

**2004 FMVSS 208 Upgrade
Instrumentation Data Channel Assignments
Driver A.T.D. Serial Number 159
8/12/04
2004 Jeep Liberty 4-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	HEAD, PRIMARY	X	VPL159HDX	Accel., Full bridge	Entran	EGEB6Q-2K	G
2	HEAD, PRIMARY	Y	VPL159HDY	Accel., Full bridge	Entran	EGEB6Q-2K	G
3	HEAD, PRIMARY	Z	VPL159HDZ	Accel., Full bridge	Entran	EGEB6Q-2K	G
4	HEAD, REDUNDANT	X	VPL159HDXR	Accel., Full bridge	Entran	EGEB6Q-2K	G
5	HEAD, REDUNDANT	Y	VPL159HDYR	Accel., Full bridge	Entran	EGEB6Q-2K	G
6	HEAD, REDUNDANT	Z	VPL159HDZR	Accel., Full bridge	Entran	EGEB6Q-2K	G
7	NECK FORCE	X	VPL159NFX	Load cell, six axis neck	R. A. Denton	1716A	N
8	NECK FORCE	Y	VPL159NFY	Load cell, six axis neck	R. A. Denton	1716A	N
9	NECK FORCE	Z	VPL159NFZ	Load cell, six axis neck	R. A. Denton	1716A	N
10	NECK MOMENT	X	VPL159NMX	Load cell, six axis neck	R. A. Denton	1716A	Nm
11	NECK MOMENT	Y	VPL159NMY	Load cell, six axis neck	R. A. Denton	1716A	Nm
12	NECK MOMENT	Z	VPL159NMZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
13	CHEST, PRIMARY	X	VPL159CHX	Accel., Full bridge	Entran	EGEB6Q-2K	G
14	CHEST, PRIMARY	Y	VPL159CHY	Accel., Full bridge	Entran	EGEB6Q-2K	G
15	CHEST, PRIMARY	Z	VPL159CHZ	Accel., Full bridge	Entran	EGEB6Q-2K	G
16	CHEST, REDUNDANT	X	VPL159CHXR	Accel., Full bridge	Entran	EGEB6Q-2K	G
17	CHEST, REDUNDANT	Y	VPL159CHYR	Accel., Full bridge	Entran	EGEB6Q-2K	G
18	CHEST, REDUNDANT	Z	VPL159CHZR	Accel., Full bridge	Entran	EGEB6Q-2K	G
19	CHEST DISPLACEMENT	X	VPL159CD	Rotary Pot Chest	JDK	CST058	MM
20	LEFT FEMUR FORCE	Z	VPL159LF	Load cell, Femur	R.A. Denton	2121	N
21	RIGHT FEMUR FORCE	Z	VPL159RF	Load cell, Femur	R.A. Denton	2121	N
22	LEFT KNEE DISPLACEMENT	Z	VPL159LK	Displacement pot, Knee	Space Age	150-0121	MM
23	RIGHT KNEE DISPLACEMENT	Z	VPL159RK	Displacement pot, Knee	Space Age	150-0121	MM

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CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
24	LEFT UPPER TIBIA MOMENT	X	VTBLMX159	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
25	LEFT UPPER TIBIA MOMENT	Y	VTBLMY159	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
26	LEFT LOWER TIBIA FORCE	X	VANLFY159	3 ch., Lower tibia gage	R. A. Denton	3643	N
27	LEFT LOWER TIBIA FORCE	Z	VANLFZ159	3 ch., Lower tibia gage	R. A. Denton	3643	N
28	LEFT LOWER TIBIA MOMENT	X	VANLMX159	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
29	LEFT LOWER TIBIA MOMENT	Y	VANLMY159	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
30	RIGHT UPPER TIBIA MOMENT	X	VTBRMX159	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
31	RIGHT UPPER TIBIA MOMENT	Y	VTBRMY159	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
32	RIGHT LOWER TIBIA FORCE	X	VANRFY159	3 ch., Lower tibia gage	R. A. Denton	3643	N
33	RIGHT LOWER TIBIA FORCE	Z	VANRFZ159	3 ch., Lower tibia gage	R. A. Denton	3643	N
34	RIGHT LOWER TIBIA MOMENT	X	VANRMX159	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
35	RIGHT LOWER TIBIA MOMENT	Y	VANRMY159	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
36	LAP BELT FORCE	X	BL168	Load cell, Seat belt	First Tech	IF-964	N
37	SHOULDER BELT FORCE	X	BL169	Load cell, Seat belt	First Tech	IF-964	N
38	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM

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TR-P24104-10-NC

**2004 FMVSS 208 Upgrade
Instrumentation Data Channel Assignments
Passenger A.T.D. Serial Number 058
8/12/04
2004 Jeep Liberty 4-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
39	HEAD, PRIMARY	X	VPL058HDX	Accel., Full bridge	Entran	EGEB6Q-2K	G
40	HEAD, PRIMARY	Y	VPL058HDY	Accel., Full bridge	Entran	EGEB6Q-2K	G
41	HEAD, PRIMARY	Z	VPL058HDZ	Accel., Full bridge	Entran	EGEB6Q-2K	G
42	HEAD, REDUNDANT	X	VPL058HDXR	Accel., Full bridge	Entran	EGEB6Q-2K	G
43	HEAD, REDUNDANT	Y	VPL058HDYR	Accel., Full bridge	Entran	EGEB6Q-2K	G
44	HEAD, REDUNDANT	Z	VPL058HDZR	Accel., Full bridge	Entran	EGEB6Q-2K	G
45	NECK FORCE	X	VPL058NFX	Load cell, six axis neck	R. A. Denton	1716A	N
46	NECK FORCE	Y	VPL058NFY	Load cell, six axis neck	R. A. Denton	1716A	N
47	NECK FORCE	Z	VPL058NFZ	Load cell, six axis neck	R. A. Denton	1716A	N
48	NECK MOMENT	X	VPL058NMX	Load cell, six axis neck	R. A. Denton	1716A	Nm
49	NECK MOMENT	Y	VPL058NMY	Load cell, six axis neck	R. A. Denton	1716A	Nm
50	NECK MOMENT	Z	VPL058NMZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
51	CHEST, PRIMARY	X	VPL058CHX	Accel., Full bridge	Entran	EGEB6Q-2K	G
52	CHEST, PRIMARY	Y	VPL058CHY	Accel., Full bridge	Entran	EGEB6Q-2K	G
53	CHEST, PRIMARY	Z	VPL058CHZ	Accel., Full bridge	Entran	EGEB6Q-2K	G
54	CHEST, REDUNDANT	X	VPL058CHXR	Accel., Full bridge	Entran	EGEB6Q-2K	G
55	CHEST, REDUNDANT	Y	VPL058CHYR	Accel., Full bridge	Entran	EGEB6Q-2K	G
56	CHEST, REDUNDANT	Z	VPL058CHZR	Accel., Full bridge	Entran	EGEB6Q-2K	G
57	CHEST DISPLACEMENT	X	VPL058CD	Rotary Pot Chest	JDK	CST058	MM
58	LEFT FEMUR FORCE	Z	VPL058LF	Load cell, Femur	R.A. Denton	2121	N
59	RIGHT FEMUR FORCE	Z	VPL058RF	Load cell, Femur	R.A. Denton	2121	N
60	LEFT KNEE DISPLACEMENT	Z	VPL058LK	Displacement pot, Knee	Space Age	150-0121	MM
61	RIGHT KNEE DISPLACEMENT	Z	VPL058RK	Displacement pot, Knee	Space Age	150-0121	MM

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Instrumentation Data Channel Assignments
Passenger A.T.D. Serial Number 058
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CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
62	LEFT UPPER TIBIA MOMENT	X	VTBLMX058	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
63	LEFT UPPER TIBIA MOMENT	Y	VTBLMY058	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
64	LEFT LOWER TIBIA FORCE	X	VANLFY058	3 ch., Lower tibia gage	R. A. Denton	3643	N
65	LEFT LOWER TIBIA FORCE	Z	VANLFZ058	3 ch., Lower tibia gage	R. A. Denton	3643	N
66	LEFT LOWER TIBIA MOMENT	X	VANLMX058	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
67	LEFT LOWER TIBIA MOMENT	Y	VANLMY058	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
68	RIGHT UPPER TIBIA MOMENT	X	VTBRMX058	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
69	RIGHT UPPER TIBIA MOMENT	Y	VTBRMY058	2 ch., Upper tibia gage	R. A. Denton	3644	Nm
70	RIGHT LOWER TIBIA FORCE	X	VANRFY058	3 ch., Lower tibia gage	R. A. Denton	3643	N
71	RIGHT LOWER TIBIA FORCE	Z	VANRFZ058	3 ch., Lower tibia gage	R. A. Denton	3643	N
72	RIGHT LOWER TIBIA MOMENT	X	VANRMX058	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
73	RIGHT LOWER TIBIA MOMENT	Y	VANRMY058	2 ch., Lower tibia gage	R. A. Denton	3644	Nm
74	LAP BELT FORCE	X	BL134	Load cell, Seat belt	First Tech	IF-964	N
75	SHOULDER BELT FORCE	X	BL135	Load cell, Seat belt	First Tech	IF-964	N
76	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM

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TR-P24104-10-NC

**2004 FMVSS 208 Upgrade
Instrumentation Data Channel Assignments
Center Rear Passenger A.T.D. Serial Number 001
8/12/04
2004 Jeep Liberty 4-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
77	HEAD, PRIMARY	X	KEAC083	Accel., 1/2 bridge	Endevco	7264-2000	G
78	HEAD, PRIMARY	Y	KEAC084	Accel., 1/2 bridge	Endevco	7264-2000	G
79	HEAD, PRIMARY	Z	KEAC085	Accel., 1/2 bridge	Endevco	7264-2000	G
80	NAAH CG	X	GPAC044	Accel., 1/2 bridge	Endevco	7264-2000	G
81	NAAH CG	Y	GPAC045	Accel., 1/2 bridge	Endevco	7264-2000	G
82	NAAH CG	Z	GPAC046	Accel., 1/2 bridge	Endevco	7264-2000	G
83	NAAH X-ARM	Y	GPAC014	Accel., 1/2 bridge	Endevco	7264-2000	G
84	NAAH X-ARM	Z	GPAC036	Accel., 1/2 bridge	Endevco	7264-2000	G
85	NAAH Y-ARM	X	GPAC001	Accel., 1/2 bridge	Endevco	7264-2000	G
86	NAAH Y-ARM	Z	GPAC012	Accel., 1/2 bridge	Endevco	7264-2000	G
87	NAAH Z-ARM	X	GPAC030	Accel., 1/2 bridge	Endevco	7264-2000	G
88	NAAH Z-ARM	Y	GPAC037	Accel., 1/2 bridge	Endevco	7264-2000	G
89	NECK FORCE	X	GPUN02FX	Load cell, six axis neck	R. A. Denton	1716A	N
90	NECK FORCE	Y	GPUN02FY	Load cell, six axis neck	R. A. Denton	1716A	N
91	NECK FORCE	Z	GPUN02FZ	Load cell, six axis neck	R. A. Denton	1716A	N
92	NECK MOMENT	X	GPUN02MX	Load cell, six axis neck	R. A. Denton	1716A	Nm
93	NECK MOMENT	Y	GPUN02MY	Load cell, six axis neck	R. A. Denton	1716A	Nm
94	NECK MOMENT	Z	GPUN02MZ	Load cell, six axis neck	R. A. Denton	1716A	Nm

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Instrumentation Data Channel Assignments
Center Rear Passenger A.T.D. Serial Number 001
8/12/04
2004 Jeep Liberty 4-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
95	CHEST, PRIMARY	X	GPAC005	Accel., 1/2 bridge	Endevco	7264-2000	G
96	CHEST, PRIMARY	Y	GPAC011	Accel., 1/2 bridge	Endevco	7264-2000	G
97	CHEST, PRIMARY	Z	GPAC010	Accel., 1/2 bridge	Endevco	7264-2000	G
98	CHEST, REDUNDANT	X	GPAC034	Accel., 1/2 bridge	Endevco	7264-200	G
99	CHEST, REDUNDANT	Y	GPAC027	Accel., 1/2 bridge	Endevco	7264-200	G
100	CHEST, REDUNDANT	Z	GPAC020	Accel., 1/2 bridge	Endevco	7264-200	G
101	CHEST DISPLACEMENT	X	VPL001CD	Rotary Pot Chest	Maurey	81422	MM
102	LEFT FEMUR FORCE	Z	KEFF001	Load cell, Femur	R.A. Denton	2121	N
103	RIGHT FEMUR FORCE	Z	KEFF002	Load cell, Femur	R.A. Denton	2121	N
104	LEFT KNEE DISPLACEMENT	Z	VPL001LK	Displacement pot, Knee	Space age	150-0121	MM
105	RIGHT KNEE DISPLACEMENT	Z	VPL001RK	Displacement pot, Knee	Space Age	150-0121	MM
106	LAP BELT FORCE	X	BL172	Load cell, Seat belt	First Tech	IF-964	N
107	SHOULDER BELT FORCE	X	BL173	Load cell, Seat belt	First Tech	IF-964	N
108	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM

