1	•		
		Loaddump Test B	LD200N Clip, LD200x + diode	5.9.1	•		
	24V Line	Pulse 1	UCS200x, MPG200	5.9.1	•		
		Pulse 1b	UCS200x, MPG200	5.9.1	•		
		Pulse 2	UCS200x, MPG200	5.9.1	•		
		Pulse 3a	UCS200x, EFT200	5.9.1	•		
		Pulse 3b	UCS200x, EFT200	5.9.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	5.9.1	•		
	12V I/O	Fast Pulse a	UCS200x, EFT200	5.9.2	•		
		Fast Pulse b	UCS200x, EFT200	5.9.2	•		
		Pulse 2 pos	UCS200x, MPG200	5.9.3	•		
		Pulse 2 neg	UCS200x, MPG200	5.9.3	•		
		LED Transient Test a	UCS200x, EFT200	5.9.4	•		
		LED Transient Test b	UCS200x, EFT200	5.9.4	•		
	24V I/O	Fast Pulse a	UCS200x, EFT200	5.9.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Fast Pulse b	UCS200x, EFT200	5.9.2	•		
		Pulse 2 pos	UCS200x, MPG200	5.9.3	•		
		Pulse 2 neg	UCS200x, MPG200	5.9.3	•		
		LED Transient Test a	UCS200x, EFT200	5.9.4	•		
		LED Transient Test b	UCS200x, EFT200	5.9.4	•		
FIAT 9.90110 (1999-07)	12V Line	Overvoltage 1	VDS200x	2.7.2	•		
		Overvoltage 2	VDS200x	2.7.2	•		
		Pulse 1	UCS200x, MPG200	2.7.4	•		
		Pulse 2	UCS200x, MPG200	2.7.4	•		
		Pulse 3a	UCS200x, EFT200	2.7.4	•		
		Pulse 3b	UCS200x, EFT200	2.7.4	•		
		Pulse 4	VDS200x	2.7.4	•		
		Pulse 5	LD200x	2.7.4	•		
		Pulse 5a	LD200N Clip, LD200x + diode	2.7.4	•		
		Jaso	VDS200x	2.7.4	•		
		Micro 1ms/10ms	PFS200x	2.7.4	•		
		Micro >1ms	PFS200x	2.7.4	•		
		Cycle 1	PFS200x	2.7.4	•		
		Cycle 2	PFS200x	2.7.4	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.7.5	•		
		Pulse 3b	UCS200x, EFT200	2.7.5	•		
FIAT 9.90110 (Rev. 11, 2003-07)	12V Line	Overvoltage 1	VDS200x	2.7.2	•	•	
		Overvoltage 2	VDS200x	2.7.2	•	•	
		Reset 1	VDS200x	2.7.3.1	•	•	
		Reset 2	VDS200x	2.7.3.1	•	•	
		Reset 3	VDS200x	2.7.3.1	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Pulse 1	UCS200x, MPG200	2.7.4	•		
		Pulse 2	UCS200x, MPG200	2.7.4	•		
		Pulse 3a	UCS200x, EFT200	2.7.4	•		
		Pulse 3b	UCS200x, EFT200	2.7.4	•		
		Pulse 4	VDS200x	2.7.4	•	•	
		Pulse 5	LD200x	2.7.4	•		
		Pulse 5a	LD200N Clip, LD200x + diode	2.7.4	•		
		Jaso	VDS200x	2.7.4	•	•	
		Micro 1ms/10ms	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Micro >1ms	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Cycle 1	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Cycle 2	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Immunity to low-frequency magnetic fields	CWS500N3	2.7.12			•
	12V I/O	Pulse 3a	UCS200x, EFT200	2.7.5	•		
		Pulse 3b	UCS200x, EFT200	2.7.5	•		
FIAT 9.90110 (Rev. 12, 2006-02)	12V Line	Overvoltage 1	VDS200x	2.7.2	•	•	
		Overvoltage 2	VDS200x	2.7.2	•	•	
		Reset 1	VDS200x	2.7.3.1	•	•	
		Reset 2	VDS200x	2.7.3.1	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Reset 3	VDS200x	2.7.3.1	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	2.7.3.2	•	•	
		Pulse 1	UCS200x, MPG200	2.7.4	•		
		Pulse 2	UCS200x, MPG200	2.7.4	•		
		Pulse 3a	UCS200x, EFT200	2.7.4	•		
		Pulse 3b	UCS200x, EFT200	2.7.4	•		
		Pulse 4	VDS200x	2.7.4	•	•	
		Pulse 5	LD200x	2.7.4	•		
		Pulse 5a	LD200N Clip, LD200x + diode	2.7.4	•		
		Jaso	VDS200x	2.7.4	•	•	
		Micro 1ms/10ms	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Micro >1ms	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Cycle 1	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Cycle 2	PFS200x, VD200 + AutoWave	2.7.4	•	•	
		Immunity to low-frequency magnetic fields	CWS500N3	2.7.12			•
	12V I/O	Pulse 3a	UCS200x, EFT200	2.7.5	•		
		Pulse 3b	UCS200x, EFT200	2.7.5	•		
FIAT 9.90110 (Rev. 13, 2007-03)	12V Line	Overvoltage 1	VDS200x	3.9.4	•	•	
		Overvoltage 2	VDS200x	3.9.4	•	•	
		Reset 1	VDS200x	3.9.5.1	•	•	
		Reset 2	VDS200x	3.9.5.1	•	•	
		Reset 3	VDS200x	3.9.5.1	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	3.9.5.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	3.9.5.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	3.9.5.2	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	3.9.5.2	•	•	
		Micro 1ms	PFS200x, VD200 + AutoWave	3.9.5.3	•	•	
		Micro 3-30ms	PFS200x, VD200 + AutoWave	3.9.5.3	•	•	
		Micro 100-3000ms	PFS200x, VD200 + AutoWave	3.9.5.3	•	•	
		Cycle A	PFS200x, VD200 + AutoWave	3.9.5.3	•	•	
		Cycle B	PFS200x, VD200 + AutoWave	3.9.5.3	•	•	
		Pulse 1	UCS200x, MPG200	3.9.6.1	•		
		Pulse 2	UCS200x, MPG200	3.9.6.1	•		
		Pulse 3a	UCS200x, EFT200	3.9.6.1	•		
		Pulse 3b	UCS200x, EFT200	3.9.6.1	•		
		Pulse 5	LD200x	3.9.6.1	•		
		Pulse 5a	LD200N Clip, LD200x + diode	3.9.6.1	•		
		Pulse 4	VDS200x	3.9.6.2	•	•	
		Sinusoidal	VDS200x	3.9.6.2	•	•	
		Immunity to low-frequency magnetic fields	CWS500N3	3.9.10			•
	12V I/O	Pulse 3a	UCS200x, EFT200	3.9.7.1	•		
		Pulse 3b	UCS200x, EFT200	3.9.7.1	•		
FIAT 9.90111/01 (Rev. 1, 2010-05)	12V Line	Supply Voltage Range	VDS200x	4.1.1	•	•	
		Supply Voltage Ripple (Superimposed Alternating Voltage)	VDS200x + AutoWave	4.1.3	•	•	
		Supply Voltage Drop Out	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.2.2	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Reset Behavior at Voltage Drop	VDS200x + AutoWave	4.2.4	•	•	
		Supply Voltage Dips	PFS200x	4.2.5	•	•	
		Engine Cranking Low Voltage - Resembling Cold Cranking	VDS200x	4.2.6	•	•	
		Engine Cranking Low Voltage - Warm cranking /Stop - Start	VDS200x	4.2.7	•	•	
		Slow decrease and increase	VDS200x	4.2.8	•	•	
		Defective Regulation	VDS200x	4.3.1	•	•	
		Jump Start	VDS200x	4.3.1	•	•	
		Reverse Voltage	VDS200x	4.3.2	•	•	
		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	6.3		•	
		Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.4.1	•		
	24V Line	Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.4.1	•		
	12V I/O	Fast Pulse a	UCS200x, EFT200	6.4.2	•		
		Fast Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
	24V I/O	Fast Pulse a	UCS200x, EFT200	6.4.2	•		
		Fast Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
FIAT 9.90111/01 (Change A, 2012-06)	12V Line	Supply Voltage Range	VDS200x	4.1.1	•	•	
		Supply Voltage Ripple (Superimposed Alternating Voltage)	VDS200x + AutoWave	4.1.3	•	•	
		Supply Voltage Drop Out	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.2.2	•	•	
		Reset Behavior at Voltage Drop	VDS200x + AutoWave	4.2.4	•	•	
		Supply Voltage Dips	PFS200x	4.2.5	•	•	
		Engine Cranking Low Voltage - Resembling Cold Cranking	VDS200x	4.2.6	•	•	
		Engine Cranking Low Voltage - Warm cranking /Stop - Start	VDS200x	4.2.7	•	•	
		Slow decrease and increase	VDS200x	4.2.8	•	•	
		Defective Regulation	VDS200x	4.3.1	•	•	
		Jump Start	VDS200x	4.3.1	•	•	
		Reverse Voltage	VDS200x	4.3.2	•	•	
		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	6.3		•	•
		Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.4.1	•		
	24V Line	Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 1b	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.4.1	•		
	12V I/O	Fast Pulse a	UCS200x, EFT200	6.4.2	•		
		Fast Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
	24V I/O	Fast Pulse a	UCS200x, EFT200	6.4.2	•		
		Fast Pulse b	UCS200x, EFT200	6.4.2	•		
		Pulse 2 pos	UCS200x, MPG200	6.4.3	•		
		Pulse 2 neg	UCS200x, MPG200	6.4.3	•		
		LED Transient Test a	UCS200x, EFT200	6.4.4	•		
		LED Transient Test b	UCS200x, EFT200	6.4.4	•		
Fisker C1.810.EMC.100.01 (2009-03)	12V Line	Pulse 1	UCS200x, MPG200	5.1	•		
		Pulse 1b	UCS200x, MPG200	5.1	•		
		Pulse 2	UCS200x, MPG200	5.1	•		
		Pulse 3a	UCS200x, EFT200	5.1	•		
		Pulse 3b	UCS200x, EFT200	5.1	•		
	12V I/O	Pulse 2+ (DCC)	UCS200x, MPG200	5.2	•		
		Pulse 2- (DCC)	UCS200x, MPG200	5.2	•		
		Pulse a (DCC)	UCS200x, EFT200	5.2	•		
		Pulse b (DCC)	UCS200x, EFT200	5.2	•		
		Pulse a (CCC)	UCS200x, EFT200	5.2	•		
		Pulse b (CCC)	UCS200x, EFT200	5.2	•		
Ford WDR 00.00EA (1996-09)	12V Line	CI 01-A-002	VDS200x + AutoWave / Arb2714		•		
		CI 01-A-005	VDS200x		•		
		CI 01-B-040	VDS200x		•		
		CI 01-B-100	VDS200x		•		
		CI02-1A	UCS200x, MPG200		•		
		CI02-1B	UCS200x, MPG200		•		
		CI02-2	MPG200 7SP		•		
		CI02-3A	UCS200x, EFT200		•		
		CI02-3B	UCS200x, EFT200		•		
		CI02-4	VDS200N / VDS200 + Arbitrary		•		
		CI02-5	LD200N, LD200B1		•		
		CI02-9A1	PFS200x		•		
		CI02-9A2	PFS200x + RDS200		•		
		CI02-9B	VDS200x		•		
		CI03-1	VDS200x		•		
		CI03-2	VDS200x		•		
		CI03-3	VDS200x		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		CI03-4	VDS200x		•		
Ford ES-W7T-1A278-AB (Rev. B, 1999-04)	12V Line	CI 210-A1	VDS200x + AutoWave / Arb2714		•	•	
		CI 210-A2	VDS200x		•	•	
		CI 210-B1	VDS200x		•	•	
		CI 210-B2	VDS200x		•	•	
		CI 220-A	UCS200x, MPG200		•		
		CI 220-B	UCS200x, MPG200		•		
		CI 220-C	UCS200x, MPG200		•		
		CI 220-D	UCS200x, EFT200		•		
		CI 220-E	UCS200x, EFT200		•		
		CI 230-A	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 230-B1	VDS200x / RDS200 + AutoWave / Arb2714		•	•	
		CI 230-B2	VDS200x / RDS200 + AutoWave / Arb2714		•	•	
		CI 230-C	VDS200x / RDS200 + AutoWave / Arb2714		•	•	
		CI 240	LD200N, LD200B1		•		
		CI 250	AMP200N + AutoWave			•	
		CI 260-A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-D	PFS200x + RDS200		•	•	
		CI 260-E	VDS200x		•	•	
		CI 270	VDS200x (with minimal 200A)		•	•	
Ford ES-XW7T-1A278-AC (Update 2006-06) (2003-10)	12V Line	RI 140 - Magnetic Field Immunity	AutoWave + AMP200N1, CWS500N3			•	•
		RI 150 - Coupled Immunity	AutoWave + VDS200			•	
		CI 210-1-1	VDS200x + AutoWave / Arb2714		•	•	
		CI 210-1-2 ‹ 1kHz	VDS200x + AutoWave / Arb2714		•	•	
		CI 210-1-2 › 1kHz	VDS200x		•	•	
		CI 210-2-1	VDS200x		•	•	
		CI 210-2-2	VDS200N, VDS200B		•	•	
		CI 210-2-3	VDS200N, VDS200B		•	•	
		CI 220 - Pulse D	UCS200x, MPG200		•		
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F	UCS200x, MPG200		•		
		CI 220 - Pulse G	LD200N, LD200B1		•		
		CI 230 - Pulse A	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave / Arb2714		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave / Arb2714		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave / Arb2714		•	•	
		CI 250	AMP200N + AutoWave			•	
		CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260 - Pulse E	VDS200x		•	•	
		CI 270	VDS200x (with minimal 200A)		•	•	
	5V Line	CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	3V Line	CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
Ford EMC-CS-2009 .1 (2010-02)	12V Line	RI 140 - (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 140 - (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 150 - (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		CI 210 - (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F1	UCS200x, MPG200		•		
		CI 220 - Pulse F2	VDS200x		•	•	
		CI 220 - Pulse G1	LD200N, LD200M		•		
		CI 220 - Pulse G2	LD200x + Zehnerdiode		•		
		CI 230 - Pulse A	PFS200x + RDS200, VDS200 + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave		•	•	
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260 - Pulse E	VDS200x		•	•	
		CI 270	VDS200x (with minimal 100A)		•	•	
	5V Line	CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
	3V Line	CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
Ford FMC 1278 (2015-07)	12V Line	RI 140 (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	
		RI 140 (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	
		RI 150 (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	
		CI 210 (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 220 - ISO Pulse 1 (Immunity from Transient Disturbances)	UCS200x, MPG200		•		
		CI 221 - ISO Test Pulse 1 (Immunity from Transient Disturbances)	UCS200x, MPG200		•		
		CI 221 - ISO Test Pulse 2a (Immunity from Transient Disturbances)	UCS200x, MPG200		•		
		CI 221 - ISO Test Pulse 2b (Immunity from Transient Disturbances)	VDS200x		•	•	
		CI 221 - ISO Test Pulse 3a (Immunity from Transient Disturbances)	UCS200x, EFT200		•		
		CI 220 - ISO Test Pulse 3b (Immunity from Transient Disturbances)	UCS200x, EFT200		•		
		CI 222 - ISO Test Pulse 5a (Immunity from Load Dump)	LD200N, LD200M		•		
		CI 222 - ISO Test Pulse 5b (Immunity from Load Dump)	LD200N + Zehnerdiode		•		
		CI 230 (Immunity from Power Cycling)	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse A (Immunity from Power Cycling)	VDS200x / RDS200 + AutoWave			•	
		CI 230 - Pulse B (Immunity from Power Cycling)	VDS200x / RDS200 + AutoWave			•	
		CI 231 (Immunity from Power Cycling)	VDS200x		•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 260 - Waveform A (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform B (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform C (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform D (Immunity to Voltage Dropout)	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 270 (Immunity to Voltage Overstress)	VDS200x (with minimal 100A)		•	•	
	24V Line	RI 140 - (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	
		RI 140 - (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	
		RI 150 - (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	
		CI 210 - (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 221 - ISO Test Pulse 1 (Immunity from Transient Disturbances)	UCS200x, MPG200		•		
		CI 221 - ISO Test Pulse 2a (Immunity from Transient Disturbances)	UCS200x, MPG200		•		
		CI 221 - ISO Test Pulse 2b (Immunity from Transient Disturbances)	VDS200x		•	•	
		CI 221 - ISO Test Pulse 3a (Immunity from Transient Disturbances)	UCS200x, EFT200		•		
		CI 220 - ISO Test Pulse 3b (Immunity from Transient Disturbances)	UCS200x, EFT200		•		
		CI 222 - ISO Test Pulse 5a (Immunity from Load Dump)	LD200N		•		
		CI 222 - ISO Test Pulse 5b (Immunity from Load Dump)	LD200x + Zehnerdiode		•		
		CI 231 (Immunity from Power Cycling)	VDS200x		•	•	
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 260 - Waveform A (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform B (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform C (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform D (Immunity to Voltage Dropout)	PFS200x + RDS200, VDS200x + AutoWave		•	•	
	5V Line	CI 260 - Waveform A (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform B (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform C (Immunity to Voltage Dropout)	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260 - Waveform D (Immunity to Voltage Dropout)	PFS200x + RDS200, VDS200x + AutoWave		•	•	
	3V Line	CI 260 - Waveform A (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform B (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform C (Immunity to Voltage Dropout)	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Waveform D (Immunity to Voltage Dropout)	PFS200x + RDS200, VDS200x + AutoWave		•	•	
Ford FS-0000-00001-AB (Rev. B, 2002-07)	12V Line	Reverse Polarity 1	VDS200x	6,2	•	•	
		Reverse Polarity 2	VDS200x	6,2	•	•	
		Jump Start	VDS200x	6,2	•	•	
Freightliner 49-00085 (Rev. B, 2002-07)	12V Line	Reverse Polarity 1	VDS200x	6,2	•	•	
		Reverse Polarity 2	VDS200x	6,2	•	•	
		Jump Start	VDS200x	6,2	•	•	
		Series Charging	VDS200x	6,2	•	•	
		Micro Cuts	PDS200x	6.2	•	•	
		Load Dump	LD200N, LD200 S2	6,2	•		
		Ind. neg	UCS200x, MPG200 S15	6,2	•		
		Ind. pos	UCS200x, MPG200 S15	6,2	•		
		Mut. neg.	UCS200x, MPG200 S15	6,2	•		
		Mut. pos.	UCS200x, MPG200 S15	6,2	•		
General Motors GM 9105 P (1996-11)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5	UCS200x S5, MPG200		•		
		Pulse 6 (Sup.)	VDS200N, VDS200B S3		•		
		Pulse 6 (Non Sup.)	VDS200N, VDS200B S3		•		
General Motors GMW 3097 / 3100 (Rev. 3, 2000-10)	12V Line	Pulse 1	UCS200x, MPG200	3.2.1.3	•		
		Pulse 2a	UCS200x, MPG200	3.2.1.3	•		
		Pulse 2b	VDS200x	3.2.1.3	•		
		Pulse 3a	UCS200x, EFT200	3.2.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.2.1.3	•		
		Pulse 4	VDS200x	3.2.1.3	•		
		Pulse 5	LD200N Clip, LD200x + diode	3.2.1.3	•		
		Pulse 6	UCS200N, UCS200 S5, MPG200	3.2.1.3	•		
		Pulse 7a	UCS200x, MPG200	3.2.1.3	•		
		Pulse 7b	UCS200x, MPG200	3.2.1.3	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.2.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.2.1.2	•		
General Motors GMW 3097 / 3100 (Rev. C, 2001-08)	12V Line	Pulse 1	UCS200x, MPG200	3.2.1.3	•		
		Pulse 2a	UCS200x, MPG200	3.2.1.3	•		
		Pulse 2b	VDS200x	3.2.1.3	•		
		Pulse 3a	UCS200x, EFT200	3.2.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.2.1.3	•		
		Pulse 4	VDS200x	3.2.1.3	•		
		Pulse 5	LD200N Clip, LD200x + diode	3.2.1.3	•		
		Pulse 7a	UCS200x, MPG200	3.2.1.3	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.2.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.2.1.2	•		
General Motors GMW 3097 (Rev. 4, 2004-02)	12V Line	Immunity to Power Line Magnetic Fields	AutoWave + AMP200Nx, CWS500N3	3.4.4		•	•
		Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2a	UCS200x, MPG200	3.5.2	•		
		Pulse 2b	VDS200x	3.5.2	•	•	
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		
		Pulse 4	VDS200x	3.5.2	•	•	
		Pulse 5	LD200N Clip, LD200x + diode	3.5.2	•		
		Pulse 7a	UCS200x, MPG200	3.5.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
		Pulse 2a -	UCS200x, MPG200	3.5.4	•		
		Pulse 2a +	UCS200x, MPG200	3.5.4	•		
		Pulse 2a -	UCS200x, MPG200	3.5.5	•		
		Pulse 2a	UCS200x, MPG200	3.5.5	•		
General Motors GMW 3097 (Rev. 5, 2006-07)	12V Line	Immunity to Power Line Magnetic Fields	AutoWave + AMP200Nx, CWS500N3	3.4.4		•	•
		Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2a	UCS200x, MPG200	3.5.2	•		
		Pulse 2b	VDS200x	3.5.2	•	•	
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 4	VDS200x	3.5.2	•	•	
		Pulse 5	LD200N Clip, LD200x + diode	3.5.2	•		
		Pulse 7a	UCS200x, MPG200	3.5.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
		Pulse 2a -	UCS200x, MPG200	3.5.4	•		
		Pulse 2a +	UCS200x, MPG200	3.5.4	•		
		Pulse 2a -	UCS200x, MPG200	3.5.5	•		
		Pulse 2a	UCS200x, MPG200	3.5.5	•		
General Motors GMW 3097 (Rev. 6, 2012-04)	12V Line	Immunity to Power Line Magnetic Fields	AutoWave + AMP200Nx, CWS500N3	3.4.4		•	•
		Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2a	UCS200x, MPG200	3.5.2	•		
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		
		Pulse 4	VDS200x	3.5.2	•	•	
		Pulse 5	LD200N Clip, LD200x + diode	3.5.2	•		
		Pulse 7a	UCS200x, MPG200	3.5.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
		Pulse 2a -	UCS200x, MPG200	3.5.4	•		
		Pulse 2a +	UCS200x, MPG200	3.5.4	•		
		Pulse 2a -	UCS200x, MPG200	3.5.5	•		
		Pulse 2a	UCS200x, MPG200	3.5.5	•		
General Motors GMW 3097 (2015-06)	12V Line	Immunity to Power Line Magnetic Fields - Level 1	AutoWave + AMP200Nx, CWS500N3	3.4.5		•	•
		Immunity to Power Line Magnetic Fields - Level 2 - DC	AutoWave + AMP200Nx	3.4.5		•	
		Immunity to Power Line Magnetic Fields - Level 2	AutoWave + AMP200Nx	3.4.5		•	
		Pulse 1	UCS200x, MPG200	3.5.2	•		
		Pulse 2a	UCS200x, MPG200	3.5.2	•		
		Pulse 3a	UCS200x, EFT200	3.5.2	•		
		Pulse 3b	UCS200x, EFT200	3.5.2	•		
		Pulse 5	LD200N Clip, LD200x + diode	3.5.2	•		
		Pulse 7a	UCS200x, MPG200	3.5.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
		Pulse 2a -	UCS200x, MPG200	3.5.4	•		
		Pulse 2a +	UCS200x, MPG200	3.5.4	•		
		Pulse 2a -	UCS200x, MPG200	3.5.5	•		
		Pulse 2a	UCS200x, MPG200	3.5.5	•		
General Motors GMW 3172 (Rev. B, 2001-12)	12V Line	Jump Start	VDS200x	2.1	•		
		Reverse Polarity	VDS200x	2.1	•		
		Overvoltage	VDS200x	2.2	•		
		Reset Behavior	VDS200x	2.4	•		
		Dropout 1	VDS200x + AutoWave / Arb2714	2.5	•		
		Dropout 2	VDS200x + AutoWave / Arb2714	2.5	•		
		Dropout 3	VDS200x + AutoWave / Arb2714	2.5	•		
		Dropout 4	VDS200x + AutoWave / Arb2714	2.5	•		
General Motors GMW 3172 (Rev. C, 2004-08)	12V Line	Jump Start	VDS200x	6.4.2	•		
		Reverse Polarity	VDS200x	6.4.2	•		
		Overvoltage 1	VDS200x	6.4.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Overvoltage 2	VDS200x	6.4.3	•		
		Reset Behavior	VDS200x	6.4.5	•		
		Dropout 1	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Dropout 2	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Dropout 3	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Dropout 4	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Ripple Sinus	VDS200x	6.4.7	•		
General Motors GMW 3172 (Rev. D, 2005-02)	12V Line	Jump Start	VDS200x	6.4.2	•		
		Reverse Polarity	VDS200x	6.4.2	•		
		Overvoltage 1	VDS200x	6.4.3	•		
		Overvoltage 2	VDS200x	6.4.3	•		
		Reset Behavior	VDS200x	6.4.5	•		
		Dropout 1	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Dropout 2	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Dropout 3	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Dropout 4	VDS200x + AutoWave / Arb2714	6.4.6	•		
		Ripple Sinus	VDS200x	6.4.7	•		
General Motors GMW 3172 (Rev. E, 2005-12)	12V Line	Jump Start	VDS200x	5.2.2	•	•	
		Reverse Polarity	VDS200x	5.2.3	•	•	
		Overvoltage 1	VDS200x	5.2.4	•	•	
		Overvoltage 2	VDS200x	5.2.4	•	•	
		Voltagedrop	VDS200x	5.2.5a	•	•	
		Voltagedrop	PFS200x + RDS200, VDS200x + AutoWave	5.2.5b	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Dropout 2	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Dropout 3	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Dropout 4	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Ripple Sinus	VDS200x	5.2.7	•	•	
General Motors GMW 3172 (Rev. F, 2007-02)	12V Line	Jump Start	VDS200x	5.2.2	•	•	
		Reverse Polarity	VDS200x	5.2.3	•	•	
		Overvoltage 1	VDS200x	5.2.4	•	•	
		Overvoltage 2	VDS200x	5.2.4	•	•	
		Voltagedrop	VDS200x	5.2.5a	•	•	
		Voltagedrop	PFS200x + RDS200, VDS200x + AutoWave	5.2.5b	•	•	
		Dropout 1	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Dropout 2	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Dropout 3	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Dropout 4	VDS200x + AutoWave / Arb2714	5.2.6	•	•	
		Ripple Sinus	VDS200x + AutoWave	5.2.7	•	•	
General Motors GMW 3172 (Rev. G, 2008-08)	12V Line	Jump Start	VDS200x	8.2.1	•	•	
		Reverse Polarity	VDS200x	8.2.2	•	•	
		Overvoltage 1	VDS200x	8.2.3	•	•	
		Overvoltage 2	VDS200x	8.2.3	•	•	
		Power Supply Interruptions 1	VDS200x	9.2.2	•	•	
		Power Supply Interruptions 2	PFS200x + RDS200, VDS200x + AutoWave	9.2.2	•	•	
		Battery Voltage Dropout 1	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Battery Voltage Dropout 2	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Battery Voltage Dropout 3	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Battery Voltage Dropout 4	VDS200x + AutoWave / Arb2714	9.2.3	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse Superimposed Voltage (Signal Up)	VDS200x + AutoWave	9.2.4	•	•	
		Pulse Superimposed Voltage	VDS200N / VDS200	9.2.5		•	
		Discrete Digital Input Threshold Voltage	AutoWave + AMP200Nx	9.2.13		•	
General Motors GMW 3172 (Rev. H, 2010-07)	12V Line	Jump Start	VDS200x	8.2.1	•	•	
		Reverse Polarity	VDS200x	8.2.2	•	•	
		Overvoltage 1	VDS200x	8.2.3	•	•	
		Overvoltage 2	VDS200x	8.2.3	•	•	
		Power Supply Interruptions 1	VDS200x	9.2.2	•	•	
		Power Supply Interruptions 2	PFS200x + RDS200, VDS200x + AutoWave	9.2.2	•	•	
