

DATA	Veh 1:	Veh 2:	
Veh Wt:	3677.00	0.00	
Pass Wt:	215.00	0.00	
Hood Ht (ft):	2.75	33.00	inches
Ped Wt:	33.00		
Ped Ht (ft):	5.17	62.00	inches
Ped F:	0.715	0.810	
1. Ped C/M (ft):	3.00	36.00	inches
1. Ped AirD:	39.00		Drag Tests:
1. Ped Throw:	77.80		Weight:
1. Ped Slide:	38.80		# Tests:
1. 1st Evid:	0.00		Results:
1. Braking?:	N		
1. Imp - VFrt:	104.43		
1. VC Speed:	35.40		
1. VC Mu:	0.40		
1. VC Dist:	104.43		
1. Pre-Skid:	0.00		Totals:
1. Radar (Braking):			Avg:
1. Radar (Impact):			Calc'd F:
2. Ped C/M (ft):	3.25	39.00	inches
2. Ped AirD:	137.75		Instructor 1:
2. Ped Throw:	148.00		Instructor 2:
2. Ped Slide:	10.25		
2. 1st Evid:	2.00		Take-Off Angles:
2. Braking?:	N		
2. Imp - VFrt:	153.08		Minimum:
2. VC Speed:	34.70		Maximum:
2. VC Mu:	0.40		
2. VC Dist:	153.08		Carry Distances:
2. Pre-Skid:	0.00		
2. Radar (Braking):			
2. Radar (Impact):			
3. Ped C/M (ft):	3.25	39.00	Carry Test 1:
3. Ped AirD:	51.60		Carry Test 2:

Inches to Decimal Feet:	
1 inch =	0.08 feet
2 inches =	0.17 feet
3 inches =	0.25 feet
4 inches =	0.33 feet
5 inches =	0.42 feet
6 inches =	0.50 feet
7 inches =	0.58 feet
8 inches =	0.67 feet
9 inches =	0.75 feet
10 inches =	0.83 feet
11 inches =	0.92 feet
12 inches =	1.00 feet

(Andy VBox Speeds)	
1	35.4
2	34.7
3	31.4
4	35
5	37.3
6	40.4
7	33.6
8	36.4
9	32.1

3. Ped Throw:	91.00
3. Ped Slide:	39.40
3. 1st Evid:	-9.30
3. Braking?:	N
3. Imp - VFrt:	100.00
3. VC Speed:	31.40
3. VC Mu:	0.40
3. VC Dist:	100.00
3. Pre-Skid:	0.00
3. Radar (Braking):	
3. Radar (Impact):	

Carry Test 3:	3.91 ft
Carry Test 4:	3.91 ft
Carry Test 5:	3.91 ft
Carry Test 6:	3.91 ft
Carry Test 7:	3.91 ft
Carry Test 8:	3.91 ft
Carry Test 9:	3.91 ft
Carry Test 10:	ft

4. Ped C/M (ft):	3.00	36.00
4. Ped AirD:	39.00	
4. Ped Throw:	59.00	
4. Ped Slide:	20.00	
4. 1st Evid:	37.00	
4. Braking?:	N	
4. Imp - VFrt:	126.50	
4. VC Speed:	35.00	
4. VC Mu:	0.40	
4. VC Dist:	126.50	
4. Pre-Skid:	0.00	
4. Radar (Braking):		
4. Radar (Impact):		

Video/Actual Take-off Angles:	
Carry Test 1:	6 Degrees
Carry Test 2:	6 Degrees
Carry Test 3:	6 Degrees
Carry Test 4:	6 Degrees
Carry Test 5:	6 Degrees
Carry Test 6:	6 Degrees
Carry Test 7:	6 Degrees
Carry Test 8:	6 Degrees
Carry Test 9:	6 Degrees
Carry Test 10:	Degrees

5. Ped C/M (ft):	3.25	39.00	inches
5. Ped AirD:	45.00		
5. Ped Throw:	81.00		
5. Ped Slide:	36.00		
5. 1st Evid:	-6.00		
5. Braking?:	N		
5. Imp - VFrt:	145.00		
5. VC Speed:	37.30		
5. VC Mu:	0.40		
5. VC Dist:	145.00		
5. Pre-Skid:	0.00		
5. Radar (Braking):			