**2004 FMVSS 208 Upgrade
Instrumentation Data Channel Assignments
Vehicle Accelerometers and Firing Circuits
8/12/04
2004 Jeep Liberty 4-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
109	LEFT REAR	X	KEVA002	Accel., Vehicle block	I.C. Sensor	3031-500	G
110	RIGHT REAR	X	KEVA004	Accel., Vehicle block	I.C. Sensor	3031-200	G
111	LEFT BRAKE CALIPER	X	KEVA005	Accel., Vehicle block	I.C. Sensor	3031-500	G
112	RIGHT BRAKE CALIPER	X	KEVA007	Accel., Vehicle block	I.C. Sensor	3031-500	G
113	INSTRUMENT PANEL	X	KEVA011	Accel., Vehicle block	I.C. Sensor	3031-500	G
114	ENGINE TOP	X	KEVA018	Accel., Vehicle block	I.C. Sensor	3031-500	G
115	ENGINE BOTTOM	X	KEVA008	Accel., Vehicle block	I.C. Sensor	3031-200	G
116	TOE PAN ACCELERATOR	X	KETX006	Accel., Vehicle block	I.C. Sensor	3031-500	G
117	TOE PAN ACCELERATOR	Z	KETX006	Accel., Vehicle block	I.C. Sensor	3031-200	G
118	TOE PAN FOOTREST	X	KETX005	Accel., Vehicle block	I.C. Sensor	3031-500	G
119	TOE PAN FOOTREST	Z	KETX005	Accel., Vehicle block	I.C. Sensor	3031-200	G
120	REAR DECK	Z	KEVA020	Accel., Vehicle block	I.C. Sensor	3031-500	G
121	REAR CENTER COMPARTMENT	X	KEVA001	Accel., Vehicle block	I.C. Sensor	3031-500	G
122	DRVR ABG SQUIB 1st Stage	N/A	SQUIB1	Squib Firing Sensor	EEURD	CTL-6-S32-8F	On/Off
123	DRVR ABG SQUIB 2nd Stage	N/A	SQUIB2	Squib Firing Sensor	EEURD	CTL-6-S32-8F	On/Off
124	DRVR PRETENSIONER	N/A	SQUIB3	Squib Firing Sensor	EEURD	CTL-6-S32-8F	On/Off
125	PASS ABG SQUIB 1st Stage	N/A	SQUIB4	Squib Firing Sensor	EEURD	CTL-6-S32-8F	On/Off
126	PASS ABG SQUIB 2nd Stage	N/A	SQUIB5	Squib Firing Sensor	EEURD	CTL-6-S32-8F	On/Off
127	PASS PRETENSIONER	N/A	SQUIB6	Squib Firing Sensor	EEURD	CTL-6-S32-8F	On/Off

**2004 FMVSS 208 Upgrade
Instrumentation Data Channel Assignments
Rigid Load Cell Barrier
8/12/04
2004 Jeep Liberty 4-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
128	BARRIER FORCE A1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
129	BARRIER FORCE A2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
130	BARRIER FORCE A3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
131	BARRIER FORCE A4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
132	BARRIER FORCE A5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
133	BARRIER FORCE A6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
134	BARRIER FORCE A7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
135	BARRIER FORCE A8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
136	BARRIER FORCE A9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
137	BARRIER FORCE B1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
138	BARRIER FORCE B2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
139	BARRIER FORCE B3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
140	BARRIER FORCE B4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
141	BARRIER FORCE B5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
142	BARRIER FORCE B6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
143	BARRIER FORCE B7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
144	BARRIER FORCE B8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
145	BARRIER FORCE B9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N

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Rigid Load Cell Barrier
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CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
146	BARRIER FORCE C1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
147	BARRIER FORCE C2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
148	BARRIER FORCE C3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
149	BARRIER FORCE C4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
150	BARRIER FORCE C5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
151	BARRIER FORCE C6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
152	BARRIER FORCE C7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
153	BARRIER FORCE C8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
154	BARRIER FORCE C9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
155	BARRIER FORCE D1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
156	BARRIER FORCE D2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
157	BARRIER FORCE D3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
158	BARRIER FORCE D4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
159	BARRIER FORCE D5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
160	BARRIER FORCE D6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
161	BARRIER FORCE D7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
162	BARRIER FORCE D8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
163	BARRIER FORCE D9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N