		Battery Voltage Dropout 1	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Battery Voltage Dropout 2	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Battery Voltage Dropout 3	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Battery Voltage Dropout 4	VDS200x + AutoWave / Arb2714	9.2.3	•	•	
		Sinusoidal Superimposed Voltage	VDS200x + AutoWave	9.2.4	•	•	
		Pulse Superimposed Voltage (Signal Up)	VDS200x + AutoWave	9.2.5		•	
		Discrete Digital Input Threshold Voltage	AutoWave + AMP200Nx	9.2.13		•	
		Crank Waveform 1	VDS200x + AutoWave	9.2.17	•	•	
		Crank Waveform 2	VDS200x + AutoWave	9.2.17	•	•	
		Crank Waveform 3	VDS200x + AutoWave	9.2.17	•	•	
		Crank Waveform 4	VDS200x + AutoWave	9.2.17	•	•	
		Crank Waveform 5	VDS200x + AutoWave	9.2.17	•	•	
		Crank Waveform 6	VDS200x + AutoWave	9.2.17	•	•	
		Crank GMW3097 Pulse 4	VDS200N / VDS200	9.2.17	•	•	
General Motors GMW 3172 (2012-11)	12V Line	Jump Start	VDS200x	8.2.1		•	
		Reverse Polarity	VDS200x	8.2.2		•	
		Overvoltage 1	VDS200x	8.2.3		•	
		Overvoltage 2	VDS200x	8.2.3		•	
		Power Supply Interruptions 1	VDS200x	9.2.2		•	
		Power Supply Interruptions 2	PFS200x + RDS200, VDS200x + AutoWave	9.2.2		•	
		Battery Voltage Dropout 1	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 2	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 3	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 4	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Sinusoidal Superimposed Voltage	VDS200x + AutoWave	9.2.4		•	
		Pulse Superimposed Voltage (Signal Up)	VDS200x + AutoWave	9.2.5		•	
		Discrete Digital Input Threshold Voltage	AutoWave + AMP200Nx	9.2.13		•	
		Crank Pulse Capatability and Durability (Functial Test)	VDS200x + AutoWave	9.2.17		•	
		Crank Pulse Capatability and Durability (Durability Test)	VDS200x + AutoWave	9.2.17		•	
		Switched Battery Lines		9.2.18			
General Motors GMW 3172 (2014-10)	12V Line	Jump Start	VDS200x	8.2.1		•	
		Reverse Polarity	VDS200x	8.2.2		•	
		Overvoltage 1	VDS200x	8.2.3		•	
		Overvoltage 2	VDS200x	8.2.3		•	
		Power Supply Interruptions 1	VDS200x	9.2.2		•	
		Power Supply Interruptions 2	PFS200x + RDS200, VDS200x + AutoWave	9.2.2		•	
		Battery Voltage Dropout 1	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 2	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 3	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 4	VDS200x + AutoWave / Arb2714	9.2.3		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Sinusoidal Superimposed Voltage	VDS200x + AutoWave	9.2.4		•	
		Pulse Superimposed Voltage (Signal Up)	VDS200x + AutoWave	9.2.5		•	
		Discrete Digital Input Threshold Voltage	AutoWave + AMP200Nx	9.2.13		•	
		Crank Pulse Capatability and Durability (Functial Test)	VDS200x + AutoWave	9.2.17		•	
		Crank Pulse Capatability and Durability (Durability Test)	VDS200x + AutoWave	9.2.17		•	
		Switched Battery Lines	PFM200N100.1 (LIC-FAST)	9.2.18		•	
General Motors GMW 3172 (2015-06)	12V Line	Jump Start	VDS200x	8.2.1		•	
		Reverse Polarity	VDS200x	8.2.2		•	
		Overvoltage 1	VDS200x	8.2.3		•	
		Overvoltage 2	VDS200x	8.2.3		•	
		Power Supply Interruptions 1	VDS200x	9.2.2		•	
		Power Supply Interruptions 2	PFS200x + RDS200, VDS200x + AutoWave	9.2.2		•	
		Battery Voltage Dropout 1	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 2	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 3	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Battery Voltage Dropout 4	VDS200x + AutoWave / Arb2714	9.2.3		•	
		Sinusoidal Superimposed Voltage	VDS200x + AutoWave	9.2.4		•	
		Pulse Superimposed Voltage (Signal Up)	VDS200x + AutoWave	9.2.5		•	
		Discrete Digital Input Threshold Voltage	AutoWave + AMP200Nx	9.2.13		•	
		Crank Pulse Capatability and Durability (Functial Test)	VDS200x + AutoWave	9.2.17		•	
		Crank Pulse Capatability and Durability (Durability Test)	VDS200x + AutoWave	9.2.17		•	
		Switched Battery Lines	PFM200N100.1 (LIC-FAST)	9.2.18		•	
Germanischer Lloyd GL VI 7-2 (2003-12)	24V Line	Conducted low frequency interference (harmonics) (Table 3.29)	AutoWave + AMP200Nx + CN200N1	20		•	
Germanischer Lloyd GL VI 7-2 (2012)	24V Line	Conducted low frequency interference (harmonics) (Table 3.30)	AutoWave + AMP200Nx + CN200N1	20		•	
GOST 28751-90 (1990)	12V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5	LD200x		•		
		Pulse 6	UCS200N, UCS200 S5, MPG200 S20		•		
		Pulse 7	LD200x		•		
	24V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200N, UCS200 S5, MPG200 S20		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5	LD200x		•		
Honda 3982Z-SDA-0030 (2003-02)	12V Line	Overvoltage	VDS200x	14	•		
		Pulse A1	LD200N, LD200S16	15	•		
		Pulse A2	UCS200x, MPG200 S13	15	•		
		Pulse B1	LDS200N, LD200M, LD200 S16	15	•		
		Pulse B2	UCS200x, MPG200 S13	15	•		
Honda	12V Line	1.1 Positive Surge 1 (Test A-1)	LDS200N, LD200M	1.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
8129ZSTX-A0901378_E		1.1 Positive Surge 1 (Test A-2)	UCS200x	1.1	•		
		1.2 Positive Surge 2 (Test B-1)	UCS200x	1.2	•		
		1.2 Positive Surge 2 (Test B-2)	LDS200N, LD200M	1.2	•		
		1.3 Positive Surge 3 (Test C-1)	UCS200x	1.3	•		
		1.4 Negative Surge 1 (Test D-1)	LDS200N, LD200M	1.4	•		
		1.4 Negative Surge 1 (Test D-2)	UCS200x	1.4	•		
		1.5 Negative Surge 2 (Test E-1)	UCS200x	1.5	•		
		1.6 Negative Surge 3 (Test F-1)	UCS200x	1.6	•		
Honda 3982Z-SDA-0030 (2003-02)	12V Line	Overvoltage	VDS200x	14	•		
		Pulse A1	LD200N, LD200S16	15	•		
		Pulse A2	UCS200x, MPG200 S13	15	•		
		Pulse B1	LDS200N, LD200M, LD200 S16	15	•		
		Pulse B2	UCS200x, MPG200 S13	15	•		
Hyundai/Kia ES 39110-00 (2005-08)	12V Line	CI 210-A1	VDS200x + AutoWave / Arb2714	3.2.210	•	•	
		CI 210-A2	VDS200x	3.2.210	•	•	
		CI 210-B1	VDS200x	3.2.210	•	•	
		CI 210-B2	VDS200x	3.2.210	•	•	
		CI 220-A	UCS200x, MPG200	3.2.220	•		
		CI 220-B	UCS200x, MPG200	3.2.220	•		
		CI 220-C	UCS200x, MPG200	3.2.220	•		
		CI 220-D	UCS200x, EFT200	3.2.220	•		
		CI 220-E	UCS200x, EFT200	3.2.220	•		
		CI 230-A	PFS200x + RDS200, VDS200x + AutoWave	3.2.230	•	•	
		CI 230-B1	VDS200x + AutoWave / Arb2714	3.2.230	•	•	
		CI 230-B2	VDS200x + AutoWave / Arb2714	3.2.230	•	•	
		CI 230-C	VDS200x + AutoWave / Arb2714	3.2.230	•	•	
		CI 240	LD200N, LD200B1	3.2.240	•		
		CI 250	VDS200N30.1 / N50.1 / Q + AutoWave			•	
		CI 260-A	PFS200x	3.2.260	•	•	
		CI 260-B	PFS200x	3.2.260	•	•	
		CI 260-C	PFS200x	3.2.260	•	•	
		CI 260-D	PFS200x + RDS200	3.2.260	•	•	
		CI 260-E	VDS200x	3.2.260	•	•	
		CI 270	VDS200N200 + AutoWave	3.2.270	•	•	
	12V I/O	Pulse 1	UCS200x, MPG200	3.2.220	•		
		Pulse 2	UCS200x, MPG200	3.2.220	•		
		Pulse 3a	UCS200x, EFT200	3.2.220	•		
		Pulse 3b	UCS200x, EFT200	3.2.220	•		
Hyundai/Kia ES 39110-00 (2006-05)	12V Line	CI 210-A1	VDS200x + AutoWave / Arb2714	3.2.210	•	•	
		CI 210-A2	VDS200x	3.2.210	•	•	
		CI 210-B1	VDS200x	3.2.210	•	•	
		CI 210-B2	VDS200x	3.2.210	•	•	
		CI 220-A	UCS200x, MPG200	3.2.220	•		
		CI 220-B	UCS200x, MPG200	3.2.220	•		
		CI 220-C	UCS200x, MPG200	3.2.220	•		
		CI 220-D	UCS200x, EFT200	3.2.220	•		
		CI 220-E	UCS200x, EFT200	3.2.220	•		
		CI 230-A	PFS200x + RDS200, VDS200x + AutoWave	3.2.230	•	•	
		CI 230-B1	VDS200x + AutoWave / Arb2714	3.2.230	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		CI 230-B2	VDS200x + AutoWave / Arb2714	3.2.230	•	•	
		CI 230-C	VDS200x + AutoWave / Arb2714	3.2.230	•	•	
		CI 240	LD200N, LD200B1	3.2.240	•		
		CI 250	VDS200N30.1 / N50.1 / Q + AutoWave			•	
		CI 260-A	PFS200x	3.2.260	•	•	
		CI 260-C	PFS200x	3.2.260	•	•	
		CI 260-D	PFS200x + RDS200	3.2.260	•	•	
		CI 260-E	VDS200x	3.2.260	•	•	
		CI 270	VDS200N200 + AutoWave	3.2.270	•	•	
	12V I/O	Pulse 1	UCS200x, MPG200	3.2.220	•		
		Pulse 2	UCS200x, MPG200	3.2.220	•		
		Pulse 3a	UCS200x, EFT200	3.2.220	•		
		Pulse 3b	UCS200x, EFT200	3.2.220	•		
Hyundai /Kia ES-95400 - 10 (Rev.A, 2003-10)	12V Line	Electric Load 1	VDS200x	4.3.1	•	•	
		Electric Load 2	VDS200x	4.3.1	•	•	
		Electric Load 3	VDS200x	4.3.1	•	•	
		Engine Start 1	VDS200x + AutoWave / Arb2714	4.3.2	•	•	
		Engine Start 2	VDS200x	4.3.2	•	•	
		Chattering	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.4.1	•	•	
		Key Switch	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.4.2	•	•	
		Inverse Polarity	VDS200x	4.5	•	•	
		Overvoltage A	VDS200x	4.6	•	•	
		Overvoltage B	VDS200x	4.6	•	•	
		Interruption	PFS200x, VDS200x + AutoWave	4.8.1	•	•	
		Pulse 1	UCS200x, MPG200	4.9.1	•		
		Pulse 2	UCS200x, MPG200	4.9.1	•		
		Pulse 3a	UCS200x, EFT200	4.9.1	•		
		Pulse 3b	UCS200x, EFT200	4.9.1	•		
		Pulse 5	LD200x	4.9.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.9.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	4.9.2	•		
		Pulse 3b	UCS200x, EFT200	4.9.2	•		
Hyundai /Kia ES-95400 - 10 (Rev.D, 2007-11)	12V Line	Reverse Polarity	VDS200x	3.4.3	•	•	
		Over-voltage test 1	VDS200x	3.4.4	•	•	
		Over voltage test 2	VDS200x	3.4.4	•	•	
		Starting 1	VDS200x + AutoWave	3.4.5	•	•	
		Starting 2	VDS200x	3.4.5	•	•	
		Starting 3	VDS200x	3.4.5	•	•	
		Electric Load 1	VDS200x	3.4.6	•	•	
		Electric Load 2	VDS200x + AutoWave	3.4.6	•	•	
		Electric Load 3	VDS200x	3.4.6	•	•	
		Interruption Test	PFS200x, VDS200x + AutoWave	3.4.7	•	•	
		Intermittent 1	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	3.4.9	•	•	
		Intermittent 2	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	3.4.9	•	•	
		Charge & Discharge	VDS200x + AutoWave	3.4.10	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
Hyundai /Kia ES-95400 - 10 (2012-08)	12V Line	Reverse Polarity	VDS200x	3.4.3	•	•	
		Over-voltage test 1	VDS200x	3.4.4	•	•	
		Over voltage test 2	VDS200x	3.4.4	•	•	
		Starting 1	VDS200x + AutoWave	3.4.5	•	•	
		Starting 2	VDS200x	3.4.5	•	•	
		Starting 3	VDS200x	3.4.5	•	•	
		Electric Load 1	VDS200x	3.4.6	•	•	
		Electric Load 2	VDS200x + AutoWave	3.4.6	•	•	
		Electric Load 3	VDS200x	3.4.6	•	•	
		Interruption Test	PFS200x, VDS200x + AutoWave	3.4.7	•	•	
		Intermittent 1	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	3.4.9	•	•	
		Intermittent 2	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	3.4.9	•	•	
		Charge & Discharge 1	VDS200x + AutoWave	3.4.10	•	•	
		Charge & Discharge 2	VDS200x + AutoWave	3.4.10	•	•	
Hyundai /Kia ES95682-50 (2012-03)	12V Line	5.1 Overvoltage	VDS200x	5.1	•	•	
		5.2 Cranking Ripple	VDS200x	5.2	•	•	
		5.3 Power voltage intermittent test	VDS200x	5.3	•	•	
		5.4 Reversed Voltage	VDS200N / VDS200	5.4	•	•	
		5.5 High Voltage	VDS200x	5.5	•	•	
		5.8 Supply Ripple	VDS200x	5.8	•	•	
		5.9 Slow discharge	VDS200x + AutoWave	5.9	•	•	
		5.12 Supply Drops	VDS200x	5.12	•	•	
Hyundai /Kia ES-959910 - 29 (2003-10)	12V Line	Reverse Voltage	VDS200x	2.1	•		
		Overvoltage	VDS200x	2.1	•		
		Pulse 1	UCS200x, MPG200	2.2	•		
		Pulse 2	UCS200x, MPG200	2.2	•		
		Pulse 3a	UCS200x, EFT200	2.2	•		
		Pulse 3b	UCS200x, EFT200	2.2	•		
		Pulse 4	VDS200x	2.2	•		
		Pulse 5	LD200x	2.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.3	•		
		Pulse 3b	UCS200x, EFT200	2.3	•		
Hyundai /Kia ES 96100-01	12V Line	Pulse A1	LD200N, LD200S16	6.12	•		
		Pulse A2	UCS200x, MPG200 S13	6.12	•		
		Pulse B1	LD200N, LD200S16	6.12	•		
		Pulse B2	UCS200x, MPG200 S13	6.12	•		
		Overvoltage	VDS200x	6.13	•	•	
		Inverse	VDS200x	6.13	•	•	
	24V Line	Pulse A1	LD200N, LD200S16	6.12	•		
		Pulse A2	UCS200x, MPG200 S13	6.12	•		
		Pulse B1	LD200N, LD200S16	6.12	•		
		Pulse B2	UCS200x, MPG200 S13	6.12	•		
		Overvoltage	VDS200x	6.13	•	•	
		Inverse	VDS200x	6.13	•	•	
Hyundai /Kia ES-96100-02 (2006-11)	12V Line	Reverse Polarity	VDS200x	4.5.3	•	•	
		Overvoltage 1	VDS200x	4.5.4	•	•	
		Overvoltage 2	VDS200x	4.5.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Engine Start 1	VDS200x + AutoWave / Arb2714	4.5.5	•	•	
		Engine Start 2	VDS200x	4.5.5	•	•	
		Electrical Load	VDS200x	4.5.6	•	•	
		Interruption	PFS200x, VDS200x + AutoWave	4.5.7	•	•	
		Intermittent 1	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.5.8	•	•	
		Intermittent 2	PFS200x, VDS200x + AutoWave, AutoWave +PFM200Nx	4.5.8	•	•	
		Charging	VDS200x	4.5.10	•	•	
		Discharging	VDS200x + AutoWave / Arb2714	4.5.10	•	•	
		AC wave inflow	VDS200x	4.5.11	•	•	
		Pulse 1	UCS200x, MPG200	4.5.12	•		
		Pulse 2	UCS200x, MPG200	4.5.12	•		
		Pulse 3a	UCS200x, EFT200	4.5.12	•		
		Pulse 3b	UCS200x, EFT200	4.5.12	•		
		Pulse 5	LD200x	4.5.12	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.5.12	•		
Hyundai /Kia ES 96200-00 (Rev.D, 2005-12)	12V Line	Pulse 1	UCS200x, MPG200	7.3.1	•		
		Pulse 2a	UCS200x, MPG200	7.3.2	•		
		Pulse 2b	VDS200x	7.3.3	•		
		Pulse 3a	UCS200x, EFT200	7.3.4	•		
		Pulse 3b	UCS200x, EFT200	7.3.5	•		
		Pulse 4	VDS200x	7.3.6	•	•	
		Pulse 5a	LD200x	7.3.7	•		
		Pulse 5b	LD200N Clip, LD200x + diode	7.3.7	•		
		Reverse Voltage	VDS200x	10	•	•	
		Overvoltage 1	VDS200x	11	•	•	
		Overvoltage 2	VDS200x	11	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	8.	•		
		Pulse 3b	UCS200x, EFT200	8.	•		
Hyundai /Kia ES 96200-00 (Rev. G, 2008-07)	12V Line	Pulse 1	UCS200x, MPG200	7.3.1	•		
		Pulse 2a	UCS200x, MPG200	7.3.2	•		
		Pulse 2b	VDS200x	7.3.3	•		
		Pulse 3a	UCS200x, EFT200	7.3.4	•		
		Pulse 3b	UCS200x, EFT200	7.3.5	•		
		Pulse 4	VDS200x	7.3.6	•	•	
		Pulse 5a	LD200x	7.3.7	•		
		Pulse 5b	LD200N Clip, LD200x + diode	7.3.7	•		
		Reverse Voltage	VDS200x	10	•	•	
		Overvoltage 1	VDS200x	11	•	•	
		Overvoltage 2	VDS200x	11	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	8.	•		
		Pulse 3b	UCS200x, EFT200	8.	•		
Hyundai /Kia ES 96200-00 (2012-01)	12V Line	Pulse 1	UCS200x, MPG200	7.3.1	•		
		Pulse 2a	UCS200x, MPG200	7.3.2	•		
		Pulse 2b	VDS200x	7.3.3	•		
		Pulse 3a	UCS200x, EFT200	7.3.4	•		
		Pulse 3b	UCS200x, EFT200	7.3.5	•		
		Pulse 4	VDS200x	7.3.6	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 5a	LD200x	7.3.7	•		
		Pulse 5b	LD200N Clip, LD200x + diode	7.3.7	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	8.	•		
		Pulse 3b	UCS200x, EFT200	8.	•		
Hyundai /Kia ES 96200-00 (Rev. L, 2014-03)	12V Line	Pulse 1	UCS200x, MPG200	7.4.1	•		
		Pulse 2a	UCS200x, MPG200	7.4.2	•		
		Pulse 2b	VDS200x	7.4.3	•	•	
		Pulse 3a	UCS200x, EFT200	7.4.4	•		
		Pulse 3b	UCS200x, EFT200	7.4.5	•		
		Pulse 4	VDS200x	7.4.6	•	•	
		Pulse 5a	LD200x	7.4.7	•		
		Pulse 5b	LD200N Clip, LD200x + diode	7.4.7	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	8.	•		
		Pulse 3b	UCS200x, EFT200	8.	•		
Hyundai /Kia ES 96202-01 (2006-04)	12V Line	Pulse 1	UCS200x, MPG200	7.3.1	•		
		Pulse 2a	UCS200x, MPG200	7.3.2	•		
		Pulse 2b	VDS200x	7.3.3	•		
		Pulse 3a	UCS200x, EFT200	7.3.4	•		
		Pulse 3b	UCS200x, EFT200	7.3.5	•		
		Pulse 4	VDS200x	7.3.6	•		
		Pulse 5a	LD200x	7.3.7	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	8.3	•		
		Pulse 3b	UCS200x, EFT200	8.3	•		
ISO 7637-1 (1990-06)	12V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2	UCS200x, MPG200	4.6.2	•		
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
		Pulse 4	VDS200x	4.6.4	•		
		Pulse 5	LD200x	4.6.5	•		
		Pulse 6	UCS200x S5, MPG200	4.6.6	•		
		Pulse 7	LD200x	4.6.7	•		
ISO 7637-2 (1990-06)	24V Line	Pulse 1a	UCS200x, MPG200	4.6.1	•		
		Pulse 1b	UCS200x, MPG200	4.6.1	•		
		Pulse 2	UCS200x, MPG200	4.6.2	•		
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
		Pulse 4	VDS200x	4.6.4	•		
		Pulse 5	LD200x	4.6.5	•		
ISO 7637-3 (1995-07)	12V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	3.5.3	•		
		Pulse 3b	UCS200x, EFT200	3.5.3	•		
ISO 7637-2 (2004-06)	12V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2a	UCS200x, MPG200	4.6.2	•		
		Pulse 2b	VDS200x	4.6.2	•	•	
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
		Pulse 4	VDS200x	4.6.4	•	•	
		Pulse 5a	LD200x	4.6.5	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.5	•		
	24V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2a	UCS200x, MPG200	4.6.2	•		
		Pulse 2b	VDS200x	4.6.2	•	•	
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
		Pulse 4	VDS200x	4.6.4	•	•	
		Pulse 5a	LD200x	4.6.5	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.5	•		
ISO 7637-2 (2011-03)	12V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2a	UCS200x, MPG200	4.6.2	•		
		Pulse 2b	VDS200x	4.6.2	•	•	
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
	24V Line	Pulse 1	UCS200x, MPG200	4.6.1	•		
		Pulse 2a	UCS200x, MPG200	4.6.2	•		
		Pulse 2b	VDS200x	4.6.2	•	•	
		Pulse 3a	UCS200x, EFT200	4.6.3	•		
		Pulse 3b	UCS200x, EFT200	4.6.3	•		
ISO 7637-3 (2007-07)	12V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
	24V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
	42V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
ISO 11452-8 (2007-07)		Internal Field - Level 1 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		Internal Field - Level 2 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		Internal Field - Level 3 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		Internal Field - Level 4 (Radiating Loop)	AutoWave + AMP200N1, CWS500N3			•	•
		External Field - Level 1 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		External Field - Level 2 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		External Field - Level 3 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		External Field - Level 4 (Radiating Loop)	AutoWave + AMP200N1, CWS500N3			•	•
		Verify H-Field (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
ISO/DIS 11452-8 (2015-06)		Internal Field - Level 1	AutoWave + AMP200Nx			•	
		Internal Field - Level 2	AutoWave + AMP200Nx			•	
		Internal Field - Level 3	AutoWave + AMP200Nx			•	
		Internal Field - Level 4	AutoWave + AMP200N1			•	
		External Field - Level 1	AutoWave + AMP200Nx			•	
		External Field - Level 2	AutoWave + AMP200Nx			•	
		External Field - Level 3	AutoWave + AMP200Nx			•	
		External Field - Level 4	AutoWave + AMP200N1			•	
		Level 1 (DC)	AutoWave + AMP200N1.1			•	
		Level 2 (DC)	AutoWave + AMP200N1.1			•	
		Level 3 (DC)	AutoWave + AMP200N1.1			•	
		Level 4 (DC)					
		Verify H-Field	AutoWave + AMP200Nx, CWS500N3			•	
ISO 11452-10 (2008-09)		Immunity to conducted disturbances (Closed Loop)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Immunity to conducted disturbances (Verify-Source Impedance Closed	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Immunity to conducted disturbances (Substitution)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
ISO 11452-10 (2009-09)		Immunity to conducted disturbances (Closed Loop)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Immunity to conducted disturbances (Verify-Source Impedance Closed	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Immunity to conducted disturbances (Substitution)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
ISO 14982 (1998-05)	12V Line	Pulse 1	UCS200x, MPG200	4.9.2	•		
		Pulse 2	UCS200x, MPG200	4.9.2	•		
		Pulse 3a	UCS200x, EFT200	4.9.2	•		
		Pulse 3b	UCS200x, EFT200	4.9.2	•		
		Pulse 4	VDS200x	4.9.2	•		
		Pulse 5	LD200x	4.9.2	•		
	24V Line	Pulse 1a	UCS200x, MPG200	4.9.2	•		
		Pulse 2	UCS200x, MPG200	4.9.2	•		
		Pulse 3a	UCS200x, EFT200	4.9.2	•		
		Pulse 3b	UCS200x, EFT200	4.9.2	•		
		Pulse 4	VDS200x	4.9.2	•		
		Pulse 5	LD200x	4.9.2	•		
ISO 16750-2 Rev. 2 (2006-08)	12V Line	Overvoltage 1	VDS200x	4.2.1	•	•	
		Overvoltage 2	VDS200x	4.2.1	•	•	
		Wobble	VDS200x + AutoWave	4.3	•	•	
		Ramp Down	VDS200x	4.4	•	•	
		Ramp Up	VDS200x	4.4	•	•	
		Drop	VDS200x	4.5.1	•	•	
		Dips	VDS200x	4.5.2	•	•	
		Start	VDS200x	4.5.2	•	•	
		Reversed Voltage	VDS200x	4.6	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V Line	Overvoltage	VDS200x	4.2.2	•	•	
		Wobble	VDS200x	4.3	•	•	
		Ramp Down	VDS200x	4.4	•	•	
		Ramp Up	VDS200x	4.4	•	•	
		Drop	VDS200x	4.5.1	•	•	
		Dips	VDS200x	4.5.2	•	•	
		Start	VDS200x	4.5.2	•	•	
		Reversed Voltage	VDS200x	4.6	•	•	
ISO 16750-2 Rev. 3 (2010-03)	12V Line	Overvoltage 18V	VDS200x	4.3.1.1	•	•	
		Overvoltage 24V	VDS200x	4.3.1.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	4.4	•	•	
		Slow decrease and increase	VDS200x + AutoWave	4.5	•	•	
		Momentary Drop	VDS200x	4.6.1	•	•	
		Reset Behaviour	VDS200x	4.6.2	•	•	
		Starting Profile	VDS200x	4.6.3	•	•	
		Pulse 5a	LD200x	4.6.4	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.4	•		
		Reversed Voltage	VDS200x	4.7	•	•	
	24V Line	Overvoltage	VDS200x	4.3.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	4.4	•	•	
		Slow decrease and increase	VDS200x + AutoWave	4.5	•	•	
		Momentary Drop	VDS200x	4.6.1	•	•	
		Reset behaviour	VDS200x	4.6.2	•	•	
		Starting Profile	VDS200x	4.6.3	•	•	
		Pulse 5a	LD200x	4.6.4	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.4	•		
		Reversed Voltage	VDS200x	4.7	•	•	
ISO 16750-2 Rev. 4 (2012-11)	12V Line	Overvoltage 18V	VDS200x	4.3.1.1	•	•	
		Overvoltage 24V	VDS200x	4.3.1.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	4.4	•	•	
		Slow decrease and increase	VDS200x + AutoWave	4.5	•	•	
		Momentary Drop	VDS200x	4.6.1	•	•	
		Reset Behaviour	VDS200x	4.6.2	•	•	
		Starting Profile	VDS200x	4.6.3	•	•	
		Pulse 5a	LD200x	4.6.4	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.4	•		
		Reversed Voltage	VDS200x	4.7	•	•	
	24V Line	Overvoltage	VDS200x	4.3.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	4.4	•	•	
		Slow decrease and increase	VDS200x + AutoWave	4.5	•	•	
		Momentary Drop	VDS200x	4.6.1	•	•	
		Reset behaviour	VDS200x	4.6.2	•	•	
		Starting Profile	VDS200x	4.6.3	•	•	
		Pulse 5a	LD200x	4.6.4	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.4	•		
		Reversed Voltage	VDS200x	4.7	•	•	
ISO/CD 21848.4 (2003-01)	42V Line	Overvoltage	VDS200N, VDS200B	4.2	•		
		Wobble 1a	VDS200x	4.3	•		
		Wobble 1b	VDS200x	4.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Wobble 2a	VDS200x	4.3	•		
		Wobble 2b	VDS200x	4.3	•		
		Slow decrease	VDS200x	4.4	•		
		Slow increase	VDS200x	4.4	•		
		Drop	VDS200x	4.5.1	•		
		Dips	VDS200x	4.5.1	•		
		Starting	VDS200x	4.5.3	•		
		Reversed Voltage	VDS200x	4.6	•		
ISO/CD 21848.4 (2005-04)	42V Line	Wobble 1a	VDS200x	4.3	•	•	
		Wobble 1b	VDS200x	4.3	•	•	
		Wobble 2a	VDS200x	4.3	•	•	
		Wobble 2b	VDS200x	4.3	•	•	
		Overvoltage	VDS200N, VDS200B	4.4	•	•	
		Slow decrease	VDS200x	4.5	•	•	
		Slow increase	VDS200x	4.5	•	•	
		Drop	VDS200x	4.6.1	•	•	
		Dips	VDS200x	4.6.1	•	•	
		Starting	VDS200x	4.6.3	•	•	
		Reversed Voltage	VDS200x	4.7	•	•	
IVECO 16-2101 (2006-4)	12V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
	24V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
IVECO 16-2101 (2010-05)	12V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
	24V I/O	DCC Fast a	UCS200x, EFT200		•		
		DCC Fast b	UCS200x, EFT200		•		
		CCC Fast a	UCS200x, EFT200		•		
		CCC Fast b	UCS200x, EFT200		•		
		DCC Slow pos.	UCS200x, MPG200		•		
		DCC Slow neg.	UCS200x, MPG200		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		ICC Slow pos.	UCS200x, MPG200		•		
		ICC Slow neg.	UCS200x, MPG200		•		