5. Radar (Impact):		
6. Ped C/M (ft):	3.00	36.00 inches
6. Ped AirD:	42.00	
6. Ped Throw:	88.75	
6. Ped Slide:	46.75	
6. 1st Evid:	19.00	
6. Braking?:	N	
6. Imp - VFrt:	138.04	
6. VC Speed:	40.70	
6. VC Mu:	0.40	
6. VC Dist:	138.04	
6. Pre-Skid:	0.00	
6. Radar (Braking):		
6. Radar (Impact):		
7. Ped C/M (ft):	3.17	38.00 inches
7. Ped AirD:	43.16	
7. Ped Throw:	74.58	
7. Ped Slide:	31.42	
7. 1st Evid:	7.00	
7. Braking?:	N	
7. Imp - VFrt:	112.50	
7. VC Speed:	33.60	
7. VC Mu:	0.40	
7. VC Dist:	112.50	
7. Pre-Skid:	0.00	
7. Radar (Braking):		
7. Radar (Impact):		
8. Ped C/M (ft):	3.25	39.00 inches
8. Ped AirD:	26.58	
8. Ped Throw:	44.00	
8. Ped Slide:	17.42	
8. 1st Evid:	-7.50	
8. Braking?:	N	
8. Imp - VFrt:	187.00	
8. VC Speed:	36.40	
8. VC Mu:	0.40	

8. VC Dist:	187.00	
8. Pre-Skid:	0.00	
8. Radar (Braking):		
8. Radar (Impact):		
9. Ped C/M (ft):	1.08	13.00 inches
9. Ped AirD:	32.60	
9. Ped Throw:	58.00	
9. Ped Slide:	25.40	
9. 1st Evid:	19.20	
9. Braking?:	N	
9. Imp - VFrt:	108.40	
9. VC Speed:	32.10	
9. VC Mu:	0.40	
9. VC Dist:	108.40	
9. Pre-Skid:	0.00	
9. Radar (Braking):		
9. Radar (Impact):		
10. Ped C/M (ft):	0.00	inches
10. Ped AirD:		
10. Ped Throw:		
10. Ped Slide:	0.00	
10. 1st Evid:		
10. Braking?:		
10. Imp - VFrt:		
10. VC Speed:		
10. VC Mu:		
10. VC Dist:		
10. Pre-Skid:	0.00	
10. Radar (Braking):		
10. Radar (Impact):		



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Date: 15-Jun-16

Place: Auburn Hills, MI

Veh One:
2002 Ford Taurus

OL: 197.80 in
OW: 72.90 in
WB: 108.70 in
FOH: 41.80 in
ROH: 47.70 in
Weight: 3677.00 lb
Hood H: 33.00 in
Occupant: 215.00 lb

Searle (Angle):

$$V = \frac{\sqrt{2 \times \mu \times g \times d}}{[\cos \theta + (\mu \times \sin \theta)]}$$

Searle (Mass & Carry):

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

Searle Maximim:

$$V_{\max} = \sqrt{2 \times \mu \times g \times d}$$

Searle Minimum:

$$V_{\min} = \sqrt{\frac{2 \times \mu \times g \times d}{1 + \mu^2}}$$

Crash Data:	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8	Test 9	Test 10
Ped Ht (ft):	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	N/A
Ped C/M Ht (ft):	3.00	3.25	3.25	3.00	3.25	3.00	3.17	3.25	1.08	N/A
Ped Slide D (ft):	38.80	10.25	39.40	20.00	36.00	46.75	31.42	17.42	25.40	N/A
Airborne D (ft):	39.00	137.75	51.60	39.00	45.00	42.00	43.16	26.58	32.60	N/A
Ped f-Value:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	N/A
Throw D (ft):	77.80	148.00	91.00	59.00	81.00	88.75	74.58	44.00	58.00	N/A
Takeoff (Min):	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	N/A
Takeoff (Max.):	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	N/A
1st Evid. (ft):	0.00	2.00	-9.30	37.00	-6.00	19.00	7.00	-7.50	19.20	N/A
Ped Weight (lb):	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	N/A
Vehicle Data:										
Hood Height (ft):	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	N/A
C/M - Hood Change (ft):	0.25	0.50	0.50	0.25	0.50	0.25	0.42	0.50	-1.67	N/A
Braking (Yes=Y/No=N):	N	N	N	N	N	N	N	N	N	N/A
Skid Total (ft):	104.43	153.08	100.00	126.50	145.00	138.04	112.50	187.00	108.40	N/A
Skid to Impact (ft):	N/A	N/A	N/A	N/A	N/A	0.00	N/A	N/A	N/A	N/A
Road f-Value:	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	N/A
Impact Spd (mph):	35.40	34.70	31.40	35.00	37.30	40.70	33.60	36.40	32.10	N/A
Radar (Start Braking):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Radar (Impact):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Speed Acquired (%)	94%	106%	92%	83%	91%	87%	97%	73%	89%	N/A

