All values measured to ground unless otherwise noted			
Conn./Plug/Pin	**Pin Information**	**Test Value**	**Comments**
N32/1			Note 1
1.1	Pin not used		
1.2	Circuit 30 fused power input	12 VDC at all times	Feed from F4f9 (up to 05/99) or F4f13
1.3	Circuit 30 fused power input	12 VDC at all times	Feed from F4f8
1.4,5	Pins not used		
1.6	CAN Class B bus (low side). Mid speed data transfer bus input and output, exchanges data with other ECMs	No reliable test. Check continuity of wiring. Approx. 5 VAC when data is on bus	
1.7	CAN Class B bus (high side)		
1.8-10	Pins not used		
1.11	Main ground to W19	Approx. 0 Ohm to ground	
1.12	Pin not used		
4.1 4.2	Rear seat adjustment (up/down) motor voltage output	12 VDC across pins 4.1 and 4.2 while seat moves up/down, polarity reversable	
4.3,4	Pins not used		
4.5 4.6	Rear seat adjustment (up/down) Hall sensor low side high side	7-12 VDC, voltage varies while adjusting through up/down range	
5.1 5.2	Seat adjustment (fore/aft) motor voltage output	12 VDC across pins 5.1 and 5.2 while seat moves fore/aft, polarity reversable	
5.3,4	Pins not used		
5.5 5.6	Seat adjustment (fore/aft) Hall sensor low side high side	7-12 VDC, voltage varies while adjusting through fore/aft range	
6.1 6.2	Front seat adjustment (up/down) motor voltage output	12 VDC across pins 6.1 and 6.2 while seat moves up/down, polarity reversable	
6.3,4	Pins not used		
6.5 6.6	Front seat adjustment (up/down) Hall sensor low side high side	7-12 VDC, voltage varies while adjusting through up/down range	
7.1	Head restraint adjustment motor voltage output	12 VDC across pins 7.1 and 7.4 while head restraint moves up/down, polarity reversable	
7.2	Backrest adjustment motor voltage output	12 VDC across pins 7.2 and 7.4 while backrest moves fore/aft, polarity reversable	
7.3	Head restraint Hall sensor high side	7-12 VDC to pin 7.5, voltage varies while adjusting through up/down range	
7.4	Backrest and head restraint adjustment motor voltage output	See pins 7.1 and 7.2	
7.5	Backrest and head restraint Hall sensor low side	See pins 7.3 and 7.6	
7.6	Backrest Hall sensor high side	7-12 VDC to pin 7.5, voltage varies while adjusting through fore/aft range	
N32/2			
1.1	Pin not used		
1.2	Circuit 30 fused power input	12 VDC at all times	Feed from F4f13 (up to 05/99) or F4f9
1.3	Circuit 30 fused power input	12 VDC at all times	Feed from F4f14
1.4,5	Pins not used		
1.6	CAN Class B bus (low side). Mid speed data transfer bus input and output,	No reliable test. Check continuity of wiring. Approx. 5 VAC when data is on bus	

	exchanges data with other ECMs		
1.7	CAN Class B bus (high side)		
1.8-10	Pins not used		
1.11	Main ground to W19	Approx. 0 Ohm to ground	
1.12	Pin not used		
4.1 4.2	Rear seat adjustment (up/down) motor voltage output	12 VDC across pins 4.1 and 4.2 while seat moves up/down, polarity reversable	
4.3,4	Pins not used		
4.5 4.6	Rear seat adjustment (up/down) Hall sensor low side high side	7-12 VDC, voltage varies while adjusting through up/down range	
5.1 5.2	Seat adjustment (fore/aft) motor voltage output	12 VDC across pins 5.1 and 5.2 while seat moves fore/aft, polarity reversable	
5.3,4	Pins not used		
5.5 5.6	Seat adjustment (fore/aft) Hall sensor low side high side	7-12 VDC, voltage varies while adjusting through fore/aft range	
6.1 6.2	Front seat adjustment (up/down) motor voltage output	12 VDC across pins 6.1 and 6.2 while seat moves up/down, polarity reversable	
6.3,4	Pins not used		
6.5 6.6	Front seat adjustment (up/down) Hall sensor low side high side	7-12 VDC, voltage varies while adjusting through up/down range	
7.1	Head restraint adjustment motor voltage output	12 VDC across pins 7.1 and 7.4 while head restraint moves up/down, polarity reversable	
7.2	Backrest adjustment motor voltage output	12 VDC across pins 7.2 and 7.4 while backrest moves fore/aft, polarity reversable	
7.3	Head restraint Hall sensor high side	7-12 VDC to pin 7.5, voltage varies while adjusting through up/down range	
7.4	Backrest and head restraint adjustment motor voltage output	See pins 7.1 and 7.2	
7.5	Backrest and head restraint Hall sensor low side	See pins 7.3 and 7.6	
7.6	Backrest Hall sensor high side	7-12 VDC to pin 7.5, voltage varies while adjusting through fore/aft range	
N69/1			
S1.1	Circuit 30 main power input	12 VDC at all times	Feed from F1f16
S1.3	Main ground to W18	Approx. 0 Ohm to ground	
S3.9	CAN Class B bus (low side). Mid speed data transfer bus input and output, exchanges data with other ECMs	No reliable test. Check continuity of wiring. Approx. 5 VAC when data is on bus	
S3.18	CAN Class B bus (high side)	See pin S3.9	
N69/2			
S1.1	Circuit 30 main power input	12 VDC at all times	Feed from F4f1
S1.3	Main ground to W19	Approx. 0 Ohm to ground	
S3.9	CAN Class B bus (low side). Mid speed data transfer bus input and output, exchanges data with other ECMs	No reliable test. Check continuity of wiring. Approx. 5 VAC when data is on bus	
S3.18	CAN Class B bus (high side)	See pin S3.9	
S5.1	Circuit 58d output, "Dimmed Instrument Illumination" voltage	Varies from 0.5-12 VDC, depending on setting of dimming value and ambient brightness	
S5.3	Left ESA switch group signal input (seat fore/aft, rear seat up/down, memory 1)	Measure to pin 1.12: S91s1 to fore 43 Ohm, aft 16 Ohm	Note 2

		S91s2 to up 169 Ohm, down 75 Ohm S91s6 memory 1 pressed 330 Ohm	
S5.5	Left ESA switch group ground signal output	Approx. 0 Ohm to ground	
S5.6	Left ESA switch group signal input (backrest fore/aft, memory 3, memory store)	Measure to pin 1.12: S91s5 to fore 43 Ohm, aft 16 Ohm S91s8 memory 3 169 Ohm S91s9 memory store pressed 330 Ohm	Note 2
S5.7	Left ESA switch group signal input (front seat up/down, head restraint up/down, memory 2)	Measure to pin 1.12: S91s3 to up 43 Ohm, down 16 Ohm S91s4 to up 169 Ohm, down 75 Ohm S91s7 memory 2 pressed 330 Ohm	Note 2
Note 1	Due to various functions N32/1, N69/1 and N69/2 are split up in several system diagrams, therefore only the relating pins are listed. Pins not shown are unrelated to this system		
Note 2	Adjustments can also be stored in memory together with steerig column, head restraint and mirror positions. See Owner's Manual		