IVECO 16-2103 (1993-12)	12V Line	Pulse 1	UCS200x		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5	LD200x		•		
		Pulse 6	UCS200N, MPG200		•		
	12V I/O	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
	24V Line	Pulse 1	UCS200x		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5	LD200x		•		
	24V I/O	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
IVECO 16-2103 (2003-04)	12V Line	Pulse 1	UCS200x		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x + AutoWave		•	•	
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		
		Pulse 6	UCS200N, MPG200		•		
		Micro-Cutoffs	PFS200x, VDS200x + AutoWave		•	•	
	24V Line	Pulse 1	UCS200x		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x + AutoWave		•	•	
		Pulse 5a	LD200x		•		
		Pulse 5b (42V)	LD200N Clip, LD200x + diode		•		
		Pulse 5b (58V)	LD200N Clip, LD200x + diode		•		
		Micro-Cutoffs	PFS200x, VDS200x + AutoWave		•	•	
IVECO 16-2103 (2007-04)	12V Line	Pulse 1	UCS200x		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4a	VDS200x + AutoWave		•	•	
		Pulse 4b	PFS200x, VDS200x + AutoWave		•	•	
		Pulse 5a	LD200x		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 5b	LD200N Clip, LD200x + diode		•		
	24V Line	Pulse 1	UCS200x		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4a	VDS200x + AutoWave		•	•	
		Pulse 4b	PFS200x, VDS200x + AutoWave		•	•	
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		
IVECO 16-2103 (2010-07)	12V Line	Pulse 1 (Spike)	UCS200x		•		
		Pulse 2a (Spike)	UCS200x, MPG200		•		
		Pulse 2b (Spike)	VDS200x		•	•	
		Pulse 3a (Burst)	UCS200x, EFT200		•		
		Pulse 3b (Burst)	UCS200x, EFT200		•		
		Pulse 4 Cranking	VDS200x + AutoWave		•	•	
		Starting Profile	VDS200x + AutoWave		•	•	
		Sinusoidal changes of supply voltage	VDS200x		•	•	
		Micro breaks	PFS200x, VDS200x + AutoWave		•	•	
		Drop of supply voltage	VDS200x		•		
		Performance on restoring power supply after voltage drop	VDS200x		•	•	
		Pulse 5a (Load dump without zener)	LD200x		•		
		Pulse 5b (Load dump with zener)	LD200N Clip, LD200x + diode		•		
		Key off/on cycle	PFS200x, VDS200x + AutoWave		•	•	
	24V Line	Pulse 1 (Spike)	UCS200x		•		
		Pulse 2a (Spike)	UCS200x, MPG200		•		
		Pulse 2b (Spike)	VDS200x		•	•	
		Pulse 3a (Burst)	UCS200x, EFT200		•		
		Pulse 3b (Burst)	UCS200x, EFT200		•		
		Pulse 4 Cranking	VDS200x + AutoWave		•	•	
		Starting Profile	VDS200x + AutoWave		•	•	
		Sinusoidal changes of supply voltage	VDS200x		•	•	
		Micro breaks	PFS200x, VDS200x + AutoWave		•		
		Drop of supply voltage	VDS200x		•	•	
		Performance on restoring power supply after voltage drop	VDS200x		•	•	
		Pulse 5a (Load dump without zener)	LD200x		•		
		Pulse 5b (Load dump with zener)	LD200N Clip, LD200x + diode		•		
		Key off/on cylce 1	PFS200x, VDS200x + AutoWave		•	•	
		Key off/on cycle 2	PFS200x, VDS200x + AutoWave		•	•	
IVECO 16-2119 (2008-11)		Immunity to magnetic fields (Radiating Loop) - Calculated	AutoWave + AMP200N1			•	
		Immunity to magnetic fields (Radiating Loop) - Subsitution	AutoWave + AMP200N1			•	
IVECO 16-2119 (2010-05)		Immunity to magnetic fields (Radiating Loop) - Calculated	AutoWave + AMP200N1			•	
		Immunity to magnetic fields (Radiating Loop) - Subsitution	AutoWave + AMP200N1			•	
Jaguar CI265 (2009-05)	12V Line	Waveform A	VDS200x + AutoWave			•	
		Waveform B	VDS200x + AutoWave			•	
		Waveform C	VDS200x + AutoWave			•	
Jaguar / Land Rover	12V Line	RI 140 - (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
EMC-CS-2010JLR (2010-06)		RI 140 - (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 150 - (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		CI 210 - (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F1	UCS200x, MPG200		•		
		CI 220 - Pulse F2	VDS200x		•	•	
		CI 220 - Pulse G1	LD200N, LD200B1		•		
		CI 220 - Pulse G2	LD200x + Zehnerdiode		•		
		CI 230 - Pulse A	PFS200x + RDS 200, VDS200x + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave		•	•	
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 265 - Waveform A (Fast Transient Burst Noise (FTBN))	VDS200x + AutoWave			•	
		CI 265 - Waveform B Random Crank)	VDS200x + AutoWave			•	
		CI 265 - Waveform C (Ramp Down/Up)	VDS200x + AutoWave			•	
		CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
		CI 270	VDS200x (with minimal 100A)		•	•	
	5V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
	3V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
Jaguar / Land Rover EMC-CS-2010JLR Version 1.1 (2011-01)	12V Line	RI 140 - (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 140 - (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 150 - (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		CI 210 - (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F1	UCS200x, MPG200		•		
		CI 220 - Pulse F2	VDS200x		•	•	
		CI 220 - Pulse G1	LD200N, LD200B1		•		
		CI 220 - Pulse G2	LD200x + Zehnerdiode		•		
		CI 230 - Pulse A	PFS200x + RDS 200, VDS200x + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave		•	•	
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 265 - Waveform A (Fast Transient Burst Noise (FTBN))	VDS200x + AutoWave			•	
		CI 265 - Waveform B Random Crank)	VDS200x + AutoWave			•	
		CI 265 - Waveform C (Ramp Down/Up)	VDS200x + AutoWave			•	
		CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
		CI 270	VDS200x (with minimal 100A)		•	•	
	5V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
	3V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
Jaguar / Land Rover EMC-CS-2010JLR Version 1.2 (2012-06)	12V Line	RI 140 - (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 140 - (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 150 - (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		CI 210 - (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F1	UCS200x, MPG200		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		CI 220 - Pulse F2	VDS200x		•	•	
		CI 220 - Pulse G1	LD200N, LD200B1		•		
		CI 220 - Pulse G2	LD200x + Zehnerdiode		•		
		CI 230 - Pulse A	PFS200x + RDS 200, VDS200x + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave		•	•	
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 265 - Waveform A (Fast Transient Burst Noise (FTBN))	VDS200x + AutoWave			•	
		CI 265 - Waveform B Random Crank)	VDS200x + AutoWave			•	
		CI 265 - Waveform C (Ramp Down/Up)	VDS200x + AutoWave			•	
		CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
		CI 270	VDS200x (with minimal 100A)		•	•	
	5V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
	3V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
Jaguar / Land Rover JLR-EMC-CS Version 1.0, Am 4 (2015-02)	12V Line	RI 140 - (Magnetic Field Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 140 - (Magnetic Field Immunity - Verify H-Field)	AutoWave + AMP200Nx, CWS500N3			•	•
		RI 150 - (Coupled Immunity)	AutoWave + AMP200Nx, CWS500N3			•	•
		CI 210 - (Immunity from Continuous Power Line Disturbances)	AutoWave + AMP200Nx + VDS200x			•	
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F1	UCS200x, MPG200		•		
		CI 220 - Pulse F2	VDS200x		•	•	
		CI 220 - Pulse G1	LD200N, LD200B1		•		
		CI 220 - Pulse G2	LD200x + Zehnerdiode		•		
		CI 230 - Pulse A	PFS200x + RDS 200, VDS200x + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave		•	•	
		CI 250 - Continuous (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 250 - Transient (Immunity to Ground Voltage Offset)	AutoWave + AMP200Nx + CN200N1			•	
		CI 265 - Waveform A (Fast Transient Burst Noise (FTBN))	VDS200x + AutoWave			•	
		CI 265 - Waveform B Random Crank)	VDS200x + AutoWave			•	
		CI 265 - Waveform C (Ramp Down/Up)	VDS200x + AutoWave			•	
		CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
		CI 270	VDS200x (with minimal 100A)		•	•	
	5V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
	3V Line	CI 265 - Waveform D (Single Voltage Dropout)	VDS200x + AutoWave			•	
JASO D 001-94 (1994)	12V Line	Sinus	VDS200x	5.2	•	•	
		Interuption	PFS200x	5.3	•	•	
		Inverse Polarity	VDS200x	5.4	•	•	
		Overvoltage 1	VDS200x	5.5	•	•	
		Overvoltage 2	VDS200x	5.5	•	•	
		Pulse A1	LD200N, LD200S16	5.7	•		
		Pulse A2	UCS200x, MPG200 S13	5.7	•		
		Pulse B1	LD200N, LD200S16	5.7	•		
		Pulse B2	UCS200x, MPG200 S13	5.7	•		
	24V Line	Sinus	VDS200x	5.2	•	•	
		Interuption	PFS200x	5.3		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Inverse Polarity	VDS200x	5.4	•	•	
		Overvoltage 1	VDS200x	5.5	•	•	
		Overvoltage 2	VDS200x	5.5	•	•	
		Pulse D1	LD200N, LD200S16	5.7	•		
		Pulse D2	UCS200x, MPG200 S13	5.7	•		
		Pulse E1	MPG200 S21	5.7	•		
		Pulse E2	MPG200 S21	5.7	•		
JASO D 014-2 (2014-03)	12V Line	Overvoltage 18V	VDS200x	4.3.1.1	•	•	
		Overvoltage 24V	VDS200x	4.3.1.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	4.4	•	•	
		Slow decrease and increase	VDS200x + AutoWave	4.5	•	•	
		Momentary Drop	VDS200x	4.6.1	•	•	
		Reset Behaviour	VDS200x	4.6.2	•	•	
		Starting Profile	VDS200x	4.6.3	•	•	
		Pulse 5a	LD200x	4.6.4	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.4	•		
		Reversed Voltage	VDS200x	4.7	•	•	
	24V Line	Overvoltage	VDS200x	4.3.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	4.4	•	•	
		Slow decrease and increase	VDS200x + AutoWave	4.5	•	•	
		Momentary Drop	VDS200x	4.6.1	•	•	
		Reset behaviour	VDS200x	4.6.2	•	•	
		Starting Profile	VDS200x	4.6.3	•	•	
		Pulse 5a	LD200x	4.6.4	•		
		Pulse 5b	LD200N Clip, LD200x + diode	4.6.4	•		
		Reversed Voltage	VDS200x	4.7	•	•	
JASO D902-95 (1995)	12V Line	Pulse B1	LD200N, LD200S16	5	•		
		Pulse B2	UCS200x, MPG200 S13	5	•		
	24V Line	Pulse E1	MPG200 S21	5	•		
		Pulse E2	MPG200 S21	5	•		
JCB STD00140 (2014-04)	12V Line	Overvoltage	VDS200x	12.2	•	•	
		Reversed Polarity	VDS200x	12.2	•	•	
		Power Up	VDS200x	12.2	•	•	
		Pulse 1	UCS200x, MPG200	13.4	•		
		Pulse 2a	UCS200x, MPG200	13.4	•		
		Pulse 2b	VDS200x	13.4	•	•	
		Pulse 3a	UCS200x, EFT200	13.4	•		
		Pulse 3b	UCS200x, EFT200	13.4	•		
		Pulse 4	VDS200x	13.4	•	•	
		Pulse 5	LD200x	13.4	•		
	24V Line	Overvoltage	VDS200x	12.2	•	•	
		Reversed Polarity	VDS200x	12.2	•	•	
		Power Up	VDS200x	12.2	•	•	
		Pulse 1	UCS200x, MPG200	13.4	•		
		Pulse 2a	UCS200x, MPG200	13.4	•		
		Pulse 2b	VDS200x	13.4	•	•	
		Pulse 3a	UCS200x, EFT200	13.4	•		
		Pulse 3b	UCS200x, EFT200	13.4	•		
		Pulse 4	VDS200x	13.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 5	LD200x	13.4	•		
	5V Line	Overvoltage	VDS200x	12.2	•	•	
		Reversed Polarity	VDS200x	12.2	•	•	
John Deere JDQ 53.3 (2005-10)	12V Line	Forward Voltage	VDS200x	9.1.2	•	•	
		Reverse Voltage	VDS200x	9.1.3	•	•	
		Start Profile	VDS200x	9.2.1	•	•	
		Load Dump >55A	LD200N, LD200M	9.2.3.1	•		
		Load Dump <55A	LD200N, LD200M	9.2.3.2	•		
		Load Dump Clamped >55A	LD200N, LD200M	9.2.3.5	•		
		Load Dump Clamped <55A	LDS200N, LD200M	9.2.3.6	•		
		Negative Spikes	UCS200x, EFT200	9.2.4	•		
		Positive Spikes	UCS200x, EFT200	9.2.4	•		
		Inductive Load	UCS200x, MPG200 S15	9.2.5	•		
		Negative Mutual	UCS200x, EFT200	9.2.6	•		
		Positive Mutual	UCS200x, EFT200	9.2.6	•		
		Direct Current	VDS200x	9.2.7	•	•	
		Wiring Harness	UCS200x, MPG200	9.2.10	•		
	24V Line	Forward Voltage	VDS200x	9.1.2	•	•	
		Reverse Voltage	VDS200x	9.1.3	•	•	
		Load Dump >55A	LDS200N, LD200M	9.2.3.3	•		
		Load Dump <55A	LDS200N, LD200M	9.2.3.4	•		
		Load Dump Clamped >55A	LDS200N, LD200M	9.2.3.7	•		
		Load Dump Clamped <55A	LDS200N, LD200M	9.2.3.8	•		
		Start Profile	VDS200x	9.2.1	•	•	
		Negative Spikes	UCS200x, EFT200	9.2.4	•		
		Positive Spikes	UCS200x, EFT200	9.2.4	•		
		Inductive Load	UCS200x	9.2.5	•		
		Negative Mutual	UCS200x, EFT200	9.2.6	•		
		Positive Mutual	UCS200x, EFT200	9.2.6	•		
		Direct Current	VDS200x	9.2.7	•	•	
		Wiring Harness	UCS200x, MPG200	9.2.10	•		
John Deere JDQ 53.3 (2011-08)	12V Line	Forward Voltage	VDS200x	9.1.2	•	•	
		Reverse Voltage	VDS200x	9.1.3	•	•	
		Start Profile	VDS200x	9.2.1	•	•	
		Load Dump >55A	LD200N, LD200M	9.2.3.1	•		
		Load Dump <55A	LD200N, LD200M	9.2.3.2	•		
		Load Dump Clamped >55A	LD200N, LD200M	9.2.3.5	•		
		Load Dump Clamped <55A	LDS200N, LD200M	9.2.3.6	•		
		Negative Spikes	UCS200x, EFT200	9.2.4	•		
		Positive Spikes	UCS200x, EFT200	9.2.4	•		
		Inductive Load	UCS200x, MPG200 S15	9.2.5	•		
		Negative Mutual	UCS200x, EFT200	9.2.6	•		
		Positive Mutual	UCS200x, EFT200	9.2.6	•		
		Direct Current	VDS200x	9.2.7	•	•	
		Wiring Harness	UCS200x, MPG200	9.2.10	•		
	24V Line	Forward Voltage	VDS200x	9.1.2	•	•	
		Reverse Voltage	VDS200x	9.1.3	•	•	
		Load Dump >55A	LDS200N, LD200M	9.2.3.3	•		
		Load Dump <55A	LDS200N, LD200M	9.2.3.4	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Load Dump Clamped ›55A	LDS200N, LD200M	9.2.3.7	•		
		Load Dump Clamped ‹55A	LDS200N, LD200M	9.2.3.8	•		
		Start Profile	VDS200x	9.2.1	•	•	
		Negative Spikes	UCS200x, EFT200	9.2.4	•		
		Positive Spikes	UCS200x, EFT200	9.2.4	•		
		Inductive Load	UCS200x	9.2.5	•		
		Negative Mutual	UCS200x, EFT200	9.2.6	•		
		Positive Mutual	UCS200x, EFT200	9.2.6	•		
		Direct Current	VDS200x	9.2.7	•	•	
		Wiring Harness	UCS200x, MPG200	9.2.10	•		
John Deere JDQ 202 (2013-12)	12V Line	JDQ 202B - Jump Start Forward Voltage	VDS200x	6	•	•	
		JDQ 202C - Jump Start Reverse Voltage	VDS200x	7	•	•	
		JDQ 202H - Start Profile	VDS200x	12	•	•	
		JDQ 202J - Batteryless Operation	AutoWave + VDS200x	13		•	
		JDQ 202K- Load Dump ›55A	LD200N, LD200M	14	•		
		JDQ 202K - Load Dump ‹55A	LD200N, LD200M	14	•		
		JDQ 202L - Load Dump Clamped ›55A	LD200N, LD200M	15	•		
		JDQ 202L - Load Dump Clamped ‹55A	LDS200N, LD200M	15	•		
		JDQ 202M - Negative Switching Spikes	UCS200x, EFT200	16	•		
		JDQ 202N - Positive Switching Spikes	UCS200x, EFT200	17	•		
		JDQ 202P - Parallel Inductive Load Switching	UCS200x,	18	•		
		JDQ 202Q - Negative Mutual Coupling	UCS200x, EFT200	19	•		
		JDQ 202P - Positive Mutual Coupling	UCS200x, EFT200	20	•		
		JDQ 202S - Direct Current Motors Acting as a Generator	VDS200x	21	•	•	
		JDQ 202V - Wiring Harness Inductive Switching	UCS200x, MPG200	22	•		
		JDQ 202Y - Power Interruptions	PFS200Nx, PFM200N100	26	•	•	
		JDQ 202Z - Reset Response During Voltage Drop - Level2	AutoWave + VDS200x	27	•	•	
		JDQ 202Z - Reset Response During Voltage Drop - Level3	VDS200x	27	•	•	
	24V Line	JDQ 202B - Jump Start Forward Voltage	VDS200x	6	•	•	
		JDQ 202C - Jump Start Reverse Voltage	VDS200x	7	•	•	
		JDQ 202H - Start Profile	VDS200x	12	•	•	
		JDQ 202J - Batteryless Operation	AutoWave + VDS200x	13	•		
		JDQ 202K- Load Dump ›55A	LD200N, LD200M	14	•		
		JDQ 202K - Load Dump ‹55A	LD200N, LD200M	14	•		
		JDQ 202L - Load Dump Clamped ›55A	LD200N, LD200M	15	•		
		JDQ 202L - Load Dump Clamped ‹55A	LDS200N, LD200M	15	•		
		JDQ 202M - Negative Switching Spikes	UCS200x, EFT200	16	•		
		JDQ 202N - Positive Switching Spikes	UCS200x, EFT200	17	•		
		JDQ 202P - Parallel Inductive Load Switching	UCS200x	18	•		
		JDQ 202Q - Negative Mutual Coupling	UCS200x, EFT200	19	•		
		JDQ 202P - Positive Mutual Coupling	UCS200x, EFT200	20	•		
		JDQ 202S - Direct Current Motors Acting as a Generator	VDS200x	21	•	•	
		JDQ 202V - Wiring Harness Inductive Switching	UCS200x, MPG200	22	•		
		JDQ 202Y - Power Interruptions	PFS200Nx, PFM200N100	26	•	•	
		JDQ 202Z - Reset Response During Voltage Drop - Level2	AutoWave + VDS200x	27	•	•	
		JDQ 202Z - Reset Response During Voltage Drop - Level3	VDS200x	27	•	•	
MAN 3285 (2001-01)	24V Line	Pulse 1	UCS200x, MPG200		•		
		Pulse 2	UCS200x, MPG200		•		
		Pulse 3a	UCS200x, EFT200		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200x		•		
	24V I/O	Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
MAN 3285 (2008-07)	24V Line	Supply voltage waviness	VDS200x	6.1.1	•	•	
		Singular interruption	VDS200x	6.1.2.1	•	•	
		Reset behaviour	VDS200x	6.1.2.2	•	•	
		Start profile	VDS200x	6.1.3	•	•	
		Pulse 1	UCS200x, MPG200	6.2.1	•		
		Pulse 2a	UCS200x, MPG200	6.2.1	•		
		Pulse 2b	VDS200x	6.2.1	•	•	
		Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.2.1	•		
	24V I/O	Interference Pulse A	UCS200x, EFT200	6.3	•		
		Interference Pulse B	UCS200x, EFT200	6.3	•		
MAN 3565 (2014-02)	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	4.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	4.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	4.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	4.4		•	
		E48-04 Recuperation	VDS200x	4.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	4.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	4.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	4.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	4.6		•	
		E48-06a Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	4.7		•	
		E48-06b Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	4.7		•	
		E48-06c Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	4.7		•	
		E48-07 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	4.9		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	4.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	4.10		•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200x	4.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200x	4.11		•	
		E48-13 Internal Voltage Strength	VDS200x	4.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	4.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	4.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	4.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	4.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	4.20		•	
Mack Trucks 606GS15 (1999-09)	12V Line	Pulse 1	UCS200x, MPG200 S15	3.4.2	•		
		Pulse 2	UCS200x, MPG200	3.4.2	•		
		Pulse 3a	UCS200x, EFT200	3.4.2	•		
		Pulse 3b	UCS200x, EFT200	3.4.2	•		
		Pulse 4	VDS200x + AutoWave /Arb2714	3.4.2	•	•	
		Pulse 5b	LD200x	3.4.2	•		
		Drops	PFS200x + RDS200	3.4.2	•	•	
Mazda	12V Line	CI 01-1a	VDS200x + AutoWave /Arb2714		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
MES PW 67600 (1995-07)		CI 01-1b	VDS200x		•		
		CI 01-1c	VDS200x		•		
		CI 01-2a	VDS200x		•		
		CI 01-2b	VDS200x		•		
		CI02-1a	UCS200x, MPG200		•		
		CI02-1b	UCS200x, MPG200		•		
		CI02-1c	UCS200x, MPG200		•		
		CI02-2	UCS200x		•		
		CI02-3a	UCS200x, EFT200		•		
		CI02-3b	UCS200x, EFT200		•		
		CI02-4	VDS200N / VDS200 + Arb2714		•		
		CI02-5	LD200N, LD200B1		•		
		CI03-1	VDS200x		•		
		CI03-2	VDS200x		•		
		CI03-3	VDS200x		•		
		CI03-4	VDS200x		•		
Mazda MES PW 67600 (2001-12)	12V Line	CI 210-A1	VDS200x + AutoWave /Arb2714		•	•	
		CI 210-A2	VDS200x		•	•	
		CI 210-B1	VDS200x		•	•	
		CI 210-B2	VDS200x		•	•	
		CI 220-A	UCS200x, MPG200		•		
		CI 220-B	UCS200x, MPG200		•		
		CI 220-C	UCS200x, MPG200		•		
		CI 220-D	UCS200x, EFT200		•		
		CI 220-E	UCS200x, EFT200		•		
		CI 230-A	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 230-B1	VDS200x + AutoWave /Arb2714		•	•	
		CI 230-B2	VDS200x + AutoWave /Arb2714		•	•	
		CI 230-C	VDS200x + AutoWave /Arb2714		•	•	
		CI 260-A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260-E	VDS200x		•	•	
		CI 240	LD200N, LD200B1		•		
	24V Line	CI 210-A1	VDS200x + AutoWave		•	•	
		CI 210-A3	VDS200x		•	•	
		CI 210-A4	VDS200x		•	•	
		CI 210-B1	VDS200x		•	•	
		CI 210-B2	VDS200x		•	•	
		CI 220-A	UCS200x, MPG200		•		
		CI 220-B	UCS200x, MPG200		•		
		CI 220-C	UCS200x, MPG200		•		
		CI 220-D	UCS200x, EFT200		•		
		CI 220-E	UCS200x, EFT200		•		
		CI 230-A	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 230-B1	VDS200x + AutoWave		•	•	
		CI 230-B2	VDS200x + AutoWave		•	•	
		CI 230-C	VDS200x + AutoWave		•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		CI 260-A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260-D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260-E	VDS200x		•	•	
		CI 240	LD200N, LD200B1		•		
Mazda MES PW 67602 (2007-03)	12V Line	RI 140 - Magnetic Field Immunity	AutoWave + AMP200N1, CWS500N3			•	•
		RI 150 - Coupled Immunity	AutoWave + VDS200			•	
		CI 210-1-1	VDS200x + AutoWave		•	•	
		CI 210-1-2 ‹ 1kHz	VDS200x + AutoWave		•	•	
		CI 210-1-2 › 1kHz	VDS200x		•	•	
		CI 210-2-1	VDS200x		•	•	
		CI 210-2-2	VDS200N, VDS200B		•	•	
		CI 210-2-3	VDS200N, VDS200B		•	•	
		CI 220 - Pulse D	UCS200x, MPG200		•		
		CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse F	UCS200x, MPG200		•		
		CI 220 - Pulse G	LD200N, LD200B1		•		
		CI 230 - Pulse A	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 230 - Pulse B	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse C	VDS200x / RDS200 + AutoWave		•	•	
		CI 230 - Pulse D	VDS200x / RDS200 + AutoWave		•	•	
		CI 250	AMP200N + AutoWave			•	
		CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
		CI 260 - Pulse E	VDS200x		•	•	
		CI 270	VDS200x (with minimal 200A)		•	•	
	5V Line	CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
	3V Line	CI 260 - Pulse A	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse B	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse C	PFS200x, VDS200x + AutoWave		•	•	
		CI 260 - Pulse D	PFS200x + RDS200, VDS200x + AutoWave		•	•	
	24V Line	CI 220 - Pulse E	UCS200x, MPG200		•		
		CI 220 - Pulse G	LD200N, LD200B1		•		
		CI 270	VDS200x (with minimal 200A)		•	•	
Mercedes-Benz AV EMV (1993-11)	12V Line	Pulse 1	UCS200x, MPG200	2.3.2	•		
		Pulse 2	UCS200x, MPG200	2.3.2	•		
		Pulse 3a	UCS200x, EFT200	2.3.2	•		
		Pulse 3b	UCS200x, EFT200	2.3.2	•		
		Pulse 4	VDS200x	2.3.2	•		
		Jump	VDS200x	2.4	•		
		Wobble	VDS200x	2.3.3	•		
	12V I/O	Pulse 1	UCS200x, MPG200	2.3.3	•		
		Pulse 2	UCS200x, MPG200	2.3.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3a	UCS200x, EFT200	2.3.3	•		
		Pulse 3b	UCS200x, EFT200	2.3.3	•		
Mercedes-Benz MBN 22 100-2 (1999-08)	12V Line	Overvoltage	VDS200x	1.3	•		
		Interruption 1	VDS200x	1.5	•		
		Interruption 2	VDS200x	1.5	•		
		Pulse 1	UCS200x, MPG200	2.4.1	•		
		Pulse 2	UCS200x, MPG200	2.4.1	•		
		Pulse 3a	UCS200x, EFT200	2.4.1	•		
		Pulse 3b	UCS200x, EFT200	2.4.1	•		
		Pulse 5	LD200N, LD200B1 S2	2.4.2	•		
		Jump	VDS200N, VDS200B	2.4.3	•		
		Start S1	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S2	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S3	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S4	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S5	VDS200x + AutoWave / Arb2714	5.1	•		
	24V Line	Overvoltage	VDS200x	1.3	•		
		Interruption 1	VDS200x	1.5	•		
		Interruption 2	VDS200x	1.5	•		
		Pulse 1	UCS200x	2.4.1	•		
		Pulse 2	UCS200x, MPG200	2.4.1	•		
		Pulse 3a	UCS200x, EFT200	2.4.1	•		
		Pulse 3b	UCS200x, EFT200	2.4.1	•		
		Pulse 5	LD200N, LD200B1 S2	2.4.2	•		
		Jump	VDS200N, VDS200B	2.4.3	•		
		Start S1	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S2	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S3	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S4	VDS200x + AutoWave / Arb2714	5.1	•		
		Start S5	VDS200x + AutoWave / Arb2714	5.1	•		
