

----- ACCIDENT HISTORY -----

	time (sec)	X (ft)	Y (ft)	PSI (deg)	Vtot (mph)	U (mph)	V (mph)	Yaw (deg/sec)	Vel
-Start of Simulation-									
Freightliner FLD 120	0.0000	245.0	12.5	183.0	54.0	54.0	0.0	0.0	0.0
Class 3 Trailer		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
International Loadsta		19.0	91.5	-83.0	24.5	24.5	0.0	0.0	0.0
Class 2 Fixed Barrier		-37.0	-33.5	0.0	0.0	0.0	0.0	0.0	0.0
----- At Impact -----									
Freightliner FLD 120	2.7400	46.0	9.5	176.7	39.5	39.5	-0.1	-3.3	
International Loadsta		30.6	-4.5	-83.1	23.6	23.6	0.0	0.0	
Freightliner FLD 120	6.5200	-30.3	-32.7	314.7	6.4	4.9	-4.1	34.2	
Class 2 Fixed Barrier		-37.0	-33.5	0.0	0.0	0.0	0.0	0.0	
--- At Separation ---									
Freightliner FLD 120	3.0000	34.4	8.3	192.4	27.2	27.1	-2.2	60.2	
International Loadsta		28.1	-10.9	-56.9	17.5	8.1	-15.5	115.1	
Freightliner FLD 120	6.8300	-30.0	-34.5	322.3	1.0	0.3	1.0	6.8	
Class 2 Fixed Barrier		-37.0	-33.5	-0.4	0.0	0.0	0.0	-4.2	
--- At Final/Rest ---									
Freightliner FLD 120	7.0400	-29.9	-34.2	322.4	0.0	0.0	0.0	0.0	
Class 3 Trailer	6.9500	-28.6	-9.2	240.0	0.0	0.0	0.0	0.0	
International Loadsta	9.3700	-23.9	-83.0	53.1	0.0	0.0	0.0	0.0	
Class 2 Fixed Barrier	0.0100	-37.0	-33.5	-10.9	0.0	0.0	0.0	0.0	

----- VEHICLE DAMAGE DATA -----

VEHICLE DAMAGE SUMMARY
 NOTE: *** indicates J-point

Freightliner FLD 120 (31 Damage Points)				Class 3 Trailer (0 Damage Points)			
RHOB	PSIB	X	Y	RHOB	PSIB	X	Y
(in)	(deg)	(in)	(in)	(in)	(deg)	(in)	(in)
145.9	0.0	145.9	0.0				
146.5	2.0	146.4	5.1				
145.9	4.0	145.6	10.2				
145.6	6.0	144.8	15.2				
145.4	8.0	144.0	20.2				

145.4	10.0	143.2	25.3
145.7	12.0	142.5	30.3
143.4	14.0	139.2	34.7
140.7	16.0	135.2	38.8
** 138.4	18.0	131.6	42.8
135.8	20.0	127.6	46.4
** 79.6	202.0	-73.8	-29.8
** 77.6	204.0	-70.9	-31.6
** 76.3	206.0	-68.5	-33.4
** 75.1	208.0	-66.3	-35.3
** 73.3	210.0	-63.4	-36.6
** 71.9	212.0	-61.0	-38.1
** 70.5	214.0	-58.4	-39.4
** 70.2	216.0	-56.8	-41.3
** 69.4	218.0	-54.6	-42.7
** 68.5	220.0	-52.4	-44.0
** 69.0	222.0	-51.3	-46.2
68.5	224.0	-49.2	-47.6
157.8	344.0	151.7	-43.5
154.0	346.0	149.4	-37.3
152.2	348.0	148.9	-31.6
150.6	350.0	148.3	-26.2
149.2	352.0	147.7	-20.8
148.1	354.0	147.3	-15.5
147.2	356.0	146.9	-10.3
146.6	358.0	146.6	-5.1

VEHICLE DAMAGE SUMMARY
NOTE: *** indicates J-point

International Loadstar Bus (7 Damage Points)				Class 2 Fixed Barrier (64 Damage Points)			
RHOB	PSIB	X	Y	RHOB	PSIB	X	Y
(in)	(deg)	(in)	(in)	(deg)	(in)	(in)	
132.0	160.0	-124.1	45.2	11.4	0.0	11.4	0.0
135.5	162.0	-128.9	41.9	10.4	2.0	10.4	0.4
142.0	164.0	-136.5	39.1	10.4	4.0	10.4	0.7
** 148.2	166.0	-143.8	35.8	10.5	6.0	10.4	1.1
** 155.6	168.0	-152.2	32.4	10.6	8.0	10.5	1.5
** 166.7	170.0	-164.1	28.9	10.6	10.0	10.4	1.8
** 235.2	172.0	-232.9	32.7	10.7	12.0	10.4	2.2
			10.7	14.0	10.4	2.6	
			10.8	16.0	10.4	3.0	
			10.9	18.0	10.4	3.4	
		**	11.0	20.0	10.4	3.8	
			11.3	22.0	10.5	4.2	
			11.4	24.0	10.4	4.6	
			11.6	26.0	10.4	5.1	
			11.0	28.0	9.7	5.1	
			11.2	30.0	9.7	5.6	
			11.4	32.0	9.7	6.0	
			11.7	34.0	9.7	6.5	
			12.0	36.0	9.7	7.0	
			12.4	38.0	9.7	7.6	
			12.1	40.0	9.3	7.8	