Disclaimer: Documentaion is provided to supplement IPTM Crash Testing.
Additional training required to fully understand the technical analysis.



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 1



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	36.84 mph
Searle (20 Degree) Takeoff:	34.50 mph
Searle Minimum Formula:	33.23 mph
Searle Maximum Formula:	40.86 mph

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	35.40 mph
Vehicle Speed - Impact:	35.40 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	35.40 mph

Other Calculations:

Speed (With Adjusted Data):	37.24 mph
Throw Minus Carry Distance:	73.89 feet
Location of First Evidence:	0.0 feet
% of Speed Attained (Ped):	94%
Difference (C/M vs. Hood H):	0.3 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.00 feet

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 32.77 \text{ mph}$$

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 32.66 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

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Additional training required to fully understand the technical analysis.



Test 2

Pedestrian/Bicycle Crash Analysis

Instructors: Mike Reade & Andy Rich



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	50.81 mph
Searle (20 Degree) Takeoff:	47.58 mph
Searle Minimum Formula: (80%)	36.67 mph
Searle Maximum Formula:	56.35 mph

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.25 feet

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	34.70 mph
Vehicle Speed - Impact:	34.70 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	34.70 mph

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

(80%) = 36.38 mph

Other Calculations:

Speed (With Adjusted Data): (80%)	41.60 mph
Throw Minus Carry Distance:	144.09 feet
Location of First Evidence:	2.0 feet
% of Speed Attained (Ped):	106%
Difference (C/M vs. Hood H):	0.5 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

(80%) = 36.49 mph

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

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Additional training required to fully understand the technical analysis.



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 3



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	39.84 mph
Searle (20 Degree) Takeoff:	37.31 mph
Searle Minimum Formula: (80%)	28.75 mph
Searle Maximum Formula:	44.19 mph

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.25 feet

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	31.40 mph
Vehicle Speed - Impact:	31.40 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	31.40 mph

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

(80%) = 28.38 mph

Other Calculations:

Speed (With Adjusted Data):	32.34 mph
Throw Minus Carry Distance:	87.09 feet
Location of First Evidence:	-9.3 feet
% of Speed Attained (Ped):	92%
Difference (C/M vs. Hood H):	0.5 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

(80%) = 28.37 mph

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

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Additional training required to fully understand the technical analysis.



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 4



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	32.08 mph
Searle (20 Degree) Takeoff:	30.04 mph
Searle Minimum Formula:	28.94 mph
Searle Maximum Formula:	35.58 mph

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.00 feet

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	35.00 mph
Vehicle Speed - Impact:	35.00 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	35.00 mph

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 28.41 \text{ mph}$$

Other Calculations:

Speed (With Adjusted Data):	32.15 mph
Throw Minus Carry Distance:	55.09 feet
Location of First Evidence:	37.0 feet
% of Speed Attained (Ped):	83%
Difference (C/M vs. Hood H):	0.3 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 28.20 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 5



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	37.59 mph
Searle (20 Degree) Takeoff:	35.20 mph
Searle Minimum Formula:	33.91 mph
Searle Maximum Formula:	41.69 mph

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	37.30 mph
Vehicle Speed - Impact:	37.30 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	37.30 mph

Other Calculations:

Speed (With Adjusted Data):	38.03 mph
Throw Minus Carry Distance:	77.09 feet
Location of First Evidence:	-6.0 feet
% of Speed Attained (Ped):	91%
Difference (C/M vs. Hood H):	0.5 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.25 feet

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 33.42 \text{ mph}$$

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 33.36 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

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Additional training required to fully understand the technical analysis.