	12V I/O	Pulse 1	UCS200x, MPG200	2.4.4	•		
		Pulse 2	UCS200x, MPG200	2.4.4	•		
		Pulse 3a	UCS200x, EFT200	2.4.4	•		
		Pulse 3b	UCS200x, EFT200	2.4.4	•		
	24V I/O	Pulse 1	UCS200x	2.4.4	•		
		Pulse 2	UCS200x, MPG200	2.4.4	•		
		Pulse 3a	UCS200x, EFT200	2.4.4	•		
		Pulse 3b	UCS200x, EFT200	2.4.4	•		
Mercedes-Benz MBN 10 615 (Draft3, 2008-09)	12V Line	E-02 Longtime Voltage	VDS200x		•	•	
		E-03 Transient Overvoltage	VDS200x + AutoWave		•	•	
		E-04 Jump Start	VDS200x		•	•	
		E-05 Load Dump	VDS200x		•	•	
		E-06 Superimposed Voltage	VDS200N, VDS200B		•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave		•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave		•	•	
		E-09 Reset Behaviour (Test 1)	VDS200x + AutoWave		•	•	
		E-09 Reset Behaviour (Test 2)	PFS200x		•		
		E-10 Short Reset	VDS200x + AutoWave		•	•	
		E-11 Cold Cranking (Normal)	VDS200x		•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		E-11 Cold Cranking (Relevant)	VDS200x		•	•	
		E-11 Warm Cranking	VDS200x + AutoWave		•	•	
		E-12 Voltage Curve	VDS200x		•	•	
		E-13 Pin Break (Contact 1) (Precompliance)	PFS200x		•		
		E-13 Pin Break (Contact 2) (Precompliance)	PFS200x, VDS200 + AutoWave		•	•	
		E-15 Reset Voltage 1	VDS200x		•	•	
		E-15 Reset Voltage 2	VDS200x		•	•	
Mercedes-Benz MBN 10 615 (Draft 4, 2009-09)	12V Line	E-02 Longtime Voltage	VDS200x	5.2	•	•	
		E-03 Transient Overvoltage	VDS200x + AutoWave	5.3	•	•	
		E-04 External Start	VDS200x	5.4	•	•	
		E-05 Load Shedding	VDS200x	5.5	•	•	
		E-06 Superimposed Voltage	VDS200N, VDS200B	5.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	5.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	5.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	5.9	•	•	
		E-10 Short Reset	PFS200x, AutoWave + PFM200Nx	5.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	5.11	•	•	
		E-11 Cold Cranking (Relevant)	VDS200x + AutoWave	5.11	•	•	
		E-11 Warm Cranking	VDS200x + AutoWave	5.11	•	•	
		E-12 Voltage Curve	VDS200x	5.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	5.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	5.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	5.13	•		
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	5.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	5.14		•	
		E-15 Reset Voltage 1	VDS200x	5.15	•	•	
		E-15 Reset Voltage 2	VDS200x	5.15	•	•	
Mercedes-Benz MBN 10 615 (2010-06)	12V Line	E-02 Longtime Voltage	VDS200x	5.2	•	•	
		E-03 Transient Overvoltage	VDS200x + AutoWave	5.3	•	•	
		E-04 External Start	VDS200x	5.4	•	•	
		E-05 Load Shedding	VDS200x	5.5	•	•	
		E-06 Superimposed Voltage	VDS200N, VDS200B	5.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	5.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	5.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	5.9	•	•	
		E-10 Short Reset	PFS200x, AutoWave + PFM200Nx	5.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	5.11	•	•	
		E-11 Cold Cranking (Relevant)	VDS200x + AutoWave	5.11	•	•	
		E-11 Warm Cranking	VDS200x + AutoWave	5.11	•	•	
		E-12 Voltage Curve	VDS200x	5.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	5.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	5.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	5.13	•		
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	5.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	5.14		•	
		E-15 Reset Voltage 1	VDS200x	5.15	•	•	
		E-15 Reset Voltage 2	VDS200x	5.15	•	•	
Mercedes-Benz MBN LV 124-1	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Overvoltage 1	VDS200x + AutoWave	4.2	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
(2011-03)		E-02 Overvoltage 2	VDS200x + AutoWave	4.2	•	•	
		E-03 Undervoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset - Test Case 1	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 2	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 3	PFS200x + BSM200N100 + R-Box LV124, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	4.13	•		
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reset Voltage 1	VDS200x	4.15	•	•	
		E-15 Reset Voltage 2	VDS200x	4.15	•	•	
Mercedes-Benz MBN LV 124-1 (2013-03)	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Transient Overvoltage	VDS200x + AutoWave	4.2	•	•	
		E-03 Transient Subvoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down and Ramp Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset	PFS200x + BSM200N100, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Break (Test Case 1)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Break (Test Case 2)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reverse Voltage (Test Case 1)	VDS200Qx	4.15		•	
		E-15 Reverse Voltage (Test Case 2)	VDS200Qx	4.15		•	
Mercedes-Benz MBN LV 148	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
(2013-09)		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	3.10	•		
		E48-10 Start Impulses - Cold start (Normal)	VDS200N / VDS200	3.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200N / VDS200	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
Mercedes-Benz MBN 10 284-2 (2002-03)	12V Line	Pulse 1	UCS200x, MPG200	4.1.1.2.1	•		
		Pulse 2	UCS200x, MPG200	4.1.1.2.2	•		
		Pulse 3a	UCS200x, EFT200	4.1.1.2.3	•		
		Pulse 3b	UCS200x, EFT200	4.1.1.2.3	•		
		Pulse 4	VDS200x	4.1.1.2.4	•	•	
		Pulse 5a	LD200N, LD200B1 S2	4.1.1.2.5	•		
		Pulse 5b	VDS200N, VDS200B	4.1.1.2.5	•	•	
		Pulse Jump Start	VDS200x	4.1.1.2.6	•	•	
		Pulse Ripple	VDS200x	4.1.2	•	•	
	24V Line	Pulse 1	UCS200x, MPG200	4.1.1.2.1	•		
		Pulse 2	UCS200x, MPG200	4.1.1.2.2	•		
		Pulse 3a	UCS200x, EFT200	4.1.1.2.3	•		
		Pulse 3b	UCS200x, EFT200	4.1.1.2.3	•		
		Pulse 4	VDS200x	4.1.1.2.4	•	•	
		Pulse 5a	LD200N, LD200B1 S2	4.1.1.2.5	•		
		Pulse 5b	VDS200N, VDS200B	4.1.1.2.5	•	•	
		Pulse Ripple	VDS200x	4.1.2	•	•	
	42V Line	Pulse 1 (Scen. 1)	UCS200x, MPG200 S14	4.1.1.2.1	•		
		Pulse 1 (Scen. 2)	UCS200x, MPG200	4.1.1.2.1	•		
		Pulse 2 (Scen. 1)	UCS200x, MPG200 S14	4.1.1.2.2	•		
		Pulse 2 (Scen. 2)	UCS200x, MPG200	4.1.1.2.2	•		
		Pulse 3a	UCS200x, EFT200	4.1.1.2.3	•		
		Pulse 3b	UCS200x, EFT200	4.1.1.2.3	•		
		Pulse 4	VDS200N, VDS200B	4.1.1.2.4	•	•	
		Pulse 5a	LD200N, LD200B1 S2	4.1.1.2.5	•		
		Pulse 5b	VDS200N, VDS200B	4.1.1.2.5	•	•	
		Pulse Jump Start	VDS200N, VDS200B	4.1.1.2.6	•	•	
		Pulse Ripple	VDS200N, VDS200B	4.1.2	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	4.1.3.1.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3b	UCS200x, EFT200	4.1.3.2.2	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	4.1.3.1.2	•		
		Pulse 3b	UCS200x, EFT200	4.1.3.2.2	•		
	42V I/O	Pulse 3a	UCS200x, EFT200	4.1.3.1.2	•		
		Pulse 3b	UCS200x, EFT200	4.1.3.2.2	•		
Mercedes-Benz MBN 10 284-2 (2008-03)		Magnetic Field Immunity (LFM-Test)	AutoWave + AMP200N1, CWS500N3	14		•	•
	12V Line	Pulse 1	UCS200x, MPG200	15	•		
		Pulse 1b	UCS200x	15	•		
		Pulse 2a	UCS200x, MPG200	15	•		
		Pulse 3a	UCS200x, EFT200	15	•		
		Pulse 3b	UCS200x, EFT200	15	•		
	24V Line	Pulse 1	UCS200x, MPG200	15	•		
		Pulse 1b	UCS200x, MPG200	15	•		
		Pulse 2a	UCS200x, MPG200	15	•		
		Pulse 3a	UCS200x, EFT200	15	•		
		Pulse 3b	UCS200x, EFT200	15	•		
	12V I/O	Pulse a (CCC)	UCS200x, EFT200	16	•		
		Puse b (CCC)	UCS200x, EFT200	16	•		
	24V I/O	Pulse a (CCC)	UCS200x, EFT200	16	•		
		Puse b (CCC)	UCS200x, EFT200	16	•		
Mercedes-Benz MBN 10 284-2 (2011-04)		Magnetic Field Immunity - DC (LFM-Test)	AutoWave + AMP200N1.1	14		•	
		Magnetic Field Immunity (LFM-Test)	AutoWave + AMP200N1, CWS500N3	14		•	•
	12V Line	Pulse 1	UCS200x, MPG200	15.2	•		
		Pulse 1b	UCS200x	15.2	•		
		Pulse 2a	UCS200x, MPG200	15.2	•		
		Pulse 3a	UCS200x, EFT200	15.2	•		
		Pulse 3b	UCS200x, EFT200	15.2	•		
	12V I/O	Fast a (CCC)	UCS200x, EFT200	16.4	•		
		Fast b (CCC)	UCS200x, EFT200	16.4	•		
		ICC Slow positive	UCS200x, MPG200	16.4	•		
		ICC Slow negative	UCS200x, MPG200	16.4	•		
Mercedes-Benz MBN 10 284-2 (2015-07)		Magnetic Field Immunity - DC (LFM-Test)	AutoWave + AMP200N1.1	14		•	
		Magnetic Field Immunity (LFM-Test)	AutoWave + AMP200N1, CWS500N3	14		•	
	12V Line	Pulse 1	UCS200x, MPG200	15.2	•		
		Pulse 1b	UCS200x	15.2	•		
		Pulse 2a	UCS200x, MPG200	15.2	•		
		Pulse 3a	UCS200x, EFT200	15.2	•		
		Pulse 3b	UCS200x, EFT200	15.2	•		
	12V I/O	Fast a (CCC)	UCS200x, EFT200	16.4	•		
		Fast b (CCC)	UCS200x, EFT200	16.4	•		
		ICC Slow positive	UCS200x, MPG200	16.4	•		
		ICC Slow negative	UCS200x, MPG200	16.4	•		
Mercedes-Benz MBN 10 284-4 (2011-04)		Magnetic Field Immunity - DC (LFM-Test)	AutoWave + AMP200N1.1	14			
		Magnetic Field Immunity (LFM-Test)	AutoWave + AMP200N1, CWS500N3	14		•	•
	12V Line	Pulse 1	UCS200x, MPG200	14.2	•		
		Pulse 1b	UCS200x	14.2	•		
		Pulse 2a	UCS200x, MPG200	14.2	•		
		Pulse 3a	UCS200x, EFT200	14.2	•		
		Pulse 3b	UCS200x, EFT200	14.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V Line	Pulse 1	UCS200x, MPG200	14.2	•		
		Pulse 1b	UCS200x, MPG200	14.2	•		
		Pulse 2a	UCS200x, MPG200	14.2	•		
		Pulse 3a	UCS200x, EFT200	14.2	•		
		Pulse 3b	UCS200x, EFT200	14.2	•		
	12V I/O	Pulse a (CCC)	UCS200x, EFT200	15.4	•		
		Puse b (CCC)	UCS200x, EFT200	15.4	•		
	24V I/O	Pulse a (CCC)	UCS200x, EFT200	15.4	•		
		Puse b (CCC)	UCS200x, EFT200	15.4	•		
Mercedes-Benz 211 000 42 99 (2002-03)	12V Line	Reverse Voltage	VDS200x	3.2.1	•	•	
		Overvoltage	VDS200x	3.2.2	•	•	
		Ramp Down	VDS200x	3.3.1	•	•	
		Ramp Up	VDS200x	3.3.1	•	•	
		Switch On	VDS200x	3.3.1.2	•	•	
		Drop	VDS200x	3.3.1.3	•	•	
		Short Drop	VDS200x	3.3.1.4	•	•	
	42V Line	Ramp Down	VDS200N, VDS200B	3.3.1	•	•	
		Ramp Up	VDS200N, VDS200B	3.3.1	•	•	
		Switch On	VDS200N, VDS200B	3.3.1.2	•	•	
		Short Drop	VDS200N, VDS200B	3.3.1.4	•	•	
Mitsubishi ES-X82010 (Rev. M, 1999-09)	12V Line	Power 10	VDS200x	4.1	•		
		Power 18	VDS200x	4.1	•		
		Electric Load 1	VDS200x + AutoWave /Arb2714	4.2.1	•		
		Electric Load 2	VDS200x	4.2.1	•		
		Electric Load 3	VDS200x	4.2.1	•		
		Engine Start 1	VDS200x + AutoWave /Arb2714	4.2.2	•		
		Engine Start 2	VDS200x	4.2.2	•		
		Engine Start 3	VDS200x	4.2.3	•		
		Chattering	PFS200x	4.3	•		
		Key Switch	PFS200x	4.3	•		
		Inverse Polarity	VDS200x	4.4	•		
		Overvoltage A	VDS200x	4.5	•		
		Overvoltage B	VDS200x	4.5	•		
		Interruption	PFS200x	4.6	•		
		Pulse 1	UCS200x, MPG200	4.7.1	•		
		Pulse 2	UCS200x, MPG200	4.7.1	•		
		Pulse 3a	UCS200x, EFT200	4.7.1	•		
		Pulse 3b	UCS200x, EFT200	4.7.1	•		
		Pulse 5	LD200x	4.7.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	4.7.2	•		
		Pulse 3b	UCS200x, EFT200	4.7.2	•		
Mitsubishi ES-X+A263682010 (Rev. N, 2000-10)	12V Line	Power 10	VDS200x	4.1	•		
		Power 18	VDS200x	4.1	•		
		Electric Load 1	VDS200x + AutoWave /Arb2714	4.2.1	•		
		Electric Load 2	VDS200x	4.2.1	•		
		Electric Load 3	VDS200x	4.2.1	•		
		Engine Start 1	VDS200x + AutoWave /Arb2714	4.2.2	•		
		Engine Start 2	VDS200x	4.2.2	•		
		Engine Start 3	VDS200x	4.2.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Chattering	PFS200x	4.3	•		
		Key Switch	PFS200x	4.3	•		
		Inverse Polarity	VDS200x	4.4	•		
		Overvoltage A	VDS200x	4.5	•		
		Overvoltage B	VDS200x	4.5	•		
		Interruption	PFS200x	4.6	•		
		Pulse 1	UCS200x, MPG200	4.7.1	•		
		Pulse 2	UCS200x, MPG200	4.7.1	•		
		Pulse 3a	UCS200x, EFT200	4.7.1	•		
		Pulse 3b	UCS200x, EFT200	4.7.1	•		
		Pulse 5	LD200x	4.7.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	4.7.2	•		
		Pulse 3b	UCS200x, EFT200	4.7.2	•		
Mitsubishi ES-X82010 (Rev. O, 2001-12)	12V Line	Electric Load 1	VDS200x + AutoWave / Arb2714	4.2.1	•	•	
		Electric Load 2	VDS200x	4.2.1	•	•	
		Electric Load 3	VDS200x	4.2.1	•	•	
		Engine Start 1	VDS200x + AutoWave / Arb2714	4.2.2	•	•	
		Engine Start 2	VDS200x	4.2.2	•	•	
		Engine Start 3	VDS200x	4.2.3	•	•	
		Chattering	PFS200x, VDS200x + AutoWave, AutoWave + PFM200Nx	4.3	•	•	
		Key Switch	PFS200x, VDS200x + AutoWave, AutoWave + PFM200Nx	4.3	•	•	
		Inverse Polarity	VDS200x	4.4	•	•	
		Overvoltage A	VDS200x	4.5	•	•	
		Overvoltage B	VDS200x	4.5	•	•	
		Interruption	PFS200x, VDS200x + AutoWave	4.6	•	•	
		Pulse 1	UCS200x, MPG200	4.7.1	•		
		Pulse 2	UCS200x, MPG200	4.7.1	•		
		Pulse 3a	UCS200x, EFT200	4.7.1	•		
		Pulse 3b	UCS200x, EFT200	4.7.1	•		
		Pulse 5	LD200x	4.7.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	4.7.2	•		
		Pulse 3b	UCS200x, EFT200	4.7.2	•		
Mitsubishi ES-X82010 (Rev. Q, 2007-01)	12V Line	Electric Load 1	VDS200x + AutoWave / Arb2714	4.2.1	•	•	
		Electric Load 2	VDS200x	4.2.1	•	•	
		Electric Load 3	VDS200x	4.2.1	•	•	
		Engine Start 1	VDS200x + AutoWave / Arb2714	4.2.2	•	•	
		Engine Start 2	VDS200x	4.2.2	•	•	
		Engine Start 3	VDS200x	4.2.3	•	•	
		Chattering	PFS200x, VDS200x + AutoWave, AutoWave + PFM200Nx	4.3	•	•	
		Key Switch	PFS200x, VDS200x + AutoWave, AutoWave + PFM200Nx	4.3	•	•	
		Inverse Polarity	VDS200x	4.4	•	•	
		Overvoltage A	VDS200x	4.5	•	•	
		Overvoltage B	VDS200x	4.5	•	•	
		Interruption	PFS200x, VDS200x + AutoWave	4.6	•	•	
		Pulse 1	UCS200x, MPG200	4.7.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 2	UCS200x, MPG200	4.7.1	•		
		Pulse 3a	UCS200x, EFT200	4.7.1	•		
		Pulse 3b	UCS200x, EFT200	4.7.1	•		
		Pulse 5	LD200x	4.7.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	4.7.2	•		
		Pulse 3b	UCS200x, EFT200	4.7.2	•		
Mitsubishi ES-X82114 (Rev. C, 2007-04)		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	8		•	•
		Magnetic Field Immunity (Verify H-Field)	AutoWave + AMP200Nx, CWS500N3	8		•	•
	12V Line	Test Pulse 1 Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 1	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2a Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 2a	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2b	VDS200x	9.1.4	•	•	
		Test Pulse 3a Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3a	UCS200x, EFT200	9.1.4	•		
		Test Pulse 3b Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3b	UCS200x, EFT200	9.1.4	•		
		Test Pulse 4	VDS200x	9.1.4	•	•	
	24V Line	Test Pulse 1 Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 1	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2a Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 2a	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2b	VDS200x	9.1.4	•	•	
		Test Pulse 3a Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3a	UCS200x, EFT200	9.1.4	•		
		Test Pulse 3b Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3b	UCS200x, EFT200	9.1.4	•		
		Test Pulse 4	VDS200x	9.1.4	•	•	
	12V I/O	CCC - Pulse a	UCS200x, EFT200	9.2.3	•		
		CCC - Pulse b	UCS200x, EFT200	9.2.3	•		
		DCC - Pulse 2+	UCS200x, MPG200	9.2.5	•		
		DCC- Pulse 2-	UCS200x, MPG200	9.2.5.1	•		
		DCC - Pulse a	UCS200x, EFT200	9.2.5.2	•		
		DCC - Pulse b	UCS200x, EFT200	9.2.5.3	•		
	24V I/O	CCC - Pulse a	UCS200x, EFT200	9.2.3	•		
		CCC - Pulse b	UCS200x, EFT200	9.2.3	•		
		DCC - Pulse 2+	UCS200x, MPG200	9.2.5	•		
		DCC- Pulse 2-	UCS200x, MPG200	9.2.5.1	•		
		DCC - Pulse a	UCS200x, EFT200	9.2.5.2	•		
		DCC - Pulse b	UCS200x, EFT200	9.2.5.3	•		
	42V I/O	CCC - Pulse a	UCS200x, EFT200	9.2.3	•		
		CCC - Pulse b	UCS200x, EFT200	9.2.3	•		
		DCC - Pulse 2+	UCS200x, MPG200	9.2.5	•		
		DCC- Pulse 2-	UCS200x, MPG200	9.2.5.1	•		
		DCC - Pulse a	UCS200x, EFT200	9.2.5.2	•		
		DCC - Pulse b	UCS200x, EFT200	9.2.5.3	•		
Mitsubishi ES-X82114 (Rev. D, 2009-03)		Magnetic Field Immunity	AutoWave + AMP200Nx, CWS500N3	8		•	
		Magnetic Field Immunity (Verify H-Field)	AutoWave + AMP200Nx, CWS500N3	8		•	
	12V Line	Test Pulse 1 Ramp	UCS200x, MPG200	9.1.4			

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Test Pulse 1	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2a Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 2a	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2b	VDS200x	9.1.4	•	•	
		Test Pulse 3a Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3a	UCS200x, EFT200	9.1.4	•		
		Test Pulse 3b Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3b	UCS200x, EFT200	9.1.4	•		
		Test Pulse 4	VDS200x	9.1.4	•	•	
	24V Line	Test Pulse 1 Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 1	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2a Ramp	UCS200x, MPG200	9.1.4			
		Test Pulse 2a	UCS200x, MPG200	9.1.4	•		
		Test Pulse 2b	VDS200x	9.1.4	•	•	
		Test Pulse 3a Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3a	UCS200x, EFT200	9.1.4	•		
		Test Pulse 3b Ramp	UCS200x, EFT200	9.1.4			
		Test Pulse 3b	UCS200x, EFT200	9.1.4	•		
		Test Pulse 4	VDS200x	9.1.4	•	•	
	12V I/O	CCC - Pulse a	UCS200x, EFT200	9.2.3	•		
		CCC - Pulse b	UCS200x, EFT200	9.2.3	•		
		DCC - Pulse 2+	UCS200x, MPG200	9.2.5	•		
		DCC- Pulse 2-	UCS200x, MPG200	9.2.5.1	•		
		DCC - Pulse a	UCS200x, EFT200	9.2.5.2	•		
		DCC - Pulse b	UCS200x, EFT200	9.2.5.3	•		
	24V I/O	CCC - Pulse a	UCS200x, EFT200	9.2.3	•		
		CCC - Pulse b	UCS200x, EFT200	9.2.3	•		
		DCC - Pulse 2+	UCS200x, MPG200	9.2.5	•		
		DCC- Pulse 2-	UCS200x, MPG200	9.2.5.1	•		
		DCC - Pulse a	UCS200x, EFT200	9.2.5.2	•		
		DCC - Pulse b	UCS200x, EFT200	9.2.5.3	•		
	42V I/O	CCC - Pulse a	UCS200x, EFT200	9.2.3	•		
		CCC - Pulse b	UCS200x, EFT200	9.2.3	•		
		DCC - Pulse 2+	UCS200x, MPG200	9.2.5	•		
		DCC- Pulse 2-	UCS200x, MPG200	9.2.5.1	•		
		DCC - Pulse a	UCS200x, EFT200	9.2.5.2	•		
		DCC - Pulse b	UCS200x, EFT200	9.2.5.3	•		
Mitsubishi ES-X82115 (Rev. C, 2007-04)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	•
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	•
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	7.2	•	•	
		Supply Voltage Dips	PFS200x, VDS200x + AutoWave	7.3	•	•	
		Engine Cranking Low Voltage	VDS200x + AutoWave / Arb2714	7.4	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	7.6	•	•	
		Defective Regulation	VDS200x	8.1	•	•	
		Jump Start	VDS200x	8.2	•	•	
		Load Dump	VDS200N, VDS200B	8.3	•	•	
		Reverse Voltage	VDS200x	8.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Operating and Voltage Stress	VDS200x	10.1		•	
Mitsubishi ES-X82115 (Rev. D, 2009-03)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	7.2	•	•	
		Supply Voltage Dips	PFS200x, VDS200x + AutoWave	7.3	•	•	
		Engine Cranking Low Voltage	VDS200x + AutoWave / Arb2714	7.4	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	7.6	•	•	
		Defective Regulation	VDS200x	8.1	•	•	
		Jump Start	VDS200x	8.2	•	•	
		Load Dump	VDS200N, VDS200B	8.3	•	•	
		Reverse Voltage	VDS200x	8.4	•	•	
		Operating and Voltage Stress	VDS200x	10.1		•	
Mitsubishi ES-X82115 (Rev. E, 2010-10)	12V Line	Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	6.3		•	
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	7.2	•	•	
		Supply Voltage Dips	PFS200x, VDS200x + AutoWave	7.3	•	•	
		Engine Cranking Low Voltage	VDS200x + AutoWave / Arb2714	7.4	•	•	
		Ramp Down	VDS200x + AutoWave / Arb2714	7.6	•	•	
		Defective Regulation	VDS200x	8.1	•	•	
		Jump Start	VDS200x	8.2	•	•	
		Load Dump	VDS200N, VDS200B	8.3	•	•	
		Reverse Voltage	VDS200x	8.4	•	•	
		Operating and Voltage Stress	VDS200x	10.1		•	
Nissan 28400 NDS02 [3] (1999-07)	12V Line	Momentary voltage drop waveform (a)	VDS200x + AutoWave	1		•	
		Momentary voltage drop waveform (b)	VDS200x + AutoWave	1		•	
		Momentary voltage drop waveform (c)	VDS200x + AutoWave	1		•	
		Momentary voltage drop waveform (d)	VDS200x + AutoWave	1		•	
		Momentary power supply interruption resistance	VDS200x + AutoWave	1		•	
		esistance to power source voltage fluctuation	VDS200x + AutoWave	3		•	
Nissan 28400 NDS03 [2] (1997-01)	12V Line	Pulse A1	LD200x S3		•		
		Pulse A2	LD200x S3		•		
		Pulse B1	LD200x S3		•		
		Pulse B2	UCS200x, MPG200 S7		•		
Nissan 28400 NDS03 [3] (2005-08)	12V Line	Pulse AP-1 (Method A)	VDS200x, VDS200B + AutoWave			•	
		Pulse AP-2 (Method A)	VDS200x, VDS200B + AutoWave			•	
		Pulse B1	LD200N, LD200M		•		
		Pulse B2	UCS200x, MPG200 S7		•		
Nissan 28400 NDS07 [4] (1998-01)	12V Line	Pulse C8	UCS200x, MPG200 S7		•		
		Pulse C50	UCS200x, MPG200 S7		•		
		Pulse C300	UCS200x, MPG200 S7		•		
Nissan 28401 NDS02 [1] (2002-05)	12V Line	Voltage Check Min	VDS200x	6.1.1	•		
		Voltage Check Max	VDS200x	6.1.1	•		
		Decrease	VDS200x	6.1.2	•		
		Increase	VDS200x	6.1.2	•		
		Profile	PFS200x + RDS200	6.1.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Overvoltage	VDS200x	6.1.4	•		
		Reverse Volt.	VDS200x	6.1.4	•		
		Ground	VDS200x	6.1.5	•		
		Pulse 1	UCS200x, MPG200	6.1.6	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		Pulse 2a	UCS200x, MPG200	6.1.6	•		
		Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.8	•		
		Pulse 2a	UCS200x, MPG200	6.1.8	•		
		Pulse 3a	UCS200x, EFT200	6.1.8	•		
		Pulse 3b	UCS200x, EFT200	6.1.8	•		
		Pulse 5a	LD200x	6.1.9	•		
		Pulse 5b	VDS200N, VDS200B	6.1.9	•		
		Micro Drops	PFS200x	6.1.10	•		
		Start	VDS200x	6.1.11	•		
		Sweep 20kHz	VDS200x	6.1.12	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Nissan 28401 NDS02 [2] (2003-10)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5a	LD200x	6.1.9	•		
		EQ/IC 03 : Pulse 5b	VDS200N, VDS200B	6.1.9	•	•	
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Nissan 28401 NDS02 [3] (2006-03)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5a	LD200x	6.1.9	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Nissan 28401 NDS02 [4] (2008-08)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5a	LD200x	6.1.9	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Nissan 28401 NDS02 [5] (2010-12)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start No.1 (S&S)	VDS200x + AutoWave / Arb2714	6.1.11	•		
		EQ/IC 05 : Start No.1*	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.2	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.3	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Nissan 28401 NDS02 [6] (2013-01)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start No.1 (S&S)	VDS200x + AutoWave / Arb2714	6.1.11	•		
		EQ/IC 05 : Start No.1*	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.2	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.3	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Nissan 28402 NDS08 [0] (2001-10)	12V Line	Power Supply Patterns for Power Supply Intermittance	AutoWave + VDS200x,	7.1		•	
Nissan	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
28558 NDS41 [1] (2013-03)		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1		•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2		•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2		•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3		•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4		•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4		•	
		EQ/TE 05 : Ground	VDS200x	6.1.5		•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6			
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6			
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6			
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7			
