
ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

MAKE & MODEL: Ford Interceptor 4.6L 3.27

BEGINNING TIME: 3:47 p.m.

WIND VELOCITY: 4.2 mph

WIND DIRECTION: 156°

TEMPERATURE: 68°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	9.17	9.01	8.97	8.88	9.01
0 – 80	16.4 sec.	14.79	14.52	14.75	14.40	14.61
0 – 100	27.1 sec.	24.84	24.10	24.88	23.78	24.40

DISTANCE TO REACH: 110 MPH .64 mile

120 MPH 1.00 mile

TOP SPEED ATTAINED: 129 mph

MAKE & MODEL: Ford Police Interceptor 4.6L 3.55

BEGINNING TIME: 2:16 p.m.

WIND VELOCITY: 2.4 mph

WIND DIRECTION: 221°

TEMPERATURE: 69.8°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	8.88	8.88	8.95	8.78	8.87
0 – 80	16.4 sec.	14.57	14.62	14.69	14.54	14.60
0 – 100	27.1 sec.	24.48	24.28	24.74	23.99	24.37

DISTANCE TO REACH: 110 MPH .66 mile

120 MPH _____

TOP SPEED ATTAINED: 119 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

MAKE & MODEL: Chevrolet Caprice 9C1

BEGINNING TIME: 3:29 p.m.

WIND VELOCITY: 1.5 mph

WIND DIRECTION: 119°

TEMPERATURE: 68°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	6.32	6.23	6.02	6.14	6.18
0 – 80	16.4 sec.	10.22	10.00	9.87	9.95	10.01
0 – 100	27.1 sec.	15.01	14.81	14.62	14.65	14.77

DISTANCE TO REACH: 110 MPH .35 mile

120 MPH .48 mile

TOP SPEED ATTAINED: 148 mph

MAKE & MODEL: Chevrolet Caprice 9C1 E85

BEGINNING TIME: 12:43 p.m.

WIND VELOCITY: 4.7 mph

WIND DIRECTION: 219°

TEMPERATURE: 66.7°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	6.32	6.16	6.09	6.01	6.15
0 – 80	16.4 sec.	10.21	9.91	9.82	9.69	9.91
0 – 100	27.1 sec.	14.96	14.56	14.55	14.25	14.58

DISTANCE TO REACH: 110 MPH .34 mile

120 MPH .45 mile

TOP SPEED ATTAINED: 148 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

MAKE & MODEL: Chevrolet Impala 9C1

BEGINNING TIME: 8:03 a.m.

WIND VELOCITY: 6.4 mph

WIND DIRECTION: 180°

TEMPERATURE: 55.1°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	8.98	8.77	8.86	8.53	8.78
0 – 80	16.4 sec.	14.27	14.01	13.98	13.68	13.99
0 – 100	27.1 sec.	24.39	23.28	24.43	22.86	23.74

DISTANCE TO REACH: 110 MPH .60 mile

120 MPH .85 mile

TOP SPEED ATTAINED: 138 mph

MAKE & MODEL: Chevrolet Impala 9C1 E85

BEGINNING TIME: 5:07 p.m.

WIND VELOCITY: 2.4 mph

WIND DIRECTION: 230°

TEMPERATURE: 69.4°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	8.83	8.64	8.65	8.60	8.68
0 – 80	16.4 sec.	14.12	13.83	13.90	13.76	13.90
0 – 100	27.1 sec.	23.30	22.82	23.01	22.64	22.94

DISTANCE TO REACH: 110 MPH .58 mile

120 MPH .83 mile

TOP SPEED ATTAINED: 139 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

MAKE & MODEL: Dodge Charger 5.7L

BEGINNING TIME: 2:01 p.m.

WIND VELOCITY: 2.8 mph

WIND DIRECTION: 269°

TEMPERATURE: 70.4°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	6.09	6.22	6.22	6.42	6.24
0 – 80	16.4 sec.	9.64	9.66	9.76	9.86	9.73
0 – 100	27.1 sec.	14.90	14.83	14.99	15.24	14.99

DISTANCE TO REACH: 110 MPH .35 mile

120 MPH .45 mile

TOP SPEED ATTAINED: 146 mph

MAKE & MODEL: Dodge Charger 3.6L

BEGINNING TIME: 2:43 p.m.