12.1	42.0	9.0	8.1
12.3	44.0	8.8	8.5
12.3	46.0	8.6	8.9
12.8	48.0	8.6	9.5
12.3	50.0	7.9	9.5
13.1	52.0	8.1	10.3
13.0	54.0	7.7	10.5
12.9	56.0	7.2	10.7
12.8	58.0	6.8	10.9
12.7	60.0	6.3	11.0
12.6	62.0	5.9	11.1
12.4	64.0	5.5	11.2
12.3	66.0	5.0	11.3
12.2	68.0	4.6	11.3
12.1	70.0	4.1	11.3
12.0	72.0	3.7	11.4
11.9	74.0	3.3	11.5
11.9	76.0	2.9	11.5
11.8	78.0	2.5	11.6
11.8	80.0	2.0	11.6
11.8	82.0	1.6	11.6
11.7	84.0	1.2	11.7
11.7	86.0	0.8	11.7
11.2	88.0	0.4	11.2
11.8	90.0	0.0	11.8
12.0	92.0	-0.4	12.0
12.5	326.0	10.4	-7.0
12.2	328.0	10.4	-6.5
12.0	330.0	10.4	-6.0
11.7	332.0	10.4	-5.5
11.6	334.0	10.4	-5.1
10.6	336.0	9.7	-4.3
11.2	338.0	10.4	-4.2
10.3	340.0	9.7	-3.5
11.0	342.0	10.4	-3.4
9.8	344.0	9.4	-2.7
11.8	346.0	11.4	-2.8
11.7	348.0	11.5	-2.4
11.7	350.0	11.5	-2.0
11.6	352.0	11.4	-1.6
11.5	354.0	11.5	-1.2
11.5	356.0	11.4	-0.8
11.5	358.0	11.5	-0.4

VEHICLE DAMAGE RANGES
NOTE: *** indicates J-point

Vehicle Name: Freightliner FLD 120

Beginning of Range		End of Range		Midpoint		- Peak Accel -			
RHOB	PSIB	RHOB	PSIB	PSIM	CDC	PDOF	DELTA-V	TIME	
VALUE									
(in)	(deg)	(in)	(deg)	(deg)	(deg)	(mph)	(sec)	(g)	
157.8	344.0	135.8	20.0	2.0	12FDEW2	-2.6	15.1	2.9460	1.5
** 79.6	202.0	68.5	224.0	207.7	06LZEW3	165.8	0.4	2.8560	1.2

Vehicle Name: Class 3 Trailer (No Damage Ranges.)

Vehicle Name: International Loadstar Bus

Beginning of Range		End of Range		Midpoint		- Peak Accel -				
RHOB	PSIB	RHOB	PSIB	PSIM	CDC	PDOF	DELTA-V	TIME		
VALUE	(in)	(deg)	(in)	(deg)	(deg)	(deg)	(mph)	(sec)	(g)	
	132.0	160.0	** 235.2	172.0	166.2	01RZEW3	44.7	13.7	2.7860	10.9

Vehicle Name: Class 2 Fixed Barrier

Beginning of Range		End of Range		Midpoint		- Peak Accel -				
RHOB	PSIB	RHOB	PSIB	PSIM	CDC	PDOF	DELTA-V	TIME		
VALUE	(in)	(deg)	(in)	(deg)	(deg)	(deg)	(mph)	(sec)	(g)	
	12.5	326.0	12.0	92.0	29.0	06FDEW2	-180.0	0.0	0.0000-100000	

CentralBridgeNY

Thu 08/10/00 08:19:59

Messages-EDSMAC4, Untitled Event

HVE Version 2.20

Licensed User: NTSB

PAGE 1

MESSAGES

NOTE: The damage midpoint (PSIM) does not match the PDOF specified by the clock direction. This condition is fairly common for sideswipes and collisions involving secondary impact.

CentralBridgeNY

Thu 08/10/00 08:19:37

Program Data-EDSMAC4, Untitled Event

HVE Version 2.20

Licensed User: NTSB

PAGE 1

GENERAL PROGRAM INFORMATION

EDSMAC4 Version No: 5.30

SIMULATION CONTROLS

Max Simulation Time (sec):	15.0000
Collision Phase dt (sec):	0.0010
Separation Phase dt (sec):	0.0100
Trajectory Phase dt (sec):	0.0200
Output Interval (sec):	0.0050
Linear Term Vel (mph):	2.00
Angular Term Vel (deg/sec):	5.00

COLLISION PARAMETERS

Angular Sweep Interval (deg):	2.00
Radial Depth Interval (in):	0.20
Max Pressure Error (lb):	15.00

Inter-vehicle Friction (*): 0.87
Min Friction Vel (in/sec): 5.00
Restitution, C0 (*): 0.04606
C1 (1/in): 0.0017547
C2 (1/in^2): 1.6711E-05

COLLISION CRITERIA

PSIB RANGE TESTS		PSIBI RHOBII TESTS	
	Angle (deg)		Angle (deg)
PSILIM1:	70.00	PSILIM5:	10.00
PSILIM2:	110.00	PSILIM6:	170.00
PSILIM3:	250.00	PSILIM7:	190.00
PSILIM4:	290.00	PSILIM8:	350.00