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7			
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8			
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8			
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9			
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10		•	
		EQ/IC 05 : Start No.1 (S&S)	VDS200x + AutoWave / Arb2714	6.1.11			
		EQ/IC 05 : Start No.1*	VDS200x	6.1.11		•	
		EQ/IC 05 : Start No.2	VDS200x	6.1.11		•	
		EQ/IC 05 : Start No.3	VDS200x	6.1.11		•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12		•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12		•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1			
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1			
OEM LV 124 (2009-10)	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Overvoltage 1	VDS200x + AutoWave	4.2	•	•	
		E-02 Overvoltage 2	VDS200x + AutoWave	4.2	•	•	
		E-03 Undervoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset - Test Case 1	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 2	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 3	PFS200x + BSM200N100 + R-Box LV124, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	4.13	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reset Voltage 1	VDS200x	4.15	•	•	
		E-15 Reset Voltage 2	VDS200x	4.15	•	•	
OEM LV 124 (2013-02)	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Transient Overvoltage	VDS200x + AutoWave	4.2	•	•	
		E-03 Transient Subvoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down and Ramp Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset	PFS200x + BSM200N100, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Break (Test Case 1)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Break (Test Case 2)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reverse Voltage (Test Case 1)	VDS200Qx	4.15		•	
		E-15 Reverse Voltage (Test Case 2)	VDS200Qx	4.15		•	
OEM LV 148 (2011-08)	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-07 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	3.9		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	3.10	•	•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200x	3.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200x	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
OEM	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
LV 148 (2013-07)		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	3.10	•		
		E48-10 Start Impulses - Cold start (Normal)	VDS200N / VDS200	3.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200N / VDS200	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
Paccar CS0016 (1996-07)	12V Line	Load Dump	LD200N, LD200 S2		•		
		Inductive pos.	UCS200x, MPG200 S15		•		
		Inductive neg.	UCS200x, MPG200 S15		•		
		Mutual pos.	UCS200x, MPG200 S15		•		
		Mutual neg.	UCS200x, MPG200 S15		•		
Paccar CPP0016 (2011-10)	12V Line	Load Dump	LD200N, LD200 S2	6.2	•		
		Inductive switching +Vs	UCS200x, MPG200 S15	6.3	•		
		Inductive switching -Vs	UCS200x, MPG200 S15	6.3	•		
		Mutual coupling +Vs	UCS200x, MPG200 S15	6.4	•		
		Mutual coupling -Vs	UCS200x, MPG200 S15	6.4	•		
		Conducted noise immunity	AutoWave + AMP200N1	6.6		•	
Paccar CS0013 (2003-11)	12V Line	Minimum voltage test	VDS200x	7.2	•	•	
		Maximum voltage test	VDS200x	7.3	•	•	
		Reverse voltage test	VDS200x	7.4	•	•	
		Start voltage test	VDS200x	7.5	•	•	
		Voltage drain test	VDS200x	7.6	•	•	
		Jump voltage test	VDS200x	7.7	•	•	
	24V Line	Minimum voltage test	VDS200x	7.2	•	•	
		Maximum voltage test	VDS200x	7.3	•	•	
		Reverse voltage test	VDS200x	7.4	•	•	
		Start voltage test	VDS200x	7.5	•	•	
		Voltage drain test	VDS200x + AutoWave	7.6	•	•	
		Jump voltage test	VDS200x	7.7	•	•	
	36V Line	Minimum voltage test	VDS200x	7.2	•	•	
		Maximum voltage test	VDS200x	7.3	•	•	
		Reverse voltage test	VDS200x	7.4	•	•	
		Start voltage test	VDS200x	7.5	•	•	
		Voltage drain test	VDS200x + AutoWave	7.6	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Jump voltage test	VDS200x	7.7	•	•	
Paccar CS0013 (2009-09)	12V Line	Minimum voltage test	VDS200x	7.2	•	•	
		Maximum voltage test	VDS200x	7.3	•	•	
		Reverse voltage test	VDS200x	7.4	•	•	
		Start voltage test	VDS200x	7.5	•	•	
		Voltage drain test	VDS200x + AutoWave	7.6	•	•	
		Jump voltage test	VDS200x	7.7	•	•	
	24V Line	Minimum voltage test	VDS200x	7.2	•	•	
		Maximum voltage test	VDS200x	7.3	•	•	
		Reverse voltage test	VDS200x	7.4	•	•	
		Start voltage test	VDS200x	7.5	•	•	
		Voltage drain test	VDS200x + AutoWave	7.6	•	•	
		Jump voltage test	VDS200x	7.7	•	•	
	36V Line	Minimum voltage test	VDS200x	7.2	•	•	
		Maximum voltage test	VDS200x	7.3	•	•	
		Reverse voltage test	VDS200x	7.4	•	•	
		Start voltage test	VDS200x	7.5	•	•	
		Voltage drain test	VDS200x + AutoWave	7.6	•	•	
		Jump voltage test	VDS200x	7.7	•	•	
Piaggio 7431 (2002-01)	12V Line	Dips	VDS200x	3.6	•	•	
		Overvoltage 1	VDS200x	3.7	•	•	
		Overvoltage 2	VDS200x	3.7	•	•	
		Pulse 1	UCS200x, MPG200	3.9	•		
		Pulse 2	UCS200x, MPG200	3.9	•		
		Pulse 4a	UCS200x, EFT200	3.9	•		
		Pulse 4b	UCS200x, EFT200	3.9	•		
		Pulse 5	UCS200x	3.9	•		
		Pulse 6	VDS200x	3.9	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Piaggio 7431 (Edition 5, 2009-07)	12V Line	Performance under low voltage	VDS200x	3.10	•	•	
		Resistance to overvoltage power supply 18V	VDS200x	3.11	•	•	
		Resistance to overvoltage power supply 24V	VDS200x	3.11	•	•	
		Pulse 1	UCS200x, MPG200	3.13	•		
		Pulse 2	UCS200x, MPG200	3.13	•		
		Pulse 4 Pos	UCS200x, EFT200	3.13	•		
		Pulse 4 Neg	UCS200x, EFT200	3.13	•		
		Piaggio 6	VDS200x	3.13	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Porsche EMV-Anforderungen (2001-09)	12V Line	Pulse 1	UCS200x, MPG200	2.1.1	•		
		Pulse 1z	UCS200x, MPG200	2.1.1	•		
		Pulse 2	UCS200x, MPG200	2.1.1	•		
		Pulse 2z	UCS200x, MPG200	2.1.1	•		
		Pulse 3a	UCS200x, EFT200	2.1.1	•		
		Pulse 3b	UCS200x, EFT200	2.1.1	•		
		Pulse 4	VDS200x	2.1.1	•		
		Pulse 5	LD200N Clip, LD200x + diode	2.1.1	•		
		Pulse 6	VDS200x	2.1.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Wobble	VDS200x	2.3	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.2	•		
		Pulse 3b	UCS200x, EFT200	2.2	•		
Porsche EMV-Anforderungen (Ver. 2.0, 2004-08)	12V Line	Pulse 1	UCS200x, MPG200	2.1.1	•		
		Pulse 1z	UCS200x, MPG200	2.1.1	•		
		Pulse 2	UCS200x, MPG200	2.1.1	•		
		Pulse 2z	UCS200x, MPG200	2.1.1	•		
		Pulse 3a	UCS200x, EFT200	2.1.1	•		
		Pulse 3b	UCS200x, EFT200	2.1.1	•		
		Pulse 5	LD200N Clip, LD200x + diode	2.1.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.2	•		
		Pulse 3b	UCS200x, EFT200	2.2	•		
Porsche EMV-Anforderungen (Ver. 2.2, 2010-02)	12V Line	Pulse 1	UCS200x, MPG200	2.1.1	•		
		Pulse 1z	UCS200x, MPG200	2.1.1	•		
		Pulse 2	UCS200x, MPG200	2.1.1	•		
		Pulse 2z	UCS200x, MPG200	2.1.1	•		
		Pulse 3a	UCS200x, EFT200	2.1.1	•		
		Pulse 3b	UCS200x, EFT200	2.1.1	•		
		Pulse 5	LD200N Clip, LD200x + diode	2.1.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.2	•		
		Pulse 3b	UCS200x, EFT200	2.2	•		
Porsche EMV Lastenheft 2007 (2005-04)	12V Line	Pulse 1	UCS200x, MPG200	2.1.1	•		
		Pulse 1z	UCS200x, MPG200	2.1.1	•		
		Pulse 2	UCS200x, MPG200	2.1.1	•		
		Pulse 2z	UCS200x, MPG200	2.1.1	•		
		Pulse 3a	UCS200x, EFT200	2.1.1	•		
		Pulse 3b	UCS200x, EFT200	2.1.1	•		
		Pulse 5	LD200N Clip, LD200x + diode	2.1.1	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.2	•		
		Pulse 3b	UCS200x, EFT200	2.2	•		
Porsche Hardware Lastenheft 2007 (Rev. 1.65, 2005-09)	12V Line	Overvoltage 1	VDS200x	4.1.2	•		
		Overvoltage 2	VDS200x	4.1.2	•		
		Wobble	VDS200x	4.1.2	•		
		Ramp Down-Up	VDS200x + AutoWave	4.1.3	•		
		Reversed Voltage	VDS200x	4.1.4	•		
		Dips	PFS200x	4.1.5	•		
		Pulse 4	VDS200x	4.1.8.1	•		
		Pulse 6	VDS200x	4.1.8.2	•		
		Reset	VDS200x	4.1.8.3	•		
Porsche Hardware Lastenheft 2007 (Rev. 2.0, 2007-10)	12V Line	Overvoltage 1	VDS200x	4.1.2	•	•	
		Overvoltage 2	VDS200x	4.1.2	•	•	
		Wobble	VDS200x	4.1.3	•	•	
		Ramp Down-Up	VDS200x + AutoWave	4.1.4	•	•	
		Reversed Voltage	VDS200x	4.1.5	•	•	
		Dips	PFS200x	4.1.6	•		
		Pulse 4	VDS200x	4.1.9.1	•	•	
		Restart Start/Stop	VDS200x + AutoWave	4.1.9.2	•	•	
		Pulse 6	VDS200x	4.1.9.3	•	•	
		Reset	VDS200x	4.1.9.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
Pronton PES-6022 (2010-10)	12V Line	4.2.1 Supply Voltage Fluctuation Test (Figure 1)	VDS200x + AutoWave	4.2.1	•	•	
		4.2.1 Supply Voltage Fluctuation Test (Figure 3)	VDS200x	4.2.1	•	•	
		4.2.2 Supply Voltage Fluctuation Test (Figure 4a)	VDS200x + AutoWave	4.2.2	•	•	
		4.2.2 Supply Voltage Fluctuation Test (Figure 4b)	VDS200x + AutoWave	4.2.2	•	•	
		4.2.3 Memory Contents	VDS200x	4.2.3	•	•	
		4.3 Supply Voltage Intermittent Test	PFS200x, AutoWave + PFM200Nx	4.3	•	•	
		4.4 Supply Voltage Reverse Connection Test	VDS200x	4.4	•	•	
		4.5 Overvoltage Test A (18V)	VDS200x	4.5	•	•	
		4.5 Overvoltage Test A (24V)	VDS200x	4.5	•	•	
		4.6 Supply Voltage Instantaneous Interruption	PFS200x	4.6	•		
		4.7 Pulse 1	UCS200x, MPG200	4.7	•		
		4.7 Pulse 2a	UCS200x, MPG200	4.7	•		
		4.7 Pulse 2b	VDS200x	4.7	•	•	
		4.7 Pulse 3a	UCS200x, EFT200	4.7	•		
		4.7 Pulse 3b	UCS200x, EFT200	4.7	•		
		4.7 Pulse 4	VDS200x	4.7	•	•	
		4.7 Pulse 5a	LD200x	4.7	•		
		4.7 Pulse 5b	LD200N Clip, LD200x + diode	4.7	•		
	12V I/O	4.7 Transient Pulse a	UCS200x, EFT200	4.7	•		
		4.7 Transient Pulse b	UCS200x, EFT200	4.7	•		
PSA B21 7090 (Rev. F, 1998-01)	12V Line	Sinus	VDS200x	4.1.2	•		
		Sweep	VDS200x	4.1.3	•		
		Overstress 18	VDS200x	4.2.1	•		
		Overstress 24	VDS200x	4.2.2	•		
		Micro Drop	PFS200x	4.3	•		
		Pulse 1	UCS200x, MPG200B1	4.4.1	•		
		Pulse S1	MPG200B1	4.4.1	•		
		Pulse S2	MPG200B1	4.4.1	•		
		Pulse 2	UCS200x, MPG200B1	4.4.1	•		
		Pulse 3a	UCS200x, EFT200	4.4.1	•		
		Pulse 3b	UCS200x, EFT200	4.4.1	•		
		Pulse 5a	VDS200N, VDS200B	4.4.1	•		
		Pulse 5	LD200x	4.4.1	•		
PSA B21 7110 (2001-07)	12V Line	Voltage Check	VDS200x	7.1.1	•		
		Decrease	VDS200x	7.1.2	•		
		Increase	VDS200x	7.1.2	•		
		Profile	PDS200x + RDS200	7.1.3	•		
		Stress 1	VDS200x	7.1.4	•		
		Stress 2	VDS200x	7.1.4	•		
		Ground	VDS200x	7.1.5	•		
		Pulse 1	UCS200x, MPG200	7.1.6	•		
		Pulse 1 bis	UCS200x, MPG200	7.1.6	•		
		Pulse 2a	UCS200x, MPG200	7.1.6	•		
		Pulse 3a	UCS200x, EFT200	7.1.7	•		
		Pulse 3b	UCS200x, EFT200	7.1.7	•		
		Pulse 5b	VDS200N, VDS200B	7.1.8	•		
		Micro Drops	PFS200x	7.1.9	•		
		Pulse 4 -C	VDS200x	7.1.10	•		
		Pulse 4 -M	VDS200x	7.1.10	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 4b -C	VDS200x	7.1.10	•		
		Pulse 4b -M	VDS200x	7.1.10	•		
		Sinus	VDS200x	7.1.11	•		
	42V Line	Voltage Check	VDS200x	7.1.1	•		
		Decrease	VDS200x	7.1.2	•		
		Increase	VDS200x	7.1.2	•		
		Profile	PFS200x + RDS200	7.1.3	•		
		Pulse 1	UCS200x, MPG200	7.1.6	•		
		Pulse 1 bis	UCS200x, MPG200	7.1.6	•		
		Pulse 2a	UCS200x, MPG200	7.1.6	•		
		Pulse 3a	UCS200x, EFT200	7.1.7	•		
		Pulse 3b	UCS200x, EFT200	7.1.7	•		
		Pulse 5b	VDS200N, VDS200B	7.1.8	•		
		Micro Drops	PFS200x	7.1.9	•		
		Pulse 4	VDS200x	7.1.10	•		
		Sinus	VDS200x	7.1.11	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	7.2.1	•		
		Pulse 3b	UCS200x, EFT200	7.2.1	•		
	42V I/O	Pulse 3a	UCS200x, EFT200	7.2.1	•		
		Pulse 3b	UCS200x, EFT200	7.2.1	•		
PSA B21 7110 (Rev. A, 2004-07)	12V Line	Voltage Check	VDS200x	6.1.1	•	•	
		Decrease	VDS200x	6.1.2	•	•	
		Increase	VDS200x	6.1.2	•	•	
		Profile	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		Stress 1	VDS200x	6.1.4	•	•	
		Stress 2	VDS200x	6.1.4	•	•	
		Ground	VDS200x	6.1.5	•	•	
		Pulse 1	UCS200x, MPG200	6.1.7	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.7	•		
		Pulse 2a	UCS200x, MPG200	6.1.7	•		
		Pulse 3a	UCS200x, EFT200	6.1.8	•		
		Pulse 3b	UCS200x, EFT200	6.1.8	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.1.9	•		
		Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		Pulse 4	VDS200x	6.1.11	•	•	
		Pulse 4b	VDS200x	6.1.11	•	•	
		Sinus	VDS200x	6.1.12	•	•	
	42V Line	Voltage Check	VDS200x	6.1.1	•	•	
		Decrease	VDS200x	6.1.2	•	•	
		Increase	VDS200x	6.1.2	•	•	
		Profile	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		Stress	VDS200x	6.1.4	•	•	
		Ground	VDS200x	6.1.5	•	•	
		Pulse 1	UCS200x, MPG200	6.1.7	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.7	•		
		Pulse 2a	UCS200x, MPG200	6.1.7	•		
		Pulse 3a	UCS200x, EFT200	6.1.8	•		
		Pulse 3b	UCS200x, EFT200	6.1.8	•		
		Pulse 5b	VDS200N, VDS200B	6.1.9	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Micro Drops	PFS200x, PFM200N100.1	7.1.13	•	•	
		Pulse 4	VDS200x	6.1.11	•	•	
		Sinus	VDS200x	6.1.12	•	•	
		Immunity to low frequency magnetic field	CWS500N3	6.3.1			•
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
	42V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
PSA B21 7110 (Rev. B, 2005-05)	12V Line	Voltage Check	VDS200x	6.1.1	•	•	
		Decrease	VDS200x	6.1.2	•	•	
		Increase	VDS200x	6.1.2	•	•	
		Profile	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		Stress 1	VDS200x	6.1.4	•	•	
		Stress 2	VDS200x	6.1.4	•	•	
		Ground	VDS200x	6.1.5	•	•	
		Pulse 1	UCS200x, MPG200	6.1.7	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.7	•		
		Pulse 2a	UCS200x, MPG200	6.1.7	•		
		Pulse 3a	UCS200x, EFT200	6.1.8	•		
		Pulse 3b	UCS200x, EFT200	6.1.8	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.1.9	•		
		Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		Pulse 4	VDS200x	6.1.11	•	•	
		Pulse 4b	VDS200x	6.1.11	•	•	
		Sinus	VDS200x	6.1.12	•	•	
	42V Line	Voltage Check	VDS200x	6.1.1	•	•	
		Decrease	VDS200x	6.1.2	•	•	
		Increase	VDS200x	6.1.2	•	•	
		Profile	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		Stress	VDS200x	6.1.4	•	•	
		Ground	VDS200x	6.1.5	•	•	
		Pulse 1	UCS200x, MPG200	6.1.7	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.7	•		
		Pulse 2a	UCS200x, MPG200	6.1.7	•		
		Pulse 3a	UCS200x, EFT200	6.1.8	•		
		Pulse 3b	UCS200x, EFT200	6.1.8	•		
		Pulse 5b	VDS200N, VDS200B	6.1.9	•	•	
		Micro Drops	PFS200x, PFM200N100.1	7.1.13	•	•	
		Pulse 4	VDS200x	6.1.11	•	•	
		Sinus	VDS200x	6.1.12	•	•	
		Immunity to low frequency magnetic field	AutoWave + AMP200Nx, CWS500N3	6.3.1		•	•
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
	42V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
PSA B21 7110 (Rev. C, 2008-03)	12V Line	Voltage Check	VDS200x	6.1.1	•	•	
		Decrease	VDS200x	6.1.3	•	•	
		Increase	VDS200x	6.1.3	•	•	
		Profile	VDS200x	6.1.4	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Overvoltage	VDS200x	6.1.5	•	•	
		Reverse Voltage	VDS200x	6.1.5	•	•	
		Ground	VDS200x	6.1.6	•	•	
		Pulse 1	UCS200x, MPG200	6.1.8	•		
		Pulse 2a	UCS200x, MPG200	6.1.8	•		
		Pulse 1 bis (high)	UCS200x, MPG200	6.1.9	•		
		Pulse 1 bis (high) U=0	UCS200x, MPG200	6.1.9	•		
		Pulse 1 bis (low) U=0	UCS200x, MPG200	6.1.9	•		
		Pulse 1 bis (low)	UCS200x, MPG200	6.1.9	•		
		Pulse 3a	UCS200x, EFT200	6.1.10	•		
		Pulse 3b	UCS200x, EFT200	6.1.10	•		
		Pulse 5b	LD200N Clip, LD200x + diode	6.1.11	•		
		Micro Drops	PFS200x, PFM200N100.1	7.1.13	•	•	
		Pulse 4	VDS200x	6.1.13	•	•	
		Pulse 4b	VDS200x	6.1.13	•	•	
		Reboot (sans DMT)	VDS200x + AutoWave	6.1.14	•	•	
		Reboot (with DMT)	VDS200x + AutoWave	6.1.14	•	•	
		Sinus	VDS200x	6.1.15	•	•	
	42V Line	Voltage Check	VDS200x	6.1.1	•	•	
		Decrease	VDS200x	61.3	•	•	
		Increase	VDS200x	6.1.3	•	•	
		Profile	PFS200x + RDS200, VDS200x + AutoWave	6.1.4	•	•	
		Reverse Voltage	VDS200x	6.1.5	•	•	
		Ground	VDS200x	6.1.6	•	•	
		Pulse 1	UCS200x, MPG200	6.1.8	•		
		Pulse 2a	UCS200x, MPG200	6.1.8	•		
		Pulse 3a	UCS200x, EFT200	6.1.10	•		
		Pulse 3b	UCS200x, EFT200	6.1.10	•		
		Pulse 5b	VDS200N, VDS200B	6.1.11	•	•	
		Micro Drops	PFS200x, PFM200N100.1	7.1.13	•	•	
		Pulse 4	VDS200x	6.1.13	•	•	
		Sinus	VDS200x	6.1.15	•	•	
		Immunity to low frequency magnetic field	AutoWave + AMP200Nx, CWS500N3	6.3.3		•	•
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
	42V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
PSA B21 7110 (Addendum Rev. C) (2010-05)	12V Line	EQ/TE 01 : Resistance to usual supply overvoltages	VDS200x	2.1.1	•	•	
		EQ/TE 08 : Resistance to the voltage variations	VDS200x	2.1.2	•	•	
		EQ/TE 02 : Resistance to slow increase and decrease	VDS200x	2.1.4	•	•	
		EQ/TE 03 : Reinitialisation test	VDS200x	2.1.5		•	
		EQ/TE 04 : Resistance to unusual supply voltage	VDS200x	2.1.6	•	•	
		EQ/TE 05 : Resistance to grounding	VDS200x	2.1.7	•	•	
		EQ/IC 01 : Resistance to pulses 1	UCS200x, MPG200	2.1.9	•		
		EQ/IC 01 : Resistance to pulses 2a	UCS200x, MPG200	2.1.9	•		
		EQ/IC 10 : Resistance to pulses on outputs - Pulse 1 bis high	UCS200x, MPG200	2.1.10	•		
		EQ/IC 10 : Resistance to pulses on outputs - Pulse 1 bis low	UCS200x, MPG200	2.1.10	•		
		EQ/IC 02 : Resistance to pulses 3a	UCS200x, EFT200	2.1.11	•		
		EQ/IC 02 : Resistance to pulses 3b	UCS200x, EFT200	2.1.11	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		EQ/IC 03 : Resistance to pulses 5b	LD200N Clip, LD200x + diode	2.1.12	•		
		EQ/IC 04 : Resistance to supply micro interruptions	PFS200x, PFM200N100.1	7.1.13	•	•	
		EQ/IC 05 : Resistance to pulses 4	VDS200x	2.1.14	•	•	
		EQ/IC 05 : Resistance to pulses 4 bis	VDS200x	2.1.14	•	•	
		EQ/IC 12 : Resistance to re-start pulse	VDS200x + AutoWave	2.1.15	•	•	
		EQ/IC 13 : Resistance to the "volt control" voltage pulse	VDS200x	2.1.16	•	•	
		EQ/IC 06: Resistance to ripple voltages of the on-board network	VDS200x	2.1.17	•	•	
		Immunity to low frequency magnetic field	AutoWave + AMP200N, CWS500N3	2.3.3		•	
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
PSA B21 7110 (Rev. D) (2012-10)	12V Line	EQ/TE 01 : Resistance to usual power supply voltages	VDS200x	7.1.1	•	•	
		EQ/TE 08 : Resistance to the variations of supply voltage	VDS200x	7.1.2	•	•	
		EQ/TE 07 : Resistance to exceptional supply voltage	VDS200x	7.1.3	•	•	
		EQ/TE 02 : Resistance to drop and slow increase	VDS200x	7.1.4	•	•	
		EQ/TE 03 : Reinitialisation test	VDS200x + AutoWave	7.1.5	•	•	
		EQ/TE 04 : Resistance to unusual power supply voltage	VDS200x	7.1.6	•	•	
		EQ/TE 05 : Resistance to grounding	VDS200x	7.1.7	•	•	
		EQ/IC 01 : Resistance to pulses 1	UCS200x, MPG200	7.1.9	•		
		EQ/IC 01 : Resistance to pulses 2a	UCS200x, MPG200	7.1.9	•		
		EQ/IC 10 : Resistance to pulses on outputs - Pulse 1 bis high	UCS200x, MPG200	7.1.10	•		
		EQ/IC 10 : Resistance to pulses on outputs - Pulse 1 bis low	UCS200x, MPG200	7.1.10	•		
		EQ/IC 02 : Resistance to pulses 3a	UCS200x, EFT200	7.1.11	•		
		EQ/IC 02 : Resistance to pulses 3b	UCS200x, EFT200	7.1.11	•		
		EQ/IC 03 : Resistance to pulses 5b	LD200N Clip, LD200x + diode	7.1.12	•		
		EQ/IC 04 : Resistance to short interruptions	PFS200x, PFM200N100.1	7.1.13	•	•	
		EQ/IC 05 : Resistance to pulses 4	VDS200x	7.1.14	•	•	
		EQ/IC 05 : Resistance to pulses 4 bis	VDS200x	7.1.14	•	•	
		EQ/IC 12 : Resistance to re-start pulse	VDS200x + AutoWave	7.1.15	•	•	
		EQ/IC 13 : Resistance to the "volt control" voltage pulse	VDS200x	7.1.16	•	•	
		EQ/IC 06: Resistance to voltage ripples	VDS200x	7.1.17	•	•	
		EQ/IR 02: Immunity to low frequency magnetic field - DC	AutoWave + AMP200N1.1, CWS500N3	7.3.6		•	•
		EQ/IR 02: Immunity to low frequency magnetic field	AutoWave + AMP200Nx, CWS500N3	7.3.6		•	•
	12V I/O	EQ/IC 07 : Immunity to the transients - Pulse 3a	UCS200x, EFT200	7.3.1	•		
		EQ/IC 07 : Immunity to the transients - Pulse 3b	UCS200x, EFT200	7.3.1	•		
Renault 36.00.808/--C (1999-01)	12V Line	Check	VDS200x	6.1.1	•		
		Pulse 1	UCS200x, MPG200	6.1.2	•		
		Pulse 2	UCS200x, MPG200	6.1.2	•		
		Pulse 3a	UCS200x, EFT200	6.1.3	•		
		Pulse 3b	UCS200x, EFT200	6.1.3	•		
		Pulse 5	LD200x	6.1.4	•		
		Pulse 5 bis	VDS200N, VDS200B	6.1.4	•		
		Micro Drops	PFS200x	6.1.5	•		
		Pulse 4 (Car)	VDS200x	6.1.6	•		
		Pulse 4 (Mot)	VDS200x	6.1.6	•		
		Pulse 4 bis (Car)	VDS200x	6.1.6	•		
		Pulse 4 bis (Mot)	VDS200x	6.1.6	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault	12V Line	Voltage Check	VDS200x	6.1.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
36.00.808/--D (2000-10)		Decrease	VDS200x	6.1.2	•		
		Increase	VDS200x	6.1.2	•		
		Profile	PFS200x + RDS200	6.1.3	•		
		Stress 1	VDS200x	6.1.4	•		
		Stress 2	VDS200x	6.1.4	•		
		Ground	VDS200x	6.1.5	•		
		Pulse 1	UCS200x, MPG200	6.1.6	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		Pulse 2a	UCS200x, MPG200	6.1.6	•		
		Pulse 3a	UCS200x, EFT200	6.1.7	•		
		Pulse 3b	UCS200x, EFT200	6.1.7	•		
		Pulse 5 bis	VDS200N, VDS200B	6.1.8	•		
		Micro Drops	PFS200x	6.1.9	•		
		Pulse 4 -C	VDS200x	6.1.10	•		
		Pulse 4 -M	VDS200x	6.1.10	•		
		Pulse 4b -C	VDS200x	6.1.10	•		
		Pulse 4b -M	VDS200x	6.1.10	•		
		Sinus	VDS200x	6.1.11	•		
	42V Line	Voltage Check	VDS200x	6.1.1	•		
		Decrease	VDS200x	6.1.2	•		
		Increase	VDS200x	6.1.2	•		
		Profile	PFS200x + RDS200	6.1.3	•		
		Pulse 1	UCS200x, MPG200	6.1.6	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		Pulse 2a	UCS200x, MPG200	6.1.6	•		
		Pulse 3a	UCS200x, EFT200	6.1.7	•		
		Pulse 3b	UCS200x, EFT200	6.1.7	•		
		Pulse 5b	VDS200N, VDS200B	6.1.8	•		
		Micro Drops	PFS200x	6.1.9	•		
		Pulse 4	VDS200x	6.1.10	•		
		Sinus	VDS200x	6.1.11	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
	42V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--E (2001-06)	12V Line	Voltage Check Min	VDS200x	6.1.1	•		
		Voltage Check Max	VDS200x	6.1.1	•		
		Decrease	VDS200x	6.1.2	•		
		Increase	VDS200x	6.1.2	•		
		Profile	PFS200x + RDS200	6.1.3	•		
		Overvoltage	VDS200x	6.1.4	•		
		Reverse Volt.	VDS200x	6.1.4	•		
		Ground	VDS200x	6.1.5	•		
		Pulse 1	UCS200x, MPG200	6.1.6	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		Pulse 2a	UCS200x, MPG200	6.1.6	•		
		Pulse 3a	UCS200x, EFT200	6.1.7	•		
		Pulse 3b	UCS200x, EFT200	6.1.7	•		
		Pulse 1 bis	UCS200x, MPG200	6.1.8	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 2a	UCS200x, MPG200	6.1.8	•		
		Pulse 3a	UCS200x, EFT200	6.1.8	•		
		Pulse 3b	UCS200x, EFT200	6.1.8	•		
		Pulse 5a	LD200x	6.1.9	•		
		Pulse 5b	VDS200N, VDS200B	6.1.9	•		
		Micro Drops	PFS200x	6.1.10	•		
		Start	VDS200x	6.1.11	•		
		Sweep	VDS200x	6.1.12	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--F (2002-05)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•		
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•		
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•		
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•		
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200	6.1.3	•		
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•		
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•		
		EQ/TE 05 : Ground	VDS200x	6.1.5	•		
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5a	UCS200x, EFT200	6.1.8	•		
		EQ/IC 03 : Pulse 5b	UCS200x, EFT200	6.1.8	•		
		EQ/IC 04 : Micro Drops	LD200x	6.1.9	•		
		EQ/IC 05 : Start	VDS200N, VDS200B	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x	6.1.10	•		