WIND VELOCITY: 2.6 mph

WIND DIRECTION: 18°

TEMPERATURE: 68.8°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	9.6 sec	8.51	8.51	8.63	8.94	8.65
0 – 80	16.4 sec.	14.27	13.93	14.17	14.65	14.26
0 – 100	27.1 sec.	24.06	23.05	23.93	24.37	23.85

DISTANCE TO REACH: 110 MPH .63 mile

120 MPH .89 mile

TOP SPEED ATTAINED: 130 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

MAKE & MODEL: Chevrolet Tahoe PPV

BEGINNING TIME: 4:26 p.m.

WIND VELOCITY: 1.0 mph

WIND DIRECTION: 160°

TEMPERATURE: 68.7°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	10.0 sec	8.62	8.71	8.80	8.68	8.70
0 – 80	16.0 sec.	14.38	14.31	14.48	14.47	14.41
0 – 100	27.0 sec.	22.71	22.17	22.59	22.22	22.42

DISTANCE TO REACH: 110 MPH .58 mile

120 MPH .86 mile

TOP SPEED ATTAINED: 139 mph

MAKE & MODEL: Chevrolet Tahoe PPV E85

BEGINNING TIME: 4:05 p.m.

WIND VELOCITY: 4.2 mph

WIND DIRECTION: 198°

TEMPERATURE: 68°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	10.0 sec	8.18	8.22	8.28	8.27	8.24
0 – 80	16.0 sec.	14.00	13.72	14.01	13.67	13.85
0 – 100	27.0 sec.	22.11	21.24	21.96	21.42	21.68

DISTANCE TO REACH: 110 MPH .56 mile

120 MPH .84 mile

TOP SPEED ATTAINED: 139 mph

*Michigan State Police minimum requirement.

SUMMARY OF ACCELERATION AND TOP SPEED

ACCELERATION*	Ford Police Interceptor 4.6 L 3.27	Ford Police Interceptor 4.6 L 3.55	Chevrolet Caprice 9C1 6.0L	Chevrolet Caprice 9C1 6.0L E85	Chevrolet Impala 9C1 3.9L	Chevrolet Impala 9C1 3.9L E85
0 – 20 mph (sec.)	1.95	1.90	1.66	1.62	2.05	2.01
0 – 30 mph (sec.)	3.27	3.16	2.54	2.49	3.33	3.27
0 – 40 mph (sec.)	4.70	4.62	3.61	3.55	4.63	4.60
0 – 50 mph (sec.)	6.69	6.70	4.83	4.78	6.39	6.31
0 – 60 mph (sec.)	9.01	8.87	6.18	6.15	8.78	8.68
0 – 70 mph (sec.)	11.55	11.39	8.06	7.94	11.28	11.20
0 – 80 mph (sec.)	14.61	14.60	10.01	9.91	13.99	13.90
0 – 90 mph (sec.)	18.95	19.12	12.19	12.02	17.82	17.65
0 – 100 mph (sec.)	24.40	24.37	14.77	14.58	23.74	22.94
TOP SPEED (mph)	129	119	148	148	138	139
DISTANCE TO REACH						
110 mph (miles)	.64	.66	.35	.34	.60	.58
120 mph (miles)	1.00		.48	.45	.85	.83
QUARTER MILE						
Time (sec.)	16.82	16.75	14.71	14.64	16.46	16.60
Speed (miles)	85.78	84.80	99.85	100.26	88.09	87.72