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 6



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	39.35 mph
Searle (20 Degree) Takeoff:	36.85 mph
Searle Minimum Formula:	35.49 mph
Searle Maximum Formula:	43.64 mph

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	40.70 mph
Vehicle Speed - Impact:	40.70 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	40.70 mph

Other Calculations:

Speed (With Adjusted Data):	39.90 mph
Throw Minus Carry Distance:	84.84 feet
Location of First Evidence:	19.0 feet
% of Speed Attained (Ped):	87%
Difference (C/M vs. Hood H):	0.3 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.00 feet

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 35.06 \text{ mph}$$

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 35.00 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

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Additional training required to fully understand the technical analysis.



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 7



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	36.07 mph
Searle (20 Degree) Takeoff:	33.78 mph
Searle Minimum Formula:	32.54 mph
Searle Maximum Formula:	40.00 mph

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.17 feet

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	33.60 mph
Vehicle Speed - Impact:	33.60 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	33.60 mph

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 32.04 \text{ mph}$$

Other Calculations:

Speed (With Adjusted Data):	36.42 mph
Throw Minus Carry Distance:	70.67 feet
Location of First Evidence:	7.0 feet
% of Speed Attained (Ped):	97%
Difference (C/M vs. Hood H):	0.4 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 31.94 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

Disclaimer: Documentaion is provided to supplement IPTM Crash Testing.
Additional training required to fully understand the technical analysis.



Pedestrian/Bicycle Crash Analysis



Instructors: Mike Reade & Andy Rich

Test 8



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	29.05 mph
Searle (20 Degree) Takeoff:	26.87 mph
Searle Minimum Formula:	26.60 mph
Searle Maximum Formula:	32.70 mph

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	3.25 feet

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	36.40 mph
Vehicle Speed - Impact:	36.40 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	36.40 mph

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 24.64 \text{ mph}$$

Other Calculations:

Speed (With Adjusted Data):	28.92 mph
Throw Minus Carry Distance:	40.09 feet
Location of First Evidence:	-7.5 feet
% of Speed Attained (Ped):	73%
Difference (C/M vs. Hood H):	0.5 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 24.46 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

Disclaimer: Documentaion is provided to supplement IPTM Crash Testing.
Additional training required to fully understand the technical analysis.



Test 9

Pedestrian/Bicycle Crash Analysis

Instructors: Mike Reade & Andy Rich



Searle Analysis: (1983)

Searle (10 Degree) Takeoff:	31.81 mph
Searle (20 Degree) Takeoff:	29.79 mph
Searle Minimum Formula:	28.69 mph
Searle Maximum Formula:	35.28 mph

NEW Searle Formulae Analysis:

Vehicle Weight: (M)	3,892.00 lb
Pedestrian Weight: (m)	33 lb
Ped C/M Height: (H)	1.08 feet

Vehicle Speed Analysis:

Vehicle Speed - Start of Braking:	32.10 mph
Vehicle Speed - Impact:	32.10 mph
Radar Speed - Start of Braking:	N/A mph
Radar Speed - Impact:	N/A mph
IMPACT SPEED To Be Used:	32.10 mph

Searle Minimum Analysis: (1993, 2009)

$$V_{\min} = \sqrt{\frac{2\mu g(d - \mu H)}{1 + \mu^2}}$$

$$= 28.50 \text{ mph}$$

Other Calculations:

Speed (With Adjusted Data):	31.86 mph
Throw Minus Carry Distance:	54.09 feet
Location of First Evidence:	19.2 feet
% of Speed Attained (Ped):	89%
Difference (C/M vs. Hood H):	-1.7 feet
Database Takeoff Angle (Degrees):	6 Degrees
Database Carry Distance:	3.91 feet

Searle Minimum Analysis: (2009)

$$V_{\min} = \frac{M + m}{M} \sqrt{\frac{2\mu g(d - \text{Carry})}{1 + \mu^2}}$$

$$= 27.94 \text{ mph}$$

(Percentage is determined by dividing Searle Minimum result by Vehicle Impact Speed)

Disclaimer: Documentaion is provided to supplement IPTM Crash Testing.
Additional training required to fully understand the technical analysis.