		EQ/IC 05 : Start	VDS200x	6.1.11	•		
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•		
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--G (2004-02)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•		
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		EQ/IC 03 : Pulse 5a	LD200x	6.1.9	•		
		EQ/IC 03 : Pulse 5b	VDS200N, VDS200B	6.1.9	•	•	
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--H (2007-06)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5a	LD200x	6.1.9	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--J (2008-04)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	PFS200x + RDS200, VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5a	LD200x	6.1.9	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--K (2009-03)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	LD200x	6.1.9	•		
		EQ/IC 05 : Start No.1 (S&S)	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start No.1*	VDS200x + AutoWave	6.1.11	•	•	
		EQ/IC 05 : Start No.2	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.3	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--L (2010-12)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start No.1 (S&S)	VDS200x + AutoWave	6.1.11	•		
		EQ/IC 05 : Start No.1*	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.2	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.3	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	EQ/IC 07 : Pulse 3a	UCS200x, EFT200	6.2.1	•		
		EQ/IC 07 : Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.808/--M (2012-07)	12V Line	EQ/TE 01 : Voltage Check Min	VDS200x	6.1.1	•	•	
		EQ/TE 01 : Voltage Check Max	VDS200x	6.1.1	•	•	
		EQ/TE 02 : Decrease	VDS200x	6.1.2	•	•	
		EQ/TE 02 : Increa+C3139se	VDS200x	6.1.2	•	•	
		EQ/TE 03 : Re-initialization test	VDS200x + AutoWave	6.1.3	•	•	
		EQ/TE 04 : Overvoltage	VDS200x	6.1.4	•	•	
		EQ/TE 04 : Reverse Voltage	VDS200x	6.1.4	•	•	
		EQ/TE 05 : Ground	VDS200x	6.1.5	•	•	
		EQ/IC 01 : Pulse 1	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 1 bis	UCS200x, MPG200	6.1.6	•		
		EQ/IC 01 : Pulse 2a	UCS200x, MPG200	6.1.6	•		
		EQ/IC 02 : Pulse 3a Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 02 : Pulse 3b Train	UCS200x, EFT200B	6.1.7	•		
		EQ/IC 10 : Pulse 1 bis neg.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 10 : Pulse 1 bis pos.	UCS200x, MPG200	6.1.8	•		
		EQ/IC 03 : Pulse 5b	LD200x	6.1.9	•		
		EQ/IC 04 : Micro Drops	PFS200x, PFM200N100.1	6.1.10	•	•	
		EQ/IC 05 : Start No.1 (S&S)	VDS200x + AutoWave	6.1.11	•		
		EQ/IC 05 : Start No.1*	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.2	VDS200x	6.1.11	•	•	
		EQ/IC 05 : Start No.3	VDS200x	6.1.11	•	•	
		EQ/IC 06 : Sweep 50kHz	VDS200x	6.1.12	•	•	
		EQ/IC 06 : Sweep 20kHz	VDS200x	6.1.12	•	•	
		EQ/IR 02 : Immunity to audio frequency magnetic field - DC	AutoWave + AMP200N1.1, CWS500N3	6.3.2		•	•
		EQ/IR 02 : Immunity to audio frequency magnetic field	AutoWave + AMP200N1, CWS500N3	6.3.2		•	•
	12V I/O	Pulse 3a	UCS200x, EFT200	6.2.1	•		
		Pulse 3b	UCS200x, EFT200	6.2.1	•		
Renault 36.00.400/B (1993-03)	24V Line	Pulse 1	MPG200 S5	3.4.2.1.1	•		
		Pulse 2	UCS200x, MPG200	3.4.2.1.2	•		
		Pulse 3a	UCS200x, EFT200	3.4.2.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.2.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	3.4.2.1.4	•		
		Pulse 5b	LD200x	3.4.2.1.5	•		
		Pulse 5c	LD200x	3.4.2.1.5	•		
		Power Supply 1	VDS200x + AutoWave / Arb2714	3.4.2.3.1	•		
		Power Supply 2	VDS200x + AutoWave / Arb2714	3.4.2.3.1	•		
	24V I/O	Pulse 1	UCS200x, MPG200	3.4.2.2	•		
		Pulse 2	UCS200x, MPG200	3.4.2.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3a	UCS200x, EFT200	3.4.2.2	•		
		Pulse 3b	UCS200x, EFT200	3.4.2.2	•		
Renault 36.00.400/C (1998-01)	24V Line	Pulse 1	UCS200x, MPG200	3.4.2.1.1	•		
		Pulse 2	UCS200x, MPG200	3.4.2.1.2	•		
		Pulse 3a	UCS200x, EFT200	3.4.2.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.2.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	3.4.2.1.4	•	•	
		Pulse 5b	LD200x	3.4.2.1.5	•		
		Power Supply 1	VDS200x + AutoWave / Arb2714	3.4.2.3.1	•	•	
		Power Supply 2	VDS200x + AutoWave / Arb2714	3.4.2.3.1	•	•	
	24V I/O	Pulse 1	UCS200x, MPG200	3.4.2.2	•		
		Pulse 2	UCS200x, MPG200	3.4.2.2	•		
		Pulse 3a	UCS200x, EFT200	3.4.2.2	•		
		Pulse 3b	UCS200x, EFT200	3.4.2.2	•		
SAE J 1113 - 2 (1996-09)		Conducted Immunity (Closed Loop)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Conducted Immunity (Verify Source Impedance - Closed Loop)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Conducted Immunity (Substitution)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
SAE J 1113 - 2 (2004-07)		Conducted Immunity (Closed Loop)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Conducted Immunity (Verify Source Impedance - Closed Loop)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Conducted Immunity (Substitution)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
SAE J 1113 - 11 (1996-06)	12V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200 S15		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5	VDS200N, VDS200B S3		•		
	24V Line	Pulse 1c	UCS200x, MPG200 S15		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
SAE J 1113 - 11 (Rev.2, 2000-03)	12V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200 S15		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•	•	
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V Line	Pulse 1c	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•	•	
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		
SAE J 1113 - 11 (Rev.4, 2006-01)	12V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200 S15		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
	24V Line	Pulse 1c	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•	•	
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
SAE J 1113 - 11 (Rev.5, 2007-06)	12V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200 S15		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		
	24V Line	Pulse 1c	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5a	LD200x		•		
		Pulse 5c	LD200N Clip, LD200x + diode		•		
		Pulse 5b	LD200N, LD200 S2		•		
SAE J 1113 - 11 (Rev.6, 2012-01)	12V Line	Pulse 1a	UCS200x, MPG200		•		
		Pulse 1b	UCS200x, MPG200 S15		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		
	24V Line	Pulse 1c	UCS200x, MPG200		•		
		Pulse 2a	UCS200x, MPG200		•		
		Pulse 2b	VDS200x		•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
		Pulse 4	VDS200x		•		
		Pulse 5a	LD200x		•		
		Pulse 5b	LD200N Clip, LD200x + diode		•		
		Pulse 5c	LD200N, LD200 S2	4.9.1	•		
SAE J 1113 - 12 (1994-12)	12V I/O	Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
	24V I/O	Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
SAE J 1113 - 12 (2006-08)	12V I/O	CCC Pulse a	UCS200x, EFT200		•		
		CCC Pulse b	UCS200x, EFT200		•		
		DCC Pulse a	UCS200x, EFT200		•		
		DCC Pulse b	UCS200x, EFT200		•		
		DCC Pulse c	UCS200x, MPG200		•		
		DCC Pulse d	UCS200x, MPG200		•		
		ICC Pulse c	UCS200x, MPG200		•		
		ICC Pulse d	UCS200x, MPG200		•		
	24V I/O	CCC Pulse a	UCS200x, EFT200		•		
		CCC Pulse b	UCS200x, EFT200		•		
		DCC Pulse a	UCS200x, EFT200		•		
		DCC Pulse b	UCS200x, EFT200		•		
SAE J 1113 - 12 (1994-12)	12V I/O	Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
	24V I/O	Pulse 3a	UCS200x, EFT200		•		
		Pulse 3b	UCS200x, EFT200		•		
SAE J 1113 - 22 (2003-11)		Immunity to radiated magnetic fields (Radating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
SAE J 2139 (2005-09)	12V Line	Minimum Voltage	VDS200x	4.8.2.2	•		
		Jumper Starts	VDS200x	4.8.2.2	•		
		Reverse Polarity	VDS200x	4.8.2.2	•		
		Load Dump	LD200N, LD200 S2	4.9.1	•		
	24V Line	Minimum Voltage	VDS200x	4.8.2.3	•		
		Jumper Starts	VDS200x	4.8.2.3	•		
		Reverse Polarity	VDS200x	4.8.2.3	•		
		Load Dump	LD200N, LD200 S2	4.9.1	•		
	12V I/O	Ind. neg	UCS200x, MPG200 S15	4.9.1	•		
		Ind. pos	UCS200x, MPG200 S15	4.9.1	•		
		Mut. neg.	UCS200x, MPG200 S15	4.9.1	•		
		Mut. pos.	UCS200x, MPG200 S15	4.9.1	•		
	24V I/O	Ind. neg	UCS200x, MPG200 S15	4.9.1	•		
		Ind. pos	UCS200x, MPG200 S15	4.9.1	•		
		Mut. neg.	UCS200x, MPG200 S15	4.9.1	•		
		Mut. pos.	UCS200x, MPG200 S15	4.9.1	•		
SAE J 2628 (2007-07)		Test A (Voltage Dropout A)	PFS200x, VDS200x + AutoWave		•	•	
		Test B (Voltage Dropout B)	PFS200x, VDS200x + AutoWave		•	•	
		Test C (Voltage Dropout C)	PFS200x, VDS200x + AutoWave		•	•	
		Test D (Voltage Dip D)	PFS200x + RDS200, VDS200x + AutoWave		•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
SAE J 1455 for trucks (1994-07)	12V Line	Load Dump	LD200N, LD200 S2	4.9.1	•		
	24V Line	Load Dump	LD200N, LD200 S2	4.9.1	•		
	12V I/O	Ind. neg	UCS200x, MPG200 S15	4.9.1	•		
		Ind. pos	UCS200x, MPG200 S15	4.9.1	•		
		Mut. neg.	UCS200x, MPG200 S15	4.9.1	•		
		Mut. pos.	UCS200x, MPG200 S15	4.9.1	•		
	24V I/O	Ind. neg	UCS200x, MPG200 S15	4.9.1	•		
		Ind. pos	UCS200x, MPG200 S15	4.9.1	•		
		Mut. neg.	UCS200x, MPG200 S15	4.9.1	•		
		Mut. pos.	UCS200x, MPG200 S15	4.9.1	•		
Scania TB1400 (1995-01)	24V Line	Pulse 1a	UCS200x, MPG200	1.3	•		
		Pulse 3a	UCS200x, EFT200	1.3	•		
		Pulse 3b	UCS200x, EFT200	1.3	•		
		Pulse 4	VDS200x	1.3	•		
		Pulse 5	LD200x	1.3	•		
		Pulse 5b	LD200N Clip, LD200x + diode	1.3	•		
Scania TB1700 (2000-01)	24V Line	Pulse 1a	UCS200x, MPG200	1.3	•		
		Pulse 3a	UCS200x, EFT200	1.3	•		
		Pulse 3b	UCS200x, EFT200	1.3	•		
		Pulse 4	VDS200x	1.3	•	•	
		Pulse 5b	LD200N Clip, LD200x + diode	1.3	•		
Scania TB1901 (2007-04)	24V Line	Over voltage	VDS200x	6.1.4	•	•	
		Reversed operating voltage	VDS200x	6.1.5	•	•	
		Superimposed voltage ripple	VDS200x	6.1.10	•	•	
		Slow decrease and icrease of operating voltage	VDS200x	6.1.11	•	•	
		Supply voltage drops	VDS200x	6.1.12	•	•	
		Supply voltage interruption	PFS200x, AutoWave + PFM200Nx	6.1.13	•	•	
		Transient protection, test pulse 1	UCS200x, MPG200	6.1.14	•		
		Transient protection, test pulse 2a	UCS200N,UCS200M, MPG200	6.1.15	•		
		Transient protection, test pulse 2b	VDS200x	6.1.16	•	•	
		Transient protection, test pulse 3a	UCS200x, EFT200	6.1.17	•		
		Transient protection, test pulse 3b	UCS200x, EFT200	6.1.18	•		
		Transient protection, test pulse 4	VDS200x + AutoWave	6.1.19	•	•	
		Transient protection, test pulse 5b	LD200N Clip	6.1.20	•		
Smart DE1005B (2001-05)	12V Line	Pulse 1	UCS200x, MPG200	1.1.3	•		
		Pulse 2	UCS200x, MPG200	1.1.3	•		
		Pulse 3a	UCS200x, EFT200	1.1.3	•		
		Pulse 3b	UCS200x, EFT200	1.1.3	•		
		Pulse 4	VDS200x	1.1.3	•	•	
		Load Dump	LD200N Clip, LD200x + diode	1.1.3	•		
		Wobble	VDS200x	1.1.3	•	•	
	12V I/O	Pulse 1	UCS200x, MPG200	1.1.3	•		
		Pulse 2	UCS200x, MPG200	1.1.3	•		
		Pulse 3a	UCS200x, EFT200	1.1.3	•		
		Pulse 3b	UCS200x, EFT200	1.1.3	•		
Ssangyong SES E 053-12 Revision 4 (2013-08)	12V Line	8.1.1 Alternator Output Overvoltage Test	VDS200x + AutoWave	8.1.1		•	
		8.1.2 Jump Start Overvoltage	VDS200x + AutoWave	8.1.2		•	
		8.2 Superimposed Alternating Voltage Test	VDS200x + AutoWave	8.2		•	
		8.2 Superimposed Alternating Voltage Test	VDS200x + AutoWave	8.2		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		8.4 Reversed Voltage Test	VDS200x + AutoWave	8.4		•	
Ssangyong SES E 922 (2006-05)	12V Line	Test Pulse 1	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2a	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2b	VDS200x	7.2.8	•	•	
		Test Pulse 3a	UCS200x, EFT200	7.2.8	•		
		Test Pulse 3b	UCS200x, EFT200	7.2.8	•		
		Test Pulse 4	VDS200x	7.2.8	•	•	
		Test Pulse 5a	LD200x	7.2.8	•		
		Test Pulse 5b	LD200N Clip, LD200x + diode	7.2.8	•		
		Power Supply Voltage Fluctuation Test	VDS200x + AutoWave / Arb2714	7.2.9	•	•	
	24V Line	Test Pulse 1	UCS200x, MPG200	3.2.1	•		
		Test Pulse 2a	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2b	VDS200x	7.2.8	•	•	
		Test Pulse 3a	UCS200x, EFT200	7.2.8	•		
		Test Pulse 3b	UCS200x, EFT200	7.2.8	•		
		Test Pulse 4	VDS200x	7.2.8	•	•	
		Test Pulse 5a	LD200x	7.2.8	•		
		Test Pulse 5b	LD200N Clip, LD200x + diode	7.2.8	•		
		Power Supply Voltage Fluctuation Test	VDS200x + AutoWave / Arb2714	7.2.9	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	7.3.2	•		
		Pulse 3b	UCS200x, EFT200	7.3.2	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	7.3.2	•		
		Pulse 3b	UCS200x, EFT200	7.3.2	•		
Ssangyong SES E 922 (2008-05)	12V Line	Test Pulse 1	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2a	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2b	VDS200x	7.2.8	•	•	
		Test Pulse 3a	UCS200x, EFT200	7.2.8	•		
		Test Pulse 3b	UCS200x, EFT200	7.2.8	•		
		Test Pulse 4	VDS200x	7.2.8	•	•	
		Test Pulse 5a	LD200x	7.2.8	•		
		Test Pulse 5b	LD200N Clip, LD200x + diode	7.2.8	•		
		Power Supply Voltage Fluctuation Test	VDS200x + AutoWave / Arb2714	7.2.9	•	•	
	24V Line	Test Pulse 1	UCS200x, MPG200	3.2.1	•		
		Test Pulse 2a	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2b	VDS200x	7.2.8	•	•	
		Test Pulse 3a	UCS200x, EFT200	7.2.8	•		
		Test Pulse 3b	UCS200x, EFT200	7.2.8	•		
		Test Pulse 4	VDS200x	7.2.8	•	•	
		Test Pulse 5a	LD200x	7.2.8	•		
		Test Pulse 5b	LD200N Clip, LD200x + diode	7.2.8	•		
		Power Supply Voltage Fluctuation Test	VDS200x + AutoWave / Arb2714	7.2.9	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	7.3.2	•		
		Pulse 3b	UCS200x, EFT200	7.3.2	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	7.3.2	•		
		Pulse 3b	UCS200x, EFT200	7.3.2	•		
Ssangyong SES E 922 (2013-05)	12V Line	Test Pulse 1	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2a	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2b	VDS200x	7.2.8	•	•	
		Test Pulse 3a	UCS200x, EFT200	7.2.8	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Test Pulse 3b	UCS200x, EFT200	7.2.8	•		
		Test Pulse 4	VDS200x	7.2.8	•	•	
		Test Pulse 5a	LD200x	7.2.8	•		
		Test Pulse 5b	LD200N Clip, LD200x + diode	7.2.8	•		
		Power Supply Voltage Fluctuation Test	VDS200x + AutoWave / Arb2714	7.2.9	•	•	
	24V Line	Test Pulse 1	UCS200x, MPG200	3.2.1	•		
		Test Pulse 2a	UCS200x, MPG200	7.2.8	•		
		Test Pulse 2b	VDS200x	7.2.8	•	•	
		Test Pulse 3a	UCS200x, EFT200	7.2.8	•		
		Test Pulse 3b	UCS200x, EFT200	7.2.8	•		
		Test Pulse 4	VDS200x	7.2.8	•	•	
		Test Pulse 5a	LD200x	7.2.8	•		
		Test Pulse 5b	LD200N Clip, LD200x + diode	7.2.8	•		
		Power Supply Voltage Fluctuation Test	VDS200x + AutoWave / Arb2714	7.2.9	•	•	
	12V I/O	Pulse 3a	UCS200x, EFT200	7.3.2	•		
		Pulse 3b	UCS200x, EFT200	7.3.2	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	7.3.2	•		
		Pulse 3b	UCS200x, EFT200	7.3.2	•		
Tata Motors TST/TS/WI/257 (2008-07)	12V Line	Pulse 1	UCS200x, MPG200	3.2.1	•		
		Pulse 2	UCS200x, MPG200	3.2.2	•		
		Pulse 3a	UCS200x, EFT200	3.2.3	•		
		Pulse 3b	UCS200x, EFT200	3.2.4	•		
		Pulse 4	VDS200x	3.2.5	•	•	
		Pulse 4b	VDS200x	3.2.6	•	•	
		Pulse 5a	LD200x	3.2.7	•		
		Immunity to supply voltage ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	3.2.9		•	•
		Immunity to supply voltage ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	3.2.9		•	•
		Voltage Range Min	VDS200x	3.2.10	•	•	
		Voltage Range Max	VDS200x	3.2.10	•	•	
		Immunity Interruption	VDS200x + AutoWave	3.2.11	•	•	
		Reset Behaviour	VDS200x	3.2.12	•	•	
		Immunity Fluctuation	VDS200x	3.2.13	•	•	
		Overvoltage Fail	VDS200x	3.2.14	•	•	
		Overvoltage Jumpstart	VDS200x	3.2.14	•	•	
		Reverse Polarity	VDS200x	3.2.15	•	•	
		Slow Decrease	VDS200x	3.2.18	•	•	
		Slow Increase	VDS200x	3.2.18	•	•	
		Micro Interruptions	PFS200x, PFM200N100.1	3.2.22	•	•	
		Immunity to Radiated Magnetic Fields with AMP200N	AutoWave + AMP200Nx	3.4.3		•	
	24V Line	Pulse 1	UCS200x, MPG200	3.2.1	•		
		Pulse 2	UCS200x, MPG200	3.2.2	•		
		Pulse 3a	UCS200x, EFT200	3.2.3	•		
		Pulse 3b	UCS200x, EFT200	3.2.4	•		
		Pulse 4	VDS200x	3.2.5	•	•	
		Pulse 4b	VDS200x	3.2.6	•	•	
		Pulse 5a	LD200x	3.2.7	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Immunity to supply voltage ripple	AutoWave + AMP200Nx + CN200N1, CWS500N3	3.2.9		•	•
		Immunity to supply voltage ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1, CWS500N3	3.2.9		•	•
		Voltage Range Min	VDS200x	3.2.10	•	•	
		Voltage Range Max	VDS200x	3.2.10	•	•	
		Immunity Interruption	VDS200x + AutoWave	3.2.11	•	•	
		Reset Behaviour	VDS200x	3.2.12	•	•	
		Immunity Fluctuation	VDS200x	3.2.13	•	•	
		Overvoltage Fail	VDS200x	3.2.14	•	•	
		Overvoltage Jumpstart	VDS200x	3.2.14	•	•	
		Reverse Polarity	VDS200x	3.2.15	•	•	
		Slow Decrease	VDS200x	3.2.18	•	•	
		Slow Increase	VDS200x	3.2.18	•	•	
		Micro Interruptions	PFS200x, PFM200N100.1	3.2.22	•	•	
		Immunity to Radiated Magnetic Fields with AMP200N	AutoWave + AMP200Nx	3.4.3		•	
	12V I/O	CCC Fast a	UCS200x, EFT200	3.2.8	•		
		CCC Fast b	UCS200x, EFT200	3.2.8	•		
		DCC Fast a	UCS200x, EFT200	3.2.8	•		
		DCC Fast b	UCS200x, EFT200	3.2.8	•		
		DCC Slow neg.	UCS200x, MPG200	3.2.8	•		
		DCC Slow pos.	UCS200x, MPG200	3.2.8	•		
		~~ICC Slow neg.~~		~~3.2.8~~			
		ICC Slow pos.	UCS200x, MPG200	3.2.8	•		
	24V I/O	CCC Fast a	UCS200x, EFT200	3.2.8	•		
		CCC Fast b	UCS200x, EFT200	3.2.8	•		
		DCC Fast a	UCS200x, EFT200	3.2.8	•		
		DCC Fast b	UCS200x, EFT200	3.2.8	•		
		DCC Slow neg.	UCS200x, MPG200	3.2.8	•		
		DCC Slow pos.	UCS200x, MPG200	3.2.8	•		
		~~ICC Slow neg.~~		~~3.2.8~~			
		ICC Slow pos.	UCS200x, MPG200	3.2.8	•		
		Immunity to radiated magnetic fields	CWS500N3	3.4.3			•
Tenneco (Rev 4.3, 2012-02)	12V Line	3.3 Jump Start	VDS200x	3.3	•		
		3.4 Reverse Jump Start	VDS200x	3.4	•		
		3.6 Micro Power Cuts	PDS200N, PFS200	3.6	•		
		3.7 Cranking Voltage	VDS200x	3.7	•		
		3.9 Load Dump (Pulse 5a)	LD200x	3.9	•		
Tesla TS-0000048-03 (2013-05)		Magnetic Field Immunity - DC (LFM-Test)	AutoWave + AMP200N1.1	6		•	
		Magnetic Field Immunity (LFM-Test)	AutoWave + AMP200N1	6		•	
	12V Line	Pulse 1	UCS200x, MPG200	15	•		
		Pulse 1b	UCS200x	15	•		
		Pulse 2a	UCS200x, MPG200	15	•		
		Pulse 3a	UCS200x, EFT200	15	•		
		Pulse 3b	UCS200x, EFT200	15	•		
	12V I/O	CCC Pulse a	UCS200x, EFT200	16	•		
		CCC Pulse b	UCS200x, EFT200	16	•		
Tesla TS-0000048-06		Magnetic Field Immunity - DC (LFM-Test)	AutoWave + AMP200N1.1	6		•	
		Magnetic Field Immunity (LFM-Test)	AutoWave + AMP200N1	6		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
(2015-08)	12V Line	Pulse 1	UCS200x, MPG200	15	•		
		Pulse 1b	UCS200x	15	•		
		Pulse 2a	UCS200x, MPG200	15	•		
		Pulse 3a	UCS200x, EFT200	15	•		
		Pulse 3b	UCS200x, EFT200	15	•		
	12V I/O	CCC Pulse a	UCS200x, EFT200	16	•		
		CCC Pulse b	UCS200x, EFT200	16	•		
		ICC Pulse a	UCS200x, EFT200	16	•		
		ICC Pulse b	UCS200x, EFT200	16	•		
Tesla TS-0000243-06 (2015-08)	12V Line	Supply Voltage Range	AutoWave + VDS200x	2.1.1		•	
		Supply Voltage Ripple	AutoWave + AMP200Nx + CN200N1	2.3.1		•	
		Supply Voltage Ripple (Verify Source Impedance)	AutoWave + AMP200Nx + CN200N1	2.3.1		•	
		Supply Voltage Drop Out	PFS200x, AutoWave + PFM200Nx	2.4.1	•	•	
		Supply Voltage Dips	PFS200x + RDS200, VDS200 + AutoWave	2.4.2	•	•	
		Supply Voltage Ramp Up	VDS200x + AutoWave / Arb2714	2.4.3	•	•	
		Supply Voltage Ramp Down	VDS200x + AutoWave / Arb2714	2.4.4	•	•	
		Defective DC/DC Regulation (Supply Overvoltage)	VDS200x	2.5.1	•	•	
		Jump Start (Supply Overvoltage)	VDS200x	2.5.2	•	•	
		Load Dump (Supply Overvoltage)	VDS200N, VDS200B	2.5.3	•	•	
		Reverse Supply Voltage	VDS200x	2.5.4	•	•	
		Transient Overvoltage (Supply Overvoltage)	VDS200N, VDS200B	2.5.5	•	•	
Toyota TSC0506G (Rev. 0, 2014-01)	12V Line	(1-1) Battery terminal connection and disconnection	VDS200x + AutoWave			•	
		(1-2) Battery terminal connection and disconnection	VDS200x + AutoWave			•	
		(2) Battery terminal chattering	VDS200x + AutoWave			•	
		(3-1) Switching over ACC, IG1 and IG2	VDS200x + AutoWave			•	
		(3-2) Switching over ACC, IG1 and IG2	VDS200x + AutoWave			•	
		(3-3) Switching over ACC, IG1 and IG2	VDS200x + AutoWave			•	
		(4) Repeated turning ON/OFF of ACC and IG	VDS200x + AutoWave			•	
		(5) Instantaneous disconnection of ACC, IG and IG2	VDS200x + AutoWave			•	
		(6) Instantaneous disconnection of ACC and IG when switching ON IG	VDS200x + AutoWave			•	
		(7) OFF and ON of IG after switching on IG	VDS200x + AutoWave			•	
		(8-1) IG ON before\after main relay OFF	VDS200x + AutoWave			•	
		(8-2) IG ON before\after main relay OFF	VDS200x + AutoWave			•	
		(8-3) IG ON before\after main relay OFF	VDS200x + AutoWave			•	
		(9-1) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(9-2) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(9-3) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(10-1) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(10-2) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(10-3) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(11-1) Cranking 3 (at normal start)	VDS200x + AutoWave			•	
		(11-2) Cranking 3 (at normal start)	VDS200x + AutoWave			•	
		(11-3) Cranking 3 (at normal start)	VDS200x + AutoWave			•	
		(12) Cranking 4 (at relief of dead battery vehicle with HV, EV and FCV)	VDS200x + AutoWave			•	
		(13) Dead battery	VDS200x + AutoWave			•	
		(14) ON/OFF of ACC and IG when battery is dead	VDS200x + AutoWave			•	
	24V Line	(1-1) Battery terminal connection and disconnection	VDS200x + AutoWave			•	
		(1-2) Battery terminal connection and disconnection	VDS200x + AutoWave			•	
		(2) Battery terminal chattering	VDS200x + AutoWave			•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		(3-1) Switching over ACC, IG1 and IG2	VDS200x + AutoWave			•	
		(3-2) Switching over ACC, IG1 and IG2	VDS200x + AutoWave			•	
		(3-3) Switching over ACC, IG1 and IG2	VDS200x + AutoWave			•	
		(4) Repeated turning ON/OFF of ACC and IG	VDS200x + AutoWave			•	
		(5) Instantaneous disconnection of ACC, IG and IG2	VDS200x + AutoWave			•	
		(6) Instantaneous disconnection of ACC and IG when switching ON IG	VDS200x + AutoWave			•	
		(7) OFF and ON of IG after switching on IG	VDS200x + AutoWave			•	
		(8-1) IG ON before\after main relay OFF	VDS200x + AutoWave			•	
		(8-2) IG ON before\after main relay OFF	VDS200x + AutoWave			•	
		(8-3) IG ON before\after main relay OFF	VDS200x + AutoWave			•	
		(9-1) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(9-2) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(9-3) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(10-1) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(10-2) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(10-3) Cranking 1 (IG OFF -› ST ON when battery is dead)	VDS200x + AutoWave			•	
		(11-1) Cranking 3 (at normal start)	VDS200x + AutoWave			•	
		(11-2) Cranking 3 (at normal start)	VDS200x + AutoWave			•	
		(11-3) Cranking 3 (at normal start)	VDS200x + AutoWave			•	