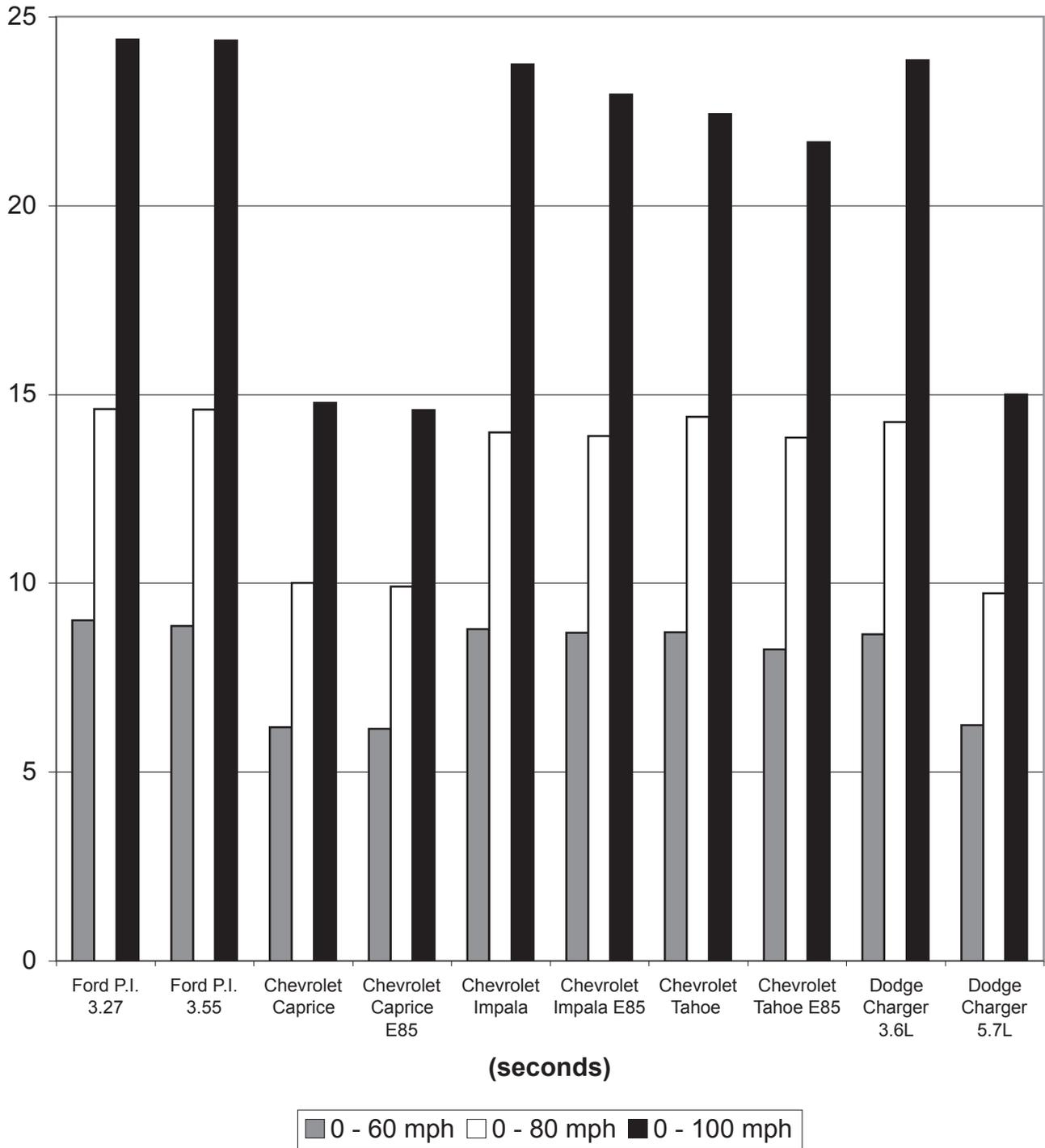
SUMMARY OF ACCELERATION AND TOP SPEED

ACCELERATION*		Dodge Charger 5.7L	Dodge Charger 3.6L	Chevrolet Tahoe PPV	Chevrolet Tahoe PPV E85
0 – 20 mph	(sec.)	1.64	2.00	2.16	2.02
0 – 30 mph	(sec.)	2.60	3.44	3.41	3.20
0 – 40 mph	(sec.)	3.55	4.89	4.93	4.59
0 – 50 mph	(sec.)	4.76	6.47	6.76	6.36
0 – 60 mph	(sec.)	6.24	8.65	8.70	8.24
0 – 70 mph	(sec.)	7.78	11.33	11.33	10.86
0 – 80 mph	(sec.)	9.73	14.26	14.41	13.85
0 – 90 mph	(sec.)	12.30	17.86	17.94	17.20
0 – 100 mph	(sec.)	14.99	23.85	22.42	21.68
TOP SPEED	(mph)	146	130	139	139
DISTANCE TO REACH					
110 mph	(miles)	.35	.63	.58	.56
120 mph	(miles)	.45	.89	.86	.84
QUARTER MILE					
Time	(sec.)	14.67	16.71	16.80	16.49
Speed	(miles)	98.63	86.86	87.07	87.82