		(12) Cranking 4 (at relief of dead battery vehicle with HV, EV and FCV)	VDS200x + AutoWave			•	
		(13) Dead battery	VDS200x + AutoWave			•	
		(14) ON/OFF of ACC and IG when battery is dead	VDS200x + AutoWave			•	
Toyota TSC3500G (1998-01)	12V Line	Pulse A - C	PDS200N, PFS200	6.22	•		
		Pulse D - J	PFS200x + RDS200	6.22	•		
		Pulse K, L	VDS200x	6.22	•		
		Pulse M, N	VDS200x	6.22	•		
		Pulse P	VDS200x	6.22	•		
		Pulse R, S	PDS200N, PFS200	6.22	•		
		Pulse T	VDS200x	6.22	•		
		Overvoltage	VDS200x	6.23	•		
		Reverse Power	VDS200x	6.24	•		
		Load Dump 1	LD200 S19	6.26	•		
		Load Dump 2	LD200 S19	6.26	•		
Toyota TSC3500G (Rev. 7,2001-07)	12V Line	(1) Line voltage timing errors (IG1, IG2)	VDS200x + AutoWave	6.22		•	
		(2) Line voltage timing errors I (ACC, IG, STA)	VDS200x + AutoWave	6.22		•	
		(3) Line voltage timing errors II (ACC, IG, STA)	VDS200x + AutoWave	6.22		•	
		(4) Momentary interuption (One Time)	VDS200x + AutoWave	6.22		•	
		(5) Momentary interuption (Repeated)	VDS200x + AutoWave	6.22		•	
		(6) Voltage drop	VDS200x + AutoWave	6.22		•	
		(7) Discharged battery (Pattern I)	VDS200x + AutoWave	6.22		•	
		(8) Discharged battery (Pattern II)	VDS200x + AutoWave	6.22		•	
		(9) Cranking	VDS200x + AutoWave	6.22		•	
		(10) Removal of battery with IG on and ACC on (Chattering)	VDS200x + AutoWave	6.22		•	
		(11) Removal of battery with IG on and ACC on (Line)	VDS200x + AutoWave	6.22		•	
		(12) Test condition K, L	VDS200x + AutoWave	6.22		•	
		(13) Test condition P	VDS200x + AutoWave	6.22		•	
		(14) Test condition T	VDS200x + AutoWave	6.22		•	
		Overvoltage	VDS200x	6.23	•	•	
		Reverse Power	VDS200x	6.24	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Field Decay	LD200 S18	6.25	•		
		Load Dump 1	LD200 S19	6.26	•		
		Load Dump 2	LD200 S19	6.26	•		
		Load Dump 3	LD200 S19	6.26	•		
Toyota TSC3500G (Rev. 8,2005-05)	12V Line	(A) Test condition K, L	VDS200x + AutoWave	6.22		•	
		(B) Test condition P	VDS200x + AutoWave	6.22		•	
		(C) Test condition T	VDS200x + AutoWave	6.22		•	
		Overvoltage	VDS200x	6.23	•	•	
		Reverse Power	VDS200x	6.24	•	•	
		Field Decay	LD200 S18	6.25	•		
		Load Dump 1	LD200 S19	6.26	•		
		Load Dump 2	LD200 S19	6.26	•		
		Load Dump 3	LD200 S19	6.26	•		
Toyota TSC3590G (Rev. 7, 2001-06)	12V Line	Load Dump 1	LD200 S19	9.13	•		
		Load Dump 2	LD200 S19	9.13	•		
		Load Dump 3	LD200 S19	9.13	•		
		Field Decay	LD200 S18	9.14	•		
		Voltage Fluctuation	VDS200N, VDS200B	9.16	•	•	
		Overvoltage	VDS200N, VDS200B	9.17	•	•	
		Reverse Connection	VDS200x	9.18	•	•	
		Pulse 1	PFS200x + RDS200, VDS200x + AutoWave	9.19	•	•	
		Pulse 2	PFS200x + RDS200, VDS200x + AutoWave	9.19	•	•	
		Pulse 3	VDS200x + AutoWave / Arb2714	9.19	•	•	
		Pulse 4	VDS200x	9.19	•	•	
		Pulse 5	VDS200x + AutoWave / Arb2714	9.19	•	•	
		Pulse 6	VDS200x + AutoWave / Arb2714	9.19	•	•	
		Pulse 7	PFS200x + RDS200, VDS200x + AutoWave	9.19	•	•	
		Pulse 8	PFS200x + RDS200, VDS200x + AutoWave	9.19	•	•	
		Pulse 9	VDS200x	9.19	•	•	
		Pulse 10	VDS200x	9.19	•	•	
		Pulse 11	VDS200x	9.19	•	•	
		Power On	VDS200x	9.24	•	•	
Toyota TSC 6203G (Rev. 6, 2001-01)	12V Line	Pulse 1	VDS200x + AutoWave	7.31		•	
		Pulse 2	VDS200x + AutoWave	7.31		•	
		Pulse 3	VDS200x + AutoWave	7.31		•	
		Pulse 4	PFS200x + RDS200, VDS200x + AutoWave	7.31	•	•	
		Pulse 5	PFS200x + RDS200, VDS200x + AutoWave	7.31	•	•	
		Pulse 6	VDS200x + AutoWave / Arb2714	7.31	•	•	
		Pulse 7	VDS200x	7.31	•	•	
		Pulse 8	VDS200x + AutoWave / Arb2714	7.31	•	•	
		Pulse 9	VDS200x + AutoWave / Arb2714	7.31	•	•	
		Pulse 10	PFS200x + RDS200, VDS200x + AutoWave	7.31	•	•	
		Pulse 11	VDS200x + AutoWave / Arb2714	7.31	•	•	
Toyota TSC7001G (Rev. 4, 2000-11)	12V Line	Field Decay	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•	•	
		Reversed Polarity	VDS200x	5.8	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
	24V Line	Field Decay	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•		
		Reversed Polarity	VDS200x	5.8	•		
Toyota TSC7001G (Rev. 5, 2004-07)	12V Line	Field Decay	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•	•	
		Reversed Polarity	VDS200x	5.8	•	•	
	24V Line	Field Decay	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•		
		Reversed Polarity	VDS200x	5.8	•		
Toyota TSC7001G (Rev. 6, 2007-01)	12V Line	Field Decay	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•	•	
		Reversed Polarity	VDS200x	5.8	•	•	
	24V Line	Field Decay	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•		
		Reversed Polarity	VDS200x	5.8	•		
Toyota TSC7001G (Rev. 7, 2009-01)	12V Line	Field Decay 1 (Square)	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•	•	
		Reversed Polarity	VDS200x	5.8	•	•	
	24V Line	Field Decay 1 (Square)	LD200 S18	5.2	•		
		Load Dump 1	LD200 S19	5.5	•		
		Load Dump 2	LD200 S19	5.5	•		
		Load Dump 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•		
		Reversed Polarity	VDS200x	5.8	•		
Toyota TSC7001G (Rev. 8, 2012-01)	12V Line	Power Supply Circuit Negative Surge Test 1 (Square)	LD200 S18	5.3	•		
		Power Supply Circuit Positive Surge Test 1	LD200 S19	5.6	•		
		Power Supply Circuit Positive Surge Test 2	LD200 S19	5.6	•		
		Power Supply Circuit Positive Surge Test 3	LD200 S19	5.6	•		
		Overvoltage	VDS200x	5.7	•	•	
		Reversed Polarity	VDS200x	5.9	•	•	
	24V Line	Power Supply Circuit Negative Surge Test 1 (Square)	LD200 S18	5.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Power Supply Circuit Positive Surge Test 1	LD200 S19	5.5	•		
		Power Supply Circuit Positive Surge Test 2	LD200 S19	5.5	•		
		Power Supply Circuit Positive Surge Test 3	LD200 S19	5.5	•		
		Overvoltage	VDS200x	5.6	•		
		Reversed Polarity	VDS200x	5.8	•		
Toyota TSC7021G (Rev. 0, 2002-07)	12V Line	(1) Battery Connection	VDS200x + AutoWave	5.2		•	
		(2) Battery Chattering	VDS200x + AutoWave	5.2		•	
		(3) Switch Repetitive	VDS200x + AutoWave	5.2		•	
		(4) IG Interruption 1	VDS200x + AutoWave	5.2		•	
		(5) IG Interruption 2	VDS200x + AutoWave	5.2		•	
		(6) Inter. by IG Switch.	VDS200x + AutoWave	5.2		•	
		(7) Main Relay OFF	VDS200x + AutoWave	5.2		•	
		(8) Ready State	VDS200x + AutoWave	5.2		•	
		(9) Battery Interruption	VDS200x + AutoWave	5.2		•	
		(10) Cranking 1	VDS200x + AutoWave	5.2		•	
		(11) Cranking 2	VDS200x + AutoWave	5.2		•	
		(12) Cranking 3	VDS200x + AutoWave	5.2		•	
		(13) Battery Flat	VDS200x + AutoWave	5.2		•	
		(14) Starting Engine	VDS200x + AutoWave	5.2		•	
		(15) IG Switching	VDS200x + AutoWave	5.2		•	
Toyota TSC7021G (Rev. 1, 2003-11)	12V Line	(1) Battery Connection	VDS200x + AutoWave	5.2		•	
		(2) Battery Chattering	VDS200x + AutoWave	5.2		•	
		(3) Switch Repetitive	VDS200x + AutoWave	5.2		•	
		(4) IG Interruption 1	VDS200x + AutoWave	5.2		•	
		(5) IG Interruption 2	VDS200x + AutoWave	5.2		•	
		(6) Inter. by IG Switch.	VDS200x + AutoWave	5.2		•	
		(7) Main Relay OFF	VDS200x + AutoWave	5.2		•	
		(8) Ready State	VDS200x + AutoWave	5.2		•	
		(9) Battery Interruption	VDS200x + AutoWave	5.2		•	
		(10) Cranking 1	VDS200x + AutoWave	5.2		•	
		(11) Cranking 2	VDS200x + AutoWave	5.2		•	
		(12) Cranking 3	VDS200x + AutoWave	5.2		•	
		(13) Battery Flat	VDS200x + AutoWave	5.2		•	
		(14) Starting Engine	VDS200x + AutoWave	5.2		•	
		(15) IG Switching	VDS200x + AutoWave	5.2		•	
		(16) IG 1 to 2 switching	VDS200x + AutoWave	5.2		•	
Toyota TSC7021G (Rev. 2, 2007-06)	12V Line	(1) Battery connection and disconnection I	VDS200x + AutoWave	5.2		•	
		(2) Battery terminal chattering	VDS200x + AutoWave	5.2		•	
		(3) Repeated turning ON/OFF	VDS200x + AutoWave	5.2		•	
		(4) Instantaneous disconnection I	VDS200x + AutoWave	5.2		•	
		(5) Instantaneous disconnection II	VDS200x + AutoWave	5.2		•	
		(6) ON-OFF operation	VDS200x + AutoWave	5.2		•	
		(7) IG before\after main relay OFF	VDS200x + AutoWave	5.2		•	
		(8) Cranking 1	VDS200x + AutoWave	5.2		•	
		(9) Cranking 2	VDS200x + AutoWave	5.2		•	
		(10) Cranking 3	VDS200x + AutoWave	5.2		•	
		(11) Cranking 4	VDS200x + AutoWave	5.2		•	
		(12) Dead battery	VDS200x + AutoWave	5.2		•	
		(13) Jump-start	VDS200x + AutoWave	5.2		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		(14) IG operation	VDS200x + AutoWave	5.2		•	
		(15) Switching over	VDS200x + AutoWave	5.2		•	
		(16) Battery connection and disconnection II	VDS200x + AutoWave	5.2		•	
		(17) Repeated turning ON/OFF	VDS200x + AutoWave	5.2		•	
		(18) IG operation before and after switching	VDS200x + AutoWave	5.2		•	
		(19) Cranking 1	VDS200x + AutoWave	5.2		•	
		(20) Cranking 2	VDS200x + AutoWave	5.2		•	
		(21) Cranking 3	VDS200x + AutoWave	5.2		•	
		(22) ST operation	VDS200x + AutoWave	5.2		•	
Toyota TSC7021G (Rev. 3, 2012-02)	12V Line	(1) Battery connection and disconnection	VDS200x + AutoWave	5.2		•	
		(2) Battery terminal chattering	VDS200x + AutoWave	5.2		•	
		(3) Repeated turning ON/OFF of IG switch connector	VDS200x + AutoWave	5.2		•	
		(4) Instantaneous disconnection of IG switch connector	VDS200x + AutoWave	5.2		•	
		(5) Instantaneous disconnection when switching ON	VDS200x + AutoWave	5.2		•	
		(6) ON-OFF operation of IG after switching ON	VDS200x + AutoWave	5.2		•	
		(7) Switching ON IG before and after switching OFF main relay	VDS200x + AutoWave	5.2		•	
		(8) Cranking 1	VDS200x + AutoWave	5.2		•	
		(9) Cranking 2	VDS200x + AutoWave	5.2		•	
		(10) Cranking 3	VDS200x + AutoWave	5.2		•	
		(11) Cranking 4	VDS200x + AutoWave	5.2		•	
		(12) Dead battery + battery instantaneaous disconnection	VDS200x + AutoWave	5.2		•	
		(13) Jump-start when battery voltage is dropped	VDS200x + AutoWave	5.2		•	
		(14) ST operation when battery voltage is dropped	VDS200x + AutoWave	5.2		•	
		(15) Switching over IG 1 and 2	VDS200x + AutoWave	5.2		•	
		(16) Battery connection and disconnection	VDS200x + AutoWave	5.2		•	
		(17) Repeated turning ON/OFF of IG switch	VDS200x + AutoWave	5.2		•	
		(18) ST operation before and after switching OFF main relay	VDS200x + AutoWave	5.2		•	
		(19) Cranking 1	VDS200x + AutoWave	5.2		•	
		(20) Cranking 2	VDS200x + AutoWave	5.2		•	
		(21) Cranking 3	VDS200x + AutoWave	5.2		•	
		(22) ST operation when battery voltage is dropped	VDS200x + AutoWave	5.2		•	
		(23) Repeated turning ON/OFF of IG switch	VDS200x + AutoWave	5.2		•	
		(24) IG operation before and after switching OFF main relay	VDS200x + AutoWave	5.2		•	
		(25) Cranking 1	VDS200x + AutoWave	5.2		•	
		(26) Cranking 2	VDS200x + AutoWave	5.2		•	
		(27) Cranking 3	VDS200x + AutoWave	5.2		•	
Toyota TSC 7034G (Rev. 0, 2005-02)	12V Line	Test 1	UCS200x, MPG200	5.2.4	•		
		Test 2-1	UCS200x, MPG200	5.2.4	•		
		Test 2-2	VDS200x	5.2.4	•	•	
		Test 3-1	UCS200x, EFT200	5.2.4	•		
		Test 3-2	UCS200x, EFT200	5.2.4	•		
		Test 4	VDS200x	5.2.4	•	•	
		Test 5-1	LD200x	5.2.4	•		
		Test 5-2	LD200N Clip, LD200x + diode	5.2.4	•		
	24V Line	Test 1	UCS200x, MPG200	5.2.4	•		
		Test 2-1	UCS200x, MPG200	5.2.4	•		
		Test 2-2	VDS200x	5.2.4	•		
		Test 3-1	UCS200x, EFT200	5.2.4	•		
		Test 3-2	UCS200x, EFT200	5.2.4	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Test 4	VDS200x	5.2.4	•		
		Test 5-1	LD200x	5.2.4	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	5.3.4	•		
		Pulse 3b	UCS200x, EFT200	5.3.4	•		
	24V I/O	Pulse 3a	UCS200x, EFT200	5.3.4	•		
		Pulse 3b	UCS200x, EFT200	5.3.4	•		
Toyota TSC7203G	12V Line	Overvoltage	VDS200x	7.22	•		
		Load Dump	LD200 S19	7.23	•		
		Field Decay	LD200 S18	7.25	•		
		Inverted Connection	VDS200x	7.28	•		
		Voltage Drop 1	VDS200x	7.29.1	•		
		Voltage Drop 2	VDS200x	7.29.2	•		
		Micro Drops	VDS200x	7.29.3	•		
	24V Line	Overvoltage	VDS200N, VDS200B	7.22	•		
		Load Dump	LD200 S19	7.23	•		
		Field Decay	LD200 S18	7.25	•		
		Inverted Connection	VDS200x	7.28	•		
		Voltage Drop 1	VDS200x	7.29.1	•		
		Voltage Drop 2	VDS200x	7.29.2	•		
		Micro Drops	PFS200x	7.29.3	•		
Toyota TSC7203G (Rev. 8, 2002-09)	12V Line	Overvoltage	VDS200x	7.22	•	•	
		Load Dump 1	LD200 S19	7.23	•		
		Load Dump 2	LD200 S19	7.23	•		
		Load Dump 3	LD200 S19	7.23	•		
		Field Decay	LD200 S18	7.25	•		
		Inverted Connection	VDS200x	7.28	•	•	
		(1) Power supply timing mismatch I	VDS200x + AutoWave	7.29		•	
		(2) Power supply timing mismatch II	VDS200x + AutoWave	7.29		•	
		(3) Power supply timing mismatch III	VDS200x + AutoWave	7.29		•	
		(4) Instantaneous interruption I	VDS200x + AutoWave	7.29		•	
		(5) Instantaneous interruption II	VDS200x + AutoWave	7.29		•	
		(6) Voltage drop	VDS200x + AutoWave	7.29		•	
		(7) Battery discharge I	VDS200x + AutoWave	7.29		•	
		(8) Battery discharge II	VDS200x + AutoWave	7.29		•	
		(9) Cranking	VDS200x + AutoWave	7.29		•	
		(10) Battery connection/disconnection I	VDS200x + AutoWave	7.29		•	
		(11) Battery connection/disconnection II	VDS200x + AutoWave	7.29		•	
Toyota TSC7203G (Rev. 9, 2003-12)	12V Line	Overvoltage	VDS200x	7.22	•	•	
		Load Dump 1	LD200 S19	7.23	•		
		Load Dump 2	LD200 S19	7.23	•		
		Load Dump 3	LD200 S19	7.23	•		
		Field Decay	LD200 S18	7.25	•		
		Inverted Connection	VDS200x	7.28	•	•	
		(1) Power supply timing mismatch I	VDS200x + AutoWave	7.29		•	
		(2) Power supply timing mismatch II	VDS200x + AutoWave	7.29		•	
		(3) Power supply timing mismatch III	VDS200x + AutoWave	7.29		•	
		(4) Battery connection/disconnection	VDS200x + AutoWave	7.29		•	
Toyota TSC7306G	12V Line	Field Decay	LD200 S18	4.12	•		
		Load Dump 1	LD200 S19	4.15	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
(Rev. 4, 2002-04)		Load Dump 2	LD200 S19	4.15	•		
		Load Dump 3	LD200 S19	4.15	•		
		Overvoltage	VDS200x	4.17	•	•	
		Reverse Polarity	VDS200x	4.18	•	•	
		(1) Instantaneous Power Failure I	VDS200x + AutoWave	4.22		•	
		(2) Instantaneous Power Failure II	VDS200x + AutoWave	4.22		•	
		(1) Power Fluctuation I	VDS200x + AutoWave	4.22		•	
		(2) Power Fluctuation II	VDS200x + AutoWave	4.22		•	
		(3) Power Fluctuation III	VDS200x + AutoWave	4.22		•	
		(4) Power Fluctuation IV	VDS200x + AutoWave	4.22		•	
		(5) Power Fluctuation V	VDS200x + AutoWave	4.22		•	
		(6) Power Fluctuation VI	VDS200x + AutoWave	4.22		•	
		(7) Power Fluctuation VII	VDS200x + AutoWave	4.22		•	
		(1) Disconnection of Power I	VDS200x + AutoWave	4.22		•	
		(2) Disconnection of Power II	VDS200x + AutoWave	4.22		•	
		(3) Disconnection of Power III	VDS200x + AutoWave	4.22		•	
		(4) Disconnection of Power IV	VDS200x + AutoWave	4.22		•	
		(5) Disconnection of Power V	VDS200x + AutoWave	4.22		•	
Toyota TSC7544G (Rev.2, 2006-11)	12V Line	(2) Normal cranking waveform	VDS200x + AutoWave	5.13		•	
		(3) Pulsed cranking waveform	VDS200x + AutoWave	5.13		•	
		(4) Cranking waveform	VDS200x + AutoWave	5.13		•	
		(5a) Chattering waveform	VDS200x + AutoWave	5.13		•	
		(5b) Waveform at the time	VDS200x + AutoWave	5.13		•	
		(6a) On-vehicle waveform	VDS200x + AutoWave	5.13		•	
		(6b) On-vehicle waveform	VDS200x + AutoWave	5.13		•	
		(7a) Waveform at time of instant-off	VDS200x + AutoWave	5.13		•	
		(7b) Waveform at time of load fluctuation	VDS200x + AutoWave	5.13		•	
		(8) Ignition switch short duration	VDS200x + AutoWave	5.13		•	
		(9) Operation durabillity test	VDS200x + AutoWave	5.13		•	
VDA 320 (2014-08)	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	4.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	4.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	4.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	4.4		•	
		E48-04 Recuperation	VDS200x	4.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	4.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	4.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	4.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	4.6		•	
		E48-06a Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	4.7		•	
		E48-06b Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	4.7		•	
		E48-06c Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	4.7		•	
		E48-07 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	4.9		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	4.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	4.10	•	•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200x	4.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200x	4.11		•	
		E48-13 Internal Voltage Strength	VDS200x	4.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	4.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	4.17		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	4.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	4.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	4.20		•	
VG 96916-5 (2013-08)	12V Line	Overvoltage	VDS200x	5.2.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	5.2.3	•	•	
		Slow decrease and increase	VDS200x + AutoWave	5.2.4	•	•	
		Momentary Drop	VDS200x	5.2.5.1	•	•	
		Reset Behaviour	VDS200x	5.2.5.2	•	•	
		Starting Profile	VDS200x	5.2.5.3	•	•	
		Pulse 5a	LD200x	5.2.5.4	•	•	
		Pulse 5b	LD200N Clip, LD200x + diode	5.2.5.4	•		
		Overvoltage	VDS200x	5.3.3			
		Superimposed Alternating Voltage	VDS200x + AutoWave	5.3.4		•	
		Slow decrease and increase	VDS200x + AutoWave	5.3.5		•	
		Momentary Drop	VDS200x	5.3.6.1		•	
		Immunity to ms-pulses	VDS200x + AutoWave	5.3.6.2		•	
	24V Line	Overvoltage	VDS200x	5.2.2	•	•	
		Superimposed Alternating Voltage	VDS200x + AutoWave	5.2.3	•	•	
		Slow decrease and increase	VDS200x + AutoWave	5.2.4	•	•	
		Momentary Drop	VDS200x	5.2.5.1	•	•	
		Reset Behaviour	VDS200x	5.2.5.2	•	•	
		Starting Profile	VDS200x	5.2.5.3	•	•	
		Pulse 5a	LD200x	5.2.5.4	•	•	
		Pulse 5b	LD200N Clip, LD200x + diode	5.2.5.4	•		
		Overvoltage	VDS200x	5.3.3			
		Superimposed Alternating Voltage	VDS200x + AutoWave	5.3.4		•	
		Slow decrease and increase	VDS200x + AutoWave	5.3.5		•	
		Momentary Drop	VDS200x	5.3.6.1		•	
		Immunity to ms-pulses	VDS200x + AutoWave	5.3.6.2		•	
Volvo 1579908 (1995-08)	12V Line	Pulse 1	UCS200x, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•		
		Pulse 5a	LD200x	5.1.5	•		
		Pulse 5b	LD200N, LD200M	5.1.5	•		
		Pulse 5c	LD200N, LD200M	5.1.5	•		
		Power Supply	VDS200x + AutoWave / Arb2714	5.3.1	•		
		Micro Cuts	PFS200x	5.3.2	•		
	24V Line	Pulse 1	MPG200 S5	5.1.1	•		
		Pulse 2	UCS200x, EFT200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•		
		Pulse 5a	LD200x	5.1.5	•		
		Pulse 5b	LD200x	5.1.5	•		
		Pulse 5c	LD200x	5.1.5	•		
		Pulse 5d	LD200N, LD200M	5.1.5	•		
		Power Supply	VDS200x + AutoWave / Arb2714	5.3.1	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Micro Cuts	PFS200x	5.3.2	•		
	I/O	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
Volvo 1579908 (Rev.3, 2002-12)	12V Line	Pulse 1	UCS200x, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5a	LD200N Clip, LD200M + diode	5.1.5	•		
		Pulse 5b	LD200x	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x	5.3.2	•		
		Overvoltage 1	VDS200x	5.3.3	•	•	
		Overvoltage 2	VDS200x	5.3.3	•	•	
	24V Line	Pulse 1	UCS200N, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb	5.1.4	•	•	
		Pulse 5c	LD200N Clip, LD200M + diode	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x	5.3.2	•		
		Overvoltage 1	VDS200N, VDS200B	5.3.3	•	•	
		Overvoltage 2	VDS200N, VDS200B	5.3.3	•	•	
	I/O	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
Volvo 1579908 (Rev.4, 2003-09)	12V Line	Pulse 1	UCS200x, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5a	LD200N Clip, LD200M + diode	5.1.5	•		
		Pulse 5b	LD200x	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x	5.3.2	•		
		Overvoltage 1	VDS200x	5.3.3	•	•	
		Overvoltage 2	VDS200x	5.3.3	•	•	
	24V Line	Pulse 1	UCS200N, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb	5.1.4	•	•	
		Pulse 5c	LD200N Clip, LD200M + diode	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x	5.3.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Overvoltage 1	VDS200N, VDS200B	5.3.3	•	•	
		Overvoltage 2	VDS200N, VDS200B	5.3.3	•	•	
	I/O	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
Volvo STD 515-0003 (Rev.2, 2006-05)	12V Line	Pulse 1	UCS200x, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5a	LD200N Clip, LD200M + diode	5.1.5	•		
		Pulse 5b	LD200x	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave / Arb2714	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave / Arb2714	5.3.1		•	
		Micro Cuts	PFS200x	5.3.2	•		
		Overvoltage 1	VDS200x	5.3.3	•		
		Overvoltage 2	VDS200x	5.3.3	•	•	
	24V Line	Pulse 1	UCS200N, MPG200 S15	5.1.1	•	•	
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5c	LD200N Clip, LD200M + diode	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave / Arb2714	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave / Arb2714	5.3.1		•	
		Micro Cuts	PFS200x	5.3.2	•		
		Overvoltage 1	VDS200N, VDS200B	5.3.3	•	•	
		Overvoltage 2	VDS200N, VDS200B	5.3.3	•	•	
	I/O	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
Volvo STD 515-0003 (Rev.3, 2008-03)	12V Line	Pulse 1	UCS200x, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5a	LD200N Clip, LD200M + diode	5.1.5	•		
		Pulse 5b	LD200x	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x, AutoWave + PFM200Nx	5.3.2	•	•	
		Overvoltage	VDS200x	5.3.3	•	•	
		Immunity to low-frequency magnetic fields	AutoWave + AMP200Nx, CWS500N3	9.1		•	•
	24V Line	Pulse 1	UCS200N, MPG200 S15	5.1.1	•	•	
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5c	LD200N Clip, LD200M + diode	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1	•	•	
		Power Supply 2	VDS200x + AutoWave	5.3.1	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Micro Cuts	PFS200x, AutoWave + PFM200Nx	5.3.2	•	•	
		Overvoltage	VDS200N, VDS200B	5.3.3	•	•	
		Immunity to low-frequency magnetic fields	AutoWave + AMP200Nx, CWS500N3	9.1		•	•
	12V I/O	Fast-Transient A	UCS200x, EFT200	5.2	•		
		Fast-Transient B	UCS200x, EFT200	5.2	•		
		Slow-Transient 1	UCS200x	5.2	•		
		Slow-Transient 2	UCS200x, MPG200	5.2	•		
	24V I/O	Fast-Transient A	UCS200x, EFT200	5.2	•		
		Fast-Transient B	UCS200x, EFT200	5.2	•		
		Slow-Transient 1	UCS200x	5.2	•		
		Slow-Transient 2	UCS200x, MPG200	5.2	•		
Volvo STD 515-0003 (Rev.4, 2009-10)	12V Line	Pulse 1	UCS200x, MPG200 S15	5.1.1	•		
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5a	LD200N Clip, LD200M + diode	5.1.5	•		
		Pulse 5b	LD200x	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x, AutoWave + PFM200Nx	5.3.2	•	•	
		Overvoltage	VDS200x	5.3.3	•	•	
		Immunity to low-frequency magnetic fields	AutoWave + AMP200Nx, CWS500N3	9.1		•	•
	24V Line	Pulse 1	UCS200N, MPG200 S15	5.1.1	•	•	
		Pulse 2	UCS200x, MPG200	5.1.2	•		
		Pulse 3a	UCS200x, EFT200	5.1.3	•		
		Pulse 3b	UCS200x, EFT200	5.1.3	•		
		Pulse 4	VDS200x + AutoWave / Arb2714	5.1.4	•	•	
		Pulse 5c	LD200N Clip, LD200M + diode	5.1.5	•		
		Power Supply 1	VDS200x + AutoWave	5.3.1		•	
		Power Supply 2	VDS200x + AutoWave	5.3.1		•	
		Micro Cuts	PFS200x, AutoWave + PFM200Nx	5.3.2	•	•	
		Overvoltage	VDS200N, VDS200B	5.3.3	•	•	
		Immunity to low-frequency magnetic fields	AutoWave + AMP200Nx, CWS500N3	9.1		•	•
	12V I/O	Fast-Transient A	UCS200x, EFT200	5.2	•		
		Fast-Transient B	UCS200x, EFT200	5.2	•		
		Slow-Transient 1	UCS200x	5.2	•		
		Slow-Transient 2	UCS200x, MPG200	5.2	•		
	24V I/O	Fast-Transient A	UCS200x, EFT200	5.2	•		
		Fast-Transient B	UCS200x, EFT200	5.2	•		
		Slow-Transient 1	UCS200x	5.2	•		
		Slow-Transient 2	UCS200x, MPG200	5.2	•		
Volvo 043878 (2014-02)	12V Line	Pulse 1	UCS200x, MPG200	2.2	•		
		Pulse 2a	UCS200x, MPG200	2.2	•		
		Pulse 2b	VDS200x	2.2	•		
		Pulse 3a	UCS200x, EFT200	2.2	•		
		Pulse 3b	UCS200x, EFT200	2.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	2.3	•		
		Pulse 3b	UCS200x, EFT200	2.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
Volvo 31850329 (2014-06)	12V Line	Pulse 1	UCS200x, MPG200	11.2.2	•		
		Pulse 2a	UCS200x, MPG200	11.2.2	•		
		Pulse 2b	VDS200x	11.2.2	•		
		Pulse 3a	UCS200x, EFT200	11.2.2	•		
		Pulse 3b	UCS200x, EFT200	11.2.2	•		
	12V I/O	Pulse 3a	UCS200x, EFT200	11.2.3	•		
		Pulse 3b	UCS200x, EFT200	11.2.3	•		
VW 80000 (2009-10)	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Overvoltage 1	VDS200x + AutoWave	4.2	•	•	
		E-02 Overvoltage 2	VDS200x + AutoWave	4.2	•	•	
		E-03 Undervoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down/Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Ramp Down / Fast Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset - Test Case 1	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 2	PFS200x + R-Box LV124, AutoWave + PFM200Nx + R-Box LV124	4.10	•	•	
		E-10 Short Reset - Test Case 3	PFS200x + BSM200N100 + R-Box LV124, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Interruption - Test Case 1 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Interruption - Test Case 3 - Contact 1 (Precompliance)	PFS200x (Precom)	4.13	•		
		E-13 Pin Interruption - Test Case 3 - Contact 2 (Precompliance)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reset Voltage 1	VDS200x	4.15	•	•	
		E-15 Reset Voltage 2	VDS200x	4.15	•	•	
VW 80000 (2013-06)	12V Line	E-01 Longtime Voltage	VDS200x	4.1	•	•	
		E-02 Transient Overvoltage	VDS200x + AutoWave	4.2	•	•	
		E-03 Transient Subvoltage	VDS200x + AutoWave	4.3	•	•	
		E-04 Jump Start	VDS200x	4.4	•	•	
		E-05 Load Dump	VDS200x	4.5	•	•	
		E-06 Superimposed Voltage	VDS200x + AutoWave	4.6	•	•	
		E-07 Slow Ramp Down and Ramp Up	VDS200x + AutoWave	4.7	•	•	
		E-08 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	4.8	•	•	
		E-09 Reset Behaviour	VDS200x + AutoWave	4.9	•	•	
		E-10 Short Reset	PFS200x + BSM200N100, AutoWave + PFM200Nx	4.10	•	•	
		E-11 Cold Cranking (Normal)	VDS200x	4.11	•	•	
		E-11 Cold Cranking (Severe)	VDS200x + AutoWave	4.11	•	•	
		E-11 Warm Cranking (Short)	VDS200x + AutoWave	4.11	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		E-11 Warm Cranking (Long)	VDS200x + AutoWave	4.11	•	•	
		E-12 Voltage Curve	VDS200x	4.12	•	•	
		E-13 Pin Break (Test Case 1)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-13 Pin Break (Test Case 2)	PFS200x (Precom), AutoWave + PFM200Nx	4.13	•	•	
		E-14 Connector Interruption	AutoWave + PFM200Nx	4.14		•	
		E-15 Reverse Voltage (Test Case 1)	VDS200Qx	4.15		•	
		E-15 Reverse Voltage (Test Case 2)	VDS200Qx	4.15		•	
VW TL 81000 (2014-04)		Magnetic Fields - Strength 2 - DC (Radiating Loop)	AutoWave + AMP200N1.1, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 2 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 3 - DC (Radiating Loop)	AutoWave + AMP200N1.1, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 3 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 4 - DC (Radiating Loop)	AutoWave + AMP200N1.1, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 4 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
		Magnetic Fields - Verify H-Field (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
	12V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
	24V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
	42V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 5b	VDS200N, VDS200B	3.4.4.1.3	•		
	48V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 5b	VDS200N, VDS200B	3.4.4.1.3	•		
	I/O	Pulse 3a	UCS200x, EFT200	3.4.5.4.1	•		
		Pulse 3b	UCS200x, EFT200	3.4.5.4.1	•		
		Pulse 1	UCS200x, MPG200	3.4.5.4.1	•		
		Pulse 2	UCS200x, MPG200	3.4.5.4.1	•		
VW TL 81000 (2013-02)		Magnetic Fields - Strength 2 - DC (Radiating Loop)	AutoWave + AMP200N1.1, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 2 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 3 - DC (Radiating Loop)	AutoWave + AMP200N1.1, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 3 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 4 - DC (Radiating Loop)	AutoWave + AMP200N1.1, CWS500N3	3.2.5		•	•
		Magnetic Fields - Strength 4 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
		Magnetic Fields - Verify H-Field (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3	3.2.5		•	•
	12V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
	24V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
	42V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 5b	VDS200N, VDS200B	3.4.4.1.3	•		
	48V Line	Pulse 3a	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 3b	UCS200x, EFT200	3.4.4.1.3	•		
		Pulse 6	UCS200x	3.4.4.1.3	•		
		Pulse 2	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 1	UCS200x, MPG200	3.4.4.1.3	•		
		Pulse 5b	VDS200N, VDS200B	3.4.4.1.3	•		
	I/O	Pulse 3a	UCS200x, EFT200	3.4.5.4.1	•		
		Pulse 3b	UCS200x, EFT200	3.4.5.4.1	•		
		Pulse 1	UCS200x, MPG200	3.4.5.4.1	•		
		Pulse 2	UCS200x, MPG200	3.4.5.4.1	•		
VW 82148 (2011-09)	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-07 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	3.9		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	3.10	•	•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200x	3.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200x	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
VW 82148	48V Line	E48-01a Long-term overvoltage (not voltage-limiting components)	VDS200x	3.1		•	
		E48-02 Transient overvoltage (load-dump) - Short Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
(2013-09)		E48-02 Transient overvoltage (load-dump) -Long Test (70V)	VDS200N100.2 / 100.6 + AutoWave	3.3		•	
		E48-03 Transient process in the lower operating range	VDS200x	3.4		•	
		E48-04 Recuperation	VDS200x	3.5		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-05 Superimposed Voltage - Part 1 - F1 (30kHz)	VDS200x	3.6		•	
		E48-05 Superimposed Voltage - Part 2 - F2 (200kHz)	VDS200x + AMP200Nx + CN200N1	3.6		•	
		E48-06 Slow Ramp Down and Ramp Up - Memory-free	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 1	VDS200x + AutoWave	3.7		•	
		E48-06 Slow Ramp Down and Ramp Up - With memory - Part 2	VDS200x + AutoWave	3.7		•	
		E48-07 Slow Ramp Down and Fast Ramp Up	VDS200x + AutoWave	3.9		•	
		E48-08 Reset Behavior	VDS200x + AutoWave	3.9		•	
		E48-09 Short Breaks	PFS200x + BS200, AutoWave + PFM200Nx	3.10	•	•	
		E48-10 Start Impulses - Cold start (Normal)	VDS200x	3.11		•	
		E48-10 Start Impulses - Cold start Severe)	VDS200x	3.11		•	
		E48-13 Internal Voltage Strength	VDS200x	3.14		•	
		E48-15 Operating in the area without functional limitation	VDS200x + AutoWave	3.16		•	
		E48-16 Operating in the upper area with functional limitation	VDS200x + AutoWave	3.17		•	
		E48-17 Operating in the lower area with functional limitation	VDS200x + AutoWave	3.18		•	
		E48-18 Over-Voltage Range	VDS200x + AutoWave	3.19		•	
		E48-19 Under-Voltage Range	VDS200x + AutoWave	3.20		•	
VW 801 01 (1999-06)	12V Line	Overvoltage L	VDS200x	5.1.2	•		
		Overvoltage K	VDS200x	5.1.3	•		
		Wobble	VDS200x	5.5	•		
		Dips	VDS200x	5.6	•		
VW 801 01 (2000-09)	12V Line	Overvoltage L	VDS200x	5.1.2	•		
		Overvoltage K	VDS200x	5.1.3	•		
		Wobble	VDS200x	5.5	•		
		Dips	VDS200x	5.6	•		
VW 801 01 (2001-04)	12V Line	Overvoltage L	VDS200x	5.1.2	•		
		Overvoltage K	VDS200x	5.1.3	•		
		Wobble	VDS200x	5.5	•		
		Dips	VDS200x	5.6	•		
VW 801 01 (2003-05)	12V Line	Reversed Upa	VDS200x	3.7	•		
		Reversed Upc	VDS200x	3.7	•		
		Overvoltage L	VDS200x	3.9	•		
		Overvotlage K	VDS200x	3.10	•		
		Wobble	VDS200x	3.11	•		
		Ramp Down	VDS200x	3.12	•		
		Ramp Up	VDS200x	3.12	•		
		Dips	VDS200x	3.13	•		
VW 801 01 (2004-07)	12V Line	Reversed Upa	VDS200x	3.7	•		
		Reversed Upc	VDS200x	3.7	•		
		Overvoltage L	VDS200x	3.9	•		
		Overvotlage K	VDS200x	3.10	•		
		Wobble	VDS200x	3.11	•		
		Ramp Down	VDS200x	3.12	•		
		Ramp Up	VDS200x	3.12	•		
		Dips	VDS200x	3.13	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
VW 801 01 (2005-06)	12V Line	Dip Kl.15,30 - 1	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 2	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 3	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 4	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 5	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 6	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 7	VDS200x	3,2	•	•	
		Dip Kl.15,30 - 8	VDS200x	3,2	•	•	
		Dip Kl.75 - 1	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 2	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 3	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 4	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 5	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 6	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 7	VDS200x + AutoWave	3,2	•	•	
		Dip Kl.75 - 8	VDS200x + AutoWave	3,2	•	•	
		Reversed Upa	VDS200x	3.8	•	•	
		Reversed Upc	VDS200x	3.8	•	•	
		Overvoltage L	VDS200x	3.10	•	•	
		Overvotlage K	VDS200x	3.11	•	•	
		Wobble	VDS200x	3.12	•	•	
		Ramp Down	VDS200x	3.13	•	•	
		Ramp Up	VDS200x	3.13	•	•	
		Dips	VDS200x	3.14	•	•	
VW 801 01 (2006-10)	12V Line	Dip 1	VDS200x	3,2	•	•	
		Dip 2	VDS200x	3,2	•	•	
		Dip 3	VDS200x	3,2	•	•	
		Dip 4	VDS200x	3,2	•	•	
		Dip 5	VDS200x	3,2	•	•	
		Dip 6	VDS200x	3,2	•	•	
		Dip 7	VDS200x	3,2	•	•	
		Dip 8	VDS200x	3,2	•	•	
		Reversed Upa	VDS200x	3.8	•	•	
		Reversed Upc	VDS200x	3.8	•	•	
		Overvoltage L	VDS200x	3.10	•	•	
		Overvotlage K	VDS200x	3.11	•	•	
		Wobble	VDS200x	3.12	•	•	
		Ramp Down	VDS200x	3.13	•	•	
		Ramp Up	VDS200x	3.13	•	•	
		Dips	VDS200x	3.14	•	•	
VW 801 01 (2009-03)	12V Line	Dip 1	VDS200x	3,2	•	•	
		Dip 2	VDS200x	3,2	•	•	
		Dip 3	VDS200x	3,2	•	•	
		Dip 4	VDS200x	3,2	•	•	
		Dip 5	VDS200x	3,2	•	•	
		Dip 6	VDS200x	3,2	•	•	
		Dip 7	VDS200x	3,2	•	•	
		Dip 8	VDS200x	3,2	•	•	
		Dip 9	VDS200x + AutoWave	3,2	•	•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Dip 10	VDS200x + AutoWave	3,2	•	•	
		Reversed Upa	VDS200x	3.8	•	•	
		Reversed Upc	VDS200x	3.8	•	•	
		Overvoltage L	VDS200x	3.10	•	•	
		Overvotlage K	VDS200x	3.11	•	•	
		Wobble	VDS200x + AutoWave	3.12	•	•	
		Wobble (KL29)	VDS200x + AutoWave	3.12	•	•	
		Ramp Down	VDS200x	3.13	•	•	
		Ramp Up	VDS200x	3.13	•	•	
		Dips	VDS200x	3.14	•	•	
VW TL 820 66 (1997-05)	12V Line	Pulse 4	VDS200x	4.1.1	•		
		Pulse 4b	VDS200x	4.1.1	•		
		Pulse 3a	UCS200x, EFT200	4.1.1	•		
		Pulse 3b	UCS200x, EFT200	4.1.1	•		
		Pulse 1b	UCS200x, MPG200	4.1.1	•		
		Pulse 2	UCS200x, MPG200	4.1.1	•		
		Pulse 1	UCS200x, MPG200	4.1.1	•		
	24V Line	Pulse 4	VDS200x	4.1.2	•		
		Pulse 3a	UCS200x, EFT200	4.1.2	•		
		Pulse 3b	UCS200x, EFT200	4.1.2	•		
		Pulse 1b	UCS200x, MPG200	4.1.2	•		
		Pulse 2	UCS200x, MPG200	4.1.2	•		
		Pulse 1	UCS200x, MPG200	4.1.2	•		
VW TL 820 66 (2001-09)	12V Line	Pulse 4	VDS200x	5.2	•		
		Pulse 4b	VDS200x	5.2	•		
		Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 1b	UCS200x, MPG200	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
	24V Line	Pulse 4	VDS200x	5.2	•		
		Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 1b	UCS200x, MPG200	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
	42V Line	Pulse 4	VDS200x	5.2	•		
		Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 1b	UCS200x, MPG200	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
		Pulse 5b	VDS200N, VDS200B	5.2	•		
VW TL 820 66 (2004-10)	12V Line	Pulse 4	VDS200x	5.2	•	•	
		Pulse 4b	VDS200x	5.2	•	•	
		Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 6	UCS200x	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Pulse 1	UCS200x, MPG200	5.2	•		
	24V Line	Pulse 4	VDS200x	5.2	•	•	
		Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 6	UCS200x	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
	42V Line	Pulse 4	VDS200x	5.2	•	•	
		Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 6	UCS200x	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
		Pulse 5b	VDS200N, VDS200B	5.2	•	•	
VW TL 820 66 (2006-10)	12V Line	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 6	UCS200x	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
	24V Line	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 6	UCS200x	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
	42V Line	Pulse 3a	UCS200x, EFT200	5.2	•		
		Pulse 3b	UCS200x, EFT200	5.2	•		
		Pulse 6	UCS200x	5.2	•		
		Pulse 2	UCS200x, MPG200	5.2	•		
		Pulse 1	UCS200x, MPG200	5.2	•		
		Pulse 5b	VDS200N, VDS200B	5.2	•		
VW TL 823 66 (2002-03)	I/O	Pulse 1	UCS200x, MPG200	6.4.1	•		
		Pulse 2	UCS200x, MPG200	6.4.1	•		
		Pulse 3a	UCS200x, EFT200	6.4.1	•		
		Pulse 3b	UCS200x, EFT200	6.4.1	•		
		Pulse 1	UCS200x, MPG200	6.4.2	•		
		Pulse 2	UCS200x, MPG200	6.4.2	•		
VW TL 823 66 (2013-02)	I/O	Pulse 3a	UCS200x, EFT200	5.4.1	•		
		Pulse 3b	UCS200x, EFT200	5.4.1	•		
		Pulse 1	UCS200x, MPG200	5.4.2	•		
		Pulse 2	UCS200x, MPG200	5.4.2	•		
VW TL 823 66 (2008-02)	I/O	Pulse 3a	UCS200x, EFT200	5.4.1	•		
		Pulse 3b	UCS200x, EFT200	5.4.1	•		
		Pulse 1	UCS200x, MPG200	5.4.2	•		
		Pulse 2	UCS200x, MPG200	5.4.2	•		
VW TL 825 66 (2006-02)		Immunity to Magnetic Fields - Strength 1 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		Immunity to Magnetic Fields - Strength 2 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		Immunity to Magnetic Fields - Strength 3 (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•
		Immunity to Magnetic Fields - Strength 4 (Radiating Loop)	AutoWave + AMP200N1, CWS500N3			•	•
		Immunity to Magnetic Fields - Verify H-Field (Radiating Loop)	AutoWave + AMP200Nx, CWS500N3			•	•

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
VW TL 825 66 (2011-05)		Immunity to Magnetic Fields - Strength 2 - DC (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Strength 2 (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Strength 3 - DC (Radiating Loop)	AutoWave + AMP200N1			•	
		Immunity to Magnetic Fields - Strength 3 (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Strength 4 - DC (Radiating Loop)	AutoWave + AMP200N1			•	
		Immunity to Magnetic Fields - Strength 4 (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Verify H-Field (Radiating Loop)	AutoWave + AMP200Nx			•	
VW TL 825 66 (2013-05)		Immunity to Magnetic Fields - Strength 2 - DC (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Strength 2 (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Strength 3 - DC (Radiating Loop)	AutoWave + AMP200N1			•	
		Immunity to Magnetic Fields - Strength 3 (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Strength 4 - DC (Radiating Loop)	AutoWave + AMP200N1			•	
		Immunity to Magnetic Fields - Strength 4 (Radiating Loop)	AutoWave + AMP200Nx			•	
		Immunity to Magnetic Fields - Verify H-Field (Radiating Loop)	AutoWave + AMP200Nx			•	
Yamaha ETS-Y-11-07 (Part) (2005-08)	12V Line	Starting-time source voltage test	VDS200N / VDS200	8.1	•		
		Surge voltage tests - Impulse type a	UCS200x	8.2.1	•		
		Surge voltage tests - Impulse type b	UCS200x	8.2.2	•		
DO RCTA DO-160E RCTA DO-160E (Chapter 16)	14V Line	Voltage (Average Value dc)	VDS200x + AutoWave			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Momentary Power Interruptions (dc)	VDS200x + AutoWave			•	
		Normal Surge Voltage (dc)	VDS200x + AutoWave			•	
		Voltage Steady State (dc)	VDS200x + AutoWave			•	
		Low Voltage Conditions (dc)	VDS200x + AutoWave			•	
		Momentary Undervoltage Operation (dc)	VDS200x + AutoWave			•	
		Abnormal Surge Voltage (dc)	VDS200x + AutoWave			•	
	28V Line	Voltage (Average Value dc)	VDS200x + AutoWave			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Momentary Power Interruptions (dc)	VDS200x + AutoWave			•	
		Normal Surge Voltage (dc)	VDS200x + AutoWave			•	
		Engine Starting Under Voltage (dc)	VDS200x + AutoWave			•	
		Voltage Steady State (dc)	VDS200x + AutoWave			•	
		Low Voltage Conditions (dc)	VDS200x + AutoWave			•	
		Momentary Undervoltage Operation (dc)	VDS200x + AutoWave			•	
		Abnormal Surge Voltage (dc)	VDS200x + AutoWave			•	
DO RCTA DO-160E (Chapter 18)	14V Line	Audio Frequency Conducted Susceptibility - Power Inputs	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
	28V Line	Audio Frequency Conducted Susceptibility - Power Inputs	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
DO RCTA DO-160F (Chapter 16)	14V Line	Voltage (Average Value dc)	VDS200x + AutoWave			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Momentary Power Interruptions (dc)	VDS200x + AutoWave			•	
		Normal Surge Voltage (dc)	VDS200x + AutoWave			•	
		Voltage Steady State (dc)	VDS200x + AutoWave			•	
		Low Voltage Conditions (dc)	VDS200x + AutoWave			•	
		Momentary Undervoltage Operation (dc)	VDS200x + AutoWave			•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Abnormal Surge Voltage (dc)	VDS200x + AutoWave			•	
	28V Line	Voltage (Average Value dc)	VDS200x + AutoWave			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Momentary Power Interruptions (dc)	VDS200x + AutoWave			•	
		Normal Surge Voltage (dc)	VDS200x + AutoWave			•	
		Engine Starting Under Voltage (dc)	VDS200x + AutoWave			•	
		Voltage Steady State (dc)	VDS200x + AutoWave			•	
		Low Voltage Conditions (dc)	VDS200x + AutoWave			•	
		Momentary Untervoltage Operation (dc)	VDS200x + AutoWave			•	
		Abnormal Surge Voltage (dc)	VDS200x + AutoWave			•	
	270V Line	Voltage (Average Value dc)	AutoWave + externe Quelle			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Momentary Power Interruptions (dc)	AutoWave + externe Quelle			•	
		Normal Surge Voltage (dc)	AutoWave + externe Quelle			•	
		Voltage Steady State (dc)	AutoWave + externe Quelle			•	
		Momentary Untervoltage Operation (dc)	AutoWave + externe Quelle			•	
		Abnormal Surge Voltage (dc)	AutoWave + externe Quelle			•	
DO RCTA DO-160F (Chapter 18)	14V Line	Audio Frequency Conducted Susceptibility - Power Inputs	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
	28V Line	Audio Frequency Conducted Susceptibility - Power Inputs	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
	270V Line	Audio Frequency Cond. Susc. - Power Inputs (Differential Mode)	AutoWave + AMP200Nx + CN200N1, CWS500N3			•	•
		Audio Frequency Cond. Susc. - Power Inputs (Common Mode)					
DO RCTA DO-160G (Chapter 16)	14V Line	Voltage (Average Value dc)	VDS200x + AutoWave			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1			•	
		Momentary Power Interruptions (dc)	VDS200x + AutoWave			•	
		Normal Surge Voltage (dc)	VDS200x + AutoWave			•	
		Voltage Steady State (dc)	VDS200x + AutoWave			•	
		Low Voltage Conditions (dc)	VDS200x + AutoWave			•	
		Momentary Untervoltage Operation (dc)	VDS200x + AutoWave			•	
		Abnormal Surge Voltage (dc)	VDS200x + AutoWave			•	
	28V Line	Voltage (Average Value dc)	VDS200x + AutoWave			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1			•	
		Momentary Power Interruptions (dc)	VDS200x + AutoWave			•	
		Normal Surge Voltage (dc)	VDS200x + AutoWave			•	
		Engine Starting Under Voltage (dc)	VDS200x + AutoWave			•	
		Voltage Steady State (dc)	VDS200x + AutoWave			•	
		Low Voltage Conditions (dc)	VDS200x + AutoWave			•	
		Momentary Untervoltage Operation (dc)	VDS200x + AutoWave			•	
		Abnormal Surge Voltage (dc)	VDS200x + AutoWave			•	
	270V Line	Voltage (Average Value dc)	AutoWave + externe Quelle			•	
		Ripple Voltage (dc)	AutoWave + AMP200Nx + CN200N1			•	
		Momentary Power Interruptions (dc)	AutoWave + externe Quelle			•	
		Normal Surge Voltage (dc)	AutoWave + externe Quelle			•	
		Voltage Steady State (dc)	AutoWave + externe Quelle			•	
		Momentary Untervoltage Operation (dc)	AutoWave + externe Quelle			•	

Standard	Application	SW Pulse Name	Device	Paragr.	Iso	Auto	ICD
		Abnormal Surge Voltage (dc)	AutoWave + externe Quelle			•	
DO RCTA DO-160G (Chapter 18)	14V Line	Audio Frequency Conducted Susceptibility - Power Inputs	AutoWave + AMP200N1 + CN200N1			•	
	28V Line	Audio Frequency Conducted Susceptibility - Power Inputs	AutoWave + AMP200N1 + CN200N1			•	
	270V Line	Audio Frequency Cond. Susc. - Power Inputs (Differential Mode)	AutoWave + AMP200N1 + CN200N1			•	
		Audio Frequency Cond. Susc. - Power Inputs (Common Mode)					
Defance Standard 61-5 Part 6	12V Line	B.8 DIT04.B Cranking	VDS200x + AutoWave		•	•	
		B.10 DIT06.B Under and Over-Voltage	VDS200x + AutoWave		•	•	
		DIT07.B Short Transients Pulse A	UCS200x, EFT200		•		
		DIT07.B Short Transients Pulse B	UCS200x, EFT200		•		
		DIT08.B Load Dump	LD200x		•		
	24V Line	B.8 DIT04.B Cranking	VDS200x + AutoWave		•	•	
		B.10 DIT06.B Under and Over-Voltage	VDS200x + AutoWave		•	•	
		DIT07.B Short Transients Pulse A	UCS200x, EFT200		•		
		DIT07.B Short Transients Pulse B	UCS200x, EFT200		•		
		DIT08.B Load Dump	LD200x		•		
Defance Standard 59-411 Part 3 (Issue 1, Amendment 1)		DRS01-A Radiated Susceptibility Magnetic (H)	CWS500N3				•
MIL-STD-461E (1999-08)		CS101, conducted susceptibility, power leads	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.7		•	•
		CS109, conducted susceptibility, structure current	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.12		•	•
		CS114, conducted susceptibility, bulk cable injection	CWS500N2	5.13			•
		RS101, radiated susceptibility, magnetic field	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.14		•	•
MIL-STD-461F (2007-12)		CS101, conducted susceptibility, power leads	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.7		•	•
		CS109, conducted susceptibility, structure current	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.12		•	•
		CS114, conducted susceptibility, bulk cable injection	CWS500N2	5.13			•
		RS101, radiated susceptibility, magnetic field	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.14		•	•
MIL-STD-461G (2015-12)		CS101, conducted susceptibility, power leads	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.7		•	
		CS109, conducted susceptibility, structure current	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.12		•	
		CS114, conducted susceptibility, bulk cable injection	CWS500N2	5.13			
		RS101, radiated susceptibility, magnetic field	AutoWave + AMP200N1 + CN200N1, CWS500N3	5.14		•	