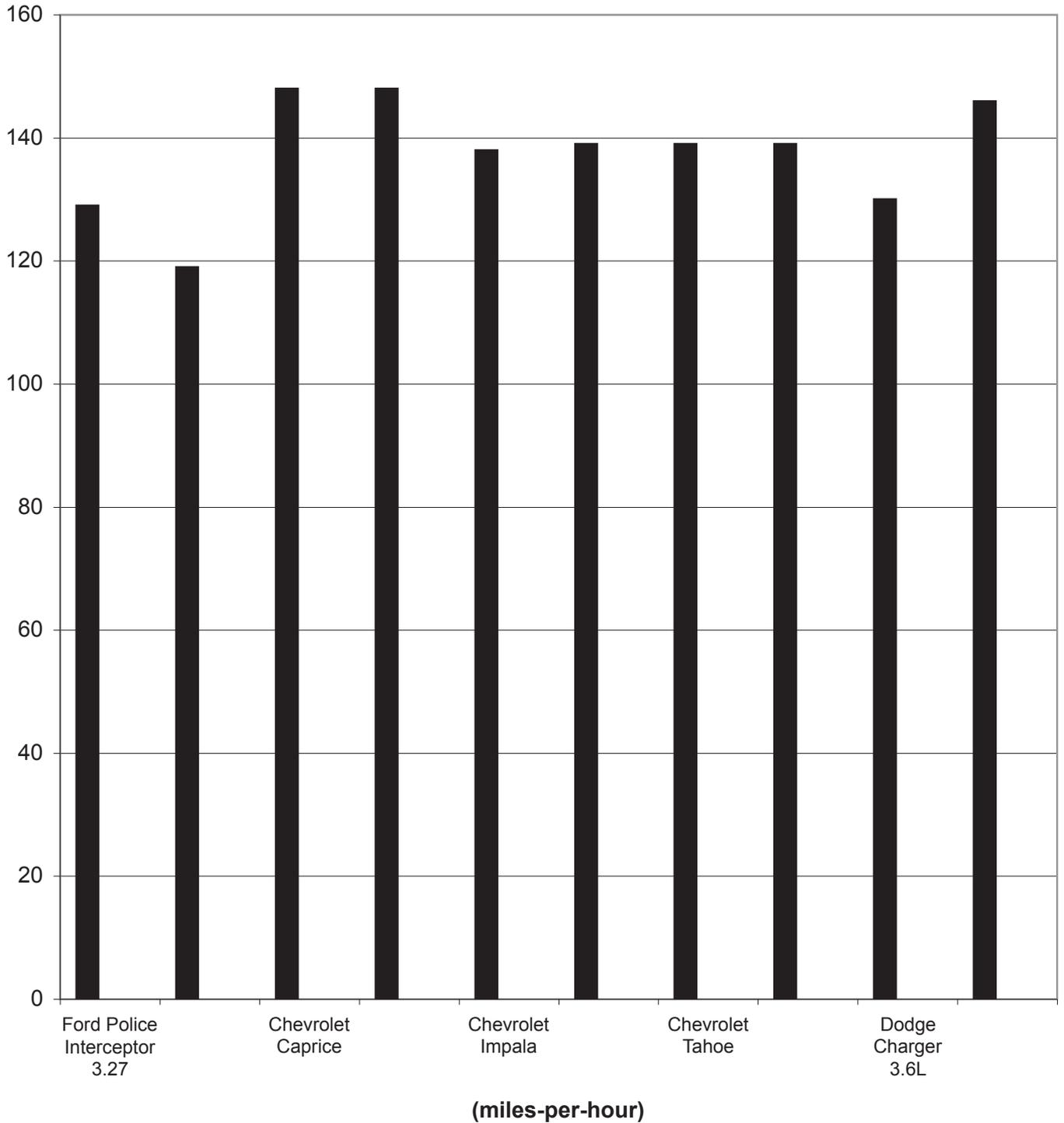
2011 ACCELERATION COMPARISON

ACCELERATION TIMES



2011 TOP SPEED COMPARISON

TOP SPEED ATTAINED



BRAKE TESTING

BRAKE TEST OBJECTIVE

Determine the deceleration rate attained by each test vehicle on twelve 60 – 0 mph impending skid (threshold) stops, with ABS in operation if the vehicle is so equipped. Each vehicle is scored on the average deceleration rate it attains.

BRAKE TEST METHODOLOGY

Each vehicle makes two decelerations at specific predetermined points on the test road from 90 – 0 mph at 22 ft/s², with the driver using a decelerometer to maintain the deceleration rate. Immediately after these “heat-up” stops are completed, the vehicle is turned around and makes six measured 60 – 0 mph impending skid (threshold) stops with ABS in operation, if so equipped, at specific predetermined points. Following a four (4) minute heat soak, the entire sequence is repeated. The exact initial velocity at the beginning of each of the 60 – 0 mph decelerations, and the exact distance required to make each stop is recorded by means of a non contact optical sensor in conjunction with electronic speed and distance meters. The data resulting from the twelve total stops is used to calculate the average deceleration rate which is the vehicle’s score for this test.

DECELERATION RATE FORMULA

$$\text{Deceleration Rate (DR)} = \frac{\text{Initial Velocity}^*(\text{IV}) \text{ squared}}{2 \text{ times Stopping Distance (SD)}} = \frac{(\text{IV})^2}{2 (\text{SD})}$$

EXAMPLE:

$$\begin{aligned} \text{Initial Velocity} &= 89.175 \text{ ft/s (60.8 mph x 1.4667*)} \\ \text{Stopping Distance} &= 171.4 \text{ ft.} \end{aligned}$$

$$\text{DR} = \frac{(\text{IV})^2}{2(\text{SD})} = \frac{(89.175)^2}{2(171.4)} = \frac{7952.24}{342.8} = 23.198 \text{ ft/s}^2$$

Once a vehicle’s average deceleration rate has been determined, it is possible to calculate the stopping distance from any given speed by utilizing the following formula:

Select a speed; translate that speed into feet per second; square the feet per second figure by multiplying it by itself; divide the resultant figure by 2; divide the remaining figure by the average deceleration rate of the vehicle in question.

EXAMPLE:

$$60 \text{ mph} = 88.002 \text{ ft/s} \times 88.002 = 7744.352 / 2 = 3872.176 / 23.198 \text{ ft/s}^2 = 166.9 \text{ ft.}$$

*Initial velocity must be expressed in terms of feet per second, with 1 mile per hour being equal to 1.4667 feet per second.

BRAKE TESTING

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

BEGINNING Time: 2:05 p.m.

TEMPERATURE: 70.2°F

MAKE & MODEL: Ford Police Interceptor 4.6L

BRAKE SYSTEM: Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.87 mph	139.95 feet	27.55 ft/s ²
Stop #2	59.87 mph	139.80 feet	27.58 ft/s ²
Stop #3	60.05 mph	140.52 feet	27.60 ft/s ²
Stop #4	60.13 mph	140.95 feet	27.59 ft/s ²
Stop #5	59.71 mph	141.95 feet	27.02 ft/s ²
Stop #6	59.51 mph	136.60 feet	27.88 ft/s ²

AVERAGE DECELERATION RATE

27.54 ft/s²

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.29 mph	140.16 feet	27.90 ft/s ²
Stop #2	60.30 mph	144.98 feet	26.97 ft/s ²
Stop #3	59.97 mph	143.69 feet	26.92 ft/s ²
Stop #4	60.31 mph	146.07 feet	26.78 ft/s ²
Stop #5	60.09 mph	145.15 feet	26.76 ft/s ²
Stop #6	60.49 mph	142.64 feet	27.59 ft/s ²

AVERAGE DECELERATION RATE

27.15 ft/s²

Phase III

	Yes/No
Evidence of severe fading?	<u>No</u>
Vehicle stopped in straight line?	<u>Yes</u>
Vehicle stopped within correct lane?	<u>Yes</u>

OVERALL AVERAGE DECEL. RATE:

27.35 ft/s²

Projected Stopping Distance from 60.0 mph

141.6 feet

BRAKE TESTING

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

BEGINNING Time: 1:36 p.m.

TEMPERATURE: 70.3°F

MAKE & MODEL: Chevrolet Caprice 9C1 6.0

BRAKE SYSTEM: Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.78 mph	124.35 feet	30.91 ft/s ²
Stop #2	60.97 mph	129.04 feet	30.98 ft/s ²
Stop #3	60.23 mph	130.14 feet	29.98 ft/s ²
Stop #4	60.22 mph	125.84 feet	31.00 ft/s ²
Stop #5	59.87 mph	127.82 feet	30.17 ft/s ²
Stop #6	59.38 mph	124.70 feet	30.42 ft/s ²

AVERAGE DECELERATION RATE

30.58 ft/s²

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.75 mph	127.17 feet	30.20 ft/s ²
Stop #2	59.70 mph	127.26 feet	30.12 ft/s ²
Stop #3	60.58 mph	132.23 feet	29.85 ft/s ²
Stop #4	59.89 mph	130.48 feet	29.57 ft/s ²
Stop #5	60.09 mph	131.84 feet	29.46 ft/s ²
Stop #6	60.41 mph	132.62 feet	29.60 ft/s ²

AVERAGE DECELERATION RATE

29.80 ft/s²

Phase III

	Yes/No
Evidence of severe fading?	<u>No</u>
Vehicle stopped in straight line?	<u>Yes</u>
Vehicle stopped within correct lane?	<u>Yes</u>

OVERALL AVERAGE DECEL. RATE:

30.19 ft/s²

Projected Stopping Distance from 60.0 mph

128.3 feet

BRAKE TESTING

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

BEGINNING Time: 8:50 a.m.

TEMPERATURE: 57.9°F

MAKE & MODEL: Chevrolet Impala 9C1 3.9L

BRAKE SYSTEM: Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.89 mph	142.46 feet	27.08 ft/s ²
Stop #2	60.53 mph	140.98 feet	27.95 ft/s ²
Stop #3	60.36 mph	139.98 feet	27.99 ft/s ²
Stop #4	60.60 mph	143.77 feet	27.48 ft/s ²
Stop #5	60.00 mph	139.74 feet	27.71 ft/s ²
Stop #6	59.86 mph	138.56 feet	27.82 ft/s ²

AVERAGE DECELERATION RATE

27.67 ft/s²

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.58 mph	138.01 feet	27.67 ft/s ²
Stop #2	60.58 mph	142.52 feet	27.70 ft/s ²
Stop #3	60.84 mph	146.44 feet	27.19 ft/s ²
Stop #4	60.08 mph	140.35 feet	27.66 ft/s ²
Stop #5	59.91 mph	138.41 feet	27.89 ft/s ²
Stop #6	59.79 mph	135.92 feet	28.29 ft/s ²

AVERAGE DECELERATION RATE

27.73 ft/s²

Phase III

Evidence of severe fading?

Yes/No

No

Vehicle stopped in straight line?

Yes

Vehicle stopped within correct lane?

Yes

OVERALL AVERAGE DECEL. RATE:

27.70 ft/s²

Projected Stopping Distance from 60.0 mph

139.8 feet

BRAKE TESTING

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

BEGINNING Time: 5:02 p.m.

TEMPERATURE: 69.3°F

MAKE & MODEL: Dodge Charger 3.6L

BRAKE SYSTEM: Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.91 mph	133.84 feet	28.84 ft/s ²
Stop #2	60.31 mph	133.37 feet	29.33 ft/s ²
Stop #3	59.88 mph	133.23 feet	28.94 ft/s ²
Stop #4	60.43 mph	136.47 feet	28.78 ft/s ²
Stop #5	59.60 mph	132.32 feet	28.88 ft/s ²
Stop #6	60.57 mph	134.43 feet	29.35 ft/s ²

AVERAGE DECELERATION RATE

29.02 ft/s²

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.53 mph	137.45 feet	28.67 ft/s ²
Stop #2	60.34 mph	134.90 feet	29.03 ft/s ²
Stop #3	60.18 mph	135.85 feet	28.68 ft/s ²
Stop #4	60.45 mph	133.48 feet	29.44 ft/s ²
Stop #5	60.32 mph	134.37 feet	29.12 ft/s ²
Stop #6	60.68 mph	132.69 feet	29.85 ft/s ²

AVERAGE DECELERATION RATE

29.13 ft/s²

Phase III

	Yes/No
Evidence of severe fading?	<u>No</u>
Vehicle stopped in straight line?	<u>Yes</u>
Vehicle stopped within correct lane?	<u>Yes</u>

OVERALL AVERAGE DECEL. RATE:

29.08 ft/s²

Projected Stopping Distance from 60.0 mph

133.2 feet

BRAKE TESTING

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

BEGINNING Time: 3:32 p.m.

TEMPERATURE: 68°F

MAKE & MODEL: Dodge Charger 5.7L

BRAKE SYSTEM: Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.24 mph	134.73 feet	28.97 ft/s ²
Stop #2	60.20 mph	133.63 feet	29.17 ft/s ²
Stop #3	60.07 mph	133.81 feet	29.00 ft/s ²
Stop #4	60.60 mph	136.58 feet	28.92 ft/s ²
Stop #5	60.59 mph	138.23 feet	28.57 ft/s ²
Stop #6	59.67 mph	131.66 feet	29.08 ft/s ²

AVERAGE DECELERATION RATE

28.95 ft/s²

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.44 mph	136.09 feet	28.87 ft/s ²
Stop #2	60.92 mph	136.26 feet	29.30 ft/s ²
Stop #3	60.36 mph	136.59 feet	28.69 ft/s ²
Stop #4	59.95 mph	130.71 feet	29.58 ft/s ²
Stop #5	59.70 mph	133.89 feet	28.63 ft/s ²
Stop #6	60.38 mph	139.07 feet	28.20 ft/s ²

AVERAGE DECELERATION RATE

28.88 ft/s²

Phase III

Evidence of severe fading?	Yes/No
Vehicle stopped in straight line?	<u>No</u>
Vehicle stopped within correct lane?	<u>Yes</u>

OVERALL AVERAGE DECEL. RATE:

28.92 ft/s²

Projected Stopping Distance from 60.0 mph

133.9 feet

BRAKE TESTING

TEST LOCATION: Chrysler Proving Grounds

DATE: September 18, 2010

BEGINNING Time: 1:15 p.m.

TEMPERATURE: 69.7°F

MAKE & MODEL: Chevrolet Tahoe 5.3L PPV 2WD

BRAKE SYSTEM: Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.94 mph	134.70 feet	28.69 ft/s ²
Stop #2	60.43 mph	139.25 feet	28.21 ft/s ²
Stop #3	59.91 mph	143.21 feet	26.96 ft/s ²
Stop #4	60.76 mph	142.31 feet	27.91 ft/s ²
Stop #5	60.05 mph	141.39 feet	27.44 ft/s ²
Stop #6	59.82 mph	140.41 feet	27.41 ft/s ²

AVERAGE DECELERATION RATE

27.77 ft/s²

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.²)

TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.60 mph	135.76 feet	28.14 ft/s ²
Stop #2	60.36 mph	142.21 feet	27.55 ft/s ²
Stop #3	60.53 mph	146.04 feet	26.98 ft/s ²
Stop #4	59.45 mph	141.29 feet	26.90 ft/s ²
Stop #5	59.69 mph	146.64 feet	26.13 ft/s ²
Stop #6	59.96 mph	144.79 feet	26.71 ft/s ²

AVERAGE DECELERATION RATE

27.07 ft/s²

Phase III

	Yes/No
Evidence of severe fading?	<u>No</u>
Vehicle stopped in straight line?	<u>Yes</u>
Vehicle stopped within correct lane?	<u>Yes</u>

OVERALL AVERAGE DECEL. RATE:

27.42 ft/s²

Projected Stopping Distance from 60.0 mph

141.2 feet

2011 Brake Testing

STOPPING DISTANCE

